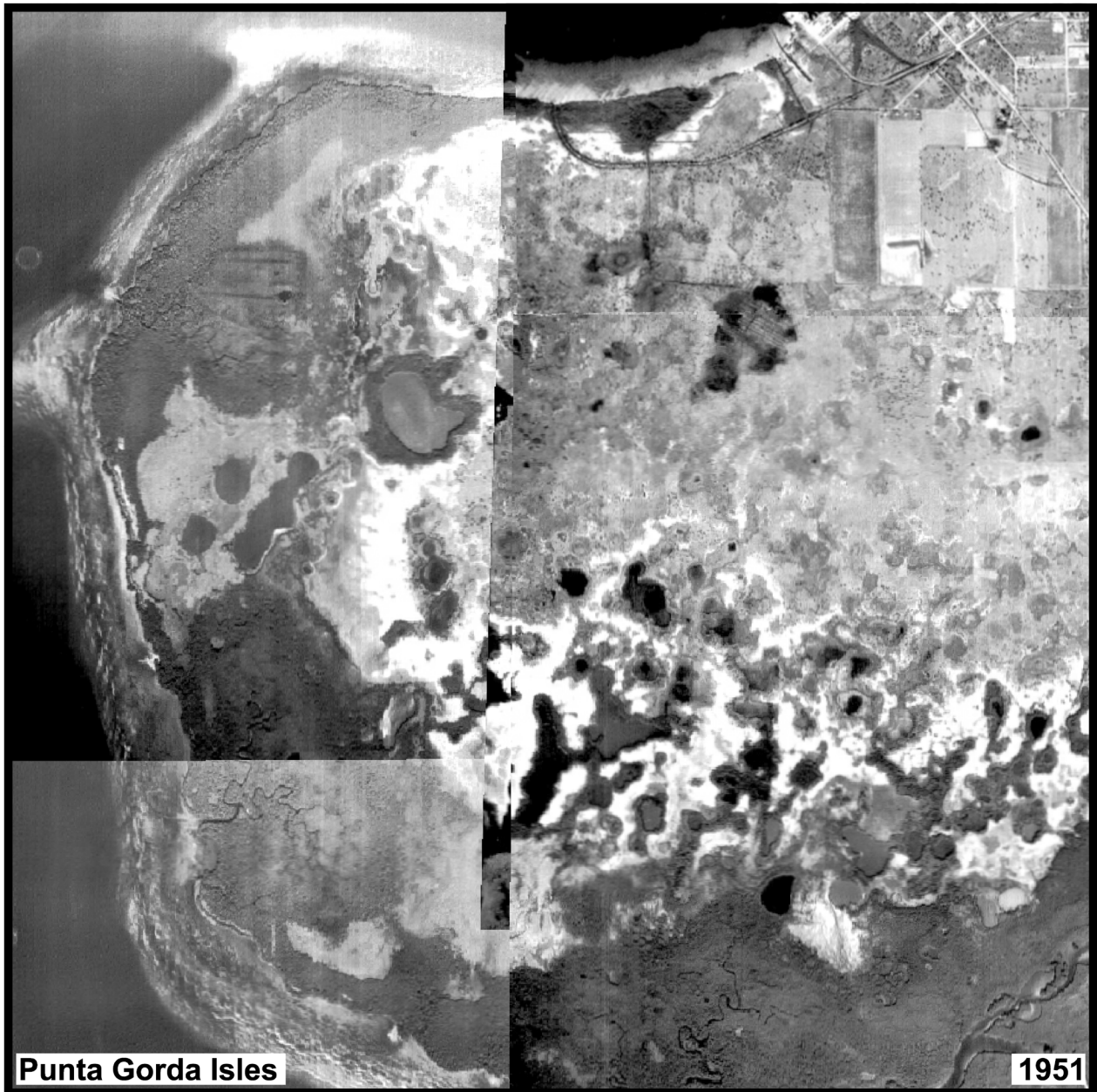


Punta Gorda

PUNTA GORDA
ISLES CANAL
MAINTENANCE
ASSESSMENT
FEE MEETING



Punta Gorda Isles

1951

PUNTA GORDA ISLES 1951



Punta Gorda Isles

1966

PUNTA GORDA ISLES 1966



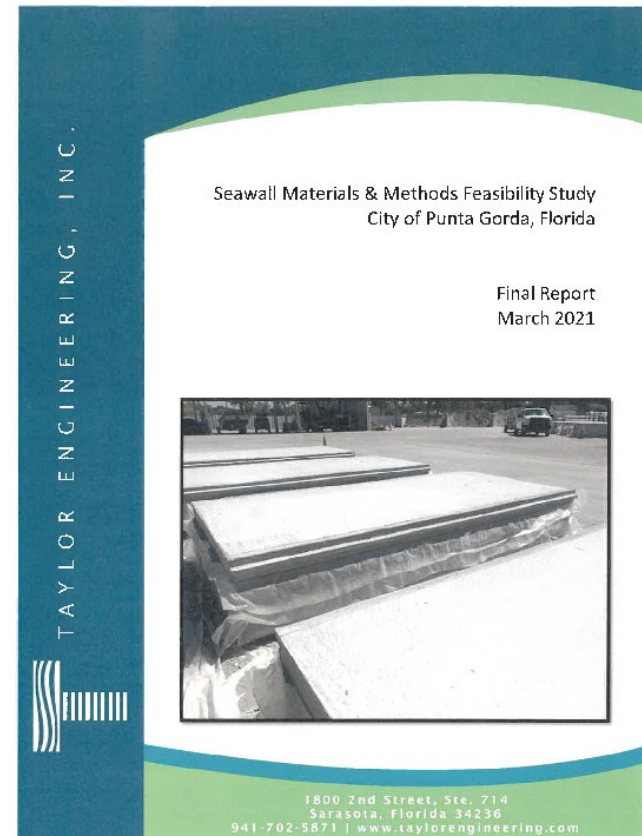
PUNTA GORDA ISLES 1979

Punta Gorda 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



Adopted Study Recommendations

- Increasing the seawall replacements rates.
 - Punta Gorda Isles seawalls originally installed in the early 1960's with an estimated service life of 40 years.
 - Of the 480,284 LF (90 miles) of seawall approximately 45% 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.

