



TOWN OF LAKE PARK COMMUNITY WORKSHOP



**VULNERABILITY, RISK AND ADAPTATION ASSESSMENT
TO CLIMATE CHANGE AND SEA LEVEL RISE**

January 25, 2025

INTRODUCTION



Public Workshop to discuss the history of the Town's efforts to address resiliency and identify methodologies and projects to ensure a reduction in environmental vulnerabilities that the Town is expected to face in the future.

During this meeting, we expect to address:

- **History of Town's Resiliency Efforts & Vulnerability Assessment**
- **Projects Identified within the Vulnerability Assessment and their respective Updates (including cost)**
- **Clarify Engineering & Design Standards for all Projects (based on Draft Town Ordinance)**
- **Potential Funding Options for Town Seawall Project (Public Access Only)**
- **Next Steps**
- **Public Comments**



RESILIENCY PLANNING & VULNERABILITY ASSESSMENT TIMELINE

PRIOR to 2021: The Town initiated and completed a flood mitigation project – “Lake Shore Drive Drainage Improvement Project”.

2021: In response to climate change and associated sea level rise, the Town completed a vulnerability assessment to identify various projects that will serve to protect our most vulnerable areas within the Town from Flooding.

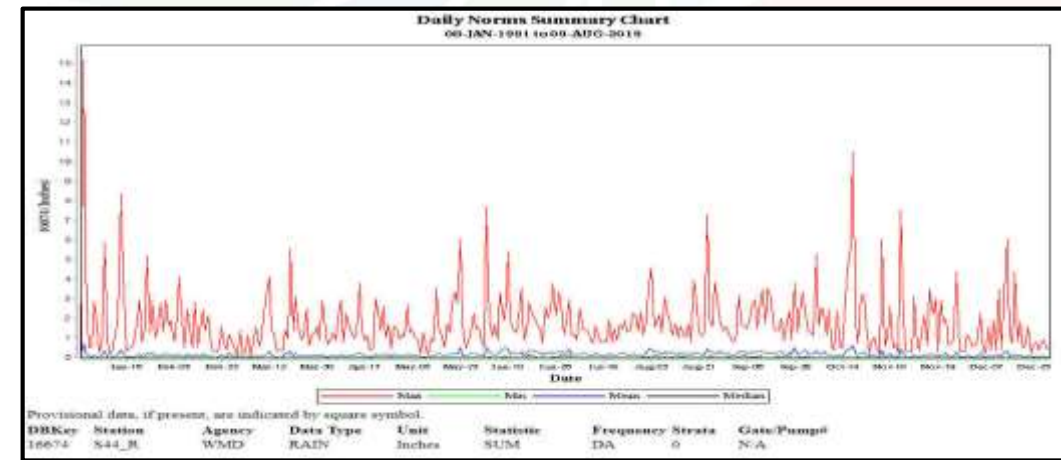
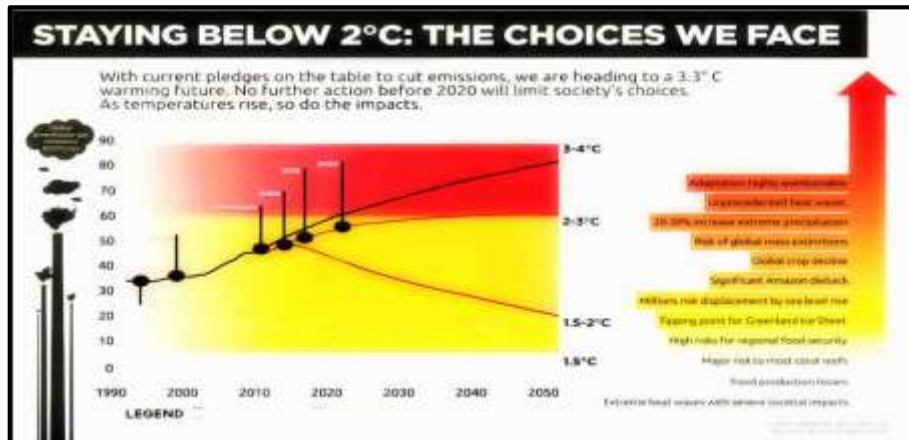
2023: Due to statutory updates (additional flood data requirements) and NOAA requirements, the Town updated its vulnerability assessment report.

2025: State of Florida mandated all municipalities to submit local Vulnerability Assessment reports to the FDEP. As a result, the Town is in the process of updating its vulnerability assessment for a 2nd time based on the NOAA 2022 sea-level data curves and extended planning horizons to 2050 and 2080.

Note: The Town has provided numerous informational documents (Town Website – www.lakeparkflorida.gov) and has held various outreach meetings within our community, including the private properties along the east side of Lake Shore Drive

