



VILLAGE OF KEY BISCAINE

Village Council

Joe I. Rasco, Mayor
Oscar Sardinas, Vice Mayor
Michael F. Bracken
Franklin H. Caplan
Edward London
Nancy Stoner
Fernando A. Vazquez

REGULAR COUNCIL MEETING
starting immediately after the First Budget Hearing
TUESDAY, SEPTEMBER 08, 2026
7:30 PM

1. CALL TO ORDER/ROLL CALL OF MEMBERS

2. PLEDGE OF ALLEGIANCE

3. BRIEF COMMENTS BY COUNCIL

4. PUBLIC COMMENTS:

If you would like to speak during public comments, please fill out a blue request form available at the Council Chamber entrance and submit it to the Village Clerk prior to the start of the meeting. When your name is called, please come forward to the podium and state your name and address. (If applicable, please state if you are a hired consultant or Village employee and/or engaged in lobbying activities and/or representing an organization.) Unless otherwise provided by Council, members of the public will have three (3) minutes to speak.

5. AGENDA:

APPROVAL/DEFERRALS/ADDITIONS/DELETIONS/SUBSTITUTIONS/WITHDRAWALS

6. SPECIAL PRESENTATIONS:

6.A. SPECIAL PRESENTATION OF A PROCLAMATION RECOGNIZING SEPTEMBER AS CHILDHOOD CANCER AWARENESS MONTH (MAYOR RASCO)

[TAB 1](#)

7. CONSENT AGENDA:

MISSION: TO PROVIDE A SAFE, QUALITY COMMUNITY ENVIRONMENT FOR ALL ISLANDERS THROUGH RESPONSIBLE GOVERNMENT.

September 08, 2026

www.keybiscayne.fl.gov

(Consent agenda items are those which are routine, do not require discussion or explanation prior to Village Council action, or have already been discussed and/or explained and do not require further discussion or explanation. Items can be removed from the consent agenda by the request on an individual Councilmember for independent consideration provided such request is made during the approval/deferrals/additions/deletions/substitutions/withdrawals segment of the meeting, prior to the vote on the consent agenda.)

- 7.A. A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, **APPROVING A THIRD AMENDMENT TO THE REVOCABLE LICENSE AGREEMENT WITH PADL LLC FOR THE PADDLEBOARD SHARING PROGRAM**; PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE. (PARKS, RECREATION, AND OPEN SPACES DIRECTOR TODD HOFFERBERTH)

TAB 2

- 7.B. A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, **ESTABLISHING THE VILLAGE'S 2027/2028 LEGISLATIVE PRIORITIES**; AND PROVIDING FOR AN EFFECTIVE DATE. (VILLAGE MANAGER)

TAB 3

8. ORDINANCES: (NOT LATER THAN 7:30 P.M.)

9. RESOLUTIONS:

- 9.A. A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, **SELECTING MOFFATT & NICHOL, INC. FOR THE OFFSHORE FEASIBILITY AND PRELIMINARY SHORELINE DESIGN STUDY PURSUANT TO REQUEST FOR QUALIFICATIONS NO. 2026-09 ("RFQ")**; PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE. (CIP AND GRANTS MANAGER COLLEEN DURFEE AND CHIEF RESILIENCE AND SUSTAINABILITY OFFICER DR. ROLAND SAMIMY)

TAB 4

10. REPORTS AND RECOMMENDATIONS:

A. VILLAGE MANAGER: (NOT LATER THAN 8:00 P.M.)

B. MAYOR AND COUNCILMEMBERS

C. VILLAGE ATTORNEY

D. VILLAGE CLERK

11. OTHER BUSINESS/GENERAL DISCUSSION

12. SCHEDULE OF FUTURE MEETINGS/EVENTS:

LOCAL PLANNING AGENCY MEETING

THURSDAY, SEPTEMBER 10, 2026, 6:00 P.M., COUNCIL CHAMBER

SPECIAL COUNCIL MEETING

THURSDAY, SEPTEMBER 10, 2026, 6:15 P.M., COUNCIL CHAMBER

2ND BUDGET HEARING

TUESDAY, SEPTEMBER 22, 2026, 6:30 P.M., COUNCIL CHAMBER

COUNCIL WORKSHOP-RIAP UPDATE & ZORC RECOMMENDATIONS

TUESDAY, SEPTEMBER 29, 2026, 6:00 P.M., COUNCIL CHAMBER

13. ADJOURNMENT

I. ANY PERSON WISHING TO ADDRESS THE VILLAGE COUNCIL ON AN ITEM ON THIS AGENDA IS ASKED TO REGISTER WITH THE VILLAGE CLERK PRIOR TO THAT ITEM BEING HEARD. PRIOR TO MAKING A STATEMENT, PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.

II. IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990, ALL PERSONS WHO ARE DISABLED AND WHO NEED SPECIAL ACCOMMODATIONS TO PARTICIPATE IN THIS PROCEEDING BECAUSE OF THAT DISABILITY SHOULD CONTACT THE OFFICE OF THE VILLAGE CLERK, 88 WEST MCINTYRE STREET, KEY BISCAYNE, FLORIDA 33149, TELEPHONE NUMBER (305) 365-5506, NOT LATER THAN TWO BUSINESS DAYS PRIOR TO SUCH PROCEEDINGS.

III. IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE VILLAGE COUNCIL WITH RESPECT TO ANY MATTER CONSIDERED AT A MEETING OR HEARING, THAT PERSON WILL NEED A RECORD OF THE PROCEEDINGS AND, FOR SUCH PURPOSE, MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED (F.S.286.0105).

IV. IN ACCORDANCE WITH VILLAGE CODE SECTION 2-161, ADOPTING SECTION 2-11.1(s) OF THE MIAMI-DADE COUNTY CODE, ANY PERSON ENGAGING IN LOBBYING ACTIVITIES, AS DEFINED THEREIN, MUST REGISTER AT THE VILLAGE CLERK'S OFFICE BEFORE ADDRESSING THE COUNCIL ON THE ABOVE MATTERS OR ENGAGING IN LOBBYING ACTIVITIES.

THE ABOVE MEETINGS ARE HELD IN THE COUNCIL CHAMBER, 560 CRANDON BOULEVARD AND ARE SUBJECT TO CHANGE. ZONING MEETINGS AND SPECIAL COUNCIL MEETINGS WILL BE SCHEDULED ON AN AS NEEDED BASIS. PLEASE VISIT

www.keybiscayne.fl.gov TO VIEW THE MEETING SCHEDULE.

Proclamation

OFFICE OF THE MAYOR



WHEREAS, September has been designated National Childhood Cancer Awareness Month to honor those children whose lives have been lost and those irrevocably impacted by this terrible illness, and to strengthen the nation's resolve to search for a cure; and

WHEREAS, cancer is the leading cause of death by disease among U.S. children between infancy and 15 years of age; and

WHEREAS, approximately 15,000 children each year in the U.S. are diagnosed with cancer before the age of 20; and

WHEREAS, Childhood Cancers cross all racial, ethnic, geographic, and socio-economic backgrounds, and each year tens of thousands of children face the battle of cancer with incredible bravery and inspiring hope; and

WHEREAS, while progress against some childhood cancers has been made, cure rates for many forms of Childhood Cancer remain less than 50%, with the incidence of Childhood Cancers increasing at a more rapid rate than any other age group; and

WHEREAS, this disease not only affects the child diagnosed with cancer, but also their entire support network of devoted parents, grandparents, loved ones and friends; and

WHEREAS, this city recognizes the devastating impact that this disease has on members of our community and the importance of increased research on Childhood Cancer; and

WHEREAS, this month we recognize that these burdens are shared by countless dedicated healthcare professionals, organizations, charities, and parent advocacy groups which support patients and families by offering advice, encouragement, hope, and financial assistance, and work tirelessly to lift the spirits of children suffering from cancer; and

NOW, THEREFORE, I, JOE I. RASCO, MAYOR OF THE VILLAGE OF KEY BISCAINE, FLORIDA, DO HEREBY ISSUE THIS PROCLAMATION OF RECOGNITION AND DO HERBY PROCLAIM SEPTEMBER 2026 AS NATIONAL CHILDHOOD CANCER AWARENESS MONTH. I ENCOURAGE THE RESIDENTS OF THE VILLAGE TO JOIN IN RAISING AWARENESS OF CHILDHOOD CANCER, HONOR THE STRENGTH OF THE CHILDREN AND FAMILIES AFFECTED BY THIS DISEASE, AND SUPPORT EFFORTS THAT BRING HOPE, COMPASSION, AND ENCOURAGEMENT TO THOSE FACING THIS JOURNEY.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL OF THE VILLAGE OF KEY BISCAINE THIS 8TH DAY OF SEPTEMBER 2026.

MAYOR JOE I. RASCO





VILLAGE OF KEY BISCAINE

STAFF MEMORANDUM

Village Council
Joe I. Rasco, Mayor
Oscar Sardiñas, Vice Mayor
Michael F. Bracken
Franklin H. Caplan
Edward London
Nancy Stoner
Fernando A. Vazquez

Village Manager
Steven C. Williamson

DATE: September 8, 2026
TO: Honorable Mayor and Councilmembers
FROM: Steven C. Williamson, Village Manager
RE: Third Amendment to the Revocable License Agreement with PADL LLC for the Paddleboard Sharing Program and Beach Wheelchair

RECOMMENDATION

Recommend Village Council approve the Third Amendment to the Revocable License Agreement with PADL LLC to: (1) extend the Paddleboard Sharing Program at the Village Beach Park; (2) authorize the addition of a deployable beach wheelchair for free public use; and (3) authorize the Village Manager to execute the Third Amendment, subject to approval by the Village Attorney as to form and legal sufficiency.

DISCUSSION

Purpose: To continue the Paddleboard Sharing Program at the Village Beach Park and expand accessibility by adding a deployable beach wheelchair that will be available for public use free of charge.

Background: On June 20, 2019, the Village entered into a Revocable License Agreement (Agreement) with PADL LLC to operate a paddleboard-sharing program at the Village Beach Park, located at 695 Ocean Drive. The Agreement authorized PADL to deploy paddleboards at the Beach Park using its self-locking equipment and software platform.

On December 11, 2020, the parties entered into a First Amendment that extended the Agreement's term and established a revenue-sharing arrangement. Under the First Amendment, PADL pays the Village 20 percent of its gross receipts, excluding sales tax.

On April 21, 2023, the parties entered into a Second Amendment that extended the Agreement through June 20, 2026, and authorized the Village Manager to renew it for up to two additional one-year periods.

The proposed Third Amendment would establish a new three-year term from October 13, 2026, through October 13, 2029, and authorize the Village Manager to renew the Agreement for up to two additional one-year periods. It would also authorize PADL to add its first deployable beach wheelchair to the equipment available at the Beach Park.

Justification: The proposed Third Amendment allows the Village to continue the existing Paddleboard Sharing Program while expanding accessibility at the Beach Park. The deployable beach wheelchair will provide individuals with mobility limitations an additional means of accessing and enjoying the beach.

The beach wheelchair will be integrated into PADL's existing self-service station and will be unlocked through PADL's software platform, including its mobile application. Use of the wheelchair will be free of charge and will not require the purchase of any other product or service.

This will be PADL's first deployable beach wheelchair utilizing its software platform. PADL will include beach wheelchair usage information in its monthly reports to the Village, allowing staff to monitor utilization and evaluate the service.

Implementation/Integration Plan: Following Council approval, the Village Manager will execute the Third Amendment. Village staff and PADL will then coordinate the wheelchair's location, installation, and integration with PADL's existing access platform. Village staff will be responsible for routine inspection and maintenance of the wheelchair and will remove it from service when necessary for repair or safety. PADL will incorporate wheelchair usage data into its existing monthly reporting to the Village

RESOURCE IMPACT

- **Recurring Funding:** The Village will be responsible for ongoing maintenance, repair, and replacement costs associated with the wheelchair and related equipment.
- **Personnel:** Existing Parks & Recreation staff will be responsible for routine inspection of the beach wheelchair, monitoring its condition, and coordinating maintenance and repairs. No additional personnel are required.
- **Equipment:** A beach wheelchair and associated docking, locking, or storage equipment will be added at the Beach Park.
- **Facilities:** The beach wheelchair and associated equipment will be located at the Village Beach Park in a location approved by the Village Manager or designee.
- **Training:** No additional training required

FUNDING SOURCES

- **GL Code:** N/A
- **Budget Line-Item:** N/A
- **Amount:** N/A
- **Maintenance & Repair:** 001-72-572-46010 REPAIRS & MAINTENANCE - PARKS/

STRATEGIC CONNECTION (GOAL / FOCUS AREA)

This project supports the Village's strategic priorities related to maintaining safe, attractive, and high-quality public parks and recreational facilities.

- Engaging and Active Community Programs and Public Spaces – Goal
- Improve Accessibility to Recreational Facilities and Amenities – Focus Area
- Expand Inclusive Recreational Opportunities – Action

ATTACHMENT(S)

- A. Draft - Third Amendment to the Revocable License Agreement with PADL
- B. Resolution 2020-62 – First Amendment
- C. Resolution 2023-19 - Second Amendment

Prepared by: Todd Hofferberth, Parks, Recreation and Open Spaces Director

Reviewed by Mr. Chad Friedman from Weiss Serota Helfman Cole & Bierman as to form and legal sufficiency.

RESOLUTION NO. 2026-_____

**A RESOLUTION OF THE VILLAGE COUNCIL OF THE
VILLAGE OF KEY BISCAYNE, FLORIDA, APPROVING A
THIRD AMENDMENT TO THE REVOCABLE LICENSE
AGREEMENT WITH PADL LLC FOR THE
PADDLEBOARD SHARING PROGRAM; PROVIDING FOR
AUTHORIZATION; AND PROVIDING FOR AN
EFFECTIVE DATE.**

WHEREAS, on May 21, 2019, the Village of Key Biscayne (“Village”) Council adopted Resolution No. 2019-27, approving a Revocable License Agreement (“Agreement”) with PADL LLC (“PADL”) to operate a paddleboard sharing concession program (“Program”) at the Village’s Beach Park located at 695 Ocean Drive, Key Biscayne, Florida (“Beach Park”); and

WHEREAS, on November 17, 2020, the Village Council adopted Resolution No. 2020-62, approving a First Amendment to the Agreement with PADL to extend the term of the Agreement and provide for revenue sharing; and

WHEREAS, on April 4, 2023, the Village Council adopted Resolution No. 2023-19, approving a Second Amendment to the Agreement with PADL to extend the term of the Agreement through June 20, 2026, and provide for up to two (2) additional one (1) year renewal options; and

WHEREAS, on March 26, 2026, the Village delivered written notice to PADL to exercise the first renewal option authorized by the Second Amendment, covering the period from June 20, 2026 through June 19, 2027; and

WHEREAS, the Village desires to enhance access to Beach Park by allowing PADL to add a deployable beach wheelchair to the existing equipment available at Beach Park; and

WHEREAS, the Village and PADL wish to amend the Agreement, in substantially the form attached hereto as Exhibit “A,” (“Third Amendment”) to establish a new three (3) year term

beginning October 13, 2026 and continuing through October 13, 2029, together with two (2) additional one (1) year renewal options exercisable by the Village Manager; and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

Section 1. **Recitals.** That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

Section 2. **Amendment Approved.** That the Village Council hereby approves the Third Amendment between the Village and PADL, in substantially the form attached hereto as Exhibit “A.”

Section 3. **Authorization.** That the Village Council hereby authorizes the Village Manager to execute the Third Amendment, in substantially the form attached hereto as Exhibit “A,” subject to the approval of the Village Attorney as to form, content, and legal sufficiency.

Section 4. **Effective Date.** That this Resolution shall be effective immediately upon adoption.

PASSED and ADOPTED this _____ day of _____, 2026.

JOE I. RASCO, MAYOR

ATTEST:

JOCELYN B. KOCH
VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY

THIRD AMENDMENT TO THE
REVOCABLE LICENSE AGREEMENT
BETWEEN
THE VILLAGE OF KEY BISCAYNE
AND
PADL LLC

THIS THIRD AMENDMENT TO THE REVOCABLE LICENSE AGREEMENT BETWEEN THE VILLAGE OF KEY BISCAYNE AND PADL LLC ("Third Amendment") is entered into as of October 13, 2026 ("Effective Date"), by and between the VILLAGE OF KEY BISCAYNE, a Florida municipal corporation ("Village"), and PADL LLC ("PADL"), a Florida limited liability company, collectively referred to as the "Parties."

WHEREAS, on June 20, 2019, the Village and PADL entered into a Revocable License Agreement ("Agreement") for operation of a paddleboard sharing concession program ("Program") at the Village's Beach Park located at 695 Ocean Drive, Key Biscayne, Florida; and

WHEREAS, on December 11, 2020, the Village and PADL entered into a First Amendment to the Agreement to extend the term of the Agreement and provide for revenue sharing; and

WHEREAS, on April 21, 2023, the Village and PADL entered into a Second Amendment to the Agreement to further extend the term of the Agreement and provide for renewal options; and

WHEREAS, the Parties wish to amend the Agreement to establish a new three (3) year term beginning October 13, 2026 and continuing through October 13, 2029, together with two (2) additional one (1) year renewal options exercisable by the Village Manager; and

WHEREAS, the Village desires to enhance access to Beach Park by allowing PADL to add a deployable beach wheelchair to the existing equipment available at Beach Park; and

WHEREAS, the Beach Wheelchair at Beach Park will be the first deployable beach wheelchair made available by PADL through its software platform; and

WHEREAS, the Parties wish to amend the Agreement in accordance with the terms and conditions set forth in this Third Amendment.

NOW, THEREFORE, for and in consideration of the mutual promises set forth herein, the Village and PADL agree as follows¹:

1. **Recitals Incorporated.** The above recitals are true and correct and incorporated herein.
2. **Amendment of Section 2 of the Agreement.** Section 2 of the Agreement is deleted in its entirety and replaced as follows:
 2. **Term.** The term of this Agreement shall commence on October 13, 2026 and continue through October 13, 2029, unless earlier terminated in accordance with Section 3. The Village Manager may renew this Agreement for up to two (2) additional one (1) year periods on the same terms as set forth herein upon written notice to PADL.
3. **Creating Paragraph 25 of the Agreement.** The Agreement is hereby amended by creating a new Paragraph 25, "Beach Wheelchair Authorized" as follows:

¹ Words ~~stricken through~~ shall be deleted. Words underscored constitute the amendment. Remaining provisions are now in effect and remain unchanged.

25. Beach Wheelchair Authorized. PADL is authorized to add and make available its first deployable beach wheelchair ("Beach Wheelchair") as part of the existing equipment used in connection with the Program at Beach Park. The Beach Wheelchair and any associated docking, locking, or storage equipment shall be placed in a location approved in advance by the Village Manager or the Village Manager's designee.

25.1 Software Access and Free Use. PADL shall configure the Beach Wheelchair as part of PADL's self service station at Beach Park so that it may be unlocked through PADL's software platform, including the PADL mobile application. Use of the Beach Wheelchair shall be free of charge. PADL shall not impose or collect any rental fee, access fee, service charge, reservation charge, or other payment for use of the Beach Wheelchair, and use shall not require the purchase of a PADL membership or any other paid product or service. No revenue sharing payment shall be due with respect to use of the Beach Wheelchair.

25.2 Village Responsibility for Operation and Maintenance. The Village shall be solely responsible, at its own cost, for the deployment, operation, inspection, maintenance, repair, replacement, and removal of the Beach Wheelchair and any associated docking, locking, or storage equipment. The Village shall keep the Beach Wheelchair in a safe, clean, and operable condition and shall promptly disable access to and remove it from service when the Village knows or reasonably should know that it is not safe or operable. The Village shall bear all risk of loss of or damage to the Beach Wheelchair and associated equipment.

25.3 Monthly Usage Reporting. Beginning with the first full calendar month after the Beach Wheelchair is made available for public use, PADL shall include usage information for the Beach Wheelchair in its monthly reporting to the Village. The report shall include the number and duration of uses recorded through PADL's software, including zero use when applicable, and any additional usage information reasonably requested by the Village that is captured by PADL's software.

4. **Creating Paragraph 26 of the Agreement.** The Agreement is hereby amended by creating a new Paragraph 26, "Scrutinized Companies" as follows:

26. Scrutinized Companies. PADL certifies that it is not on the Scrutinized Companies that Boycott Israel List or engaged in a boycott of Israel. Pursuant to section 287.135, Florida Statutes, the Village may immediately terminate this Agreement at its sole option if PADL is found to have submitted a false certification; or if PADL is placed on the Scrutinized Companies that Boycott Israel List or is engaged in the boycott of Israel during the term of the Agreement. If this Agreement is for more than one million dollars, PADL certifies that it is also not on the Scrutinized Companies with Activities in Sudan, Scrutinized Companies with Activities in the Iran Terrorism Sectors List, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria as identified in Section 287.135, Florida Statutes. Pursuant to Section 287.135, Florida Statutes, the Village may immediately terminate this Agreement at its sole option if PADL is found to have submitted a false certification; or if PADL is placed on the Scrutinized Companies with Activities in Sudan List, Scrutinized Companies with Activities in the Iran Terrorism Sectors List, Scrutinized Companies with Activities in Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria during the term of the Agreement.

5. **Creating Paragraph 27 of the Agreement.** The Agreement is hereby amended by creating a new Paragraph 27, "Noncoercive Conduct Affidavit," as follows:

27. Noncoercive Conduct Affidavit. Pursuant to Section 787.06, Florida Statutes, a nongovernmental entity executing, renewing, or extending a contract with a governmental entity is required to provide an affidavit, signed by an officer or a representative of the nongovernmental entity under penalty of perjury, attesting that the nongovernmental entity does not use coercion for labor or services as defined in Section 787.06(2)(a), Florida Statutes. By entering into this

Agreement, PADL acknowledges that it has read Section 787.06, Florida Statutes, and will comply with the requirements therein, and has executed the required affidavit attached hereto and incorporated herein.

6. **Creating Paragraph 30 of the Agreement. The Agreement is hereby amended by creating a new Paragraph 30, “Prohibition on Contracting with Entities of Foreign Concern,” as follows:**

30. Prohibition on Contracting with Entities of Foreign Concern. Pursuant to Section 287.138, Florida Statutes (which is expressly incorporated herein by reference), a governmental entity may not knowingly enter into a contract with an entity which would give access to an individual’s personal identifying information if (a) the entity is owned by the government of a foreign country of concern; (b) the government of a foreign country of concern has a controlling interest in the entity; or (c) the entity is organized under the laws of or has its principal place of business in a foreign country of concern. By entering into this Agreement, PADL acknowledges that it has read Section 287.138, Florida Statutes, and complies with the requirements therein, and has executed the required affidavit attached hereto and incorporated herein.

7. **Conflict; Amendment Prevails.** In the event of any conflict or ambiguity between the terms and provisions of this Third Amendment and the terms and provisions of the Agreement, including any previous amendments thereto, the terms and provisions of this Third Amendment shall control.
8. **Agreement Ratified.** Except as otherwise specifically set forth or modified herein, all terms of the Agreement are hereby ratified and affirmed and shall remain unmodified and in full force and effect in accordance with their terms.
9. **Defined Terms.** All initial capitalized terms used in this Third Amendment but not otherwise defined herein shall have the same meaning ascribed thereto in the Agreement.
10. **Counterparts.** This Third Amendment may be executed in counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. An executed facsimile or electronic copy of this Third Amendment shall have the same force and effect as an original hereof.

[THIS SPACE INTENTIONALLY LEFT BLANK. SIGNATURE PAGE FOLLOWS.]

IN WITNESS WHEREOF, the Parties hereto have executed this Third Amendment as of the date first written above.

VILLAGE OF KEY BISCAYNE

PADL LLC

By: _____
Steven C. Williamson
Village Manager

By: _____
Name: _____
Title: _____

Attest:

By: _____
Jocelyn B. Koch
Village Clerk

Approved as to form and legal sufficiency:

By: _____
Weiss Serota Helfman Cole + Bierman, P.L.
Village Attorney

RESOLUTION NO. 2023-19

A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, APPROVING A SECOND AMENDMENT TO THE REVOCABLE LICENSE AGREEMENT WITH PADL LLC FOR THE PADDLEBOARD SHARING PROGRAM; PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, on May 21, 2019, the Village of Key Biscayne (“Village”) Council adopted Resolution No. 2019-27, approving a Revocable License Agreement (“Agreement”) with PADL LLC (“PADL”) to operate a paddleboard sharing concession program (“Program”); and

WHEREAS, on November 17, 2020, the Village Council adopted Resolution No. 2020-62, approving a First Amendment to the Agreement with PADL to extend the term of the Agreement and provide for revenue sharing; and

WHEREAS, the Agreement is set to expire on June 20, 2023; and

WHEREAS, the Village desires to permit PADL to continue operating its Program at the Village’s Beach Park located at 695 Ocean Drive, Key Biscayne, Florida (“Beach Park”) for the benefit of Village residents; and

WHEREAS, the Village and PADL wish to amend the Agreement, in substantially the form attached hereto as Exhibit “A,” (“Second Amendment”) to extend the term of the Agreement; and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

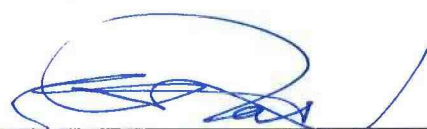
Section 1. Recitals. That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

Section 2. Amendment Approved. That the Village Council hereby approves the Second Amendment between the Village and PADL, in substantially the form attached hereto as Exhibit "A".

Section 3. Authorization. That the Village Council hereby authorizes the Village Manager to execute the Second Amendment, in substantially the form attached hereto as Exhibit "A," subject to the approval of the Village Attorney as to form, content, and legal sufficiency.

Section 4. Effective Date. That this Resolution shall be effective immediately upon adoption.

PASSED and ADOPTED this 4th day of April, 2023.



JOE I. RASCO, MAYOR

ATTEST:



JOCELYN B. KOCH
VILLAGE CLERK



APPROVED AS TO FORM AND LEGAL SUFFICIENCY.



WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY

**SECOND AMENDMENT TO THE
REVOCABLE LICENSE AGREEMENT
BETWEEN
THE VILLAGE OF KEY BISCAYNE
AND
PADL LLC**

THIS SECOND AMENDMENT TO THE REVOCABLE LICENSE AGREEMENT BETWEEN THE VILLAGE OF KEY BISCAYNE AND PADL LLC ("Second Amendment") is entered into as of this 21st day of April, 2023 ("Effective Date"), by and between the **VILLAGE OF KEY BISCAYNE**, a Florida municipal corporation ("Village"), and **PADL LLC** ("PADL"), a Florida limited liability company, collectively referred to as the "Parties."

WHEREAS, on June 20, 2019, the Village and PADL entered into a Revocable License Agreement ("Agreement") for a one (1) year term for operation of a paddleboard sharing concession program at the Village's Beach Park located at 695 Ocean Drive, Key Biscayne, Florida; and

WHEREAS, on December 11, 2020, the Village and PADL entered into a First Amendment to the Agreement (the "First Amendment") to extend the term of the Agreement and provide for revenue sharing; and

WHEREAS, the Village wishes to extend the term of the Agreement; and

WHEREAS, the Village and PADL wish to modify the terms of the Agreement in accordance with the terms and conditions set forth in this Second Amendment.

NOW, THEREFORE, for and in consideration of the mutual promises set forth herein, the Village and PADL agree as follows:

1. **Recitals Incorporated.** The above recitals are true and correct and incorporated herein.
2. **Amendment of Section 2 of the Agreement.** Section 2 of the Agreement is deleted in its entirety and replaced as follows:
 2. **Term.** The term of this Agreement shall be from the Effective Date through June 20, 2026, unless earlier terminated in accordance with Section 3. The Village Manager may renew this Agreement for up to two (2) additional one (1) year periods on the same terms as set forth herein upon written notice to PADL.
3. **Conflict; Amendment Prevails.** In the event of any conflict or ambiguity between the terms and provisions of this Second Amendment and the terms and provisions of the Agreement, including any previous amendments thereto, the terms and provisions of this Second Amendment shall control.
4. **Agreement Ratified.** Except as otherwise specifically set forth or modified herein, all terms in the Agreement are hereby ratified and affirmed and shall remain unmodified and in full force and effect in accordance with its terms.

5. **Defined Terms.** All initial capitalized terms used in this Second Amendment but not otherwise defined herein shall have the same meaning ascribed thereto in the Agreement.
6. **Counterparts.** This Second Amendment may be executed in counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. An executed facsimile or electronic copy of this Second Amendment shall have the same force and effect as an original hereof.

[THIS SPACE INTENTIONALLY LEFT BLANK. SIGNATURE PAGE FOLLOWS.]

IN WITNESS WHEREOF, the Parties hereto have executed this Second Amendment as of the date first written above.

VILLAGE OF KEY BISCAYNE

DocuSigned by:
By: Steven C Williamson
Steven Williamson
Village Manager

Attest:

DocuSigned by:
By: Jocelyn Koch
86876E7FDD91447...
Jocelyn B. Koch
Village Clerk

Approved as to form and legal sufficiency:

DocuSigned by:
Chad Friedman
By: FB4F15E0EE1040F...
Weiss Serota Helfman Cole & Bierman, P.L.
Village Attorney



Addresses for Notice:

Village of Key Biscayne
Attn: Village Manager
88 West McIntyre Street
Key Biscayne, FL 33149
305-365-5514 (telephone)
305-365-8936 (facsimile)
aagha@keybiscayne.fl.gov (email)

With a copy to:

Weiss Serota Helfman Cole & Bierman, P.L.
Attn: Chad Friedman, Esq.
Village of Key Biscayne Attorney
2800 Ponce de Leon Boulevard, 12th Floor
Coral Gables, FL 33134
cfriedman@wsh-law.com (email)

PADL LLC

By: 
Name: **Andres Avello**

Title: **PADL Holdings Inc., a Delaware corporation, its Manager**

Addresses for Notice:

_____ (telephone)
 _____ (facsimile)
 _____ (email)

With a copy to:

Andres Avello
Registered Agent
478 Bay Lane
Key Biscayne, FL 33149
786-749-6730 (telephone)
(facsimile)
management@padl.co (email)

RESOLUTION NO. 2020-62**A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, APPROVING A FIRST AMENDMENT TO THE REVOCABLE LICENSE AGREEMENT WITH PADL LLC FOR THE PADDLEBOARD SHARING PROGRAM; PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE.**

WHEREAS, on May 21, 2019, the Village of Key Biscayne (“Village”) Council adopted Resolution No. 2019-27, approving a Revocable License Agreement (“Agreement”) with PADL LLC (“PADL”) to operate a paddleboard sharing concession program (“Program”); and

WHEREAS, the Village wishes to permit PADL to continue operating its Program at the Village’s Beach Park located at 695 Ocean Drive, Key Biscayne, Florida (“Beach Park”) for the benefit of Village residents; and

WHEREAS, the Village and PADL wish to amend the Agreement, in substantially the form attached hereto as Exhibit “A,” (“First Amendment”) to extend the term of the Agreement and provide for revenue sharing; and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

Section 1. **Recitals.** That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

Section 2. **Amendment Approved.** That the First Amendment between the Village and PADL, in substantially the form attached hereto as Exhibit “A”, is hereby approved.

Section 3. Authorization. That the Village Council hereby authorizes the Village Manager to execute the Agreement, in substantially the form attached hereto as Exhibit "A," subject to the approval of the Village Attorney as to form, content, and legal sufficiency.

Section 4. Effective Date. That this Resolution shall be effective immediately upon adoption.

PASSED and ADOPTED this 17th day of November, 2020.


MICHAEL W. DAVEY, MAYOR

ATTEST:


JOCELYN B. KOCH
VILLAGE CLERK



APPROVED AS TO FORM AND LEGAL SUFFICIENCY:


WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY

**FIRST AMENDMENT TO THE
REVOCABLE LICENSE AGREEMENT
BETWEEN
THE VILLAGE OF KEY BISCAYNE
AND
PADL LLC**

THIS FIRST AMENDMENT TO THE REVOCABLE LICENSE AGREEMENT BETWEEN THE VILLAGE OF KEY BISCAYNE AND PADL LLC ("First Amendment") is entered into as of this 11 day of December, 2020 ("Effective Date"), by and between the **VILLAGE OF KEY BISCAYNE**, a Florida municipal corporation ("Village"), and **PADL LLC** ("PADL"), a Florida limited liability company, collectively referred to as the "Parties."

WHEREAS, on June 20, 2019, the Village and PADL entered into a Revocable License Agreement ("Agreement") for a one (1) year term for operation of a paddleboard sharing concession program at the Village's Beach Park located at 695 Ocean Drive, Key Biscayne, Florida; and

WHEREAS, the Village wishes to extend the term of the Agreement and provide for revenue sharing; and

WHEREAS, the Village and PADL wish to modify the terms of the Agreement in accordance with the terms and conditions set forth in this First Amendment.

NOW, THEREFORE, for and in consideration of the mutual promises set forth herein, the Village and PADL agree as follows:

1. **Recitals Incorporated.** The above recitals are true and correct and incorporated herein.
2. **Amendment of Section 2 of the Agreement.** Section 2 of the Agreement is deleted in its entirety and replaced as follows:
 2. **Term.** The term of this Agreement shall be from the Effective Date through June 20, 2021, unless earlier terminated in accordance with Section 3. The Village Manager may renew this Agreement for up to two (2) additional one (1) year periods on the same terms as set forth herein upon written notice to PADL.
3. **Amendment of Section 4 of the Agreement.** Section 4 of the Agreement is deleted in its entirety and replaced as follows:
 4. **License Fee.** PADL shall pay the Village 20% of PADL's gross receipts, net of sales tax, as a license fee ("Revenue Share") on a quarterly basis. Gross receipts shall be calculated based upon all revenues generated within the Village. On or before the fifteenth day of January, April, July, and October of each year, PADL shall pay the Village its Revenue Share and provide the Village with a quarterly audit, summary of sales, profit and loss statement, and general ledger sheets in support of the Revenue Share.

4. **Removal of Section 5 of the Agreement.** Section 5 of the Agreement is deleted in its entirety.
5. **Amendment of Section 22 of the Agreement.** Section 22 of the Agreement is deleted in its entirety and replaced as follows:

22. Public Records; Ownership and Access to Records and Audits.

- 22.1. [Intentionally Omitted].
- 22.2. PADL agrees to keep and maintain public records in PADL's possession or control in connection with PADL's performance under this Agreement. The Village Manager or her designee shall, during the term of this Agreement and for a period of three (3) years from the date of termination of this Agreement, have access to and the right to examine and audit any records of the PADL involving transactions related to this Agreement. PADL additionally agrees to comply specifically with the provisions of Section 119.0701, Florida Statutes. PADL shall ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed, except as authorized by law, for the duration of the Agreement, and following completion of the Agreement until the records are transferred to the Village.
- 22.3. Upon request from the Village's custodian of public records, PADL shall provide the Village with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided by Chapter 119, Florida Statutes, or as otherwise provided by law.
- 22.4. Unless otherwise provided by law, any and all records, including but not limited to reports, surveys, and other data and documents provided or created in connection with this Agreement are and shall remain the property of the Village.
- 22.5. Upon completion of this Agreement or in the event of termination by either party, any and all public records relating to the Agreement in the possession of the PADL shall be delivered by the PADL to the Village Manager, at no cost to the Village, within seven (7) days. All such records stored electronically by PADL shall be delivered to the Village in a format that is compatible with the Village's information technology systems. Once the public records have been delivered upon completion or termination of this Agreement, the PADL shall destroy any and all duplicate public records that are exempt or confidential and exempt from public records disclosure requirements.
- 22.6. Any compensation due to PADL shall be withheld until all records are received as provided herein.
- 22.7. PADL's failure or refusal to comply with the provisions of this section shall result in the immediate termination of this Agreement by the Village.

22.8. Notice Pursuant to Section 119.0701(2)(a), Florida Statutes. IF PADL HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO PADL'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS: Jocelyn B. Koch, 88 West McIntyre Street, Key Biscayne, FL 33149, Telephone: 305-365-5506, Email: JKoch@keybiscayne.fl.gov.

6. **Conflict; Amendment Prevails.** In the event of any conflict or ambiguity between the terms and provisions of this First Amendment and the terms and provisions of the Agreement, the terms and provisions of this First Amendment shall control.
7. **Agreement Ratified.** Except as otherwise specifically set forth or modified herein, all terms in the Agreement are hereby ratified and affirmed and shall remain unmodified and in full force and effect in accordance with its terms.
8. **Defined Terms.** All initial capitalized terms used in this First Amendment but not otherwise defined herein shall have the same meaning ascribed thereto in the Agreement.
9. **Counterparts.** This First Amendment may be executed in counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. An executed facsimile or electronic copy of this First Amendment shall have the same force and effect as an original hereof.

[THIS SPACE INTENTIONALLY LEFT BLANK. SIGNATURE PAGE FOLLOWS.]

3HX8595-1st Amendment to Revocable License Agreement with PADL

Final Audit Report

2020-12-14

Created:	2020-12-14
By:	Natalie Winters (nwinters@keybiscayne.fl.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAnq9nEIHFjcg1Jdff6DoKdO8YdqulzuDt

"3HX8595-1st Amendment to Revocable License Agreement with PADL" History

-  Document created by Natalie Winters (nwinters@keybiscayne.fl.gov)
2020-12-14 - 5:31:58 PM GMT- IP address: 50.206.46.18
-  Document emailed to Andrea Agha (aagha@keybiscayne.fl.gov) for signature
2020-12-14 - 5:32:25 PM GMT
-  Email viewed by Andrea Agha (aagha@keybiscayne.fl.gov)
2020-12-14 - 7:22:04 PM GMT- IP address: 64.57.201.0
-  Document e-signed by Andrea Agha (aagha@keybiscayne.fl.gov)
Signature Date: 2020-12-14 - 7:22:18 PM GMT - Time Source: server- IP address: 64.57.201.0
-  Agreement completed.
2020-12-14 - 7:22:18 PM GMT



VILLAGE OF KEY BISCAYNE

STAFF MEMORANDUM

Village Council
Joe I. Rasco, Mayor
Oscar Sardiñas, Vice Mayor
Michael F. Bracken
Franklin H. Caplan
Edward London
Nancy Stoner
Fernando A. Vazquez

Village Manager
Steven C. Williamson

DATE: September 8, 2026
TO: Honorable Mayor and Councilmembers
FROM: Steven C. Williamson, Village Manager
RE: 2027 State Legislative Agenda and FY28 Federal Legislative Agenda

RECOMMENDATION

Recommend Village Council approve Village of Key Biscayne's 2027 State and FY28 Federal Legislative Agendas and authorize the mayor, staff, and legislative consultants to advocate for the Village's legislative priorities, funding requests, and grant opportunities.

DISCUSSION

Purpose: To establish the Village's 2027 State and FY28 Federal Legislative Agendas, which guide the legislative priorities, advocacy efforts, and funding requests for the upcoming state and federal legislative cycles. The agendas provide policy direction for elected officials, staff, and legislative consultants while advancing the Village's strategic goals and community interests.

Background: Each year, the Village develops state and federal legislative priorities to guide advocacy efforts and coordinate with elected officials, agency partners, and legislative representatives. These agendas provide a framework for pursuing policy initiatives, appropriations, grants, and other funding opportunities that advance the Village's strategic objectives.

The proposed agendas are guided by principles that promote community resilience, environmental stewardship, public safety, mobility, quality of life, and effective local governance. The Village supports initiatives that protect home rule authority, strengthen fiscal sustainability, improve resilience to flooding and coastal hazards, protect environmental resources and water quality, enhance transportation and mobility, support emergency preparedness, and foster community well-being. The Village also advocates for responsible planning, infrastructure investment, innovation, and regional collaboration to address the unique needs of coastal and barrier island communities.

Consistent with these principles, the State Legislative Agenda focuses on issues affecting local government authority, resilience, environmental stewardship, public safety, transportation, and quality of life, including appropriation requests for infrastructure, flood mitigation, senior services, and coastal protection. The Federal Legislative Agenda advances funding requests for coastal resilience, flood protection, and critical infrastructure projects that help safeguard residents, public facilities, transportation access, and community assets from increasing environmental and climate-related risks.

Justification: The State and Federal Legislative Agendas are important tools for advancing Village priorities and securing outside funding. Continued advocacy helps ensure Key Biscayne receives consideration for legislative initiatives, appropriations, grants, and agency programs that support the Village's resilience, infrastructure, environmental, public safety, and community service objectives.

Beyond funding requests, the agendas establish policy positions that guide the Village's response to legislation and administrative actions affecting municipal authority, revenue stability, infrastructure investment, environmental protection, transportation, public safety, and quality of life. They also provide

direction for monitoring emerging issues such as coastal resiliency, utility undergrounding, property and flood insurance, condominium legislation, water quality, and government modernization.

The proposed priorities align with ongoing Village investments in the Resilient Infrastructure and Adaptation Program (RIAP), stormwater management, shoreline protection, transportation improvements, public safety enhancements, and quality-of-life services. Adoption of these agendas provides clear direction to the Mayor, Council, staff, and legislative consultants and strengthens the Village's advocacy before the Florida Legislature, Congress, and administrative agencies.

Implementation Plan: Upon approval, staff will distribute the adopted State and Federal Legislative Agendas to legislative consultants, elected officials, and agency partners, and will use the Legislative Priorities Exhibit to guide advocacy efforts throughout the year.

The Mayor, Village Manager, and legislative consultants will advocate for the Village's priorities before state and federal decision-makers, support appropriations requests, monitor relevant legislation, and coordinate with partner organizations when interests align.

Staff will provide periodic updates to the Village Council on legislative activity, funding requests, grant opportunities, and key outcomes. Any significant changes to legislative priorities or policy positions will be presented to the Council for direction.

This approach ensures the agendas serve as both an annual funding strategy and a policy framework for advancing the Village's strategic objectives and protecting its interests.

RESOURCE IMPACT

Recurring Funding: N/A

Personnel: Mayor, Village Manager, and supporting departmental staff as required

Equipment, Facilities and Training: N/A

FUNDING SOURCES

- GL Code: 001-13-513-31103-000000
- Budget-Line Items: Federal Lobbying Support
- Amounts: \$78,000
- GL Code: 001-13-513-31030-000000
- Budget-Line Items: State Lobbying Support
- Amounts: \$75,000

STRATEGIC CONNECTION

The State and Federal Legislative Agendas support the Village's strategic priorities by advancing efforts to secure external funding, strengthen infrastructure resilience, protect environmental resources, enhance public safety, and preserve the Village's exceptional quality of life.

- Goal – Communicate and Collaborate with Community and Partners
- Focus Area – Collaborate with Partners
- Actions – Develop and pursue state and federal agendas & advance regional partner coordination and relationships

ATTACHMENTS

- A. Village of Key Biscayne Legislative Priorities (Exhibit A)
- B. 2027 State Legislative Agenda Packet
- C. FY28 Federal Legislative Agenda Packet

Prepared by: Steven C. Williamson, Village Manager

Reviewed by Chad Friedman from Weiss Serota Helfman Cole & Bierman as to form and legal sufficiency.

RESOLUTION NO. 2026-_____

**A RESOLUTION OF THE VILLAGE COUNCIL OF THE
VILLAGE OF KEY BISCAYNE, FLORIDA, ESTABLISHING
THE VILLAGE'S 2027/2028 LEGISLATIVE PRIORITIES;
AND PROVIDING FOR AN EFFECTIVE DATE.**

WHEREAS, the Village of Key Biscayne (the “Village”) Council desires to establish the policies and appropriations for fiscal years 2027/2028, all as set forth in greater detail in the Legislative Priorities attached hereto as Exhibit “A,” the 2027 State Legislative Agenda attached hereto as Exhibit “B,” and the 2028 Federal Legislative Agenda attached hereto as Exhibit “C” (collectively, the “Legislative Priorities”); and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the Village and its residents.

**NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE
VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:**

Section 1. **Recitals.** That the above recitals are true and correct and incorporated herein by this reference.

Section 2. **Establishing Legislative Priorities.** That the Village Council hereby establishes the policies and appropriations set forth in the Legislative Priorities attached hereto as Exhibits “A,” “B,” and “C.”

Section 3. **Effective Date.** That this Resolution shall take effect immediately upon adoption.

PASSED and ADOPTED this ____ day of _____, 2026.

JOE I. RASCO, MAYOR

ATTEST:

JOCELYN B. KOCH
VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY

EXHIBIT A: VILLAGE OF KEY BISCAYNE LEGISLATIVE PRIORITIES

The Village of Key Biscayne supports legislation, policies, funding opportunities, and intergovernmental partnerships that advance the Village's strategic goals of community resiliency, environmental stewardship, public safety, mobility, quality of life, and effective local governance. The Village's legislative priorities include the following:

Home Rule and Local Government Authority

- Protect and advance the constitutional and statutory home rule powers of municipalities.
- Oppose unfunded mandates, preemptions, or legislation that unnecessarily limits local decision-making authority.
- Promote a stable and diversified framework of municipal revenue sources necessary to provide essential local government services.

Resiliency, Infrastructure, and Coastal Protection

- Advocate for policies, regulatory reforms, and funding opportunities that strengthen community resilience to coastal hazards, flooding, storm impacts, and sea level rise.
- Encourage investment in resilient public infrastructure, including stormwater systems, transportation networks, public facilities, utilities, and other critical infrastructure.
- Prioritize the hardening, modernization, reliability, and undergrounding of electrical, telecommunications, and other utility infrastructure serving coastal and barrier island communities.
- Advance shoreline protection, beach renourishment, coastal restoration, and other measures that preserve coastal resources and public access.
- Promote improved coordination among federal, state, regional, and local agencies to facilitate timely resilience, infrastructure, and environmental projects.

Environmental Stewardship and Water Quality

- Champion initiatives that protect, restore, and enhance water quality, marine resources, public waterways, beaches, and coastal ecosystems.
- Advance legislation, regulations, and funding programs that address water quality challenges affecting Biscayne Bay and other regional water resources.
- Encourage innovative and sustainable approaches to managing coastal environmental conditions and natural resource impacts.
- Foster environmental sustainability, ecosystem restoration, and long-term stewardship of natural resources.

Land Use, Community Planning, and Growth Management

- Promote responsible planning, intergovernmental coordination, and consideration of regional impacts associated with development and growth.
- Encourage collaboration among neighboring jurisdictions when proposed actions may affect traffic, infrastructure, public safety, environmental conditions, or quality of life beyond municipal boundaries.
- Recognize and advocate for planning frameworks that address the unique circumstances and challenges of coastal and barrier island communities.

EXHIBIT A: VILLAGE OF KEY BISCAYNE LEGISLATIVE PRIORITIES

Public Safety and Emergency Preparedness

- Strengthen legislative and funding efforts related to emergency preparedness, disaster response, hazard mitigation, and recovery.
- Promote initiatives that enhance community, pedestrian, and boating safety.
- Advance investments in infrastructure, technology, and equipment that improve public safety operations and emergency coordination.

Transportation and Mobility

- Advocate for transportation policies and funding programs that improve connectivity, safety, accessibility, and mobility.
- Encourage balanced approaches to emerging mobility technologies while prioritizing public safety and community compatibility.
- Promote investments that expand multimodal transportation options and accessibility.

Community Well-Being and Quality of Life

- Advance policies that enhance health, wellness, recreation, cultural opportunities, and community engagement.
- Promote services and resources that foster independence, safety, and quality of life for older adults and other populations with unique community needs.
- Cultivate vibrant public spaces, strong neighborhoods, and quality of life for residents.

Technology and Innovation

- Encourage the responsible use of emerging technologies and innovation to improve government efficiency and service delivery.
- Promote policies that strengthen cybersecurity, data protection, and technological resilience for local governments.

Monitoring and Advocacy

The Village will monitor and advocate on legislation, regulations, administrative policies, and funding opportunities affecting:

- Municipal home rule and local government authority.
- Municipal revenues and fiscal sustainability.
- Coastal resiliency and climate adaptation.
- Utility infrastructure reliability and undergrounding.
- Beach and shoreline protection.
- Water quality and environmental protection.
- Property and flood insurance availability and affordability.
- Condominium and community association legislation.
- Transportation and mobility issues.
- Public safety and emergency management.
- Community health, wellness, and aging services.
- Technology, innovation, and government modernization.

The Village shall also work collaboratively with federal, state, regional, municipal, and partner organizations whose legislative priorities advance the interests of the Village of Key Biscayne and its residents.



VILLAGE OF KEY BISCAYNE

State Legislative Interests

August 31, 2026

Legislative Topics to Monitor:

- Land use, zoning, and building codes affecting coastal and barrier island communities
- Tax proposals potentially affecting local municipalities and home rule authorities
- Revenue diversification for local governments
- Condominium association governance, operations, and financial requirements
- Property and flood insurance affordability and availability in coastal communities
- Electrical and telecommunications grid resilience, reliability, and undergrounding
- Shoreline protection and beach renourishment
- Coastal environmental protection
- Sargassum and seaweed mitigation
- Water quality initiatives
- Boating safety
- Micro-mobility initiatives impacting motorized scooters and electric bicycle usage
- State park and local government coordination

Administration Programs to Monitor:

1. *Resilience and Coastal Protection:*

Beach Management Funding Assistance Program

- Fully fund or increase program funding
- Village benefits:
 - Beach renourishment
 - Offshore barrier reef

Resilient Florida

- Fully fund or increase program funding
- Village benefits:
 - Design and construction of the Village's Resilient Infrastructure & Adaptation Program (RIAP)

2. *Water Restoration Assistance:*

Clean Water State Revolving Fund

- Fully fund or increase program funding
- Village benefits:
 - Design and construction of the stormwater components of the Village's Resilient Infrastructure & Adaptation Program (RIAP)

FDEP Water Quality Improvement Program

- Fully fund or increase program funding
- Village benefits:
 - Design and construction of stormwater treatment systems supporting the Village's Resilient Infrastructure & Adaptation Program (RIAP)
 -



VILLAGE OF KEY BISCAYNE

3. *Coastal Ecosystem Restoration:*

Florida Coral Reef Restoration and Recovery Initiative
FDEM Coral Reef Shoreline Mitigation & Protection Program



VILLAGE OF KEY BISCAYNE

2027 State Appropriations Requests

August 31, 2026

Sunset Circle Outfall Repair:

- The project includes repair and replacement of critical stormwater outfall infrastructure serving the Key Biscayne K-8 Community School area. The improvements will restore the system's ability to efficiently discharge stormwater, improve reliability during heavy rainfall events, reduce localized flooding risks, and protect surrounding public infrastructure and private property in an area used daily by students, families, school staff, and nearby residents. The project addresses aging coastal infrastructure that is essential to maintaining safety and stormwater system performance around our local public school.
- Project cost: \$2,500,000. The Village requests \$1,000,000 from the State and commits \$1,500,000 in federal CPF grant match.
- Without funding, the deteriorating outfall infrastructure will continue to pose risks to school safety and the Village's stormwater system performance, increasing the potential for flooding, erosion, infrastructure failures, and emergency repair costs. Delayed repairs may result in more extensive damage to public facilities and adjacent properties, leading to significantly higher future replacement costs and reduced resilience during major storm events.

Garden District Pump Station Installation:

- The project includes construction of a new stormwater pump station and associated infrastructure improvements within the Garden District. The pump station will enhance drainage capacity, improve flood protection during heavy rainfall and tidal events, and support the Village's long-term resilience strategy. The project serves one of Key Biscayne's most densely populated residential areas, home to approximately 5,000 residents across 1,500 housing units, and is a critical component of the Village's broader flood mitigation efforts.
- Project cost: \$2,500,000. The Village requests \$1,000,000 from the State and commits \$1,500,000 in FEMA HMGP Grant match.
- Without funding, residents within the Garden District will continue to experience recurring flooding and associated impacts to homes, vehicles, infrastructure, and public safety. Delays in implementation will increase future construction costs, prolong risks to one of the Village's most vulnerable neighborhoods, and may jeopardize the Village's ability to leverage major federal HMGP resources tied to the local match.

Seniors Programming:

- Request supports the Village's senior program to improve the quality of life for residents ages 60 and older by providing recreational, social, health, wellness, and educational opportunities, while also offering support services and resources that promote



VILLAGE OF KEY BISCAYNE

independence, engagement, and overall well-being, including support for older adults with physical and cognitive impairments.

- Project cost: \$265,000. The Village requests \$125,000 from the State and commits \$140,000 in local match.
- Senior programming serves more than 15% of the Village's population, a share significantly higher than surrounding areas, and plays a critical role in maintaining health, safety, and community connections for older adults. Due to Key Biscayne's geographic isolation, accessible only via a single causeway, local programs are especially important. Without funding, the Village would be forced to reduce services that help prevent social isolation, support healthy aging, reduce dependence on emergency and social service programs, and avoid shifting from proactive engagement to more costly reactive services.

Extend Streetlight Coverage for Safety:

- The project expands streetlight coverage throughout targeted areas of the Village to improve pedestrian safety, bicycle safety, roadway visibility, and public security. Enhancements will address existing lighting gaps along key travel corridors, neighborhood streets, and public spaces, improving visibility for residents, visitors, and first responders while creating a safer environment for all users.
- Project cost: \$2,500,000. The Village requests \$750,000 from the State and commits \$1,750,000 in local match.
- Without funding, existing lighting deficiencies will remain, leaving ongoing safety concerns for pedestrians, cyclists, and motorists during nighttime and low-visibility conditions. Gaps in lighting along key roadways and public spaces will persist, limiting efforts to enhance public safety and support a more walkable, connected community.

Beach Access Pathway Improvement:

- This project constructs a critical public access pathway to Key Biscayne's beachfront, providing safe and controlled access for residents and visitors while protecting sensitive dune systems and endangered sea turtle nesting habitat. The pathway will help direct pedestrian traffic, reduce environmental impacts, improve accessibility, and support long-term coastal stewardship objectives. It also supports the Village's ability to rejoin the U.S. Army Corps of Engineers Coastal Storm Risk Management Program, unlocking access to substantial federal coastal protection resources.
- Project cost: \$350,000. The Village requests \$175,000 from the State and commits \$175,000 in local match.
- Without funding, uncontrolled pedestrian access will continue to contribute to degradation of sensitive coastal resources and create challenges for managing public access to the beach. Delaying the project will limit the Village's ability to protect environmental assets, improve accessibility, enhance visitor safety, and pursue federal coastal protection resources that could help safeguard approximately \$15 billion in local property value.



VILLAGE OF KEY BISCAYNE

State Grants and Loan Requests

August 31, 2026

The Village takes a strategic and thoughtful approach to pursuing grant funding and financing. With impending sea level rise and increasingly frequent and intense storms, the Village is investing in protecting life, property, and quality of life now and for generations to come. Most current and future loan and grant pursuits support the Village's Resilient Infrastructure and Adaptation Program (RIAP). RIAP is an integrated program to protect our shorelines, upgrade our stormwater systems, improve our roadways, and underground our utilities. Other grants support beach renourishment and transportation initiatives.

1. **Hazard Mitigation Grant 4486-092R Phase 2:** FEMA/FDEM | Grant Amount: \$6,755,682 | Match: 54% | Status: FEMA Review | Project Cost: \$14,701,270 | Project: Phase 2 – Construct Garden District Stormwater Drainage Improvements
2. **State Appropriation FY26** | FDEP | \$375,000 | Match: TBD | Status: Contract Execution | Project Cost: \$14,701,270 | Project: Phase 2 – Construct Garden District Stormwater Drainage Improvements
3. **State Appropriation FY26** | FDEP | \$250,000 | Match: TBD | Status: Contract Execution | Project Cost: \$1,200,000 | Project: Feasibility Study and Preliminary Design for Offshore Reef Breakwater System.
4. **TPO Municipal Planning Grant:** Miami-Dade TPO | Grant Amount: \$40,000 | Match: 73% | Status: Contract Execution | Project Cost: \$150,000 | Project: Planning and Conception Design for Fernwood Drive Improvements Project
5. **FDOT Transportation Alternatives Program:** FDOT | Grant Amount: \$1,500,000 | Match 60% | Status: Notice of Award Received, project scheduled in FDOT Tentative Work Program for FY2031 | Project: Fernwood Drive Improvements Project
6. **Beach Management Funding Assistance Program:** FDEP | Request Amount \$1,120,385.00 | Match: \$1,329,615.00 | Status: Funds available for 2027 projects. | Project Cost: \$2,450,000.00 | Project: Beach renourishment and dune restoration

Points of Contact:

Steven Williamson, Village Manager, Village of Key Biscayne, swilliamson@keybiscayne.fl.gov | (786) 570-1618
Colleen Durfee, Grants Manager, Village of Key Biscayne, cdurfee@keybiscayne.fl.gov | (305) 365-8948
Jared Rosenstein, Capital City Consulting, jared@cccfla.com | (786) 247-8716



VILLAGE OF KEY BISCAINE

Federal FY28 Appropriations Requests

August 31, 2026

Oceanside Dune System Reinforcement:

- The project reinforces and enhances Key Biscayne's primary oceanside dune system to improve coastal resilience, reduce erosion, and provide greater protection from storm surge and wave action. The project includes dune restoration, strategic sand placement, native vegetation installation, stabilization measures, and related improvements designed to strengthen the island's natural coastal defenses. The dune system serves as the Village's first line of protection against hurricanes and severe coastal storms while supporting critical habitat and preserving public beach resources. The project helps protect approximately 10,000 residents, 35 multifamily condominium buildings, the Village's hotel district, and nearly \$8 billion in property value.
- Project cost: \$4,000,000. The Village requests \$2,000,000 and commits \$2,00,000 in local match.
- Funding this project will strengthen protection for residents, businesses, critical infrastructure, and the Village's only evacuation route. A reinforced dune system will help reduce storm damage, mitigate erosion, improve long-term coastal resilience, protect public and private property values, and preserve one of the community's most important natural assets. The project will also reduce future recovery costs associated with storm impacts while supporting environmental stewardship and habitat preservation. Continued investment in this natural defensive system will help protect thousands of residents and billions of dollars in community assets from increasing storm and sea level rise risks.