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

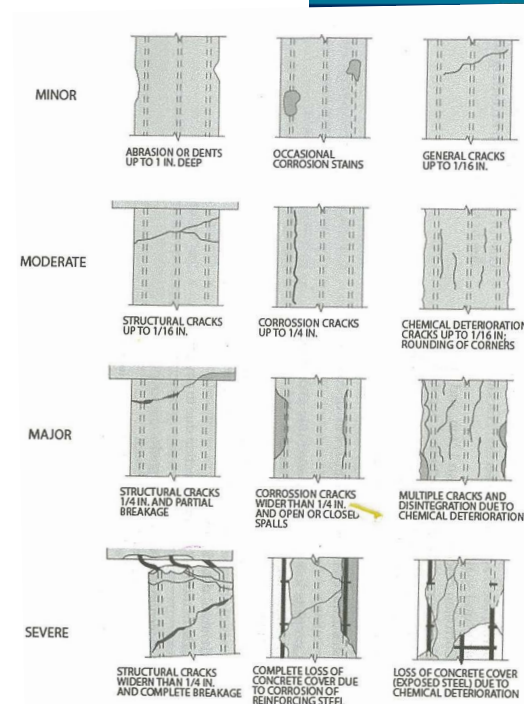
ASCE Manual

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

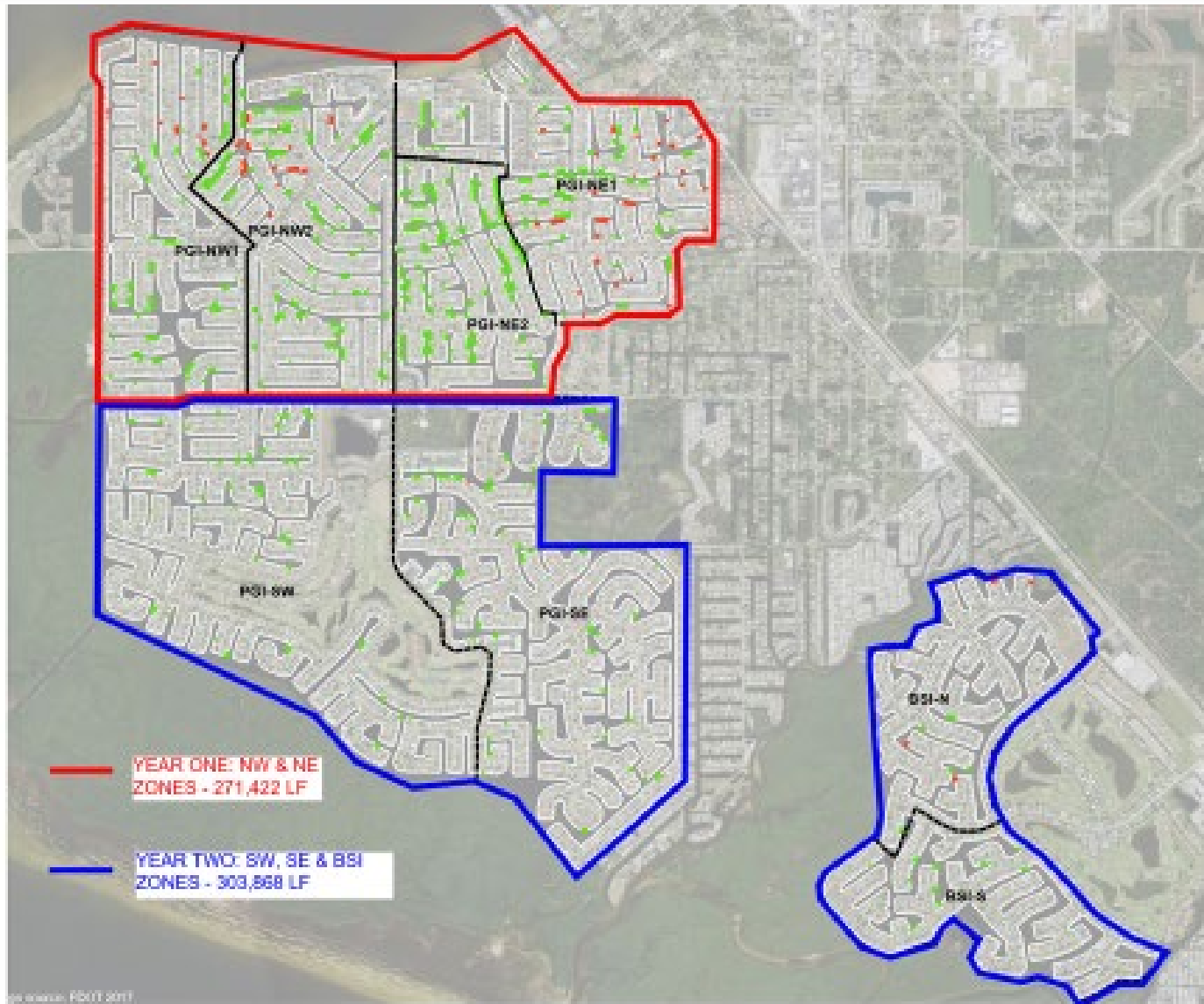


ASCE Manuals
and Reports on
Engineering
Practice No. 130

Waterfront Facilities Inspection and Assessment



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

Punta Gorda Isles Assessment Results

2020-21 Seawall Assessment

Analysis Summary

Punta Gorda Isles

Zones NE and NW

Total Cap and Wall

Calc'd Condition (Jenks)	Condition Length (Feet)	Condition Length (Miles)
Totals:	271,401	51.40
0	178	0.03
1	154,396	29.24
2	29,021	5.50
3	49,124	9.30
4	36,332	6.88
5	2,349	0.44

2021-22 Seawall Assessment

Analysis Summary

Punta Gorda Isles

Zones SE and SW

Total Cap and Wall

Calc'd Condition (Jenks)	Condition Length (Feet)	Condition Length (Miles)
Totals:	208,603	39.51
0	226	0.04
1	74,870	14.18
2	60,800	11.52
3	50,653	9.59
4	16,422	3.11
5	5,632	1.07

Seawall Replacement Assessment

Total of 480,284 lineal feet of seawalls or approximately 90 miles. Approximately 45% of the original seawall has been replaced. Leaving approximately 261,070 lineal feet or 49.45 miles of original seawall.

