

DEP AGREEMENT NO. **R1905**
CHANGE ORDER NO. # **2**

GRANTEE

Town of Bay Harbour Islands
9665 Bay Harbor Terrace
Bay Harbor Islands, FL 33145

DEP Agreement No. **R1905** as entered into on the 3rd day of September 2019, is hereby revised as follows:

1. **Attachment 3, Grant Work Plan, Project Timeline** is hereby deleted in its entirety and replaced with the following:

PROJECT TIMELINE:

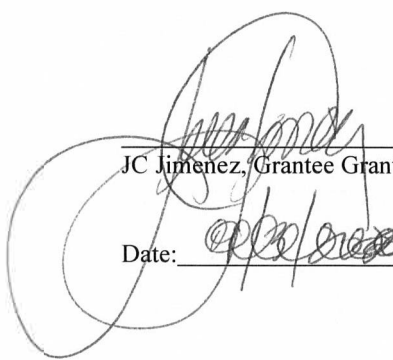
Task No.	Task Title	Deliverable Due Date	Funding Amount
1	Flood Vulnerability Assessment	04/30/2020	\$45,000
2	Adaption Strategies Report	05/30/2020	\$20,000
3	Comprehensive Plan Amendments	05/30/2020	\$5,000
Total			\$70,000

All other terms and conditions of the Agreement shall remain unchanged.

The parties agree to the terms and conditions of this Change Order and have duly authorized their respective representatives to sign it on the dates indicated below.

TOWN OF BAY HARBOUR ISLANDS

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



JC Jimenez, Grantee Grant Manager

Date: 02/17/2020

Whitney Gray, DEP Grant Manager

Date: _____

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
GRANT WORK PLAN
DEP AGREEMENT NO.: R1905**

ATTACHMENT 3

Project Title: Sea Level Impact Assessment and Strategies

Grantee Contact Information:

Organization Name: Town of Bay Harbor Islands
Authorized Signer for the Organization: JC Jimenez
Title: Town Manager
Address: 9665 Bay Harbor Terrace
City: Bay Harbor Islands
Zip Code: 33145
Area Code and Telephone Number: (305) 866-6241
E-mail Address: jcjimenez@bayharborislands-fl.gov

Grant Manager Contact Information:

Organization Name: JC Jimenez
Title: Town Manager
Address: 9665 Bay Harbor Terrace
City: Bay Harbor Islands
Zip Code: 33145
Area Code and Telephone Number: (305) 866-6241
E-mail Address: jcjimenez@bayharborislands-fl.gov

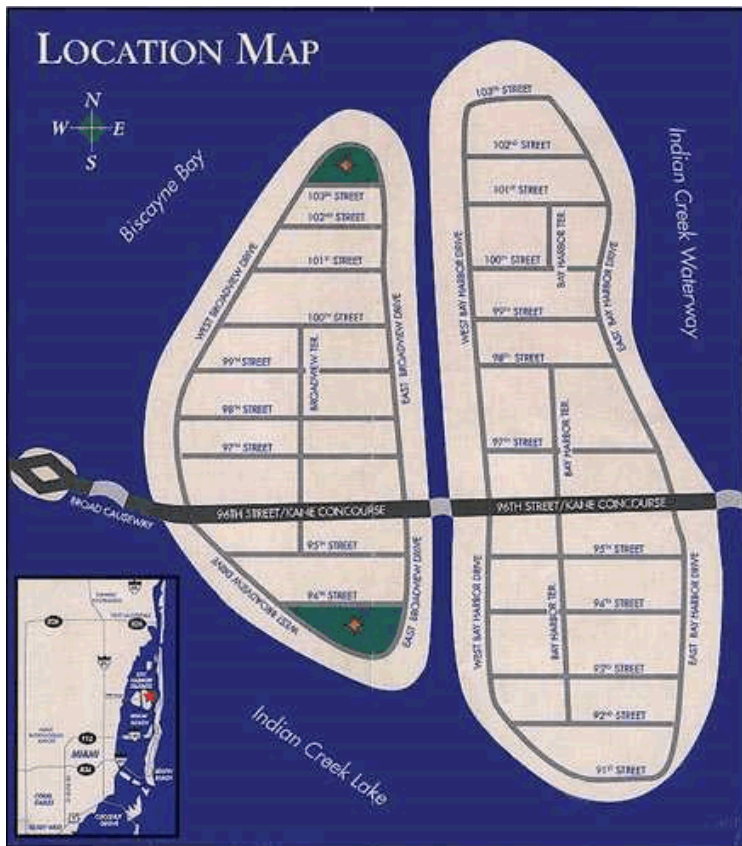
Fiscal Agent Contact Information:

Organization Name: Melissa Cruz
Title: Finance Director
Address: 9665 Bay Harbor Terrace
City: Bay Harbor Islands
Zip Code: 33145
Area Code and Telephone Number: (305) 866-6241
E-mail Address: mcruz@bayharborislands-fl.gov

FEID No.: 596000273

DUNS No.: 081822603

PROJECT LOCATION: The project will take place within the Town of Bay Harbor Islands, FL. The community of 5,600 is comprised of two islands (253 total acres) in coastal northern Miami-Dade County.



WORK PLAN

1. **Project Summary:** Complete FVA that allows for the development of adaptation strategies to address impacts from increasing sea levels.

2. **Project Description:**

The Town of Bay Harbor Islands consist of two islands located within Biscayne Bay and northern Miami Dade County. The small community is densely populated, and both islands are completely developed with both residential and commercial uses. The impact of changes in the environment, specifically to the water that completely surrounds the islands has made taking action a necessity. While the Town has made flood prevention a priority with installation of check valves and recent upgrades to the outfall systems, the potential of rising sea levels poses a significant risk.

To plan for future needs of the community and its 5,000+ residents, the Town must consider the changing environment, including sea level rise, and the effects it may have on the community. Though street flooding within the Town limits has not been a concern in the recent past, the Town has acknowledged that rising sea levels and increased rainfall have the potential to disrupt drainage systems by lowering their capacities, inundating roadways, parking lots, and other low-lying areas.

The proposed project will consist of a combination of data collection, analysis and public engagement. The scope of work will consist of two phases (tasks) including the following:

- **Flood Vulnerability Assessment**
 1. Data Collection and Review
 2. Community Engagement
 3. Flood Risk Modeling
 4. Assessment Final Report
- **Adaption Strategies**
 1. Community Engagement
 2. Adaption Strategies Final Report
- **Comprehensive Plan Amendments**

The main goal of the project is to further assist the community in making calculated and collaborative decisions with stakeholders in its future planning efforts.

To complete the project, the Town will engage a consultant that has proven experience in completing this work and can demonstrate the knowledge of the unique issues that face the community and the region. The selected firm will be expected to be experts in the fields of climate science, sea level rise, meteorology and engineering. They will be tasked with using the latest methods associated with geospatial data and analytics including high-resolution online cloud-based technology to assess and quantify specific, annualized flooding risks at regional and property levels.

3. **Project Need and Benefit:**

Over the last decade the Town has implemented numerous stormwater improvement projects to protect against flooding. As sea levels continue to rise, rain events present increased drainage issues for not only roadways and parking areas but low lying residential and commercial structures. With the island Town being surrounded by water and almost built-out, effectively moving stormwater will continue to be a challenge. The completion of the proposed project will provide the following benefits for the community:

- Identification of most vulnerable areas to flooding

- Establish a baseline of data that can be used for future planning efforts
- Increase awareness of potential risks and actions needed through community engagement
- Establish immediate and long-term strategies and actions that lessen the potential impacts of sea level rise.

