

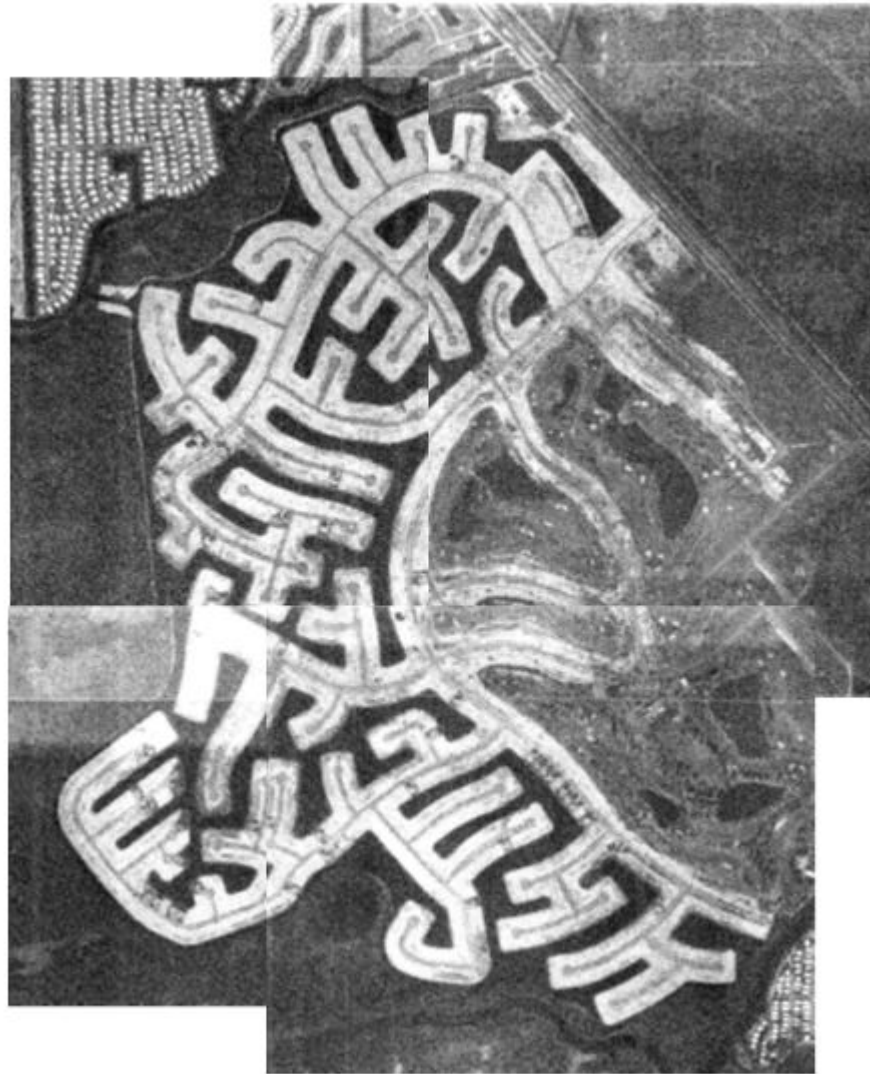


# Punta Gorda

BURNT STORE  
ISLES CANAL  
MAINTENANCE  
ASSESSMENT  
FEE MEETING



**BURNT STORE ISLES JANUARY 