Table based on 2020-21 Seawall Assessment
PGI-NE and PGI-NW

Wall Rebar	Feet	Percent	Feet	Percent
Total	271,401	100.0%		
Epoxy Coated	71,348	26.3%	148,733	54.8%
MMFX	77,385	28.5%		
Original	122,668	45.2%		



Table based on 2021-22 Seawall Assessment
PGI-SE and PGI-SW

Wall Rebar	Feet	Percent	Feet	Percent
Total	208,883	100.0%		
Epoxy Coated	32,906	15.8%	70,481	33.7%
MMFX	37,575	18.0%		
Original	138,402	66.3%		

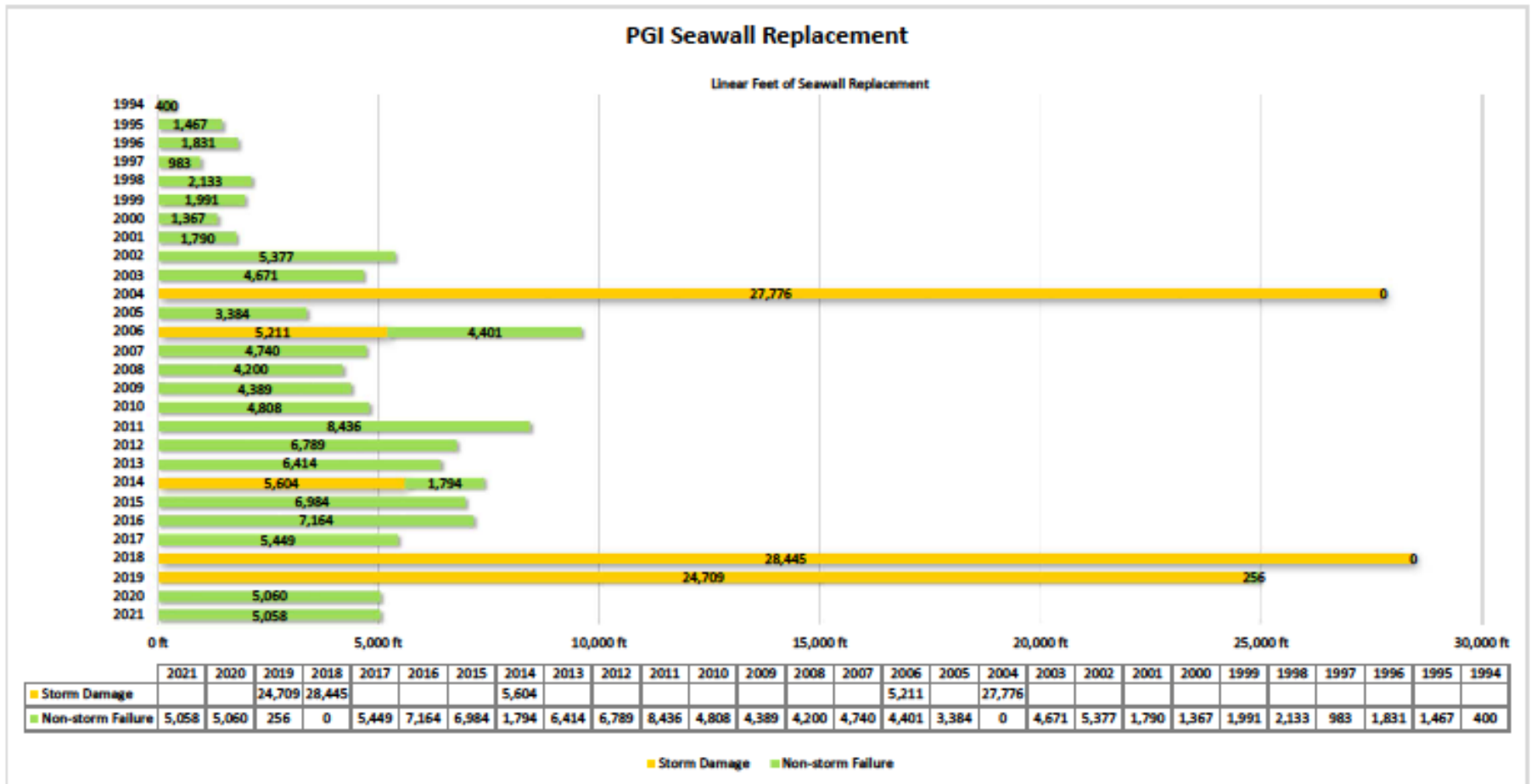


Combined tables from above
PGI-NE, PGI-NW, PGI-SE, and PGI-SW

Wall Rebar	Feet	Percent	Feet	Percent
Total	480,284	100.0%		
Epoxy Coated	104,254	21.7%	219,214	45.6%
MMFX	114,960	23.9%		
Original	261,070	54.4%		



Storm Related Replacements vs. Regular Maintenance



Total Storm Damage	91,745 feet	47.5%
Total Non-storm Failure	101,336 feet	52.5%
Total Seawall Replacement	193,081 feet	100.0%

Note: Replacement lengths shown are based on historical financial and recent replacement records.