The project will further the priority areas identified as part of the RPG program. With the Town having a Coastal Element as part of their adopted Comprehensive Plan, the development of vulnerability assessment using reliable data that includes multiple sea level rise scenarios will meet the intent of Priority No. 1. In addition, the completion of a written report that was developed with public engagement meet the intent of this priority. The project will also include development of comprehensive plan amendments for an update of the Coastal Management Element to meet the “Peril of Flood” statute.

The Town will be able to complete the project before the grant period deadline of April 30, 2020. Within one month of executing the grant agreement the Town will have engaged a consultant to complete the work. The anticipated length of the project including all three tasks is 11 months.

4. **Budget Summary:** Allowable budget categories and costs for this project are listed in the table below.

FIXED PRICE	Grant Amount Awarded
AGREEMENT TOTAL	\$ 70,000

5. **Project Timeline:** All tasks are to be completed and submitted no later than the Deliverable due date listed in the table below. Request for any change must be submitted prior to the current deliverable due date listed in the project timeline. Request are to be sent via separate email to the Department’s Grant Manager, with the details of the request being made and the reason for the request.

PROJECT TIMELINE

Task No.	Task Title	Deliverable Due Date	Funding Amount
1	Flood Vulnerability Assessment	01/15/2020	\$45,000
2	Adaption Strategies Report	04/15/2020	\$20,000
3	Comprehensive Plan Amendments	04/30/2020	\$5,000
Total			\$70,000

6. **Performance Measure:** The Department’s Grant Manager will review the deliverables to verify that they meet the specifications in the Grant Work Plan and this task description, to include any work being performed by any sub-contractor(s). Upon review and written acceptance by the Department’s Grant Manager of all deliverables under this task, the Grantee may proceed with payment request submittal. All deliverable documents must be provided in an electronic downloadable format.
7. **Consequences for Non-Performance:** The Department will reduce each Task Funding Amount by 5% for every day that the Deliverable(s) is not received on the specified due date in the most recent Project Timeline, for the Agreement. Should a Change Order or Amendment be requested on the date of or after the most current Deliverable Due Date, the 5% reduction of that Task Funding Amount will be imposed until the date of the requested change is received, via email by the Department.

8. **Payment Request Schedule:** Grantee may submit a request for the Task Funding Amount to be paid using the Exhibit C, after all Deliverables for that Task have been approved by the Department. Request(s) for payment must include the Exhibit A showing 100% completion of that Task and must be submitted within 45 days of the Deliverable Due Date.

Or

Grantee may submit one request for the Grant Amount Awarded, by using the Exhibit C, after the project is 100% completed. The request for the Grant Amount Awarded, must include an Exhibit A showing 100% completion for all Tasks, and must be submitted within 45 days of the Deliverable Due Date.

TASKS & DELIVERABLES

Task # 1

A. Title: Flood Vulnerability Assessment

B. Description: Deliverable #1 will consist of the following activities:

1) Data Collection and Review

The consultant will compile the relevant information to understand the social, economic, and physical composition of the Town of Bay Harbor Islands and its historic experiences with flooding. The primary interests are critical infrastructure and facilities such as emergency response, and key ingress/egress corridors. This will include an understanding of the improvements to the stormwater conveyance systems within the Town are under way through the installation of new, larger outfall pipes. Information regarding the recent and proposed outfall improvements will be provided by the Town; specifically, the pipe sizes, elevations, locations and service areas will be required.

2) Community Engagement

Consultant will conduct meetings with Town staff to summarize and review the critical infrastructure within the Town limits, as well as to identify plans that may affect the flood vulnerabilities of the community. These plans may include changes to policy, infrastructure improvements, or additional community engagements.

Key components of resiliency planning include the promotion of engaged communities and identification of social dimensions. The consultant along with Town staff will hold a Town Hall style meeting to introduce the Project to the community stakeholders, gauge the existing perception of flooding vulnerability and risks held by community members, and collect relevant information from community members to serve as the bridge between the socioeconomic and physical climates.

