

Utility Capital Projects Update:

Country Club Shores AC Water Main Replacement and Subaqueous Force Main Project

Town Commission Special Workshop

June 28, 2024



TOWN OF LONGBOAT KEY

Country Club Shores Asbestos Cement Pipe Replacement

Project Background:

Country Club Shores subdivision is located at south end of the island.

The potable water mains in this neighborhood are made of asbestos cement pipe, constructed in the late 1960's and early 1970s.

The water mains have aged beyond their useful life and are very fragile.

Project Phases 1 and 2:

- Replace 15,000 LF with new PVC, 4" to 8", and place in roadways
- Replace services and meter boxes
- Replace and add fire hydrants
- Full mill and asphalt overlay





TOWN OF LONGBOAT KEY

Country Club Shores Asbestos Cement Pipe Replacement

Project Phases 1 and 2:

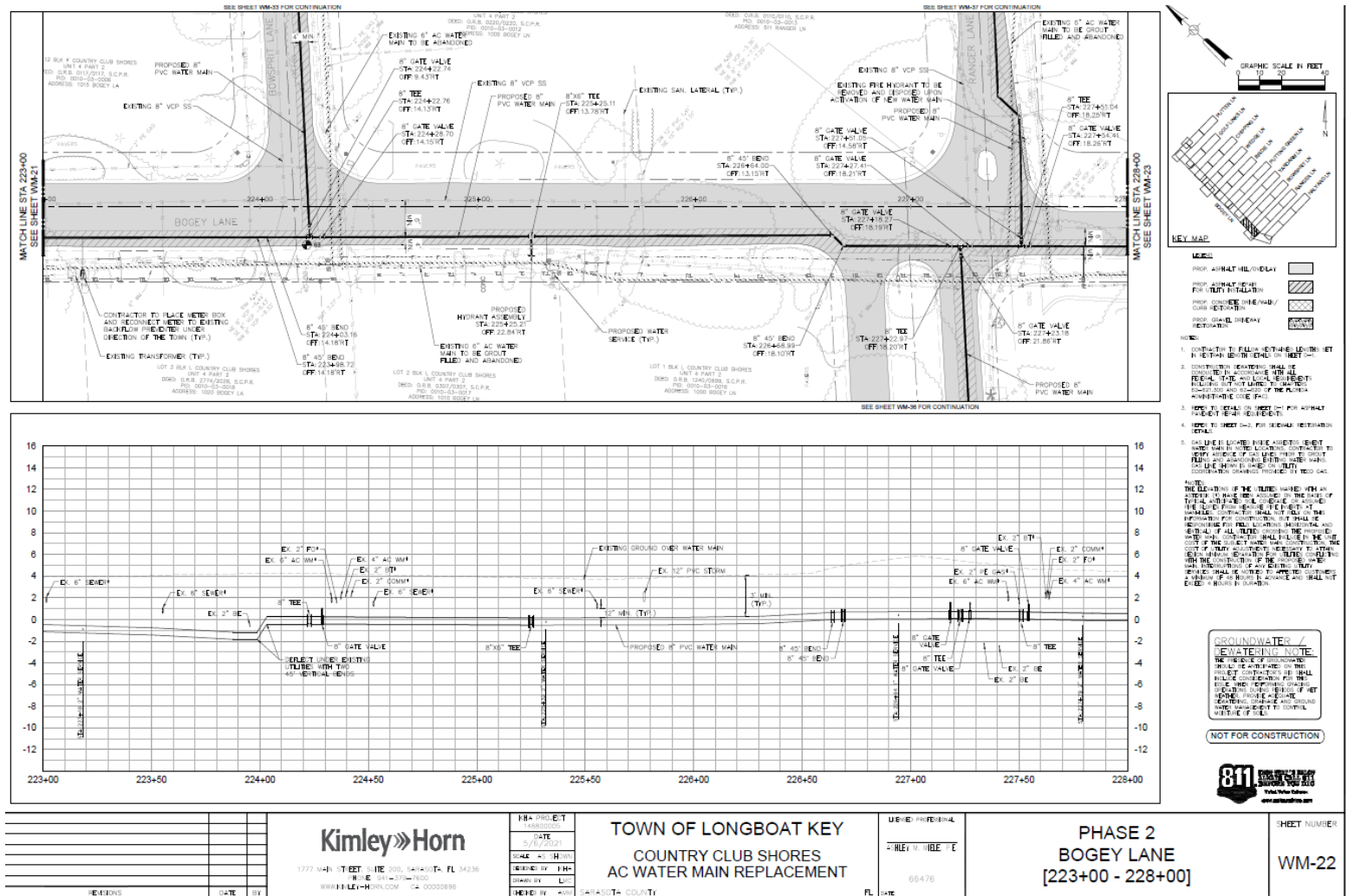
Town hired KHA for design and permitting: Complete