West Matheson Neighborhood Outfall Repair:

- The project repairs and upgrades the West Matheson Drive stormwater outfall system that serves one of the Village's most flood-prone areas and supports the broader Zone 1 stormwater improvement program. The existing outfall infrastructure is critical to conveying stormwater away from surrounding neighborhoods during heavy rainfall and tidal events. Improvements will restore system reliability, improve discharge capacity, reduce localized flooding, and protect public infrastructure and adjacent properties. The area served includes a public school, numerous single-family residences, approximately 2,000 residents, and approximately \$1.5 billion in property value.
- Project cost: \$2,500,000. The Village requests \$1,000,000 and commits \$1,500,000 in local match.
- Funding this project will improve stormwater system performance, reduce flooding in vulnerable residential areas, protect roadways and public infrastructure, and support ongoing resilience investments throughout the Village. Without these improvements, aging infrastructure will continue to increase flood risks, maintenance costs, and potential damage to homes, public facilities, and transportation networks during major storm events.



VILLAGE OF KEY BISCAYNE

The project will provide enhanced flood protection for a critical residential area, help safeguard access to a public school, and protect about \$1.5 billion in community assets.

Holiday Colony Neighborhood Flood Reduction:

- The project implements neighborhood-scale flood reduction improvements within the Holiday Colony area, a residential community consisting of both single-family and multi-family homes, as well as the Village's public library. The project will improve stormwater conveyance and drainage capacity through infrastructure upgrades designed to reduce the frequency, depth, and duration of flooding caused by increasingly intense rainfall events, elevated groundwater conditions, and tidal influences. The project helps protect residential homes, multifamily residences, the Village's public library, and nearly \$2 billion in property value.
- Project cost: \$8,500,000. The Village requests \$3,000,000 and commits \$5,500,000 in local match.
- Funding this project will protect residents and public facilities from recurring flood impacts while improving public safety, emergency access, and neighborhood resilience. The project will help safeguard homes, multifamily residences, the public library, roadways, and supporting infrastructure from flood-related damage. By reducing chronic flooding, the Village can better protect property values, improve quality of life, and ensure continued access to essential community services during severe weather events. This investment will protect a critical residential neighborhood, preserve access to essential public services, and reduce flood risks to close to \$2 billion in community assets.

Points of Contact:

Steven Williamson, Village Manager, Village of Key Biscayne, swilliamson@keybiscayne.fl.gov | (786) 570-1618

Colleen Durfee, Grants Manager, Village of Key Biscayne, cdurfee@keybiscayne.fl.gov | (305) 365-8948

Jim Davenport, Thorn Run Partners, jim.davenport@thornrun.com | (703) 597-2009



VILLAGE OF KEY BISCAYNE

STAFF MEMORANDUM

Village Council
Joe I. Rasco, Mayor
Oscar Sardiñas, Vice Mayor
Michael F. Bracken
Franklin H. Caplan
Edward London
Nancy Stoner
Fernando A. Vazquez

Village Manager
Steven C. Williamson

DATE: September 8, 2026
TO: Honorable Mayor and Councilmembers
FROM: Steven C. Williamson, Village Manager
RE: Offshore Feasibility and Preliminary Shoreline Design and Study

RECOMMENDATION

Recommend Village Council select Moffatt & Nichol Inc. for the Village of Key Biscayne Offshore Feasibility and Preliminary Shoreline Design and Study and authorize the Village Manager to negotiate an agreement with the Consultant. If negotiations with the recommended firm are unsuccessful, further recommend the Village Manager to negotiate with the next-ranked proposer.

DISCUSSION

Purpose: To develop a scientifically validated and implementable framework for offshore artificial reef systems intended to reduce shoreline erosion, improve coastal resilience, and deliver ecological co-benefits. The work will combine oceanographic field data, advanced wave and sediment-transport modeling, benthic habitat assessment, prototype fabrication, coral propagation testing, preliminary engineering design, and evaluation of the regulatory and permitting pathway.

Background: The Village experiences chronic erosion along its 1.2-mile Atlantic shoreline, with an estimated annual loss of approximately 12,000 cubic yards of sand. Shoreline recession threatens critical infrastructure, the dune system, the Village's evacuation route, and substantial adjacent property values. Traditional beach renourishment has been used since 1969, but the interval between projects has shortened and the approach does not directly address unattenuated wave energy reaching the shoreline.

Procurement Process and Evaluation: The Village issued RFQ No. 2026-09 on May 19, 2026, and advertised the solicitation through the Village website and notice board, DemandStar, and the Miami Herald. Two responsive qualification packages were received on June 23, 2026, from GHD Services Inc. and Moffatt & Nichol Inc. Procurement completed due diligence and found both firms properly licensed, qualified, and responsive, with no material defects identified.

The Evaluation Committee reviewed the written submissions, heard presentations, and scored each proposer using the RFQ criteria: project approach (40 points), organizational profile (30 points), and experience and qualifications (30 points). Moffatt & Nichol received 473 of 500 available points and ranked first; GHD Services received 459 points and ranked second.

Justification: The Committee's recommendation reflects Moffatt & Nichol's comprehensive technical and community-engagement approach; partnership with the University of Miami Rosenstiel School of Marine, Atmospheric, and Earth Science; access to local expertise and data; consideration of innovative and cost-effective alternatives; and strong municipal references. The team's local presence and specialized coastal engineering, marine science, coral, and hybrid-reef expertise position it to perform the study effectively and rigorously.

Implementation/Integration Plan: Following Council approval, the Village Manager will negotiate the

agreement with the top-ranked firm. The two-year study will advance through site assessment and data collection, technical modeling, preliminary design, prototype and ecological testing, stakeholder engagement, and regulatory analysis. Each phase is intended to inform the next and to complement ongoing federal and regional coastal-resilience efforts.

The recommended team, led by **Moffatt & Nichol Inc.** in partnership with the **University of Miami Rosenstiel School of Marine, Atmospheric, and Earth Science**, brings a unique combination of nationally recognized coastal engineering expertise and world-class marine science capabilities. Moffatt & Nichol has extensive experience in the analysis and modeling of coastal systems, shoreline processes, and the design of protective coastal infrastructure. This expertise is complemented by the University of Miami's Rosenstiel School, an internationally recognized leader in coral research, reef restoration, marine ecology, and the development of hybrid artificial reef systems.

The partnership provides the Village with direct access to a multidisciplinary team of engineers, oceanographers, marine scientists, and coral experts capable of evaluating both the shoreline protection and ecological benefits of a hybrid offshore reef approach. The University of Miami's longstanding presence in the region, including its research facilities on Virginia Key, provides valuable local knowledge, scientific resources, and experience with South Florida's unique coastal and marine environments. Together, the team is uniquely qualified to undertake the rigorous scientific investigation, engineering analysis, and stakeholder engagement necessary to determine the feasibility of an offshore artificial barrier reef system for Key Biscayne.

The project will be implemented over a two-year period and will progress through a series of integrated phases, including data collection, site characterization, oceanographic and sediment-transport modeling, ecological assessments, preliminary engineering design, coral propagation testing, and regulatory and permitting analysis. The initial NOAA-funded tasks represent the foundational phase of the study and will provide the technical data and scientific basis necessary to inform subsequent project components funded through state appropriations and the Village's local match. Throughout the study, the consultant team will coordinate with Village staff, regulatory agencies, and key stakeholders to ensure that each phase builds upon the previous one and results in a comprehensive evaluation of the feasibility, constructability, and long-term effectiveness of a hybrid offshore reef system as a shoreline resilience strategy for Key Biscayne.

RESOURCE IMPACT

- **Recurring Funding:** This is a multi-year professional services study funded through project-specific federal, state, and local sources.

Source	Amount	Use
Federal appropriation administered by NOAA	\$412,500	Initial three tasks
State appropriation administered by FDEP	\$250,000	Later study tasks
Local match	\$412,500	Later study tasks and required match
Total	\$1,075,000	Full feasibility study

- **Personnel:** Work will be performed by the selected consultant team and managed by the Village's Chief Resilience and Sustainability Officer, with support from appropriate Village departments.
- **Equipment:** N/A
- **Facilities:** N/A
- **Training:** N/A

FUNDING SOURCES

This is a multi-year professional services study funded through project-specific federal, state, and local sources.

- **GL Code:** 301-41-541-63073
- **Budget Line-Item:** Design off-Shore Hybrid Reef
- **Amount:** \$1,075,000
- **Maintenance & Repair:** N/A

STRATEGIC CONNECTION (GOAL / FOCUS AREA)

This work advances the Resilient Infrastructure and Adaptation Program, specifically the Village's shoreline-protection and coastal-resilience priorities.

- **Goal** - Resilient and Sustainable Environment and Infrastructure
- **Focus Area** – Protect Shorelines
- **Action** – Perform offshore barrier reef feasibility study and preliminary design

ATTACHMENT(S)

- A. Procurement Documents Links Sheet
- B. Procurement Recommendation Memorandum and Evaluation Results
- C. Recommended Proposal & Presentation

Prepared by: Roland Samimy, Ph.D., Chief Resilience and Sustainability Officer

Department Director: Christopher Miranda | Public Works Department

Reviewed by Mr. Chad Friedman of Weiss Serota Helfman Cole & Bierman as to form and legal sufficiency.

RESOLUTION NO. 2026- _____

A RESOLUTION OF THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, SELECTING MOFFATT & NICHOL, INC. FOR THE OFFSHORE FEASIBILITY AND PRELIMINARY SHORELINE DESIGN STUDY PURSUANT TO REQUEST FOR QUALIFICATIONS NO. 2026-09 (“RFQ”); PROVIDING FOR AUTHORIZATION; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Village of Key Biscayne (“Village”) issued Request for Qualifications No. 2026-09 (“RFQ”) for the Offshore Feasibility and Preliminary Shoreline Design Study (the “Project”); and

WHEREAS, two (2) firms submitted their qualifications by the RFQ deadline; and

WHEREAS, the Evaluation Committee ranked Moffatt and Nichol, Inc. (the “Consultant”) as the most qualified firm for the Project; and

WHEREAS, the Village Manager recommends that the Village Council select the Consultant for the Project; and

WHEREAS, the Village Council desires to select the Consultant as the most qualified firm for the Project and authorize the Village Manager to negotiate an agreement with the Consultant, which agreement shall be presented to the Village Council for approval at a future meeting; and

WHEREAS, the Village Council finds that this Resolution is in the best interest and welfare of the residents of the Village.

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE COUNCIL OF THE VILLAGE OF KEY BISCAYNE, FLORIDA, AS FOLLOWS:

Section 1. Recitals. That each of the above-stated recitals are hereby adopted, confirmed, and incorporated herein.

Section 2. **Selection.** That the Village Council hereby selects the Consultant for the Project.

Section 3. **Authorization.** That the Village Council hereby authorizes the Village Manager to negotiate an agreement with the Consultant for the Project, which agreement shall be presented to the Village Council for approval at a future meeting. If an agreement cannot be reached with the top-ranked Consultant, the Village Manager is authorized to negotiate with the next highest ranked firm until an agreement in the best interest of the Village is reached.

Section 4. **Effective Date.** That this Resolution shall be effective immediately upon adoption.

PASSED and ADOPTED this _____ day of _____, 2026.

JOE I. RASCO, MAYOR

ATTEST:

JOCELYN B. KOCH, CMC
VILLAGE CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

WEISS SEROTA HELFMAN COLE & BIERMAN, P.L.
VILLAGE ATTORNEY



VILLAGE OF KEY BISCAINE

PROCUREMENT DOCUMENTS LINK

RFQ # 2026-09 Village of Key Biscayne Offshore Feasibility and Preliminary Shoreline Design Study

Below are links to procurement documents for:
(click on each line for document)

1. [Request for Qualifications \(RFQ\)](#)
2. [RFQ Addendum No. 1](#)
3. [RFQ Addendum No. 2](#)
4. [Bid Tabulation Sheet](#)
5. [Evaluation Committee Meeting Minutes](#)
6. [Evaluation Recommendation](#)
7. [Recommended Proposal & Presentation – Moffatt & Nichol Inc.](#)
8. **Purchase Requisition – [N/A](#)**

Daren Jairam, MBA, MHC
Procurement Officer
djairam@keybiscayne.fl.gov
305-365-7577



VILLAGE OF KEY BISCAINE

MEMORANDUM

Village Council

Joe I. Rasco, Mayor
Oscar Sardiñas, Vice Mayor
Michael F. Bracken
Franklin H. Caplan
Edward London
Nancy Stoner
Fernando A. Vazquez

DATE: August 28, 2026

TO: Steven Williamson – Village Manager

CC: Benjamin Nussbaum – Village Chief Financial Officer
 Jennifer Rodero – Chief of Staff
 Christopher Miranda – Public Works Director

FROM: Daren Jairam, Procurement Officer

RE: Procurement Recommendation to Award for RFQ No. 2026-09 –
 Village of Key Biscayne Offshore Feasibility and Preliminary
 Shoreline Design and Study

Village Manager

Steven C. Williamson

RECOMMENDATION

It is recommended that the Village Manager negotiate an agreement with **Moffatt & Nichol Inc.**, the highest ranked proposal, for Village of Key Biscayne Offshore Feasibility and Preliminary Shoreline Design and Study. The proposed agreement will be for two (2) years with no option to extend.

BACKGROUND

In accordance with government procurement best practices, and as part of a larger effort to ensure best value and promote fair and open competition for Village contracts, the decision was made to go out to market for these services.

The Village issued an RFQ (Request for Qualifications) on May 19, 2026. The RFQ was posted to the Village's website and Notice Board, DemandStar and Miami Herald. A non-mandatory pre-conference meeting was held for interested vendors where a bid summary was given.

The RFQ allows potential vendors to submit their best proposal based on specified deliverables, qualifications, experience, and capabilities. Vendors are then ranked to allow the Village the opportunity to negotiate the best and final offer with the highest ranked vendor.

SCOPE OF WORK

The Village intends to select qualified and experienced firm to develop a scientifically validated and implementable framework for hybrid offshore artificial reef systems that reduce shoreline erosion, enhance coastal resilience, and provide significant ecological co-benefits for the Village of Key Biscayne and the broader southeast Florida coast on the following project: Village of Key Biscayne Feasibility and Preliminary Shoreline Design Study. Services shall be in full accordance with the specifications, terms and conditions contained in Section 2 of this Request for Qualifications (RFQ).

To qualify for award, prospective Proposers were required to:

- A. Meet the objectives and team qualifications set in the RFQ Scope of Services.
- B. Have a minimum of five (5) years' experience, principal, project manager and company.



VILLAGE OF KEY BISCAINE

- C. Must be appropriately licensed and in good standing with the Florida Department of Professional Regulation.

EVALUATION AND RANKING PROCESS

On June 23, 2026, two (02) proposals were received from the following firms:

No.	Proposer	Years Experience	
1.	GHD Services Inc.	98	
2.	Moffatt & Nichol Inc.	25	

The Evaluation Committee comprises the following individuals:

1. Christopher Miranda, Public Works Director
2. Jeremy Calleros Gauger, Building, Zoning & Planning Director
3. Colleen Durfee, CIP/Grants Manager
4. Olga Garcia, Building & Zoning Inspector
5. Amy Knowles, City of Miami Beach Chief Resilience Officer

Roland Samimy – Chief Resilience and Sustainability Officer was in attendance as Village subject matter experts.

Procurement conducted a thorough due diligence review of the proposals and determined that the proposals were deemed responsive, with no material defects identified in the proposals or the qualifications of the proposers. Each proposer is properly licensed and qualified to perform the work, has provided the required certifications and references, and no issues were found indicating that any of the responsive proposers would be incapable of delivering the services.

The Evaluation Committee received the proposals and held its initial meeting on July 30, 2026, to review, discuss, hear presentations, and evaluate the submissions. Once the presentations were completed members proceeded to score and rank based on the following criteria.

- a. Project Approach – 40 pts.
- b. Organizational Profile – 30 pts.
- c. Experience and Qualifications – 30 pts.

Committee Member	GHD Services Inc.		Moffatt & Nichol Inc.	
	Scores	Rank	Scores	Rank
Christopher Miranda	95	2	96	1
Colleen Durfee	94	2	98	1
Jeremy Calleros Gauger	95	2	99	1
Olga Garcia	95	1	90	2
Amy Knowles	80	2	90	1



VILLAGE OF KEY BISCAINE

Total Scores and Ranking	459	9	473	6
Final Ranking	2		1	
	GHD Services Inc.		Moffatt & Nichol Inc.	

Proposers were scored out of 500 points then ranked with no. 1 being most favorable in the following order:

1. Moffatt & Nichol Inc. – 473 points
2. GHD Services Inc. – 459 points

NEGOTIATION PROCEESS

The Village will take its recommendation for the final ranking of the shortlisted Proposers to the Village Council for approval and permission to negotiate the contract with the top- ranked Proposer.

RECOMMENDATION

The Evaluation Committee recommends that the Village Manager approve the recommendation and recommends to the Village Council that a contract be executed substantially in the form attached as Exhibit A, with **Moffatt & Nichol Inc.** The recommendation is based on the following key factors:

- **Comprehensive Approach:** Presented a holistic community engagement strategy, incorporating stakeholder input throughout the project, while demonstrating strong knowledge of current state laws and regulatory requirements.
- **University of Miami (UM) Partnership:** UM's Rosentiel School of Marine, Atmosphere, and Earth Science team brings an established partnership with the Village. This collaboration provides direct access to local expertise, research, and institutional knowledge, strengthening the team's understanding of the community and enhancing the project's ability to address local needs and conditions.
- **Local Expertise & Data:** Leveraged existing relationships with three local professors, and access to localized data and expertise to strengthen project analysis and recommendations.
- **Innovative & Cost-Effective Solutions:** Proposed multiple alternatives, including a potential Sargassum improvement barrier, supported by a comprehensive cost-benefit analysis to identify the most effective and feasible long-term solution.
- **References:** Provided strong municipality references stating their performance exceeded expectations and contributed meaningfully to the success of their coastal resiliency initiative.

In the event an agreement cannot be reached with the top-ranked Proposer, it is further recommended that the Village Manager terminate negotiations with that firm and proceed with negotiations with the next highest-ranked Proposers until an agreement can be reached.

☒ Concur

☐ Reject

Signed by:

Steven C Williamson

CFSC095978AA42B...

Steven Williamson – Village Manager

8/31/2026

Date

Request for Qualification

Prepared for the Village of Key Biscayne
June 23, 2026



moffatt & nichol

Village of Key Biscayne Offshore Feasibility and Preliminary Shoreline Design Study

RFQ # 2026-09



Tab A

Representations and Certifications



Cover Sheet →



Company Name

Moffatt & Nichol Inc.



Address

3150 SW 38th Avenue
Suite 600
Miami, FL 33146



Contact Person

Tim Blankenship, PE
Principal-in-Charge
Email: tblankenship@moffattnichol.com
Phone: (786) 725-4180



Request For Qualifications

RFQ Number: 2026-09
RFQ Name: Village of Key Biscayne Offshore Feasibility and Preliminary
Shoreline Design Study
Submitted To: Village of Key Biscayne
Submitted By: Moffatt & Nichol, Inc.
Due Date: June 23, 2026

Proposal Forms →

Form 1: Response Checklist

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

SECTION 6. FORMS, AFFIDAVITS, AND ATTACHMENTS

FORM 1 RESPONSE CHECKLIST

- ☒ Form 1: Response Checklist
- ☒ Form 2: Addendum Acknowledgment
- ☒ Form 3: Certificate of Authority (Complete one of the two forms as applicable)
 - Form 3A: Certificate of Authority (for Corporations or Partnerships)
 - Form 3B: Certificate of Authority (for Individuals)
- ☒ Form 4: Proposer’s Statement of Organization
- ☒ Form 5: References
- ☒ Form 6: Affidavits
 - Form 6A: Single Execution Affidavits
 - Form 6B: Independence Affidavit
 - Form 6C: Non-Collusion Affidavit
- ☒ Form 7: Drug Free Workplace
- ☒ Form 8: Certification to Accuracy of Proposal
- ☒ Form 9: Scrutinized Companies
- ☒ Form 10: Public Entity Crimes
- ☒ Form 11: Dispute Disclosure
- ☒ Form 12: List of Proposed Subcontractors
- ☒ Form 16: Insurance and License Certificates

ATTACHMENTS

- ☒ A: Sample Contract

EXHIBITS

- ☒ A: Scope of Services
- ☒ B: CCNA Schedule
- ☒ C: Certificate of Insurance
- ☒ D: Map



Form 2: Addendum Acknowledgement

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 2
ADDENDUM ACKNOWLEDGEMENT

Solicitation Title:
VILLAGE OF KEY BISCAYNE OFFSHORE FEASIBILITY AND PERLIMINARY SHORELINE DESIGN STUDY
Solicitation No.:
RFQ # 2026-09

Listed below are the dates of issue for each Addendum received in connection with this Solicitation:

Addendum No. <u>1</u>	Dated <u>May 22, 2026</u>
Addendum No. <u>2</u>	Dated <u>June 11, 2026</u>
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

☐ No Addendum issued for this
Solicitation

Firm's Name: Moffatt & Nichol, Inc.

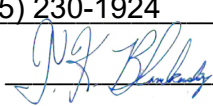
Authorized Representative's Name: Tim Blankenship, PE

Title: Vice President

Email: tblankenship@moffattnichol.com

Address: 3150 SW 38th Avenue, Suite 600, Miami, FL 33146

Phone Number: (305) 230-1924

Authorized Signature: 





CERTIFICATE OF ASSISTANT SECRETARY

MOFFATT & NICHOL

I, Sarah M. Sabunas, hereby certify that I am now and at all times relevant hereto have been the duly elected and acting Assistant Secretary of Moffatt & Nichol, a California corporation (the Corporation).

I further certify that Tim Blankenship, Vice President, duly appointed by the Board of Directors by resolution dated April 1, 2026, is authorized to execute various written agreements and instruments on behalf of the Corporation, which would include the Request for Qualifications (RFQ) submittal for the “Village of Key Biscayne Offshore Feasibility and Preliminary Shoreline Design Study” project (Project), RFQ No. 2026-09, for the Village of Key Biscayne, Florida, RFQ Release Date May 19, 2026, as well as any ancillary instruments necessary to affect said RFQ response, including a resultant Professional Services Agreement for the Project.

The undersigned does further certify that the foregoing resolution has not been revoked, amended or modified, and is in full force and effect as of the date hereof.

IN WITNESS WHEREOF, the undersigned has affixed her signature and the corporate seal of Moffatt & Nichol this 1st day of June 2026.


Sarah M. Sabunas, Assistant Secretary



(SEAL)



Form 4: Statement of Organization

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 4

PROPOSER’S STATEMENT OF ORGANIZATION

1. Full Name of Proposer:
Moffatt & Nichol, Inc.
2. Principal Business Address, Phone and Email Address:
Address: 3150 SW 38th Avenue, Suite 600, Miami, FL 33146
Phone: (786) 725-4180
Email Address: tblankenship@moffattnichol.com
3. Principal Contact Person(s):
Tim Blankenship, PE, Vice President
4. Form of Proposer (Corporation, Partnership, Joint Venture, Other):
Corporation

A. If a corporation, in what state incorporated: California

B. Date Incorporated: July 22, 1957

C. Federal ID Number (EIN) 95-1951343

D. If a joint Venture or Partnership, date of Agreement: Not Applicable

E. Name and address of all partners (state whether general or limited partnership): Not Applicable

F. If other than a corporation or partnership describe, organization and name of principals. Not Applicable
5. Provide names of principals or officers as appropriate and provide proof of the ability of the individuals so named to legally bind proposer.
Name Title
For a full list of Officers and Directors, please refer to the list attached to this form.
6. Indicate the number of years’ proposer has had current continual successful experience performing work of a similar scope relevant to this RFQ Agreement. 25 Years
7. List all entities participating in this Agreement (including subcontractors if applicable):

	Name	Address	Title
A.	Moffatt & Nichol, Inc.	3150 SW 38th Ave. Ste. 600, Miami, FL 33146	Prime Consultant
B.	University of Miami	1320 S Dixie Hwy., Coral Gables, FL 33146	Subconsultant
C.	Olin Hydrographic Solutions, Inc.	5952 Senegal Drive, Jupiter, FL 33458	Subconsultant



- D. Brizaga, Inc. - 2101 W. Commercial Blvd., Ste. 4600, Fort Lauderdale, FL 33309 - Subconsultant
8. Outline specific areas of responsibility for each entity listed in Question 7.
- A. Moffatt & Nichol, Inc.: Coastal Engineering, Resilience & Adaptation, Planning & Outreach, Coastal Permitting, Cost Estimating, Marine Foundation
- B. University of Miami: Marine Environmental, Physical Modeling, Innovative Coastal Structures
- C. Olin Hydrographic Solutions, Inc.: Surveying
- D. Brizaga, Inc.: Public Outreach
9. County or municipal business tax receipt number (attach copies):
 County: 7450679 (Business Tax Receipt attached to this form)
 Municipal: 213512 (Business Tax Receipt attached to this form)
10. What is the last project of this nature you completed?
Key Biscayne Beach Nourishment Annual Monitoring
11. Have you made a site visit? X Yes, No
12. How soon after the award can you begin work? 0 Days.
13. List any licenses, permits or certifications, etc., you hold for performing this type of work.
State of Florida Business Authorization, Florida Department of Business and Professional Regulation (DBPR) Board of Professional Engineers, City of Miami Office Permit. Attached is a copy of Moffatt & Nichol's current Florida DBPR Engineering Business Registry Proof, State of Florida Department of State Good Standing Certificate, and a copy of the Florida Annual Report filed on April 30, 2026.
14. How did you hear about the RFQ? Indicate if it was via the Village's website, internet search, DemandStar, newspapers, email, etc. The Village of Key Biscayne is always looking for ways to improve its services. DemandStar and Email
15. Have you ever failed to complete any work awarded to you?
 Yes No X **If yes, attach a separate sheet of explanation.**
16. Within the last five years, has any officer or partner of your organization ever been an officer or partner of another organization that failed to complete an Agreement?
 Yes No X **If yes, attach a separate sheet of explanation.**
17. Within the last five years, have you ever had a performance, payment or bid bond called?
 Yes No X **If yes, attach a separate sheet of explanation.**
18. Have you, any officer or partner of your organization, or the organization been involved in any litigation or arbitration against the Village?
 Yes No X **If yes, attach a separate sheet of explanation.**
19. Within the last five years, have you, any officer or partner of your organization, or the organization or parent company or its subsidiaries been involved in any litigation or

arbitration against any other Florida public entity?

Yes X No **If yes, attach a separate sheet of explanation.**

(See the attached "Professional Liability Litigation – Claims" document

20. Within the last five years, have you, any officer or partner of your organization, or the organization or parent company or its subsidiaries been involved in any litigation or arbitration against any private entity for an amount greater than \$100,000?

Yes X No **If yes, attach a separate sheet of explanation.**

(See the attached "Professional Liability Litigation – Claims" document

21. Has your organization or any of its partners, officers, or key personnel, or its subsidiaries or parent company been charged or indicted for any criminal activity within the last five years?

Yes No X **If yes, attach a separate sheet of explanation.**

22. Has your organization or any of its partners, officers, or key personnel, or its subsidiaries or parent company been convicted and/or fined for any criminal activity within the last five years?

Yes No X **If yes, attach a separate sheet of explanation.**

23. Within the last five years, have you, any officer or partner of your organization, or the organization been investigated by any local, state, or federal law enforcement agency, criminal justice agency or inspector general office?

Yes No X **If yes, attach a separate sheet of explanation.**

24. Within the last five years, have you, any officer or partner of your organization, or the organization communicated with any local, state, or federal law enforcement agency, criminal justice agency or inspector general office relating to goods or services provided or performed for any governmental entity?

Yes No X **If yes, attach a separate sheet of explanation.**

25. Within the last five years, have there been any reports or audits relating to you, any office or partner of your organization, or the organization issued by any local, state, or federal law enforcement agency, criminal justice agency or inspector general office.

Yes No X **If yes, attach a separate sheet of explanation.**

26. Within the last five years, have you, any officer or partner of your organization, or the organization failed to disclose or made misrepresentations to any governmental entity regarding conflicts of interest or potential or apparent conflicts of interest.

Yes No X **If yes, attach a separate sheet of explanation.**

Moffatt & Nichol

Officers and Directors list

Title	Name	Address
President / Chief Executive Officer	Eric A. Nichol, PE	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Senior Vice President / Chief Financial Officer	Olie Abbamonto	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Senior Vice President / Chief Legal Officer / Secretary	David W. Huchel	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Senior Vice President / Chief Operations Officer	Douglas J. Plasencia, PE	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Senior Vice President	Richard M. Rhoads, PE	2185 N. California Blvd., Suite 500, Walnut Creek, CA 94596
Senior Vice President	Jeffrey L. Sparrow, PE	21308 Small Branch Place, Ashburn, VA 20148
Vice President / Assistant Secretary	Neha Lugo	2780 Lighthouse Point East, Suite D, Baltimore, MD 21224
Vice President / Assistant Secretary	Sarah M. Sabunas	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Senior Vice President	Robert A. Nathan	501 E. Kennedy Blvd., Suite 1910, Tampa, FL 33602
Vice President	Tim Blankenship	3150 SW 38th Avenue, Suite 600, Miami, FL 33146
Vice President	Jeffrey C. Helms	Seville Tower, 226 South Palafox Place, Floor 6, Pensacola, FL 32502
Vice President	Michael N. Herrman	501 E. Kennedy Blvd., Suite 1910, Tampa, FL 33602
Vice President	Shawn Justice	1141 E. Jackson Avenue, Chipley, FL 32428
Vice President	Willson McBurney	1025 Greenwood Blvd., Suite 371, Lake Mary, FL 32746
Vice President	Dave Mulholland	1025 Greenwood Blvd., Suite 371, Lake Mary, FL 32746
Director / Chairman	Eric A. Nichol, PE	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	John Carrato	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	Mark A. Handley	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	Randell H. Iwasaki, PE	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	Ralph Larison	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	Michael N. Rieger	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	Lynn L. Schrier-Behler	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
Director	Richard D. Steinke	4225 E. Conant Street, Suite 101, Long Beach, CA 90808

Ownership

Percent Ownership	Name, Title	Address
35.88%	Eric A. Nichol, PE, President/Chief Executive Officer	4225 E. Conant Street, Suite 101, Long Beach, CA 90808
24.36%	Douglas Nichol through Moffatt & Nichol Shares Trust Dated November 28, 2006	c/o 4225 E. Conant Street, Suite 101, Long Beach, CA 90808
39.76%	Remaining Employee Shareholders (Less than 2% each)	c/o 4225 E. Conant Street, Suite 101, Long Beach, CA 90808



Moffatt & Nichol

Professional Liability Litigation – Claims

Moffatt & Nichol is a multinational corporation with nearly 1,300 employees worldwide. Although Moffatt & Nichol employs aggressive quality control efforts to minimize claims, Moffatt & Nichol is occasionally involved in claims and litigation typical of those generally asserted against design professionals. A list of litigated claims within the prior five years is shown below. Please note, Moffatt & Nichol does not disclose employment related matters or non-public information related to claims or litigation due to various contractual obligations and the need to protect attorney work product and attorney-client privileged communications. However, we have no reason to believe that these claims will materially affect Moffatt & Nichol's ability to perform services under this or any other contract. If you require additional information, please contact our Corporate General Counsel, David Huchel at 562.308.5370.

Further, to the best of current knowledge, the firm is not aware of any professional licensure investigations or disciplinary actions instituted against any member of the firm.

1. **Name of Case:** *Piantedosi v. Doherty*
Court Case ID No.: Superior Court of California, County of Orange, Case No. 30-2022-01271218-CU-PA-CJC
Date of Filing: January 31, 2024
State: California
Description: Cross-Complaint, Alleged Express Indemnity, Breach of Contract, Equitable Indemnity, Declaratory Relief, and Apportionment of Fault/Contribution in connection with a motor vehicle collision
2. **Name of Case:** *City of Redwood City, by and Through its Board of Port Commissioners v. Moffatt & Nichol*
Court Case ID No.: Superior Court for the County of San Mateo, Case No. 23-CIV-05378
Date of Filing: November 9, 2023
State: California
Description: Complaint alleging Breach of Contract, Negligence, Misrepresentation, Indemnification, Violation of Govt. Code 12650, Violation of B&P Code 17200 and Breach of Contractual Obligation
3. **Name of Case:** *Animal Protection and Rescue League, Inc. v. City of San Diego*
Court Case ID No.: Superior Court for the County of San Diego, Case No. 37-2022-00046172-CU-TT-CTL
Date of Filing: November 15, 2022
State: California
Description: Petition for Writ of Mandamus and Complaint for Declaratory and Injunctive Relief filed against the City and M&N – Matter Resolved
4. **Name of Case:** *James Roy Tucker, Jr. v. Marina Management Corp. and V&R Investments Ltd.*
Court Case ID No.: US District Court for the Northern District of Florida, Pensacola Division, Case No. 3:20-cv-5943-TKW-MJF
Date of Filing: November 3, 2022
State: Florida
Description: Cross-Complaint, Alleged Contractual Indemnification, Alleged Common Law Indemnification, Alleged Breach of Contract - Matter Resolved
5. **Name of Case:** *M. Westland, LLC v. State of California et. al.*
Court Case ID No.: Orange County Superior Court Case No. 30-2019-01104539-CU-BC-CXC
Date of Filing: November 20, 2020
State: California
Description: Cross-Complaint, Alleged Negligence, Alleged Indemnity, Alleged Breach of Contract

THE OFFICIAL SITE OF THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION



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dbpr Department of Business
& Professional Regulation

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LICENSEE DETAILS

6:12:47 PM 5/5/2026

Licensee Information

Name:	MOFFATT & NICHOL (Primary Name)
Main Address:	4225 E. CONANT STREET, SUITE 101 LONG BEACH California 90808
County:	OUT OF STATE
License Mailing:	4225 E. CONANT STREET, SUITE 101 LONG BEACH CA 90808
County:	OUT OF STATE

License Information

License Type:	Engineering Business Registry
Rank:	Registry
License Number:	4877
Status:	Current
Licensure Date:	12/04/1987
Expires:	

Special Qualifications

Qualification Effective

--

Alternate Names

--

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[View License Complaint](#)

2601 Blair Stone Road, Tallahassee FL 32399 :: Email: [Customer Contact Center](#) :: Customer Contact Center: 850.487.1395

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Under Florida law, email addresses are public records. If you do not want your email address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. *Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee. However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public. Please see our [Chapter 455](#) page to determine if you are affected by this change.

State of Florida

Department of State

I certify from the records of this office that MOFFATT & NICHOL, INC. is a California corporation authorized to transact business in the State of Florida, qualified on June 10, 1985.

The document number of this corporation is P06383.

I further certify that said corporation has paid all fees due this office through December 31, 2026, that its most recent annual report/uniform business report was filed on January 12, 2026, and that its status is active.

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

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twelfth day of January, 2026*




Secretary of State

Tracking Number: 1021607836CC

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

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>

2026 FOREIGN PROFIT CORPORATION AMENDED ANNUAL REPORT

DOCUMENT# P06383

Entity Name: MOFFATT & NICHOL, INC.**Current Principal Place of Business:**4225 E. CONANT STREET
SUITE 101
LONG BEACH, CA 90808**Current Mailing Address:**4225 E. CONANT STREET
SUITE 101
LONG BEACH, CA 90808 US**FEI Number:** 95-1951343**Certificate of Status Desired:** Yes**Name and Address of Current Registered Agent:**CT CORPORATION SYSTEM
1200 S. PINE ISLAND ROAD
PLANTATION, FL 33324 US*The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.***SIGNATURE:**

Electronic Signature of Registered Agent

Date

Officer/Director Detail :**Title** SENIOR VICE PRESIDENT/CHIEF
FINANCIAL OFFICER**Name** ABBAMONTO, OLIE**Address** 4225 E. CONANT STREET
SUITE 101**City-State-Zip:** LONG BEACH CA 90808**Title** SENIOR VICE PRESIDENT/CHIEF
LEGAL OFFICER/SECRETARY**Name** HUCHEL, DAVID W.**Address** 4225 E. CONANT STREET
SUITE 101**City-State-Zip:** LONG BEACH CA 90808**Title** DIRECTOR**Name** LARISON, RALPH**Address** 4225 E. CONANT STREET
SUITE 101**City-State-Zip:** LONG BEACH CA 90808**Title** SENIOR VICE PRESIDENT / CHIEF
OPERATIONS OFFICER**Name** PLASENCIA, DOUGLAS J.**Address** 3101 N. CENTRAL AVENUE
SUITE 840E**City-State-Zip:** PHOENIX AZ 85012**Title** PRESIDENT/CHIEF EXECUTIVE
OFFICER/DIRECTOR/CHAIRMAN**Name** NICHOL, ERIC A.**Address** 4225 E. CONANT STREET
SUITE 101**City-State-Zip:** LONG BEACH CA 90808**Title** SENIOR VICE PRESIDENT**Name** NATHAN, ROBERT A.**Address** 401 E. JACKSON STREET
SUITE 1100**City-State-Zip:** TAMPA FL 33602**Title** DIRECTOR**Name** STEINKE, RICHARD D.**Address** 4225 E. CONANT STREET
SUITE 101**City-State-Zip:** LONG BEACH CA 90808**Title** SENIOR VICE PRESIDENT**Name** RHOADS, RICHARD M.**Address** 2185 N. CALIFORNIA BLVD.
SUITE 500**City-State-Zip:** WALNUT CREEK CA 94596**Continues on page 2**

I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am an officer or director of the corporation or the receiver or trustee empowered to execute this report as required by Chapter 607, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.

SIGNATURE: DAVID W. HUCHEL**SECRETARY****04/30/2026**

Electronic Signature of Signing Officer/Director Detail

Date

P242483



Officer/Director Detail Continued :

Title SENIOR VICE PRESIDENT
Name SPARROW, JEFFREY L.
Address 21308 SMALL BRANCH PLACE
City-State-Zip: ASHBURN VA 20148

Title VP
Name HERRMAN, MICHAEL N.
Address 401 E. JACKSON STREET
SUITE 1100
City-State-Zip: TAMPA FL 33602

Title DIRECTOR
Name RIEGER, MICHAEL N.
Address 4225 E. CONANT STREET
SUITE 101
City-State-Zip: LONG BEACH CA 90808

Title DIRECTOR
Name CARRATO, JOHN
Address 4225 E. CONANT STREET
SUITE 101
City-State-Zip: LONG BEACH CA 90808

Title VP
Name JUSTICE, SHAWN
Address 1141 E JACKSON AVENUE
City-State-Zip: CHIPLEY FL 32428

Title DIRECTOR
Name HANDLEY, MARK A.
Address 4225 E. CONANT STREET
SUITE 101
City-State-Zip: LONG BEACH CA 90808

Title VP / ASSISTANT SECRETARY
Name LUGO, NEHA
Address 2780 LIGHTHOUSE POINT EAST
SUITE D
City-State-Zip: BALTIMORE MD 21224

Title VP
Name MCBURNEY, WILLSON
Address 1025 GREENWOOD BLVD.
SUITE 371
City-State-Zip: LAKE MARY FL 32746

Title DIRECTOR
Name SCHRIER-BEHLER, LYNN L.
Address 4225 E. CONANT STREET
SUITE 101
City-State-Zip: LONG BEACH CA 90808

Title VP / ASSISTANT SECRETARY
Name SABUNAS, SARAH M.
Address 4225 E. CONANT STREET
SUITE 101
City-State-Zip: LONG BEACH CA 90808

Title DIRECTOR
Name IWASAKI, RANDELL
Address 4225 E. CONANT STREET
SUITE 101
City-State-Zip: LONG BEACH CA 90808

Title VP
Name HELMS, JEFFREY C.
Address SEVILLE TOWER
226 SOUTH PALAFOX PLACE FLOOR
6
City-State-Zip: PENSACOLA FL 32502

Title VP
Name MULHOLLAND, DAVE
Address 1025 GREENWOOD BOULEVARD
SUITE 371
City-State-Zip: LAKE MARY FL 32746

Local Business Tax Receipt

Miami-Dade County Office of The TaxCollector

-THIS IS NOT A BILL - DO NOT PAY



EXPIRES

SEPTEMBER 30, 2026

Must be displayed at place of business
Pursuant to County Code
Chapter 8A - Art. 9 & 10

7171776

RECEIPT NO.

RENEWAL

7450679

BUSINESS NAME/LOCATION

MOFFATT & NICHOL INC

3150 SW 38TH AVE STE 600

MIAMI, FL 33146-1512



OWNER

MOFFATT & NICHOL INC

SEC. TYPE OF BUSINESS

212

P.A./CORP/PARTNERSHI

P/FIRM

**PAYMENT RECEIVED
BY TAX COLLECTOR**

49.50 02/10/2026

PTBTC-26-075194

Employee(s)

6

LIC4877



This Local Business Tax Receipt only confirms payment of the Local Business Tax. The Receipt is not a license, permit, or a certification of the holder's qualifications, to do business. Holder must comply with any governmental or nongovernmental regulatory laws and requirements which apply to the business.

The RECEIPT NO. above must be displayed on all commercial vehicles - Miami-Dade Code Sec 8a-276.

For more information, visit mdctaxcollector.gov



CITY OF MIAMI BUSINESS TAX RECEIPT

FY 25- 26

ISSUED:

Nov 21, 2025

Robert Santos-Alborna
Director, Code Compliance

BUSINESS NAME: MOFFATT & NICHOL, INC.

DBA:

BTR HOLDER NAME: MOFFATT & NICHOL, INC.

BUSINESS ADDRESS: 3150 SW 38 AV 600

EXPIRES: Effective Year Oct. 1 2025 Thru Sep. 30 2026

ACCOUNT NUMBER: 265246

RECEIPT NUMBER: 213512

COMMENTS: PROF ASSN/FIRM/CO./PTNERSHPS/CORP

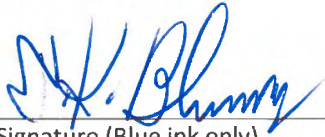
RESTRICTIONS:

This issuance of a business tax receipt does not permit the holder to violate any zoning laws of the City nor does it exempt the holder from any license or permits that may be required by law. This document does not constitute a certification that the holder is qualified to engage in the business, profession or occupation specified herein. The document indicates payment of the business tax receipt only.



- PLEASE DISPLAY THIS CERTIFICATE IN A CONSPICUOUS LOCATION AT OCCUPANCY ADDRESS.
- FAVOR DE MOSTRAR ESTE CERTIFICADO EN UN SITIO VISIBLE EN LA DIRECCION DEL COMERCIO.
- TANPRI AFICHE SÈTIFIKA SA A NAN YON KOTE KONSIDÈB NAN ADRÈS OKIPANS.

www.miamigov.com



Signature (Blue ink only)

Tim Blankenship, PE

Print Name

Vice President

Title

06/03/2026

Date

STATE OF Florida)

COUNTY OF Broward)

The foregoing instrument was acknowledged before me this 03 day of June, 2026

by Tim Blankenship, PE as Vice President
(Name of person acknowledging) (Title)

for Moffatt & Nichol.
(Company name)

Personally known to me X or has produced Identification _____, type of identification

produced _____.

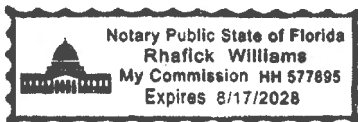


(NOTARY SEAL HERE)

SIGNATURE OF NOTARY PUBLIC

Rhafick Williams

PRINT, TYPE/STAMP NAME OF NOTARY



VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 5
CLIENT REFERENCES

PRINT CLEARLY

REFERENCE #1

Name of Company: Village of Key Biscayne
Reference Contact Name: Roland I. Samimy, PhD
Contact Title: Chief Resilience and Sustainability Officer
Contact Email: rsamimy@keybiscayne.fl.gov
Contract Start Date: 2017 **Contract End Date:** Present

REFERENCE #2

Name of Company: Miami-Dade County
Reference Contact Name: Christian Kamrath
Contact Title: Resilience Program Manager
Contact Email: christian.kamrath@miamidade.gov
Contract Start Date: 2022 **Contract End Date:** Present

REFERENCE #3

Name of Company: City of Hollywood
Reference Contact Name: Christopher Roschek
Contact Title: Chief Resiliency Officer
Contact Email: croschek@HollywoodFL.org
Contract Start Date: 2016 **Contract End Date:** Present

REFERENCE #4

Name of Company: City of Tampa
Reference Contact Name: Kevin Henika
Contact Title: City Architect
Contact Email: kevin.henika@tampagov.net
Contract Start Date: 2022 **Contract End Date:** Present

REFERENCE #5

Name of Company: City of Miami Beach
Reference Contact Name: Lindsey Precht
Contact Title: Deputy Resilience Officer and Assistant Director
Contact Email: lindseyprecht@miamibeachfl.gov
Contract Start Date: 2020 **Contract End Date:** Present



Form 6A: Single Execution Affidavits

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 6A

SINGLE EXECUTION AFFIDAVITS

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

THIS FORM COMBINES SEVERAL AFFIDAVIT STATEMENTS TO BE SWORN TO BY THE PROPOSER OR BIDDER AND NOTARIZED BELOW. IN THE EVENT THE PROPOSER OR BIDDER CANNOT SWEAR TO ANY OF THESE AFFIDAVIT STATEMENTS, THE PROPOSER OR BIDDER IS DEEMED TO BE NON-RESPONSIBLE AND IS NOT ELIGIBLE TO SUBMIT A PROPOSAL/BID.

THESE SINGLE EXECUTION AFFIDAVITS ARE SUBMITTED TO THE VILLAGE OF KEY BISCAYNE AND ARE STATEMENTS MADE:

By: Tim Blankenship, PE

For (Name of Proposing or Bidding Entity): Moffatt & Nichol, Inc.

Whose business address is: 3150 SW 38th Avenue, Suite 600, Miami, FL 33146

And (if applicable) its Federal Employer Identification Number (FEIN) is: 95-1951343

(if the entity does not have an FEIN, include the Social Security Number of the individual signing this sworn statement. SS#: Not Applicable)

Americans with Disabilities Act Compliance Affidavit

The above-named firm, corporation or organization is in compliance with and agrees to continue to comply with, and assure that any subcontractor, or third-party contractor under this project complies with all applicable requirements of the laws listed below including, but not limited to, those provisions pertaining to employment, provision of programs and services, transportation, communications, access to facilities, renovations, and new construction.

- The American with Disabilities Act of 1990 (ADA), Pub. L. 101-336, 104 Stat 327, 42 USC 1210112213 and 47 USC Sections 225 and 661 including Title I, Employment; Title II, Public Services; Title III, Public Accommodations and Services Operated by Private entities; Title IV, Telecommunications; and Title V, Miscellaneous Provisions.
- The Florida Americans with Disabilities Accessibility Implementation Act of 1993, Section 553.501-553.513, Florida Statutes:
- The Rehabilitation Act of 1973, 229 USC Section 794;
- The Federal Transit Act, as amended 49 USC Section 1612;
- The Fair Housing Act as amended 42 USC Section 3601-3631.

TNB

Proposer Initials



Public Entity Crimes Affidavit

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 misrepresentations.

I understand that “convicted” or “conviction” as defined in Paragraph 287.133(1)(b), 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 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

I understand that an “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

1. A predecessor or successor of a person convicted of a public entity crime; or
2. 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 agents 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 or 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.

I understand that a “person” as defined in Paragraph 287.133(1)(e), Florida Statutes, 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, and partners, shareholders, employees, members, and agents who are active in management of an entity.

Based on information and belief, the statement, which I have marked below, is true in relations to the entity submitting this sworn statement.

(INDICATE WHICH STATEMENT APPLIES.)

☒ Neither the entity submitting this sworn statement, nor 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 ad convicted of a public entity crime subsequent to July 1, 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 1, 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 1, 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 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 category two of any change in the information contained in this form.



Proposer Initials

No Conflict of Interest or Contingent Fee Affidavit

Proposer warrants that neither it nor any principal, employee, agent, representative nor family member has paid or will pay any fee or consideration that is contingent on the award or execution of a contract arising out of this solicitation. Proposer also warrants that neither it nor any principal, employee, agent, representative nor family member has procured or attempted to procure this contract in violation of any of the provisions of the Miami-Dade County conflict of interest or code of ethics ordinances. Further, Proposer acknowledges that any violation of these warrants will result in the termination of the contract and forfeiture of funds paid or to be paid to the Proposer should the Proposer be selected for the performance of this contract.

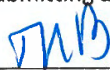


Proposer Initials

Business Entity Affidavit

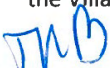
Proposer hereby recognizes and certifies that no elected official, board member, or employee of the Village of Key Biscayne (the "Village") shall have a financial interest directly or indirectly in this transaction or any compensation to be paid under or through this transaction, and further, that no Village employee, nor any elected or appointed officer (including Village board members) of the Village, nor any spouse, parent or child of such employee or elected or appointed officer of the Village, may be a partner, officer, director or proprietor of Proposer or Vendor, and further, that no such Village employee or elected or appointed officer, or the spouse, parent or child of any of them, alone or in combination, may have a material interest in the Vendor or Proposer. Material interest means direct or indirect ownership of more than 5% of the total assets or capital stock of the Proposer. Any exception to these above-described

restrictions must be expressly provided by applicable law or ordinance and be confirmed in writing by Village. Further, Proposer recognizes that with respect to this transaction or bid, if any Proposer violates or is a party to a violation of the ethics ordinances or rules of the Village, the provisions of Miami-Dade County Code Section 2-11.1, as applicable to Village, or the provisions of Chapter 112, part III, Fla. Stat., the Code of Ethics for Public Officers and Employees, such Proposer may be disqualified from furnishing the goods or services for which the bid or proposal is submitted and may be further disqualified from submitting any future bids or proposals for goods or services to Village.


Proposer Initials

Anti-Collusion Affidavit

1. Proposer/Bidder has personal knowledge of the matters set forth in its Proposal/Bid and is fully informed respecting the preparation and contents of the attached Proposal/Bid and all pertinent circumstances respecting the Proposal/Bid;
2. The Proposal/Bid is genuine and is not a collusive or sham Proposal/Bid; and
3. Neither the Proposer/Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including Affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Proposer/Bidder, firm, or person to submit a collusive or sham Proposal/Bid, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer/Bidder, firm, or person to fix the price or prices in the attached Proposal/Bid or of any other Proposer/Bidder, or to fix any overhead, profit, or cost element of the Proposal/Bid price or the Proposal/Bid price of any other Proposer/Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Village of Key Biscayne or any person interested in the proposed Contract.


Proposer Initials

Scrutinized Company Certification

1. Proposer certifies that it and its subcontractors are not on the Scrutinized Companies that Boycott Israel List. Pursuant to Section 287.135, F.S., the Village may immediately terminate the Agreement that may result from this ITB at its sole option if the Proposer or its subcontractors are found to have submitted a false certification; or if the Proposer, or its subcontractors are placed on the Scrutinized Companies that Boycott Israel List or is engaged in the boycott of Israel during the term of the Agreement.
2. If the Agreement that may result from this ITB is for more than one million dollars, the Proposer certifies that it and its subcontractors are also not on the Scrutinized Companies with Activities in Sudan, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria as identified in Section 287.135, F.S. pursuant to Section 287.135, F.S., the Village may immediately terminate the Agreement that may result from this ITB at its sole option if the Proposer, its affiliates, or its subcontractors are found to have submitted a false certification; or if the Proposer, its affiliates, or its subcontractors are placed on the Scrutinized

Companies with Activities in Sudan List, or Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged with business operations in Cuba or Syria during the term of the Agreement.

3. The Proposer agrees to observe the above requirements for applicable subcontracts entered into for the performance of work under the Agreement that may result from this ITB. As provided in Subsection 287.135(8), F.S., if federal law ceases to authorize the above-stated contracting prohibitions then they shall become inoperative.

JNB

Proposer Initials

Acknowledgment, Warranty, and Acceptance

1. CONTRACTOR warrants that it is willing and able to comply with all applicable state of Florida laws, rules and regulations.

CONTRACTOR warrants that it has read, understands, and is willing to comply with all requirements of **RFQ # 2026-09 VILLAGE OF KEY BISCAYNE OFFSHORE FEASIBILITY AND PERLIMINARY SHORELINE DESIGN STUDY**

2. and any addendum/addenda related thereto.
3. CONTRACTOR warrants that it will not delegate or subcontract its responsibilities under an agreement without the prior written permission of the Village Council or Village Manager, as applicable.
4. CONTRACTOR warrants that all information provided by it in connection with this Proposal is true and accurate.

JNB

Proposer Initials

Truth in Negotiation Certification

The CONTRACTOR hereby certifies, covenants, and warrants that wage rates and other factual unit costs supporting the compensation for this project's agreement are accurate, complete, and current at the time of contracting.

The CONTRACTOR further agrees that the original agreement price and any additions thereto shall be adjusted to exclude any significant sums by which the Village determines the agreement price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such agreement adjustments shall be made within (1) year following the end of the contract. For purposes of this certificate, the end of the agreement shall be deemed to be the date of the final billing or acceptance of the work by the Village, whichever is later.

JNB

Respondent Initials

FORM 6B
INDEPENDENCE AFFIDAVIT

The undersigned individual, being duly sworn, deposes and says that:

I am Tim Blankenship, PE, Vice President of Moffatt & Nicol, Inc., the proposer that has submitted the attached proposal;

I hereby certify to the best of my knowledge that neither I nor any of those persons residing in my household have or have had during the past five years, any relationships (professional, financial, familial or otherwise) with the VILLAGE (or any of its districts), its elected or appointed officials, its employees or agents, or any member or alternate member of the Selection Committee.

A “relationship” for the purpose of this affidavit shall include but not be limited to employer/employee, consultant, contractor, subcontractor, associate, officer, partnership, joint venture, ownership greater than one percent, landlord/tenant, or creditor/debtor, gift donor/recipient (in excess of \$100.00), past or on-going personal relationships, or joint involvement with charitable/voluntary activities. **Relationship includes having a prior or current contract with the VILLAGE.**

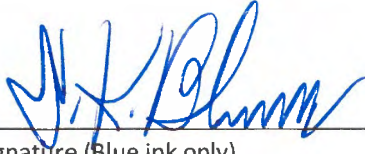
Except as set forth below, I hereby certify to the best of my knowledge that neither I nor any of those persons residing in my household have received any promise of compensation, remuneration, gift, discount, or other gratuity in exchange for my proposal.

I understand and agree that I shall give the VILLAGE written notice of any other relationships (as defined above) that I enter into with the VILLAGE (or any of its districts), its elected or appointed officials, its employees or agents, or any member or alternate member of the Selection Committee during the period of the Agreement.

I set forth below any exceptions to the aforementioned (if none, write “None”):

None





Signature (Blue ink only)

Tim Blankenship, PE

Print Name

Vice President

Title

06/03/2026

Date

STATE OF Florida)

COUNTY OF Broward)

The foregoing instrument was acknowledged before me this 03 day of June, 2026

by Tim Blankenship, PE as Vice President

(Name of person acknowledging)

(Title)

for Moffatt & Nichol, Inc.

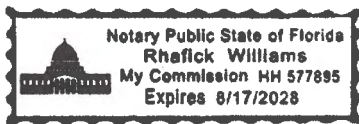
(Company name)

Personally known to me X or has produced Identification _____ type of identification
produced _____



(NOTARY SEAL HERE)

SIGNATURE OF NOTARY PUBLIC



Rhafick Williams

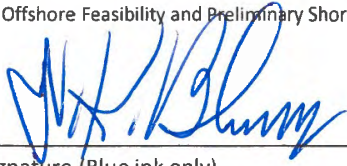
PRINT, TYPE/STAMP NAME OF NOTAR

FORM 6C
NON-COLLUSION AFFIDAVIT

The undersigned individual, being duly sworn, deposes and says that:

1. He/She is Tim Blankenship, PE, Vice President of Moffatt & Nichol, Inc.,
proposer that has submitted the attached proposal;
2. He/She is fully informed respecting the preparation and contents of the attached proposal and of
all pertinent circumstances respecting such proposal;
3. Such proposal is genuine and is not a collusive or sham proposal;
4. Neither said proposer nor any of its officers, partners, owners, agents, representatives,
employees, or parties in interest, including this affiant, has in any way colluded, connived, or
agreed, directly or indirectly, with any other proposer, firm or person to submit a collusive or
sham proposal in connection with the Agreement for which the attached proposal has been
submitted or to refrain from proposing in connection with the Agreement, or has in any manner,
directly or indirectly, sought by agreement of collusion or communication of conference with any
other proper, firm, or person to fix the price or prices in the attached proposal, or of any other
proposer, or to fix any overhead, profit or cost element of the proposal or the response of any
other proposer, or to secure through any collusion, connivance, or unlawful agreement any
advantage against the Village of Key Biscayne, Florida, or any person interested in the Agreement;
and
5. The response to the attached RFQ is fair and proper and is not tainted by any collusion,
conspiracy, connivance, or unlawful agreement on the part of the proposer or any of its agents,
representatives, owners, employees, or parties in interest, including this affiant.





Signature (Blue ink only)

Tim Blankenship, PE

Print Name

Vice President

Title

06/03/2026

Date

STATE OF Florida)

COUNTY OF Broward)

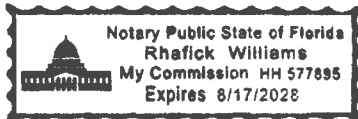
The foregoing instrument was acknowledged before me this 03 day of June, 2026

by Tim Blankenship, PE as Vice President
(Name of person acknowledging) (Title)

for Moffatt & Nichol, Inc.
(Company name)

Personally known to me X or has produced Identification _____, type of identification produced _____.

(NOTARY SEAL HERE)



SIGNATURE OF NOTARY PUBLIC

Rhafick Williams

PRINT, TYPE/STAMP NAME OF NOTARY

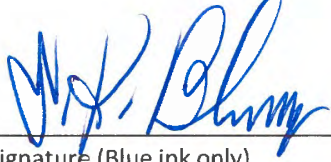
FORM 7
DRUG FREE WORKPLACE

The undersigned proposer in accordance with Chapter 287.087, Florida Statutes, hereby certifies that
Moffatt & Nichol, Inc. does:

(Name of proposer)

- 1. Publish a statement notifying employees that the unlawful manufacturing, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- 2. Inform employees about the dangers of drug abuse in the workplace, the business’s policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3. Give each employee engaged in providing the contractual services described in the RFQ document a copy of the statement specified in subsection (1).
- 4. In the statement specified in subsection (1), notify the employee that, as a condition of working on the contractual services described in the RFQ or the Agreement, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
- 5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee’s community, by any employee who is so convicted.
- 6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.
- 7. As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.