1979**



**BURNT STORE ISLES DECEMBER 1981**

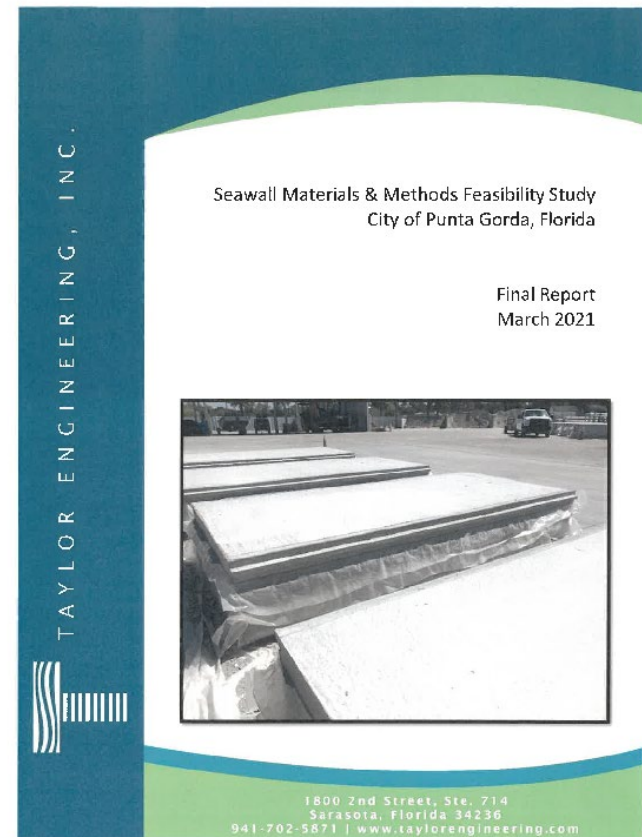


# Burnt Store Isles Canal Maintenance

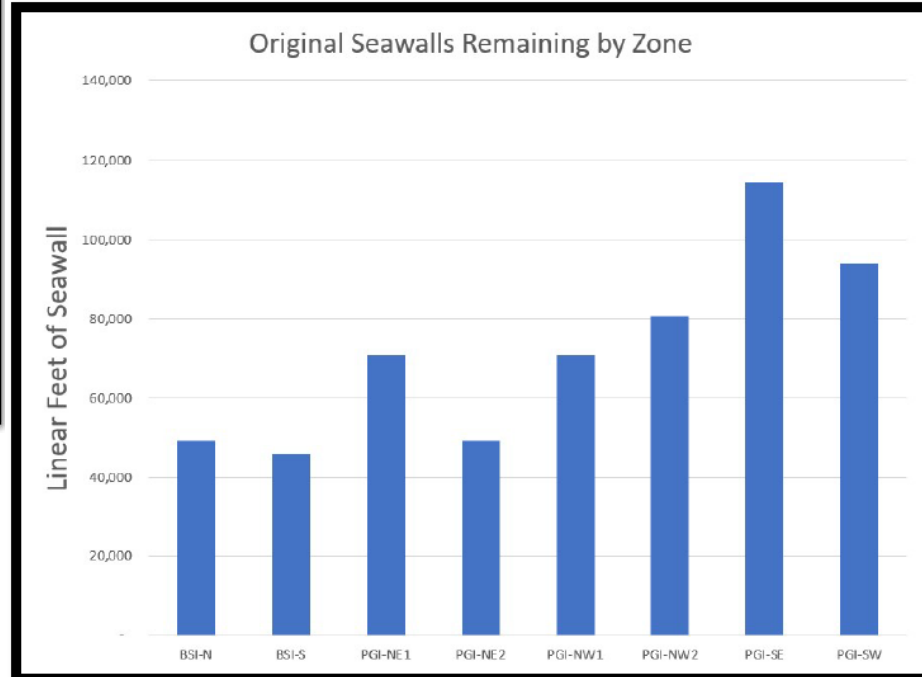