CURRENT TOWN CONDITIONS

Higher Temperatures, Higher Rainfall Intensities, More Frequent Flooding



4th Street & Evergreen Drive

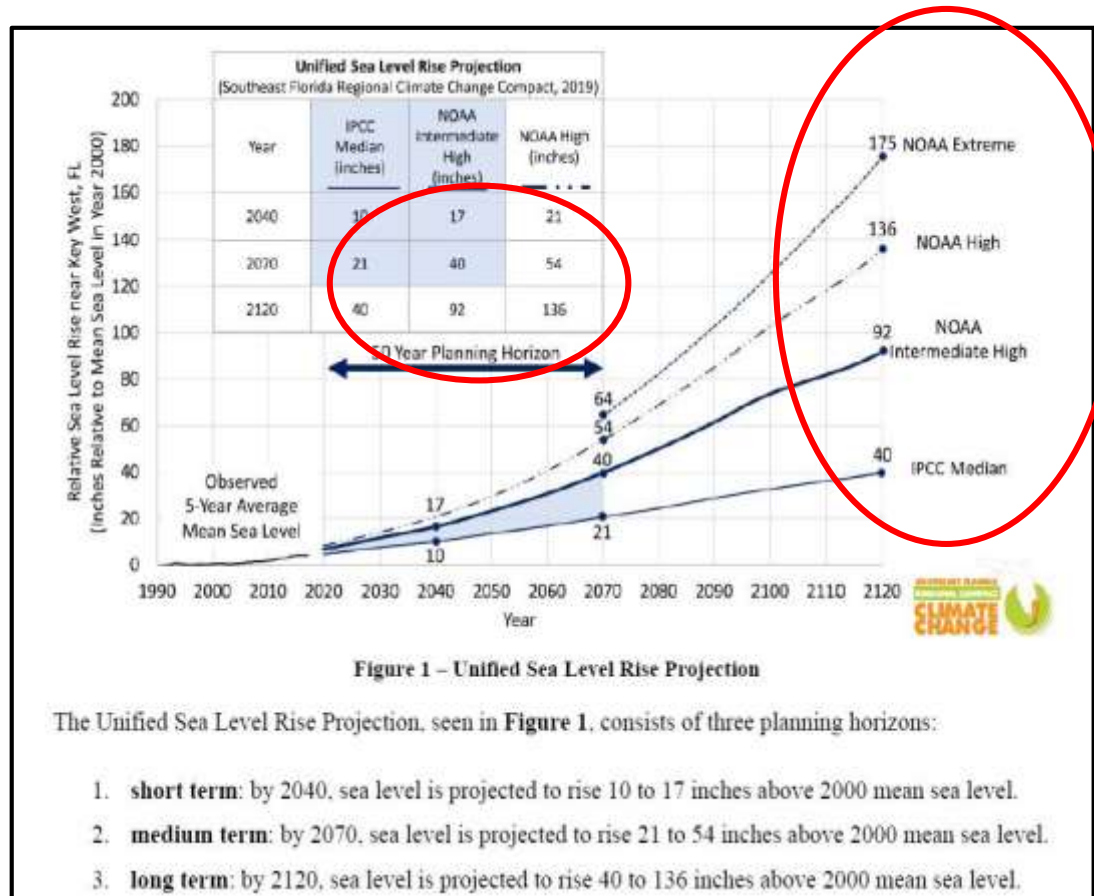


Ilex Drive

CURRENT TOWN CONDITIONS



Sea Level Rise & Seawall Overtopping



SEA LEVEL RISE
42" Predicted By 2070



“Sunny day” flooding is already experienced during “king” fall tides along lake shore drive.



TOWN EFFORTS TO ADDRESS MOST VULNERABLE AREAS

Green infrastructure helps the Town mitigate flooding by slowing down and reducing the amount of stormwater runoff, allowing more water to infiltrate the ground and prevents rapid surges in water levels and flooding during heavy rainfall events. The Town maintains a Stormwater Master Plan (SWMP) in conjunction with the Town's Vulnerability Assessment to identify and address our most vulnerable areas.





RESILIENCY PLANNING & VULNERABILITY ASSESSMENT PROJECTS

- **Lake Shore Drive Drainage Improvement Project (Completed)- FEMA Grant (HMGP) - \$4.2 million**
- **2nd Street Roadside Bioswales Project (Completed) – FDEP Grant (Resilient Florida) - \$583,759**
- **Southern Outfall Priority Rehabilitation Program - \$11.1 million:**
 - **Phase I - Southern Outfall Priority Retrofit Project (In-Progress - Construction) – FDEO (CDBG-MIT) - \$3,053,300**
 - **Phase II - Bert Bostrom Park Underground Chamber Filtration Project (In-Progress - Construction) – FDEO (CDBG-MIT) - \$2,572,500**
 - **Phase III - 10th Street Green Infrastructure Improvement Project (In-Progress – Design) – Funding to be determined**
- **Inundation Mapping (Completed) - FDEP Grant (Resilient Florida) - \$75,000**
- **Additional Adaptation Pathways and Options (Potential future implementation)**
- **Seawall/Bulkhead Restoration/Reconstruction Project (Assessment Only - Completed) - FDEP Grant (Resilient Florida) - \$75,000**

RESILIENCY PLANNING & VULNERABILITY ASSESSMENT

LAKE SHORE DRIVE DRAINAGE IMPROVEMENT PROJECT (COMPLETED)

- FEMA Grant (HMGP) - \$4.2 million

SOUTHERN OUTFALL PHASE 2

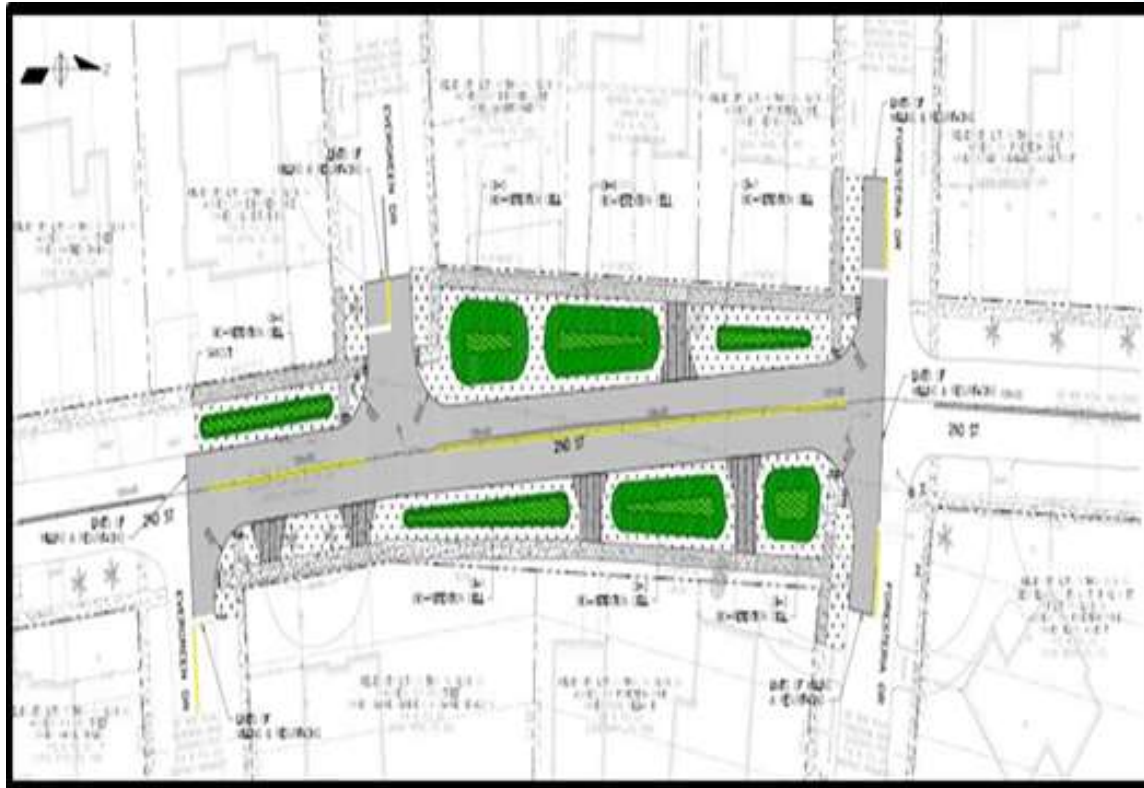
Upstream Peak Discharge Diversion, Attenuation And Water Quality Treatment Using GI/LID-based Underground Chamber Filtration @ Bert Bostrom Park