Bids Received: May 2023

Contractor:

Spectrum Underground, Inc.
\$5.5 million

- Notice-to-Proceed Oct. 2023
- 480-day contract.
- Approx. halfway through contract.



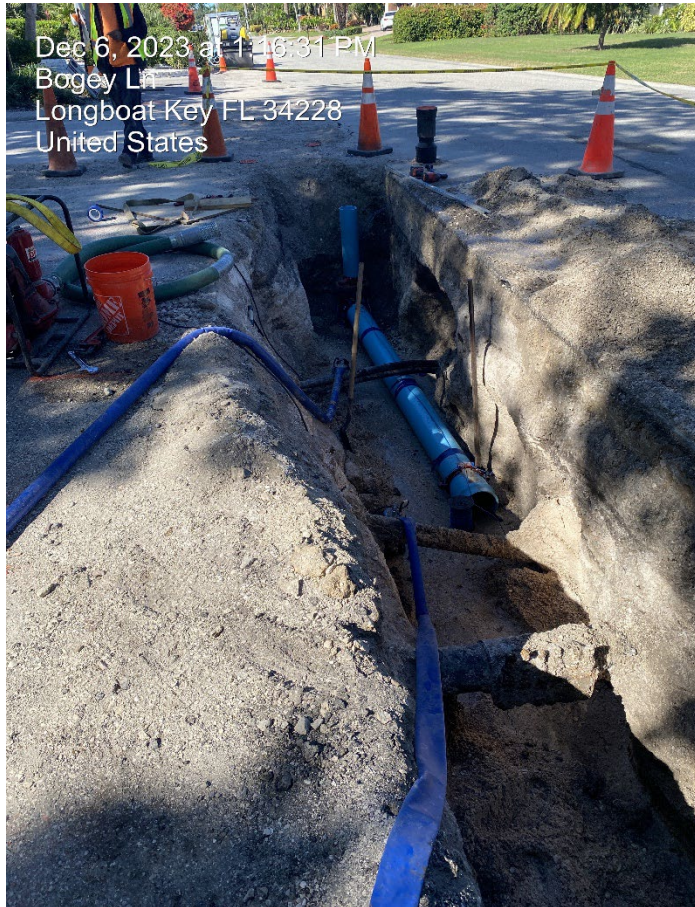
PROJECT INFORMATION TOWN OF LONGBOAT KEY COUNTRY CLUB SHORES AC WATER MAIN REPLACEMENT		SHEET NUMBER WM-22
CONTRACTOR Kimley-Horn 1777 W. 4th St. Suite 200, Sarasota, FL 34236 WWW.KIMLEY-HORN.COM	DATE 5/10/2023 SCALE AS SHOWN DRAWN BY LUT	PHASE 2 BOGEY LANE [223+00 - 228+00]



TOWN OF LONGBOAT KEY

Country Club Shores Asbestos Cement Pipe Replacement

Project Phases 1 and 2:





TOWN OF LONGBOAT KEY

Country Club Shores Asbestos Cement Pipe Replacement

Project Phases 3 and 4:

Survey work Complete

Scope of Work:

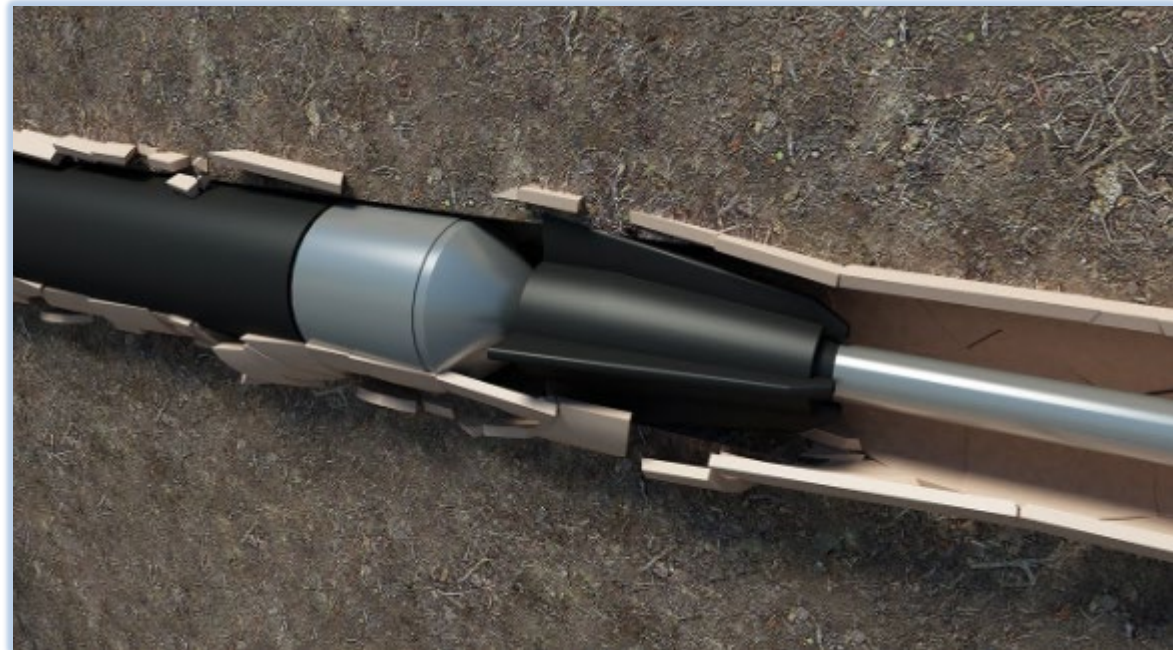
- Area conducive to a trenchless technology called "Pipe Bursting."
- New pipes bored into same location as existing and services tied in.
- Burst the existing pipe and leave in place (permitted activity)
- Cost savings and minimize disruption and inconvenience.

Advertise for Bids:

After Budget Adoption October 1, 2024

Estimated Construction Cost:

\$3 - \$3.5 million



Example: Trenchless Solutions. [pipe bursting \(how it works\) \(youtube.com\)](https://www.youtube.com/watch?v=...)