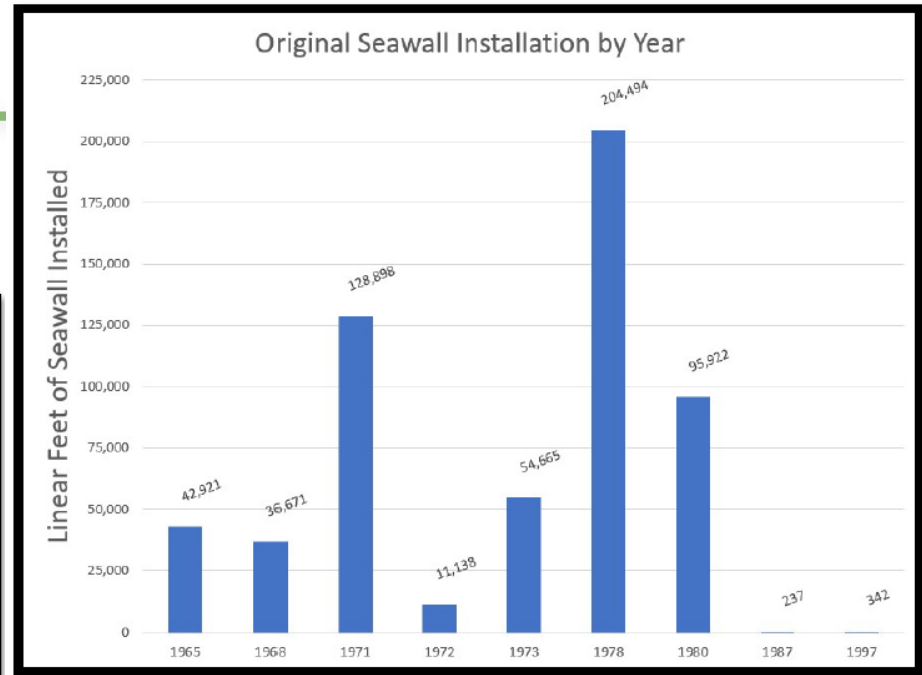
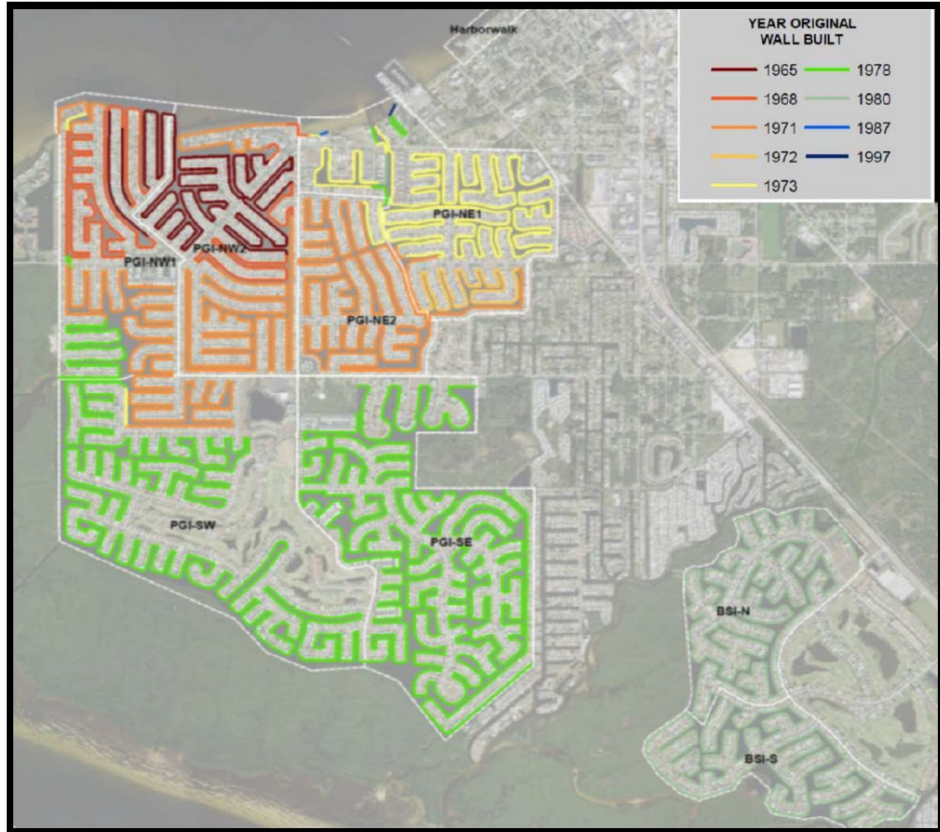
In 2019, the City of Punta Gorda contracted with Taylor Engineering, Inc.