Signature (Blue ink only)

Tim Blankenship, PE

Print Name

Vice President

Title

06/03/2026

Date

STATE OF Florida)
COUNTY OF Broward)

The foregoing instrument was acknowledged before me this 03 day of June, 2026

by Tim Blankenship, PE as Vice President

(Name of person acknowledging)

(Title)

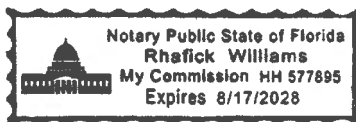
for Moffatt & Nichol, Inc.

(Company name)

Personally known to me X or has produced Identification _____ type of identification
produced _____

(NOTARY SEAL HERE)

SIGNATURE OF NOTARY PUBLIC



Rhafick Williams
PRINT, TYPE/STAMP NAME OF NOTARY

Form 8: Certification to Accuracy of Proposal

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 8

CERTIFICATION TO ACCURACY OF PROPOSAL

The proposer, by executing this form, hereby certifies and attests that all forms, affidavits and documents related thereto that it has enclosed in the proposal in support of its proposal are true and accurate. Failure by the proposer to attest to the truth and accuracy of such forms, affidavits and documents shall result in the proposal being deemed non-responsive and such proposal will not be considered.

By submitting a proposal to do the work, the proposer certifies that a careful review of the RFQ and the Agreement has taken place and that the proposer is fully informed and understands the requirements of the RFQ and the Agreement and the quality and quantity of service to be performed.

The undersigned individual, being duly sworn, deposes and says that:

1. He/She is Tim Blankenship, PE, Vice President of Moffatt & Nichol, Inc., the proposer that has submitted the attached proposal;
2. He/She is fully informed respecting the preparation and contents of the attached proposal and of all forms, affidavits and documents submitted in support of such proposal;
3. All forms, affidavits and documents submitted in support of this proposal and included in this proposal are true and accurate;
4. No information that should have been included in such forms, affidavits and documents has been omitted; and
5. No information that is included in such forms, affidavits or documents is false or misleading.

STATE OF Florida)
COUNTY OF Broward)

The foregoing instrument was acknowledged before me this 03 day of June, 2026

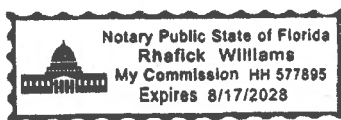
by Tim Blankenship, PE as Vice President
(Name of person acknowledging) (Title)

for Moffatt & Nichol, Inc.
(Company name)

Personally known to me X or has produced Identification [Signature] type of identification produced _____

(NOTARY SEAL HERE)

SIGNATURE OF NOTARY PUBLIC



Rhaick Williams
PRINT, TYPE/STAMP NAME OF NOTARY

Form 9: Scrutinized Companies

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

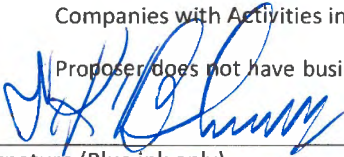
FORM 9
SCRUTINIZED COMPANIES

The undersigned proposer in accordance with Section 287.135, Florida Statutes, hereby certifies that:

Proposer is not participating in a boycott of Israel;

Proposer is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List;

Proposer does not have business operations in Cuba or Syria.


Signature (Blue ink only)

Tim Blankship, PE
Print Name

Vice President
Title

06/03/2026
Date

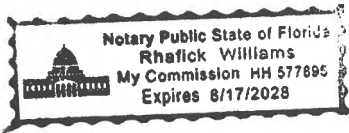
STATE OF Florida)
COUNTY OF Broward)

The foregoing instrument was acknowledged before me this 03 day of June, 2026,
by Tim Blankenship, PE as Vice President
(Name of person acknowledging) (Title)

for Moffatt & Nichol
(Company name)

Personally known to me X or has produced Identification _____, type of identification
produced _____

(NOTARY SEAL HERE)




SIGNATURE OF NOTARY PUBLIC

Rhafick Williams
PRINT, TYPE/STAMP NAME OF NOTARY



FORM 10
PUBLIC ENTITY CRIMES

Sworn Statement Under §287.133(3)(a), Florida Statutes

(This form must be signed in the presence of a notary public or other officer authorized to administer oaths.)

1. This sworn statement is submitted with Bid, Proposal or contract No. RFQ # 2026-09

2. This sworn statement is submitted by: Moffatt & Nichol, Inc.
(name of entity submitting sworn statement)

whose business address is: 3150 SW 38th Avenue
Suite 600
Miami, FL33146

Federal Identification Number (FEIN) is: 95-1951343
(if applicable)

Social Security Number: Not Applicable

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

3. My name is: Tim Blankenship, PE
(print name of individual signing this document)

and my relationship to the entity is: Vice President

4. I understand that a "public entity crime" as defined in §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 with 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.

5. I understand that a "convicted" or "conviction" as defined in §287.133(1)(b), Florida Statutes, means a finding of guilt of 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 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

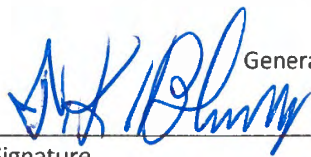
6. I understand that an "affiliate" as defined in §287.133(1)(a), Florida Statutes means:

- (a) A predecessor or successor of a person or a corporation 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, share holders, employees, members, and agents 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 or 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.

7. I understand that a "person" as defined in §287.133(1)(e), Florida Statutes, 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 binds or applies to bids 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.
8. Based on the information and belief, the statement that I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies)
 - a. ☒ Neither the entity submitting the sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members or agents who are active in management of the entity nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.
 - b. ☐ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989 and (Please indicate which additional statement applies)
 - 1) ☐ There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order)
 - 2) ☐ The person or affiliate was placed on the convicted list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order)
 - 3) ☐ The person or affiliate has not been placed on the convicted vendor list. (Please describe any action taken by or pending with the Department of



Signature

General Services)

06/03/2026

Date

STATE OF Florida)
COUNTY OF Broward)

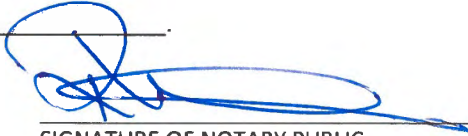
The foregoing instrument was acknowledged before me this 03 day of June, 2026

by Tim Blankenship, PE as Vice President
(Name of person acknowledging) *(Title)*

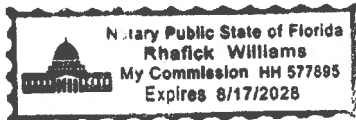
for Moffatt & Nichol, Inc.
(Company name)

Personally known to me X or has produced Identification _____, type of identification
produced _____

(NOTARY SEAL HERE)



SIGNATURE OF NOTARY PUBLIC



Rhafick Williams

PRINT, TYPE/STAMP NAME OF NOTARY

Form 11: Dispute Disclosure

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 11
DISPUTE DISCLOSURE

Answer the following questions by placing an “X” after “Yes” or “No”. If you answer “Yes”, please explain in the space provided, or on a separate sheet attached to this form.

1. Has your firm or any of its officers, received a reprimand of any nature or been suspended by the Department of Professional Regulations or any other regulatory agency or professional associations within the last five (5) years?

YES _____ NO X

2. Has your firm, or any member of your firm, been declared in default, terminated or removed from a contract or job related to the services your firm provides in the regular course of business within the last five (5) years?

YES _____ NO X *(Moffatt & Nichol's clients may discontinue or end work/contracts for their own convenience or for other reasons, but Moffatt & Nichol has not been terminated for any cause.)*

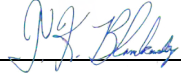
3. Has your firm had against it or filed any requests for equitable adjustment, contract claims, Bid protests, or litigation in the past five (5) years that is related to the services your firm provides in the regular course of business?

YES X NO _____

If yes, state the nature of the request for equitable adjustment, contract claim, litigation, or protest, and state a brief description of the case, the outcome or status of the suit and the monetary amounts of extended contract time involved. *(See the attached "Professional Liability Litigation-Claims" document.)*

I hereby certify that all statements made are true and agree and understand that any misstatement or misrepresentation or falsification of facts shall be cause for forfeiture of rights for further consideration of this Bid for the Village of Key Biscayne.

Firm: Moffatt & Nichol, Inc.

Authorized Signature: 

Print or Type Name: Tim Blankenship, PE

Title: Vice President

Date: June 2, 2026



Moffatt & Nichol

Professional Liability Litigation – Claims

Moffatt & Nichol is a multinational corporation with nearly 1,300 employees worldwide. Although Moffatt & Nichol employs aggressive quality control efforts to minimize claims, Moffatt & Nichol is occasionally involved in claims and litigation typical of those generally asserted against design professionals. A list of litigated claims within the prior five years is shown below. Please note, Moffatt & Nichol does not disclose employment related matters or non-public information related to claims or litigation due to various contractual obligations and the need to protect attorney work product and attorney-client privileged communications. However, we have no reason to believe that these claims will materially affect Moffatt & Nichol's ability to perform services under this or any other contract. If you require additional information, please contact our Corporate General Counsel, David Huchel at 562.308.5370.

Further, to the best of current knowledge, the firm is not aware of any professional licensure investigations or disciplinary actions instituted against any member of the firm.

- 1. Name of Case:** *Piantedosi v. Doherty*
Court Case ID No.: Superior Court of California, County of Orange, Case No. 30-2022-01271218-CU-PA-CJC
Date of Filing: January 31, 2024
State: California
Description: Cross-Complaint, Alleged Express Indemnity, Breach of Contract, Equitable Indemnity, Declaratory Relief, and Apportionment of Fault/Contribution in connection with a motor vehicle collision
- 2. Name of Case:** *City of Redwood City, by and Through its Board of Port Commissioners v. Moffatt & Nichol*
Court Case ID No.: Superior Court for the County of San Mateo, Case No. 23-CIV-05378
Date of Filing: November 9, 2023
State: California
Description: Complaint alleging Breach of Contract, Negligence, Misrepresentation, Indemnification, Violation of Govt. Code 12650, Violation of B&P Code 17200 and Breach of Contractual Obligation
- 3. Name of Case:** *Animal Protection and Rescue League, Inc. v. City of San Diego*
Court Case ID No.: Superior Court for the County of San Diego, Case No. 37-2022-00046172-CU-TT-CTL
Date of Filing: November 15, 2022
State: California
Description: Petition for Writ of Mandamus and Complaint for Declaratory and Injunctive Relief filed against the City and M&N – Matter Resolved
- 4. Name of Case:** *James Roy Tucker, Jr. v. Marina Management Corp. and V&R Investments Ltd.*
Court Case ID No.: US District Court for the Northern District of Florida, Pensacola Division, Case No. 3:20-cv-5943-TKW-MJF
Date of Filing: November 3, 2022
State: Florida
Description: Cross-Complaint, Alleged Contractual Indemnification, Alleged Common Law Indemnification, Alleged Breach of Contract - Matter Resolved
- 5. Name of Case:** *M. Westland, LLC v. State of California et. al.*
Court Case ID No.: Orange County Superior Court Case No. 30-2019-01104539-CU-BC-CXC
Date of Filing: November 20, 2020
State: California
Description: Cross-Complaint, Alleged Negligence, Alleged Indemnity, Alleged Breach of Contract

Form 12: List of Proposed Subcontractors

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 12
LIST OF PROPOSED SUBCONTRACTORS

The undersigned Proposer hereby designates, as follows, all major subcontractors whom they propose to utilize for the major areas of work for the project. The bidder is further notified that all subcontractors shall be properly licensed, bondable and shall be required to furnish the Village with a Certificate of Insurance in accordance with the contract general conditions. Failure to furnish this information shall be grounds for rejection of the bidder’s proposal. (If no subcontractors are proposed, state “None” on first line below.)

No.	Subcontractor Name & Address	Scope of Work	License Number
1	Brizaga, Inc. (2101 W. Commercial Blvd., Ste. 4600, Fort Lauderdale 33309)	Public Outreach	32365
2	Olin Hydrographic Solutions, Inc. (5952 Senegal Dr., Jupiter, FL 33458)	Surveying	26050
3	University of Miami (1320 S Dixie Hwy., Coral Gables, FL 33146)	Marine Environmental, Physical Modeling, Innovative Coastal Structures	33509

Firm: Moffatt & Nichol, Inc

Authorized Signature: 

Print or Type Name: Tim Blankenship, PE

Title: Vice President

Date: June 2, 2026

P242483



VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

FORM 13A – N/A

FORM 13B – N/A

FORM 14 – N/A

FORM 15 – N/A

FORM 16

INSURANCE AND LICENSE CERTIFICATES
VILLAGE OF KEY BISCAYNE

PROPOSER’S REPRESENTATION

VILLAGE OF KEY BISCAYNE OFFSHORE FEASIBILITY AND PERLIMINARY SHORELINE DESIGN
STUDY

Proposal of Moffatt & Nichol, Inc.

(Name)

3150 SW 38th Avenue, Suite 600, Miami, FL 33146

(Address)

to furnish all materials, equipment, and labor and to perform all work in accordance with the Contract Documents for:

VILLAGE OF KEY BISCAYNE OFFSHORE FEASIBILITY AND PERLIMINARY SHORELINE DESIGN
STUDY

(“THE PROJECT”)

TO: Village of Key Biscayne
Attn: Village Clerk
88 West McIntyre Street, Suite 220
Key Biscayne, Florida 33149

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid, as principal or principals, is or are named herein and that no other person than herein mentioned has any interests in the Bid or the Contract to which the Work pertains; that this Bid is made without connection or arrangement with any other person, company, or parties making Bids or Proposals and that the Bid is in all respects fair and made in good faith without collusion or fraud.

The Bidder further declares that he or she has examined the geographic location and sites of the Work; that he has made sufficient investigations to fully satisfy himself that such sites are suitable for this Work; and he assumes full responsibility therefore; that he has examined the specifications for the Work and from his own experience or from professional advice that the specifications are sufficient for the Work to be done and he has examined the other Contract Documents relating thereto, including the Instructions to Bidders, the Contract, Bid, Detailed Scope of Work/Specifications, Qualification Statement, Public Entity Crime Form, and Insurance requirements



and he has read all addenda prior to the opening of Bids, and that he has satisfied himself fully, relative to all matters and conditions with respect to the Work to which this Bid pertains.

The Bidder proposes and agrees, if this Bid is accepted, to timely execute the Contract with the Village in the form attached and to furnish all necessary materials, all equipment, all necessary machinery, tools, apparatus, means of transportation, and labor necessary to complete the Work specified in the Bid and the Contract, and called for by the drawings and specifications and in the manner specified and to timely submit all required bonds and insurance certificates.

NOTE: THIS SCHEDULE OF BID ITEMS IS MERELY ILLUSTRATIVE OF THE MINIMUM AMOUNT/QUANTITY OF WORK TO BE PERFORMED UNDER THE CONTRACT. IN THE CASE OF ANY CONFLICT BETWEEN THIS SCHEDULE OF BID ITEMS AND THE DETAILED SPECIFICATIONS, THE DETAILED SPECIFICATIONS WILL PREVAIL.

The Bidder further proposes and agrees to comply in all respects with the time limits for commencement and completion of the Work as stated in the Contract.

The Bidder agrees to execute the Contract and furnish the executed Contract, all required bonds, insurance certificates, and other required information to Village within ten (10) ten calendar days after written notice of the Award of Contract. Failure on the part of the Bidder to timely comply with this provision shall give Village all rights and remedies set forth in the Instructions to Bidders.

The undersigned agrees to accept as full compensation therefore the total of the lump sum prices and extended unit prices items named in the following schedule. It is understood that the unit prices quoted or established for a particular item are to be used for computing the amount to be paid to the Contractor, based on the Work actually performed as determined by the Contract and the Village. However, in utilizing the schedule, the Bidder agrees that in no event shall compensation paid to the Bidder under the Contract exceed the dollar amount of the Bidder's Bid amount, as set forth in the attached Bid.

It is intended that all Work to be performed under this Bid shall commence approximately thirty (30) days after Contract execution.

In no event shall Village be obligated to pay for Work not performed or materials not furnished. Bidder's

Certificate of Competency No. P06383

Bidder's Occupational License No. 4877

WITNESS:

Dolores Petz DOLORES PETZ
Julia Grissett JULIA GRISSETT

By: [Signature]
Signature of Authorized Agent
Tim Blankenship, P.E.
Vice President
06/03/2026
[SEAL]

[Signature]
Notary
Rhafick Williams
06/03/2026

Notary Public State of Florida
Rhafick Williams
My Commission MH 577895
Expires 8/17/2028

Personally known to me.

Form 17: E-Verify Affidavit

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

E-VERIFY AFFIDAVIT

In accordance with Section 448.095, Florida Statutes, the Village requires all contractors doing business with the Village to register with and use the E-Verify system to verify the work authorization status of all newly hired employees. The Village will not enter into a contract unless each party to the contract registers with and uses the E-Verify system.

The contracting entity must provide of its proof of enrollment in E-Verify. For instructions on how to provide proof of the contracting entity's participation/enrollment in E-Verify, please visit:
<https://www.e-verify.gov/faq/how-do-i-provide-proof-of-my-participation-enrollment-in-e-verify>

By signing below, the contracting entity acknowledges that it has read Section 448.095, Florida Statutes and will comply with the E-Verify requirements imposed by it, including but not limited to obtaining E-Verify affidavits from subcontractors.

☒ Check here to confirm proof of enrollment in E-Verify has been attached to this Affidavit.

In the presence of:

Dolores Betz

Witness #1 Print Name: DOLORES BETZ

Julia Grissett

Witness #2 Print Name: Julia Grissett

Signed, sealed and delivered by:

Tim Blankenship

Print Name: Tim Blankenship, PE

Title: Vice President

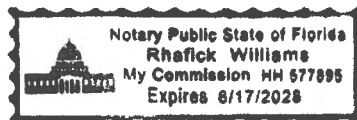
Entity Name: Moffatt & Nichol, Inc.

ACKNOWLEDGMENT

State of Florida

County of Broward

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this 03 day of June, 20 26, by Tim Blankenship
(name of person) as Vice President (type of authority) for Moffatt & Nichol, Inc.
(name of party on behalf of whom instrument is executed).



Rhafick Williams
Notary Public (Print, Stamp, or Type as Commissioned)

☒ Personally known to me; or

☐ Produced identification (Type of Identification: _____)

☐ Did take an oath; or

☐ Did not take an oath



Company ID Number:1215852

Client Company ID Number:1600079

If you have any questions, contact E-Verify at 1-888-464-4218.

Approved by:

Employer	
Moffatt & Nichol	
Name (Please Type or Print)	Title
Felicia Corbett	
Signature	Date
Electronically Signed	October 26, 2020
E-Verify Employer Agent	
ADP, Inc.	
Name (Please Type or Print)	Title
eVerify Team WFN	
Signature	Date
Electronically Signed	October 26, 2020
Department of Homeland Security - Verification Division	
Name	Title
USCIS Verification Division	
Signature	Date
Electronically Signed	October 26, 2020





Company ID Number:1215852

Client Company ID Number:1600079

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	Moffatt & Nichol
Company Facility Address	4225 East Conant Street Long Beach, CA 90808
Company Alternate Address	4225 East Conant Street Long Beach, CA 90808
County or Parish	Los Angeles
Employer Identification Number	95-1951343
North American Industry Classification Systems Code	Professional, Scientific, And Technical Services (541)
Parent Company	
Number of Employees	500 to 999
Number of Sites Verified for	29



Company ID Number:1215852

Client Company ID Number:1600079

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State:

California	5
Hawaii	1
Washington	2
Georgia	2
Florida	6
Virginia	2
North Carolina	2
Alaska	1
Texas	2
Louisiana	2
Alabama	1
Maryland	1
Massachusetts	1
New York	1

Form 18: Labor or Services Affidavit

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

AFFIDAVIT ATTESTING TO
NONCOERCIVE CONDUCT FOR LABOR OR SERVICES

Effective July 1, 2024, Section 787.06, Florida Statutes, a nongovernmental entity executing, renewing, or extending a contract with a governmental entity is required to provide an affidavit, signed by an officer or a representative of the nongovernmental entity under penalty of perjury, attesting that the nongovernmental entity does not use coercion for labor or services as defined in Section 787.06(2)(a), Florida Statutes.

By signing below, I hereby affirm under penalty of perjury that:

1. I have read Section 787.06, Florida Statutes, and understand that this affidavit is provided in compliance with the requirement that, upon execution, renewal, or extension of a contract between a nongovernmental entity and a governmental entity, the nongovernmental entity must attest to the absence of coercion in labor or services.
2. I am an officer or representative of Moffatt & Nichol, Inc., a nongovernmental entity.
3. Moffatt & Nichol, Inc. does not use coercion for labor or services as defined in the relevant section of the law.

In the presence of:

Dolores Betz
Witness #1 Print Name: DOLORES BETZ
Julia Grissett
Witness #2 Print Name: Julia Grissett

Under penalties of perjury, I declare that I have read the foregoing and the facts stated in it are true:

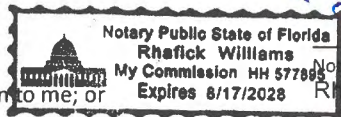
Tim Blankenship
Print Name: Tim Blankenship, PE
Title: Vice President
Entity Name: Moffatt & Nichol, Inc.

OATH OR AFFIRMATION

State of Florida
County of Broward

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this 03 day of June, 20 26, by Tim Blankenship, PE (name of person) as Vice President (type of authority) for Moffatt & Nichol, Inc. (name of party on behalf of whom instrument is executed).

X Personally known to me; or
Produced identification (Type of Identification: _____)
Did take an oath; or
Did not take an oath



Rhaefick Williams
Notary Public (Print, Stamp, or Type as Commissioned)

Form 19: Contracting Prohibition Affidavit

VKB Offshore Feasibility and Preliminary Shoreline Design Study RFQ # 2026-09

**AFFIDAVIT REGARDING PROHIBITION ON CONTRACTING WITH
ENTITIES OF FOREIGN COUNTRIES OF CONCERN**

Pursuant to Section 287.138, Florida Statutes (which is expressly incorporated herein by reference), a governmental entity may not knowingly enter into a contract with an entity which would give access to an individual's personal identifying information if (a) the entity is owned by the government of a foreign country of concern; (b) the government of a foreign country of concern has a controlling interest in the entity; or (c) the entity is organized under the laws of or has its principal place of business in a foreign country of concern.

This affidavit must be completed by an officer or representative of an entity submitting a bid, proposal, or reply to, or entering into, renewing, or extending, a contract with a governmental entity which would grant the entity access to an individual's personal identifying information.

1. Moffatt & Nichol, Inc. ("entity") does not meet any of the criteria in paragraphs (2)(a)-(c) of Section 287.138, F.S.

In the presence of:

Under penalties of perjury, I declare that I have read the foregoing and the facts stated in it are true:

Douglas Betz
Witness #1 Print Name: Douglas BETZ
Julia Brissett
Witness #2 Print Name: Julia brissett

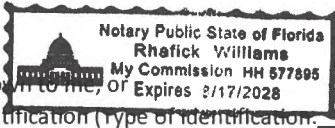
Tim Blankenship
Print Name: Tim Blankenship, PE
Title: Vice President
Entity Name: Moffatt & Nichol, Inc.

OATH OR AFFIRMATION

State of Florida
County of Broward

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this 03 day of June, 2026, by Tim Blankenship, PE (name of person) as Vice President (type of authority) for Moffatt & Nichol, Inc. (name of party on behalf of whom instrument is executed).

☒ Personally known to me, or
☐ Produced identification (type of identification: _____)
☐ Did take an oath; or
☐ Did not take an oath

 Notary Public (Print, Stamp, or Type as Commissioned)
Rhafick Williams

Statement of Financial Stability →

Moffatt & Nichol has no bankruptcy, pending litigation, planned office closures, impending mergers, or acquisitions that may impede the firm's ability to perform all services required for this project. There are no financial conditions (past, present, or projected) that would impede the firm's ability to successfully complete this project. Moffatt & Nichol's financial and administrative strength is illustrated by its organic growth and prudent management. By virtue of its organic growth, Moffatt & Nichol is not burdened by acquisition costs or external capital. The company is employee-owned, therefore is not directly affected by the ups and downs of the stock market. We have a robust data and communication network that accommodates projects, employees, and partners working together in the office and remotely, both at the same time. This allows our staff and clients the flexibility needed to get the job done, considering modern work environments and needs.

With an 80-year history, Moffatt & Nichol has the stability and capacity to complete your project as described in the Request for Qualifications (RFQ). The firm has a record of steady growth, financial stability, and competitive rates. The company provides services to numerous federal, state, and local public agencies and, as such, is subject to frequent audits in accordance with Federal Acquisition Regulation (FAR) requirements related to federally-funded projects. The company also conducts an annual self-imposed direct labor, fringe benefits, and general overhead audit by an independent external audit firm. The audit is conducted in accordance with government auditing standards and ensures our labor, indirect, and overhead costs are in compliance with 48 CFR Part 16.301-3, 2 CFR Part 200, and 48 CFR Part 31's accounting regulations.

Moffatt & Nichol is a privately held (non-public) company. The financial information contained herein constitutes proprietary and confidential information. Public disclosure would cause competitive harm. Accordingly, the proposer asserts all applicable exemptions under Chapter 119, Florida Statutes.

We have provided our corporate confidential, condensed financial reports from the last three years on the following pages. For a full report, or if you require additional information, please contact our Chief Accounting Officer, Tracy Li, at 562.308.5366.

Tab B

Executive Summary



1. Title Page →

June 23, 2026

Village of Key Biscayne

88 West McIntyre Street
Key Biscayne, Florida 33149

Uploaded and Submitted Via DemandStar



3150 SW 38th Avenue, Suite 600
Miami, FL 33146
Tel: (305) 290-1924
moffattnichol.com

Reference: RFQ # 2026-09: Village of Key Biscayne Offshore Feasibility and Preliminary Shoreline Design Study

Dear Members of the Selection Committee:

Moffatt & Nichol (M&N) is pleased to submit the enclosed qualifications, technical approach, and all requested supporting documentation for the Village of Key Biscayne's (Village) Offshore Feasibility and Preliminary Shoreline Design Study. As a trusted partner of the Village since 2017 and featuring key personnel who have worked on Village projects for more than 20 years, we are excited for the opportunity to help advance this innovative project and evaluate the potential role that offshore hybrid reef systems may play in enhancing the Village's shoreline resilience.

Few firms possess the combination of local knowledge and technical expertise that M&N brings to this assignment. For nearly a decade, we have served as an extension of Village staff. Our team has successfully guided multiple beach nourishment projects, secured millions of dollars in external funding, and developed a comprehensive understanding of the coastal processes, regulatory environment, stakeholder priorities, and resilience challenges that shape shoreline management decisions in Key Biscayne. This foundational knowledge allows us to immediately focus on evaluating feasible offshore reef alternatives without the learning curve typically required of outside consultants. In addition, in 2018 M&N was involved in a prior study for the Village that evaluated the effectiveness of offshore breakwaters as a long-term coastal resilience measure. The primary objective of this study was to determine whether strategically placed offshore structures could reduce erosion rates, enhance beach stability, and extend the interval between costly beach nourishment events.

The proposed study presents a unique opportunity to investigate innovative approaches that complement traditional beach nourishment and shoreline management practices. M&N is uniquely qualified to lead this effort through our extensive global experience in coastal engineering, nature-based solutions, offshore structures, and advanced coastal modeling. Our team includes specialists who have planned, designed, and evaluated coastal protection projects worldwide. Through sophisticated numerical modeling and engineering analyses, we will evaluate how potential reef configurations influence waves, currents, sediment transport, shoreline response, and coastal resilience.

Our project team will be led by Manuel Castaño, PE, who brings more than 13 years of coastal engineering experience and has worked on shorelines throughout Florida and the Caribbean.

Our principal-in-charge, Tim Blankenship, PE, is a Key Biscayne resident who has been working on Key Biscayne beach management since 2000.

Together, they offer the Village continuity, local knowledge and technical leadership that will ensure that the study is completed efficiently and effectively. Our team is supported by other M&N resources in Miami, as well as our other Florida offices and those across the country. We are staffed to provide the Village with the best personnel to complete any potential project task.

To further strengthen our team, M&N has partnered with the University of Miami, bringing together nationally-recognized experts in coastal engineering, oceanography, and marine ecology. This collaboration provides the Village with direct access to leading researchers and practitioners who have extensive experience studying South Florida's coastal and marine environments. This combined expertise will allow us to evaluate not only the engineering feasibility of offshore reef concepts, but also their ecological benefits, environmental compatibility, monitoring opportunities, and long-term beach performance. The team also includes Brizaga for Community Outreach and education programming. Our teaming reflects our belief that science, engineering, and public engagement must work together for a project such as this to succeed.

M&N appreciates the opportunity to continue serving the Village of Key Biscayne. We are enthusiastic about helping the Village evaluate this forward-looking concept and develop a clear understanding of the opportunities, constraints, and potential benefits associated with offshore hybrid reef systems. Should you have any questions or need additional information, please do not hesitate to reach out to me or Manuel.

Respectfully,

Moffatt & Nichol

Tim Blankenship, PE
Vice President & Principal-in-Charge
(786) 725-4180
tblankenship@moffattnichol.com

Manuel Castaño, PE
Project Manager
(305) 230-1924
mgcastano@moffattnichol.com

**(Proof of authority for
Tim Blankenship to bind is
provided on Form 3A under
Section A Representations
and Certifications)*



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3. Executive Summary →

Moffatt & Nichol (M&N) has the expertise and experience of a consultant partner that understands the unique environment where water meets the land. Since 2017, M&N has been a trusted partner for all beach management projects undertaken by the Village, and M&N provided technical advisory services to establish seawall design criteria as part of the ongoing Village efforts in *Elevating Our Island Paradise*. M&N has assembled a highly capable team to continue as an extension of Village staff for the *Offshore Feasibility and Preliminary Shoreline Design Study*.

M&N Coastal Engineering – The Legacy Continues

M&N has a reputation for excellence in the field of coastal engineering working on complex and challenging projects along the world's coastlines. The firm pioneered the modern practice of coastal engineering, and our current team builds upon that legacy. M&N also brings unmatched experience in numerical modeling of the physical processes that challenge all manner of coastal/waterfront projects. We offer clients access to the latest technologies and the industry's leading practitioners, solving complex problems using state-of-the-art technologies but with a practical approach that has been developed over decades of experience on constructed projects.

M&N has been ranked **#1 by *Engineering News-Record* for Marine & Port Facilities for the past four years!** We have more than 1,300 planning and design-related professionals and support personnel in over 65 offices who specialize in coastal, structural, civil, mechanical, electrical, and construction engineering disciplines, as well as coastal environmental permitting and resiliency-adaptation services. The company is a private corporation and maintains a board of directors, with key practice leaders and operational managers who provide overall leadership for the company.

The firm's coastal engineering and resilience experts have assessed hazards, developed adaptation plans, and designed solutions in at-risk coastal areas suffering from intense, high-profile, climate-related impacts such as Florida, California, New York, Virginia, North Carolina, and Louisiana. The firm has completed feasibility studies, regulatory permitting, coastal engineering design, numerical/physical modeling, and monitoring of all types of coastal structures worldwide. Recent experience includes the \$570M Glass Breakwater in Guam that was damaged by Typhoon Mawar in 2023. The team is currently evaluating improvements to the breakwater in Nassau Harbor, Bahamas.

Ranked #1 by *Engineering News-Record*

Moffatt & Nichol is the leading team working in dynamic environments where land meets water, and we bring that expertise of this work to the Village. We currently rank first in maritime and ports facilities by the respected industry publication, *Engineering News-Record*.



Village Of Key Biscayne Experience

M&N established its first Florida office in 1994, but the firm has been working on projects in Florida since 1985. Since our Miami office opened in 2014, we have grown our presence in Southeast Florida with offices in Fort Lauderdale and in West Palm Beach. M&N has been successfully supporting the Village since 2017 with Coastal Engineering Consulting Services. Task orders assigned by the Village have included the following:

- › **2021 & 2023 Beach Nourishment** – Engineering design, environmental permitting, construction administration, and annual physical/biological monitoring
- › **Funding Reimbursements** – Assisted the Village in securing over \$5 million in grants from state agencies and from FEMA
- › **2018 Village of Key Biscayne Offshore Coastal Structures Study** – A comprehensive feasibility study to evaluate the effectiveness of offshore breakwaters as a long-term coastal resilience measure for the Village of Key Biscayne. The primary objective of the study was to determine whether strategically-placed offshore structures could reduce erosion rates, enhance beach stability, and extend the interval between costly beach nourishment events.

University of Miami - Leading the Hybrid Reefs

Andrew Baker, from the University of Miami, will collaborate on the project and his research focuses on coral reefs, climate change, and the development and testing of interventions to increase the thermal tolerance and disease resistance of corals for restoration efforts. Andrew recently served on the National Academy of Sciences' Committee on Interventions to Increase the Persistence and Resilience of Coral Reefs, and co-leads (with Professor Diego Lirman) the Southeast Florida Coral Reef Restoration Hub.

M&N has teamed with University of Miami (UM) to support this feasibility study based on their leading research and development with hybrid reefs. UM was awarded grants from

the Defense Advanced Research Projects Agency (DARPA) for the Reefense Program which is an initiative to develop hybrid biological and engineered reef-mimicking structures. UM's experience with this program includes a feasibility study for the SeaHive system at Elliott Key that is similar to the nearshore area of Key Biscayne.

Project Team

To accomplish your goals, we have assembled a highly-qualified team of experts to meet the needs outlined in your RFQ—many of whom have worked on previous Village projects.

- › **Principal-in-Charge:** Tim Blankenship, PE, will serve as principal-in-charge, as he has been working with the Village since 2000. He brings a wealth of knowledge to the Village to support the M&N team.
- › **Project Manager:** Manual Castaño, PE, has led projects for the City of Miami, City of Miami Beach, and City of Tampa. He has been with M&N for over 10 years and recently relocated to Fort Lauderdale to lead projects for the firm in Southeast Florida. He is a senior coastal engineer with extensive US and international experience.
- › **Assistant Project Manager:** Amanda Caparro, CFM, ENV SP, is an environmental scientist and project manager specializing in environmental permitting and regulatory compliance analysis in the coastal and marine environments.
- › **Resiliency Lead:** Lynette Cardoch, PhD, LEED AP, M&N's Director of Resilience and Adaptation, is based in our Miami office and has supported the Village's CSRM. She is the project manager to the County in support of the USACE Miami-Dade County Back Bay CSRM. Lynette is also a recognized leader in the realm of emerging ocean technology, serving as a voting delegate in the Ocean Exchange global program.
- › **Joint Coastal Permitting:** Christy Brush, CFM, has led coastal construction, joint coastal, and environmental resource permitting since 2000. She has worked diligently to keep the Village's beach management permits active and in compliance to facilitate future funding as project planning.
- › **Marine Environmental:** Diego Lirman, PhD, from the University of Miami, focuses research on the disturbance ecology and active restoration of both coral reefs and seagrass ecosystems.
- › **Innovative Coastal Structures:** Landolf Rhode-Barbarigos, PhD, from the University of Miami, focuses research on coastal resilience and sustainability; structural design and optimization; structural morphology, form finding and analysis of structures; green/gray infrastructure; space engineering and construction; and computer-aided engineering.
- › **Physical Modeling:** Brian Haus, PhD, from the University of Miami, currently leads the University of Miami component of a DOD ECSTP study that seeks to evaluate the technological readiness of 3-D printed concrete structures for coastal resilience.

- › **Community Outreach:** Erica Echeverri, ENV SP, CSRP, is Brizaga's Outreach Lead, and she spent nearly a decade as a classroom teacher before bringing that expertise into the resilience field. Alec Bogdanoff, Ph.D., brings a career at the intersection of oceanography and science communication, working directly with student and community groups to translate coastal science into meaningful action.

These key personnel are backed by a team of coastal engineers, marine environmentalists, construction estimators, surveyors, planning and outreach personnel, and resiliency/planning experts.

Feasibility Study - Hybrid Reefs

The M&N team brings extensive working knowledge, having served as an extension of the Village's staff since 2017 with all beach management projects undertaken by the Village. Furthermore, key personnel including Tim Blankenship and Christy Brush have been involved in every beach management project since 2000.

M&N is "plug and play", having completed the 2018 offshore breakwater feasibility study, known as the Offshore Coastal Structures Study. All of the MIKE 21 numerical modeling will be utilized - there is no learning curve for the M&N Team. The M&N team understands the need for the Village to develop a long-term, sustainable solution to increase the interval between truck haul beach nourishments.

UM is leading the industry with the research and development of hybrid reefs, which if placed in appropriate locations, this may avoid/minimize impacts to the nearshore seagrass beds and other marine resources. The major challenge for this project is the regulatory permitting, as placing structures on protected nearshore seagrass beds will be very challenging to permit. Therefore, relying on hybrid reef technology that will enhance marine habitat may demonstrate to be "self mitigating" and will achieve the goal of improved shoreline stabilization over longer periods of time while enhancing the sensitive ecosystem along the unique ecosystem of Key Biscayne.

The M&N team stands ready to jump in the water, fire up the wave tank at the SUSTAIN lab, simulate coastal processes with advanced numerical models, conduct outreach to the community and to local students, and to develop a feasible shoreline stabilization project to support the Village's efforts in Elevating Our Paradise.

4. Deliverables, Tasks, Activities →

The M&N team offers a unique combination of local knowledge, global coastal engineering expertise, and specialized scientific capabilities directly aligned with the scope of services outlined for the Offshore Feasibility and Preliminary Shoreline Design Study. While our longstanding relationship with the Village of Key Biscayne provides valuable insight into the local shoreline system, the strength of our team lies in our extensive experience delivering complex coastal resilience, offshore engineering, numerical modeling, environmental assessment, and nature-based infrastructure projects throughout Florida and around the world.

Our team has successfully completed projects involving hydrodynamic and wave modeling, sediment transport analysis, shoreline change assessments, offshore structure design, coastal monitoring programs, environmental resource evaluations, regulatory feasibility assessments, and stakeholder engagement programs. The more extensive Proposal Approach is contained in Tab E Proposal Approach, as requested. This section spotlights, in summary fashion, the request for the Executive Summary to list the deliverables, tasks, and activities as outlined in the Scope of Services.

These projects demonstrate our ability to perform the technical tasks required to evaluate the feasibility of hybrid offshore reef systems and advance innovative shoreline protection solutions from concept through implementation.

The project begins with a comprehensive understanding of the existing coastal conditions and physical processes driving shoreline change along the Village beaches, [Task 1 - Data Collection and Review](#). Our team has extensive experience collecting and evaluating hydrographic, topographic, sediment, ecological, and oceanographic data to characterize coastal systems and identify the primary drivers of erosion and shoreline response. In fact, in 2018, M&N conducted the precursor of this study with the “Village of Key Biscayne Coastal Structures Study”. Another example of our expertise is on the **Estero Regional Inlet Management Study** project which demonstrates a strong understanding of the interactions between waves, currents, sediment transport, and shoreline evolution that influence long-term beach performance. For this task, deliverables will include technical memoranda that document instrumentation, sampling methodology, calibration, data summaries for numerical modeling, and a Data Management Plan.

[Task 2 - Site Identification and Evaluation](#) builds upon the foundation set in Task 1. M&N has extensive experience with advanced numerical modeling tools such as MIKE 21, 3DCSTM, and Delft3D to evaluate coastal processes, simulate wave transformation, assess sediment transport pathways, and predict shoreline response under existing and future conditions. Our coastal engineers and modelers



have utilized these tools to support shoreline protection projects, such as the **Hillsboro Beach Coastal Structure Numerical Modeling** project, coastal resilience initiatives including the **City of Norfolk Coastal Structures** projects, and nature-based infrastructure projects, like the **Lightning Point Living Shoreline** project. This experience allows our team to efficiently evaluate potential reef locations, configurations, and performance objectives while identifying opportunities to maximize shoreline stabilization benefits along with habitat and ecological benefits, and community preferences. For this task, deliverables include technical memoranda that will document the calibrated numerical models, historical shoreline analysis, results of the MetOcean statistics, and the habitat assessment. These criteria will be compiled into an evaluation matrix with resulting site rankings.

The preliminary engineering design component of this study, [Task 3 - Preliminary Design and Prototyping](#), aligns closely with M&N's experience with designing coastal structures.

M&N served as the design team lead for the **Illinois Beach State Park Shoreline Stabilization** project, which consisted of shore-connected and offshore stone breakwaters, beach nourishment, and habitat elements. The project was recognized as one of The American Shore and Beach Preservation Association's (ASBPA) Best Restored Beaches in 2024, acknowledging the project's design to increase the shoreline's resiliency and protect state park infrastructure and critical habitats. Through our partnership with the University of Miami, the Village will also benefit from nationally-recognized expertise in physical modeling, innovative marine structures, coral ecology, and applied coastal research, as demonstrated by their work on the **Elliott Key DARPA REEFense Feasibility** project. Along with the 3D concrete printed physical prototypes, deliverables for this task will result in a preliminary design package, with an engineer's certification.

The University of Miami provides a particularly strong advantage for **Task 4 - Coral Species Analysis and Field Testing** through its extensive coral propagation, nursery management, and reef restoration programs. The University's X-Reefs project is focused on developing next-generation hybrid reefs, and the lead researchers maintain both land-based and in-water coral nurseries supporting numerous coral species. This experience includes the cultivation and planting of thousands of corals representing hundreds of genotypes, with a focus on heat-tolerant and restoration-priority species. The team has extensive experience selecting candidate species, deploying corals on structures, monitoring survival and growth, and assessing the role of coral-enhanced structures in improving ecological function and coastal protection performance. These capabilities directly align with the coral species analysis, field testing, and performance monitoring requirements of the scope of services and will provide the Village with a scientifically rigorous basis for evaluating future coral-integrated reef concepts. Technical memoranda serve as the deliverable for this task and will document species selection justification, propagation methodology, and coral performance metrics.

Successful implementation of future offshore reef systems will ultimately depend on regulatory feasibility and stakeholder support. For **Task 5 – Regulatory and Permitting Feasibility Screening**, M&N brings substantial experience coordinating with federal, state, and local regulatory agencies, including the U.S. Army Corps of Engineers, Florida Department of Environmental Protection, Miami-Dade County DERM, NOAA Fisheries, U.S. Fish and Wildlife Service, and the Florida Fish and Wildlife Conservation Commission. Our team routinely conducts permitting feasibility assessments, agency coordination meetings, and regulatory strategy development for complex coastal projects. As a M&N best practice, we treat the documentation of steps in this arena as vigorously as science & engineering steps. As such, the deliverable for this task is a regulatory roadmap memorandum.

In the end, we know that a project cannot be viewed as successful without a supportive and engaged community. For **Task 6 – Stakeholder Engagement**, the addition of Brizaga to our team adds experience in facilitating public outreach, stakeholder engagement, and community education efforts that help build consensus around innovative resilience initiatives, which they performed in their work on the **Resilient Infrastructure & Adaptation Program**.

Collectively, these capabilities provide the Village with a team that has successfully performed each major element of the proposed scope of services. By combining M&N's coastal engineering expertise, extensive experience with shoreline resilience projects, and longstanding knowledge of Key Biscayne's coastal system with the University of Miami's research and scientific capabilities, the Village will receive a technically rigorous and implementation-focused feasibility study that establishes a clear path toward future offshore reef deployment. Equally important, our team's decades of experience working along the Village shoreline provide an understanding of local coastal conditions that will allow us to immediately focus on evaluating feasible offshore reef solutions rather than spending valuable project resources developing baseline familiarity with the site.

5. Exceptions →

Moffatt & Nichol has no exceptions to the RFQ.

Tab C

Qualifications and Experience



1. Qualifications →

a. Qualifications of Firm

By choosing the M&N team, the Village will benefit from the combined approach of a long history of completed coastal engineering projects worldwide with innovative habitat-based coastal structures, developed by the University of Miami.

M&N will be the prime consultant for the Village under this project, responsible for project delivery, management, and quality, and will lead the project from our local Miami office. Supporting M&N is the University of Miami, which is leading research and development of shoreline protection systems while restoring coastal habitats.

Moffatt & Nichol

As an industry leader in coastal engineering, M&N will provide the Village with innovative beach management solutions.

M&N was founded in Long Beach, California in 1945 to provide design engineering services to the evolving maritime industry. This led M&N to be one of the first engineering firms in the world to embrace the concept of modern coastal engineering. Today, we have more than 65 offices across 12 countries and 1,300 employees worldwide, including the largest collection of coastal engineers and resilience experts of any consulting firm in the country. M&N's influential staff of scientists, planners, and engineers are recognized for solving global issues related to coastal, estuarine, and riverine systems. We offer clients access to the latest technologies and the industry's leading practitioners, solving complex problems using state-of-the-art technologies but with a practical approach that has been developed over decades of experience on constructed projects. While the firm has a global footprint, it maintains its culture and legacy through our leadership, with our CEO, Eric Nichol, who is a third-generation Nichol.

M&N has been established in Florida since 1994, and the firm has grown in Florida now with nine offices: Pensacola, Tallahassee, Chipley, Tampa, Jacksonville, Lake Mary (Orlando), West Palm Beach, Fort Lauderdale, and Miami. The firm currently has over 100 staff in Florida, of which over 25 are coastal/maritime engineers and scientists. The contract will be managed through our Miami office with support from other Florida and regional offices. M&N is currently under contract with the Village through the continuing architectural, engineering, and planning, and over 20 task orders have been completed to-date.

WHY THIS TEAM?

Combining local knowledge with industry expertise

The M&N team provides the Village with the responsiveness of an experienced, local team led by experts you already know and trust, combined with the innovative shoreline protection experience of industry-renowned experts.

1

Trusted Partners of the Village of Key Biscayne

Our team members are trusted advisors to your staff and have been working closely with the Village for a combined 25 years on some of its more impactful environmental, permitting, and resilience initiatives. We are keenly aware of the Village's long-term strategy elevating our Island Paradise, facilitating objectives of this feasibility study.

2

Institutional Knowledge of Your Beach and Littoral Processes

Our team comprises technical experts with years of experience working on your shoreline. We have a comprehensive understanding of existing conditions, shoreline stabilization and implementation challenges, effective public engagement techniques, and strategies for successful environmental permitting.

3

Innovative Solutions Teamed with the University of Miami to Demonstrate 3DCP Shoreline Solutions

The University of Miami is leading research and development in the coastal engineering and biohabitat applications of hybrid reefs, and their labs at RSMAS are in close proximity to this project. Their experience, lab testing, and deployment experience will bolster the M&N team's approach to develop a feasible hybrid reef solution.

b. Qualifications of Staff

Members of our team have worked closely with the local governments, utilities, and natural resource agencies on integrated planning and operational resiliency. As members of the local community, our team has a vested interest in mitigating the impacts of sea level rise and climate change. Several of our key personnel have participated in the South Florida Climate Change Compact or served on other task forces, initiatives, or advisory boards. Through our team's presence in the local community, we are in tune with resiliency initiatives municipalities are currently undertaking, helping to make certain our work will not be duplicative but instead help identify and bridge any gaps, foster collaboration, and enhance funding opportunities.



M&N has been partnering with state, local, and federal clients in Florida since the 1980s, including FEMA, FDOT, Florida Division of Emergency Management, and FDEP. M&N has completed more than 500 projects in Florida in the past three decades and has been involved with significant planning and design for projects that include shoreline stabilization, sea level rise prediction, risk analysis, flood protection, public access, stakeholder engagement, coastal civil and structural engineering, and environmental permitting.

Our key personnel in M&N's Miami office have 20 years of experience working on both the coast and back bay areas of Southeast Florida. Tim Blankenship, Manuel Castaño, Amanda Caparro, Lynette Cardoch, Christy Brush, and others have demonstrated success on critical Village initiatives. These team members are actively working on the Village beach management initiatives, and team continuity is essential to maintain environmental permitting and funding.

c. Industry Knowledge and Expertise

For more than 80 years, M&N has built a reputation as the premier coastal engineering and ecosystem design firm in the United States. In the past 20 years, we have expanded our expertise to become leaders in resilient infrastructure, having provided resilient planning and design in some of the most challenging, at-risk environments. In the face of rising seas and climate change impacting the safety and viability of coastal communities, the M&N team has pioneered innovative approaches to resilience—Resilient by Nature, Living with Water®, the Dutch Dialogues, supercomputing in numerical modeling—improving our ability to assess risk and develop comprehensive, cohesive, and cost-effective mitigation strategies.

Our team has completed numerous ecosystem restoration and living shoreline projects throughout the United States, establishing a reputation for implementable context-sensitive designs grounded in practical, proven, and cost-effective solutions. We have implemented 50+ large-scale habitat restoration projects, 20+ miles of shoreline restoration projects. Our nationwide experience on living shoreline projects in Florida, Alabama, Louisiana, North Carolina, Virginia, Maryland, and beyond attests to our ability to deliver complementary, context-sensitive designs for the identified project sites and allows us to expedite the design process by leveraging proven living shoreline design strategies.

“

The Moffatt & Nichol team...exceeded my expectations. Their professionalism, knowledge and experience resulted in unanimous elected officials support and ongoing public compliments throughout the master planning process... I look forward to working with [Moffatt & Nichol] on future endeavors.”

— David Vazquez, Assistant Director, City of Hollywood Parks, Recreation and Cultural Arts Dept.



Flagler County Emergency Dune Nourishment

d. Project Management, Special Services, and Past Performance

M&N's coastal engineering and resilience experts have assessed hazards, developed adaptation plans, and designed solutions in at-risk coastal areas suffering from intense, high-profile climate-related impacts, such as Florida, California, New York, Virginia, North Carolina, and Louisiana. Our experience includes the development of site-specific coastal engineering criteria for the design of shoreline stabilization that can include living shorelines, rock revetment, seawalls, and breakwaters. More than half a century of designing coastal flood protection projects has prepared our staff with expertise in how current and predicted sea level rise hazards vary across regions and reaches of coastline. Our team applies unparalleled familiarity with complex, situational coastal processes and development patterns to efficiently deliver world-class solutions for resilience to rising sea levels.

“

[I] have worked with Moffatt & Nichol on several large projects over the last 10 years in the City of Hampton and at the City of Norfolk. I have always found staff professional, courteous and knowledgeable about coastal flooding, coastal resilience and mitigation measures. I have the highest respect for the engineers representing Moffatt & Nichol and would always ask them to submit on any flood related projects.”

— Scott Smith, *The City of Hampton*

Our expertise in coastal engineering has enabled us to serve clients at the municipal and state level. Through these projects, we have effectively monitored and assisted communities in managing their coastal systems. This project experience is similar to the types that will be needed on this contract for the Village and are evidence of our ability to complete this type of work. This U.S. and international coastal/marine experience, combined with local Miami-Dade County and Florida experience, provides a unique and specialized approach to the challenges associated with coastal engineering for the Village.

State-Of-The-Art Numerical Modeling Capabilities

Development of infrastructure on coasts—from conceptual layouts, optimization, stability, and Environmental Assessment to detailed engineering design—requires a thorough understanding of coastal processes, including water levels, waves, current, sediment transport, and morphological evolution. M&N is a leader in multidimensional coastal, stormwater, hydrologic and hydraulic (H&H), sediment

transport, and morphological and ecological modeling. Our state-of-the-art flood resilience, coastal engineering, and restoration practice utilizes the full range of analysis tools that are currently available. In addition, we use public domain and proprietary numerical codes developed by groups like the USACE, Danish Hydraulic Institute, XPSWMM, InfoWorks, and DELFT. Such an extensive portfolio of available modeling platforms gives our team the flexibility to bring the most suitable modeling tool to each project, depending on your specific needs.

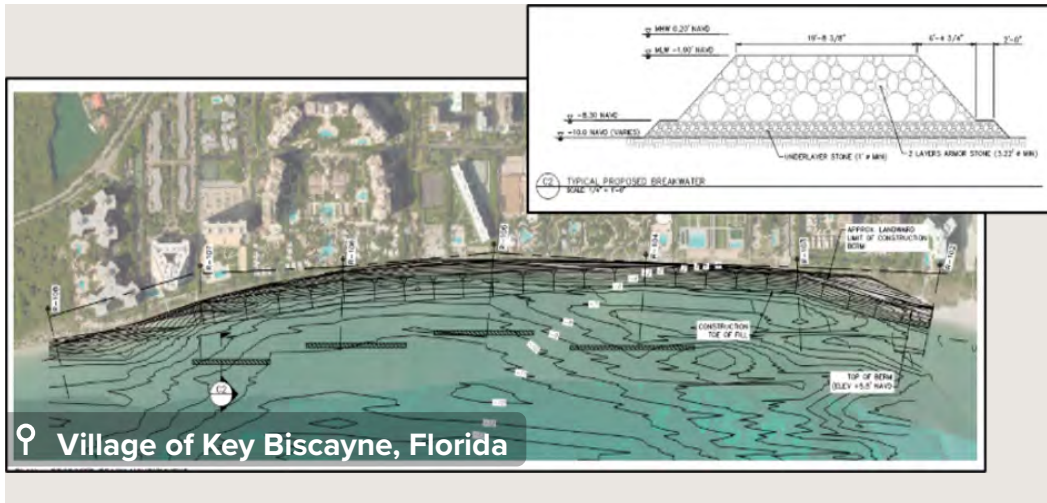
Our staff routinely evaluates storm conditions, wind, tide, current, and wave data based on existing published information or new data collection efforts. We use the latest modeling tools to analyze water quality, tidal hydraulics, waves, currents, sediment transport, and dredging. We have two in-house numerical models for simulating circulation and storm surges on the open coast and within estuarine embankments: the WES Implicit Flooding Model and the FEMA Coastal Flooding Hurricane Storm Surge Model.

In addition, M&N has developed its in-house suite of tools to integrate cross-code modeling platforms. We can take an existing model platform and convert it to a format capable of simulating a different suite of processes not possible in the original model, making maximum use of existing efforts without having to conduct lengthy and expensive reconstruction of new grids and models. This utility is invaluable in not having to “re-invent the wheel” when adapting the work conducted by others on an existing model platform and will be an invaluable asset when coordinating efforts with existing Village modeling efforts.

More efficient Modeling

M&N has invested in a 1552-core High Performance Computing (HPC) cluster, providing in-house “Supercomputer” capabilities. The HPC offers a significant increase in capacity compared to typical high-end workstations, enabling multiple simultaneous scenario runs and much larger, high-resolution grids over more extended periods with shorter production times. In addition, having this capability in-house provides significant advantages in terms of production run wait times, sequencing queues, and unscheduled downtime.

Relevant Experience



Client Contact
 Roland Samimy
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Contract Amount
 \$40,000

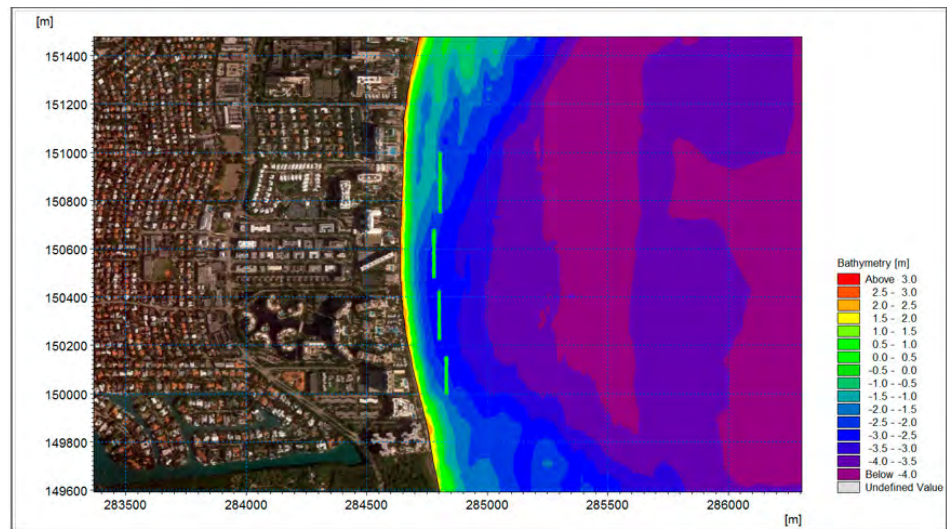
Project Start & End Dates
 2017 - 2018

Village of Key Biscayne Offshore Coastal Structures Study

M&N conducted a comprehensive feasibility study to evaluate the effectiveness of offshore breakwaters as a long-term coastal resilience measure for the Village of Key Biscayne. The primary objective of the study was to determine whether strategically placed offshore structures could reduce erosion rates, enhance beach stability, and extend the interval between costly beach nourishment events. To support this evaluation, M&N performed detailed numerical modeling of waves, sediment transport, and shoreline response under a range of existing and future coastal conditions.

The study also included an extensive assessment of the physical and environmental processes that influence shoreline behavior in the Village, including wave climate, littoral sediment transport, storm impacts, sea level rise, and historical shoreline change trends. Existing beach management practices and previous nourishment projects were reviewed to better understand the factors affecting long-term beach performance and maintenance requirements.

Results of the engineering analyses demonstrated that properly sited and designed offshore breakwaters would significantly reduce incoming wave energy reaching the shoreline, thereby decreasing erosion potential and promoting greater long-term beach stability. The study further concluded that incorporating Nature-Based Solutions into the breakwater design, such as ecological enhancements and habitat-forming features, could provide environmental benefits while helping the structures function as self-mitigating projects. This approach was identified as a means of reducing potential environmental impacts



and facilitating a more streamlined permitting process with regulatory agencies.

M&N compiled the findings into a comprehensive feasibility report that documented the engineering analyses, modeling results, conceptual design considerations, environmental factors, and implementation recommendations. The report also included an extensive review of beach management activities in Key Biscayne dating back to the 1960s, providing valuable historical context regarding shoreline evolution, nourishment performance, coastal storm impacts, and previous efforts undertaken to maintain and protect the Village's beaches.