RESILIENCY PLANNING & VULNERABILITY ASSESSMENT

2ND STREET ROADSIDE BIOSWALES PROJECT (COMPLETED)

- FDEP Grant (Resilient Florida) - \$583,759



RESILIENCY PLANNING & VULNERABILITY ASSESSMENT

SOUTHERN OUTFALL PRIORITY REHABILITATION PROGRAM

- **\$11.1 million:**
 - **Phase I - Southern Outfall Priority Retrofit Project (In-Progress - Construction) – FDEO (CDBG-MIT) - \$3,053,300**
 - **Phase II - Bert Bostrom Park Underground Chamber Filtration Project (In-Progress - Construction) – FDEO (CDBG-MIT) - \$2,572,500**
 - **Phase III - 10th Street Green Infrastructure Improvement Project (In-Progress – Design) – Funding to be determined**





LAKE SHORE DRIVE DRAINAGE IMPROVEMENT PROJECT SOUTHERN OUTFALL PRIORITY REHABILITATION PROGRAM

TOWN OF LAKE PARK COASTAL ADAPTATION ALONG LAKE SHORE DRIVE

- Consolidation of outfalls to Lake Worth Lagoon and Valve Placement
- Installation of Sea Level Rise Pump Stations to offset high tides
- Transitional (2020-2050) SLR Impact Efforts
- Will address local drainage deficiency for tide-impacted outfalls
- Will address “Sunny Day” flooding from King Tides

THESE PROJECTS WILL HOLD OFF SEA LEVEL RISE IMPACTS FOR THE NEXT 30 YEARS ONLY – BEGINNING IN 2050 SEWALLS WILL BE OVERTOPPED AND PUMP STATION EFFICIENCY WILL DECREASE SUBSTANTIALLY

LAKE SHORE
DRIVE
DRAINAGE
IMPROVEMENT
PROJECT

SOUTHERN
OUTFALL
PRIORITY
RETROFIT
PROJECT



Bert Bostrom Park Underground Chamber Filtration Project

The SWMP goal is to convert 10% of impervious areas to GI in the next 20 years to offset warming trends