- Establish Estimated Wall Age by Location
- Assignment of Remaining Service Life
- Evaluate the City's Seawall Design and Installation
- Review City's Annual Inspection Criteria and Data
- Alternatives and Associated Costs
- Planning Level Replacement Projections
- Study can be found on the City website at:

[www.ci.punta-gorda.fl.us/government/public-works/canal-maintenance](http://www.ci.punta-gorda.fl.us/government/public-works/canal-maintenance)



# Estimated Wall Age



# Seawall Replacement Rates vs. Service Life

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Punta Gorda replaces approximately 8,000 LF of seawall a year – 1,000 LF just in BSI.

After considering the remaining service life of the seawalls, Taylor Engineering recommended that all original seawalls should be replaced by FY 2040.

A phased approach was presented –

- increasing seawall replacement by 56% from FY 2020 to FY 2030
- then increase replacements by 281% from FY 2030 to FY 2040.

Or increasing seawall replacements 219% every year for 20 years.

# Adopted Study Recommendations

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- Increasing the seawall replacements rates.
  - Burnt Store Isles seawalls originally installed in the 1980's with an estimated service life of 40 years.
  - Of the 95,042 LF (18 miles) of seawall approximately **20%** of the original seawall has been replaced.
- Continue utilizing concrete seawall panels with corrosion resistant steel reinforcement also known as MMFX Steel.
- Increasing the amount of deadmen replacements.
- Plan for future construction staging areas.
- Due to limited barge access – widening the lock and perimeter canal at 90 degree corners.

# Adopted Study Recommendations (continued)

- Seawall Inspection Changes
  - Reduce inspection frequency
  - Implement inspection standards such as American Society of Civil Engineer's (ASCE) Waterfront Facilities Inspection Manual

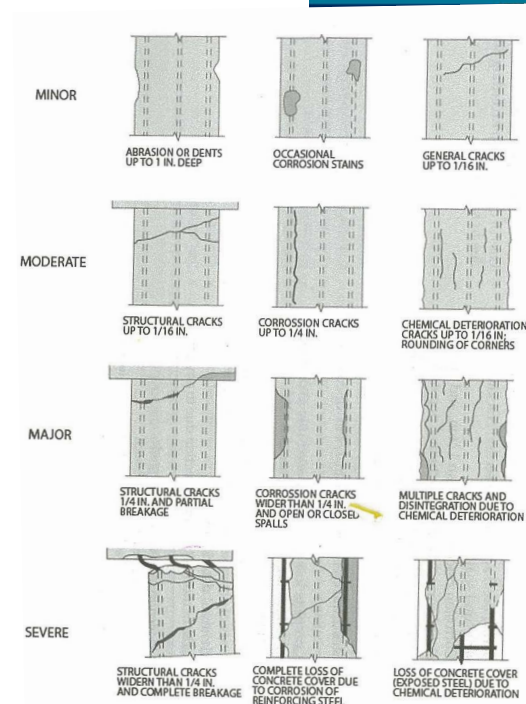
## ASCE Manual

- Level I Inspection (Visual and Tactile) - Routine "walk by or swim by" Inspection
- Element by Element Findings
- Structure Ratings
- Repair Recommendations



ASCE Manuals  
and Reports on  
Engineering  
Practice No. 130

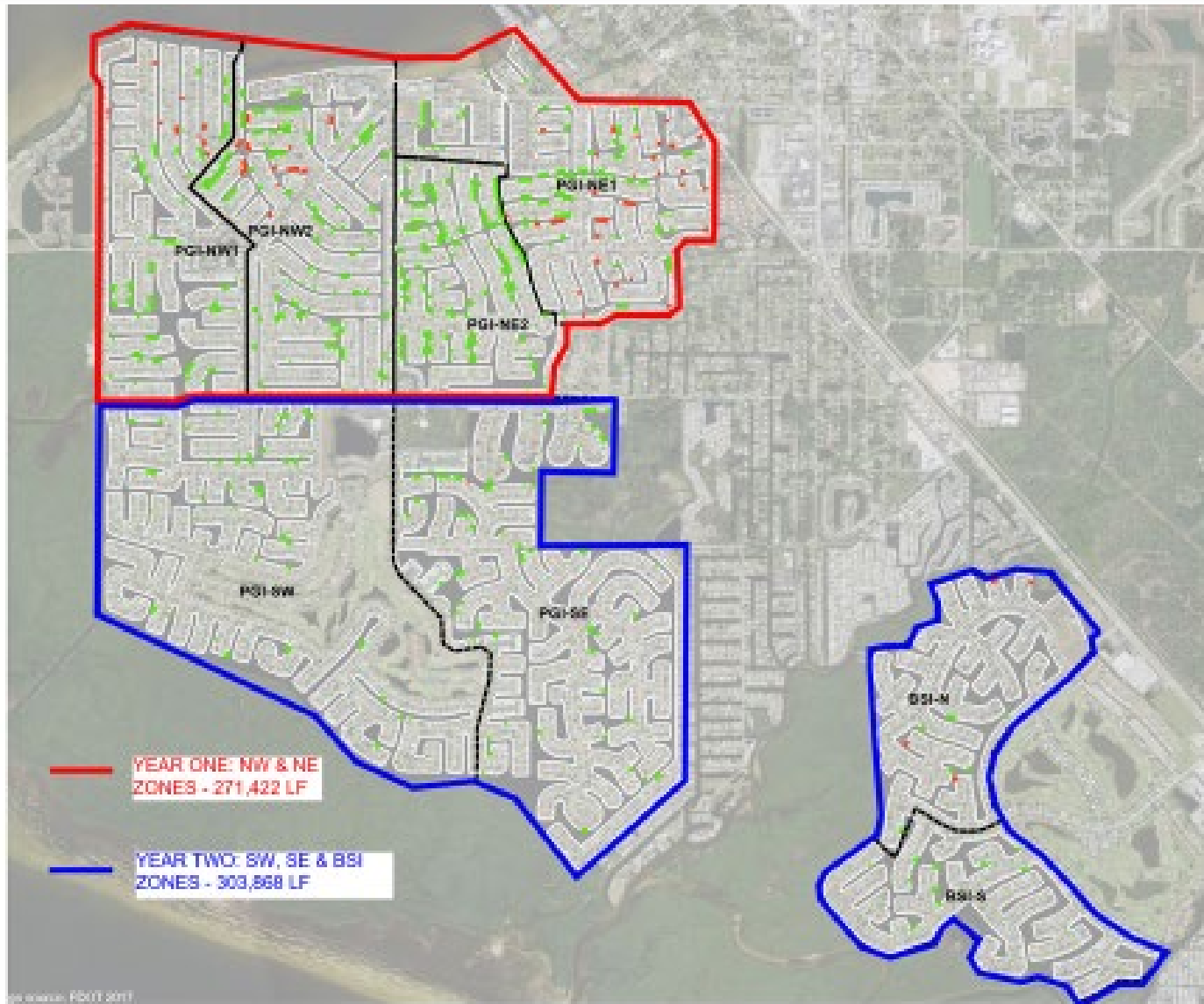
## Waterfront Facilities Inspection and Assessment