Seawall Replacement Rates vs. Service Life

Punta Gorda replaces approximately 8,000 LF of seawall a year (7,000 LF in PGI)

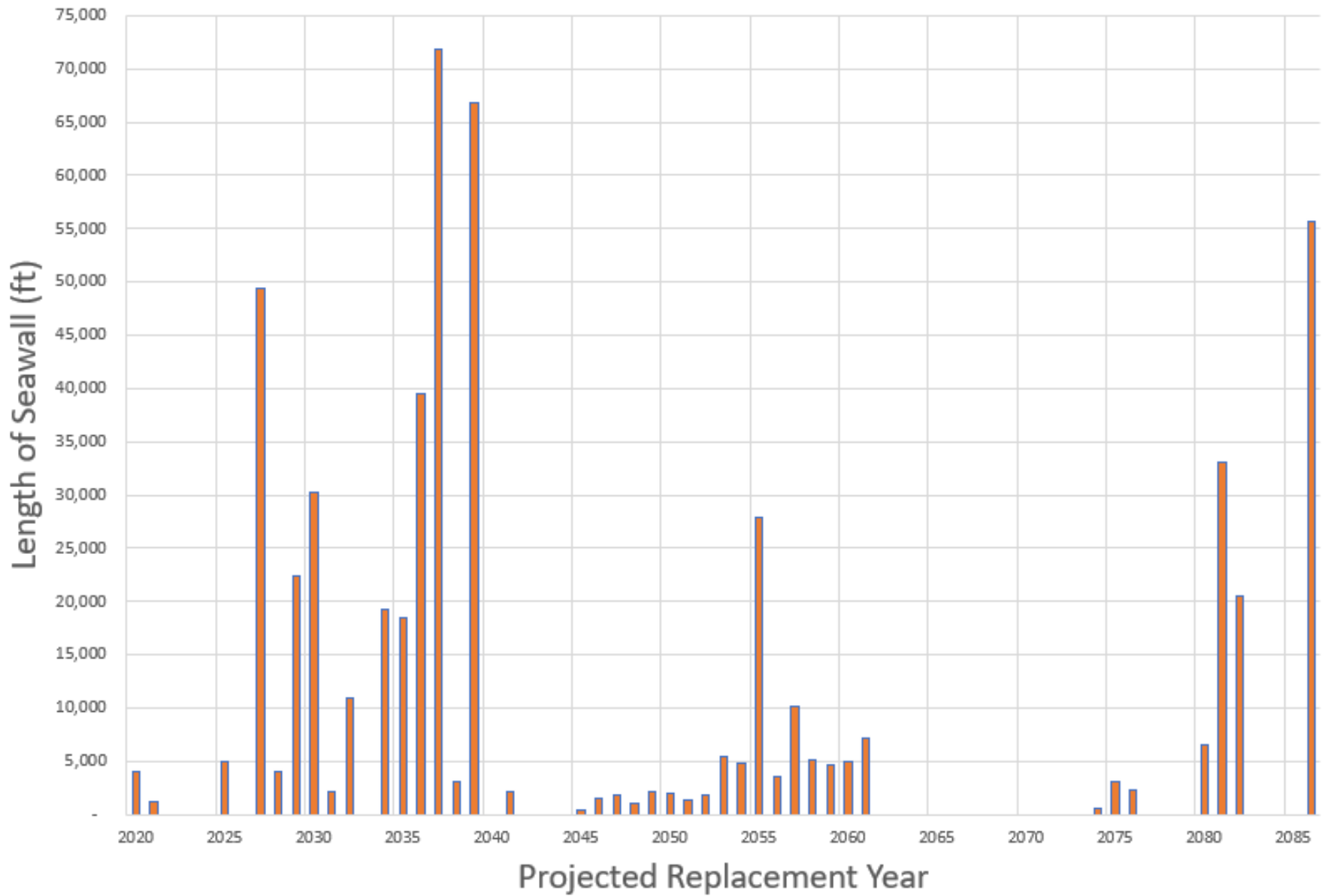
After considering the remaining service life of the seawalls, Taylor Engineering recommended that all original seawalls should be replaced by FY 2040.