JANUARY 17, 2025

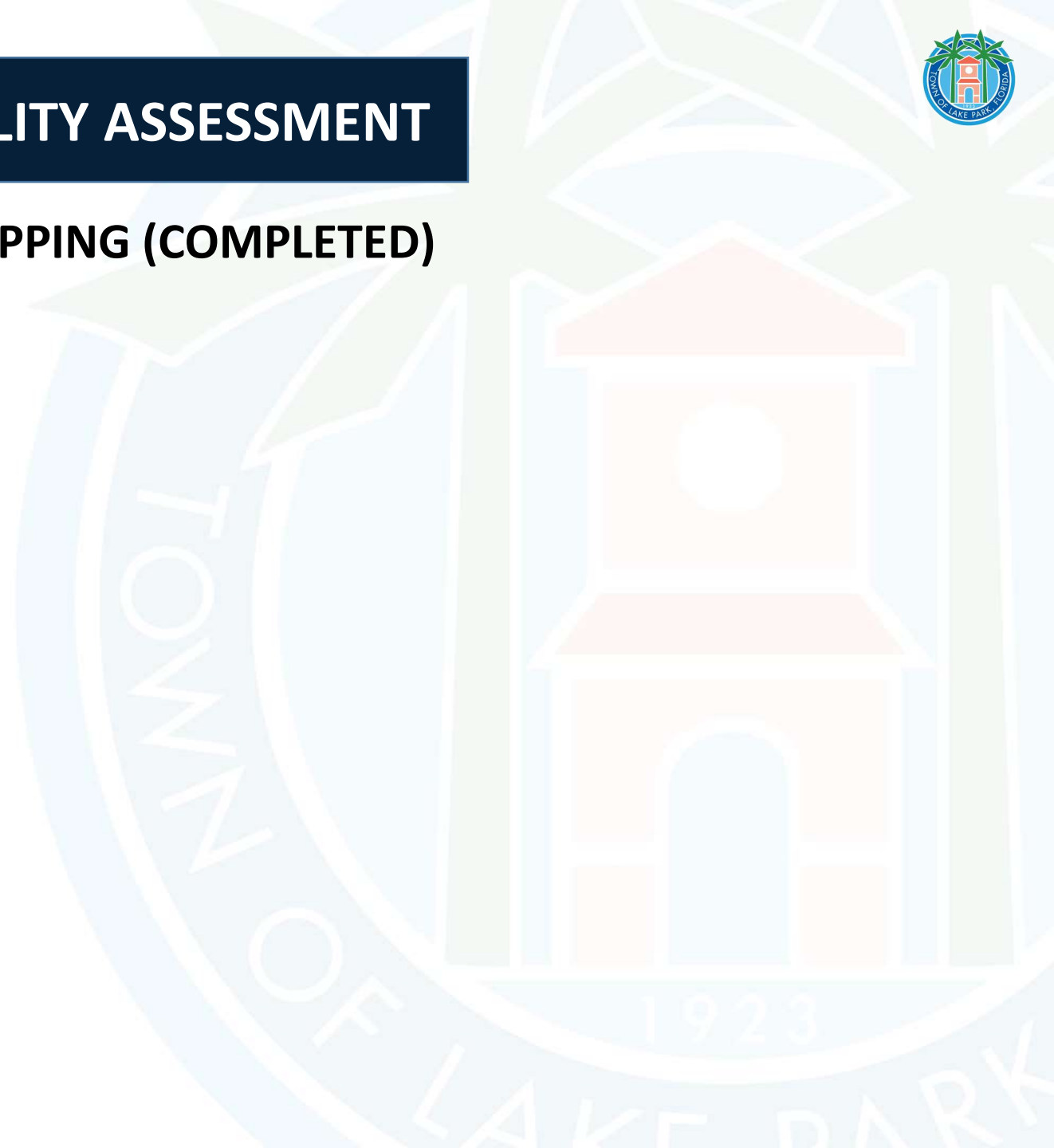


RESILIENCY PLANNING & VULNERABILITY ASSESSMENT

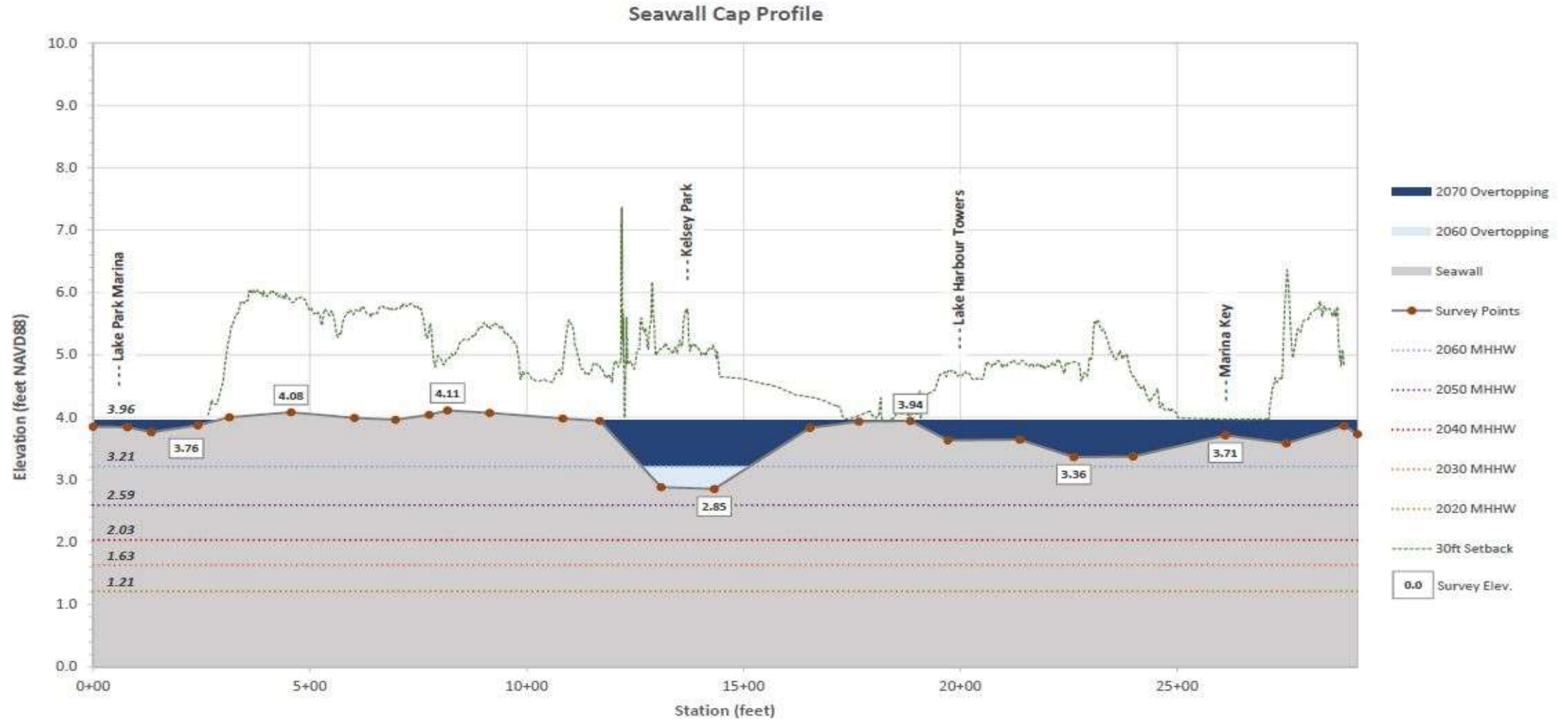


INUNDATION MAPPING (COMPLETED)

- - FDEP Grant (Resilient Florida) - \$75,000



TIDAL INUNDATION BY DECADES



(Gray fill) – profile of the seawall cap

(Small dotted lines and blue fill) – elevations of the decadal MHHW

(Green dashed line) – ground elevation profile set back 30 feet westward from the seawall face

COASTAL SURGE INUNDATION MAPPING



EFFECTIVE 2017 FEMA 100-YEAR (1%) FLOODING (2019 DFIRM'S UNDER FINAL REVIEW)



Blue: 100-Year Flood Boundaries / Yellow: 500-Year Flood Boundaries

SEA LEVEL RISE INUNDATION MAPPING (2060)



TIDAL INUNDATION BY DECADES



2080 Tidal Flooding



South Lake



Lagoon



TIDAL INUNDATION DAMAGES & RISK ASSESSMENT

To determinate monetary damages incurred in each decadal coastal flood scenario, three (3) types of costs were estimated for every flooded building using the FEMA/US Army Corps of Engineers Methodology:

Structural damage – Physical damage to building structures

Contents damage – Damage to items within the structure that are not permanently installed

Permanent Loss of Function (PLOF) – Costs associated with not being able to inhabit the structure until physical damages are restored



TIDAL INUNDATION DAMAGES & RISK ASSESSMENT

Scenario Year	Buildings Inundated	Buildings Blocked	Parcel Units (PLOF)	PLOF Costs	Risks	Overall Risk Assessment
2020	0	0	0	-	-	Low
2030	0	0	0	-	King Tides	Low
2040	0	0	0	-	King Tides	Low
2050	0	0	0	-	Drainage + King Tides	Moderate
2060	3	31	433	\$105,362,000	Drainage + King Tides	High
2070	15	107	692	\$154,675,000	Drainage + Overtopping	Severe



RESILIENCY PLANNING & VULNERABILITY ASSESSMENT ADDITIONAL ADAPTATION PATHWAYS AND OPTIONS (POTENTIAL FUTURE IMPLEMENTATION)

ADDITIONAL ADAPTATION PATHWAYS & OPTIONS (continued)

DRY FLOOD-PROOFING

- If ceiling heights permit, raising the first-floor elevation may be practical for facilities near the fringe of the floodplain
- Floodwalls (permanent or deployable) at an appropriate future BFE
- A quick estimation for the future BFE is to take the current FEMA BFE and add an amount of sea level appropriate for the expected useful life of the facility

SURFACE WATER MANAGEMENT DESIGN EXAMPLE 2



ADDITIONAL ADAPTATION PATHWAYS & OPTIONS (continued)

WET FLOOD-PROOFING

- Not occupying the first floor (still usable for storage and access purposes)
- Raising vulnerable utilities and infrastructure within the first floor above the future BFE



ADDITIONAL ADAPTATION PATHWAYS & OPTIONS (continued)

RAISING ROADS

- Build road base to accommodate additional wearing surface layers later
- Elevate culverts or provide in-line valves





RESILIENCY PLANNING & VULNERABILITY ASSESSMENT

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT (ASSESSMENT ONLY - COMPLETED)

- - FDEP Grant (Resilient Florida) - \$75,000



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

STRUCTURAL ASSESSMENT



1. **Topographic Survey**
Javier Bidot Associates
2. **Structural Condition Assessment**
Coastal Systems International
3. **Repair/Replacement Cost**
Coastal Systems International

Note: Three (3) Technical Reports are available for download on the Town's Website in the 'Residents' tab

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT



STRUCTURAL CONDITION ASSESSMENT - ENGINEER FIELD INVESTIGATION



Structural Assessment

A team of two engineers used snorkel equipment and completed the above- and below-water inspection.

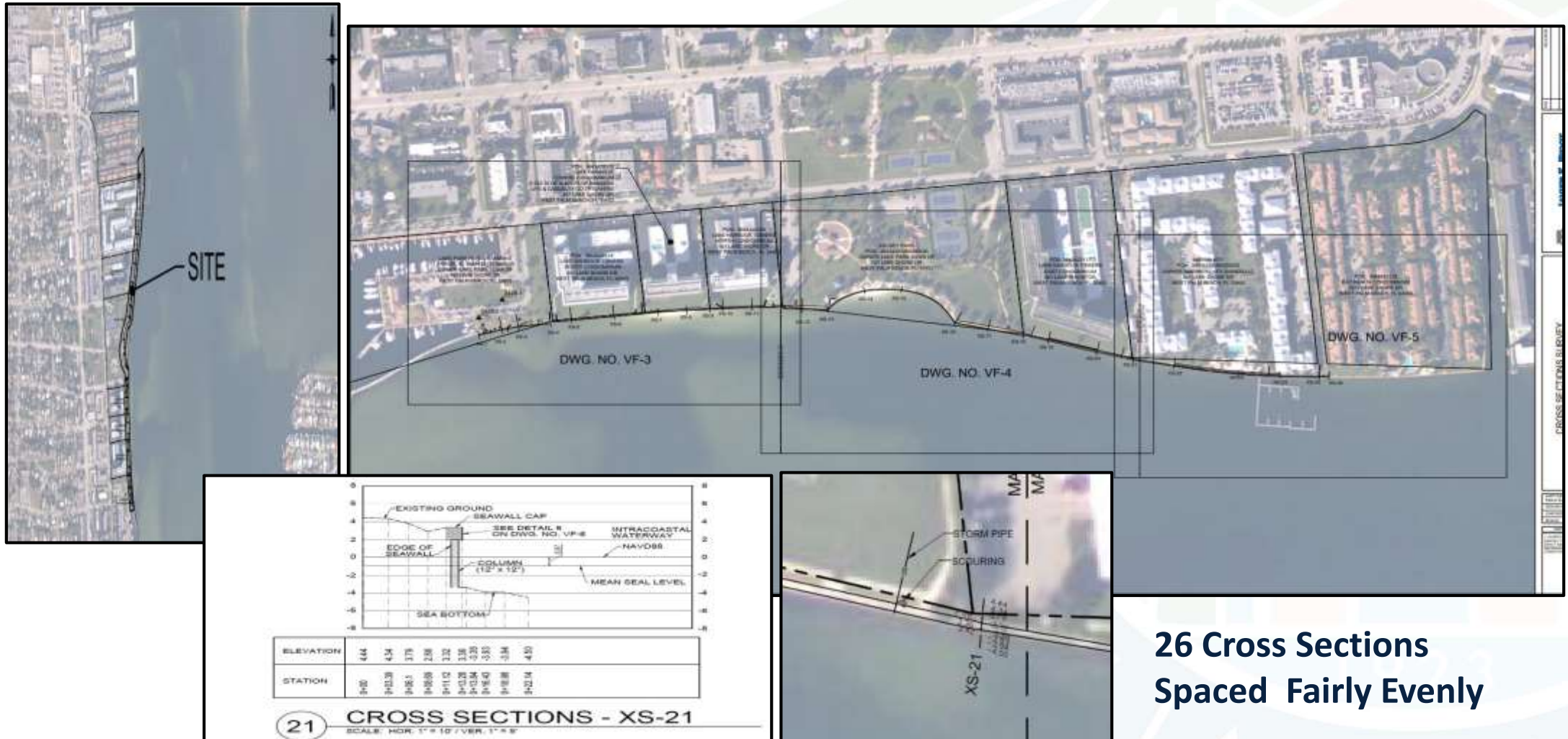
Exploratory Excavation

Four (4) locations were selected to perform exploratory excavations to reveal the condition of the tie-back systems. Assistance from the Lakeshore Harbor Towers HOA's was provided with testing areas of the existing seawall owned and maintained by the HOA's.