ASCE



# Inspections performed every two years



# Wall and Cap Inspection Ratings



Code	Rating	Description
0	Excellent	New condition
1	Good	Some minor problems
2	Fair	All primary structural elements are sound, but may have minor section loss, cracking, spalling or scour
3	Moderate	Neither 2 nor 4, but no other specific description provided
4	Serious	Loss of section, deterioration, spalling, or scour have seriously affected primary structural components; local failures are possible
5	Failure	Failure of primary structural elements

# BURNT STORE ISLES ASSESSMENT RESULTS

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## FY 2022 Seawall Assessment

### Analysis Summary

#### Burnt Store Isles

#### Total Cap and Wall

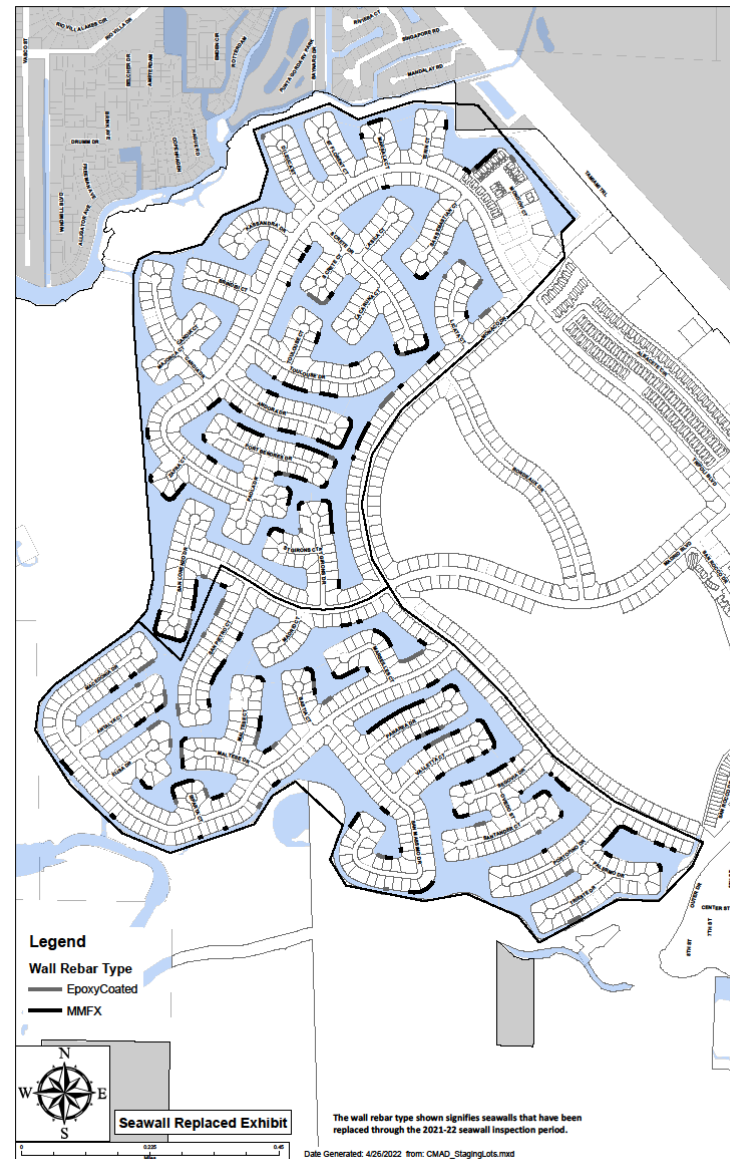
	Calc'd Condition	Condition Length (Feet)	Condition Length (Miles)
Excellent	0	0	0.00
Good	1	40,944	7.75
Fair	2	31,493	5.96
Moderate	3	15,523	2.94
Serious	4	5,245	0.99
Failure	5	1,624	0.31
Obstructed Inspection		213	0.04
Total District Length		95,042	18.00