TOWN OF LONGBOAT KEY

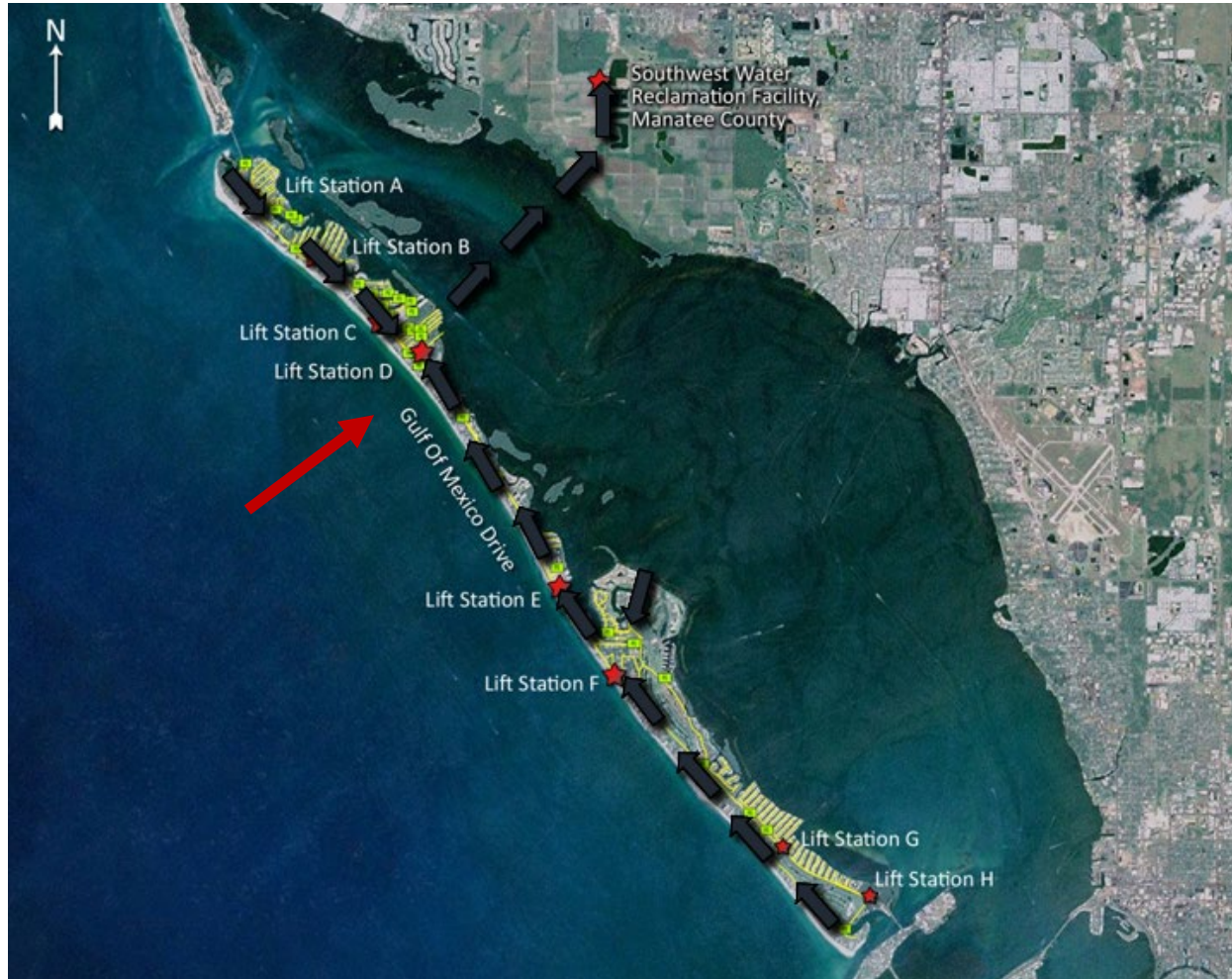
Town of Longboat Key

"Premier Community, Exceptional Service"

Subaqueous Force Main Project

Town Wastewater System Overview

TOWN OF LONGBOAT KEY



47 Lift Stations island-wide to move effluent to Primary Lift Station “D” on Gulf Bay Road

Town effluent pumped from Lift Station D through a four (4) mile route to Manatee County Southwest Water Reclamation Facility on 65th Avenue East

- Approx. 2-miles under Sarasota Bay
- Approx. 2-miles under land
- Town owns up to master meter on 53rd Ave.