Client Contact

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Contract Amount

\$575,000 (To-Date)

Project Start & End Dates

2017 - Present

Village of Key Biscayne, Florida

Village of Key Biscayne Continued Services

M&N has been providing coastal engineering services through task-based contracts continuously since 2017 for the Village of Key Biscayne. M&N has managed all aspects of the Village's beach management that have included planning, budgeting, funding, conducting field investigations, permitting, and managing construction and annual monitoring of the truck haul beach nourishment projects.

Beach & Dune Management Program

- 2017 – Placement of 26,000 cubic yards (CY) of beach fill to address impacts from Hurricane Matthew in October 2016—funded by FEMA
- 2021 – Placement of 31,000 CY of beach fill including dune restoration and planting—funded by FEMA and Florida Department of Environmental Protection (FDEP)
- 2024 – Placement of 24,000 CY of beach fill including dune restoration and planting—funded by FDEP

For all three beach nourishment projects, M&N processed the maintenance projects' environmental permit authorizations through USACE, FDEP, and Miami-Dade County Department of Environmental Resources Management (DERM). Currently, M&N is processing event-based permits through state and federal agencies to facilitate ongoing maintenance events, and M&N is managing compliance requirements associated with the permits. The presence of nearshore seagrass presents challenges for beach nourishment design, and M&N has managed the compliance monitoring on an annual basis to document no impacts from storm events and from ongoing truck haul maintenance events. M&N has completed coastal engineering analyses using two independent methods to estimate the Equilibrium Toe Of Fill (ETOOF) to avoid impacts to adjacent nearshore seagrass beds. For all of the projects, M&N assisted the Village with procuring qualified construction contractors, and during construction M&N has provided Resident Project Representative Services in addition to construction administration to ensure the projects were constructed in

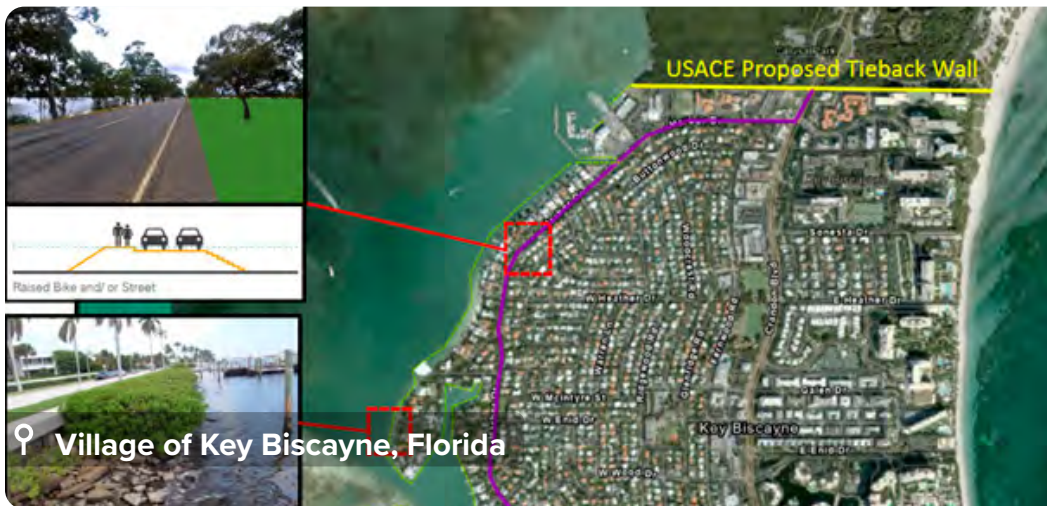
accordance with the drawings, specifications, and environmental permits.

M&N continues to manage applications, processing, and funding reimbursement requests on behalf of the Village for their ongoing beach management. To date, over \$5 million in funding has been secured by M&N to cost share with the Village for beach management projects. Currently, M&N is processing Florida DEP funding for both ongoing beach nourishment efforts and to obtain additional funding for the offshore breakwaters.

USACE Miami-Dade County CSRM Program Management

The purpose of this study was to address the protection of critical infrastructure, reduction of structural damages, and evacuation route protection along the Dade County Beach Erosion Control & Hurricane Protection project in response to the risks and effects of coastal storms and associated impacts, such as sea-level rise, storm surge, and extreme wind and tidal effects. The study area consisted of the coastline between FDEP R-monuments R-27 and R-74 and included the municipalities of Bal Harbor, Surfside, and the City of Miami Beach. During the study, the Key Biscayne Segment (R-101 to R-108) was considered to be included, however, upon further investigation, the U.S. Army Corps of Engineers decided the Key Biscayne Segment would be best evaluated under its own new start feasibility study. The Main Segment was authorized in the Water Resources Development Act of 2022, thereby extending Federal participation by an additional 50 years after 2025.

During this CSRM process, M&N provided technical advisory services on behalf of the Village. We provided background technical documents and reviewed technical studies and results that influenced the BCR and other parameters affecting the Village possibly being added to the project. M&N evaluated the alternatives developed by the USACE and provided technical comments and participated in various workshops. M&N performed initial BeachFx simulations to review setup and parameters.



Client Contact
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Contract Amount
 \$160,000 (To-Date)

Project Start & End Dates
 2022 - Present

Resilient Infrastructure & Adaptation Program (RIAP)

Based on a 30-year outlook of environmental and infrastructure-related vulnerabilities, Black & Veatch as prime consultant along with subconsultants M&N, Waggoner & Ball, Brizaga, and other consultants were selected to develop and execute a resilient infrastructure program strategy and an integrated implementation plan to guide infrastructure upgrades across the entire Village to address future risks. The overall multi-dimensional infrastructure improvement initiative will be a multi-year, high-value investment in upgrading infrastructure and supporting efforts to mitigate predicted environmental changes and help to make the Village of Key Biscayne a stronger, more resilient, and sustainable community.

RIAP

M&N, working with Brizaga, prepared a coastal vulnerability assessment to evaluate coastal hazards and vulnerabilities along the Village shoreline that included both oceanfront and bayfront shorelines. This assessment included a review of background coastal data, development of a gap analysis, and the exposure and sensitivity analysis. M&N attended public workshops and supported Brizaga in the compilation of the overall Vulnerability Assessment.

Zone 1 Infrastructure

The Zone 1 Integrated Infrastructure Project is the Village's first major resilience program undertaking because it is in the most vulnerable, low-lying area surrounding the K-8 Center and is extremely prone to flooding. The project's purpose is to alleviate localized flooding. M&N supported Black and Veatch with Technical reviews of Zone 1 stormwater management and roadway design calculations, technical specifications, and drawings. M&N participated in design workshops in a program management role to support this ongoing project.

Village of Key Biscayne CSRM

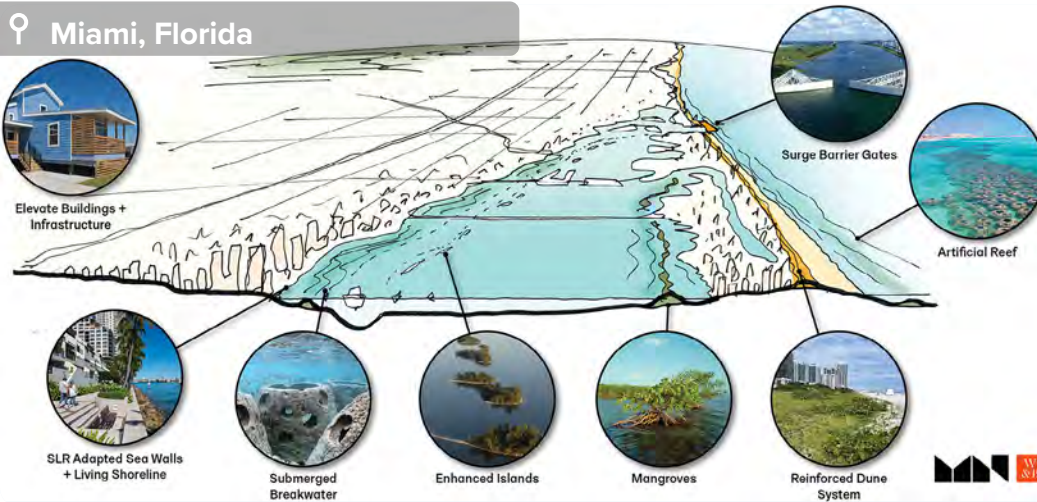
The purpose of this study is to address protection of critical infrastructure, reduction of structural damages, and evacuation



route protection along Miami-Dade County's CSRM Program's Key Biscayne Segment in response to the risks and effects of coastal storms and associated impacts, such as sea level rise, storm surge, and extreme wind and tidal effects. The primary issues the study will address are storm damages primarily due to coastal flooding from the oceanside and back bay areas due to hurricanes and storms, which includes storm surges, tides, and waves combined with the effects of the sea-level rise, storm damages due to erosion and wave attacks along the ocean shoreline, and compounding flooding contributions from rainfall and stormwater movement.

M&N continues to provide advisory services to the Village. M&N has participated in planning workshops, attended public meetings, and reviewed the modeling setup and results produced by USACE. Technical documentation was provided to support data collection efforts by the USACE as M&N is currently the coastal engineering consultant for the Village. Based on the storm surge and flood modeling results, M&N's Waggoner & Ball studio developed alternatives for a raised berm along existing Village Right-of-Way and developed concepts and renderings for visualization of the infrastructure improvements.

♀ Miami, Florida



Client Contact

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Contract Amount

\$1.5 million

Project Start & End Dates

2022 - Present

Miami-Dade County Back Bay Coastal Storm Risk Management Feasibility Study

Developing non-structural alternatives that enhance the use of nature-based features for risk reduction, allowing for adaptive management of sea level rise and climate change.

M&N serves as a planning and technical advisor to Miami-Dade County's Office of Resilience, the Chief Bay Officer, and the Office of the Mayor for the Miami-Dade County Back Bay CSRM Study. After the initial USACE Back Bay CSRM feasibility study published in 2020 proposed an 18-foot-tall conventional floodwall surrounding most of the downtown waterfront and divided the northern part of the County, there was a significant lack of local support for the USACE plan. USACE and Miami-Dade County paused the project, and the County made a formal request to USACE to have the feasibility study incorporate natural and nature-based features and consider alternatives that would also enhance the natural environment and urban communities. In August 2022, USACE expressed support for the development and consideration of locally identified alternatives that enhance the natural environment and urban communities, in combination with other measures, to provide a level of risk reduction from storm surge.

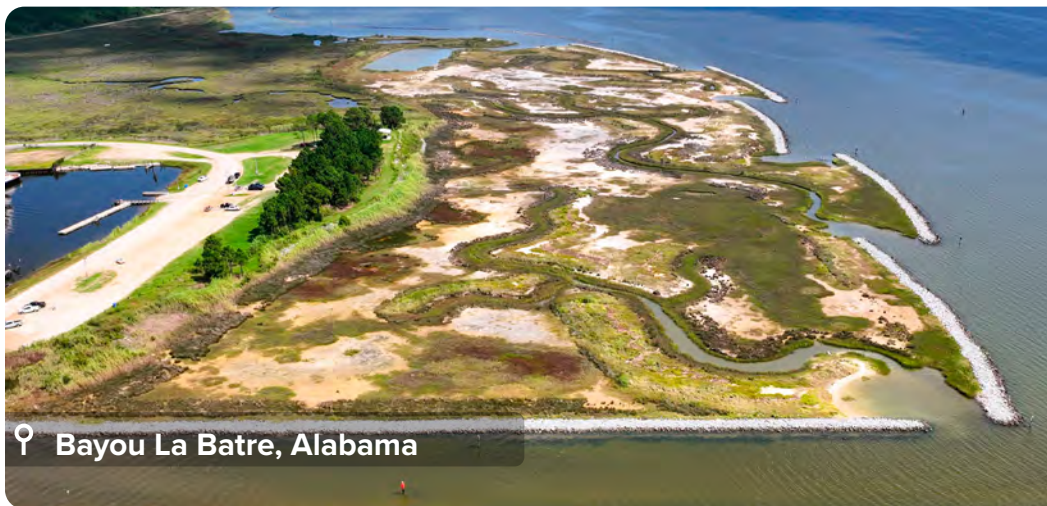
Through a series of design charrettes that included USACE, the County, and key stakeholders, M&N led efforts to develop alternatives that would include the use of nature-based features, such as mangrove wetlands or hybrid reefs, for risk reduction, expand the protection zones, allow for adaptive management in the face of climate change, and provide more equitable protection across the entire County. A grounding principle was to take a systems approach where a broader geographic lens is used to incorporate multiple lines of storm surge protection. This includes consideration of the broader geography that influences coastal storm surge and making use of features that can provide risk reduction, such as offshore reefs, onshore dunes and berms, segmented breakwaters, and natural and nature-based features. M&N also collaborated with USACE and County staff to develop a Nature-Based Solutions Pilot Program that will enable USACE to evaluate the potential storm risk protection benefits of nature-

based solutions for integration into other CSRM studies around the US M&N has also been mindful of the fact that any nature-based solutions proposed must be customized to limit impacts to submerged aquatic vegetation within Biscayne Bay in order to be permitted with regulatory agencies.

M&N developed a nature-based structural solution with multiple lines of protection while providing environmental benefits, additional public access, stormwater improvements, and water quality upgrades, as well as maintaining local property values and views.

M&N has worked in collaboration with federal, state, and local authorities, as well as environmental groups, to develop alternatives that can provide immediate storm risk protection benefits while also pushing to further study the potential benefits of nature-based solutions for CSRM. As these alternatives were developed, M&N worked with local regulatory authorities to ensure that any nature-based solutions proposed within Biscayne Bay were feasible from a permitting perspective. Finally, public workshops have also been essential to this process as we work to find solutions that fit within the USACE framework and provide the community benefits that the public expects.





Client Contact

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Contract Amount

\$14 million (Construction)

Project Start & End Dates

2017 - 2020

📍 Bayou La Batre, Alabama

Lightning Point Living Shoreline Restoration, Design, and Long-Term Sustainability Plan

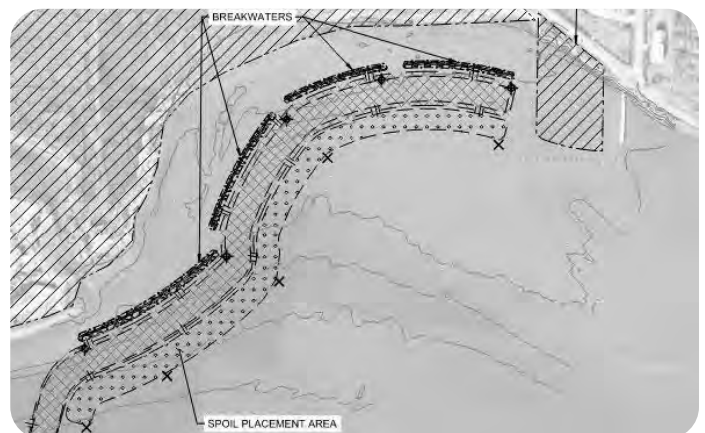
This restoration project combined an innovative approach to traditional shoreline protection through adaptive breakwaters; restoration of multiple habitats, including not only marsh, but intertidal oyster reef, shell-hash beach, scrub-shrub, and tidal creeks; and complementary green infrastructure amenities to allow for managed community access to the restored site. This multi-award-winning project has weathered five major storms since being built.

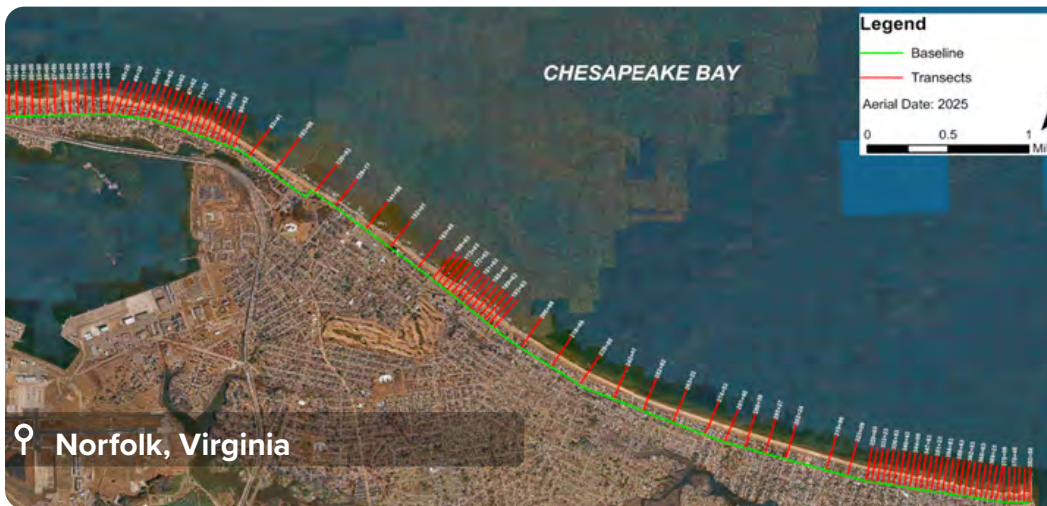
M&N was contracted by The Nature Conservancy (TNC) to develop a living shoreline approach to address critical levels of storm-induced erosion at the ecologically important shoreline in Bayou La Batre. A multifaceted and innovative living shoreline design was developed, incorporating lessons learned into the design from past living shoreline efforts in the region. The final design included 6,000-LF of segmented offshore breakwaters (including fish passages) constructed from 51,000 tons of rock. 40 acres of inter-tidal marsh and scrub-shrub habitat were created from the beneficial use of 240,000 CY of dredged material and included 10,000 LF of tidal creek. The nearshore segmented rock breakwaters design involved a statistical risk-based assessments of overtopping probabilities that enabled a robust assessment of risk reduction trade-off analysis in relation to project cost. Unique modeling techniques and risk-based profile projections were used to assess critical marsh erosion thresholds based on wave energy tolerances and refine the design of the breakwaters to result in wave energy transmission below these critical thresholds.

Advanced spectral and Boussinesq wave modeling was used to determine design criteria and configure the breakwaters' geometry. A state-of-the-art hydrodynamic modeling approach was used to configure the tidal creeks to required flushing times for the promotion of ecological benefits. Using ecological guiding principles (order sinuosity, drainage density, bifurcation ratios, and widths and depth), the tidal creeks were designed to mimic natural tidal creek systems and will provide both

recreational opportunities as well as provide for a diverse range of habitat to support targeted local marine life and key species of interest including birds, oysters, and terrapins.

The project further benefited up to 30 acres of existing marsh that had been hydrologically cut off from the bay, by re-connecting the relic tidal creek channels within the in-situ marsh to the newly created tidal creek channels. M&N completed all dredging engineering (production rates, dredging duration and hydraulic and mechanical dredging unit cost estimates) and cost-estimating, including. M&N secured all federal and state permits, successfully responding to multiple stakeholder inquiries and providing follow-up support for stakeholder and public outreach. Full construction plans and specifications, bid support, contractor interviews, construction administration, supervision, and inspection were provided for the \$11 million construction contract completed in August 2020. M&N created a long-term site suitability plan to improve the project resilience to sea level rise over the project design life. This included planning for thin-layer dredge placement to raise marsh elevations; scheduling of maintenance dredged dredge material availability in the region; and determining required marsh elevation levels for resilience to sea level rise in the region.





Client Contact

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Contract Amount

Varies

Project Start & End Dates

Varies

City of Norfolk Coastal Structures

M&N has a long and ongoing relationship with the City of Norfolk, delivering a broad portfolio of coastal structures work along the Ocean View shoreline on the Chesapeake Bay. The work spans study, design, permitting, construction oversight, and inspection across multiple project areas.

East Ocean View Beach Nourishment

M&N provided planning, permitting, and engineering services to the City of Norfolk for beach restoration along an approximately 1-mile reach of Norfolk's Ocean View community known as East Beach. After beach restoration was complete, the firm prepared plans and specifications for dune grass plantings over a 10-acre area of restored dunes, including Beach Grass (*Ammophila Breviligulata*) and Sea Oats (*Uniola Paniculata*).

West Ocean View Offshore Breakwaters Study

M&N was retained by the City of Norfolk to provide coastal engineering calculations and develop conceptual design alternatives for shoreline stabilization in the vicinity of the 200 Block of West Ocean View Avenue, Virginia. West Ocean View Beach is located along the southern coast of Chesapeake Bay. The proposed project area is located approximately between Mason Creek Road and Chesapeake Boulevard. The project study area consists of approximately 5,000 linear feet of shoreline.

Key technical work included:

- MIKE 21 Spectral Wave Model to analyze wave conditions and calibrate against the Norfolk ADCP gauge
- 3D Coastal Sediment Transport Model (3DCSTM) calibrated and validated using historical bathymetric survey data
- Evaluation of 15 breakwater alternatives with varying lengths, gap spacings, and offshore distances

Willoughby Spit Beach Restoration Study

M&N performed a detailed study of shoreline erosion at the Willoughby Spit area of Ocean View Beach and developed a recommended alternative for beach restoration and stabilization. M&N compiled and reviewed existing shoreline, survey,

sediment, and shoreline trend data using GIS and analyzed existing wave data. The firm also conducted field reconnaissance of the groins and breakwaters to assess their condition from a structural and coastal performance perspective. The compiled data supported the development of models of the Willoughby Spit system using GENESIS-T, SBEACH, and Delft3D. These models allowed M&N to assess the performance of current shoreline stabilization projects, examine multiple structural and non-structural alternatives for beach restoration, and determine the potential impacts these alternatives would have on the stability of the beach.

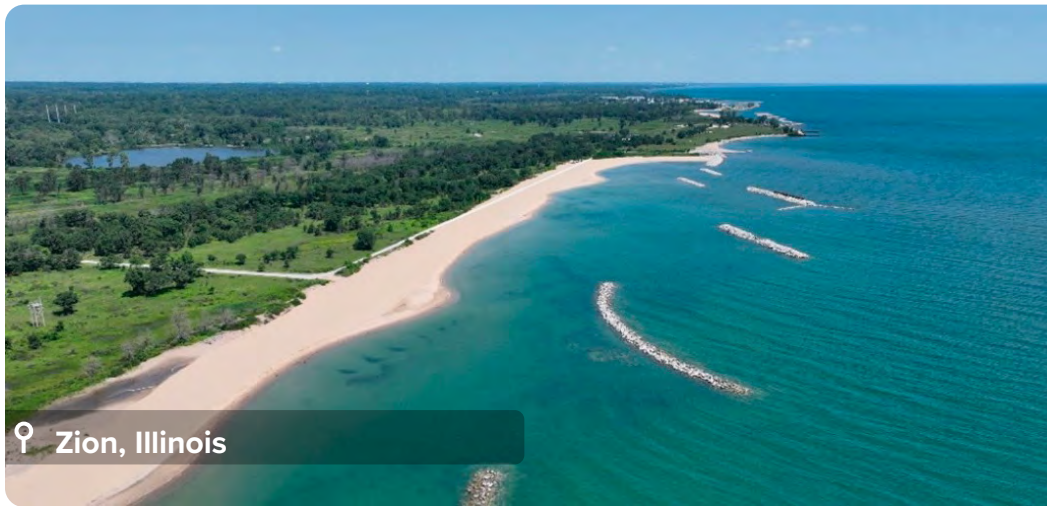


Ocean View Shoreline Integrated Management Study

This ongoing integrated report draws on the full regional modeling framework to support long-term shoreline management decisions.

Modeling Applications:

- Spectral wave modeling to characterize the average mean wave direction and wave height across the 7.3-mile shoreline
- Sea level rise analysis using IPCC Sixth Assessment Report intermediate climate change conditions to assess tidal overtopping frequency for breakwaters at varying elevations
- Shoreline change analysis using bi-annual survey data to compute retreat rates and volumetric changes across six reaches



Client Contact

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Contract Amount

\$2.98 million

Project Start & End Dates

2022 - 2024

Illinois Beach State Park Shoreline Stabilization

On Lake Michigan, Illinois Beach State Park represents the final remaining natural, undeveloped lakefront in Illinois and has long experienced shoreline erosion. The shoreline is transient by nature and, if left unprotected, would naturally erode over time. Lacking a steady supply of updrift sand, the park suffers from accelerated erosion that threatens its rare panne wetlands and dedicated nature preserves. In addition to its habitat value, with bike and walking trails, fishing, swimming, and camping, the park provides public recreational opportunities for over one million visitors per year.

The project includes final design and construction of a new shoreline protection and stabilization system that includes shore attached and offshore breakwaters, sand nourishment, and habitat structures to protect critical infrastructure and reduce natural shoreline erosion along the shore. The project site consists of three distinct areas, North Beach, Camp Logan, and Swimming Beach.

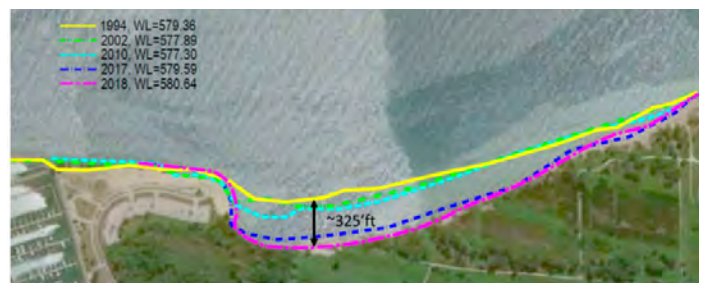
M&N teamed with the construction contractor on this challenging design-build project and prepared the final construction plans and specifications for the entire project. Additional work included managing the design team, including surveying services, geotechnical data collection and analyses, as well as coastal, civil, and habitat design. The project's key features include 22 near-shore rock breakwaters and two shore-connected coastal groins, beach nourishment and habitat elements to attract and improve both avian and aquatic habitat conditions in the nearshore zone of the park.

Approximately 311,000 tons of stone, ranging from 10-lb bedding stone to 7-ton armor stone, make up the breakwaters and groins. A volume of 510,200 cubic yards of sand was trucked in to complete the beach nourishment. Avian and aquatic habitat elements are integrated into the offshore breakwaters in the Camp Logan area and include precast tern nests, submerged vegetated and unvegetated blocks, submerged rock, and submerged driftwood.

Wave Modeling

MIKE 3 WAVE and MIKE 21 sediment transport models were used to evaluate impacts on beach morphology due to breakwater structure optimizations against the bridging document design. Analyses included technical design analysis and numerical modeling. Over the course of the project, design refinements were made to improve constructability, reduce rock volume, and improve the construction schedule. The wave study models were utilized to compare performance of optimized breakwater configurations against initial layouts and geometries (from the "Bridging Documents").

The "morphologically significant wave condition" was used as the wave model boundary condition to evaluate any potential changes to the wave climate on the lee side of the breakwaters and along the beach. The resulting spatially varied wave and current fields from MIKE 3 WAVE were then fed to the sediment transport model to study the changes in sediment transport capacities due to the breakwater design optimizations. The modeled results show that all breakwater configurations reduce the wave heights on the lee side of the structures and, on average, reduce the sediment transport rate substantially compared to the existing conditions. In addition, the modeled spatial distribution of wave energy and sediment transport capacity from M&N's optimized design is similar to the original design as it was shared with the regulatory agencies; therefore, any impacts from the changes are considered de minimis. This finding expedited the final regulatory process and getting permits secured.





Client Contact
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Contract Amount
 \$140,000

Project Start & End Dates
 2016 - 2018

♀ Hillsboro Beach, Florida

Hillsboro Beach Coastal Structure Numerical Modeling

The Town of Hillsboro Beach is located on a barrier island in Broward County, Florida, 35 miles north of Miami. The town covers 3.2 miles of beach and stretches from Deerfield Beach in the north to Hillsboro Inlet in the south. The beach along the oceanfront provides shore protection, but experiences severe erosion caused by winter storms and hurricanes. M&N has been providing beach management consulting services to the Town of Hillsboro Beach continuously since 2016 through multiple task contracts.

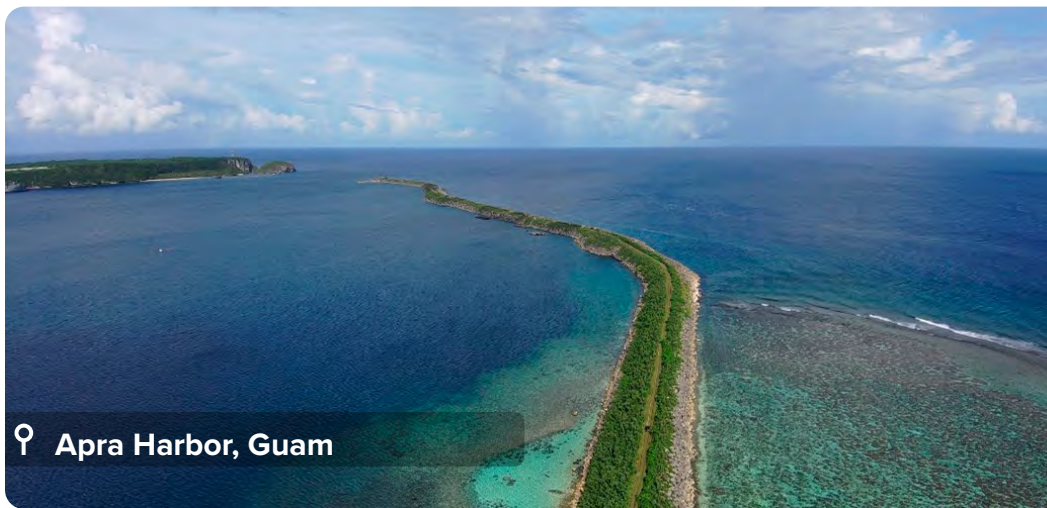
M&N provided consulting engineering support to the Town relative to litigation associated with the downdrift erosion caused by the groin field in Deerfield Beach. Support included a literature search of previous reports, studies, and aerial photography back to the 1940s to document the effects of the updrift groin field that was constructed in the early 1960's along the shoreline of Deerfield Beach. Numerical modeling was performed using MIKE 21 Spectral Wave (SW) for wave propagation from offshore to nearshore. To calibrate this model, three (3) Acoustic Doppler Current Profiler (ADCP) gauges were deployed by a subconsultant to measure waves and currents in the nearshore zone and in deeper water. The data and resulting numerical modeling calibration further supported and validated the modeling results for a complex coastal process simulation.

The wave data was then used for input into the LITLINE shoreline evolution model to evaluate sediment transport. The shoreline model for the Hillsboro Beach area and Deerfield Beach area was developed, calibrated and validated utilizing the historical shoreline changes/positions, and volume changes, along with an evaluation of the model simulated longshore sediment transport rates. The calibrated/validated shoreline model was used to simulate five years of continuous shoreline changes for the physical conditions:

1. Conditions with the Deerfield groin field in place;
2. A hypothetical condition over the same time period in which the Deerfield groin is removed; and
3. A hypothetical condition of annual sediment bypassing at Boca Raton Inlet.

Simulations over a 5- and 10-year period were performed, and the effects of the groin field were evaluated. The literature review, field data collection, numerical model setup, and coastal engineering recommendations were compiled into a comprehensive coastal engineering report for the Town.





Client Contact

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Contract Amount

\$1.6 million

Project Start & End Dates

2023 - Present

Apra Harbor, Guam

Admiral Glass Breakwater Repair

In May 2023, the Admiral Glass Breakwater (Glass Breakwater) suffered damage during Typhoon Mawar, requiring repairs and/or improvements to continue wave protection of Naval Base Guam and Apra Harbor and improve the structure's resiliency to storms. As a member of a joint venture team, M&N participated in conducting updated condition assessments and initiating a scoping and planning charrette process to facilitate scope of work development for the project and verify stakeholder requirements.

The Glass Breakwater provides wave protection for Apra Harbor, the only commercial harbor in Guam. The original breakwater structure was constructed in 1946 using limestone rock. Since then, the breakwater has been repaired numerous times using various materials including limestone and concrete armor units (dolos and cube shapes). A condition assessment completed in 2016 identified more than 20 areas of the breakwater's seaward slope that were considered to be in damaged condition and needed repairs. Damage was mainly on the seaward side of the breakwater where the slope steepened, was missing armor stones, and exposed underlayer and core material.

Under a Naval Facilities Engineering Command (NAVFAC) Pacific indefinite delivery, indefinite quantity contract, M&N, as a member of a joint venture, performed a condition assessment of the breakwater in July 2023, using several methods. To collect imagery and elevation data of the structure, a multibeam survey was performed underwater and a light detection and ranging (LiDAR) survey was conducted for above water areas. Findings were combined with visual observations by a field team of engineer-divers for areas that were identified as damaged after a review of the survey data. It was determined that the Glass Breakwater had exceeded its useful service life and required repairs to maintain the structure's functional performance.

To determine a course of action, the team moved forward with a project charrette. Participants included designated representatives from the U.S. Pacific Fleet, Joint Region

Marianas, Naval Base Guam Public Works, and Naval Base Guam Port Operations, Naval Facilities Engineering and Expeditionary Warfare Center, NAVFAC Marianas, NAVFAC Pacific, and the Government of Guam.

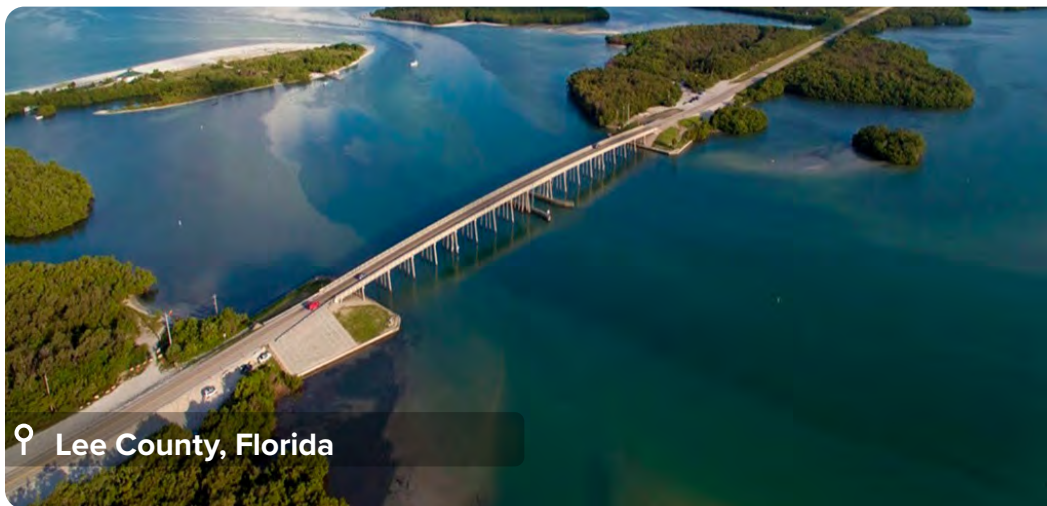
Charrette goals and expectations included:

- › Validation of project scope and requirements to develop the DD 1391.
- › Identification of critical issues.
- › Identification of environmental and regulatory requirements.
- › Information collection about past assessments/damages/repairs.
- › Document post typhoon (Mawar) condition of Glass Breakwater.
- › Identification of constructability considerations.
- › Development of design criteria.
- › Development of preliminary construction cost for planning purposes

During the charrette, NAVFAC Pacific leadership discussed additional scope, including analysis of the outer harbor area to address concerns regarding operations at Kilo Wharf during extreme storm events.

As a result of the charrette, the project scope for the Glass Breakwater improvements expanded to include expedited critical repairs of the most damaged breakwater sections and improvements at Kilo Wharf to improve mooring capabilities.

The DD 1391 for Glass Breakwater was based on an initial phase for critical breakwater repairs and mooring improvements at Kilo Wharf, followed with a full breakwater restoration to construct a more robust Glass Breakwater and increase the structure's resilience against future storms, address sea level rise, and extend the service life of the structure.



Client Contact
Steve Boutelle
Lee County
(239) 533-8128
sboutelle@leegov.com

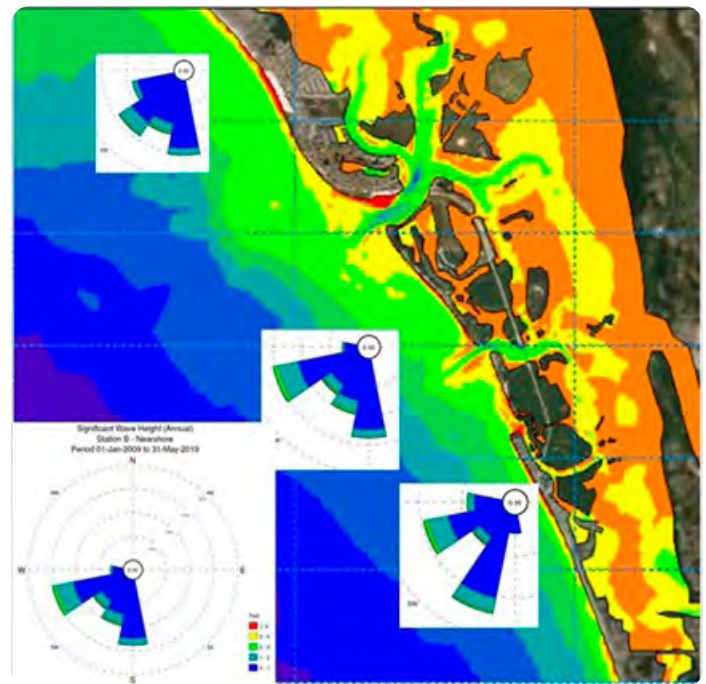
Contract Amount
\$590,620

Project Start & End Dates
2020 - 2022

Estero Barriers Regional Inlet Management Study

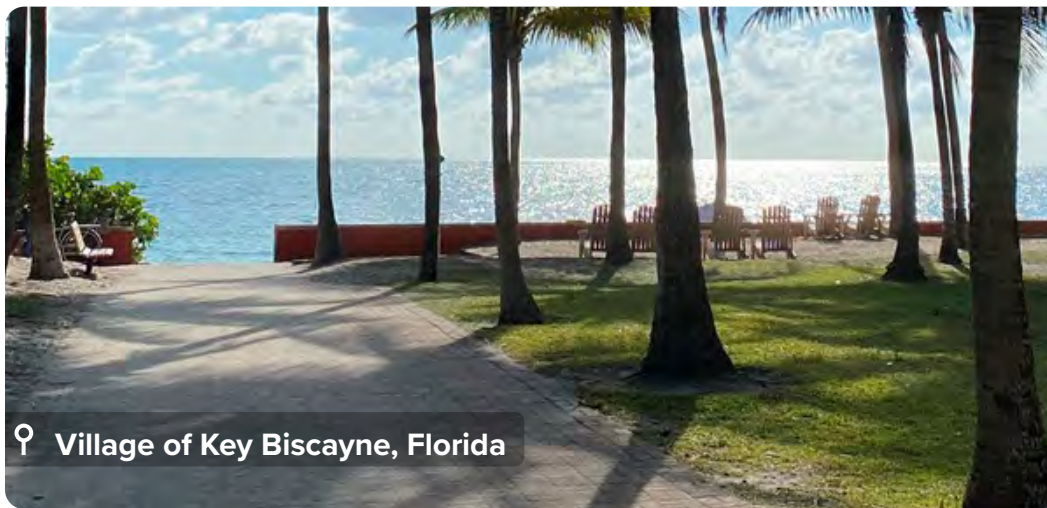
M&N was retained by Lee County to perform a Regional Inlet Management Study (RIMS) to develop sediment budgets for the three (3) interdependent Estero Barrier inlets located within southern Lee County, Florida. The scope included evaluating strategies of inlet sediment management, resulted in balancing the sediment budget between the inlets and adjacent beaches. The inlets included in the study area (Big Carlos Pass, New Pass, and Big Hickory Pass) are located between FDEP R-Monuments, R-209 and R-227. The RIMS evaluated options and provided potential recommendations for the ongoing management of the passes and the adjacent beaches. The recommendations considered the governmental and property stakeholders involved in the current management practices, including Lee County (County), the West Coast Inland Navigation District (WCIND), The Town of Ft. Myers Beach, Lovers Key State Park, the Town of Bonita Springs, the Estero Bay Aquatic Preserve, Pelican Landing, and the Florida Department of Environmental Protection (FDEP).

The study included detailed field data collection with bathymetric survey data of the Project area including the flood shoal, the inlet channel, and the ebb shoal at each of the 3 inlets as well as the deployment of four (4) concurrent ADCP instruments to collect tidal currents and wave data near the channel entrances. A fifth ADCP instrument was deployed in the nearshore area to evaluate wave propagation and for calibration of the wave modeling. The historical shoreline and beach volumetric changes between Estero Island and Little Hickory Island were analyzed and used to calibrate the shoreline and morphological change models. Coastal numerical modeling was utilized to simulate tide conditions, wave propagation, wave and current interactions, breaking waves generated alongshore currents, and sediment transport at the Estero Barrier passes. Due to the complexity of simulating 3 inlets simultaneously, several suites of moles were utilized including MIKE-21 for the majority of the wave and hydrodynamic modeling and Delft3D for the sediment transport modeling within the inlets. The LITLINE model was used for simulation of the beach shorelines.



Due to the complexities of the sediment transport patterns, M&N developed an additional morphological model using a three-dimensional (3D) coastal sediment transport model (3DCSTM) model, in addition to the Delft3D model for the project. This complex analysis resulted in a comprehensive sediment budget, with numerous sediment cells within the Project area. The sediment cells outlined capture the dynamic, morphological features of the study area, including beaches, nearshore areas, inlets, shoals, channels, and offshore areas.

M&N and the County conducted Technical Advisory Committee (TAC) meetings to review the results of the RIMS and to receive feedback from stakeholders. A comprehensive coastal engineering study report was compiled along with support studies and the sediment budget report by subconsultants on the M&N team.



Client Contact
Colleen Durfee
Village of Key Biscayne
(305) 365-8948
cdurfee@keybiscayne.fl.gov

Budget Amount
\$93,358 (Brizaga Portion)

Project Start & End Dates
2022 - 2024



♀ Village of Key Biscayne, Florida

Resilience Strategy, VA, & Grant Support

Brizaga developed a Village-wide Resilient Infrastructure Strategy, including a flood vulnerability assessment compliant with s. 380.093 F.S.; coordinated integration of the \$100 million general obligation bond into broader resilience planning efforts; supported development of an Implementation and Integration Plan; and, provided grant application and administration support across multiple funding programs.



In 2022, the Village of Key Biscayne initiated an extensive Resilient Infrastructure and Adaptation Program encompassing the entire village, including developing a Resilient Infrastructure Strategy aligned with this strategy. This program aims to harmonize and execute all Village initiatives, which are structured around our essential five Lines of Effort, to optimize advantages

for residents and minimize disruptions. By prioritizing utilizing all available funding sources and adhering to the “Dig Once” principle, the community will maximize the value derived from the investments in our infrastructure.

The Village is poised to enhance and “Elevate our Island Paradise” through collaborative efforts.” This Program included a comprehensive flood vulnerability assessment, which Brizaga led for the entire project team.

Brizaga led the development of the Village’s Resilient Infrastructure Strategy, guiding technical analysis and overall program alignment while directing a Village-wide vulnerability assessment evaluating risks from flooding, wind, heat, and

coastal erosion to community assets and the local economy, all in full compliance with State requirements.

The team coordinated across multiple consultants to align Resilient Florida Grant Program requirements with existing design criteria, ensuring consistency across initiatives, while also supporting grant strategy and applications to secure funding for priority projects. This integrated approach combined technical expertise, strategic planning, and clear communication, including development of visually compelling graphics and outreach materials, to support informed decision-making and successful program implementation.





Client Contact
DARPA

Contract Amount
\$6,000,000 (total grant,
approximately)

Project Start & End Dates
2022 - 2025



📍 Miami-Dade County, FL

Elliott Key DARPA REEFENSE Feasibility

University of Miami (UM) is one of three universities in the U.S. that was awarded a contract from the Defense Advanced Research Projects Agency (DARPA) introduced the Reefense Program. Reefense is an initiative with “Reef” and “Defense” to develop hybrid biological and engineered reef-mimicking structures. These structures would mitigate impacts from waves and storms while minimizing the potential impacts to marine resources that are often associated with conventional shore protection projects.

UM evaluated hybrid reef sites in South Florida at several sites including in the Florida Keys as well as in Elliott Key which is adjacent to Key Biscayne. In Dec 2023-March 2024, the benthic habitats offshore of Elliott Key were surveyed by UM teams led by Diego Lirman as potential deployment sites for the DARPA structures. Out of the multiple sites surveyed, an optimum site was selected as the preferred location based on depth, distance to shore, and the benthic community observed. The water depth throughout the site ranges between 6-12 feet. Unlike other survey sites in the area that contain dense seagrass patches, the site selected has only a few sparse seagrass patches. The site can be characterized as a hardbottom/hard pan habitat with a Pleistocene carbonate matrix occupied by macroalgae, soft and stony corals, and sponges.

Developed by researchers at UM, SEAHIVE® represents a paradigm shift in coastal resilience by integrating the structural robustness of traditional grey engineering with the regenerative capacity of green living shorelines. The system utilizes modular, hexagonal hollow prisms composed of reinforced concrete that can be stacked in versatile horizontal or vertical configurations to meet site-specific hydrodynamic and ecological requirements. By occupying a deliberate middle ground in infrastructure design, SEAHIVE® provides the immediate structural protection required by eroding shorelines while simultaneously creating the necessary conditions for mangroves, coral, and oyster habitats

to establish and grow. In this capacity, the technology functions as a short-term structural solution that actively nurtures the biological systems destined to serve as long-term, self-sustaining coastal defenses.

The Elliott Key site was selected for the DARPA REEFense project to utilize SEAHIVE® to develop hybrid coral reefs capable of dissipating up to 95% of wave energy. Based on the marine resource mapping at the UM selected site a series of design alternatives were developed and physical modeling was conducted by UM’s SUSTAIN lab to assess their wave attenuation performance over a range of wave conditions. The SUSTAIN Laboratory allows physical testing of shoreline protection systems in relatively large -scale conditions, as well as scaled system configurations providing a unique opportunity for experimental validation of the system’s performance under a range of wave conditions including extreme storms. Over 48 different tests were conducted and this was used to identify the most effective designs which were then further tested in both the SUSTAIN laboratory and at the USACE ERDC facility in Vicksburg MS. The open foam computer modeling was also implemented by UC Santa Cruz for these designs. Consistent results were obtained from the physical modeling at both facilities and the computer modeling.

The numerical modeling conducted for the project along with validation with physical modeling will facilitate the hybrid reef feasibility study at nearby Key Biscayne which has similar wave climate, extreme storm condition and shallow shelf as Elliot Key. UM was not able to complete the planned test deployment at this location, but the information collected during the design development phase will be useful for moving this project expeditiously through the design phase.

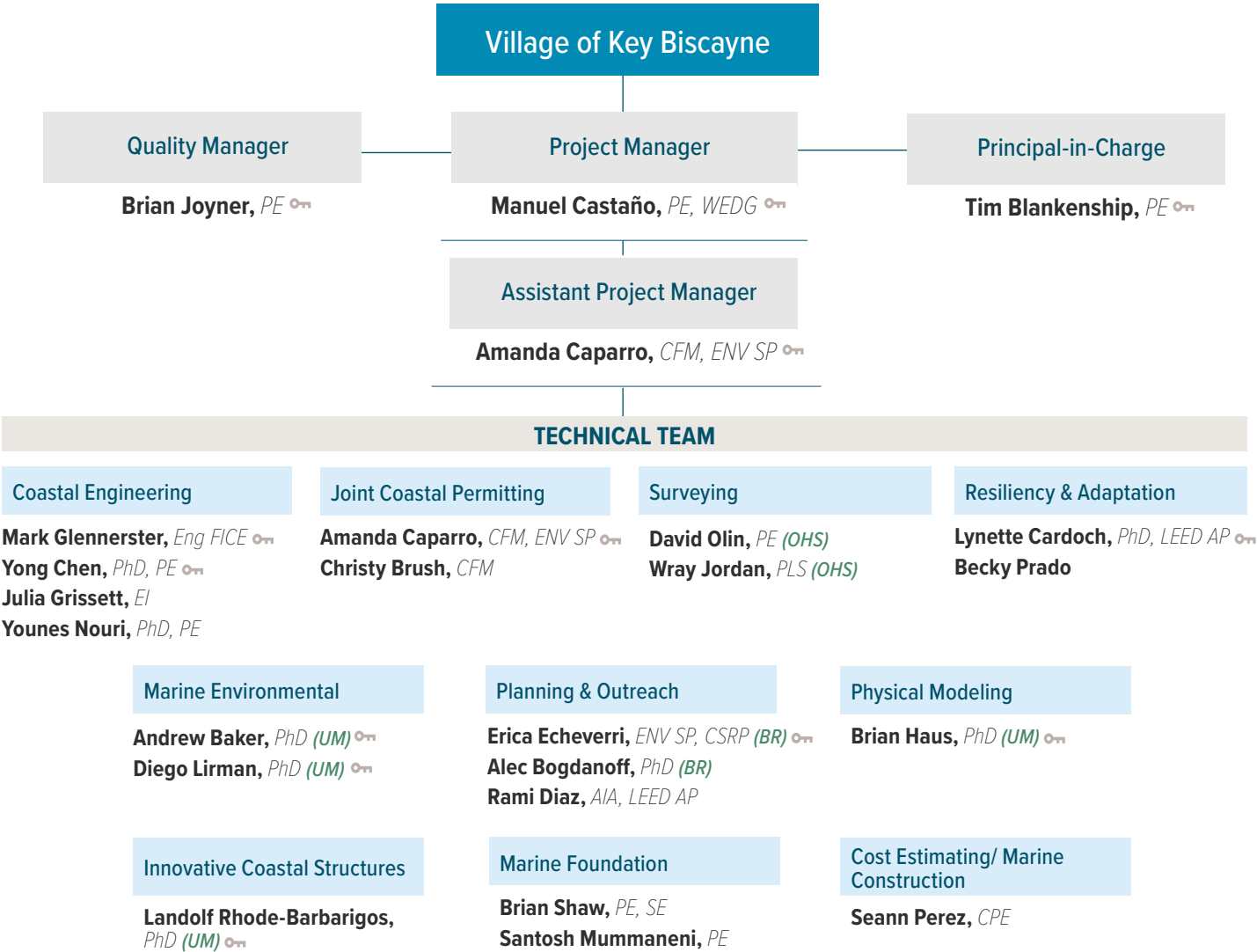
2. Service Team and Resume →

a. Organizational Chart

Our team’s organization creates seamless linkages between the Village, our project management team, a team of renowned coastal experts, and locally-knowledgeable specialists. Our organizational strategy focuses on finding the right individuals to lead or perform specific areas of work. As illustrated in our organizational chart below, the M&N team provides a comprehensive delivery strategy to meet your need and achieve your goals for this project. One page resumes for all team members are provided starting on the following page.

*Industry Partners

Moffatt & Nichol has worked with various industry partners across the U.S. (e.g., SEAHIVE, EConcrete, Kind Designs, and Reef Arches), helping develop some of the science behind these technologies. Given the project’s early stage, the feasibility analysis will evaluate multiple solutions before selecting a vendor best suited to local conditions and needs.



LEGEND

All personnel are M&N unless noted.

Key Personnel

Teaming Partners

(BR) Brizaga

(OHS) Olin Hydrographic Solutions (SBE)

(UM) University of Miami



b. Team Members



Manuel Castaño 

PE, WEDG

Project Manager | Moffatt & Nichol

Manuel Castaño has served as project manager and lead coastal engineer for variety of coastal and waterfront engineering projects, including numerous Nature-Based Solution projects (living breakwaters, living shorelines, gabion shorelines, etc.), shoreline armoring and enhancement, beach and dune enhancement, or Sea Level Rise assessments. Manuel routinely leads multiple phases of these projects, including feasibility assessment, hydrodynamic and wave propagation numerical modeling, design development, and construction support services. Manuel is one of the co-authors of PIANC Design Guidelines WG168 and is currently involved in ASCE's Sea Level Change Task Committee”.

Education:

MS, Civil Engineering, 2015

BS-MS, Civil Engineering, 2013

Registrations:

Professional Engineer: Florida
(#86926), California, Puerto Rico

Waterfront Edge Design
Guidelines Associate,
Waterfront Alliance

Breakwater Feasibility Study at Nas Jax Marina, Jacksonville, FL. Project engineer-in-charge of the feasibility study completed for the system of offshore breakwaters for the NAS JAX marina. As part of this study, M&N completed MIKE21 and MIKE3 numerical modeling to evaluate the performance of several typologies and geometries of breakwaters to assess wave propagation during predominant (seasonal) and extreme (hurricane) conditions. In addition to the breakwater performance, M&N completed construction cost estimates, a preliminary geotechnical evaluation, and an environmental permitting review to fully understand the overall feasibility of this project.

Boca Chica Restoration Engineering with Nature, Nas Key West, FL. Coastal engineer-in-charge of the development of shoreline protection alternatives based on Engineering with Nature (EWN) principles along Geiger Beach at NAS Key West. The intent of this project is to protect the southeastern end of Runway 32 from shoreline erosion. The feasibility of several configuration of offshore breakwaters based on a green-gray infrastructure was evaluated considering future facility resilience, ecology and recreational opportunities for local visitors.

Hillsboro Beach Nourishment Monitoring, Hillsboro Beach, FL. Project engineer-in-charge of the 1- and 2-year post-construction physical monitoring task for the Town of Hillsboro Beach. This task consisted on the evaluation of beach profiles along monuments R01 through R13 to assess shoreline and volumetric change following the Beach Renourishment for the Town of Hillsboro Beach and City of Deerfield Project that was completed in April 2015.

City of St Petersburg Municipal Marina South Dock Breakwater Evaluation, St. Petersburg, FL. Project engineer-in-charge of the numerical modeling to evaluate several configurations for the modification of the existing breakwaters at the City of St. Petersburg Marina. A Boussinesq numerical wave model was developed to assess wave propagation and to reduce agitation at the new proposed transient docks.

Bay Parc Plaza, Miami, FL. Engineer-in-charge of the numerical modeling required for a FEMA letter of map amendment based on existing site conditions to modify a parcel from a partial VE flood zone to an AE zone with lower base flood elevation. The map change allows the site greater flexibility of ground level uses and flood protection design options.

5775 Collins Avenue, Miami Beach, FL. Engineer-in-charge of the numerical modeling required for a FEMA CLOMR based on fill to modify the proposed structure's effective flood zone from a partial AE flood zone to an X zone.



Tim Blankenship

PE

Principal-in-Charge | Moffatt & Nichol

Education:

ME, Coastal Engineering, 1994

BS, Civil Engineering, 1992

Registrations:

Professional Engineer: Florida
(#55910), Virginia

Tim Blankenship has extensive experience as a coastal engineer having completed beach and dune nourishment, inlet, and coastal structure studies and design throughout Florida over the past 25 years, and he has been PM/EOR on every beach management project the Village has permitted and constructed since 2000. He brings this depth of experience to lead the M&N team with beach management and bayfront shoreline projects through the duration of this contract. This intimate knowledge of coastal processes in Biscayne makes him a through leader in the advisory services to the Village with the recent USACE CSRSM process. Tim continues to innovate in the coastal/marine industry with a passion for the development of nature-based solutions. He has been designing nature-base solutions for many years, and developing technology for greengray infrastructure is needed for barrier islands like Key Biscayne.

Village of Key Biscayne Beach Management Program, Key Biscayne, FL. Engineering project manager and engineer-of-record overseeing public relations, field surveys, coastal engineering assessments, design, construction, and beach performance evaluations. Completed design, permitting, and construction administration for multiple beach management projects since 2000.

Village of Key Biscayne Resilient Infrastructure Program Strategy and Integrated Implementation Plan, FL. Project manager for a technical advisory role to support the Village with the USACE CSRSM study for the development of shoreline stabilization and flood protection alternatives for the beaches and back bay as part of the Village's Elevating Our Island Paradise Resilience Program with the goal of protecting the Village from the effects of flooding, sea level rise, and environmental changes. Developing alternative solutions for shoreline stabilization, working with USACE and Village to integrate nature-based solutions for shoreline stabilization.

Miami-Dade County Federal Shore Protection Project CSRSM. Project manager/coastal engineer provided technical advisory services to the Village. Purpose of the study was to address the protection of critical infrastructure, reduction of structural damages, and evacuation route protection along the Dade County Beach Erosion Control and Hurricane Protection (BEC&HP) project in response to the risks and effects of coastal storms and associated impacts such as sea level rise, storm surge, and extreme wind and tidal effects. Collaborated with USACE Jacksonville District providing technical comments on CSRSM numerical modeling and economic impact analyses and developed conceptual renderings of Tentatively Specific Plan (TSP).

Back Bay CSRSM, Miami-Dade County, FL. Project manager for the evaluation of shore protection alternatives to the proposed floodwall developed by USACE for the downtown waterfront as part of the CSRSM study with the county. Developed living shoreline with adaptable system of oyster reefs, revetment, mangroves, and seagrass habitat as a green infrastructure alternative to the floodwall. Worked with the local developer, Swire Properties, along with the City of Miami and the county to develop consensus with stakeholders for adaptable and resilient shore protection system to be incorporated into the CSRSM report.

Pagani Residences Living Seawall, North Bay Village, FL. Project principal for the design of a living seawall located at 7938-7940 West Drive in North Bay Village. The living seawall is part of the waterfront of proposed development that will incorporate a promenade for public access as part of Island Walk master plan (developed by Moffatt & Nichol). The living seawall is approximately 240 feet long and is designed with 3D concrete printed panels manufactured by KIND Design in Miami, FL.



Amanda Caparro

CFM, ENV SP

Assistant Project Manager | Moffatt & Nichol

Amanda Caparro is an environmental scientist and project manager specializing in environmental permitting and regulatory compliance analysis in the coastal and marine environments. Amanda's project experience includes field investigations, technical review and analysis, regulatory compliance, and processing of coastal construction and environmental resource permits for a variety of projects, including residential, mixed-use, and resort developments, beach nourishment projects, shoreline stabilization structures, and environmental restoration projects. Amanda has also assisted coastal communities with securing and administering state and federal-funding for beach management, coastal resilience, and environmental restoration projects, including preparation of FDEP funding requests, FEMA grant applications, and reimbursement documentation.