# Seawall Replacement Locations

Total of 95,042 lineal feet of seawalls or approximately 18 miles

Approximately 20% of the original seawall has been replaced.

Leaving approximately 76,034 lineal feet or 14.4 miles of original seawall





# Canal Maintenance Assessment Fees Pay For:

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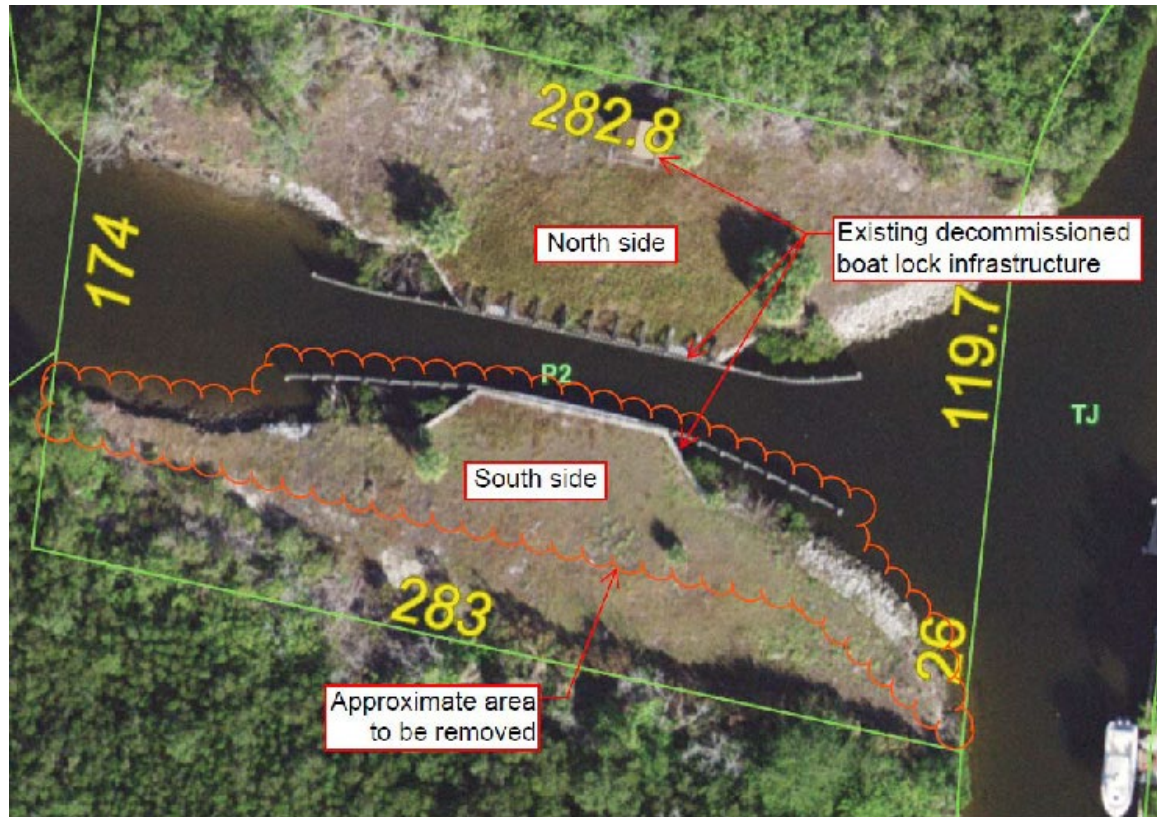
- Seawall replacement
- Bi-annual seawall assessment
- Manufacturing seawall panels
- Mangrove trimming in common areas
- Dredging navigable channels
- Channel marker maintenance – pilings, signs, lights, mirrors, etc.
- Seawall maintenance – depressions, cap and wall repairs
- Boat Lock maintenance – mowing, tree trimming, lights, fender boards, etc.
- Maintenance of the drainage inlet filters
- Permit compliance and reporting
- Customer service – inspections, debris removal, etc.