3) Flood Risk Modeling

The consultant will utilize advanced geospatial modeling capabilities to predict and analyze current and future flooding due to tidal variations, storm surge, and groundwater conditions, compounded by sea level rise. This framework forecasts the probability of both tidal flooding and storm surge inundation on individual property parcels through the next 30 years (or longer, if desired by the Town). The model utilizes publicly available databases and best practices from NOAA and the USACE which are integrated with our geospatial analysis tools.

Three types of flood risk will be modeled as part of this analysis: (1) tidal or nonstorm flooding (often referred to as “nuisance flooding”) resulting from water levels rising

above land elevations; (2) storm surge flooding, which occurs from tropical cyclones (including hurricanes) making landfall near the Town; and (3) high groundwater coupled with heavy rainfall, which results in a reduced ground storage capacity and an overflow of stormwater runoff.

4) Flood Vulnerability Assessment Final Report

A Flood Vulnerability Assessment (FVA) Final Report will be completed by the consultant to provide a detailed analysis of flood vulnerabilities and flood risks to the Town of Bay Harbor Islands through the next 30 years (or longer, if desired by the Town), focused on the effects of sea level rise. The FVA Final Report will include discussions related to transportation, stormwater infrastructure, and other social and economic considerations as discussed with community stakeholders.

- C. Deliverable:** Advertisements, agendas, notes, sign-in sheets, and presentations from community engagement meetings; Flood Vulnerability Assessment Report (Hard Copy, Electronic Copy)

Task # 2

A. Title: Adaptation Strategies Report

B. Description: Deliverable #2 will consist of the following activities:

1) Community Engagement

Hold town hall style meetings to address sea level rise adaptation. These forums are a necessary measure for involving and educating the local community in any adaptation program. Consultant will host two (2) town hall style meetings with the community to include key personnel, including climate scientists, engineers, and floodplain managers for approximately three hours per meeting. The scheduling of the meetings will be coordinated with the town management. The format of the first town hall meeting will consist of a presentation of the study results conducted under Task I of this scope and a general discussion to garner feedback from the community.

The second town hall style meeting will be conducted following the completion of the Adaptation Strategies Final Report below and will outline various adaptation strategies that may be considered by the Town and the community. The format will be the same as the format outlined above, but the presentation will focus on adaptation rather than vulnerability. This forum will serve as the platform from which local officials and community stakeholders can collectively launch a plan to become a more resilient community.

2) Adaptation Strategies Final Report

The consultant will provide a final report to outline potential adaptation strategies available to the Town of Bay Harbor Islands to lessen the impacts of sea level rise. These common strategies will involve three basic components (1) Community Engagement, (2) Policy Review, and (3) Infrastructure Improvement.

The Adaptation Strategies Final Report will be designed to provide insight into the benefits of various adaptation measures relative to a “no adaptation” scenario. Adaptation strategies will be developed based on the findings of the Flood Vulnerability Assessment performed under Task I and the feedback received from the community during the first two town hall meetings completed as part of this task.

- C. Deliverable:** Advertisements, agendas, notes, sign-in sheets, and presentations from community engagement meetings; Adaptation Strategies Final Report (Hard Copy, Electronic Copy)

Task # 3

A. Title: Comprehensive Plan Amendments

B. Description: Deliverable #3 will be consist of the following activities:

1) Comprehensive Plan Amendment Drafts

Consultant will draft proposed comprehensive plan amendments from the information derived from Task No. 1 and No. 2. This will include data, community input and recommended strategies. The amendment will be in strike-through and underline format and satisfy the “Peril of Flood” requirements in Section 163.3178(2)(f), Florida Statutes. The updates will be developed in coordination with Florida Department of Economic Opportunity and will include at least:

- 4 examples each of strategies, principles, and related engineering solutions that reduce flood risk in coastal areas,
- 4 site development techniques that may reduce losses to the local government and property owners due to coastal flooding.

C. Deliverable: Comprehensive Plan Amendments (Hard Copy, Electronic Copy)