Education:

BA, Sustainability & Environment, 2024

MS, Environmental Policy & Management, 2025

Registrations:

Certified Floodplain Manager, Association of State Floodplain Managers (CFM)

Institute for Sustainable Infrastructure, ENV SP

Village of Key Biscayne Beach and Dune Management Program, Key Biscayne, FL. M&N has been providing coastal engineering and environmental permitting services for the Village of Key Biscayne since 2017. This includes providing design and permitting services for multiple truck haul beach renourishment events along 6,000 feet of shoreline in the Village of Key Biscayne. Environmental scientist responsible for securing permit authorizations from the USACE, Florida Department of Environmental Protection, and Miami-Dade County DERM. Providing permit administration services and management of postconstruction biological monitoring services. Assisted the Village with their FDEP Beach Management Funding grant and reimbursements.

Citywide Pedestrian Beach Path Feasibility Analysis, Miami Beach, FL. Project manager in charge of conducting a feasibility study for the creation of a dedicated, city-wide, pedestrian-only path on the hardpacked sand east of the dunes. The City's existing shared-use Beachwalk path that is highly utilized by pedestrians, cyclists, joggers, and skaters, has experienced challenges with public safety due to conflicts between users. M&N undertook an initial phase of consulting services to assess the potential conceptual design alternatives, regulatory feasibility, construction costs, schedule, and other points of diligence relative to the proposed pedestrian beach path.

Miami-Dade County "Back Bay" Coastal Storm Risk Management, Miami, FL. Assistant project manager for the USACE Back Bay CSRM Feasibility Study. M&N serves as a planning and technical advisor to Miami-Dade County's Office of Resilience, the Chief Bay Officer, and the Office of the Mayor for the Miami-Dade County Back Bay CSRM Study. M&N developed alternatives that enhance the use of nature-based features, such as mangrove wetlands or hybrid reefs, for risk reduction, expand the protection zones, allow for adaptive management of climate change, and provide more equitable protection across the entire County. A grounding principle was to take a systems approach where we use a broader geographic lens to incorporate multiple lines of storm surge protection.

Surfside Dune Restoration Coastal Permitting, Miami, FL. Assistant project manager for prioritized management and implementation of dune restoration/enhancement projects. Conducted field work, marked up aerials, identified native and invasive species, and took photographs. Currently providing FDEP CCCL permitting services.

Golden Beach Residences, Golden Beach, FL. Project manager overseeing Florida Department of Environmental Protection (FDEP) Coastal Construction Control Line (CCCL) permitting, flood regulation compliance review, and Florida Fish and Wildlife Conservation Commission (FWC) exterior lighting approval compliance for several single-family residences developed within the Town of Golden Beach.

**Education:**

MS, Civil Engineering with
Coastal Concentration, 1997

BS, Environmental
Engineering, 1995

Registrations:

Professional Engineer: Florida
(#57496), North Carolina,
Virginia

Brian Joyner

PE

Quality Manager | Moffatt & Nichol

Brian Joyner's 29-year career has focused on determining coastal and stormwater flood hazards on both local and regional scales and designing projects to mitigate or withstand those hazards. His experience includes detailed numerical modeling of stormwater hydrology/hydraulics, storm surge, waves, sediment transport, and the effects of coastal and hydraulic structures. Since 2020, Brian has served as PIANC (World Association for Waterborne Transport Infrastructure) USA representative to PIANC's Permanent Task Group on Climate Change. In that role, he assists with updating and promoting PIANC guidance on resilience and adaptation of waterborne transport infrastructure and operations, relative to both open-coast and inland navigation.

Coastal Restoration Services, Flagler Beach, FL. Project manager for coastal engineering services focused on identifying and designing solutions to restore the city's beach and dune system, which had suffered severe erosion in recent years. Participated in compatibility analysis to identify suitable offshore borrow areas for beach nourishment.

Norfolk Wave Climate Monitoring, Norfolk, VA. Project manager for ongoing wave data collection and analysis at a central location along Norfolk's seven-mile-long Ocean View and Willoughby Spit shoreline. Coordinated subconsultants' field data collection. Provided engineering technical review of wave climate documentation and statistics.

Ocean View Sand Management Pilot Project, Norfolk, VA. Project manager and lead coastal engineer to design and coordinate permits to excavate sand encroaching against private structures and place the excavated sand into gaps and narrow reaches in adjacent dunes. The present effort covers shoreline between Grove Avenue and Cape View Avenue as a pilot project to work through the technical, financial, and regulatory requirements, with a view to applying the process elsewhere in Ocean View.

Ocean View Shoreline Periodic Survey and Analysis, Norfolk, VA. Project manager and lead coastal engineer for twice-yearly spring and fall surveys and monitoring reports along Norfolk's seven-mile long Ocean View and Willoughby Spit shoreline. Coordinated subconsultants' field data collection. Provided engineering technical review of volume change and shoreline change calculations and documentation. Established reporting methods for monitoring the performance of the USACE's Coastal Storm Damage Reduction Federal beach nourishment project

Sand, Beach, And Dune Management Committee and Technical Investigations, Norfolk, VA. Coastal engineer who provided data products and technical document as needed in relation to Cottage Line dune management and participated actively as a member of the City's Sand, Beach and Dune Management Plan Steering Committee in a process intended to address residents' concerns about sand encroachment on their properties while maintaining storm damage protection afforded by the dunes.

Chesapeake Beach Nourishment Design and Permitting, Virginia Beach, VA. Lead coastal engineer and project manager for design of a hydraulic dredging and beach nourishment and dune restoration project at Chesapeake Beach. The nourishment sand is obtained by hydraulic dredging of a nearshore shoal with pipeline to the beach. Designed the nourishment template and prepared basis of design and the Joint Permit Application and supporting documents. Coordinated with federal and state agencies to assist with permit processing and federal Section 408 review.

**Education:**

HND, Civil Engineering, 1988

Registrations:

Incorporated Engineer: United Kingdom (#48066507)

Fellow of the Institution of Civil Engineers

Mark Glennerster

ENG FICE

Coastal Engineering | Moffatt & Nichol

Mark Glennerster is a premier breakwater expert with global expertise. He is a fellow of the Institution of Civil Engineers, with over 38 years of experience in the planning, investigation, analysis, design and documentation of coastal and marine structures. He is an expert advisor on marine projects around the world and often called in by clients to advise on complex maritime related problems. Mark has a reputation for working on large breakwaters for various clients in some of the most challenging parts of the world. He knows how to bring pragmatic solutions to clients and also bringing extensive knowledge of construction techniques and health and safety issues associated with marine projects.

Italy; Genoa Port. Technical specialist for design of caisson breakwater in 55m of water. Responsible for advice to design and build team and managing Physical modelling.

USA; Guam. Technical specialist for design and repair of breakwater damaged by Typhon Mawar in May 2023.

Algeria; Chercell Port. Technical specialist for design of caisson breakwater in 50m of water. Responsible for advice to design and build team and managing Physical modelling.

Australia; Westport new port, Fremantle. Specialist advisor on breakwater for the new development.

UK Environment Agency. Lydd and Hythe ranges, design manager for Van Oord UK on the two large Coast protection projects.

UK: Waveney District council. Advice on selected sites, assistance with planning of maintenance works.

UK: New Forest District Council. Advice on selected sites, assistance with planning of both capital and maintenance works.

UK: Environment Agency. Advice and reviews / site visits to West Bay Sea defence scheme to offer advice to project team on various matters.

UK: Environment Agency. Contractors Design coordinator on various works on Lincolnshire coastline.

UK ; Various. Acting as Principal Designer under CDM regulations for various private and Local Authority clients on Marine projects.

UK; Portsmouth City Council. Review of design of large UK Sea Defence scheme, south of England.

UK; Various locations. Assisting various contractors with bids, including Value engineering, reviews of others designs and concept reviews.

British Standards. Reviewer of BS6349 Part 1-4:2013.

UK: Network Rail; Dawlish Warren. Advice and review of consultant's work on programme of work for 20km of new river and sea wall / reclamation works.

**Mark Glennerster recently joined Moffatt & Nichol. Projects listed were with previous firm, Glennerster Consulting Limited.*



Yong Chen

PHD, PE

Coastal Engineering | Moffatt & Nichol

Education:

PhD, Civil and Structural Engineering, 2001

MS, River and Coastal Engineering, 1990

BS, Harbor and Waterway Engineering, Hohai University, 1984

Registrations:

Professional Engineer: Florida (#82318)

Yong Chen has over 30 years of consulting experience spanning all phases of coastal engineering projects involving planning of field investigations and processing of field data from hydrographic surveys; geotechnical and wave/current gauges; navigation channel planning; port and harbor planning and sediment dredging analysis; FEMA coastal floodplain mapping; wave statistical analysis, wave transformation, storm surge analysis and sediment transport analysis; structural design projects involving riprap shore protection, breakwaters, jetties, single point mooring systems, marina basins, dredging, and beach nourishment and management. Yong has extensive experience in development and utilization of software packages for numerical model simulations of coastal processes. He has applied the DHI MIKE 21 model, MIKE 3 model, Delft3D model, CMS model and other 1D/2D/3D coastal numerical models for wave transformation, hydrodynamics, flushing analysis, sediment transport, dredging plume, coastal processes, shoreline changes and coastal morphology.

Estero Barriers Regional Inlet Management Study, Lee County, FL. Lead coastal engineer for a numerical modeling study for the Estero Barriers Regional Inlet Management Study including three inlets. Performed hydrodynamic modeling for regional domain using MIKE 21 hydrodynamic model, wave transformation modeling using MIKE 21 wave model, sediment transport and morphological modeling using Delft3D model, shoreline change and longshore sediment using LITLINE model. Performed sediment transport rate and sediment budget analysis.

Hillsboro/Deerfield Beach Groin Field Evaluation, Broward County, FL. Lead coastal modeler who performed spectral wave model calibration and validation using three months of field survey data. Conducted 63-year wave transformation runs. Calibrated and validated shoreline change model and evaluated the Deerfield Beach groin field impacts.

Ocean View Shoreline Periodic Survey and Analysis, Norfolk, VA. Coastal engineer for twice-yearly spring and fall surveys and monitoring reports along Norfolk's seven-mile-long Chesapeake Bay shoreline. Conducted volume change and shoreline change calculations on survey profile data and provided technical reports summarizing the beach condition for each monitoring period, including post-construction monitoring of Norfolk's Coastal Storm Damage Reduction federal beach nourishment project.

Hillsboro/Deerfield Beach Restoration, Broward County, FL. Coastal engineer responsible for beach nourishment design for a 339,200 cubic yard beach fill project. Performed all beach profiles, hydrographic surveys, and monitoring.

Village Of Key Biscayne Beach Nourishment, FL. Senior coastal engineer for the beach nourishment of Village of Key Biscayne. Participated in the design, permitting and construction phases of the project.

Town Of Palm Beach South Restoration, Palm Beach County, FL. Lead coastal engineer who conducted a feasibility study, equilibrium toe of fill assessment, and modeling to support application processing for a beach nourishment project. Evaluated sediment coming from updrift beach renourishment project.

Toler Place Breakwater Modifications, Norfolk, VA. Lead coastal engineer. Performed conceptual alternative development, wave transformation modeling, shoreline/ morphological modeling using Delft3D model and 3DCSTM model.



Julia Grissett

EI

Coastal Engineering | Moffatt & Nichol

Julia Grissett is a coastal associate with experience in preliminary design plans, field data collection, data management and analytics with a variety of software, and preparing professional reports on findings and conclusions. She was involved in coastal ecology research at the University of Florida where she primarily worked in southeastern US barrier island ecosystems such as saltmarshes and dunes. Through research experience she gained proficiency in coastal instrumentation and field data collection techniques, data post-processing strategies, and field study design.

Education:

ME, Coastal Engineering and Coastal Ecosystem Dynamics, 2022

BS, Environmental Engineering, 2020

Registrations:

Engineering Intern: Florida (#1100025794)

Village of Key Biscayne Seawall Ordinance Technical Report, Village of Key Biscayne, FL.

Project engineer for the development of a technical report to support the seawall ordinance proposal developed by the Village of Key Biscayne. In the face of climate change impacts and to align with the Miami-Dade County seawall ordinance, the Village of Key Biscayne Office of Resiliency prepared an ordinance that requires the raising of seawalls within the Village to a minimum height. This ordinance was bolstered by a technical report supporting its findings with evidence of climate change impacts and provided adaptation alternatives. Responsibilities included analyzing sea level rise projections, previously permitted seawall construction projects, geotechnical reports, and seawall adaptation strategies.

Coastal Protection and Beach Nourishment, Private Resort, St. Thomas, USVI. Project engineer preparing basis of design report for shoreline restoration works for a private beach at a luxury resort. Checked design scenarios for coastal improvements and shoreline protection and coordinated with modeling team for assessment of wave conditions at the project site. The project elements include revetment and scour protection utilizing rubble mound structure to stabilize shoreline, prevent further erosion at the site, and improve resiliency of resort infrastructure in the face of storm events. Project is currently in the permit approval process.

Miami-Dade County, Back Bay Coastal Storm Risk Management (CSRM) Study, Miami, FL.

Project engineer for the CSRM study in which M&N is a prime consultant to Miami-Dade County. Responsibilities include working with the County to further develop conceptual ideas generated in public charrettes, information synthesis across various projects to pursue integration, coastal data management, and assisting with report reviews.

FDEP 100-Year Storm Impact and Wave Load Analysis, Surf Club at Ponte Vedra Inn & Club, Ponte Vedra, FL. Project engineer for conducting the FDEP-required 100-year Storm Impact and Wave Load Analysis utilizing methods established by the Florida Building Code 3109 and FDEP's report "One-Hundred-Year Storm Elevation Requirements for Habitable Structures Located Seaward of a Coastal Construction Line." Responsibilities included analyzing survey data, architectural drawings, and existing structure drawings to establish beach profile transects; identifying and compiling appropriate R-monument data for the site; utilizing the DEAN S numerical model to establish the post-storm eroded profile, extent of toe of erosion, and anticipated wave crest elevation; and estimating resulting wave forces on vertical walls and columns. The project involves the demolition and rebuilding of waterfront hotel guest amenities and event spaces in Ponte Vedra, FL.



Younes Nouri

PHD, PE

Coastal Engineering | Moffatt & Nichol

Education:

PhD, Coastal Engineering,
2013

MASc, Coastal Engineering,
2008

BS, Civil Engineering, 2003

Registrations:

Professional Engineer:
California, Washington, British
Columbia

Younes Nouri brings over 20 years of experience planning, analyzing, and designing sustainable waterfront projects that are resilient against coastal hazards and restore coastal and estuarine processes. He is uniquely skilled in applying advanced numerical modeling tools to characterize coastal and estuarine processes, including tidal hydrodynamics, wave generation and propagation, harbor resonance, river flow, circulation, sediment transport, and tsunami wave propagation. His experience encompasses engineering studies of wave run-up and overtopping, wave and tsunami loads on nearshore structures, vessel propwash impacts, and sea level rise vulnerability and adaptation studies, as well as engineering designs of shore protection structures, jetties and breakwaters, harbor and terminal layouts, and vessel moorings. Recently, Younes has served as the coastal engineering lead for several Naval Facilities Engineering Systems Command projects.

Lower Deschutes Estuary Restoration Study, Olympia, WA. As part of a consulting engineering team for this Washington State Department of Enterprise Services project, served as technical lead for numerical modeling of tidal hydrodynamics, salinity, and sediment transport to inform the development of long-term management alternatives and 35 percent design of the preferred alternative. The study evaluated the feasibility of returning the impounded Capitol Lake in Olympia to an estuary. Three proposed alternatives were analyzed to evaluate their feasibility based on historical designs, reports, and trends.

Swantown Culvert Replacement, Island County, WA. As part of a consulting engineering team for this Island County project, served as Moffatt & Nichol's project manager responsible for providing preliminary design and hydrodynamic analysis services for replacement of the failing culvert and tide gate system connecting the 100-acre Swantown Lake to the Strait of Juan de Fuca on Whidbey Island, Washington. A hydrodynamic model was developed that encompassed the lake and nearshore area. This model simulated tidal hydraulics, culvert flow, and tide gate operations, allowing for a detailed assessment of various replacement configurations. An initial screening analyzed numerous combinations of culvert size, shape, quantity, slope, and roughness. The alternatives analysis compared alternatives based on fish passage performance metrics (velocity, depth, gate closure duration, etc.), alongside practical considerations, to support future design decisions. Initial findings indicated challenges in meeting strict Washington Department of Fish and Wildlife fish passage criteria within the original project constraints, prompting investigation into alternatives.

West Bay Yards Development – Shoreline Enhancement Design, WA. As coastal engineer and project manager, led the design of a shoreline enhancement project for West Bay Development Group LLC for a former industrial area with ecologically degraded shoreline along the west shoreline of West Bay in Budd Inlet. The shoreline restoration/enhancement converts the existing armored shoreline to a more natural mixed sand and gravel shoreline, removes debris from intertidal areas, and creates space for native salt marsh plantings to support a juvenile salmon habitat. The design incorporated recommendations from the City of Olympia's Sea Level Rise Response Plan (2019) for increasing resiliency against sea level rise by flattening the shoreline profile and accommodating adaptations for rising sea levels.



Christy Brush

CFM

Joint Coastal Permitting | Moffatt & Nichol

Education:

BS, Marine Science, 1996

Registrations:

ASFPM, Certified Floodplain Manager, (#US-18-10328)

Christy Brush provides environmental/permitting support and a range of client/stakeholder coordination, project strategy, and project management functions in her role as Environmental Regional Manager for M&N. Her 25 years of experience includes coordination among project teams and regulatory agencies to acquire local, county, state, and federal permits. Her experience includes a variety of projects in the coastal, waterfront, and marine environment involving mixed-use, resort and residential developments, parks and other recreational facilities, docks and marinas, port and other industrial/infrastructure projects, beach nourishment, stabilization/maintenance of inlets, beaches, and inland shorelines, including protective structures, stormwater management systems, and other environmental enhancement/restoration projects. She has an in-depth understanding of the many regulations and procedures governing coastal/waterfront construction and has worked with top environmental/land use attorneys to support precedent-setting projects.

Village of Key Biscayne Beach Management Program, Key Biscayne, FL. Environmental manager who secured coastal/environmental permit authorizations and compliance for 26,000 cy truck haul beach renourishment event completed in 2017 along 6,000 feet of shoreline, including pre- and post-construction biological and physical monitoring. Oversaw seagrass mitigation monitoring and compliance affirmation with regulatory agencies. Completed permit modification processing to refine the FDEP Joint Coastal Permit (JCP) Biological Monitoring Plan and update the JCP to current agency standards. Completed permit modifications to add new mined sand sources to all beach permits and processed available permit time extensions.

Coastal and Marine Engineering Consulting Services and Dune Master Plan, Hollywood, FL. Project manager in consultancy role to the Hollywood Beach Community Redevelopment Agency (CRA), primarily providing input regarding flood and coastal regulatory policies, plans, and risk mitigation within the CRA District. Prepared a Dune Master Plan that addresses dune maintenance/creation goals set forth in the 2017 Hollywood Sustainability Action Plan. This master plan outlines a management approach for dune projects with immediate and long-term shore protection, ecological, and aesthetic benefits, while also developing guidelines for design, permitting, funding, and maintenance. Completed initial permitting feasibility assessment relative to extending the City's Boardwalk path to the south for supplemental public beach access. Provided miscellaneous flood and CCCL regulatory compliance consulting services and assessment of permitting feasibility.

6747 Collins Avenue Development, Miami Beach, FL. Senior environmental manager overseeing the FDEP CCCL permitting process for an oceanfront development. Services also include FWC exterior lighting review for marine turtle protection, completion of site-specific flood zone mapping using FEMA-approved models to optimize project design, and Florida Building Code/flood regulation compliance review.

The Savoy Hotel, Miami Beach, FL. Senior environmental manager overseeing FDEP CCCL permitting for strategic development of a dune restoration plan to include re-grading and landward relocation of a segment of on-grade, shore-parallel public paver Beachwalk path running along the west side of the sand dune to mitigate runoff concerns associated with an existing steep landward dune slope. Includes dune vegetation mitigation design for unavoidable impacts to existing vegetation and FWC approval of turtle-friendly lighting along the path on the sand dune. Schematic design and FDEP CCCL permitting strategy in progress for upcoming major hotel redevelopment project.



David Olin

PE

Surveying | Olin Hydrographic Solutions

David Olin has more than 20 years of experience working with civil, coastal and environmental projects in Florida, Central America, and throughout the Caribbean. He has demonstrated expertise in waterfront engineering, surveying and mapping, environmental monitoring and mitigation, and oceanographic studies. David's strong diving and boating background combines with his engineering, surveying and environmental education to make him uniquely qualified in the field of coastal engineering and mapping. David brings extensive knowledge of waterfront improvement projects, including beach nourishment, as well as RTK GPS, single beam, and multibeam hydrographic survey experience.

Education:

ME, Civil/Coastal Engineering, 1997

BS, Civil Engineering, 19956

Registrations:

Professional Engineer: Florida (#57555), Louisiana

Village of Key Biscayne Beach Nourishment Project Post Construction Physical Monitoring Reports, Key Biscayne, FL.

Prepared annual physical monitoring reports for the 2021 Beach Nourishment Event to summarize the shoreline and volumetric changes observed during each monitoring period. Coordinated biological and physical monitoring survey efforts with subconsultants and Village staff to collect survey data. As a subconsultant to Moffatt & Nichol, retained to summarize the Key Biscayne Beach Year-2 and Year-3 post-construction conditions following the 2021 Beach Nourishment Event.

Phipps Ocean Park Beach Nourishment Project, Palm Beach, FL. Professional Engineer, Turbidity Monitoring, Drone Operator. Performed turbidity monitoring during the ongoing nourishment project. All collection, testing and reporting were provided. Samples were obtained by UAV. Utilized a LaMotte 2020 E Turbidity Gauge with a grab sampler to analyze each sample. Samples were required every 4 hours daily during daylight hours while the dredging project was underway.

Jupiter/Carlin Beach Nourishment Project, Palm Beach County, FL. Professional Engineer, Turbidity Monitoring, Drone Operator. Performed turbidity monitoring during the ongoing nourishment project. All collection, testing and reporting were provided. Samples were obtained by UAV. Utilized a LaMotte 2020 E Turbidity Gauge with a grab sampler to analyze each sample. Samples were required every 4 hours daily during daylight hours while the dredging project was underway. Also performed a hydrographic survey to verify volumes dredged.

Dinner Key Marina, Miami, FL. Surveyor and Project Manager. Performed a high-resolution aerial drone survey, a topographic survey of all marina features and utilities, a boat based hydrographic survey with marine resource mapping, and provided an engineering dive team and top-side support to perform an above/below water assessment of the existing concrete piles within the marina.

Fisher Island Bulkhead, Marina, and Ferry Terminal Improvements, Fisher Island, FL. Surveyor, Diver and Project Manager. Olin was awarded the beach, seawall, south marina and ferry terminal design work for exclusive Fisher Island. As part of this effort, OHS performed shoreline surveys and facility inspections of all the marinas and existing shorelines surrounding the island and at the site of the new ferry terminal. OHS performed the field work, design, and coastal permitting for each of these major projects at the prestigious property. Construction Layout, Topographic surveys, multibeam surveys, as-built surveys, underwater inspections, resource mapping, and coral relocation.



Wray Jordan

PLS

Surveying | Olin Hydrographic Solutions

Wray Jordan has over 40 years of experience working in the land surveying profession in Southeast Florida, serving the planning, development and heavy construction industries in Palm Beach, Martin, St. Lucie, Okeechobee, Miami-Dade, Monroe, and Broward Counties. He has extensive work in platting, boundary and mortgage surveys, construction layout and record drawings. He has advanced skills in CADD, WordPerfect, drafting, AutoCAD Civil 3D, Total Stations, TDS Data Collection/transfer, Topcon GPS with Pocket 3D Field Software, Leica GPS, and Leica SmartWork Viva field software.

Education:

Surveying studies, 1979 - 1981
AS, Drafting and Design
Technology, 1974

Registrations:

Professional Surveyor and
Mapper: Florida (#LS4244)

Dolphin Beach Club, Daytona Beach, FL. Professional Surveyor and Mapper. Conducted a boundary survey which included the retrieval & review of all relevant documents to compile the boundary information required during fieldwork. Measurements and field observations were completed using a Trimble RTK-GPS. The field information was downloaded, reduced, and calculated electronically into a base model document meeting all MTS requirements. Performed a topographic survey of the new platform utilizing RTK GPS to document the existing footprint of the platform for the final as built certification required by the permitting agencies. Elevations were referenced to NAVD 88 as requested by the permitting agencies. The data collected in the field was reduced to the horizontal coordinate system established for this project, NAD 83, Florida East Zone.

Kings Bay Magnetic Silencing Facility, Jacksonville. Professional Surveyor and Mapper. Utilized a Trimble RTK GPS system to calibrate on nearby existing survey points supplied by the client. Set a minimum of two nails and washers and provided the Northing, Easting, and Elevations to the client for their use at the project site. Performed a Topographic Survey of the upland project power cable areas utilizing RTK GPS. The survey included Topographic data within 50' of and along the existing and proposed power cable routes as well as any additional features that the engineer requested. Vertical reference datum was per project specifications. Assisted in surveying all above ground visible utilities within 50' of the path of the power cable. Utilities were surveyed to the nearest point of connection.

Lighterage Wharf Lift Launch and Pier, Blount Island, Jacksonville, FL. Professional Surveyor and Mapper. Utilized its in-house DJI mapping drone and Pix 4D mapping software and obtained high resolution aerial photographs and complete topography of the upland site and existing Pier. Set ground control points and performed quality control checks with the RTK GPS to ensure accurate mapping was performed. Used this data to obtain topography of the upland project area. The survey included topographic data along a 50'x 50' grid on paved and grassy areas and also 25' centers along the roadway.

Daytona Seabreeze Condominium, Daytona Beach, FL. Professional Surveyor and Mapper. Conducted a boundary survey which included the retrieval & review of all relevant documents to compile the boundary information required during fieldwork. Measurements and field observations were completed using a Trimble RTK-GPS. The field information was downloaded, reduced, and calculated electronically into a base model document meeting all MTS requirements. Performed a topographic survey of the new platform utilizing RTK GPS to document the existing footprint of the platform for the final as built certification required by the permitting agencies. Elevations were referenced to NAVD 88 as requested by the permitting agencies. The data collected in the field was reduced to the horizontal coordinate system established for this project, NAD 83, Florida East Zone.



Lynette Cardoch 

PHD, LEED AP

Resiliency & Adaptation | Moffatt & Nichol

Education:

PhD, Oceanography and Coastal Sciences, 2000

Fulbright Scholar, Ecological Economics, 1999

MA, Marine Affairs and Policy, 1994

BA, Biological Anthropology, 1992

Registrations:

LEED Accredited Professional

Lynette Cardoch is M&N's Director of Resilience & Adaptation, leading collaborative efforts to deliver comprehensive resiliency and adaptation solutions in the coastal zone. A coastal ecologist with more than 20 years of experience in regulatory and water policy, coastal restoration, and urban and coastal resiliency, she steers interdisciplinary teams of engineers, scientists, and regulators, and works closely with coastal utilities and natural resource agencies to operationalize resiliency for coastal protection, storm surge, and interior flooding. She is also active in advancing emerging water-sector technology — serving as a voting delegate for Ocean Exchange's Solutions Review Team (which awarded \$330,000 to Blue Economy startups in 2025) and chairing the Resilience Committee at the Greater Miami Chamber of Commerce, where she has expanded programming spotlighting emerging 3D concrete printing technologies in support of South Florida's bid to become a global leader in Ocean Tech.

C-7, C-8, and C-9 Watersheds Flood Protection Level of Service (FPLOS) Adaptation and Mitigation Project Study, South Florida Water Management District, Broward and Miami-Dade Counties, FL.

Dynamic Adaptive Policy Pathway (DAPP) and stakeholder engagement lead. DAPP analyzes how much sea level rise is accommodated by each of the mitigation measures (or sequence of measures) based on the threshold, the pre-specified minimum performance level performance criteria. As a subconsultant to another firm, Lynette leads stakeholder coordination for workshops and follow-up meetings, and technical direction for adaptation planning and mitigation planning for flood mitigation projects needed in the C-7, C-8, and C-9 watersheds to maintain or improve the level of flood protection provided by the SFWMD's flood control infrastructure.

Miami-Dade County Back Bay Coastal Storm Risk Management (CSRM) Miami-Dade County, FL.

Project Manager. M&N is currently the advisor to the County's Office of Environmental Risk & Resiliency, leading the 2nd phase of the CSRM Feasibility study aimed towards a Chief's Report in 2027. During Phase 1, M&N reviewed the USACE 2020 tentatively selected plan and the updated USACE 2021 draft recommended plan, which included an 18-foot flood wall around downtown Miami and divided communities in the northern part of the County. We generated alternatives that focus on protection of critical infrastructure, enhanced the use of nature-based features for risk reduction, allowed for adaptive management of climate changes, and provided more equitable protection across the entire County. A \$180 million nature-based solutions pilot program that was also authorized, with appropriations already requested for 2027. Previously, M&N developed a nature-based structural solution with multiple lines of defense. The system consisted of low crested oyster breakwaters, elevated structural breakwaters planted with mangroves, dedicated seagrass-wetland protection zones, secondary structural revetment system upland seat walls, bio-swale stormwater areas, and localized building protection.

Preliminary Design Of Resilience Infrastructure, Environmental Impact Bond, City Of Hampton, VA.

Resiliency specialist. Green infrastructure and blueway project concept designs were evaluated to validate achievable stormwater volume capture in the Newmarket Creek watershed. The projects restore and expand storage, along with bioretention and wetland creation in adjacent areas, delaying stormwater discharge into a flood-prone tidal stream. The analyses include green infrastructure, blueway stream improvement, and raising of a critical transportation corridor—all of which will provide additional volume capture capacity. The Big Bethel Blueway retrofits backyard drainage ditches and main drainage channel to store stormwater and create vegetated areas that improve water quality.

**Education:**

MS, Marine Sciences, 2003

BS, Marine Biology, 2000

Becky Prado

Resiliency & Adaptation | Moffatt & Nichol

Becky Prado is a coastal scientist with over 20 years of experience in resilient coastal zone restoration, management, and policy for private sectors and state agencies throughout the Southeast and the Gulf of Mexico, developing multisector consensus, partnership expansion, and grant and funding strategies, as well as providing administration of large programs and budgets. Becky has pioneered essential design criteria for green infrastructure and led Florida's beach and coastal zone management programs. Her experience working on coastal projects and pursuits, particularly in Florida, the Gulf of Mexico, and the southeastern United States, has provided Becky with an extensive network of coastal managers and practitioners, as well as a rare perspective on individual project and program goals informed from the local, state, and national landscapes. She embraces co-production processes throughout her projects, ensuring a true partnership with her clients.

Grant Administration and Implementation, Pinellas County, FL. Project manager and technical lead for the three grant applications to the Resilient Florida Program. After conducting due diligence on a suite of projects, led the recommendations and strategies for enhanced scoring criteria in addition to the development of three application packages. Projects totaled over \$46 million and ranked within the top 6 percent of ranked projects.

Pensacola Bay Living Shoreline Monitoring, Pensacola, FL. As coastal program director for this National Oceanic and Atmospheric Administration Western Acquisition project, provided technical support for monitoring of the Pensacola Bay Living Shoreline Project, implemented with funds from the Deepwater Horizon Natural Resource Damage Assessment Restoration Plan. Implementation included the construction of three submerged breakwaters and placement of fill material to create 8.7 acres of marsh. Monitoring of bivalves, infauna and epifauna, vegetation, and physical characteristics ensures project goals to reduce wave energy, create and protect salt marsh habitat, and promote reef development for invertebrates are achieved.

Mote Seagrass Restoration Plan, FL. Project director for the development of a 10-year Florida seagrass restoration plan for Mote Marine Laboratory & Aquarium. Implementing Florida statutes, leads the development of a statewide seagrass restoration plan through a bay-by-bay assessment of seagrass stressors, current management activities, and restoration strategies. The plan will integrate genetically resilient seagrasses identified through genotypic biomarkers and phenotypic characteristics in addition to new tools and technologies.

Orange Beach Waterfront Park, Orange Beach, AL. Project coastal management lead for design of a living shoreline along Wolf Bay in Orange Beach. Implemented by The Nature Conservancy, supports a co-production design process, in addition to the technical analyses, for the design of beach, marsh, and breakwater habitat features along this public shoreline. Will support permitting and the design report and plan set once design is finalized.

The Bay Park (Phase 2) Design and Engineering Services, Sarasota Bay, FL. As part of a planning and engineering consulting team, serves as strategic planning, natural resource, and permitting advisor for this Bay Park Conservancy, Inc., project. Bay Park encompasses 53 acres of City-owned land. Focusing on the coastal resilient shoreline (1,400 feet) project components, provides assessments on innovative living shoreline products (ecoconcrete, habitat boulders, and living tiles) to provide ecosystem-positive solutions within the watershed. These assessments also ensure recommended design solutions align with identified project goals and broader watershed needs.



Andrew Baker

PHD

Marine Environmental | University of Miami

Andrew Baker is a marine biologist whose research focuses on coral reefs and climate change. He directs the Coral Reef Futures Lab at the University of Miami's Rosenstiel School of Marine Atmospheric, and Earth Science, focusing on the development and testing of methods to increase coral reef resilience. He also leads a new Miami-based project (X-reefs) to develop next-generation hybrid reefs that combine the wave-protection benefits of artificial structures with the ecological benefits of coral reefs. The X-reefs project incorporates novel structural designs and materials, ecological engineering, and adaptive biology approaches to develop self-building and self-repairing reef structures that are resilient to climate and other disturbances. Andrew is a Pew Fellow in Marine Conservation, a former Fulbright scholar, adjunct faculty member of Columbia University, Fellow of the Explorers Club, and Inventor-in-Residence at the Frost Museum of Science in Miami. He recently served on the National Academy of Sciences Committee on Interventions to Increase the Persistence and Resilience of Coral Reefs.

Education:

PhD, Marine Biology and Fisheries, 1999

BS, Zoology, 1993

Affiliations

Rosenstiel - Marine Biology & Ecology, Rosenstiel School, Schools & Colleges, University of Miami

Rosenstiel School, Schools & Colleges, University of Miami

Selected Recent Grants And Contracts:

DARPA: X-REEFS: Next-generation Reef Engineering to Enhance Future Structures.

\$10,453,292 (06/2022 – 12/2024)

NOAA. Next-Generation Coral Restoration. Implementing and scaling new approaches to increase the climate resilience of Florida's Coral Reef. \$16,000,000 (10/2024 – 09/2028)

NFWF. Enhancing the resilience and climate readiness of South Florida's most vulnerable and valuable shorelines through coral reef restoration. \$2,996,814; (01/2020 – 12/2023)

NSF. Assessing the changing symbiotic milieu on Caribbean coral reefs under climate change: magnitude, tradeoffs, interventions, and implication. \$570,024 (04/2019 – 03/2024)

Selected Recent Publications:

Baker AC, Baums IB, Davies SW, Grottoli AG, Kenkel CD, et al. (2025) Proactive assisted gene flow for Caribbean corals in an era of rapid coral reef decline. *Science* 389 (6758): 344-347.

Palacio-Castro AM, Smith TB, Brandtneris V. (2023) Increased dominance of heat-tolerant symbionts creates resilient coral reefs in near-term ocean warming. *Proc. of the Natl. Acad. USA*

Cunning R, Parker KE, Johnson-Sapp K, Karp RF, Wen A, Williamson OM. (2021) Census of heat tolerance among Florida's threatened staghorn corals finds resilient individuals throughout existing nursery populations. *Proceedings of the Royal Society B* 288 (1961), 20211613

Williamson OM, Allen CE, Williams DE, Johnson MW, Miller MW. (2021) Neighboring corals influence uptake of thermotolerant endosymbionts in threatened Caribbean coral recruits. *Coral Reefs* 40 (3), 867-879 Best Paper Award 2021, *Coral Reefs*

**Education:**

PhD, US Marine Biology and Ecology, 1997

MS, Marine Biology, 1992

BS, US Marine Biology, 1988

Diego Lirman **PHD****Marine Environmental | University of Miami**

Diego Lirman's research focuses on the disturbance ecology and active restoration of both coral reefs and seagrass ecosystems. His lab has been instrumental in developing science-based restoration and monitoring methods now used widely in Florida and the Caribbean and has planted 10,000s of corals onto degraded reefs. Diego has also been conducting research on Submerged Aquatic Vegetation in Biscayne Bay, Miami, Florida for > 25 years focused on the impacts of salinity and other factors in habitats impacted by the Comprehensive Everglades Restoration Plan. Diego has received >\$15M in funding from NFWF, NPS, EPA, Army Corps of Engineers, NSF, NOAA, TNC, Miami-Dade County, Florida Department of Environmental Protection, Mote, and corporate and private sponsors to complete his restoration and research activities.

Recognizing the need to develop strategies that combine coral restoration and coastal protection, and to protect our shorelines and coastal populations efficiently using nature-based solutions, the University of Miami faculty worked together as a highly interdisciplinary team with expertise in coral climate adaptation (Andrew Baker), coastal and hydrodynamic modelling (Brian Haus), and structural engineering (Landolf Rhode-Barbarigos) to design, test, and deploy the first truly hybrid artificial reefs in SE Florida. This pilot project was funded (\$180k) as part of the inaugural ULINK (Laboratory for Integrated Knowledge) program at UM. Three test-bed structures were successfully deployed in Miami Beach and are being used to evaluate the performance of nursery-grown corals in non-reef environments and co-benefits including wave mitigation and fish community development. This initial project positioned UM as a regional leader in the field of hybrid artificial reefs and nature-based solutions in support of coastal protection

Selected Recent publications:

Muller, E. et al. 2025. Restoration strategies are preventing the local extirpation of two critically endangered coral species in Florida. *Conservation Biology*. <https://doi.org/10.1111/cobi.70168>.

Schopmeyer, S., V. Galvan, E.A. Hernandez-Delgado, G. Nava, M. D'Alessandro, L. Carne, E. Goergen, S.Viehman, A. Moulding, and D. Lirman. (2024) An evaluation tool to assess coral restoration efforts. *Frontiers in Marine Science* <https://doi.org/10.3389/fmars.2024.1404336>.

Ghiasian, M., J. Carrick, L. Rhodes-Barbarigos, B. Haus, A. Baker, and D. Lirman. (2020) Dissipation of wave energy by a hybrid artificial reef in a wave simulator: implications for coastal resilience and shoreline protection. *Limnology and Oceanography: Methods*, <https://doi.org/10.1002/lom3.10400>.

Santos, R. and D. Lirman. (2012) Using habitat suitability models to predict changes in seagrass niche distribution caused by water management practices. *Canadian Journal of Fisheries and Aquatic Sciences* 69:1380-1388.

Santos, R., D. Lirman, and J. Serafy. (2011) Quantifying freshwater induced fragmentation of submerged aquatic vegetation communities using a multi-scale landscape ecology approach. *Marine Ecology Progress Series* 427:233-246.

**Planning & Outreach | Brizaga****Education:**

MS, Environmental Science

BS, Animal Science

Registrations:Envision Sustainability
Professional (#66418)**Affiliations**National Association of
Environmental Professionals
National Education Association
– Florida Chapter
Citizens Climate Lobby
National Ground Water
Association
Leadership Broward – Class
XLIII (2026 Board of Directors)

Erica Echeverri is Brizaga's Outreach and Engagement Manager, bringing nearly a decade of science education experience and three years of leading public engagement efforts for resilience, adaptation, environmental, and infrastructure projects throughout South Florida. Task 6 (Section 2.3.6) of this project asks for something most outreach professionals cannot fully deliver: a stakeholder engagement program that combines coastal science education, K-12 programming, citizen science coordination, and active partnership with civic organizations like the Key Biscayne Community Foundation. For Erica, this is not a stretch of her qualifications. It is the intersection of her two careers. Before joining Brizaga, Erica taught Zoology, Biology, and Environmental Science at Terra Environmental Research Institute, one of South Florida's premier environmental science magnet schools. Since joining Brizaga, Erica has led outreach and stakeholder engagement efforts for climate resilience, adaptation planning, shoreline protection, stormwater management, water conservation, and environmental infrastructure projects throughout South Florida. Critically, Erica also has an established relationship with the Village of Key Biscayne. She served as Outreach Coordinator for the Village's Climate Vulnerability Assessment and Integration and Implementation Plan. She understands the Village's stakeholders, community priorities, and engagement expectations and has already built relationships within the community.

Hollywood Tidal Flooding Mitigation And Shoreline Protection. Outreach Coordinator for the City of Hollywood's Tidal Flooding Mitigation and Shoreline Protection Projects, leading public engagement efforts across North Lake, South Lake, and the Intracoastal Waterway. Developed and distributed targeted outreach materials, organized educational workshops, and facilitated community discussions to gather input and ensure alignment with citywide resilience goals. Managed media campaigns to boost public awareness and highlight key project milestones, supporting transparent and inclusive communication throughout the planning and implementation process.

Town Of Briny Breezes Va And Adaptation Plan. Served as Outreach Coordinator for the townwide adaptation plan, leading public engagement efforts to inform and involve residents in resilience planning. Organized and facilitated community workshops to gather input on stormwater management and infrastructure improvements. Developed clear and accessible communication materials in collaboration with city staff and designers, including brochures, posters, and social media content, to enhance public awareness and support for the Town's adaptation strategies.

Palm Beach Va And Resilience Action Plan. Leads the development and coordination of public outreach and educational materials across print, social media, and newsletters as part of the Palm Beach County Climate Risk Assessment and Action Plan. This countywide project addresses environmental hazards and climate risks related to climate change and sea level rise. Manage logistics for 16 large-scale public meetings, coordinating venues, audiovisual setups, and virtual engagement platforms to ensure broad community accessibility.



Alec Bogdanoff

PHD

Planning & Outreach | Brizaga

Alec Bogdanoff is a distinguished oceanographer, meteorologist, and co-founder of Brizaga, a pioneering firm at the forefront of climate resilience and adaptation. With over two decades of experience spanning policy, politics, and science, Alec is a visionary leader recognized for his unmatched expertise in resilient infrastructure policy. As Principal, he combines thought leadership with hands-on innovation, driving transformative solutions for the most pressing climate challenges of our time. His thought leadership has established him as a go-to expert on resilience and adaptation, and his forward-thinking approach inspires others to think beyond traditional paradigms. With unparalleled insight into the world of resilient infrastructure and a passion for making a tangible difference, Alec continues to lead the charge in shaping a more adaptive and sustainable future for communities worldwide.

Education:

PhD, Physical Oceanography,
2016

MS, Meteorology, 2010

BS, Meteorology, 2008

Affiliations

Greater Fort Lauderdale
Chamber of Commerce (Chair,
Strategic Planning Committee
and Bylaws Committee;
Member, Board of Directors)

American Meteorological
Society

American Geophysical Union

American Society of
Adaptation Prof.

American Planning Association
Urban Land Institute ULI (Chair,
District Resilience Committee;
Member, District Management
Committee))

Village of Key Biscayne Resiliency Strategy, Key Biscayne, FL. Spearheading the development of a forward-thinking Resilience Strategy for VKB. Focused on addressing critical vulnerabilities and integrating climate resilience across municipal operations, this strategy set actionable goals for the Village of Key Biscayne. Public outreach included inclusive workshops, stakeholder meetings, and multilingual educational materials. In addition to overseeing technical planning, Alec supported development of the program's brand identity and messaging approach. The phased roadmap resulting from this effort will guide infrastructure improvements and long-term sustainability planning for the Village.

Clearwater Beach Resiliency Project and Seawall Policy Update, Clearwater, FL. Led the development of a comprehensive seawall policy update recommendation for the City of Clearwater, navigating complex regulatory requirements and the City's unique coastal and flood risk conditions. Provided grant strategy, policy, and communications support for the Clearwater Beach Resilience and Adaptation Project, helping the City secure additional funding while maintaining compliance with existing grant requirements. Supported the successful layering of multiple funding sources, including legislative appropriations and federal and state resilience programs, to advance implementation of priority adaptation measures.

Town of Briny Breezes V.A. and Adaptation Plan, Briny Breezes, FL. Resilience Lead. This plan delivered a first-of-its-kind climate adaptation strategy for the small coastal community of Briny Breezes, addressing sea level rise, flooding, and infrastructure vulnerability. Using Brizaga's APEx tool, assets were prioritized and strategies outlined across short-, medium-, and long-term horizons. The plan secured a \$7 million implementation grant through the Resilient Florida program. Its framework is now used as a replicable model for other at-risk communities.

Business Case for Resilience in Southeast Florida, Urban Land Institute, in Broward, Miami-Dade, Palm Beach, and Monroe Counties, FL. Served as Local Project Manager for this groundbreaking initiative, and shaping the development of a first-of-its-kind project scope aimed at advancing regional resilience. Led in coordination with the Urban Land Institute, this initiative demonstrated the economic benefits of regional resilience investments in Southeast Florida. Day-to-day activities were coordinated across multiple partners and jurisdictions. Stakeholder collaboration was prioritized, producing actionable recommendations that advanced the case for policy shifts and increased investment in resilience.



Rami Diaz

AIA, LEED AP

Planning & Outreach | Moffatt & Nichol

Rami Diaz leads our Living With Water® resilient urban design and architecture practice. Rami is a client liaison, visionary urban designer, senior architect, and collaboration leader for climate adaptation projects nationwide. A frequent lecturer and tour leader, they are an expert at integrating architecture, landscape, and water system challenges into pictures that suggest innovative solutions and capture the spirit of a place. Rami was a key part of the firm's leadership in developing the Living With Water® movement in New Orleans after Hurricane Katrina. In the Dutch Dialogues New Orleans effort, Rami led site visits, research, and design workshops, collaborating with a large, international, multidisciplinary team of experts.

Education:

MA, Architecture, 2000

BA, Architecture, 1996

Registrations:

Registered Architect: Louisiana

Village of Key Biscayne Resilient Infrastructure Program Strategy and Integrated

Implementation Plan, Key Biscayne, FL. Project architect to support the Village with the USACE CSRSM study for the development of shoreline stabilization and flood protection alternatives for the beaches and back bay as part of the Village's Elevating Our Island Paradise Resilience Program with the goal of protecting the Village from the effects of flooding, sea level rise, and environmental changes. Developing alternative solutions for shoreline stabilization, working with USACE and Village to integrate nature-based solutions for shoreline stabilization.

Norfolk CSRSM, Norfolk, VA. As urban design lead, Rami shaped resilient and community-driven waterfront spaces for the Norfolk CSRSM project—a partnership with M&N, the City of Norfolk, and the U.S. Army Corps of Engineers. They guided urban design strategy for storm surge mitigation infrastructure that protected the city while preserving its urban character and enhancing public space. Through a series of design charrettes, Rami collaborated with local stakeholders, Corps officials, and technical experts to develop integrated, place-based solutions.

Chesapeake Industrial Waterfront Study, VA. Project lead for this study that will determine the highest and best use for waterfront lands, understand the impacts of coastal water hazards such as flooding and heavy rain events, and identify strategies to mitigate those issues.

Louisiana NDR: LA Safe Resilience Planning, LA. Urban designer. Key team member in the successful grant application, urban design and planning process, GIS cartography, community workshops, and report production, which resulted in the implementation of climate resilience and adaptation projects in six coastal parishes.

Dutch Dialogues Virginia, Norfolk, VA. Urban designer who is leading the firm's Living With Water® effort on the East Coast, focusing on Virginia. Starting with the Dutch Dialogues Virginia workshops, they have conducted research, analysis, and resilience planning work in multiple coastal cities in the Hampton Roads region, including Hampton, Norfolk, and Chesapeake.

City of Hampton, Resilient Hampton, Hampton, VA. Project lead who has been in charge of three consecutive planning studies for the City of Hampton. The first study focused on creating a citywide resilience strategy and developing planning units based on waterways and watersheds. The second study concentrated on the Newmarket Creek watershed, while the third study targeted the urban centers of Downtown, Phoebus, and Buckroe Beach. During these studies, the team identified resilient, coastal adaptation, and green infrastructure projects, policies, and programs and created conceptual designs for select projects. An environmental impact bond funds the implementation of several projects currently under construction.



Brian Haus 

PHD

Physical Modeling | University of Miami

Brian Haus is currently leading the University of Miami component of a DOD ECSTP study that seeks to evaluate the technological readiness of 3-D printed concrete structures for coastal resilience. His focus is on fundamental processes that occur at the interfaces between the fluid atmosphere and ocean and solid surfaces. Understanding the transfers of heat, moisture, momentum and energy that occur across these surfaces can lead to improved climate modeling, hurricane and wave forecasting, safer marine activities and more resilient coastal communities. As a Professor, a key focus of his research is educating the next generation of engineers and scientists that will implement these new technologies. Brian's teaching interests are experimental studies of coastal ocean surface currents for application to oil spill transport prediction and response(CARTHE); radar remote sensing of oceanographic processes from satellites in collaboration with CSTARS and from coastal radars; shelf and inlet dynamics; wave-current interactions; laboratory studies of air-sea interactions in extreme winds, wave dynamics, turbulence and coastal structure design in the SUSTAIN laboratory.

Education:

BS, Ocean Science, 1987

MSE, Coastal Engineering,
1989

PhD, Coastal Engineering,
1992

Post-Doctoral Associate, Naval
Arch. and Marine Engineering,
1993

Post-Doctoral Fellow, RSMAS/
Applied Marine Physics,
1993-1995

Selected research projects:

Analysis, Comparison and Experimental Investigation of Hurricane Wind, Storm-Surge and Wave Load Models, National Institute of Standards and Technology (NIST)

X-REEFS (Reef Engineering to Enhance Future Structures), Defense Advanced Research Projects Agency (DARPA)

Large-scale CoPe. Reducing Climate Risks with Equitable Nature-based Solutions: Engaging Communities on Reef-Lined Coasts, National Science Foundation (NSF)

SEAHIVE. Sustainable Estuarine and Marine Revetment, National Cooperative Highway Research Program (NCHRP)

Selected Recent publications:

Viehman, T. S., Reguero, B. G., Lenihan, H. S., Rosman, J. H., Storlazzi, C. D., Goergen, E. A., Haus, B. K., ... & Hench, J. L. (2023) Coral restoration for coastal resilience: Integrating ecology, hydrodynamics, and engineering at multiple scales. *Ecosphere*, 14(5), e4517.

Haus, B. K., Ortiz-Suslow, D. G., Doyle, J. D., Flagg, D. D., Graber, H. C., MacMahan, J., .. & Yardim, C. (2022) Clasi: Coordinating innovative observations and modeling to improve coastal environmental prediction systems. *Bulletin of the American Meteorological Society*, 103(3), E889-E898.

Ghiasian, M., J. Carrick, C. Bisson, B.K. Haus, A.C. Baker, D. Lirman, and L.

RhodeBarbarigos. (2021) Laboratory quantification of the relative contribution of staghorn coral skeletons to the total wave- energy dissipation provided by an artificial coral reef. *Journal of Marine Science and Engineering*.

Ghiasian, M., J. Carrick, L. Rhodes-Barbarigos, B. Haus, A. Baker, and D. Lirman. (2020) Dissipation of wave energy by a hybrid artificial reef in a wave simulator: implications for coastal resilience and shoreline protection. *Limnology and Oceanography: Methods*.

**Education:**

PhD, Structural Engineering,
2012

MSc, Civil Engineering, 2008

BSc, Civil Engineering, 2006

Landolf Rhode-Barbarigos **PHD****Innovative Coastal Structures | University of Miami**

Landolf Rhode-Barbarigos' research focuses on structural morphology and morphogenesis. He explores these concepts to design tomorrow's structures using systems, such as tensegrity, with applications varying from marine and coastal structures to building and infrastructure systems to space structures. His research interests include coastal resilience and sustainability; structural design and optimization; structural morphology, form finding and analysis of structures; green/gray infrastructure; space engineering and construction; computer-aided engineering. One project Landolf has been leading is SEAHIVE®, a sustainable estuarine and marine protection system developed under the National Cooperative Highway Research Program (NCHRP) in collaboration with the Florida Department of Transportation (FDOT). Designed through morphological investigations and physical testing at the University of Miami SUSTAIN Facility, the system evaluates performance against various water and wave conditions prior to full-scale implementation. Leveraging University of Miami's unique qualifications and strategic location, he also investigates the wave-energy dissipation capacity of coral reefs.

Selected research projects:

CAREER. Static, Dynamic and Kinematic Analysis and Optimization of Tensegrity Structures through Cellular Morphogenesis, National Science Foundation (NSF)

Analysis, Comparison and Experimental Investigation of Hurricane Wind, Storm-Surge and Wave Load Models, National Institute of Standards and Technology (NIST)

X-REEFS (Reef Engineering to Enhance Future Structures), Defense Advanced Research Projects Agency (DARPA)

Large-scale CoPe. Reducing Climate Risks with Equitable Nature-based Solutions: Engaging Communities on Reef-Lined Coasts, National Science Foundation (NSF)

SEAHIVE. Sustainable Estuarine and Marine Revetment, National Cooperative Highway Research Program (NCHRP)

Sustainable and scalable 3D printing of concrete materials for green-gray coastal protection systems, Department of Defense Small Business Innovation Research (SBIR) Phase II (SP)

Enhancing Windstorm Resilience of Coastal Communities through Ultra-High Performance GlassFiber Reinforced Polymer Concrete Seawalls, National Institute of Standards and Technology (NIST) (Co-PI)

Wahoo Bay SEAHIVE™. A Real-World Experiment of Green Engineering Shoreline Protection, University of Miami Laboratory for INtegrative Knowledge (U-LINK) (PI)

Multidimensional Resilience of Port Miami. Collaborative Engagement, Interdisciplinary Assessment, and an Educational "Port Hub", University of Miami Laboratory for INtegrative Knowledge (U-LINK)(Co-PI)

Engineering Corals for Climate Change Resilience. University of Miami Laboratory for INtegrative Knowledge (U-LINK) (Co-PI)



Brian Shaw

PE, SE

Marine Foundation | Moffatt & Nichol

Education:

MS, Civil Engineering, 2010

BS, Civil Engineering, 2009

Registrations:

Professional Engineer: Florida
(84768), Louisiana

As both a geotechnical and structural engineer, Brian Shaw is a go-to technical resource within M&N for problems involving deep foundations, earth-retaining structures, site stabilization, and complex soil-structure interaction in general—especially cases with no standard engineering solution or methodology—where his multidisciplinary understanding provides robust and practical design results. He focuses on developing ports and offshore wind (OSW) terminals, land reclamation, and dredged material containment facilities. Brian's 15 years of experience includes extensive design for shoreline protection, urban waterfronts, naval facilities, and water control structures. As a professional diver, Brian has participated in underwater inspections completed by the firm, including waterfront facilities and bridges.

National Mall Seawalls and Shoreline Rehabilitation, Washington, DC. As part of a joint venture team for this National Park Service project, serves as structural engineer for the development of a design-build request for proposal package. Performed quality control for the RFP package and managed the completion of various technical documents for rehabilitating major portions of the Tidal Basin and West Potomac Park seawalls in the National Mall and Memorial Parks in Washington, DC. The project involved site analyses, including geotechnical, hydrologic studies, climate analysis, utility identification, vegetation survey, and topographic/bathymetric surveys; historical forensics of seawall construction; preparation of climate hazard and risk analyses; water-level gauge deployment, data collection, analysis, and documentation; long-term water-level analysis and sea level rise; hydraulic numerical modeling of the Chesapeake Bay and Potomac River system; localized hydrodynamic numerical modeling; and preparation of conceptual designs, basis of design report, and construction cost estimates.

Seawall and Boardwalk Analysis, Coastal Storm Risk Management (CSRM) Study, South Shore of Staten Island, NY. As part of a joint venture team under an indefinite quantity contract for CSRM for the U.S. Army Corps of Engineers, served as geotechnical and structural engineer for numerical modeling and structural detailing of storm surge barrier alternatives. Modeling included finite element analyses and limit equilibrium stability calculations for double sheet pile, I-wall, and buried rock seawall structural alternatives subjected to hydrostatic and hydrodynamic loading.

Isles at Old Tampa Bay (Georgetown) Canal Restoration and Shoreline Stabilization, Tampa, FL. Project engineer involved in the design and preparation of bid documents for waterfront structures in a phased 150-acre residential development featuring an interconnected canal system with 23,000 linear feet of bulkhead, concrete retaining walls, shoreline protection structures, and canal excavation and dredging for Georgetown (Tampa) ASLI VI, L.L.L.P. Coordinated with the developer and upland civil engineer to accommodate future canal dredge depths, upland retaining walls, drainage structures, pools, and roadway bridges.

Alice Wainwright Park Redevelopment, Miami, FL. Structural engineer for a waterfront park redevelopment at the 15-acre Alice Wainwright Park located on Biscayne Bay for the City of Miami. The project scope included permitting, design, and construction of approximately 1,150 linear feet of bulkhead replacement and 33,000 square feet of pervious, compacted gravel baywalk with landscaping, hardscaping, drainage improvements, and lighting. The top of bulkhead and adjacent grade were being raised by approximately 2.5 feet to provide flood and wave protection for the baywalk and existing park. Site grade elevations were to be raised to accommodate the Baywalk development and to develop new stormwater drainage swales.

**Education:**

MS, Civil Engineering, 2011
BS, Civil Engineering, 2009

Registrations:

Professional Engineer: DC,
Pennsylvania, Virginia

Santosh Mummaneni

PE

Marine Foundation | Moffatt & Nichol

Santosh Mummaneni is a Geotechnical Engineer with over 12 years' experience in complex engineering analyses, report preparation, field exploration, and further analysis. His experience includes geotechnical design parameters for soil and/or rock-supported foundations, deep and shallow foundation designs, quality control services, road and highway design calculations and drawings, erection and demolition plans and drawings, foundation pile splice designs, earth retention systems, deep foundation testing, CAPWAP analyses, static load testing, cross hole sonic logging testing and shaft bottom inspection on drilled shafts, soil liquefaction assessments and mitigation, and geotechnical and structural monitoring.

Shipyards Bulkhead and Marina, Jacksonville, FL. Geotechnical engineer who performed and reviewed bulkhead design calculations and drawings. Coordinated with structural and mechanical teams to provide access for utilities to pass through the bulkhead.