# Widening the Boat Lock

This project will allow a fully assembled and loaded barge to access the subdivision. The southerly 21' of uplands would be removed to widen the boat lock from its current 21' width to 42' wide.

Design and permits have been completed. Bids to construct the widening came in above budgeted cost. Therefore the bids were rejected.

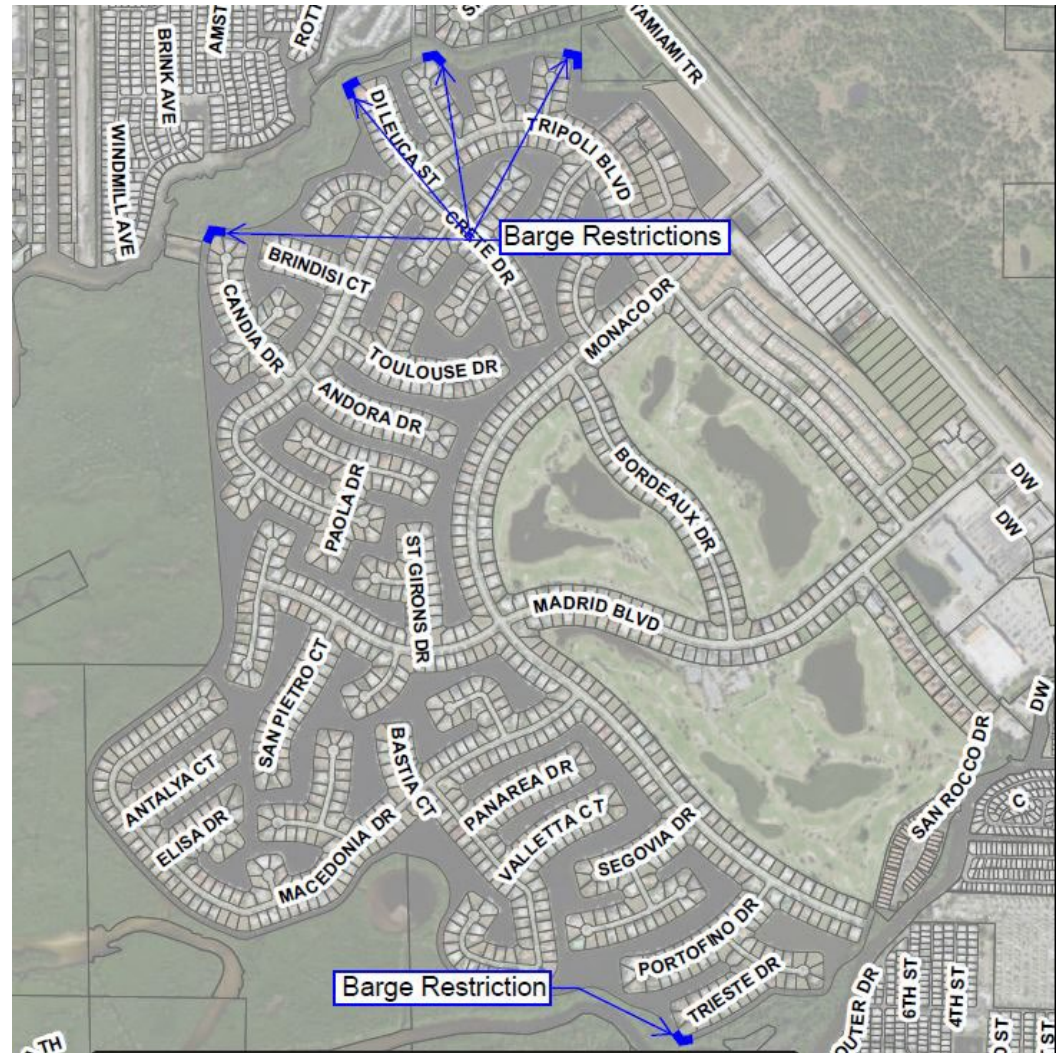
Permits for this project is for 5 years, so the project can be delayed until construction costs come down or additional funds are budgeted.