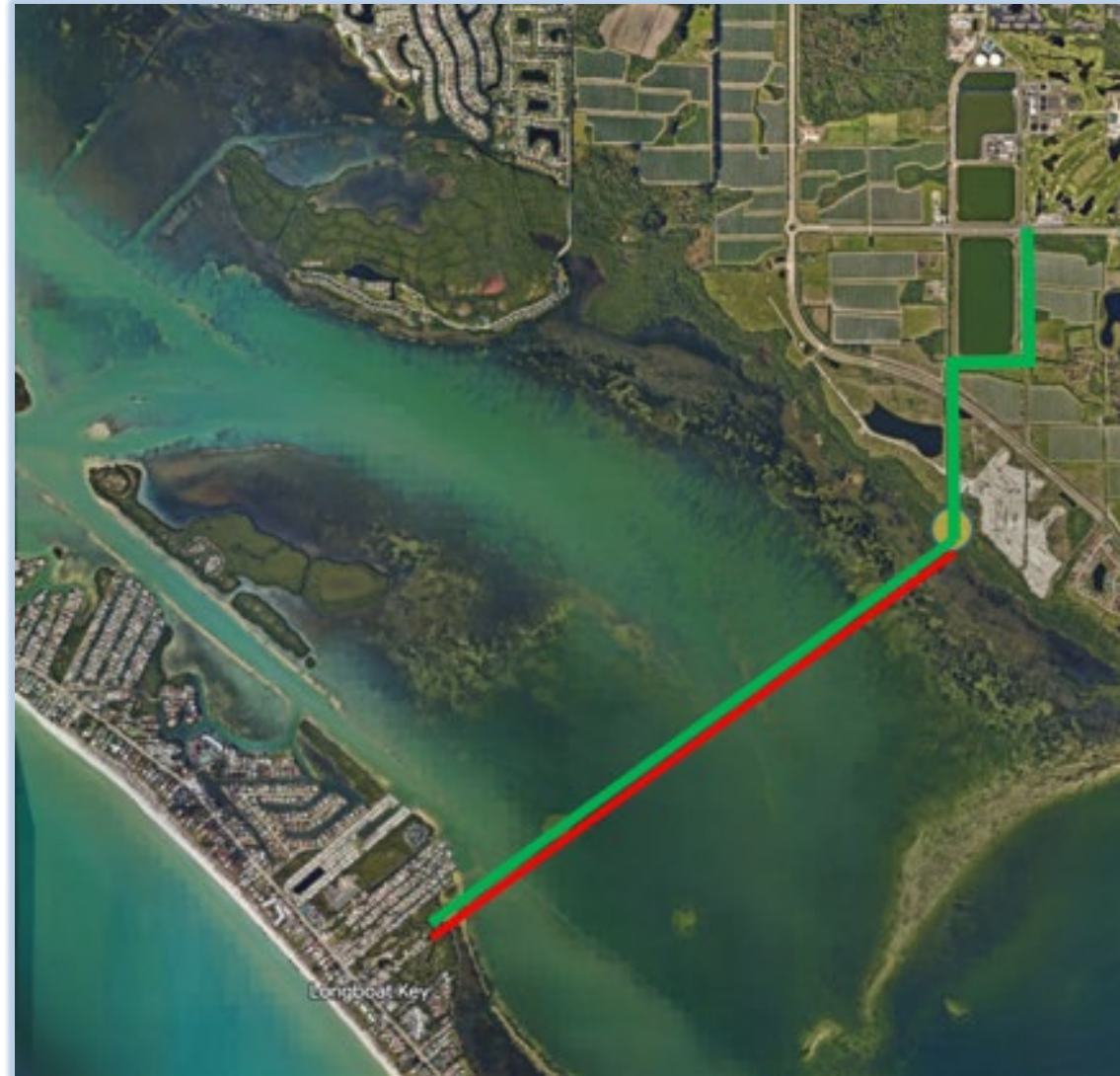
Town’s 20-inch ductile iron force main was installed in 1973 and placed into service in 1975



Update on Current Force Main Efforts

TOWN OF LONGBOAT KEY

1. Town has been planning the addition of a redundant force main (replacement) for some time.
2. **Jan. 2020:** Began preliminary design and permitting for a Sarasota Bay “open-cut” project.
 - a. Carollo Engineers, Inc. and ESA
3. **June 2020:** Manatee County and Town staff discovered a force main leak on the mainland side in Long Bar Pointe. Repaired and placed back into service in about 30-hours.
4. **February 2021:** Entered into consent order with Florida Department of Environmental Protection (“FDEP”).
5. **May 2023:** Town completed slip-line rehabilitation of major mainland portion of the force main pipe line (~6,400 linear feet).