Clearwater Beach Marina Replacement, Clearwater, FL. Geotechnical engineer who performed bulkhead design to facilitate construction of bulkhead.

Port of Lake Charles, Industrial Canal Planning, Lake Charles, LA. Geotechnical engineer who performed and reviewed bulkhead design calculations and drawings.

Officer's Row Seawall and Chapel Hill, Sandy Hook, NJ. Assistant project manager and geotechnical engineer who performed 10 percent alternative design analyses and explored multiple options including armor stone revetment wall, steel sheet pile, and concrete sea wall.

HRPT Heliport Feasibility Analysis, New York, NY. Geotechnical engineer who reviewed the report from the contractor to ensure the planned construction activity does not affect the existing HRPT's bulkhead. Scope of services also includes review of contractor proposed construction monitoring plan and/or provide construction monitoring plan to protect the existing bulkhead.

Milwaukee Dredge Material Management Facility, Milwaukee, WI. Geotechnical engineer who reviewed PLAXIS models/bulkhead calculations for the North and East walls and updated MN's final design report with geotechnical analyses.

New Jersey Windport Detailed Design, Salem, NJ. Geotechnical engineer who reviewed pile driving at Parcel A and Parcel B1, performed slope stability analyses at Parcel E, and excavation support at Parcel B1. MN is NJEDA (owner's) engineer for the project. (2023 to 2024) 11102-35

Lake Montauk Harbor, NY. Geotechnical engineer who reviewed slope stability analyses of the jetty along the alignment.

City of Mobile Riverfront E&D, Mobile, AL. Geotechnical engineer who reviewed bulkhead calculations for the north coffer cells and explore several options to address issues at south coffer cells.

Pier 1 South Rehabilitation, North Kingstown, RI. Geotechnical engineer who reviewed PDA test reports and production pile logs for test and production piles and provided recommendations. Also, reviewed L pile analyses to compare the pile actual tip elevation met the minimum pile tip elevation .

**Education:**

MBA, 2001

BA, Business Management,
1992

BA, Speech Communications,
1992

Registrations:

Certified Professional
Estimator, American Society of
Professional Estimators

Seann Perez

CPE

Cost Estimating/Marine Construction | Moffatt & Nichol

Seann Perez is a construction estimator with more than 30 years of experience in the dredging and dredging-related field. As a former lead estimator for the largest dredging company in North America, he participated in some of the most high-profile, complex projects in the dredging industry, including several projects of more than \$100 million. His skills have been applied to port and harbor projects for waterways in Miami Harbor, New York Harbor, Wilmington Harbor, Delaware River, Charleston Harbor, and the Port of Long Beach, as well as large-scale beach nourishment projects. Seann is very familiar with the development of dredging, beach nourishment, and marsh creation plans and specifications and understands the constructability of projects to aid in developing cost-effective projects. His expertise includes large dredging and reclamation construction experience, including cost estimating and proposal preparation, scheduling, work methodology, procurement, and market analysis. He also brings international experience working on several joint venture projects with European companies for projects in Asia, Australia, and the Middle East.

Nags Head Beach Renourishment, Nags Head, NC. Senior estimator for this more than \$30 million project that included 4 million cubic yards of beach fill covering more than 50,000 linear feet of beach for the Town of Nags Head. Offshore borrow was designed for either a hopper or hydraulic dredge. Project was bid with two options—one for work in 2018 and one for work in 2019. Developed internal cost estimates to bid this project, looking at countless options to secure the best bid. Communicated with multiple subcontractors to capture their costs. Once the project was procured, reestimated the project monthly to track actual costs and produce and incorporate future planning based on site development.

Dauphin Island Causeway Shoreline Restoration, Mobile County, AL. Construction estimator for the shoreline restoration of the Dauphin Island Causeway for the Mobile County Environmental Services Department. The project consisted of constructing 150,000 tons of nearshore rock breakwaters and the dredging of approach and floatation channels. Involved in project from initial to final design. Provided cost estimates during the various design stages. Assisted with the review of contract specifications and contract drawings and held discussions with potential contractors for feedback during the design stages.

Bucktown Marsh Restoration and Living Shoreline, Jefferson Parrish, LA. Construction estimator for the development of a 50-acre marsh restoration project for the Bucktown community on Lake Pontchartrain. This Jefferson Parish project features constructing rock breakwater and earthen containment dikes, dredging for marsh creation, excavating tidal creeks, and vegetative plantings. Working with design engineers on various construction scenarios from 15 percent through project completion. Held discussions with contractors from the industry to create the best solutions for constructing the project during the design phase.

Upper Mobile Bay Beneficial-Use Wetland Creation Site (Planning), Mobile, AL. Construction estimator for the development of a 1,200-acre wetland creation site in Upper Mobile Bay for the Alabama State Port Authority. The project includes features such as the constructing dredge-filled containment dikes, installing rock revetments, excavating tidal creeks, constructing access channels, and constructing a material offloading facility. Working with design engineers on cost estimates for many different methodologies of containment dikes, borrow sources, and revetments to arrive at the most cost-effective solution. Providing a review of geotechnical data for the most efficient areas of dike placement, as well as potential borrow material sources.

c. Relevant Experience of Team Members

Name/Role	Credentials	Relevant Experience/Value Added
Manuel Castaño, PE, WEDGE Project Manager	- Years of Exp: 13 - MS, Civil Eng; BS, Civil Engineering	Manuel is a senior coastal engineer with extensive experience in numerical modeling of metocean conditions (wind, waves, currents, water levels, etc.), as well as hurricane events and their effects in the shoreline. Manuel has been involved in several feasibility studies to evaluate the performance of shoreline armoring structures, including Nature based Solutions.
Tim Blankenship, PE Principal-in-Charge	- Years of Exp: 31 - ME, Coastal Eng; BS, Civil Engineering	Tim has supported the Village of Key Biscayne since 2000 with beach management, including USACE CSRM study for the development of shoreline stabilization and flood protection alternatives for the beaches and back bay with the goal of protecting the Village from the effects of flooding, sea level rise, and environmental changes.
Amanda Caparro, CFM, ENV SP Assistant Project Manager, Joint Coastal Permitting	- Years of Exp: 19 - MS, Environmental Policy & Management; BA, Sustainability & Environment	Through her work on the Village of Key Biscayne beach management program, Amanda has obtained permits and grant funding for multiple truck haul beach nourishment events. This experience makes her intimately familiar with the Village's shoreline environmental conditions, regulatory constraints, and community expectations..
Brian Joyner, PE Quality Manager	- Years of Exp: 29 - MS, Civil Eng; BS, Environmental Engineering	Brian is M&N's lead coastal and storm water engineer in Virginia. His focus is on determining coastal and stormwater flood hazards on both local and regional scales and designing projects to mitigate or withstand those hazards. His experience includes detailed numerical modeling of stormwater hydrology/hydraulics, storm surge, waves, sediment transport, and the effects of coastal and hydraulic structures.
Mark Glennerster, Eng FICE Coastal Engineering	- Years of Exp: 38 - HND, Civil Engineering, 1988	Mark has over 38 years of experience in the planning, investigation, analysis, design and documentation of coastal and marine structures. He is an expert advisor on marine projects around the world and often called in by clients to advise on complex maritime related problems.
Yong Chen, PhD, PE Coastal Engineering	- Years of Exp: 30 - PhD, Civil & Structural Engineering; MS, River & Coastal Engineering; BS, Harbor & Waterway Engineering	Yong has experience in hydrographic surveys, geotechnical and wave/current gauges, navigation channel planning, port and harbor planning, sediment dredging analysis, FEMA coastal floodplain mapping, wave statistical analysis and transformation, storm surge and sediment transport analysis, riprap shore protection, breakwaters, jetties, single point mooring systems, marina basins, dredging, and beach nourishment and management.
Julia Grissett, EI Coastal Engineering	- Years of Exp: 4 - ME, Coastal Eng; BS, Environmental Engineering	Julia is a coastal associate with experience in preliminary design plans, field data collection, data management and analytics, and preparing professional reports on findings and conclusions. She was involved in coastal ecology research at the University of Florida where she primarily worked in southeastern US barrier island ecosystems such as salt marshes and dunes.
Younes Nouri, PhD, PE Coastal Engineering	- Years of Exp: 21 - PhD, Coastal Engineering; MASc, Coastal Engineering; BS, Civil Engineering	Younes is a recognized specialist in the analysis and modeling of wave, tsunami, and floating debris loads on structures. He is an associate member of the Tsunami Loads and Effects committee of ASCE 7-16. Younes also brings his knowledge of resiliency planning, including experience working with communities adapting for rising sea levels. He offers expertise in numerical modeling and engineering analysis of coastal processes, including tidal currents, waves, tsunamis, estimation of wave/current/floating debris loads on structures, propwash scour analysis, passing vessel and mooring analysis, and sediment transport.

Name/Role	Credentials	Relevant Experience/Value Added
Christy Brush, CFM Joint Coastal Permitting	› Years of Exp: 28 › BS, Marine Science	Christy is an expert in coastal/environmental management planning and regulation. Having worked in the Miami-Dade area for more than 25 years and the Village for more than 15 years, she has an in-depth understanding of the Village's permitting authorizations and compliance for beach monitoring and renourishment.
Lynette Cardoch, PhD, LEED AP Resiliency & Adaptation	› Years of Exp: 25 › PhD, Oceanography & Coastal Sciences; MA, Marine Affairs; BA, Biological Anthropology	Lynette is based in Miami-Dade County and is M&N's Director of Resilience and Adaptation, leading collaborative efforts to deliver comprehensive resiliency solutions and adaptation services in the coastal zone. She was a technical advisor and co-author of the FDOT first resiliency guidebook. She is also on the Advisory Council for the N-EWN through the USACE.
Becky Prado Resiliency & Adaptation	› Years of Exp: 24 › MS, Marine Sciences; BS, Marine Biology	Becky has pioneered essential design criteria for green infrastructure and led Florida's beach and coastal zone management programs. Becky has experience in resilient coastal zone restoration, management, and policy throughout the Southeast and the Gulf of Mexico, developing multi-sector consensus, partnership expansion, and grant and funding strategies, as well as providing administration of large programs and budgets.
Rami Diaz, AIA, LEED AP Waterfront Planning	› Years of Exp: 30 › MA, Architecture; BA, Architecture	Rami is a client liaison, visionary urban designer, senior architect, and collaboration leader for climate adaptation projects nationwide. Rami was a key part of the firm's leadership in developing the Living With Water® movement in New Orleans after Hurricane Katrina. Rami also leads the firm's Living With Water® effort on the East Coast.
Brian Shaw, PE, SE Marine Foundation	› Years of Exp: 14 › MS, Civil Engineering; BS, Civil Engineering	Brian is a go-to technical resource for problems involving deep foundations, earth-retaining structures, site stabilization, and complex soil-structure interaction in general—especially cases with no standard engineering solution or methodology—where his multidisciplinary understanding provides robust and practical design results. He focuses on developing ports and offshore wind (OSW) terminals, land reclamation, and dredged material containment facilities. Brian's 14 years of experience includes extensive design for shoreline protection, urban waterfronts, naval facilities, and water control structures. As a professional diver, Brian has participated in underwater inspections completed by the firm, including waterfront facilities and bridges.
Santosh Mummaneni, PE Marine Foundation	› Years of Exp: 12 › MS, Civil Engineering; BS, Civil Engineering	Santosh is a geotechnical engineer with over 12 years' experience in complex engineering analyses, report preparation, field exploration, and further analysis. His experience includes geotechnical design parameters for soil and/or rock-supported foundations, deep and shallow foundation designs, quality control services, road and highway design calculations and drawings, erection and demolition plans and drawings, foundation pile splice designs, earth retention systems, deep foundation testing, CAPWAP analyses, static load testing, cross hole sonic logging testing and shaft bottom inspection on drilled shafts, soil liquefaction assessments and mitigation, and geotechnical and structural monitoring.
Seann Perez, CPE Cost Estimating / Marine Construction	› Years of Exp: 33 › MBA, Business Administration, BA, Business Management; BA, Speech Communication	Seann is a construction estimator with more than 30 years of experience in the dredging and dredging-related field. His skills have been applied to port and harbor projects for waterways in New York Harbor, Wilmington Harbor, Delaware River, Charleston Harbor, Miami Harbor, and the Port of Long Beach, as well as large-scale beach nourishment projects.

Name/Role	Credentials	Relevant Experience/Value Added
David Olin, PE Surveying (Olin Hydrographic Solutions)	- Years of Exp: 22 - ME, Civil/Coastal Engineering; BS, Civil Engineering	David has experience working with civil, coastal, and environmental projects in Florida, Central America, and the Caribbean. He has demonstrated expertise in waterfront engineering, surveying and mapping, environmental monitoring and mitigation, and oceanographic studies. He brings extensive knowledge of waterfront improvement projects, including beach nourishment, as well as RTK GPS, single seam, and multibeam hydrographic survey experience.
Wray Jordan, PLS Surveying (Olin Hydrographic Solutions)	- Years of Exp: 21 - Surveying studies, Palm Beach Junior College; AS, Drafting and Design Technology, Palm Beach Junior College	Wray has been providing professional services for over forty years and has experience working in the Land Surveying Profession in Southeast Florida serving the planning, development and heavy construction industries in Palm Beach, Martin, St. Lucie, Okeechobee, Miami-Dade, Monroe, and Broward Counties.
Erica Echeverri, ENV SP, CSRP Planning & Outreach (Brizaga)	- Years of Exp: 11 - BS, Animal Science; MS, Environmental Science	Erica is an Outreach Manager at Brizaga, leading projects focused on stakeholder engagement, public outreach, and educational material development. Erica is skilled at building strong relationships and fostering active participation across diverse communities. She specializes in creating comprehensive communication strategies, managing public workshops, and developing content for print, social media, and digital platforms.
Alec Bogdanoff, PhD Planning & Outreach (Brizaga)	- Years of Exp: 18 - PhD, Physical Oceanography; MS, Meteorology; BS, Meteorology	Alec is a distinguished oceanographer, meteorologist, and co-founder of Brizaga. With over two decades of experience spanning policy, politics, and science, Alec is a visionary leader recognized for his unmatched expertise in resilient infrastructure policy. As Principal, he combines thought leadership with hands-on innovation, driving transformative solutions for the most pressing climate challenges of our time.
Andrew Baker, PhD Marine Environmental (University of Miami)	- Years of Exp: 33 - PhD, Marine Biology and Fisheries; BS, Zoology	Andrew is a marine biologist whose research focuses on coral reefs and climate change. He directs the Coral Reef Futures Lab at the University of Miami's Rosenstiel School of Marine Atmospheric, and Earth Science, focusing on the development and testing of methods to increase coral reef resilience.
Diego Lirman, PhD Marine Environmental (University of Miami)	- Years of Exp: 38 - PhD, US Marine Biology and Ecology; MS, Marine Biology; BS, US Marine Biology	Diego's research focuses on the disturbance ecology and active restoration of both coral reefs and seagrass ecosystems. His lab has been instrumental in developing science-based restoration and monitoring methods now used widely in Florida and the Caribbean and has planted 10,000s of corals onto degraded reefs.
Brian Haus, PhD Physical Modeling (University of Miami)	- Years of Exp: 39 - BS, Ocean Science; MSE, Coastal Engineering; PhD, Coastal Engineering; Post-Doctoral Associate, Naval Arch. and Marine Engineering; Post-Doctoral Fellow, RSMAS/ Applied Marine Physics	Brian is currently leading the University of Miami component of a DOD ECSTP study that seeks to evaluate the technological readiness of 3-D printed concrete structures for coastal resilience. His focus is on fundamental processes that occur at the interfaces between the fluid atmosphere and ocean and solid surfaces.
Landolf Rhode-Barbarigos, PhD Innovative Coastal Structures (University of Miami)	- Years of Exp: 23 - PhD, Structural Engineering; MSc, Civil Engineering; BSc, Civil Engineering	Landolf's research focuses on structural morphology and morphogenesis. He explores these concepts to design tomorrow's structures using systems, such as tensegrity, with applications varying from marine and coastal structures to building and infrastructure systems to space structures.

d. Team Approach

M&N is a large planning and engineering firm with offices on five continents. Perhaps more importantly however is that we have nine offices in Florida with a staff of more than 100 personnel who live and work in the state and are committed to our local clients. Project manager, principal-in-charge, and key personnel serving the Village under this project are based in Southeast Florida. Combined with our firm-wide roster of more than 1,300 personnel, we have more than sufficient resources to make certain that your project will stay on schedule and budget.

Status Reporting

Regular project status updates will be provided to the Village through regular coordination meetings and a monthly report. The coordination meetings are an opportunity for close coordination on the day-to-day activities in the contract while the monthly report provides a more formal status of the project including work completed to date, project status, and any potential risks.

Meeting the Village's Operational and Administrative Requirements

M&N has deep ties to the Southeast Florida area, where we live, work, and engage with the local community. Our team possesses extensive and direct experience collaborating with the Village, having worked closely on a variety of projects over the years. We are well-versed in coordinating with Village staff, as well as working with critical bodies, such as the Village Council, for project reviews and approvals.

Project Scheduling

M&N employs a robust Project Management System to keep projects on schedule, provide our clients with quality deliverables, and meet their budgetary requirements. In fact, the System, of which schedule control is a part, is ISO-9001-certified, illustrating our commitment to meeting our client's needs with a structured, well-defined plan.

A project schedule listing all disciplines and work products will be developed at the outset of the project using Microsoft Project. The primary components of the effort will be to ascertain the validity of each time estimate, determine the amount of "float" time available throughout the various elements of the project, and concentrate on those elements which are critical or near-critical to expeditious project completion. This will allow our team to mitigate the impact of changes to the work plan through proactive scheduling to avoid overall schedule slip.

The scheduling will not be outsourced from the project manager. Monitoring progress against schedule and continuously tracking and adjusting the work to maintain the critical path are an essential project management task that is difficult to successfully outsource. If done well, the scheduling effort identifies potential problems and supports decision making rather than serves as an add-on, after the fact reporting tool regarding the status of the project. The schedule will track the milestone submissions, regulatory approvals, bid award, construction moratoriums, and construction schedules at a minimum, depending on the assigned task order.



P242483



3. Personnel Plan →

a. Operational Plan

With more than 1,300 employees nationwide, we are one of the largest coastal engineering firms in the U.S., and are confident that we can efficiently staff any potential project workload. The Operating Plan/Organization Chart below demonstrates M&N's commitment and available resources to be provided to the Village.

Position / Role	Responsibilities	Commitment (Hours)		
		Daily	Weekly	Monthly
Project Manager	- Project scoping - Project budgeting - Village staff communication and coordination - Assignment of staffing and tracking project progress - Presentations at public meetings and at Village Council meetings	0.5	2	8
Assistant Project Manager	- Resource allocation - Managing/tracking project budgets - Internal project management reporting - Client communications to support project manager and other staff	0.25	1	3
Principal-in-Charge	- Ensure experienced staff are assigned to project - Provide senior technical reviews of work products - Assist Project Manager in client communication - Presentations at public meetings and at Village Council meetings	0.5	2	8
Quality Manager	- Peer reviews of designs, permits, studies, reports, coastal/waterfront engineering designs, construction documents, and key construction submittals/documentation - Ensure all work products are reviewed in accordance with ISO-9001 quality control procedures and documentation - Assign appropriate technical reviewers to review various work products	0.25	1	3
Coastal Engineering	- Comprehensive beach management and coastal zone consulting design and advisory services - Coastal dunes: Field evaluation, planning, and design - Pre- and post-storm damage assessments; preparation of documents required to obtain assistance from State and/or Federal agencies - Evaluation of long-term beach management studies - Continued physical monitoring of beach nourishment - Engineering design and preparation of beach nourishment drawings and specifications - Resilience planning and consulting - Bayfront consulting on storm surge, flooding, and wave impacts on seawalls - Coastal numerical modeling to facilitate analysis of coastal processes for use in planning, permitting, and engineering - Evaluation of beach cleaning methods and advisement on procurement and new technology/systems to control sargassum	2	10	30
Resiliency & Adaptation	- Assistance with State and/or Federal funding acquisition, reimbursement, preliminary project investigations, cost studies, and economic comparisons and analysis - Interaction with lobbyists and advocates to assist with public funding opportunities - Advise Village on resiliency objectives in accordance with the Lines of Effort that are the foundation of resilience program	0.5	2.5	6

P242483



Position / Role	Responsibilities	Commitment (Hours)		
		Daily	Weekly	Monthly
Joint Coastal Permitting	› Marine biological resource (i.e., seagrass and hard bottom) mapping and monitoring, in accordance with regulatory permit requirements › Marine turtle protection, lighting, etc. › US Army Corps of Engineers: Federal permit processing for beach management and compliance reporting; application and processing for new coastal or waterfront projects › Florida DEP: State permit processing for beach management and compliance reporting and applications and processing for new waterfront permits › Miami-Dade RER (DER): County permit processing for beach management and compliance reporting and applications and processing for new waterfront permits › FEMA: Coordination with applications and processing for engineered beaches after coastal storm events	2	10	30
Surveying	› Field data collection and analysis for beach sand sources—upland and offshore sources › Coastal and hydrographic surveying and physical monitoring, in accordance with regulatory permit requirements › Surveying for CCCL permitting projects › Mean High Water (MHW) surveys for waterfront projects	0.25	2	6
Marine Environmental	› Seagrass mapping, GIS analysis, and reporting of nearshore seagrass resources adjacent to beach › Compliance reporting in accordance with environmental › Permits Shorebird nesting surveys and monitoring › Marine resource and wetlands mapping for waterfront (on the bay) projects › Artificial Reef baseline and monitoring	0.25	3	6
Planning & Outreach	› Public engagement for coastal or environmental infrastructure projects › Develop and deliver science education programming for K–12 and general public audiences › Designing or administering citizen science monitoring programs › Working alongside community foundations or civic organizations	0.25	3	8
Marine Foundation	› Marine geotechnical investigations and seabed characterization › Marine mattress foundation systems for submerged coastal structures	2	10	30
Cost Estimating/ Marine Construction	› Constructability review of coastal and waterfront engineering construction documents › Compilation of construction cost estimates for all beach management and waterfront projects at all phases of design › Supporting the Village in the evaluation of construction bids and award to the most responsive bidder › Support construction administration and review of claims, change orders, contractor schedules, etc.	0.25	3	6
Physical Modeling	› Numerical modeling development and calibration › Advanced numerical wave and sediment transport modeling	0.25	2	6
Innovative Coastal Structures	› Design coastal armor structures, submerged reef structures, or artificial reef systems › Preliminary engineering designs and fabricate prototype reef structures validated through wave tank testing	2	10	30

b. Staffing Levels

Moffatt & Nichol brings a long history of marine and coastal projects, with more than 1,300 professionals worldwide and more than 100 dedicated staff within Florida. The M&N team is organized to provide top-tier service to the Village. Key members of the team are not only recognized for their individual coastal expertise but also for their proven track records in delivering solutions in a timely, cost-effective manner to federal, state, and local governments.

In assembling the team, Tim Blankenship and Manuel Castaño reviewed each candidate's expertise as well as their availability. The team proposed on our organizational chart are highly-qualified and have ample availability to devote the necessary time to any potential projects. Manuel will monitor their availability throughout the life of this project and will work closely with the Village.

The M&N team will have clearly defined roles under the leadership of Manuel. He will organize, assess, direct, integrate, coordinate, and control the work. M&N has management tools in place to facilitate this coordination. One important tool is our Project Management Plan (PMP), which Manuel will develop to keep individual tasks on schedule and within budget. The PMP is a flexible document that consists of a list of common-sense items that supplements the contractual scope of work.

M&N conducts weekly calls corporate-wide with technical disciplines to review ongoing resource allocation, and the firm relies heavily on work share between offices for efficient project delivery. The majority of the work completed for the Village will be done primarily with resources located in Florida, however, M&N has the ability to ramp up (or down) resources due to efficient work share that the firm has refined over many years of practice. The firm employs the BST ERP, and this software tracks project management and provides financial reporting. This tool also requires project managers to upload resourcing outlooks by project, so allocation can be balanced.

c. Managerial Organizational Chart

Please refer to the organizational chart starting on page 94 for managerial assignments and corporate levels.

d. Descriptions of Roles

The formation of an effective project team is key to the success of this project. M&N has established a team of proven professionals, both in-house and with subconsultants, to meet the Village's project schedule. Our approach is to assemble a team with a mix of experienced engineers, technical experts, and project managers, supported by specialized sub-consultants as needed.

Project Manager Manuel Castaño will be the primary point of contact for the Village and will make sure that our team adheres to project scope, schedule, and budget. Manuel will oversee the overall coordination of the project and collaborate with both internal and external teams to make certain all deliverables are met. In addition to managing the project at a high level, Manuel will delegate specific roles and responsibilities to the assistant project manager and other team members. He will monitor progress, making sure that each team member's efforts are aligned with the project's overall objectives.

Internally, Manuel will coordinate with engineering, environmental, and permitting experts to make sure that all teams are working effectively and collaboratively. Externally, he will liaise with the Village's Contract Coordinator and other stakeholders, providing regular updates, addressing any issues, and making certain the project moves forward smoothly. To deliver the highest quality of work, Manuel will establish rigorous quality control protocols and actively manage project risks, mitigating any issues that may arise throughout the course of the project.

Assistant Project Manager Amanda Caparro will support Manuel by overseeing daily project management tasks, delivering smooth operations, and providing regular updates on project status. Additionally, Amanda will assist with progress reporting, documentation, and quality assurance so that all work meets project specifications and standards in collaboration with Manuel.

Descriptions of roles and responsibilities for all personnel are provided starting on page 94.

Tab D

Subcontracting Plan



Subcontracting Plan →

To best meet the Village of Key Biscayne's needs for this contract, M&N has assembled a comprehensive team of local experts with experience working with the Village, that are available and ready to achieve the project goals. Based on M&N's experience working with the Village since 2017, we are including three specialty subconsultants.

Our subconsultants are an extension of M&N and, therefore, are required to conform to the same level of performance. Project Manager Manuel Castaño will conduct frequent and regular progress reviews with the subconsultants to assure schedule, budget, and focus are being maintained. The subconsultants will participate in all formal milestone reviews and their input is solicited from them on the plan, progress of work, and the direction of the remaining activities. Subconsultants are also required to submit invoices with a progress report detailing work accomplished. This allows M&N to track the expended budget and to flag issues.



Brizaga | Planning and Outreach

Brizaga is a resilience-focused engineering and consulting firm helping communities plan, communicate, and adapt in the face of flooding, sea level rise, and a changing climate. Founded in 2017 in Fort Lauderdale, Brizaga has supported more than 140 communities. They are strategic thinkers who bridge science, policy, and engineering with a strong focus on community engagement and collaboration. Brizaga maintains a longstanding and trusted relationship with the Village, serving as a key consultant for the Village's Resilient Infrastructure and Adaptation Program (RIAP) since 2022. Their work has included development of the Village's Resilient Infrastructure Strategy, a comprehensive flood vulnerability assessment across the Village's critical assets, and strategic infrastructure funding and finance support. Brizaga also created a distinctive brand identity for the resilience program, ensuring consistent messaging across all stakeholder communications. Brizaga secured multiple grants for the Village under the Resilient Florida program and other funding sources, including a Biscayne Bay Water Quality Grant and a Watershed Master Plan Grant, helping leverage bond funding with state and federal dollars.

- › **Field of Expertise:** Resilience-focused engineering and consulting
- › **Years in the Field:** 9 years
- › **Point-of-Contact:** Erica Echeverri, (954) 834-3533, erica@brizaga.com

Olin Hydrographic Solutions | Surveying



Olin Hydrographic Solutions, founded in 2004, is a specialized consulting firm providing expertise in hydrographic surveying, coastal engineering, environmental mapping, and waterfront engineering.

The firm has the personnel, equipment, and expertise to provide hydrographic surveying, beach profiling, seagrass mapping, and geophysical surveys. The team also has experience in the deployment of oceanographic instrumentation such as ADCPs to measure tidal currents and waves to provide data for the calibration of numerical modeling. Olin regularly performs turbidity monitoring on dredging projects to monitor water quality. The firm employs drones for aerial photography and other remote sensing assignments. Olin has conducted field investigations on Key Biscayne since 2000 and has completed the last four annual monitoring surveys for the Village as a subconsultant to M&N.

- › **Field of Expertise:** Consulting engineering, surveying, mapping, and environmental services
- › **Years in the Field:** 22 years
- › **Point-of-Contact:** David Olin, (305) 619-2800, david@olinhydrographic.com

University of Miami | Marine Environmental, Physical Modeling, Innovative Coastal Structures



The University of Miami interdisciplinary team brings together a powerful combination of expertise to advance hybrid reef design and coastal resilience by blending engineered elements with living coral systems. Dr. Landolf Rhode-Barbarigos drives the engineering innovation, focusing on structural morphology and the design of advanced infrastructure units. Dr. Brian Haus provides the hydrodynamic foundation, utilizing state-of-the-art wave and surge testing to evaluate structural performance and wave-energy attenuation. On the ecological side, Dr. Diego Lirman integrates critical expertise in benthic ecology and reef restoration to maximize habitat creation and community recovery, while Dr. Andrew Baker contributes vital insights into coral biology and symbiosis, ensuring that climate-resilient corals are successfully established for the long-term biological viability of the hybrid reef. Together, this collaborative effort bridges structural design, fluid dynamics, and marine science to deliver comprehensive, nature-based shoreline protection. Working in close synergy since 2018, the team has secured over \$50 million in funding and successfully deployed pilot projects in partnership with local communities.

- › **Field of Expertise:** Marine, Atmospheric, and Earth Science
- › **Years in the Field:** 8 years
- › **Point-of-Contact:** Landolf Rhode-Barbarigos, (305) 284-3489, landolfrb@miami.edu

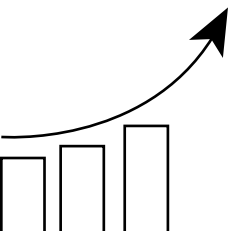
Tab E

Proposal Approach



Proposal Approach →

The M&N team has reviewed the scope of work in Section 2 of the RFQ, and the following approach is organized in the format in the RFQ with additional background, based on our understanding of the objectives of this feasibility study and experience with similar projects. M&N understands the Village’s intent to complete the first three tasks within the scope and budget of the NOAA Grant, and the Village has allocated additional budget for the remaining phases. The Village is in the process of applying for additional funding through the Florida DEP’s LGFR process and M&N is currently providing consulting services assisting the Village through this process. As additional funding may become available, the feasibility study will be phased and possibly a test deployment can be completed to further validate the hybrid reef concept.



TASK 1 - DATA COLLECTION AND REVIEW

The M&N Team has been consulting on beach management on Key Biscayne since 2017, and key staff with M&N have experience providing coastal engineering services since 2000. This extensive background and experience facilitates M&N’s ability to initiate work immediately and not spend funding or time on data collection, as the firm already has the depth of knowledge and understanding. In addition to this extensive experience, M&N developed the “Village of Key Biscayne Offshore Coastal Structures Study” in 2018, providing us with a thorough understanding of site conditions, available background information, and the Village’s established vision and objectives for the project. ***M&N is plug and play; we have the background data and have been studying the beaches for many years, and we’ve supported the Village with the development of the vision for this project since 2018. There is no learning curve.***

Data collection is a key parameter of the feasibility study’s success, as it supplies the quantitative and qualitative evidence required to evaluate project feasibility, validate assumptions, and develop actionable recommendations with confidence. The project will rely on previous coastal studies and shoreline data, historic records of beach nourishment, oceanographic measurements (waves, currents, tides, and weather), marine habitat and benthic community data (species distribution, abundance, diversity, and habitat condition), and sediment depth and composition information.

Together, these datasets will provide the physical and ecological baseline needed to characterize site conditions and support the feasibility assessment.

Historic Erosion Trends and Beach Nourishments

The littoral processes and erosion trends along the shoreline of Key Biscayne are well-established with studies that include data back to the 1850s. The long-term erosion rates are a direct result of Government Cut acting as a littoral barrier relative to littoral processes. The long-term erosion rates combined with bathymetric contours create focusing of wave energy, generally within the Village municipal limits, and the portions to the north and south of Key Biscayne have been accretional. Since the 1960s, the Village has relied upon regular beach nourishment to maintain shore protection. In 2018, M&N led the study to evaluate the potential of using offshore breakwaters as a countermeasure to extend the time between beach nourishments.

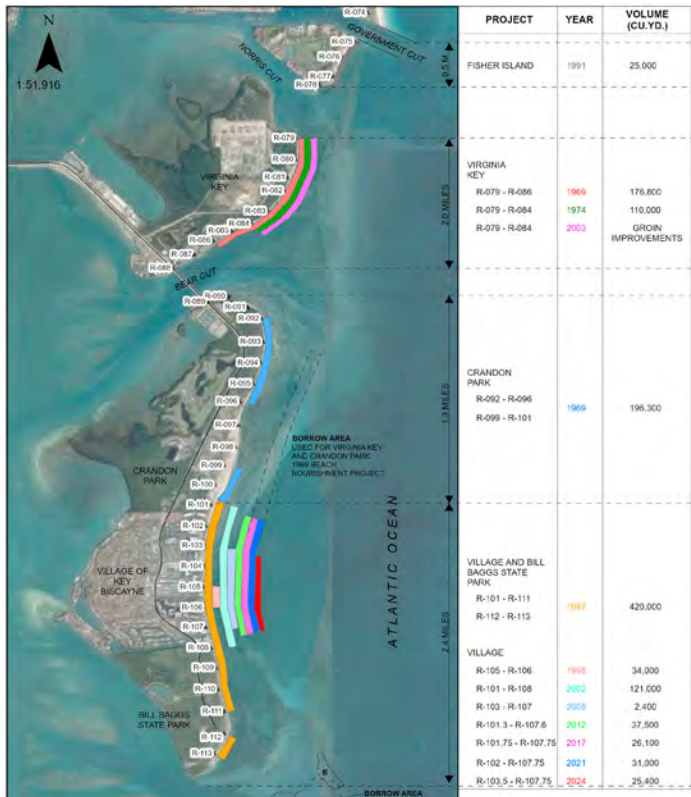


Figure 1. Summary of Beach Nourishment on Key Biscayne, Updated from the 2018 Moffatt & Nichol Feasibility Report.

Figure 1, shown above, is an updated figure from the 2018 Feasibility Report with beach nourishment projects and approximately limits dating back to 1969. M&N has been Engineer-of-Record on the last three beach nourishment



projects implemented by the Village, and the firm has conducted physical and biological monitoring of the performance of the beach nourishments on an annual basis, in accordance with the regulatory permits. All of this data is in GIS and will be relied upon extensively for this project.

Over the last 30 years in Florida, the regulatory permitting process for coastal structure projects has been very challenging due to environmental concerns with traditional coastal groins and breakwaters. However, continued truck haul nourishments are not sustainable.

The Village has been proactive since the 2018 time frame attempting to be incorporated into Miami Dade County's Coastal Storm Reduction Management (CSRM) projects through the USACE with Miami-Dade County as local sponsor. The County's 50-year federal shore protection project was reauthorized without Key Biscayne. Key Biscayne will require a stand-alone CSRM project that evaluates coastal storm impacts from the oceanfront as well as flooding from the "back bay" area of Key Biscayne. M&N provided technical advisory services to support the Key Biscayne CSRM process since March 2023. The CSRM process is pending additional federal funding, however the results of the study outlined ongoing truck haul beach nourishment at an interval of approximately every two years as the preferred plan. This continued need for truck haul nourishment is not sustainable for the Village, and an innovative system in the nearshore could be justified to the regulatory agencies applying innovative systems. ***The data collection and summary of previous studies will need to lay the groundwork for justification of coastal structural solutions.***

Oceanographic Instrument Deployment

Comprehensive numerical modeling will be required for the project, and oceanographic data in the form of wave and current measurements are needed to calibrate the models. M&N will work with the University of Miami's SUSTAIN laboratory under the leadership of Dr. Brian Haus to deploy instrumentation, likely over a 30-90 day period. The SUSTAIN laboratory has 10 shallow water 3-50 m SOFAR smart mooring systems for nearshore wave and current measurement. These instruments are particularly useful for coastal engineering related studies as local wave and current forcing can be conveniently sampled locally. The buoy can provide directional wave spectra at selected intervals with onboard recording of time-series data up to 2 Hz.

Key features and Innovative Capabilities of this system are:

- › **Real-Time Subsurface Telemetry:** Delivers real-time information from sensors distributed up to 50 meters deep via satellite or data streams.

- › **Bristlemouth Plug-and-Play Integration:** Powered by the open-source Bristlemouth hardware standard, allowing users to plug-and-play up to three universal nodes along a single cable without manual splicing.
- › **Rapid, Single-Handed Deployment:** The complete system is compact and light enough to be deployed from a small watercraft or rigid-hulled inflatable boat (RHIB).
- › **Zero-Maintenance Solar Budget:** Fully solar-powered surface buoy replenishes internal lithium reserve cells continuously, entirely eliminating scheduled battery-replacement field missions.
- › **Rugged Environmental Resilience:** Built with Kevlar-reinforced, high-visibility yellow, UV-stabilized, and biofouling-resistant thermoplastic polyurethane (TPU) jacketing.

Depending on the data collection needs for the project, the SUSTAIN laboratory can also deploy Nortek Signature 1000 current meters (See **Figure 2**, below). The SUSTAIN laboratory has two of these units which can provide high resolution adaptive sampling of currents, waves, turbulence and acoustic backscatter.

Key Features include:

- › **Five Beams:** Four slanted at 25° from vertical and one vertical beam, enabling simultaneous measurement of mean currents, turbulence, wave height/direction, and biomass.
- › **High Sampling Rate:** Up to 16 Hz for unprecedented turbulence spectrum access
- › **Vertical resolution as fine as 2 cm over up to 8 m depth**
- › **Wave Processing:** Onboard wave processing for height and direction
- › **Echosounder Capability:** Center beam can function as a biological echosounder for biomass estimates
- › **Deployment Flexibility:** Buoy-mounted, bottom frame, or high-energy environments; optional AHRS for motion correction
- › **Small Footprint:** Only 21.2 cm tall and lightweight, making it suitable for various deployment platforms
- › **Data Interfaces:** Ethernet, optional serial, and power connectors; supports real-time and post-recovery data retrieval



Figure 2. Nortek Signature 1000 Current Meter

The SUSTAIN lab, in conjunction with coastal engineers at M&N, will complete data analysis and compile a MetOcean data measurement report for use in the project.

Benthic Survey Mapping

The Rosenstiel School, University of Miami (RSMAS), will conduct the benthic resource mapping, led by Dr. Diego Lirman as Principal Investigator. M&N will provide RSMAS with the background data and previous monitoring studies (in GIS) along with updated collected for the CSRM process by the USACE. This data compiled in GIS will reduce costs and will contribute to efficiency in the field.

During the most recent biological monitoring survey conducted in the summer of 2025 (See **Figure 3**, shown to the right), there were areas of sparse seagrass coverage observed at the northern end of the project area (see **Figure 4** of *transect map from R-103 to the right*). There were also large gaps observed in the western seagrass edge in this area (Transects 1-10), due to the presence of sand shoaling. These areas may provide locations where the initial demonstration project implementation would have the least impact on SAV.

This ongoing monitoring data in GIS will be built upon by RSMAS, as Dr. Lirman's research is divided evenly between seagrass and coral reef ecosystems where RSMAS has explored the impacts of multiple disturbances (storms, boat grounding, sedimentation, nutrients, temperature extremes) on diverse taxa at the individual, population, community, and seascape level. RSMAS seagrass research has focused on the nearshore environments of Biscayne Bay that are targets of Everglades Restoration and have shown remarkable resistance to decadal changes in water quality. Dr. Lirman is co-lead of the Integrated Biscayne Bay Ecological Monitoring and Assessment program (IBBEAM) that combines water quality, mangrove fish, epifauna, and submerged aquatic vegetation monitoring and has the longest integrated data record in Florida (> 25 years). Dr. Lirman's research has helped establish relationships between water quality and seagrass abundance and identify indicator species and benchmarks currently used by the Everglades RECOVER program to evaluate the progress of restoration. RSMAS will lead the efforts in the benthic assessments for potential deployment areas.

All field work and Quality Assurance/Quality Control (QA/QC) of the surveys and data collected by RSMAS will be completed by qualified biologists, in accordance with FDEP requirements, who meet at least the following minimum requirements:

1. *Bachelor of Science in Marine Biology, Biology with a concentration in marine sciences, Environmental Science with a minor in Biology, or similar degree;*



Figure 3. Seagrass Monitoring Data (2025 Monitoring Report)

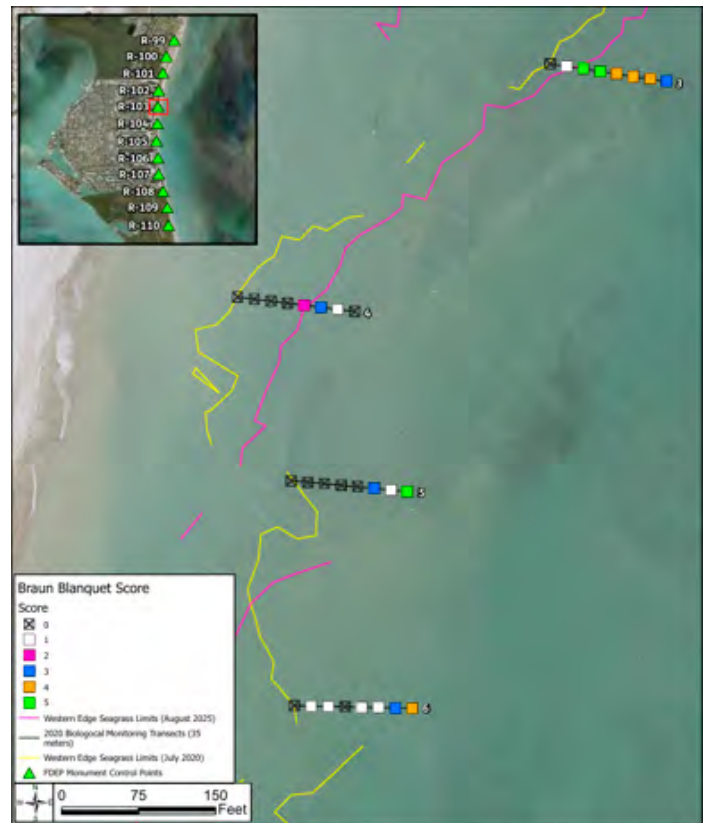


Figure 4. Benthic Resource Survey Data (2025 Monitoring Report)

2. *At least 3 years documented experience monitoring coral hardbottom / coral reef communities in South Florida;*
3. *Knowledge of marine benthic ecosystems and organisms, including but not limited to identification of Caribbean coral species.*

Benthic Mapping Goals

- To provide information needed to characterize the quantity and quality of categories of Essential Fish Habitat (EFH) at the site, including corals (ESA listed and non-listed), hardbottom, and seagrass.
- To document the distribution, identity, abundance, condition, and size of benthic taxa located within the impact and buffer areas to support the permitting process.



Figure 5. Benthic Survey Transect (Representative Location at Elliott Key)

Qualitative methods utilizing towed video will provide coarse level data to plan transects. Once transects are identified, RSMAS will utilize a grid-based design to characterize benthic taxa at the selected site.

Mapping Protocol

- Install temporary weighted markers at the corners and the center of the plot. The location of these markers will be recorded using GPS (decimal degrees).

Seagrasses and Protected Coral Species

- Set up 8 parallel, 70-m transects that are separated by 10 m to create a mapping grid for detailed surveys.
 - Areas of potential impact and areas of buffer will be surveyed by divers (using the transects as guides) to document the presence of seagrass patches and protected coral species
- If seagrass is encountered, divers will:
 - Document the location of the patch (using triangulation to the survey lines),

- Measure the size (2 perpendicular diameters) of the seagrass patch,
- Deploy 0.5 m x 0.5 m PVC quadrats haphazardly within each patch to assess cover of seagrasses (by species) using the Braun Blanquet method. The number of quadrats per patch will vary based on the size of the patch, with at least 10% of the area of the patch to be surveyed. Water depth (depth gauge) and sediment depth (metal rulers or PVC push rods and measuring to the closest mm) will be measured at the center point of each quadrat.
- If colonies of protected coral species are encountered, divers will:
 - Document the location of the colony using a GPS location (digital degrees) collected from the surface,
 - Measure the size (2 perpendicular diameters, height) of the colony,
 - Record the percentage of live tissue and recent partial mortality,
 - Attach a cattle tag next to the colony for tracking and take a picture as a permanent record.

All qualitative and transect data will be compiled into GIS to facilitate the planning and site identification.

Bathymetric Survey



Figure 6. Bathymetry from 2025 Physical Monitoring Survey

Olin Hydrographic Solutions will conduct an updated bathymetric survey to densify bathymetry, if required, from the ongoing physical monitoring surveys being conducted by M&N with Olin on annual basis to monitoring the performance of the truck haul beach nourishments. **Figure 6**, shown above, depicts the coverage of these surveys, and this data will be relied upon to the extent possible to minimize costs for new data collection.

The surveys generally extend approximately 2000' offshore to contours ranging for -10' to -14' but the survey may need to be extended further offshore for input into the numerical modeling software. Olin will utilize single-beam echo sounding equipment to obtain additional cross sections, as multibeam surveying

is not warranted for this feasibility level study. The survey will be conducted in accordance with Florida DEP requirements for beach monitoring, and surveys will be sealed by a Florida professional surveyor/mapper.



TASK 2 - SITE IDENTIFICATION AND EVALUATION

After the field work and data collection is completed under Task 1, M&N will conduct numerical modeling to simulate

the coastal processes in the region including water levels, waves, hydrodynamics, and sediment transport.

M&N completed the feasibility study for offshore breakwaters in 2018, and this work will be built upon to further evaluate the feasibility of a hybrid reef system. **Figure 7**, shown below, is the bathymetry set up for the finer grid modeling for use in the MIKE 21 suite of numerical models, and these boundary conditions will be updated with new survey data.

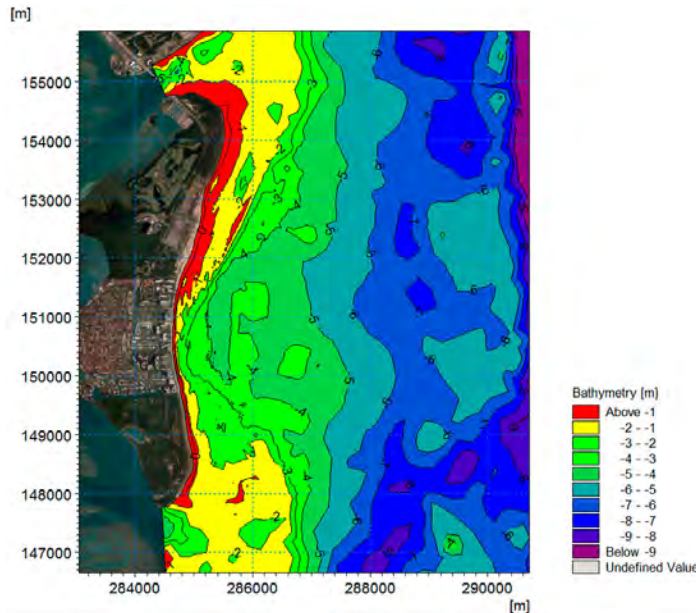


Figure 7. Bathymetry Set Up in MIKE 21 from 2018 Report

The modeling will be initiated utilizing MIKE 21 SW and HD tools to simulate and calibrate these coastal processes. **Figure 8**, shown to the right, is a representative plot showing offshore wave propagation from the 2018 study that will be updated/validated for a selected return period.

For shoreline modeling and evaluating the feasibility of structures, predominant (day-to-day) conditions will be modeled for a number of years to better understand the seasonal metocean conditions at the site. These modeling runs will include wave and hydrodynamic (water current) conditions. In addition, several extreme events (storms) will be evaluated

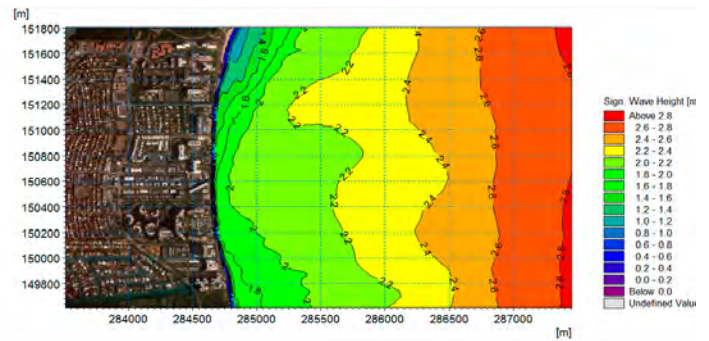


Figure 8. Wave Heights from MIKE 21 SW Simulations of 25-year Event; Waves from East

to better understand the potential impacts to the shoreline from these coastal storm events. These hurricane conditions will also be utilized by the M&N design team to assess the potential degree of wave sheltering of the structures, and the design conditions that will be needed for the survivability of the proposed offshore reefs.

The MIKE 21 tools facilitate the evaluation of conditions pre- and post-project for various conditions of Sea Level Change (SLC). M&N will work with the Village on scenarios to simulate. For long-term morphological change simulations, the boundary conditions can be adjusted to evaluate the effects on the hydrodynamics and waves which are driving the sediment transport, and the vulnerability through 2070 can be evaluated.

In addition to the MIKE 21 HD and SW models, M&N will also evaluate the complex wave transformation patterns resulting from the interaction between the local wave climate and the proposed structures by using a phase-resolving model, such as MIKE 3.

Once the MIKE 21 SW and HD models have been adequately calibrated, M&N will conduct a

phased approach to the sediment transport modeling. The characteristics of sediment transport along the Village's shoreline are well-established, and studies will be reviewed to summarize empirical data for use. **Figure 9** above depicts historical littoral drift patterns from studies conducted in 1997, and review and understanding of these historical patterns is essential prior to initiating numerical modeling.

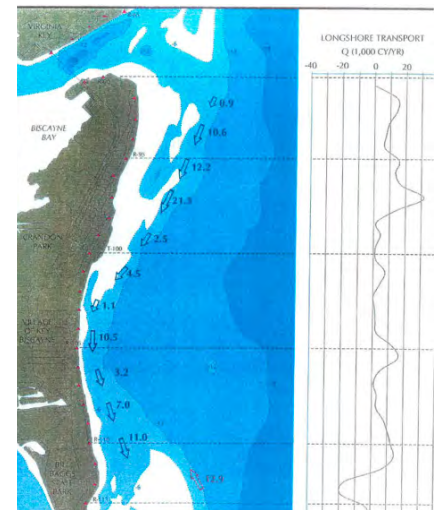


Figure 9. Littoral Transport Rates – NE Wave Conditions (1997 Long Range Beach Management Plan)



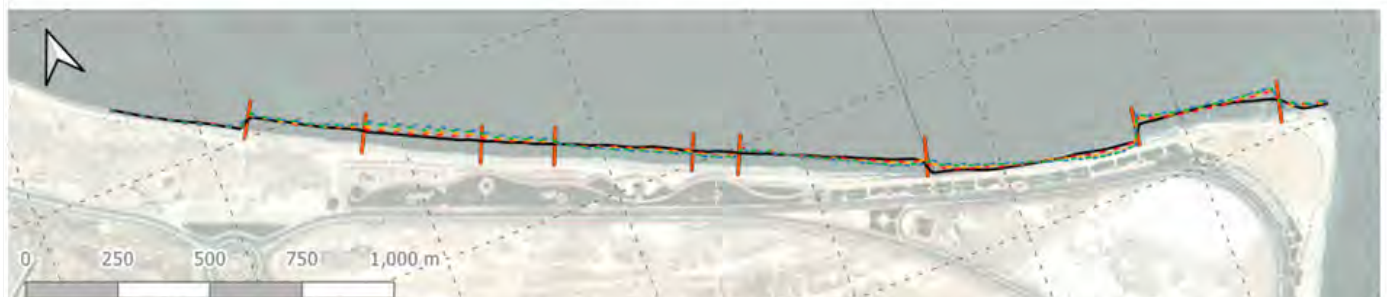
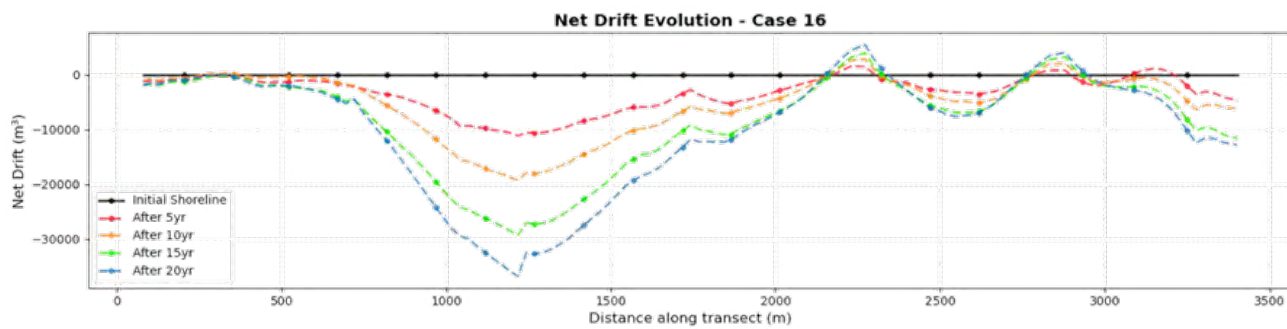


Figure 10. Typical Morphological Model Along a Shoreline with Proposed Structures Depicting Net Littoral Drift Changes Over Simulations Up to 20 Years

The first phase of the sediment transport numerical modeling will begin with the use of the MIKE 21 Shoreline Morphological model. Input from MIKE 21 SW and HD modeling will be “driving” the morphological model to evaluate the existing shoreline conditions, and then hybrid reef configurations can be evaluated and simulated over 5-10 years efficiently. **Figure 10** shown above is a typical run from the morphological model for a groin field, however similar plots will be generated for the hybrid reefs.

Once the hybrid reef locations and configurations are optimized using the morphological tools, preferred alternatives will be simulated with XBEACH. This is a model that provides more reasonable results for shoreline response to coastal structures. The modeling will be conducted in collaboration with the considered hybrid reef technologies, and UM will provide testing data for input in the model as the hybrid reefs do not perform as typical rubblemound structures. **Figure 11**, shown to the right, illustrates XBEACH results with nearshore detached breakwater options.

Refining the XBEACH model will be critical to understanding the wave transmission through the proposed hybrid reef system. **Figure 12**, shown to the right, shows the results from a table of different structure crest widths and the resulting transmission coefficients from the 2018 study. Similar curves will be developed for the hybrid reef configurations.

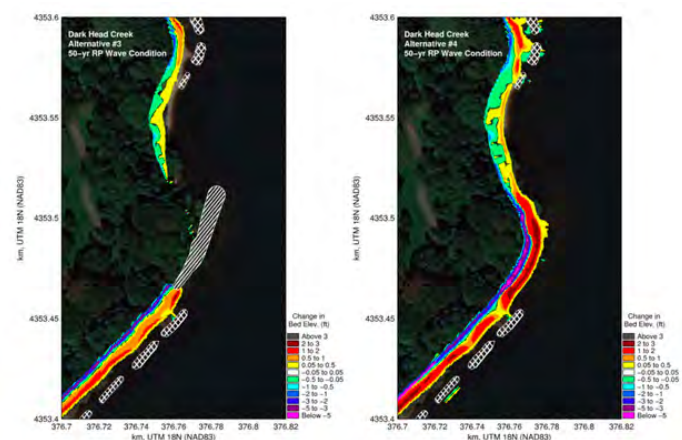


Figure 11. Example of XBEACH Shoreline Response Results for Nearshore Breakwaters (Comparison of Bed Elevation Change for 50-year Return Period Conditions - Alternative #3 vs. #4).

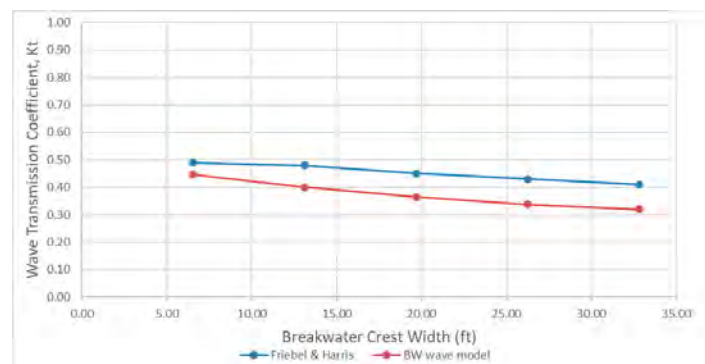


Figure 12. Predicted Wave Transmission coefficients – from 2018 M&N Feasibility Study

The location of the hybrid reef system will be further refined through the numerical modeling. The 2018 report recommended depths that were 400' to 500' offshore as shown in **Figure 13**, below. The Village would prefer the structures be placed within the currently permitted swim zone which is approximately 250-300 feet offshore.

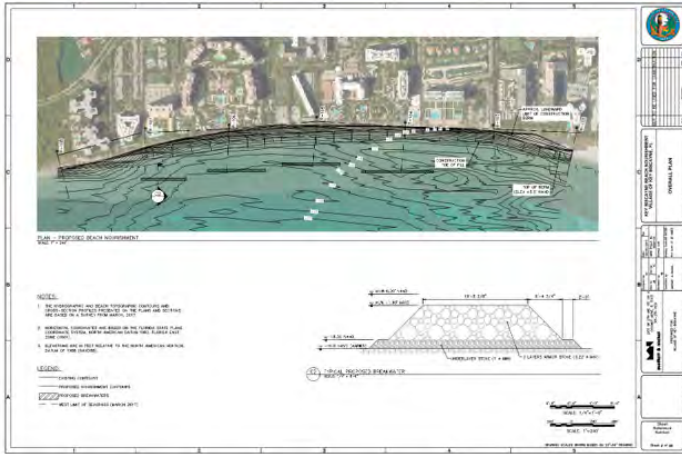
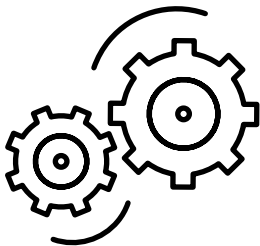


Figure 13. Concept Plan of Coastal Structures from 2018 M&N Report

In conjunction with the University of Miami, M&N will evaluate potential locations of a hybrid reef system utilizing the following, but not limited to, criteria:

- › *Technical feasibility (wave attenuation, erosion control)*
- › *Ecological benefit*
- › *Avoidance of sensitive marine resources*
- › *Regulatory permitting feasibility*
- › *Construction logistics and cost*
- › *Community preference*

The modeling report will be compiled in accordance with FDEP requirements, and a matrix of options will be presented along with the recommended locations and configuration.