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.

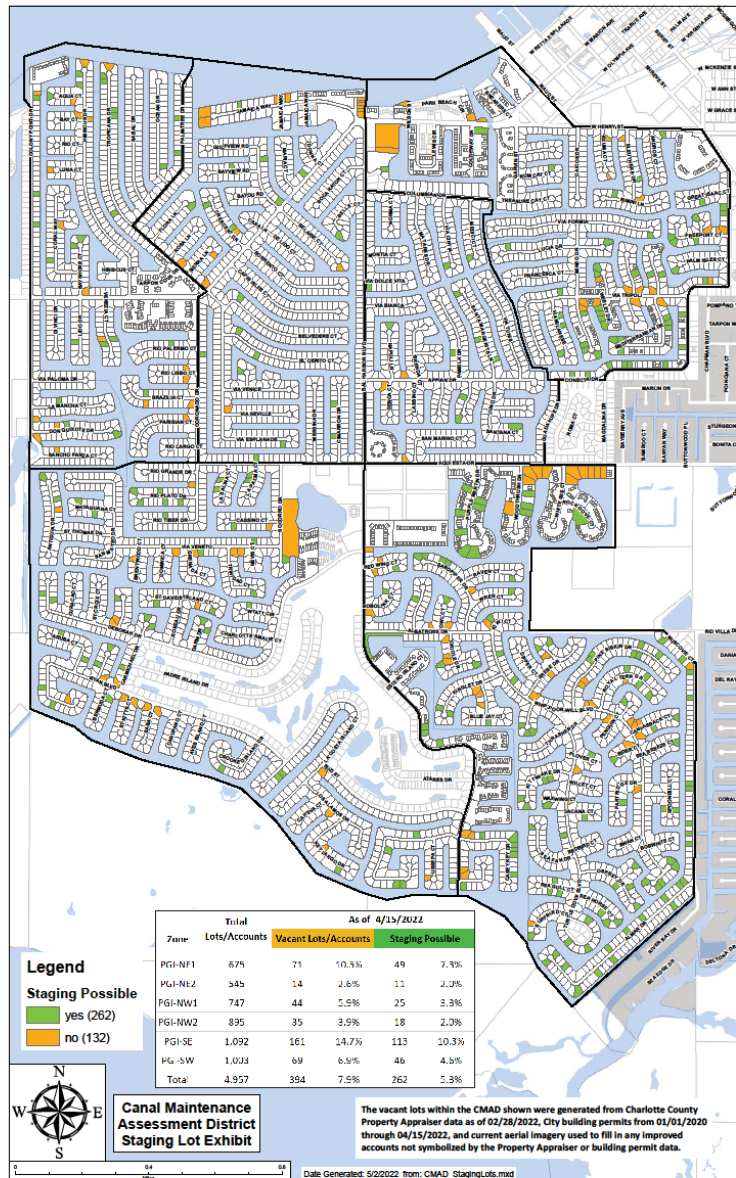
Remaining Projected Seawall Service Life



Canal Maintenance Assessment Fees Pay For:

- Seawall replacement
- Annual seawall inspection
- Manufacturing seawall panels
- Mangrove trimming in common areas
- Dredging navigable channels and inlets
- Channel marker maintenance – pilings, signs, lights, mirrors, etc.
- Seawall maintenance – depressions, cap and wall repairs
- Sancho Panza Point maintenance – mowing and tree trimming
- Permit compliance and reporting
- Customer service – inspections, debris removal, etc.

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 4,957 lots in the PGI Canal Maintenance District. Approximately 92% of those lots are built out.

As of April 15, 2022, only 262 lots are vacant with the potential to be used as a staging area.

Spoil Site Channel

With the increase in new home construction, there are fewer vacant lots available for staging for seawall replacements.

Recommendation is to dredge a channel from Ponce Inlet to the spoil site to create a waterway access for barges.