June 2020 Force Main Repair: E.T. Mackenzie

TOWN OF LONGBOAT KEY





TOWN OF LONGBOAT KEY

June 2020 Force Main Repairs: E.T. Mackenzie





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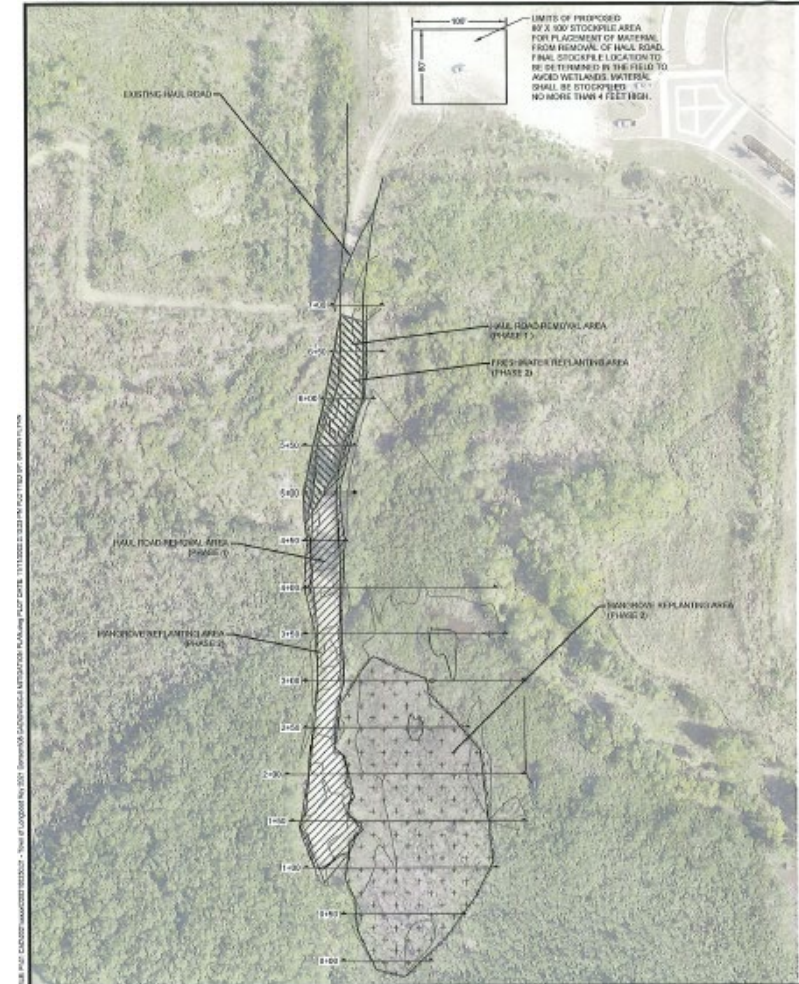
Consent Order between Town and FDEP

Consent order signed Feb. 2021:

- All deliverables up to date including 1st monitoring report.
- All “in-kind” projects completed.
- Town’s Restoration Plan for Long Bar Pointe initiated:
 - A portion of nursery grown planted mangroves in ~1-acre area did not survive.
 - Coordinating alternative(s) with FDEP.



Lift Station “E” By-Pass Pump



Restoration area, imagery by ESA.
Plan approved January 31, 2023



TOWN OF LONGBOAT KEY

Mainland Force Main Lining Project Completed May 2023

Town was granted two State appropriations in the amounts of \$1.25 million and \$800,000, respectively.