TASK 3 - PRELIMINARY DESIGN AND PROTOTYPING

Building on the site identification, the launch of the design phase begins with the development of a preliminary design and specific

prototypes. Our phase culminates in the fabrication and wave tank stability testing of a minimum of two small scale prototypes. The approach advances the evaluation of the top-ranked site alternatives along with the suitability of the potential structures through an iterative refinement process that takes into account

not just the requested aspects of constructability and 3D concrete printing processes, but also permitting viability of the structure. Our practitioners fully understand that the best suited designs are the alternatives that are viable for deployment, implementation, and monitoring.

Geotechnical Evaluation and Foundation Design

Seabed geotechnical conditions at the preferred sites will be evaluated to develop a site-appropriate marine mattress foundation system. Evaluation will draw on available geotechnical data and, where necessary, supplemental subsurface characterization to inform foundation bearing capacity, settlement potential, and scour susceptibility under design wave and current conditions. Based on our experience in this area and available geophysical data from the CSRM, sand layers 8-20 feet deep can be expected on top of limestone layers. M&N has in-house geotechnical engineers that will evaluate the marine foundation system that will likely consist of polymeric mattresses filled with appropriately graded stone.

Iterative Structural Design and Characteristics of 3D Concrete Printing

Coastal structure geometry will be refined iteratively to identify preferred configurations that balance hydraulic performance, constructability constraints specific to 3D Concrete Printing (3DCP) processes, and potential impacts to natural resources. Structural design will address the following elements:

- › *Stability under design wave conditions*
- › *Head and roundhead protection*
- › *Toe scour and toe protection sizing*
- › *Optimized slope and crest geometry balancing stability, overtopping, and material efficiency*

For coastal armor applications and specifically hybrid offshore artificial reef systems, 3DCP presents a compelling opportunity to fabricate interlocking unit geometries with a design flexibility superior to conventional pre-cast structures. This is partially due to the ability to rapidly iterate unit geometries.

Three-dimensional concrete printing has matured rapidly over the past decade, advancing from laboratory demonstrations to field-deployable systems capable of producing structurally complex, geometrically precise elements at scale. For coastal armor and hybrid offshore artificial reef applications, 3DCP offers design flexibility that often exceeds conventional precast methods. This enables rapid iteration of unit geometries. This technology is also able to produce complex surface textures, allowing for ecologically enhanced profiles designed to promote marine habitat restoration.

Real-World Applications, Emerging Vendors, and Technology Evaluation Framework

As previously mentioned, success for M&N means that the project delivers a project that is able to advance the permitting landscape and reach deployment. M&N thrives in the adoption of technological innovation that can advance the desired outcome and bring benefits to our communities. Specifically in this space of 3D printing of coastal structures, as a company, as well as individuals of our project team, M&N has experience with the design and permitting of some of the emerging technologies used for wave attenuation and ecological enhancements. With this lens, this team will treat prototype fabrication not only as a structural validation exercise, but as an opportunity to critically evaluate current 3DCP technology readiness for nearshore and coastal armor deployment in Key Biscayne.

The prototype development process begins with a structured review and comparative evaluation of existing 3DCP coastal protection products and systems. Precast and conventional rubblemound configurations can be evaluated, however the purpose of this project is to evaluate the feasibility of hybrid reefs manufactured with innovative 3DCP methods.



Hybrid Reef Structures for Coastal Habitat Restoration & Wave Energy Reduction

Shown in the table below is a representative (non-exhaustive) list of vendors with whom M&N has relationships offering precast or 3DCP structures designed to attenuate wave energy, restore marine habitat, or provide living shoreline functions.

Vendor	Key Product(s)	Description
SEAHIVE	Honeycomb Reef Units	Hexagonal hollow precast units developed at the University of Miami; dissipate wave energy and provide substrate for coral attachment. Tested off Miami Beach.
Kind Designs	Living Seawall™, Kind Tiles™, Living Shorelines™	3D-printed eco-concrete panels and tiles that mimic mangrove roots and coral reef texture; recruit oysters and other organisms.
ECONcrete	Coastalock, Armor Units, Seawall Tiles	Ecologically engineered concrete mix and textured mold designs that increase biodiversity on seawalls, breakwaters, and riprap. Commercial-scale with major port deployments globally (San Diego, San Francisco, Staten Island Living Breakwaters).
Natrx	ExoForms™	Modular, project-specific living shoreline modules paired with AI-driven satellite site analysis (Natrx Assess). Designed for wave attenuation and habitat restoration along US East Coast estuary environments.
Reef Arches	Reef Arch Units, Seawall Tiles®	South Florida-based company producing honeycomb-design precast concrete arch-es made from low-pH concrete. Permitted as living shoreline structures (FDEP/USACE); deployed by the City of Cape Canaveral at Banana River Lagoon (2025) and Marine Resources Council (2024).
SECS (Shoreline Erosion Control Solutions)	SECS® Units	Patented, marine-engineered precast concrete units with a tongue-and-groove inter-locking design that sit on the seafloor without tiebacks or driven piles. Diffuse and deflect wave energy rather than absorbing it head-on.

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The technology evaluation framework will be developed in collaboration with the Village of Key Biscayne and based on industry-accepted references, such as the USACE Coastal Engineering Manual (2002) for coastal armor stability benchmarks; Ghiasian et al. (2021) for hybrid reef hydraulic performance targets; and McQueen et al. (2026) for material, ecological, and scaling evaluation dimensions.

Potential criteria may include:

- **Hydraulic Performance:** *Wave energy dissipation efficiency and armor stability*
- **Material Durability and Fabrication Quality:** *Print mix performance dimensional accuracy, unit-to-unit repeatability, and interlayer bond integrity across print runs.*
- **Ecological Co-Benefit Potential:** *Surface texture, void architecture, porosity distribution, and substrate chemistry and compatibility with South Florida's coastal ecology.*
- **Constructability and Scalability:** *Print throughput, unit handling requirements, marine deployment logistics, and production cost will be assessed across candidate systems.*
- **Permitting Compatibility:** *Local, state and federal regulatory frameworks.*

Physical Prototype Fabrication and Wave Tank Testing

A minimum of two small-scale prototype structures (1–2 m length) will be fabricated using 3D concrete printing to validate design geometry, print fidelity, and structural integrity at reduced scale. Prototypes will be subjected to wave tank stability testing under representative hydraulic loading conditions, with results used to confirm or refine final design configurations. Permitting considerations will be factored into the prototype fabrication process.

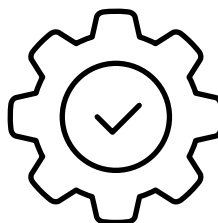
Engineer's Certification

The selected hybrid reef system and configuration will be overseen by a Florida professional engineer with more than 20 years of coastal experience, and any documents required by the environmental agencies can be signed/sealed by a professional engineer if needed.

- U.S. Army Corps of Engineers. (2002). Coastal Engineering Manual. Engineer Manual EM 1110-2-1100. U.S. Army Corps of Engineers, Washington, D.C. (in 6 parts, updated through 2011). <https://www.publications.usace.army.mil/USACE-Publications/Engineer-Manuals/u43544q/636F617374616C20656E67696E656572696E67206D616E75616C/>
- Ghiasian, M., Carrick, J., Rhode-Barbarigos, L., Haus, B., Baker, A.C., & Lirman, D. (2021). Dissipation of wave energy

by a hybrid artificial reef in a wave simulator: implications for coastal resilience and shoreline protection. *Limnology and Oceanography: Methods*, 19(1), 1–7. <https://doi.org/10.1002/lom3.10400>

- McQueen, A.D., Kennedy, A.J., Suedel, B., Ballentine, M., Bortner, M.J., Friedman, A., Youngblood, J.P., Zavattieri, P., Neithalath, N., Wangpraseurt, D., Thorne, S., Boyda, J., May, L., Calomeni-Eck, A., & Slattery, L. (2026). Building tomorrow: Unlocking the potential of additive manufacturing to revolutionize coastal infrastructure. *Integrated Environmental Assessment and Management*, vjag053. <https://doi.org/10.1093/inteam/vjag053>



TASK 4 - CORAL SPECIES ANALYSIS AND FIELD TESTING

In 2007, RSMAS was part of the group of researchers from MOTE, NOVA, TNC, CRF, NOAA, and FWC that came together to create the “Florida Acropora Restoration Program”, the collaboration that kick-started active reef restoration in Florida and the Caribbean and provided scientific support to a multitude of ongoing regional efforts. The role of RSMAS was to develop, evaluate, and publish best-practices for the use of asexual coral propagation in restoration. For this project, Dr. Andrew Baker will be principal investigator and will use his coral nursery resources and expertise to build and deploy test structures to assess the potential of the nearshore habitats of Key Biscayne to provide a suitable growth environment for multiple corals species to be used in the deployment of hybrid reef modules for coastal protection.

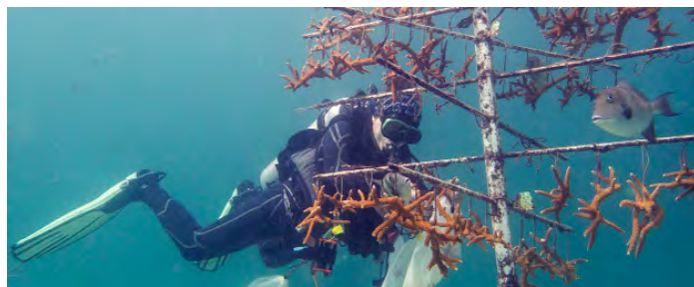
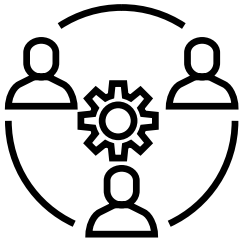


Figure 14. *Floating Coral Nursery Tree (Courtesy of UM)*

The suitability of the target deployment sites will be assessed with the pilot deployment of stony corals on temporary nursery structures at multiple locations (pending permit approvals). Corals selected for their climate resistance by UM researchers will be collected from the UM in-situ and ex-situ nurseries and deployed on floating (pvc trees) and fixed-to-bottom (rebar tables) structures to assess corals performance at the target

sites. These structures have been used for almost 20 years by the UM team to grow corals for restoration in Miami-Dade County. The performance of corals at the pilot sites will be assessed using visual surveys of survivorship, condition, and growth and sites suitability will be ranked based on these key metrics.



TASK 5 - REGULATORY AND PERMITTING FEASIBILITY SCREENING

M&N will conduct a comprehensive regulatory and permitting feasibility screening to identify potential permitting

constraints, evaluate regulatory risks, and establish a clear pathway for future project implementation. Our approach is designed to engage regulatory agencies early in the planning process, allowing agency concerns, environmental resource considerations, and permitting requirements to inform reef siting and preliminary design development before significant design investments are made. Our team brings extensive experience navigating the regulatory framework governing coastal resilience and shoreline protection projects in Miami-Dade County, including serving as the lead permitting consultant for the Village of Key Biscayne's beach nourishment projects since 2017. M&N's experience with permitting and regulatory compliance for the Village's beach nourishment events over the past 10 years gives us a thorough understanding of the Village's coastal management objectives, environmental resources, and regulatory considerations. This institutional knowledge, combined with our established relationships with permitting and resource agencies, will allow the project team to efficiently identify potential permitting challenges and develop practical strategies for advancing future offshore reef implementation.

This task will begin with a desktop review of the project area and applicable regulatory framework. The team will evaluate jurisdictional considerations, existing environmental resources, marine habitat mapping, navigational constraints, submerged lands ownership, and relevant federal, state, and local permitting requirements associated with the project. Particular attention will be given to potential interactions with submerged aquatic vegetation (SAV), coral resources, hardbottom habitat, Essential Fish Habitat (EFH), navigation channels, and other environmentally sensitive features that could influence project feasibility or permitting complexity.

Building upon this review, M&N will prepare agency-specific briefing materials and facilitate pre-application coordination meetings with the U.S. Army Corps of Engineers (USACE), Florida

Department of Environmental Protection (FDEP), and Miami-Dade County Department of Regulatory and Economic Resources, and Division of Environmental Resources Management (DERM). Coordination will also include consultation with resource agencies and commenting agencies, including the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and Florida Fish and Wildlife Conservation Commission (FWC), to identify potential environmental concerns, consultation requirements, and recommended design considerations.

During agency coordination, our team will seek feedback on permitting feasibility, preferred siting criteria, anticipated environmental review requirements, potential mitigation considerations, monitoring expectations, and opportunities to streamline future permitting efforts. Agency input will be documented in detail and evaluated alongside technical and environmental findings to identify key permitting drivers and project risks.

The information gathered through this process will be synthesized into a Regulatory Roadmap Technical Memorandum that outlines the anticipated permitting pathway, required approvals and authorizations, agency consultation requirements, environmental data needs, critical permitting considerations, and recommendations for advancing the project into subsequent design and permitting phases. The roadmap will provide the Village with a clear understanding of regulatory feasibility and a strategic framework for future implementation of offshore reef projects.



TASK 6 - STAKEHOLDER ENGAGEMENT

M&N will work with Brizaga's engagement team for this engagement process. Brizaga is well-known with the Village, having collaborated on

the recent vulnerability assessment with the Key Biscayne Community Foundation (KBCF). For this project, Erica Echeverri, Brizaga's Outreach Lead, spent nearly a decade as a classroom teacher before bringing that expertise into the resilience field. Alec Bogdanoff, PhD, brings a career at the intersection of oceanography and science communication, working directly with student and community groups to translate coastal science into meaningful action. From the St. Mark's Sea Lab to North Miami's Citizen's Guide to Hollywood's Recapture the Swale program, Brizaga has a proven track record of connecting large infrastructure projects to the communities they serve through education, signage, guides, and hands-on engagement. In addition, M&N is leading efforts nationwide with infrastructure

community engagement, and most recently worked with the Village supporting the CSRM efforts of the USACE.

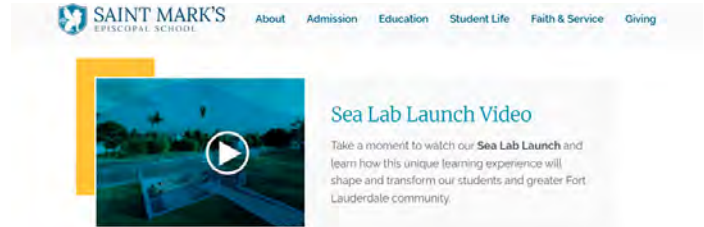
The Brizaga team understands how the Village's community thinks about and relates to its waterfront. That continuity means Brizaga spends less time building trust and more time building program. The KBCF Citizen Scientist Project already runs monthly lectures, the Key Challenge science fair spanning all schools on the Key and MAST Academy, mangrove and beach cleanups, and partnerships with organizations like Miami WaterKeeper and the Everglades Foundation. This project does not ask the Village to build something new from scratch. The project builds on a platform that is already working, adding a reef monitoring and education program that fits naturally into what Key Biscayne residents and students are already doing. This includes curriculum-aligned presentations and workshops through the Citizen Scientist program, coordination with the K-8 Center School and MAST Academy, and integration into the Marine Biology Summer Camp at the Key Biscayne Community Center.

Beyond the classroom, Brizaga will develop a shore-based monitoring program designed for accessibility. Swimmers, snorkelers, paddleboarders, and kayakers will be trained in REEF fish survey methodology to track reef fish community development at structures located within 200 meters of shore. Beach educational signage will support self-guided exploration for casual visitors and dedicated community members alike. Four organized coastal cleaning events will round out the program, reinforcing community stewardship and long-term reef health.

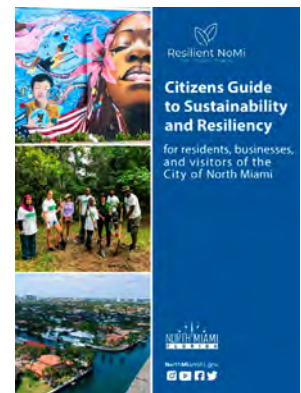
Engagement metrics are central to how Brizaga manages this program. Unique QR codes deployed across signage, events, workshops, and digital materials allow the team to track participation and effectiveness at each touchpoint and through each channel. What is working gets resourced; What is not working gets adjusted. The program will be anchored by a mobile-first portal built for the way people actually experience Key Biscayne, on the water, on the beach, and on the go. Anyone who scans a sign, attends a cleanup, or walks the shoreline can pull up the full program in seconds. The information will be fully multilingual, with Spanish as a core language, ensuring that residents, families, and visitors from across the region and around the world can engage with the reef and its story in their own language. This is not a project website. It is a living resource for the community, one that grows alongside the reef and keeps Key Biscayne connected to what is being built in its waters. Recent experience from Brizaga providing community engagement includes the following two relevant projects:

1. At St. Mark's Episcopal School in Oakland Park, Brizaga served as engineer-of-record for a first-of-its-kind Sea Lab on the Middle River, supported curriculum development

alongside school faculty, and facilitated connections with local institutions to ground the program in environmental stewardship.



2. For the City of North Miami, Brizaga developed the Citizen's Guide to Sustainability and Resiliency, a resource covering a broad range of climate and resilience topics tailored to the community. The guide included Resilient NoMi challenges, actionable steps residents could take individually to make a meaningful collective impact.

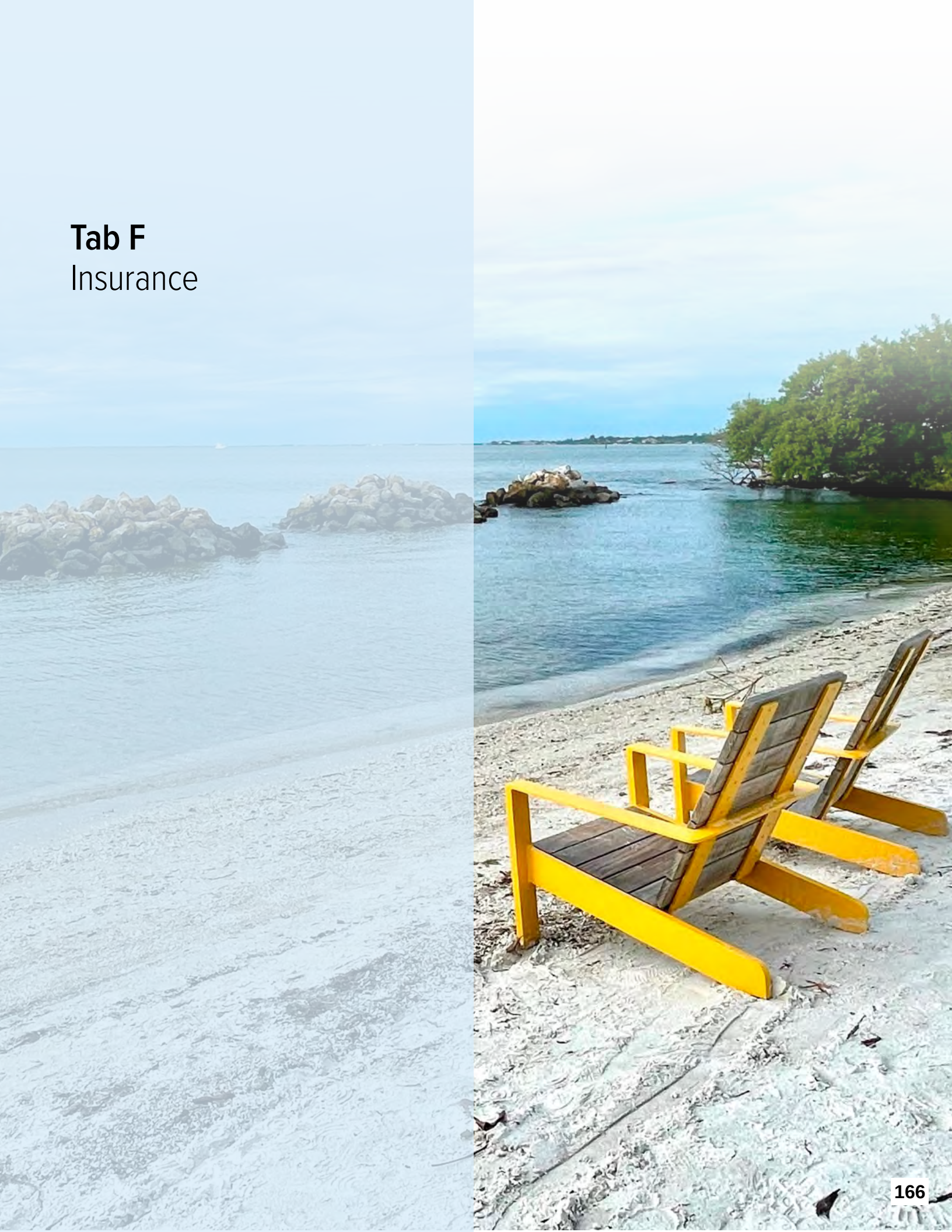


Technical Advisory Committee (TAC)

The RFQ outlines the requirement of a Technical Advisory Committee (TAC). M&N along with UM will work with the Village to assemble this committee to be comprised of technical experts over a range of disciplines to act independently. The TAC will be made up of representatives from scientific agencies including NOAA, Miami-Dade DERM, Florida Fish and Wildlife Conservation Commission (FWC) along with recommended members as outlined in the RFP. TAC meetings will be scheduled at key intervals to receive industry feedback as the feasibility study progresses. Meetings will be documented and compiled into a review report. The M&N team will need to address feedback from the TAC as the Project progresses.

Tab F

Insurance



Insurance →

M&N's evidence of insurance currently in place that meets or exceeds the specifications is provided below and on the following pages. Our Certificate of Insurance names the Village as an additional insured.

		CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY) 3/4/2026															
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.																			
IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).																			
PRODUCER AssuredPartners Design Professionals Insurance Services, LLC 3697 Mt. Diablo Blvd., Suite 230 Lafayette CA 94549 License#: 6003745			CONTACT NAME: Karin Thorp PHONE (A/C, No, Ext): 714-427-3494 FAX (A/C, No): E-MAIL ADDRESS: DesignProCerts@AssuredPartners.com																
INSURED Moffatt & Nichol 4225 E. Conant Street Long Beach CA 90808 License#: 6003745 MOFFANICH			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">INSURER(S) AFFORDING COVERAGE</th> <th style="text-align: left;">NAIC #</th> </tr> <tr> <td>INSURER A : Continental Casualty Company</td> <td>20443</td> </tr> <tr> <td>INSURER B : The Insurance Company of the State of Pennsylvania</td> <td>19429</td> </tr> <tr> <td>INSURER C :</td> <td></td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </table>			INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Continental Casualty Company	20443	INSURER B : The Insurance Company of the State of Pennsylvania	19429	INSURER C :		INSURER D :		INSURER E :		INSURER F :	
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INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS												
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A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ONLY ☒ NON-OWNED AUTOS ONLY	Y	Y	6056712989	11/22/2025	11/22/2026	EACH OCCURRENCE \$ AGGREGATE \$ DED RETENTION \$												
B	☐ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION \$																		
B	☒ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	WC19397907 WC19397906	11/22/2025 11/22/2025	11/22/2026 11/22/2026	☒ PER STATUTE ☐ OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000												
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Workers Comp extends to include Jones Act & USL&H. RE: All Operations of the Named Insured -- Village of Key Biscayne is named as Additional Insured on General Liability and Auto Liability per policy forms, with respect to the operations of the Named Insured, as required by written contract. General Liability is Primary and Non-Contributory and a severability of interest clause applies per policy form wording. Insurance coverage includes waiver of subrogation per attached. 30 Day Notice of Cancellation.																			
CERTIFICATE HOLDER Village of Key Biscayne 88 West McIntyre Street Key Biscayne, FL 33149				CANCELLATION 30 Day Notice of Cancellation SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 															





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

3/17/2026

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PRODUCER Cavignac 451 A Street, Suite 1800 San Diego CA 92101	CONTACT NAME: Certificate Department	
	PHONE (A/C, No, Ext): 619-234-6848 FAX (A/C, No): 619-234-8601	
	E-MAIL ADDRESS: certificates@cavignac.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Underwriters at Lloyds London	85202
INSURED Moffatt & Nichol 4225 E Conant Street Long Beach, CA 90808	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES

CERTIFICATE NUMBER: 370175490

REVISION NUMBER:

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	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE \$
	☐ CLAIMS-MADE ☐ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$
							MED EXP (Any one person) \$
							PERSONAL & ADV INJURY \$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$
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	OTHER:						\$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$
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	☐ ALL OWNED AUTOS						BODILY INJURY (Per accident) \$
	☐ HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$
	☐ SCHEDULED AUTOS						\$
	☐ NON-OWNED AUTOS						
	UMBRELLA LIAB						EACH OCCURRENCE \$
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	☐ OCCUR ☐ CLAIMS-MADE						\$
	DED RETENTION \$						
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						PER STATUTE OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$
A	Professional Liability			B0572MR25ADLW	11/22/2025	11/22/2026	Each Claim Aggregate 2,000,000 2,000,000

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

Professional Liability - Claims made form, defense costs included within limit. If the insurance company elects to cancel or non-renew coverage for any reason other than nonpayment of premium Cavignac will provide 30 days notice of such cancellation or nonrenewal.

CERTIFICATE HOLDER

CANCELLATION

The Village of Keys Biscayne 88 W. McIntyre St Key Biscayne FL 33149	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

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P242483



**Blanket Additional Insured - Owners, Lessees or Contractors -
with Products-Completed Operations Coverage Endorsement**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

It is understood and agreed as follows:

- I. WHO IS AN INSURED** is amended to include as an **Insured** any person or organization whom you are required by **written contract** to add as an additional insured on this **Coverage Part**, but only with respect to liability for **bodily injury, property damage** or **personal and advertising injury** caused in whole or in part by your acts or omissions, or the acts or omissions of those acting on your behalf:
- A.** In the performance of your ongoing operations subject to such **written contract**; or
 - B.** In the performance of **your work** subject to such **written contract**, but only with respect to **bodily injury** or **property damage** included in the **products-completed operations hazard**, and only if:
 - 1. The **written contract** requires you to provide the additional insured such coverage; and
 - 2. This **Coverage Part** provides such coverage; and
 - C.** Subject always to the terms and conditions of this policy, including the limits of insurance, the Insurer will not provide such additional insured with:
 - 1. Coverage broader than what you are required to provide by the **written contract**; or
 - 2. A higher limit of insurance than what you are required to provide by the **written contract**.

Any coverage granted by this Paragraph **I.** shall apply solely to the extent permissible by law.

- II.** If the written contract requires additional insured coverage under the 07-04 edition of CG2010 or CG2037, then paragraph **I.** above is deleted in its entirety and replaced by the following:

WHO IS AN INSURED is amended to include as an **Insured** any person or organization whom you are required by **written contract** to add as an additional insured on this **Coverage Part**, but only with respect to liability for **bodily injury, property damage** or **personal and advertising injury** caused in whole or in part by your acts or omissions, or the acts or omissions of those acting on your behalf:

- A.** In the performance of your ongoing operations subject to such **written contract**; or
- B.** In the performance of **your work** subject to such **written contract**, but only with respect to **bodily injury** or **property damage** included in the **products-completed operations hazard**, and only if:
 - 1. The **written contract** requires you to provide the additional insured such coverage; and
 - 2. This **Coverage Part** provides such coverage.

- III.** But if the **written contract** requires:

- A.** Additional insured coverage under the 11-85 edition, 10-93 edition, or 10-01 edition of CG2010, or under the 10-01 edition of CG2037; or

- B.** Additional insured coverage with "arising out of" language;

then paragraph **I.** above is deleted in its entirety and replaced by the following:

WHO IS AN INSURED is amended to include as an **Insured** any person or organization whom you are required by **written contract** to add as an additional insured on this **Coverage Part**, but only with respect to liability for **bodily injury, property damage** or **personal and advertising injury** arising out of **your work** that is subject to such **written contract**.

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CONTINENTAL CASUALTY COMPANY

Insured Name: MOFFATT & NICHOL

Policy No: 6056712992

Endorsement No: 37

Effective Date: 11/22/2025

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**Blanket Additional Insured - Owners, Lessees or Contractors -
with Products-Completed Operations Coverage Endorsement**

IV. But if the **written contract** requires additional insured coverage to the greatest extent permissible by law, then paragraph I. above is deleted in its entirety and replaced by the following:

WHO IS AN INSURED is amended to include as an **Insured** any person or organization whom you are required by **written contract** to add as an additional insured on this **Coverage Part**, but only with respect to liability for **bodily injury, property damage** or **personal and advertising injury** arising out of **your work** that is subject to such **written contract**.

V. The insurance granted by this endorsement to the additional insured does not apply to **bodily injury, property damage**, or **personal and advertising injury** arising out of:

- A. The rendering of, or the failure to render, any professional architectural, engineering, or surveying services, including:
1. The preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
 2. Supervisory, inspection, architectural or engineering activities; or
- B. Any premises or work for which the additional insured is specifically listed as an additional insured on another endorsement attached to this **Coverage Part**.

VI. Under **COMMERCIAL GENERAL LIABILITY CONDITIONS**, the Condition entitled **Other Insurance** is amended to add the following, which supersedes any provision to the contrary in this Condition or elsewhere in this **Coverage Part**:

Primary and Noncontributory Insurance

With respect to other insurance available to the additional insured under which the additional insured is a named insured, this insurance is primary to and will not seek contribution from such other insurance, provided that a **written contract** requires the insurance provided by this policy to be:

1. Primary and non-contributing with other insurance available to the additional insured; or
2. Primary and to not seek contribution from any other insurance available to the additional insured.

But except as specified above, this insurance will be excess of all other insurance available to the additional insured.

VII. Solely with respect to the insurance granted by this endorsement, the section entitled **COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended as follows:

The Condition entitled **Duties In The Event of Occurrence, Offense, Claim or Suit** is amended with the addition of the following:

Any additional insured pursuant to this endorsement will as soon as practicable:

1. Give the Insurer written notice of any **claim**, or any **occurrence** or offense which may result in a **claim**;
2. Send the Insurer copies of all legal papers received, and otherwise cooperate with the Insurer in the investigation, defense, or settlement of the **claim**; and
3. Make available any other insurance, and endeavor to tender the defense and indemnity of any **claim** to any other insurer or self-insurer, whose policy or program applies to a loss that the Insurer covers under this **coverage part**. However, if the **written contract** requires this insurance to be primary and non-contributory, this paragraph 3. does not apply to other insurance under which the additional insured is a named insured.

The Insurer has no duty to defend or indemnify an additional insured under this endorsement until the Insurer receives written notice of a **claim** from the additional insured.

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CONTINENTAL CASUALTY COMPANY

Insured Name: MOFFATT & NICHOL

Policy No: 6056712992

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**Blanket Additional Insured - Owners, Lessees or Contractors -
with Products-Completed Operations Coverage Endorsement**

VIII. Solely with respect to the insurance granted by this endorsement, the section entitled **DEFINITIONS** is amended to add the following definition:

Written contract means a written contract or written agreement that requires you to make a person or organization an additional insured on this **Coverage Part**, provided the contract or agreement:

A. Was executed prior to:

- 1.** The **bodily injury** or **property damage**; or
- 2.** The offense that caused the **personal and advertising injury**;
for which the additional insured seeks coverage; and

B. Is still in effect at the time of the **bodily injury** or **property damage occurrence** or **personal and advertising injury** offense.

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy, unless another effective date is shown below, and expires concurrently with said Policy.

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CONTINENTAL CASUALTY COMPANY

Insured Name: MOFFATT & NICHOL

Policy No: 6056712992

Endorsement No: 37

Effective Date: 11/22/2025

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CNA PARAMOUNT

**Architects, Engineers and Surveyors General Liability
Extension Endorsement**

It is understood and agreed that this endorsement amends the **COMMERCIAL GENERAL LIABILITY COVERAGE PART** as follows. If any other endorsement attached to this policy amends any provision also amended by this endorsement, then that other endorsement controls with respect to such provision, and the changes made by this endorsement with respect to such provision do not apply.

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CONTINENTAL CASUALTY COMPANY

Insured Name: MOFFATT & NICHOL

Policy No: 6056712992

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**Architects, Engineers and Surveyors General Liability
Extension Endorsement****1. ADDITIONAL INSURED**

- a. **WHO IS AN INSURED** is amended to include as an **Insured** any person or organization described in paragraphs **A.** through **I.** below whom a **Named Insured** is required to add as an additional insured on this **Coverage Part** under a written contract or written agreement, provided such contract or agreement:

(1) is currently in effect or becomes effective during the term of this **Coverage Part**; and

(2) was executed prior to:

(a) the **bodily injury** or **property damage**; or

(b) the offense that caused the **personal and advertising injury**,

for which such additional insured seeks coverage.

- b. However, subject always to the terms and conditions of this policy, including the limits of insurance, the Insurer will not provide such additional insured with:

(1) a higher limit of insurance than required by such contract or agreement; or

(2) coverage broader than required by such contract or agreement, and in no event broader than that described by the applicable paragraph **A.** through **I.** below.

Any coverage granted by this endorsement shall apply only to the extent permissible by law.

A. Controlling Interest

Any person or organization with a controlling interest in a **Named Insured**, but only with respect to such person or organization's liability for **bodily injury**, **property damage** or **personal and advertising injury** arising out of:

1. such person or organization's financial control of a **Named Insured**; or

2. premises such person or organization owns, maintains or controls while a **Named Insured** leases or occupies such premises;

provided that the coverage granted by this paragraph does not apply to structural alterations, new construction or demolition operations performed by, on behalf of, or for such additional insured.

B. Co-owner of Insured Premises

A co-owner of a premises co-owned by a **Named Insured** and covered under this insurance but only with respect to such co-owner's liability for **bodily injury**, **property damage** or **personal and advertising injury** as co-owner of such premises.

C. Engineers, Architects or Surveyors Engaged By You

An architect, engineer or surveyor engaged by the **Named Insured**, but only with respect to liability for **bodily injury**, **property damage** or **personal and advertising injury** caused in whole or in part by the **Named Insured's** acts or omissions, or the acts or omissions of those acting on the **Named Insured's** behalf:

a. in connection with the **Named Insured's** premises; or

b. in the performance of the **Named Insured's** ongoing operations.

But the coverage hereby granted to such additional insureds does not apply to **bodily injury**, **property damage** or **personal and advertising injury** arising out of the rendering of or failure to render any professional services by, on behalf of, or for the **Named Insured**, including but not limited to:

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**Architects, Engineers and Surveyors General Liability
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1. the preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
2. supervisory, inspection, architectural or engineering activities.

D. Lessor of Equipment

Any person or organization from whom a **Named Insured** leases equipment, but only with respect to liability for **bodily injury, property damage or personal and advertising injury** caused, in whole or in part, by the **Named Insured's** maintenance, operation or use of such equipment, provided that the **occurrence** giving rise to such **bodily injury, property damage** or the offense giving rise to such **personal and advertising injury** takes place prior to the termination of such lease.

E. Lessor of Land

Any person or organization from whom a **Named Insured** leases land but only with respect to liability for **bodily injury, property damage or personal and advertising injury** arising out of the ownership, maintenance or use of such land, provided that the **occurrence** giving rise to such **bodily injury, property damage** or the offense giving rise to such **personal and advertising injury** takes place prior to the termination of such lease. The coverage granted by this paragraph does not apply to structural alterations, new construction or demolition operations performed by, on behalf of, or for such additional insured.

F. Lessor of Premises

An owner or lessor of premises leased to the **Named Insured**, or such owner or lessor's real estate manager, but only with respect to liability for **bodily injury, property damage or personal and advertising injury** arising out of the ownership, maintenance or use of such part of the premises leased to the **Named Insured**, and provided that the **occurrence** giving rise to such **bodily injury or property damage**, or the offense giving rise to such **personal and advertising injury**, takes place prior to the termination of such lease. The coverage granted by this paragraph does not apply to structural alterations, new construction or demolition operations performed by, on behalf of, or for such additional insured.

G. Mortgagee, Assignee or Receiver

A mortgagee, assignee or receiver of premises but only with respect to such mortgagee, assignee or receiver's liability for **bodily injury, property damage or personal and advertising injury** arising out of the **Named Insured's** ownership, maintenance, or use of a premises by a **Named Insured**.

The coverage granted by this paragraph does not apply to structural alterations, new construction or demolition operations performed by, on behalf of, or for such additional insured.

H. State or Governmental Agency or Subdivision or Political Subdivisions – Permits

A state or governmental agency or subdivision or political subdivision that has issued a permit or authorization but only with respect to such state or governmental agency or subdivision or political subdivision's liability for **bodily injury, property damage or personal and advertising injury** arising out of:

1. the following hazards in connection with premises a **Named Insured** owns, rents, or controls and to which this insurance applies:
 - a. the existence, maintenance, repair, construction, erection, or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoistaway openings, sidewalk vaults, street banners, or decorations and similar exposures; or
 - b. the construction, erection, or removal of elevators; or
 - c. the ownership, maintenance or use of any elevators covered by this insurance; or

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Extension Endorsement**

2. the permitted or authorized operations performed by a **Named Insured** or on a **Named Insured's** behalf.

The coverage granted by this paragraph does not apply to:

- a. **Bodily injury, property damage** or **personal and advertising injury** arising out of operations performed for the state or governmental agency or subdivision or political subdivision; or
- b. **Bodily injury** or **property damage** included within the **products-completed operations hazard**.

With respect to this provision's requirement that additional insured status must be requested under a written contract or agreement, the Insurer will treat as a written contract any governmental permit that requires the **Named Insured** to add the governmental entity as an additional insured.

I. Trade Show Event Lessor

1. With respect to a **Named Insured's** participation in a trade show event as an exhibitor, presenter or displayer, any person or organization whom the **Named Insured** is required to include as an additional insured, but only with respect to such person or organization's liability for **bodily injury, property damage** or **personal and advertising injury** caused by:

- a. the **Named Insured's** acts or omissions; or
- b. the acts or omissions of those acting on the **Named Insured's** behalf,

in the performance of the **Named Insured's** ongoing operations at the trade show event premises during the trade show event.

2. The coverage granted by this paragraph does not apply to **bodily injury** or **property damage** included within the **products-completed operations hazard**.

2. ADDITIONAL INSURED - PRIMARY AND NON-CONTRIBUTORY TO ADDITIONAL INSURED'S INSURANCE

The **Other Insurance** Condition in the **COMMERCIAL GENERAL LIABILITY CONDITIONS** Section is amended to add the following paragraph:

If the **Named Insured** has agreed in writing in a contract or agreement that this insurance is primary and non-contributory relative to an additional insured's own insurance, then this insurance is primary, and the Insurer will not seek contribution from that other insurance. For the purpose of this Provision 2., the additional insured's own insurance means insurance on which the additional insured is a named insured. Otherwise, and notwithstanding anything to the contrary elsewhere in this Condition, the insurance provided to such person or organization is excess of any other insurance available to such person or organization.

3. ADDITIONAL INSURED – EXTENDED COVERAGE

When an additional insured is added by this or any other endorsement attached to this **Coverage Part, WHO IS AN INSURED** is amended to make the following natural persons **Insureds**.

If the additional insured is:

- a. An individual, then his or her **spouse** is an **Insured**;
- b. A partnership or joint venture, then its partners, members and their **spouses** are **Insureds**;
- c. A limited liability company, then its members and managers are **Insureds**; or
- d. An organization other than a partnership, joint venture or limited liability company, then its executive officers, directors and shareholders are **Insureds**;

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**Architects, Engineers and Surveyors General Liability
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but only with respect to locations and operations covered by the additional insured endorsement's provisions, and only with respect to their respective roles within their organizations.

Please see the **ESTATES, LEGAL REPRESENTATIVES, AND SPOUSES** provision of this endorsement for additional coverage and restrictions applicable to **spouses** of natural person **Insureds**.

4. BOATS

Under **COVERAGES, Coverage A – Bodily Injury And Property Damage Liability**, the paragraph entitled **Exclusions** is amended to add the following additional exception to the exclusion entitled **Aircraft, Auto or Watercraft**:

This exclusion does not apply to:

Any watercraft owned by the **Named Insured** that is less than 30 feet long while being used in the course of the **Named Insured's** inspection or surveying work.

5. BODILY INJURY – EXPANDED DEFINITION

Under **DEFINITIONS**, the definition of **bodily injury** is deleted and replaced by the following:

Bodily injury means physical injury, sickness or disease sustained by a person, including death, humiliation, shock, mental anguish or mental injury sustained by that person at any time which results as a consequence of the physical injury, sickness or disease.

6. BROAD KNOWLEDGE OF OCCURRENCE/ NOTICE OF OCCURRENCE

Under **CONDITIONS**, the condition entitled **Duties in The Event of Occurrence, Offense, Claim or Suit** is amended to add the following provisions:

A. BROAD KNOWLEDGE OF OCCURRENCE

The **Named Insured** must give the Insurer or the Insurer's authorized representative notice of an **occurrence**, offense or **claim** only when the **occurrence**, offense or **claim** is known to a natural person **Named Insured**, to a partner, executive officer, manager or member of a **Named Insured**, or to an **employee** designated by any of the above to give such notice.

B. NOTICE OF OCCURRENCE

The **Named Insured's** rights under this **Coverage Part** will not be prejudiced if the **Named Insured** fails to give the Insurer notice of an **occurrence**, offense or **claim** and that failure is solely due to the **Named Insured's** reasonable belief that the **bodily injury** or **property damage** is not covered under this **Coverage Part**. However, the **Named Insured** shall give written notice of such **occurrence**, offense or **claim** to the Insurer as soon as the **Named Insured** is aware that this insurance may apply to such **occurrence**, offense or **claim**.

7. BROAD NAMED INSURED

WHO IS AN INSURED is amended to delete its Paragraph **3**, in its entirety and replace it with the following:

3. Pursuant to the limitations described in Paragraph **4**, below, any organization in which a **Named Insured** has management control:

a. on the effective date of this **Coverage Part**; or

b. by reason of a **Named Insured** creating or acquiring the organization during the **policy period**,

qualifies as a **Named Insured**, provided that there is no other similar liability insurance, whether primary, contributory, excess, contingent or otherwise, which provides coverage to such organization, or which would have

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**Architects, Engineers and Surveyors General Liability
Extension Endorsement**

provided coverage but for the exhaustion of its limit, and without regard to whether its coverage is broader or narrower than that provided by this insurance.

But this **BROAD NAMED INSURED** provision does not apply to:

- (a) any partnership, limited liability company or joint venture; or
- (b) any organization for which coverage is excluded by another endorsement attached to this **Coverage Part**.

For the purpose of this provision, management control means:

- A. owning interests representing more than 50% of the voting, appointment or designation power for the selection of a majority of the Board of Directors of a corporation; or
 - B. having the right, pursuant to a written trust agreement, to protect, control the use of, encumber or transfer or sell property held by a trust.
4. With respect to organizations which qualify as **Named Insureds** by virtue of Paragraph 3. above, this insurance does not apply to:
- a. **bodily injury** or **property damage** that first occurred prior to the date of management control, or that first occurs after management control ceases; nor
 - b. **personal or advertising injury** caused by an offense that first occurred prior to the date of management control or that first occurs after management control ceases.
5. The insurance provided by this **Coverage Part** applies to **Named Insureds** when trading under their own names or under such other trading names or doing-business-as names (dba) as any **Named Insured** should choose to employ.

8. CONTRACTUAL LIABILITY – RAILROADS

With respect to operations performed within 50 feet of railroad property, the definition of **insured contract** is replaced by the following:

Insured Contract means:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire to premises while rented to a **Named Insured** or temporarily occupied by a **Named Insured** you with permission of the owner is not an **insured contract**;
- b. A sidetrack agreement;
- c. Any easement or license agreement;
- d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
- e. An elevator maintenance agreement;
- f. That part of any other contract or agreement pertaining to the **Named Insured's** business (including an indemnification of a municipality in connection with work performed for a municipality) under which the **Named Insured** assumes the tort liability of another party to pay for **bodily injury** or **property damage** to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. does not include that part of any contract or agreement:

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- (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:
- (a) Preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage;
- (2) Under which the **Insured**, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in (1) above and supervisory, inspection, architectural or engineering activities.

9. ESTATES, LEGAL REPRESENTATIVES, AND SPOUSES

The estates, executors, heirs, legal representatives, administrators, trustees, beneficiaries and **spouses** of any natural person **Insured** or living trust shall also be insured under this policy; provided, however, coverage is afforded to such estates, executors, heirs, legal representatives, administrators, trustees, beneficiaries and **spouses** only for **claims** arising solely out of their capacity or status as such and, in the case of a **spouse**, where such **claim** seeks **damages** from marital community property, jointly held property or property transferred from such natural person **Insured** to such **spouse**. No coverage is provided for any act, error or omission of an estate, heir, legal representative, or **spouse** outside the scope of such person's capacity or status as such, provided, however, that the **spouse** of a natural person **Named Insured**, and the **spouses** of members or partners of joint venture or partnership **Named Insureds** are **Insureds** with respect to such **spouses'** acts, errors or omissions in the conduct of the **Named Insured's** business.

10. EXPECTED OR INTENDED INJURY – EXCEPTION FOR REASONABLE FORCE

Under **COVERAGES, Coverage A – Bodily Injury And Property Damage Liability**, the paragraph entitled **Exclusions** is amended to delete the exclusion entitled **Expected or Intended Injury** and replace it with the following:

This insurance does not apply to:

Expected or Intended Injury

Bodily injury or **property damage** expected or intended from the standpoint of the **Insured**. This exclusion does not apply to **bodily injury** or **property damage** resulting from the use of reasonable force to protect persons or property.

11. GENERAL AGGREGATE LIMITS OF INSURANCE - PER LOCATION

- A. A separate Location General Aggregate Limit, equal to the amount of the General Aggregate Limit, is the most the Insurer will pay for the sum of:

- 1. All **damages** under **Coverage A**, except **damages** because of **bodily injury** or **property damage** included in the **products-completed operations hazard**; and
- 2. All medical expenses under **Coverage C**,
that arise from **occurrences** or accidents which can be attributed solely to ongoing operations at that location. Such payments shall not reduce the General Aggregate Limit shown in the Declarations, nor the Location General Aggregate Limit of any other location.

- B. All:

- 1. **Damages** under **Coverage B**, regardless of the number of locations involved;

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**Architects, Engineers and Surveyors General Liability
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2. **Damages** under **Coverage A**, caused by **occurrences** which cannot be attributed solely to ongoing operations at a single location, except **damages** because of **bodily injury** or **property damage** included in the **products-completed operations hazard**; and

3. Medical expenses under **Coverage C** caused by accidents which cannot be attributed solely to ongoing operations at a single location,

will reduce the General Aggregate Limit shown in the Declarations.

C. For the purpose of this **GENERAL AGGREGATE LIMITS OF INSURANCE - PER LOCATION** Provision, "location" means:

1. a premises the **Named Insured** owns or rents; or

2. a premises not owned or rented by any **Named Insured** at which the **Named Insured** is performing operations pursuant to a contract or written agreement. If operations at such a location have been discontinued and then restarted, or if the authorized parties deviate from plans, blueprints, designs, specifications or timetables, the location will still be deemed to be the same location.

For the purpose of determining the applicable aggregate limit of insurance, premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad shall be considered a single location.

D. The limits shown in the Declarations for Each Occurrence, for Damage To Premises Rented To You and for Medical Expense continue to apply, but will be subject to either the Location General Aggregate Limit or the General Aggregate Limit, depending on whether the **occurrence** can be attributed solely to ongoing operations at a particular location.

E. When coverage for liability arising out of the **products-completed operations hazard** is provided, any payments for **damages** because of **bodily injury** or **property damage** included in the **products-completed operations hazard**, regardless of the number of locations involved, will reduce the Products-Completed Operations Aggregate Limit shown in the Declarations.

F. The provisions of **LIMITS OF INSURANCE** not otherwise modified by this **GENERAL AGGREGATE LIMITS OF INSURANCE - PER LOCATION** Provision shall continue to apply as stipulated.

12. IN REM ACTIONS

A quasi in rem action against any vessel owned or operated by or for the **Named Insured**, or chartered by or for the **Named Insured**, will be treated in the same manner as though the action were in personam against the **Named Insured**.

13. INCIDENTAL HEALTH CARE MALPRACTICE COVERAGE

Solely with respect to **bodily injury** that arises out of a **health care incident**:

A. Under **COVERAGES, Coverage A – Bodily Injury And Property Damage Liability**, the **Insuring Agreement** is amended to replace Paragraphs **1.b.(1)** and **1.b.(2)** with the following:

b. This insurance applies to **bodily injury** provided that the professional health care services are incidental to the **Named Insured's** primary business purpose, and only if:

(1) such **bodily injury** is caused by an **occurrence** that takes place in the **coverage territory**.

(2) the **bodily injury** first occurs during the **policy period**. All **bodily injury** arising from an **occurrence** will be deemed to have occurred at the time of the first act, error, or omission that is part of the **occurrence**; and

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**Architects, Engineers and Surveyors General Liability
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This exclusion applies only if the **bodily injury** arising from a **health care incident** is covered by other liability insurance available to the **Insured** (or which would have been available but for exhaustion of its limits).

ii. delete the exclusion entitled Contractual Liability and replace it with the following:

This insurance does not apply to:

Contractual Liability

the **Insured's** actual or alleged liability under any oral or written contract or agreement, including but not limited to express warranties or guarantees.

iii. to add the following additional exclusions:

This insurance does not apply to:

Discrimination

any actual or alleged discrimination, humiliation or harassment, including but not be limited to **claims** based on an individual's race, creed, color, age, gender, national origin, religion, disability, marital status or sexual orientation.

Dishonesty or Crime

Any actual or alleged dishonest, criminal or malicious act, error or omission.

Medicare/Medicaid Fraud

any actual or alleged violation of law with respect to Medicare, Medicaid, Tricare or any similar federal, state or local governmental program.

Services Excluded by Endorsement

Any **health care incident** for which coverage is excluded by endorsement.

C. DEFINITIONS is amended to:**i. add the following definitions:**

Health care incident means an act, error or omission by the **Named Insured's employees or volunteer workers** in the rendering of:

a. professional health care services on behalf of the **Named Insured** or

b. Good Samaritan services rendered in an emergency and for which no payment is demanded or received.

Professional health care services means any health care services or the related furnishing of food, beverages, medical supplies or appliances by the following providers in their capacity as such but solely to the extent they are duly licensed as required:

a. Physician;

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- b. Nurse;
- c. Nurse practitioner;
- d. Emergency medical technician;
- e. Paramedic;
- f. Dentist;
- g. Physical therapist;
- h. Psychologist;
- i. Speech therapist;
- j. Other allied health professional; or

Professional health care services does not include any services rendered in connection with human clinical trials or product testing.

- ii. delete the definition of **occurrence** and replace it with the following:

Occurrence means a **health care incident**. All acts, errors or omissions that are logically connected by any common fact, circumstance, situation, transaction, event, advice or decision will be considered to constitute a single **occurrence**;

- iii. amend the definition of **Insured** to:

- a. add the following:

the **Named Insured's employees** are **Insureds** with respect to:

(1) **bodily injury** to a co-**employee** while in the course of the co-**employee's** employment by the **Named Insured** or while performing duties related to the conduct of the **Named Insured's** business; and

(2) **bodily injury** to a **volunteer worker** while performing duties related to the conduct of the **Named Insured's** business;

when such **bodily injury** arises out of a **health care incident**.

the **Named Insured's volunteer workers** are **Insureds** with respect to:

(1) **bodily injury** to a co-**volunteer worker** while performing duties related to the conduct of the **Named Insured's** business; and

(2) **bodily injury** to an **employee** while in the course of the **employee's** employment by the **Named Insured** or while performing duties related to the conduct of the **Named Insured's** business;

when such **bodily injury** arises out of a **health care incident**.

- b. delete Subparagraphs (a), (b), (c) and (d) of Paragraph 2.a.(1) of **WHO IS AN INSURED**.

- D. The **Other Insurance** condition is amended to delete Paragraph b.(1) in its entirety and replace it with the following:

Other Insurance

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- (1) To the extent this insurance applies, it is excess over any other insurance, self insurance or risk transfer instrument, whether primary, excess, contingent or on any other basis, except for insurance purchased specifically by the **Named Insured** to be excess of this coverage.

14. JOINT VENTURES / PARTNERSHIP / LIMITED LIABILITY COMPANIES**A. Past Joint Ventures, Partnerships, Limited Liability Companies**

The following is added to **WHO IS AN INSURED**:

If the **Named Insured** was a joint venturer, partner, or member of a limited liability company and such joint venture, partnership or limited liability company terminated prior to or during the **policy period**, such **Named Insured** is an **Insured** with respect to its interest in such joint venture, partnership or limited liability company but only to the extent that:

- a. any offense giving rise to **personal and advertising injury** occurred prior to such termination date, and the **personal and advertising injury** arising out of such offense, first occurred after such termination date;
- b. the **bodily injury** or **property damage** first occurred after such termination date; and
- c. there is no other valid and collectible insurance purchased specifically to insure the partnership, joint venture or limited liability company.

If the joint venture, partnership or limited liability company is or was insured under a **consolidated (wrap-up) insurance program**, then such insurance will always be considered valid and collectible for the purpose of paragraph c. above. But this provision will not serve to exclude **bodily injury, property damage** or **personal and advertising injury** that would otherwise be covered under the **Architects, Engineers And Surveyors General Liability Extension Endorsement** provision entitled **WRAP-UP EXTENSION: OCIP, CCIP, OR CONSOLIDATED (WRAP-UP) INSURANCE PROGRAMS**. Please see that provision for the definition of **consolidated (wrap-up) insurance program**.

B. Participation In Current Professional Joint Ventures

The following is added to **WHO IS AN INSURED**:

The **Named Insured** is also an **Insured** for participation in a current joint venture that is not named on the Declarations, but only if such joint venture meets all of the following criteria:

- a. Each and every one of the **Named Insured's** co-venturers are architectural, engineering or surveying firms only; and
- b. There is no other valid and collectible insurance purchased specifically to insure the joint venture.

However, the **Named Insured** is an **Insured** only for the conduct of such **Named Insured's** business within such a joint venture. The **Named Insured** is not insured for liability arising out of the acts or omissions of other co-venturers, nor of their partners, members or employees.

C. WHO IS AN INSURED is amended to delete its last paragraph and replace it with the following:

Except as provided under this **Architects, Engineers And Surveyors General Liability Extension Endorsement** or by the attachment of another endorsement (if any), no person or organization is an **Insured** with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a **Named Insured** in the Declarations.

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**Architects, Engineers and Surveyors General Liability
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- A.** Under **COVERAGES, Coverage A – Bodily Injury and Property Damage Liability**, the paragraph entitled **Exclusions** is amended to delete exclusion **j. Damage to Property** in its entirety and replace it with the following:

This insurance does not apply to:

j. Damage to Property

Property damage to:

- (1)** Property the **Named Insured** owns, rents, or occupies, including any costs or expenses incurred by you, or any other person, organization or entity, for repair, replacement, enhancement, restoration or maintenance of such property for any reason, including prevention of injury to a person or damage to another's property;
- (2)** Premises the **Named Insured** sells, gives away or abandons, if the **property damage** arises out of any part of those premises;
- (3)** Property loaned to the **Named Insured**;
- (4)** Personal property in the care, custody or control of the **Insured**;
- (5)** That particular part of real property on which the **Named Insured** or any contractors or subcontractors working directly or indirectly on the **Named Insured's** behalf are performing operations, if the **property damage** arises out of those operations; or
- (6)** That particular part of any property that must be restored, repaired or replaced because **your work** was incorrectly performed on it.

Paragraphs **(1)**, **(3)** and **(4)** of this exclusion do not apply to **property damage** (other than damage by fire) to premises rented to the **Named Insured** or temporarily occupied by the **Named Insured** with the permission of the owner, nor to the contents of premises rented to the **Named Insured** for a period of 7 or fewer consecutive days. A separate limit of insurance applies to Damage To Premises Rented To You as described in **LIMITS OF INSURANCE**.

Paragraph **(2)** of this exclusion does not apply if the premises are **your work**.

Paragraphs **(3)**, **(4)**, **(5)** and **(6)** of this exclusion do not apply to liability assumed under a sidetrack agreement.

Paragraph **(6)** of this exclusion does not apply to **property damage** included in the **products-completed operations hazard**.

Paragraphs **(3)** and **(4)** of this exclusion do not apply to **property damage** to:

- i.** tools, or equipment the **Named Insured** borrows from others, nor
- ii.** other personal property of others in the **Named Insured's** care, custody or control while being used in the **Named Insured's** operations away from any **Named Insured's** premises.

However, the coverage granted by this exception to Paragraphs **(3)** and **(4)** does not apply to:

- a.** property at a job site awaiting or during such property's installation, fabrication, or erection;
- b.** property that is **mobile equipment** leased by an **Insured**;

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- c. property that is an **auto**, aircraft or watercraft;
- d. property in transit; or
- e. any portion of **property damage** for which the **Insured** has available other valid and collectible insurance, or would have such insurance but for exhaustion of its limits, or but for application of one of its exclusions.

A separate limit of insurance and deductible apply to such property of others. See **LIMITS OF INSURANCE** as amended below.

- B.** Under **COVERAGES, Coverage A – Bodily Injury and Property Damage Liability**, the paragraph entitled **Exclusions** is amended to delete its last paragraph and replace it with the following:

Exclusions **c.** through **n.** do not apply to damage by fire to premises while rented to a **Named Insured** or temporarily occupied by a **Named Insured** with permission of the owner, nor to damage to the contents of premises rented to a **Named Insured** for a period of 7 or fewer consecutive days.

A separate limit of insurance applies to this coverage as described in **LIMITS OF INSURANCE**.