# Channel Corner Widening

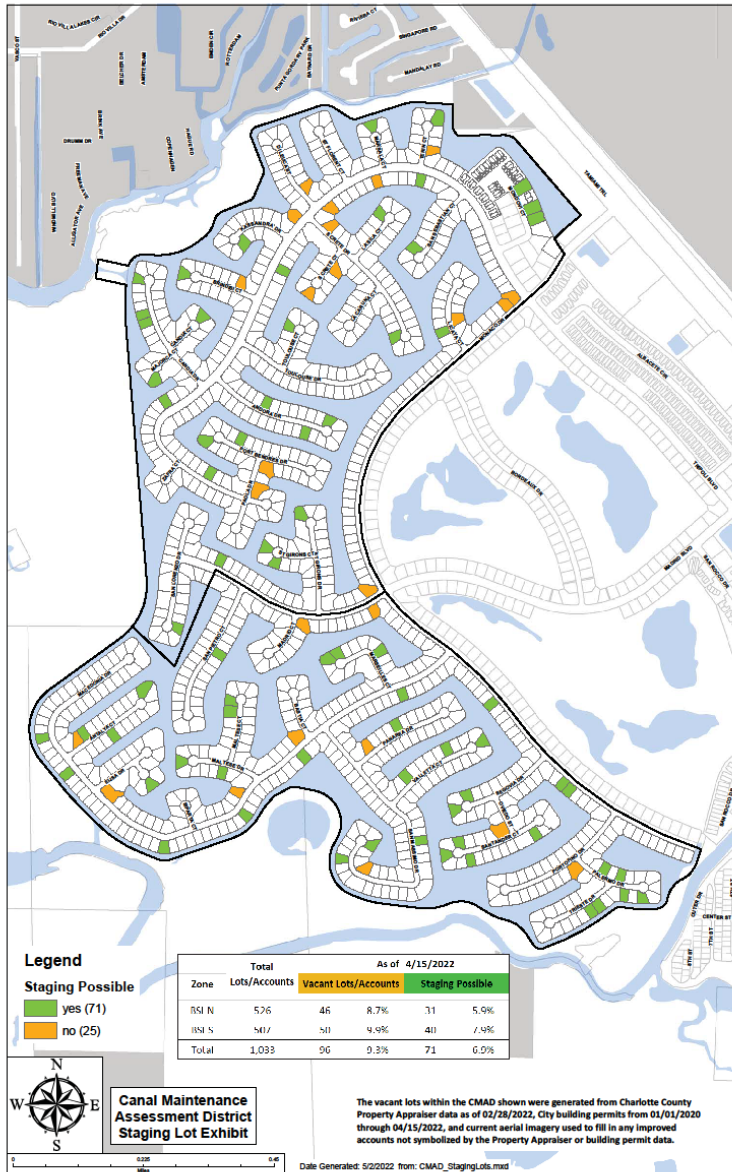
Currently a fully assembled and loaded barge has difficulty maneuvering through 5 pinch points along the perimeter canal. At times, delaying seawall replacement.

Recommendation is to purchase additional land and then design and permit the navigable channel to be dredged approximately 40' wide.





# Planning for Future Staging Areas



Per City Code, the seawall replacement contractor is able to utilize vacant lots for staging construction materials.

There are approximately 1,033 lots in the BSI Canal Maintenance District. Approximately 90% of those lots are built out.

As of April 15, 2022, only 71 lots are vacant with the potential to be used as a staging area.

Recommendation: start saving funds to purchase commercial property for permanent construction staging area.