Public Works engaged Murphy Pipeline Contractors to line a mainland portion north of Sarasota Bay:

- Slip line with 18" High Density Polyethylene ("HDPE").

Lining work began November 2022 and was completed May 2023:

- From Manatee County meter at 53rd Ave. south into Long Bar Pointe to the leak repair site.
- Approximately 6,400-feet of new pipe inside existing.

Overall project cost approximately \$2.72 million. This includes design, construction and construction oversight.

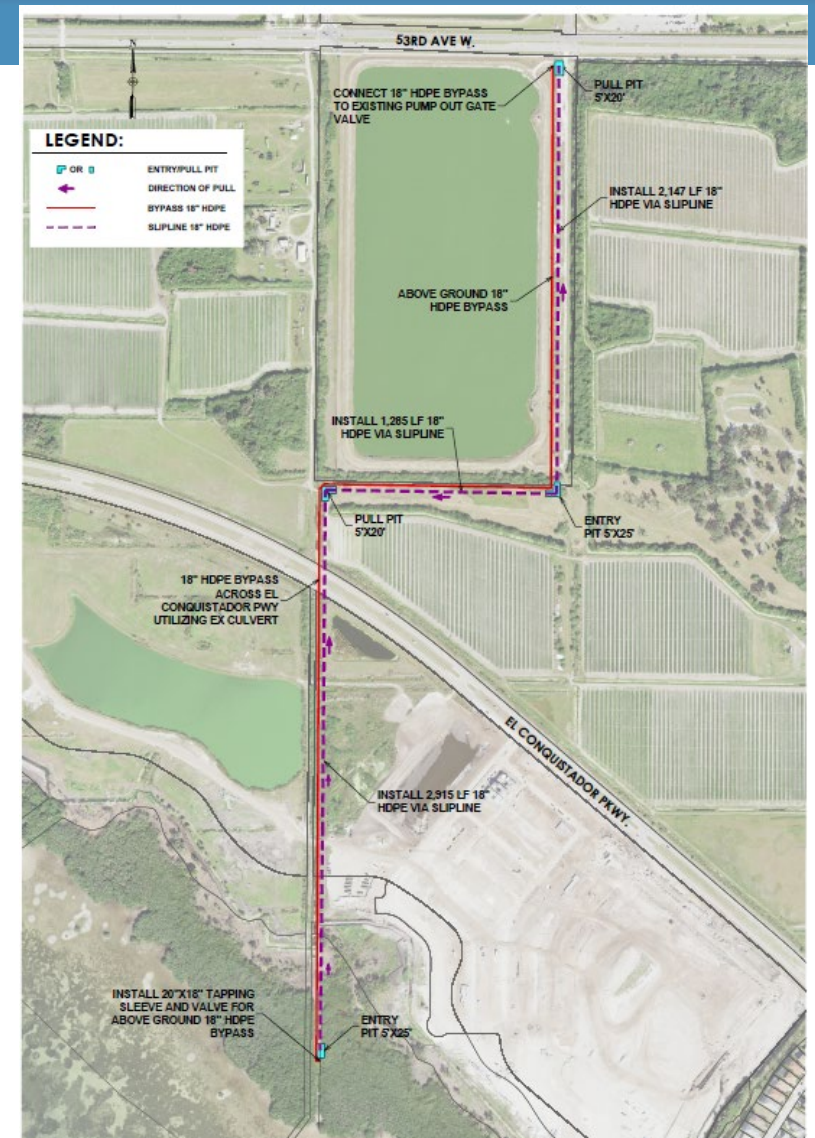


Exhibit – 1, by Chen Moore and Associates



Mainland Force Main Lining

TOWN OF LONGBOAT KEY



Apr 10, 2023 at 2:12:08 PM
Redbay
Bradenton FL 34210
United States



Apr 20, 2023 at 2:10:11 PM
Bradenton FL 34210
United States



Apr 11, 2023 at 2:40:25 PM
Bradenton FL 34210
United States

Condition Assessment (Screening)