- C.** The following paragraph is added to **LIMITS OF INSURANCE**:

Subject to **5.** above, \$25,000 is the most the Insurer will pay under **Coverage A** for **damages** arising out of any one **occurrence** because of the sum of all **property damage** to borrowed tools or equipment, and to other personal property of others in the **Named Insured's** care, custody or control, while being used in the **Named Insured's** operations away from any **Named Insured's** premises. The Insurer's obligation to pay such **property damage** does not apply until the amount of such **property damage** exceeds \$1,000. The Insurer has the right but not the duty to pay any portion of this \$1,000 in order to effect settlement. If the Insurer exercises that right, the **Named Insured** will promptly reimburse the Insurer for any such amount.

- D.** Paragraph **6.**, Damage To Premises Rented To You Limit, of **LIMITS OF INSURANCE** is deleted and replaced by the following:

- 6.** Subject to Paragraph **5.** above, (the Each Occurrence Limit), the Damage To Premises Rented To You Limit is the most the Insurer will pay under **Coverage A** for **damages** because of **property damage** to any one premises while rented to the **Named Insured** or temporarily occupied by the **Named Insured** with the permission of the owner, including contents of such premises rented to the **Named Insured** for a period of 7 or fewer consecutive days. The Damage To Premises Rented To You Limit is the greater of:

- a. \$500,000; or
- b. The Damage To Premises Rented To You Limit shown in the Declarations.

- E.** Paragraph **4.b.(1)(a)(ii)** of the **Other Insurance** Condition is deleted and replaced by the following:

- (ii) That is property insurance for premises rented to the **Named Insured**, for premises temporarily occupied by the **Named Insured** with the permission of the owner; or for personal property of others in the **Named Insured's** care, custody or control;

16. LIQUOR LIABILITY

Under **COVERAGES, Coverage A – Bodily Injury and Property Damage Liability**, the paragraph entitled **Exclusions** is amended to delete the exclusion entitled **Liquor Liability**.

This **LIQUOR LIABILITY** Provision does not apply to any person or organization who otherwise qualifies as an additional insured on this **Coverage Part**.

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**Architects, Engineers and Surveyors General Liability
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A. LIMITS OF INSURANCE is amended to delete Paragraph **7.** (the Medical Expense Limit) and replace it with the following:

7. Subject to Paragraph **5.** above (the Each Occurrence Limit), the Medical Expense Limit is the most the Insurer will pay under **Coverage C** for all medical expenses because of **bodily injury** sustained by any one person. The Medical Expense Limit is the greater of:

(1) \$15,000 unless a different amount is shown here: \$N,NNN,NNN,NNN; or

(2) the amount shown in the Declarations for Medical Expense Limit.

B. Under **COVERAGES**, the **Insuring Agreement** of **Coverage C – Medical Payments** is amended to replace Paragraph **1.a.(3)(b)** with the following:

(b) The expenses are incurred and reported to the Insurer within three years of the date of the accident; and

18. NON-OWNED AIRCRAFT

Under **COVERAGES, Coverage A – Bodily Injury and Property Damage Liability**, the paragraph entitled **Exclusions** is amended as follows:

The exclusion entitled **Aircraft, Auto or Watercraft** is amended to add the following:

This exclusion does not apply to an aircraft not owned by any **Named Insured**, provided that:

1. the pilot in command holds a currently effective certificate issued by the duly constituted authority of the United States of America or Canada, designating that person as a commercial or airline transport pilot;
2. the aircraft is rented with a trained, paid crew to the **Named Insured**; and
3. the aircraft is not being used to carry persons or property for a charge.

19. NON-OWNED WATERCRAFT

Under **COVERAGES, Coverage A – Bodily Injury and Property Damage Liability**, the paragraph entitled **Exclusions** is amended to delete subparagraph **(2)** of the exclusion entitled **Aircraft, Auto or Watercraft**, and replace it with the following.

This exclusion does not apply to:

(2) a watercraft that is not owned by any **Named Insured**, provided the watercraft is:

- (a) less than 75 feet long; and
- (b) not being used to carry persons or property for a charge.

20. PERSONAL AND ADVERTISING INJURY –DISCRIMINATION OR HUMILIATION

A. Under **DEFINITIONS**, the definition of **personal and advertising injury** is amended to add the following tort:

Discrimination or humiliation that results in injury to the feelings or reputation of a natural person.

B. Under **COVERAGES, Coverage B – Personal and Advertising Injury Liability**, the paragraph entitled **Exclusions** is amended to:

1. delete the Exclusion entitled **Knowing Violation Of Rights Of Another** and replace it with the following:

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This insurance does not apply to:

Knowing Violation of Rights of Another

Personal and advertising injury caused by or at the direction of the **Insured** with the knowledge that the act would violate the rights of another and would inflict **personal and advertising injury**. This exclusion shall not apply to discrimination or humiliation that results in injury to the feelings or reputation of a natural person, but only if such discrimination or humiliation is not done intentionally by or at the direction of:

- (a) the **Named Insured**; or
- (b) any **executive officer**, director, stockholder, partner, member or manager (if the **Named Insured** is a limited liability company) of the **Named Insured**.

2. add the following exclusions:

This insurance does not apply to:

Employment Related Discrimination

discrimination or humiliation directly or indirectly related to the employment, prospective employment, past employment or termination of employment of any person by any **Insured**.

Premises Related Discrimination

discrimination or humiliation arising out of the sale, rental, lease or sub-lease or prospective sale, rental, lease or sub-lease of any room, dwelling or premises by or at the direction of any **Insured**.

Notwithstanding the above, there is no coverage for fines or penalties levied or imposed by a governmental entity because of discrimination.

The coverage provided by this **PERSONAL AND ADVERTISING INJURY –DISCRIMINATION OR HUMILIATION** Provision does not apply to any person or organization whose status as an **Insured** derives solely from

Provision 1. **ADDITIONAL INSURED** of this endorsement; or

attachment of an additional insured endorsement to this **Coverage Part**.

21. PERSONAL AND ADVERTISING INJURY - CONTRACTUAL LIABILITY

A. Under **COVERAGES, Coverage B –Personal and Advertising Injury Liability**, the paragraph entitled **Exclusions** is amended to delete the exclusion entitled **Contractual Liability**.

B. Solely for the purpose of the coverage provided by this **PERSONAL AND ADVERTISING INJURY - LIMITED CONTRACTUAL LIABILITY** provision, the following changes are made to the section entitled **SUPPLEMENTARY PAYMENTS – COVERAGES A AND B**:

1. Paragraph 2.d. is replaced by the following:

- d. The allegations in the **suit** and the information the Insurer knows about the offense alleged in such **suit** are such that no conflict appears to exist between the interests of the **Insured** and the interests of the indemnitee;

2. The first unnumbered paragraph beneath Paragraph 2.f.(2)(b) is deleted and replaced by the following:

So long as the above conditions are met, attorney's fees incurred by the Insurer in the defense of that indemnitee, necessary litigation expenses incurred by the Insurer, and necessary litigation expenses incurred

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by the indemnitee at the Insurer's request will be paid as **defense costs**. Such payments will not be deemed to be **damages** for **personal and advertising injury** and will not reduce the limits of insurance.

- C.** This **PERSONAL AND ADVERTISING INJURY - LIMITED CONTRACTUAL LIABILITY** Provision does not apply if **Coverage B – Personal and Advertising Injury Liability** is excluded by another endorsement attached to this **Coverage Part**.

This **PERSONAL AND ADVERTISING INJURY - CONTRACTUAL LIABILITY** Provision does not apply to any person or organization who otherwise qualifies as an additional insured on this **Coverage Part**.

22. PROPERTY DAMAGE – ELEVATORS

- A.** Under **COVERAGES, Coverage A – Bodily Injury and Property Damage Liability**, the paragraph entitled **Exclusions** is amended such that the **Damage to Your Product** Exclusion and subparagraphs **(3)**, **(4)** and **(6)** of the **Damage to Property** Exclusion do not apply to **property damage** that results from the use of elevators.
- B.** Solely for the purpose of the coverage provided by this **PROPERTY DAMAGE – ELEVATORS** Provision, the **Other Insurance** conditions is amended to add the following paragraph:

This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis that is Property insurance covering property of others damaged from the use of elevators.

23. RETIRED PARTNERS, MEMBERS, DIRECTORS AND EMPLOYEES

WHO IS INSURED is amended to include as **Insureds** natural persons who are retired partners, members, directors or employees, but only for **bodily injury, property damage** or **personal and advertising injury** that results from services performed for the **Named Insured** under the **Named Insured's** direct supervision. All limitations that apply to **employees** and **volunteer workers** also apply to anyone qualifying as an **Insured** under this Provision.

24. SUPPLEMENTARY PAYMENTS

The section entitled **SUPPLEMENTARY PAYMENTS – COVERAGES A AND B** is amended as follows:

- A.** Paragraph **1.b.** is amended to delete the \$250 limit shown for the cost of bail bonds and replace it with a \$5,000. limit; and
- B.** Paragraph **1.d.** is amended to delete the limit of \$250 shown for daily loss of earnings and replace it with a \$1,000. limit.

25. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

If the **Named Insured** unintentionally fails to disclose all existing hazards at the inception date of the **Named Insured's Coverage Part**, the Insurer will not deny coverage under this **Coverage Part** because of such failure.

26. WAIVER OF SUBROGATION - BLANKET

Under **CONDITIONS**, the condition entitled **Transfer Of Rights Of Recovery Against Others To Us** is amended to add the following:

The Insurer waives any right of recovery the Insurer may have against any person or organization because of payments the Insurer makes for injury or damage arising out of:

1. the **Named Insured's** ongoing operations; or
2. **your work** included in the **products-completed operations hazard**.

However, this waiver applies only when the **Named Insured** has agreed in writing to waive such rights of recovery in a written contract or written agreement, and only if such contract or agreement:

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1. is in effect or becomes effective during the term of this **Coverage Part**; and
2. was executed prior to the **bodily injury, property damage** or **personal and advertising injury** giving rise to the **claim**.

27. WRAP-UP EXTENSION: OCIP, CCIP, OR CONSOLIDATED (WRAP-UP) INSURANCE PROGRAMS

Note: The following provision does not apply to any public construction project in the state of Oklahoma, nor to any construction project in the state of Alaska, that is not permitted to be insured under a **consolidated (wrap-up) insurance program** by applicable state statute or regulation.

If the endorsement **EXCLUSION – CONSTRUCTION WRAP-UP** is attached to this policy, or another exclusionary endorsement pertaining to Owner Controlled Insurance Programs (O.C.I.P.) or Contractor Controlled Insurance Programs (C.C.I.P.) is attached, then the following changes apply:

A. The following wording is added to the above-referenced endorsement:

With respect to a **consolidated (wrap-up) insurance program** project in which the **Named Insured** is or was involved, this exclusion does not apply to those sums the **Named Insured** become legally obligated to pay as **damages** because of:

1. **Bodily injury, property damage, or personal or advertising injury** that occurs during the **Named Insured's** ongoing operations at the project, or during such operations of anyone acting on the **Named Insured's** behalf; nor
2. **Bodily injury or property damage** included within the **products-completed operations hazard** that arises out of those portions of the project that are not **residential structures**.

B. Condition **4. Other Insurance** is amended to add the following subparagraph **4.b.(1)(c)**:

This insurance is excess over:

- (c)** Any of the other insurance whether primary, excess, contingent or any other basis that is insurance available to the **Named Insured** as a result of the **Named Insured** being a participant in a **consolidated (wrap-up) insurance program**, but only as respects the **Named Insured's** involvement in that **consolidated (wrap-up) insurance program**.

C. DEFINITIONS is amended to add the following definitions:

Consolidated (wrap-up) insurance program means a construction, erection or demolition project for which the prime contractor/project manager or owner of the construction project has secured general liability insurance covering some or all of the contractors or subcontractors involved in the project, such as an Owner Controlled Insurance Program (O.C.I.P.) or Contractor Controlled Insurance Program (C.C.I.P.).

Residential structure means any structure where 30% or more of the square foot area is used or is intended to be used for human residency, including but not limited to:

1. single or multifamily housing, apartments, condominiums, townhouses, co-operatives or planned unit developments; and
2. the common areas and structures appurtenant to the structures in paragraph **1.** (including pools, hot tubs, detached garages, guest houses or any similar structures).

However, when there is no individual ownership of units, **residential structure** does not include military housing, college/university housing or dormitories, long term care facilities, hotels or motels. **Residential structure** also does not include hospitals or prisons.

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**Architects, Engineers and Surveyors General Liability
Extension Endorsement**

This **WRAP-UP EXTENSION: OCIP, CCIP, OR CONSOLIDATED (WRAP-UP) INSURANCE PROGRAMS** Provision does not apply to any person or organization who otherwise qualifies as an additional insured on this **Coverage Part**.

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy, unless another effective date is shown below, and expires concurrently with said Policy.

CNA74858XX (1-15)

Page 18 of 18

CONTINENTAL CASUALTY COMPANY

Insured Name: MOFFATT & NICHOL

Policy No: 6056712992

Endorsement No: 10

Effective Date: 11/22/2025

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EXTENDED COVERAGE ENDORSEMENT - BA PLUS

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

I. LIABILITY COVERAGE

A. Who Is An Insured

The following is added to **SECTION II, Paragraph A.1., Who Is An Insured:**

1. a. Any incorporated entity of which the Named Insured owns a majority of the voting stock on the date of inception of this Coverage Form; **provided that,**
 - b. The insurance afforded by this provision **A.1.** does not apply to any such entity that is an **insured** under any other liability **policy** providing **auto** coverage.
2. Any organization you newly acquire or form, other than a limited liability company, partnership or joint venture, and over which you maintain majority ownership interest.

The insurance afforded by this provision **A.2.:**

- a. Is effective on the acquisition or formation date, and is afforded only until the end of the policy period of this Coverage Form, or the next anniversary of its inception date, whichever is earlier.
- b. Does not apply to:
 - (1) **Bodily injury** or **property damage** caused by an **accident** that occurred before you acquired or formed the organization; or
 - (2) Any such organization that is an **insured** under any other liability **policy** providing **auto** coverage.
3. Any person or organization that you are obligated to provide Insurance where required by a written contract or agreement is an insured, but only with respect to legal responsibility for acts or omissions of a person for whom Liability Coverage is afforded under this policy.
4. An **employee** of yours is an **insured** while operating an **auto** hired or rented under a contract or agreement in that **employee's** name, with your permission, while performing duties related to the conduct of your business.

Policy, as used in this provision **A. Who Is An Insured**, includes those policies that were in force on the inception date of this Coverage Form but:

1. Which are no longer in force; or
2. Whose limits have been exhausted.

B. Bail Bonds and Loss of Earnings

SECTION II, Paragraphs A.2.a.(2) and A.2.a.(4) are revised as follows:

1. In **a.(2)**, the limit for the cost of bail bonds is increased from \$2,000 to \$5,000, and
2. In **a.(4)**, the limit for the loss of earnings is increased from \$250 to \$500 a day.

C. Fellow Employee

SECTION II, Paragraph B.5 does not apply.

Form No: SCA 23 500 D (10-2011)

Endorsement No: Page: 1 of 5

Underwriting Company: Continental Casualty Company

Policy No: 6056712989

Policy Effective Date: 11/22/2025

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Such coverage as is afforded by this provision C. is excess over any other collectible insurance.

II. PHYSICAL DAMAGE COVERAGE

A. Towing

SECTION III, Paragraph A.2., is revised to include Light Trucks up to 10,000 pounds G.V.W.

B. Glass Breakage – Hitting A Bird Or Animal – Falling Objects Or Missiles

The following is added to **SECTION III, Paragraph A.3.:**

With respect to any covered **auto**, any deductible shown in the Declarations will not apply to glass breakage if such glass is repaired, in a manner acceptable to us, rather than replaced.

C. Transportation Expenses

SECTION III, Paragraph A.4.a. is revised, with respect to transportation expense incurred by you, to provide:

- a. \$60 per day, in lieu of \$20; subject to
- b. \$1,800 maximum, in lieu of \$600.

D. Loss of Use Expenses

SECTION III, Paragraph A.4.b. is revised, with respect to loss of use expenses incurred by you, to provide:

- a. \$1,000 maximum, in lieu of \$600.

E. Personal Property

The following is added to **SECTION III, Paragraph A.4.**

c. We will pay up to \$500 for loss to **Personal Property** which is:

- (1) Owned by an **insured**; and
- (2) In or on the covered **auto**.

This coverage applies only in the event of a total theft of your covered **auto**.

This insurance is excess over any other collectible insurance and no deductible applies.

F. Rental Reimbursement

The following is added to **SECTION III, Paragraph A.4.:**

d. We will pay for rental reimbursement expenses incurred by you for the rental of an **auto** because of **loss** to a covered **auto**. Payment applies in addition to the otherwise applicable amount of each coverage you have on a covered **auto**. No deductibles apply to this coverage.

- 1. We will pay only for those expenses incurred during the policy period beginning 24 hours after the **loss** and ending, regardless of the policy's expiration, with the lesser of the following number of days:
 - (a) The number of days reasonably required to repair or replace the covered **auto**; or,
 - (b) 15 days.
- 2. Our payment is limited to the lesser of the following amounts:
 - (a) Necessary and actual expenses incurred; or,
 - (b) \$25 per day subject to a maximum of \$375.

Form No: SCA 23 500 D (10-2011)

Endorsement No: Page: 2 of 5

Underwriting Company: Continental Casualty Company

Policy No: 6056712989

Policy Effective Date: 11/22/2025

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**Business Auto Policy
Policy Endorsement**

3. This coverage does not apply while there are spare or reserve **autos** available to you for your operations.
4. If **loss** results from the total theft of a covered **auto** of the private passenger type, we will pay under this coverage only that amount of your rental reimbursement expenses which is not already provided for under the Physical Damage Coverage Extension.

G. Hired "Autos"

The following is added to **SECTION III, Paragraph A.:**

5. Hired Autos

If Physical Damage coverage is provided under this policy, and such coverage does not extend to Hired Autos, then Physical Damage coverage is extended to:

- a. Any covered **auto** you lease, hire, rent or borrow without a driver; and
- b. Any covered **auto** hired or rented by your **employee** without a driver, under a contract in that individual **employee's** name, with your permission, while performing duties related to the conduct of your business.
- c. The most we will pay for any one **accident** or **loss** is the actual cash value, cost of repair, cost of replacement or \$75,000 whichever is less minus a \$500 deductible for each covered auto. No deductible applies to **loss** caused by fire or lightning.
- d. The physical damage coverage as is provided by this provision will be limited to the types of physical damage coverage(s) provided on your owned **autos**.
- e. Such physical damage coverage for hired **autos** will:
 - (1) Include loss of use, provided it is the consequence of an **accident** for which the Named Insured is legally liable, and as a result of which a monetary loss is sustained by the leasing or rental concern.
 - (2) Such coverage as is provided by this provision **G.e.(1)** will be subject to a limit of \$750 per **accident**.

H. Airbag Coverage

The following is added to **SECTION III, Paragraph B.3.**

The accidental discharge of an airbag shall not be considered mechanical breakdown.

I. Electronic Equipment

SECTION III, Paragraphs B.4.c and B.4.d. are deleted and replaced by the following:

- c. Physical Damage Coverage on a covered **auto** also applies to **loss** to any permanently installed electronic equipment including its antennas and other accessories
- d. A \$100 per occurrence deductible applies to the coverage provided by this provision.

J. Diminution In Value

The following is added to **SECTION III, Paragraph B.6.**

Subject to the following, the **diminution in value** exclusion does not apply to:

- a. Any covered **auto** of the private passenger type you lease, hire, rent or borrow, without a driver for a period of 30 days or less, while performing duties related to the conduct of your business; and

Form No: SCA 23 500 D (10-2011)

Endorsement No: Page: 3 of 5
Underwriting Company: Continental Casualty Company

Policy No: 6056712989
Policy Effective Date: 11/22/2025

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Business Auto Policy Policy Endorsement

- b. Any covered **auto** of the private passenger type hired or rented by your **employee** without a driver for a period of 30 days or less, under a contract in that individual **employee's** name, with your permission, while performing duties related to the conduct of your business.
- c. Such coverage as is provided by this provision is limited to a **diminution in value** loss arising directly out of accidental damage and not as a result of the failure to make repairs; faulty or incomplete maintenance or repairs; or the installation of substandard parts.
- d. The most we will pay for **loss** to a covered **auto** in any one accident is the lesser of:
 - (1) \$5,000; or
 - (2) 20% of the **auto's** actual cash value (ACV)

III. Drive Other Car Coverage – Executive Officers

The following is added to **SECTIONS II and III**:

- 1. Any **auto** you don't own, hire or borrow is a covered **auto** for Liability Coverage while being used by, and for Physical Damage Coverage while in the care, custody or control of, any of your executive officers, except:
 - a. An **auto** owned by that **executive officer** or a member of that person's household; or
 - b. An **auto** used by that **executive officer** while working in a business of selling, servicing, repairing or parking **autos**.

Such Liability and/or Physical Damage Coverage as is afforded by this provision will be:

- (1) Equal to the greatest of those coverages afforded any covered **auto**; and
- (2) Excess over any other collectible insurance.

- 2. For purposes of this provision, **executive officer** means a person holding any of the officer positions created by your charter, constitution, by-laws or any other similar governing document, and, while a resident of the same household, includes that person's spouse.

Such **executive officers** are **insureds** while using a covered **auto** described in this provision.

IV. BUSINESS AUTO CONDITIONS

A. Duties In The Event Of Accident, Claim, Suit Or Loss

The following is added to **SECTION IV, Paragraph A.2.a.**

- (4) Your **employees** may know of an **accident** or **loss**. This will not mean that you have such knowledge, unless such **accident** or **loss** is known to you or if you are not an individual, to any of your executive officers or partners or your insurance manager.

The following is added to **SECTION IV, Paragraph A.2.b.**

- (6) Your **employees** may know of documents received concerning a claim or **suit**. This will not mean that you have such knowledge, unless receipt of such documents is known to you or if you are not an individual, to any of your executive officers or partners or your insurance manager.

B. Concealment, Misrepresentation or Fraud

The following is added to **SECTION IV, Paragraph B.2.**

Your failure to disclose all hazards existing on the date of inception of this Coverage Form shall not prejudice you with respect to the coverage afforded provided such failure or omission is not intentional.

C. Policy Period, Coverage Territory

SECTION IV, Paragraphs 7.(5).(a). is revised to provide:

Form No: SCA 23 500 D (10-2011)

Endorsement No: Page: 4 of 5

Underwriting Company: Continental Casualty Company

Policy No: 6056712989

Policy Effective Date: 11/22/2025

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- a. 45 days of coverage in lieu of 30 days

V. DEFINITIONS

SECTION V. Paragraph C. is deleted and replaced by the following:

Bodily injury means bodily injury, sickness or disease sustained by a person, including mental anguish, mental injury or death resulting from any of these

Form No: SCA 23 500 D (10-2011)

Policy No: 6056712989

Policy Effective Date: 11/22/2025

Endorsement No: Page: 5 of 5

Underwriting Company: Continental Casualty Company

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**WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM

BUSINESS AUTO COVERAGE FORM

MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured: MOFFATT & NICHOL

Endorsement Effective Date: 11/22/2025

SCHEDULE

Name(s) Of Person(s) Or Organization(s):

ANY PERSON OR ORGANIZATION FOR WHOM OR WHICH YOU ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT TO OBTAIN THIS WAIVER FROM US. YOU MUST AGREE TO THAT REQUIREMENT PRIOR TO LOSS.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

Form No: CA 04 44 10 13

Endorsement No: Page: 1 of 1

Underwriting Company: Continental Casualty Company

Policy No: 6056712989

Policy Effective Date: 11/22/2025

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WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement changes the policy to which it is attached effective on inception date of the policy unless a different date is indicated below.

This endorsement, effective 12:01 AM 11/22/2025

forms a part of Policy No. **WC 19397906**

Issued to **MOFFATT & NICHOL**

By **THE INSURANCE COMPANY OF THE STATE OF PENNSYLVANIA**

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit any one not named in the Schedule.

Schedule

ANY PERSON OR ORGANIZATION WITH WHOM YOU HAVE ENTERED INTO A CONTRACT, A CONDITION OF WHICH REQUIRES YOU TO OBTAIN THIS WAIVER FROM US. THIS ENDORSEMENT DOES NOT APPLY TO BENEFITS OR DAMAGES PAID OR CLAIMED:

1. PURSUANT TO THE WORKERS' COMPENSATION OR EMPLOYERS' LIABILITY LAWS OF KENTUCKY, NEW HAMPSHIRE, OR NEW JERSEY; OR,
2. BECAUSE OF INJURY OCCURRING BEFORE YOU ENTERED INTO SUCH A CONTRACT.

This form is not applicable in Kansas for private construction contracts as defined in K.S.A. 16-1801 through K.S.A. 16-1807 or public construction contracts as defined in K.S.A. 16-1901 through 16-1908, except where permitted by statute or other applicable law, such as for use in wrap-up insurance programs.

Any person or organization for which the employer has agreed by written contract, executed prior to loss, may execute a waiver of subrogation. However, for purposes of work performed by the employer in Missouri, this waiver of subrogation does not apply to any construction group of classifications as designated by the waiver of right to recover from others (subrogation) rule in our manual.

This form is not applicable in California, Kentucky, New Hampshire, New Jersey, Texas, or Utah.

WC 00 03 13
(Ed. 04/84)

Countersigned by _____



Authorized Representative

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT--CALIFORNIA

This endorsement changes the policy to which it is attached effective on the inception date of the policy unless a different date is indicated below.

(The following "attaching clause" need be completed only when this endorsement is issued subsequent to preparation of the policy).

This endorsement, effective 12:01 AM **11/22/2025** forms a part of Policy No. **WC 19397907**

Issued to **MOFFAT & NICHOL**

By **THE INSURANCE COMPANY OF THE STATE OF PENNSYLVANIA**

Premium

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us).

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be **2** % of the California workers' compensation premium otherwise due on such remuneration.

Schedule

Person or Organization

ANY PERSON OR ORGANIZATION WITH WHOM YOU
HAVE ENTERED INTO A CONTRACT, A CONDITION OF
WHICH REQUIRES YOU TO OBTAIN THIS WAIVER FROM
US. THIS ENDORSEMENT DOES NOT APPLY TO BENEFITS
OR DAMAGES PAID OR CLAIMED

WC 04 03 06
(Ed. 04/84)

Countersigned by _____



Authorized Representative



Contact:

Tim Blankenship, PE
Vice President & Principal-in-Charge
tblankenship@moffattnichol.com

3150 SW 38th Avenue, Suite 600
Miami, FL 33146
(305) 230-1924

moffattnichol.com



VILLAGE OF KEY BISCAYNE

Offshore Feasibility and Preliminary Shoreline Design Study

RFQ # 2026-09 • August 13, 2026





A

Introduce the proposed project management team, including each **team** member's role, area of **expertise**, organizational structure, and identify the Project Manager/Project Lead.



Proposed Project Management Team

Our Team



Village of Key Biscayne

Quality Manager

Brian Joyner, PE

Project Manager

Manuel Castaño, PE, WEDG

Principal-in-Charge

Tim Blankenship, PE

Assistant Project Manager

Amanda Caparro, CFM, ENV SP

LEGEND

All personnel are M&N unless noted.

Key Personnel Local



UNIVERSITY OF MIAMI
ROSENSTIEL SCHOOL of
MARINE, ATMOSPHERIC
& EARTH SCIENCE



TECHNICAL TEAM

Resiliency & Adaptation

Lynette Cardoch,
PhD, LEED AP
Becky Prado

Marine Environmental

Andrew Baker, PhD (UM)
Diego Lirman, PhD (UM)

Planning & Outreach

Erica Echeverri, ENV SP, CSRP (BR)
Alec Bogdanoff, PhD (BR)
Rami Diaz, AIA, LEED AP

Physical Modeling

Brian Haus, PhD (UM)

Marine Foundation

Brian Shaw, PE, SE
Santosh Mummaneni, PE

Innovative Coastal Structures

Landolf Rhode-Barbarigos,
PhD (UM)

Cost Estimating/ Marine Construction

Seann Perez, CPE

Surveying

David Olin, PE (OHS)
Wray Jordan, PLS (OHS)

Joint Coastal Permitting

Amanda Caparro, CFM, ENV SP
Christy Brush, CFM

Coastal Engineering

Mark Glennerster, Eng FICE
Yong Chen, PhD, PE
Julia Grissett, EI
Younes Nouri, PhD, PE





B

Describe your approach to **engaging Village residents and stakeholders** to promote public awareness, participation, and community support throughout the project.





Grounded in Reality, Making the Complex Clear

1 Know the Audience, Align the Message

We map the community early — residents, businesses, and key voices — and align the team around one clear message.

2 Educate & Build Awareness Early

Clear, consistent information through the channels residents already use.

3 Make the Complex Clear

Turn technical concepts into answers residents can understand and trust.

4 Your partner through the entire process

WE KNOW THE VILLAGE

Here Since 2017.

Resilience strategy. Vulnerability Assessment. Program implementation. Community engagement.

We've worked with the Community Foundation before too – your original Vulnerability Assessment.

We come in with context — not a learning curve.

We've Done This Role Before



South Florida Water Management District



OVER 220 ATTENDEES | 100 ORGANIZATIONS

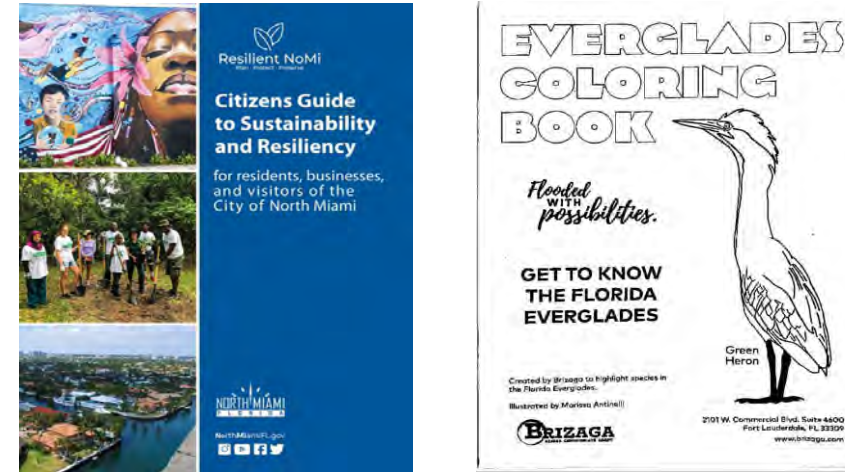
The Challenge

SFWMD was updating its Sea Level Rise and Flood Resiliency Plan and needed meaningful stakeholder input to shape regional resilience priorities and strengthen the final Plan.

What We Did

- Translated technical flood-control and water-management concepts for stakeholders.
- Developed a multi-channel strategy with direct meetings, a survey and engagement kit.
- Led workshops across three regions and reported back what we heard.

Translating Complex Information



North Miami

- Transformed complex flooding and resilience information into a clear, actionable 52-page guide.
- Paired the guide with bilingual materials and workshops to extend community reach.

Everglades Coloring Book

- Turned Everglades and resilience concepts into an engaging educational tool for younger audiences.
- Used at Water Matters Day, Climate Leadership Summit, and Youth Climate Summit

THE THROUGHLINE

Different audiences.

Different formats.

Same discipline:

Make technical information clear without losing the substance.

WHY THIS MATTERS FOR KEY BISCAVNE

We know how to take complex resilience and infrastructure information and make it clear, credible and useful to the people who need to understand it.





Identify potential **funding opportunities** available to the Village, including local, state, and federal grants, as well as other applicable funding sources.



Grants and Funding Sources



Funding is central to our approach
we evaluate and pursue eligible funding opportunities from project inception



Proven success (+\$200M)



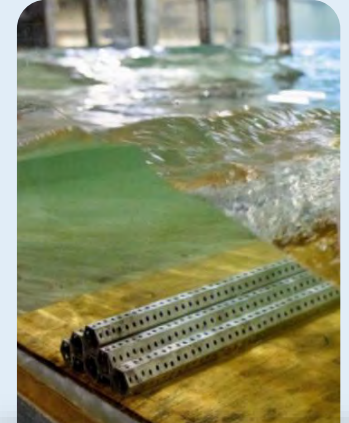
Grant specialists + doers



Amanda Caparro (M&N) assisted the Village in securing **\$5M+** in grants from state agencies and from **FEMA and FDEP**



Brizaga supported **\$100M+** in grant applications, aligning **Resilient Florida** requirements with design criteria and supporting funding applications. Their work also including stacking 4 grants for Clearwater, leveraging a **\$6M** City investment into **\$28M** in grant funding.



Andrew Baker (UM) received **\$6M** in **DARPA Reefense** funding for hybrid reef structures, including a SeaHive study at Elliott Key.



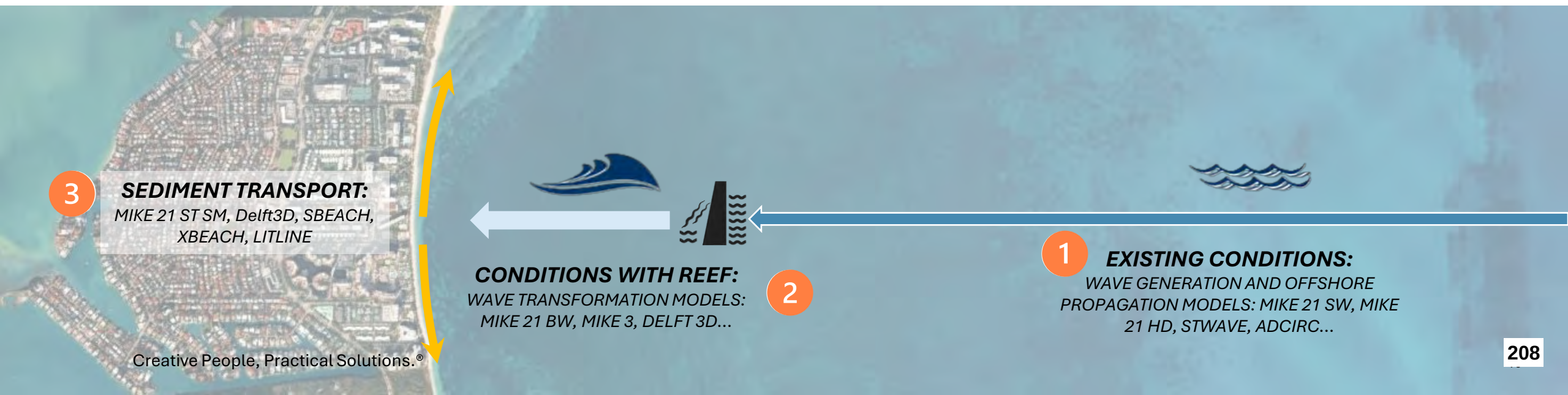
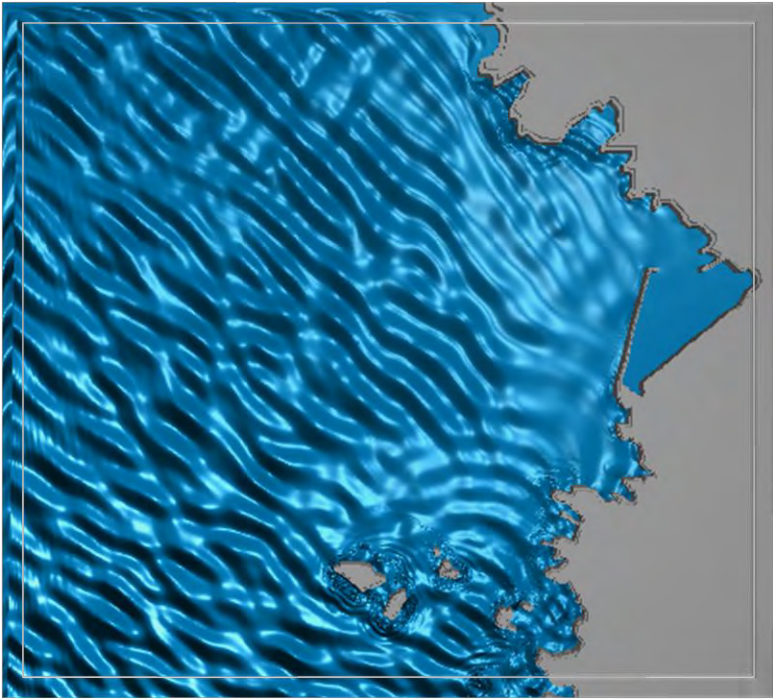
D

Explain the **proposed modeling methodology**, technical approach, and the **benefits** of your recommended solution for achieving the project's objectives.



Modeling Methodology

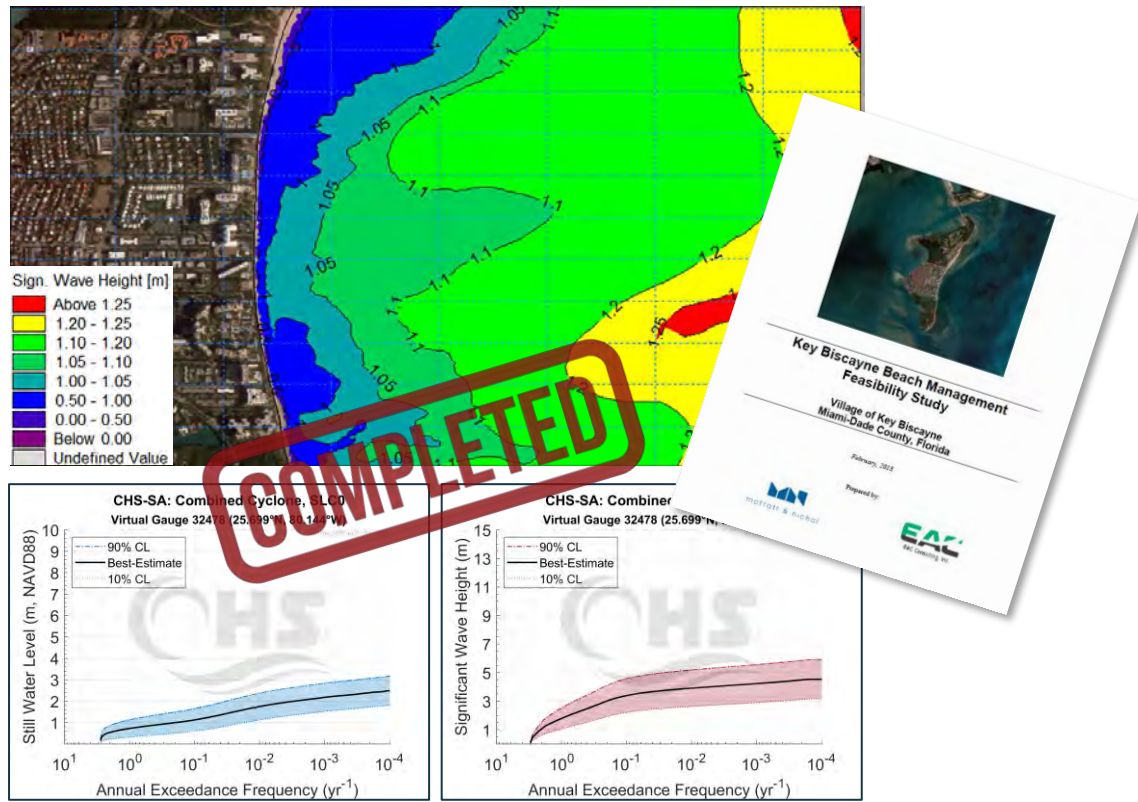
Numerical modeling 101 – tool to better understand the existing local conditions (waves, currents, sediment transport) and to evaluate how the proposed project may affect them.



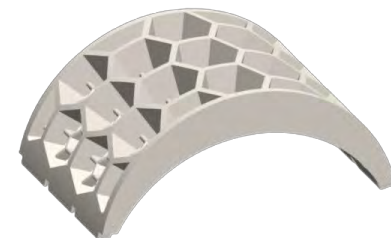
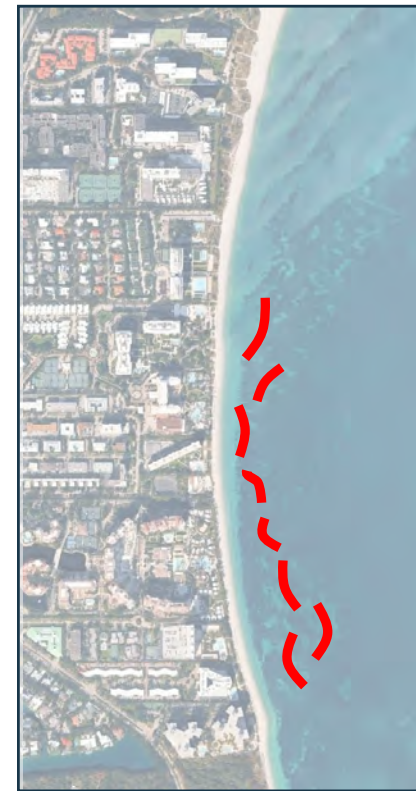
Technical Approach



1 Evaluation of existing conditions



2 Evaluation conditions with proposed reef



Technical Approach

Hybrid Reef Structures for Coastal Restoration & Wave Energy Reduction



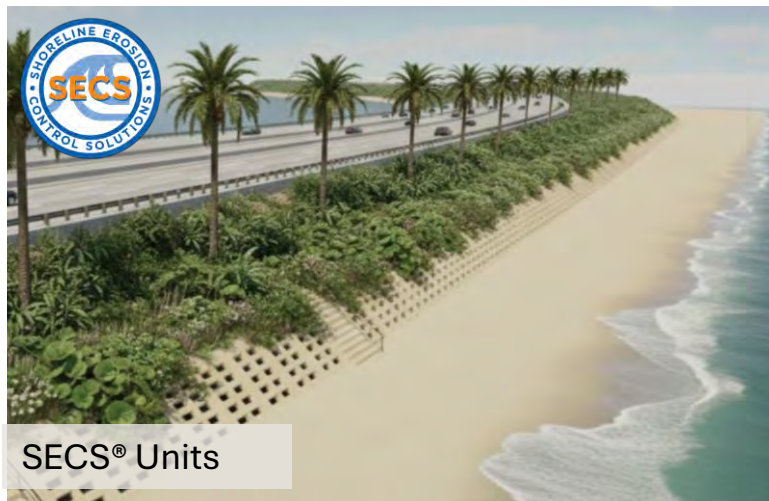
SEAHIVE
Honeycomb Reef Units



Living Seawall™
Kind Tiles™
Living Shorelines™



Coastalock,
Armor Units,
Seawall Tiles



SECS® Units



Reef Arch Units, Seawall Tiles®



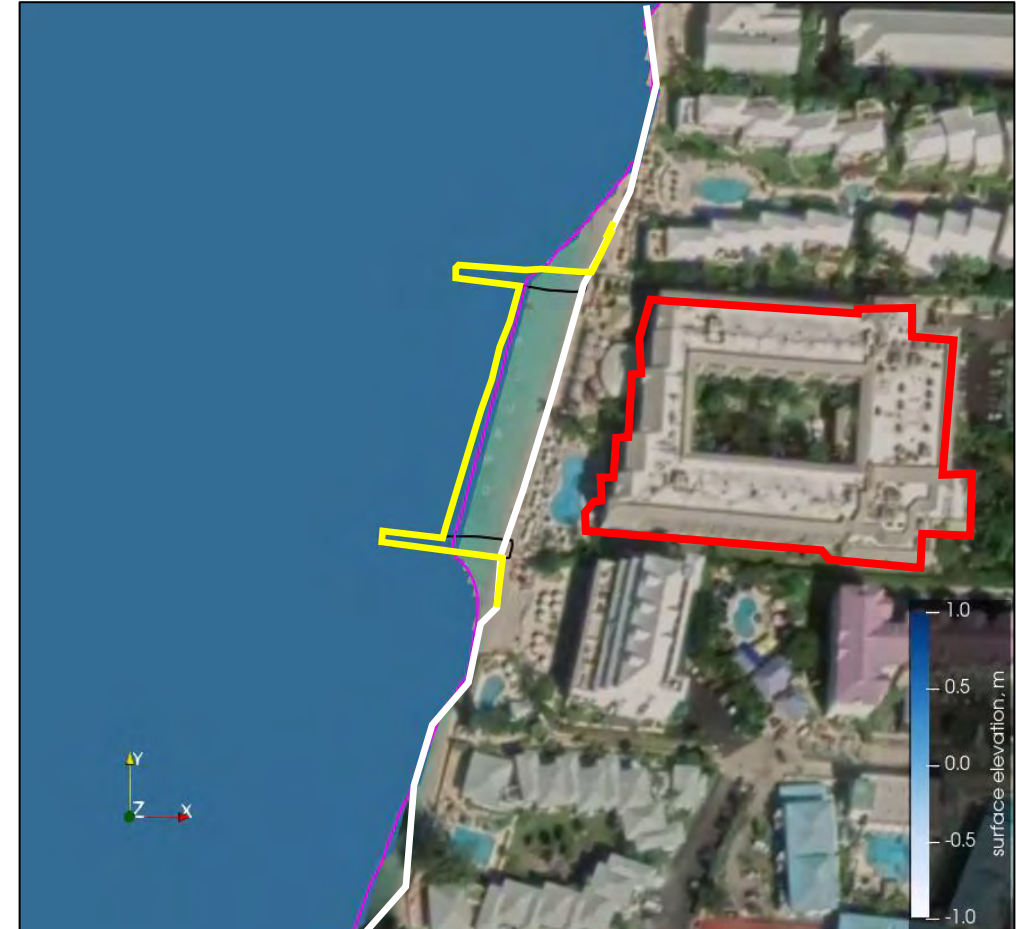
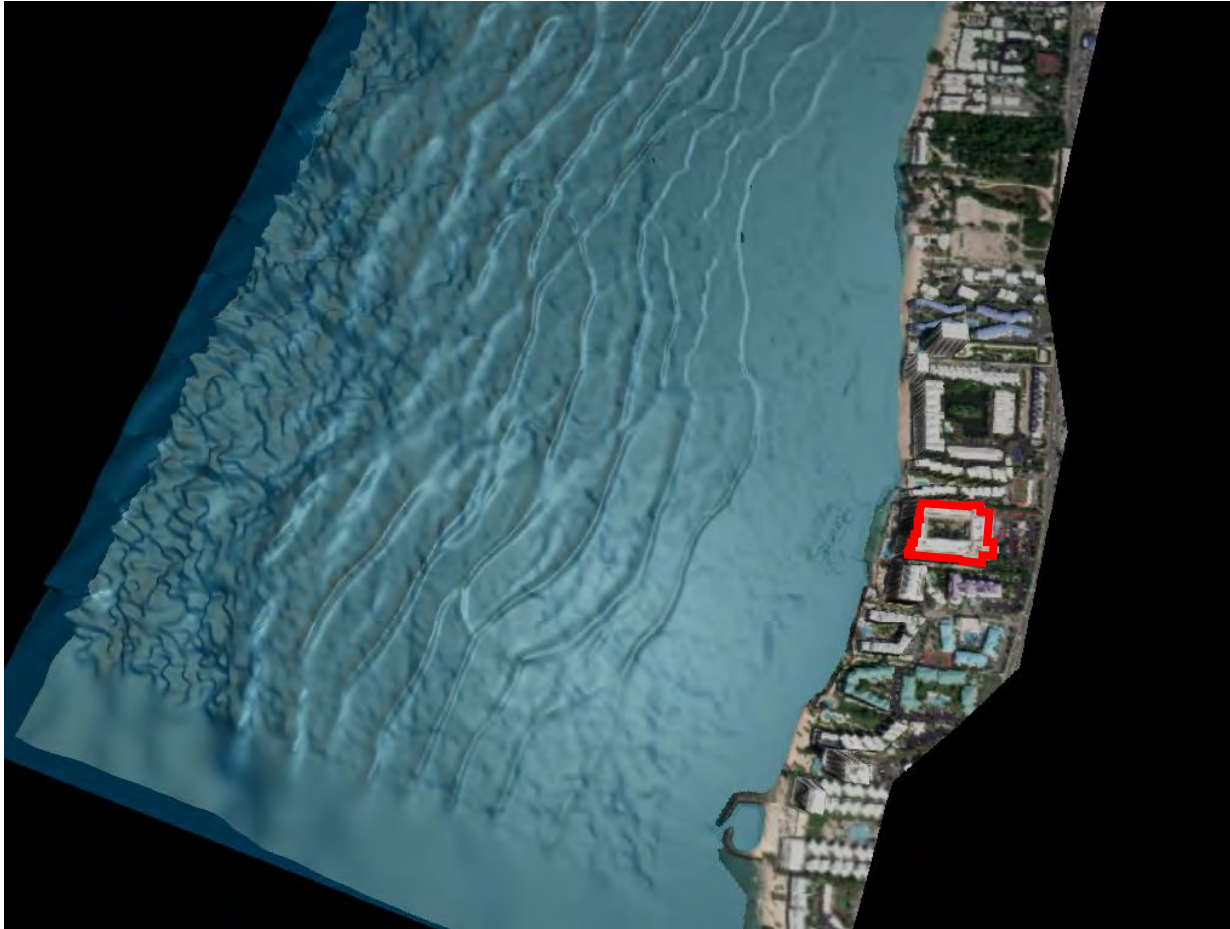
ExoForms™



Technical Approach



3 Sediment transport

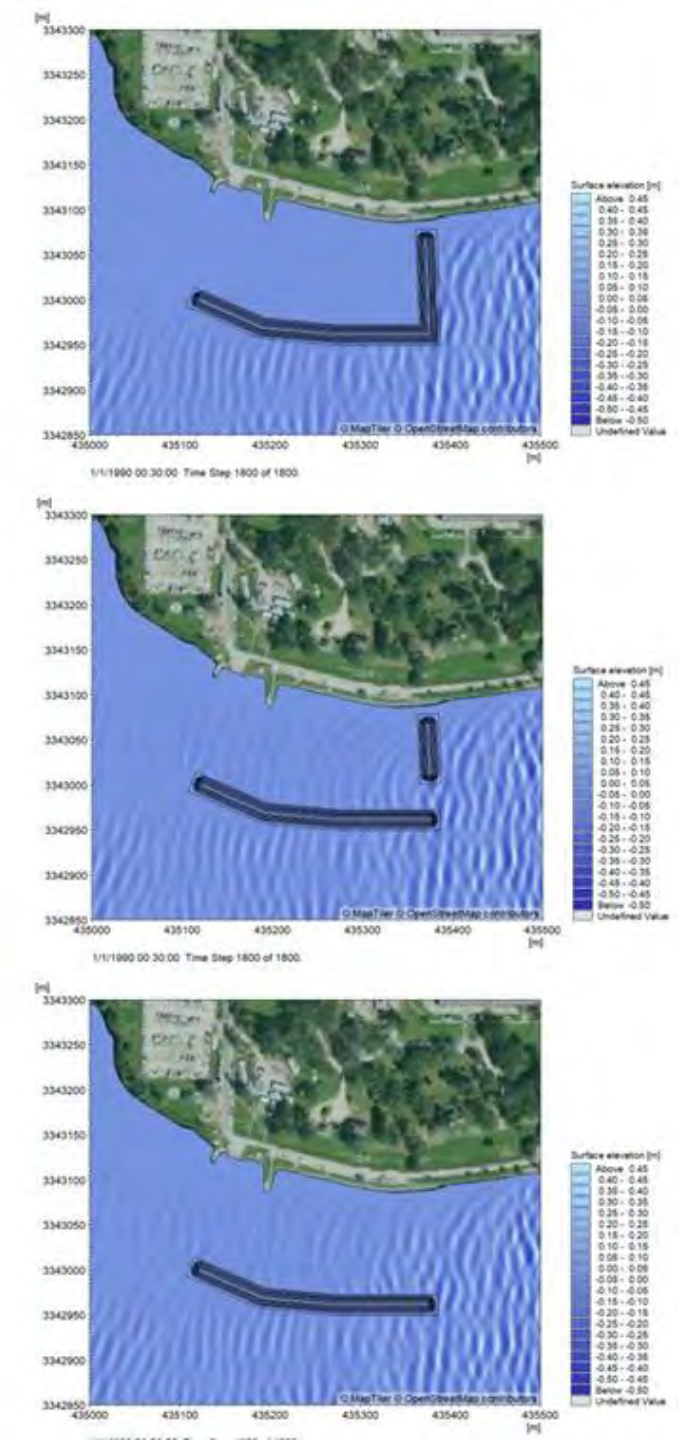




Benefits of this Technical Approach

1 This approach provides a **quantitative, science-based framework to evaluate** the performance of the proposed reef system

- › Protects Key Biscayne Beach
- › Structures are designed to survive hurricane events
- › Adapts to future SLR scenarios





Benefits of this Technical Approach

2 M&N's successful experience benefits VKB

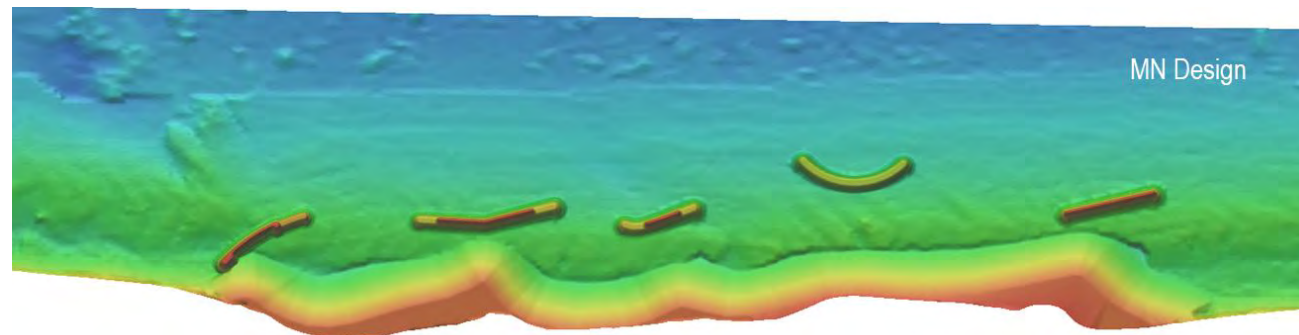
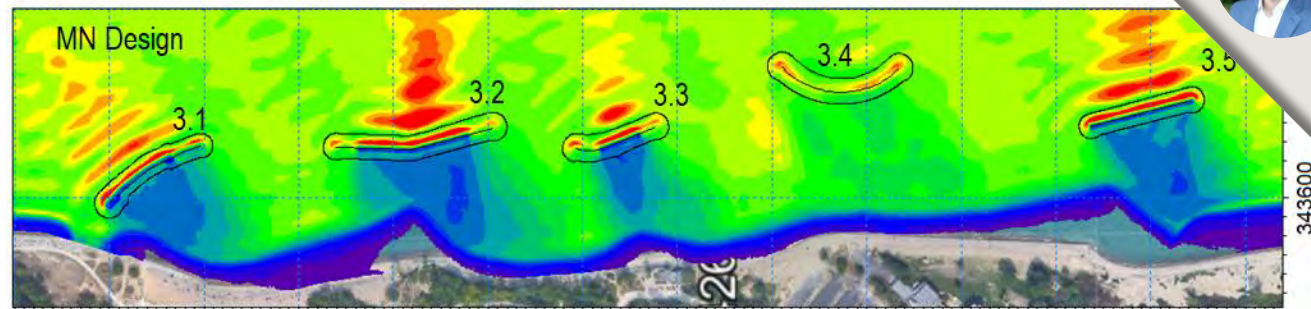




Benefits of this Technical Approach

2 M&N's successful experience benefits VKB

Illinois Beach State Park Shoreline Stabilization





Benefits of this Technical Approach

2 M&N's successful experience benefits VKB

Illinois Beach State Park Shoreline Stabilization



ASBPA Announces 2024 Best Restored Beaches 

© May 24, 2024 Press Releases

The American Shore and Beach Preservation Association is proud to release our annual awards of the nation's Best Restored Beaches. The award winning projects this year are the **Illinois Beach State Park Shoreline Stabilization** in Zion, Illinois, and the **North Cove Coastal Systems Restoration** in North Cove, Washington.

The goal of ASBPA projects around the world is to...

 [About](#) [WEDG Manual](#) [Services](#) [Projects](#) [Contact](#)

Verified Projects

 **Illinois Beach State Park Shoreline Stabilization Project**

2025 WLA (World Landscape Architecture) Honorable Mention in the Category of Built Sustainability & Resilience

2024 Chicagoland AGC (Associated General Contractors) Excellence in Environmental Design-Build

2025 ILASLA (Illinois American Society of Landscape Architects) Honor Award: General Design – Constructed \$250,00 – \$1,000,000 Landscape Construction Budget



E

Discuss the **key challenges** the Village may face in implementing this project, including technical, environmental, regulatory, permitting, financial, and funding considerations, and describe your **strategies** for addressing those challenges.





Challenges and Strategy

01

**Technical
Feasibility**

02

**Environmental
Feasibility**

03

**Cost
Feasibility**

04

**Recreational
Feasibility**

M&N HOLISTIC PROJECT FEASIBILITY





Challenges and Strategy



01

Design a reef that:

- **Protects** Key Biscayne Beach
- **Survives** extreme storm events
- **Adapts** to SLR

Technical Feasibility >

- Numerical and physical modeling
- Engineering analyses of structures for different design storms and SLR scenarios

02

Understand:

- Presence of **benthic resources** and **environmental permitting constraints**
- **NBS + coral incorporation**

Environmental Feasibility >

- Develop benthic resources surveys
- Pre-application meetings w/ agencies
- M&N engagement in evolving regulations (SB302)
- Collaboration b/w UM and M&N team members



Challenges and Strategy



03

Understand:

- Total **construction cost**
- Potential **savings on future nourishments**
- **How can VKB pay for this?**

Cost Feasibility >

- M&N's team of marine contractors and cost estimators – **business case**
- **Grant opportunities** specialists in several disciplines

04

Develop a project:

- Improves **user experience**
- **Safety** considerations
- Increase opportunities for **recreation and water access**

Recreational Feasibility >

- Engage relevant **stakeholders and public** along the design process



Best partner to help you achieve your goal



Any Questions?