Probing, Coring, Testing

Ten (10) concrete core samples were obtained from the concrete cap and concrete panel of the existing seawall and sent to a laboratory for compressive strength and chloride content testing.

TOPOGRAPHIC SURVEYING



26 Cross Sections Spaced Fairly Evenly

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT



ENGINEER FIELD INVESTIGATION LOCATIONS



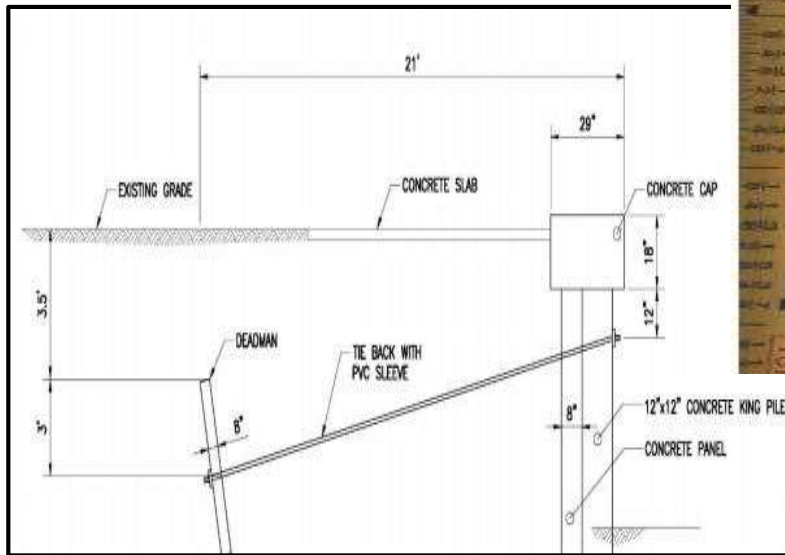
Tie-Back Excavation Locations



Concrete Coring Locations

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

STRUCTURAL CONDITION ASSESSMENT – ENGINEER FIELD INVESTIGATION



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

ENGINEER FIELD INVESTIGATION

Underwater, Below Deck Assessment Documentation & Tie Back Excavation



Photo A-39: Delamination on the bottom of the concrete slab at bent 13-a.



Photo A-40: Delamination at the bottom of the concrete slab between bent 14 and bent 14-a.



Photo E-55: Deterioration on soldier piles at the casement bulkhead.



Photo E-56: Deterioration on soldier piles at the casement bulkhead.



Photo A-69: Excavation Location 1 at Exhibit 1, Section 2, station 1+35.



Photo A-70: An old bulkhead was revealed behind the existing bulkhead. A tieback was revealed at station 1+34.

CONDITION ASSESSMENT RATINGS, REMAINING USEFUL LIFE, & RECOMMENDATIONS



- Exhibit 1 – Lake Park Marina
- Exhibit 2 – Lake Harbour Towers (301, 401, 501)
- Exhibit 3 – Kelsey Park
- Exhibit 4 – Lake Harbour Towers East (801)
- Exhibit 5 – Marina Key (901)
- Exhibit 6 – Bay Reach

Location	*Rating	Initial Repair/Replacement Urgency	Remaining Useful Life after Performing the Repairs
Exhibit 1 – Section 1 (Pier 7)	Fair	Repair within 6 months	20 years w/periodic maintenance
Exhibit 1 – Section 1 (Pier 6)	Fair	Repair within 6 months	20 years w/periodic maintenance
Exhibit I – Section 2 (Bulkhead)	Satisfactory	-	30 years w/periodic maintenance
Exhibit 2	Serious	Replacement within 6 months	Design life ended
Exhibit 3	**Serious	Repair within 6 months	25 years w/periodic maintenance
Exhibit 4	Fair	Repair within 6 months	15 years w/periodic maintenance
Exhibit 5 – Section 1	Fair	Repair of piles and replacement of cap within 5 years	15 years w/periodic maintenance
Exhibit 5 – Section 2 (Easement)	Serious	Replacement within 6 months	Design life ended
Exhibit 6	Good	-	40 years w/periodic maintenance – recently replaced

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT



TOTAL COST - \$7 MILLION (BASED ON 2021 ENGINEERING COST ESTIMATE)

INITIAL REPAIR/REPLACEMENT COST

The initial repair/replacement cost as recommended for the full length of the bulkhead is approximately \$5 Million.

NOTE: This value does not account for the periodic maintenance that is required for the remaining useful life of the structures.

SEA LEVEL RISE ADJUSTMENT COST

Raising bulkhead caps and installing tie-backs is recommended to account for sea level rise is estimated to be approximately \$2 Million.

Note: The proposed engineering cost estimate outlined above would be to replace the entire seawall within the Town of Lake Park (both Town maintained seawall and private property maintained seawall).