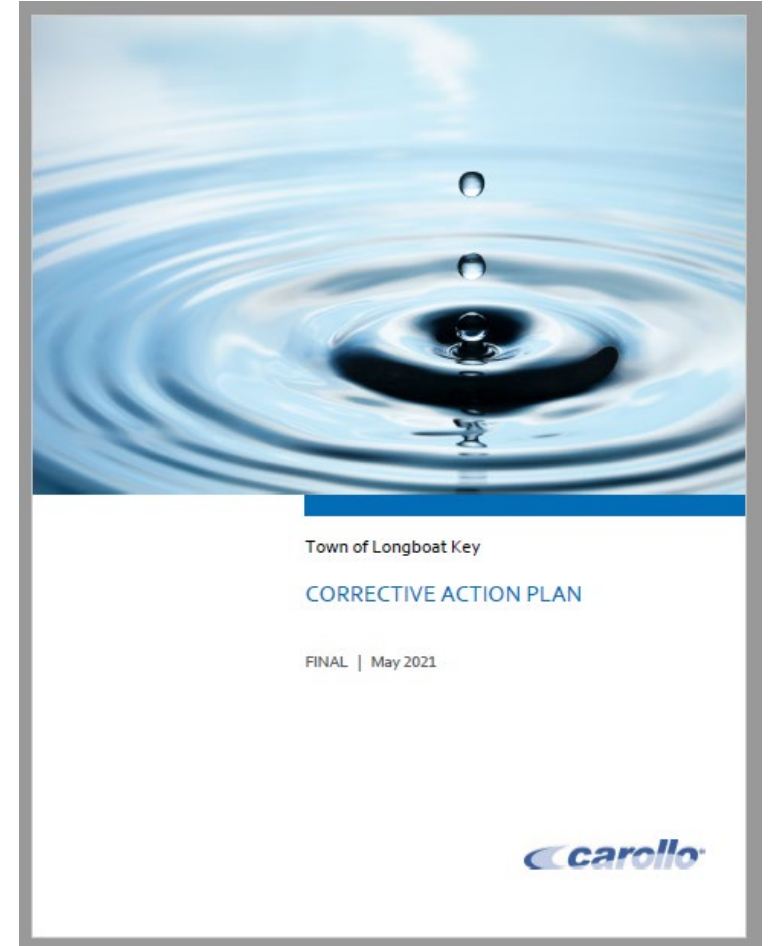
TOWN OF LONGBOAT KEY

Performed condition assessment in accordance with Town's plan and consent order.

Screening tools:

- Hydromax USA Nautilus for gas pockets and leak detection
- V&A Consulting Engineers, Inc. using electro-potential survey for corrosion detection (mostly mainland)
- Coupon extraction from the mainland lining project
- Dive testing.

No major data points of concern at this time. Continue proceeding with major project.





Subaqueous Force Main Project: Current Status

TOWN OF LONGBOAT KEY

Current Status

- New Force Main under Sarasota Bay preliminary design is complete.
- Town has received FDEP and U.S. Army Corps permits to open cut and install a redundant Subaqueous Force Main under Sarasota Bay
- In accordance with our permits, Town will have to perform sea grass and mangrove mitigation for the open cut (8-acres and 1-acre, respectively).
- Town staff proposed \$31.4 million in FY 2025 for final design, easement acquisition, and construction
- Intent is to complete final design, obtain necessary easements, construct the new pipeline project, and construct the mitigation areas.



Subaqueous Force Main Project: Next Steps

TOWN OF LONGBOAT KEY

Next Steps

1. Proceed with and complete final design and permit updating (approx. 1-yr.). Select construction manager for the new, major project early in final design process (Fall 2024).
2. Obtain necessary easement (temporary and permanent) from Long Bar Pointe and Florida Office of State Lands.
3. Target start of Construction Fall 2025.

In addition:

- Resolve final settlement with Long Bar Pointe regarding leak impacts.
- Resolve restoration area mangrove mitigation alternative.

Thank you!