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

TOTAL COST - \$7 MILLION (BASED ON 2021 ENGINEERING COST ESTIMATE)

Description	Quantity	Unit	Unit Cost	Extended Cost
Exhibit 1				
Pier 7 – Crack Repairs	135	LF	\$ 360.00	\$ 48,600
Pier 6 – Crack Repairs	523	LF	\$ 360.00	\$ 18,280
Exhibit 2				
Complete Bulkhead Replacement	775	LF	\$ 3,500.00	\$ 2,712,500
Exhibit 3				
Cap – Crack Repair	866	LF	\$ 120.00	\$ 103,920
Piles and Panels – Gap Repair	16	EA	\$ 1,500.00	\$ 24,000
Exhibit 4				
Batter Piles – Major Repair	41	EA	\$ 1,200.00	\$ 49,200
King Piles - Repair	9	EA	\$ 800.00	\$ 7,200
Cap – Crack Repair	370	LF	\$ 120.00	\$ 44,400
Exhibit 5				
Batter Piles – Repair	25	EA	\$ 800.00	\$ 20,000
King Piles – Repair	8	EA	\$ 800.00	\$ 6,400
Cap – Replacement	624	LF	\$ 50.00	\$ 156,000
Exhibit 5 Easement				
Complete Bulkhead Replacement	32	LF	\$ 3,500.00	\$ 112,000
Sub-Total				\$ 3,472,500
General Conditions (10%)				\$ 374,250
Mobilization (5%)				\$ 173,625
Bond and Insurance (5%)				\$ 173,625
Contractor Overhead and Profit (10%)				\$ 347,250
Contingency (10%)				\$ 347,250
Total Probable Construction Cost				\$ 4,861,500



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

SEA LEVEL RISE ADJUSTMENT COST (2021)

Description	Quantity	Unit	Unit Cost	Extended Cost
Exhibit 1				
Raising the Bulkhead Cap	242	LF	\$ 250.00	\$ 60,500
Additional Tieback Anchors	40	EA	\$ 3,000.00	\$ 120,000
Exhibit 3				
Raising the Bulkhead Cap	866	LF	\$ 250.00	\$ 216,500
Additional Tieback Anchors	110	EA	\$ 3,000.00	\$ 330,000
Exhibit 4				
Raising the Bulkhead Cap	370	LF	\$ 250.00	\$ 92,500
Additional Tieback Anchors	50	EA	\$ 3,000.00	\$ 150,000
Exhibit 5				
Raising the Bulkhead Cap	624	LF	\$ 250.00	\$ 156,000
Additional Tieback Anchors	80	EA	\$ 3,000.00	\$ 240,000
Sub-Total				\$1,365,500
General Conditions (10%)				\$ 136,550
Mobilization (5%)				\$ 68,275
Bond and Insurance (5%)				\$ 68,275
Contractor Overhead and Profit (10%)				\$ 136,550
Contingency (10%)				\$ 136,550
Total Probable Construction Cost				\$1,911,700

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT



REPLACEMENT OPTIONS – STRUCTURAL

Steel Sheet Piles Bulkhead



Concrete Pile and Panel



Concrete Sheet Pile Bulkhead



Truline Bulkhead



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

REPLACEMENT OPTIONS – SUSTAINABLE

Living Shoreline (Currie Park)



Gabion Bulkhead



Bio-enhanced Concrete Forms



Combination Gabion Bulkhead & Living Shoreline



Preferred Town Option for Kelsey Park Seawall Replacement

SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT



STRUCTURAL & SUSTAINABLE REPLACEMENT OPTIONS COST (2021)

Structural Replacement Cost (Per Lineal Foot)

Description	Unit	Unit Cost
Replacement Cost per Linear Feet of Bulkhead		
Concrete King Pile and Panels Bulkhead	LF	\$ 1,500.00
ECO Seawall	LF	\$ 2,000.00
Steel Sheet Pile Bulkhead	LF	\$ 2,500.00
Concrete Sheet Pile Bulkhead with GFRP/CFRP	LF	\$ 5,500.00

Sustainable Construction Cost (Unit Cost)

Description	Quantity	Unit	Unit Cost	Extended Cost
Living Shoreline (for 100 Linear Feet of shoreline)				
Riprap Breakwater	185	CY	\$ 120.00	\$ 22,200
Soil Mix for Planter	370	CY	\$ 30.00	\$ 11,100
Mangrove	2500	SF	\$ 0.40	\$ 1,000
Total (for 100 Linear Feet of shoreline)				\$ 34,300
Eco-Concrete Unit Costs	Unit	Unit Cost		
ECO Seawall Panels	SF	\$ 70.00		
ECO Mat (8 ft by 15 ft)	EA	\$ 1,500.00		
Tide Pool Armor (4 ft by 4 ft by 4ft block)	EA	\$ 900.00		

PROPOSED FLOOD PROTECTION/RESILIENCY



PROPOSED TOWN ORDINANCE PROVISIONS

The Town's staff, along with the Town's consulting Building Official and Resiliency Consultant, have developed proposed language to be included within a Town Ordinance that may be considered by the Town Commission at a later date. If approved, the proposed Ordinance would develop provisions within the Town's Land Development Regulations (LDR's) to permit for the development of adequate flood protections against rising flood waters.

- The proposed Ordinance, if approved, would require all repairs/reconstruction project to adhere to the Florida Building Code and National Oceanic and Atmospheric Administration (NOAA) – North American Vertical Datum (NAVD) specifications/requirements, as amended.
- The proposed Ordinance was developed utilizing language from various Counties and surrounding municipalities.

Note: A determination on the completion date for flood protection measures (i.e., seawall/bulkhead restoration/reconstruction project, etc.) will need to be identified prior to consideration.



PROPOSED FLOOD PROTECTION/RESILIENCY

PROPOSED TOWN ORDINANCE PROVISIONS EXAMPLES OF MINIMUM ELEVATIONS FROM OTHER FLORIDA COMMUNITIES

Political Jurisdiction	Minimum Elevation (NAVD)	Notes
Village of North Palm Beach	5 Feet	
Palm Beach County	At least one foot above the flood depth specified by FEMA. If FEMA doesn't specify a flood depth, the minimum elevation is at least two feet above the highest adjacent grade.	
Delray Beach	4.2 Feet (Now)	5.0 Feet (In the future)
Broward County	4.0 Feet (by 2035)	5.0 Feet (by 2050)
City of Miami Beach	5.7 Feet	

PROPOSED FLOOD PROTECTION/RESILIENCY



PROPOSED TOWN ORDINANCE PROVISIONS

- The Town implemented a moratorium on the acceptance of seawall related applications from August 2023 to August 2024
 - Since the beginning of this moratorium (2023) to date, the Town has not received any inquiries and/or held meetings with any private property owners and/or representing engineering firms related to any seawall repair/reconstruction project within our community.
 - Further, the Town staff, including the Town's consulting Building Official, has not discussed with any private property owners and/or representing engineering firms the Town's proposed development standards to repair/reconstruction seawalls within our community.
 - Since the beginning of the moratorium (2023) to date, the Town has not formally developed and/or reviewed development plans from developers (i.e., preliminary site plan, site plans, engineering design plans, etc.) for the repair/reconstruction of any seawall sections within the Town on Private property that include a public access component.

POTENTIAL FUNDING SOURCES



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

Grants Available for Town & Permanent Public Access Properties:

Florida Inland Navigation District (FIND) WAP Grant Programs - Waterways Assistance Programs (WAP)

- Aim is to enhance public access to the Atlantic Intracoastal Waterway and related waterways within the District. Authorized under Section 374.976 of the Florida Statutes and governed by Chapter 66B-2 of the Florida Administrative Code, the **program serves local governmental agencies, including municipalities, counties, port authorities, and special taxing districts across the twelve counties in the District.**

FDEP Resilient Florida Program - Implementation Grants

- **Available to counties, municipalities and certain special districts** for infrastructure projects that address risks identified in a local government vulnerability assessment.

POTENTIAL FUNDING SOURCES



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

Grants Available for Town & Permanent Public Access Properties - Continued:

FEMA Flood Mitigation Assistance

- **Federal funds are available to state, territory and local governments and Tribal Nations** to reduce or eliminate the risk of repetitive flood damage to buildings insured under the National Flood Insurance Program (NFIP) from participating communities

Palm Beach County Division of Emergency Management - Local Mitigation Strategy (LMS) Prioritized Project List (PPL)

- Inclusion on this list also makes the project eligible through the FEMA Hazard Mitigation Grant Program (HMGP) if funds become available

Note: At this time, the Town has not found grant funding opportunities for the repair/reconstruction of seawall's on Private Property without a Public Access component. However, the Town's Grant Writer is continuously looking to identify grant funding to support this project. However, grant funding does not appear to be available for private properties at this time.

POTENTIAL FUNDING SOURCES



SEAWALL/BULKHEAD RESTORATION/RECONSTRUCTION PROJECT

Grants Available for Town & Permanent Public Access Properties - Continued:

At this time, the Town has not found grant funding opportunities for the repair/reconstruction of seawall's on Private Property without a Public Access component. However, the Town's Grant Writer is continuously looking to identify grant funding to support this project. However, grant funding does not appear to be available for private properties at this time.

Potential Funding Options for Private Properties:

1. Private Property Financing
2. Special Assessment (Potentially – Town Attorney Reviewing Options without Public Dedication Component)
3. Create a 501(c)(3) to potentially apply for grant funding opportunities
4. Provide Permanent Public Access for limited portions of Private Property to enable Town to include project within Town Grant opportunities/applications

NEXT STEPS



VULNERABILITY, RISK AND ADAPTATION ASSESSMENT TO CLIMATE CHANGE AND SEA LEVEL RISE

1. Consider adoption of the proposed Town's Flood Protection/Resiliency Ordinance to establish standards that adhere the Florida Building Code and National Oceanic and Atmospheric Administration (NOAA) – North American Vertical Datum (NAVD) specifications/requirements, as amended
2. Update repair/reconstruction costs for Town' seawall (i.e., design and construction)
3. Determine Town Implementation Strategy and Timeline for the repair/reconstruction of the Town's seawall
 - Apply/Accept grant funding to support the needed repairs/reconstruction costs associated with the Town's portion of the seawall
4. Work with local, private property owners to determine if there is a desire to participate within the Town's design and construction process for repair/reconstruction of the seawall to ensure lower total project costs (i.e., single engineering firm, single construction contractor, reduced mobilization costs, etc.) to ensure consistency in the repair/reconstruction of the entire seawall within Lake Park.
 - This may enable both the Town and the private property owners to develop a long-term plan to address maintenance responsibilities and costs that may be experienced over a determined time period

NEXT STEPS



VULNERABILITY, RISK AND ADAPTATION ASSESSMENT TO CLIMATE CHANGE AND SEA LEVEL RISE

1. Consider adoption of the proposed Town's Flood Protection/Resiliency Ordinance to establish standards that adhere the Florida Building Code and National Oceanic and Atmospheric Administration (NOAA) – North American Vertical Datum (NAVD) specifications/requirements, as amended
2. Update repair/reconstruction costs for Town' seawall (i.e., design and construction)
3. Determine Town Implementation Strategy and Timeline for the repair/reconstruction of the Town's seawall
 - Apply/Accept grant funding to support the needed repairs/reconstruction costs associated with the Town's portion of the seawall
4. Work with local, private property owners to determine if there is a desire to participate within the Town's design and construction process for repair/reconstruction of the seawall to ensure lower total project costs (i.e., single engineering firm, single construction contractor, reduced mobilization costs, etc.) to ensure consistency in the repair/reconstruction of the entire seawall within Lake Park.
 - This may enable both the Town and the private property owners to develop a long-term plan to address maintenance responsibilities and costs that may be experienced over a determined time period

THANK YOU

Merrell Angstreich – Grant Writer/Public Information Officer – mangstreich@lakeparkflorida.gov

Nadia Di Tommaso – Community Development Director – nditommaso@lakeparkflorida.gov

Jamie Morales – Public Works Director – jmorales@lakeparkflorida.gov

WRMA – Raul Mercado, Principal Engineer - raul.mercado@wrmaeng.com

Coastal Systems International (subcontractor or WRMA)

Judson – CAP Government, Regional Operations Manager (Building Official Services) -
judson.dulany@bureauveritas.com

