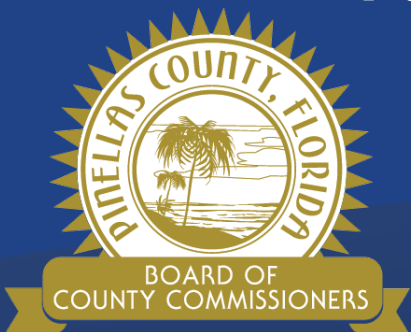


Grand Canal



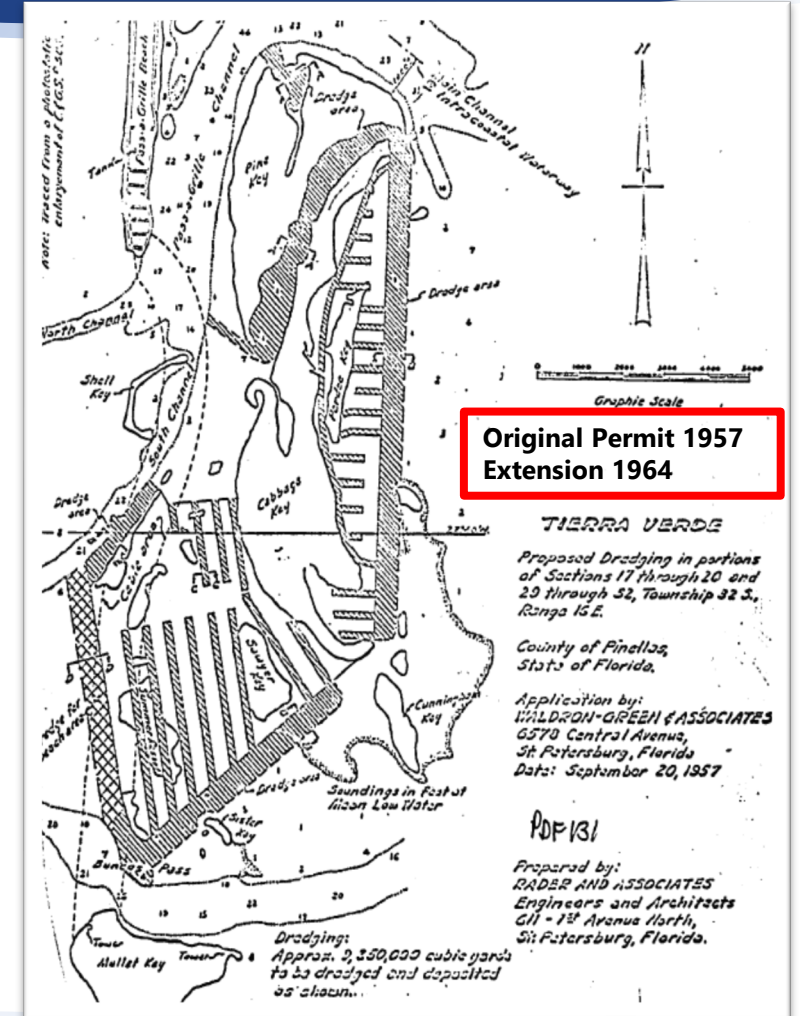
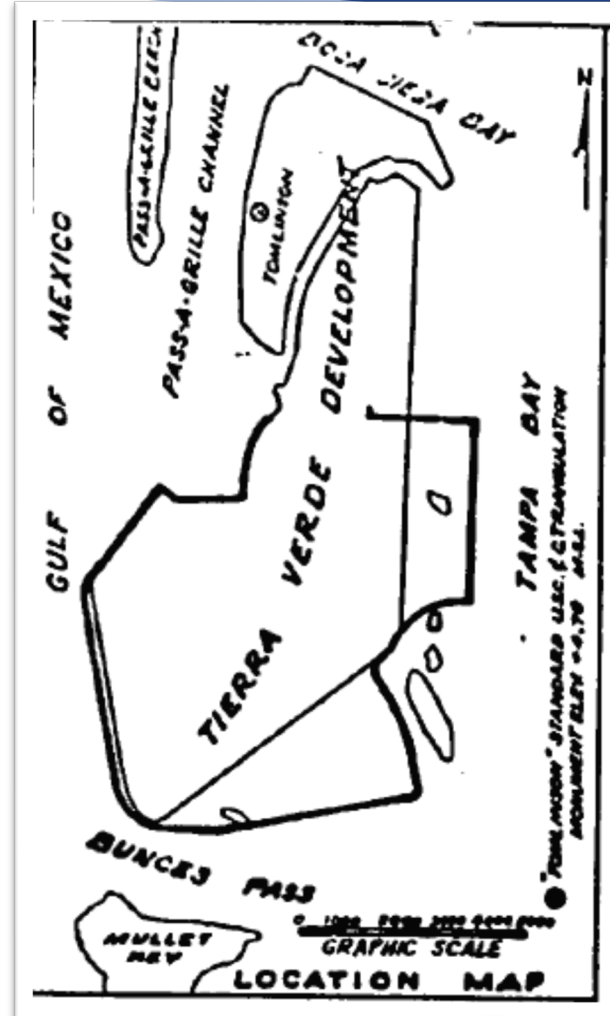
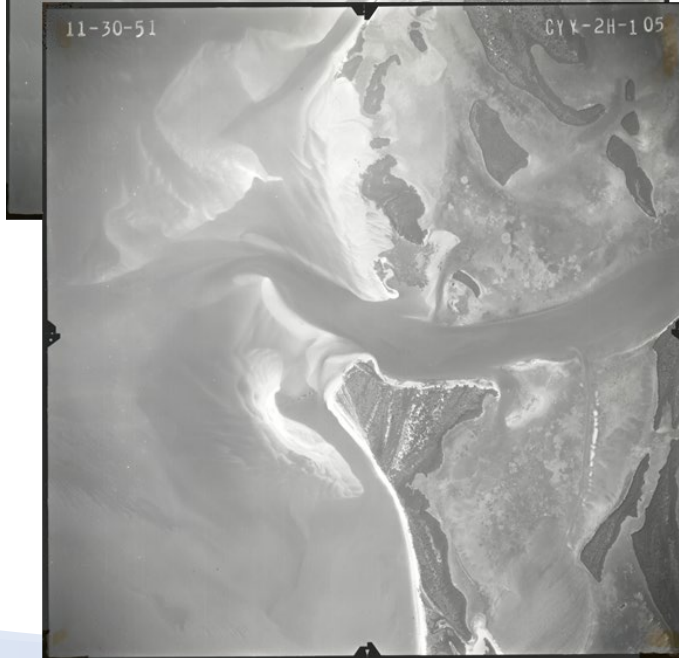
Public Works Department
Kelli Hammer Levy
Director



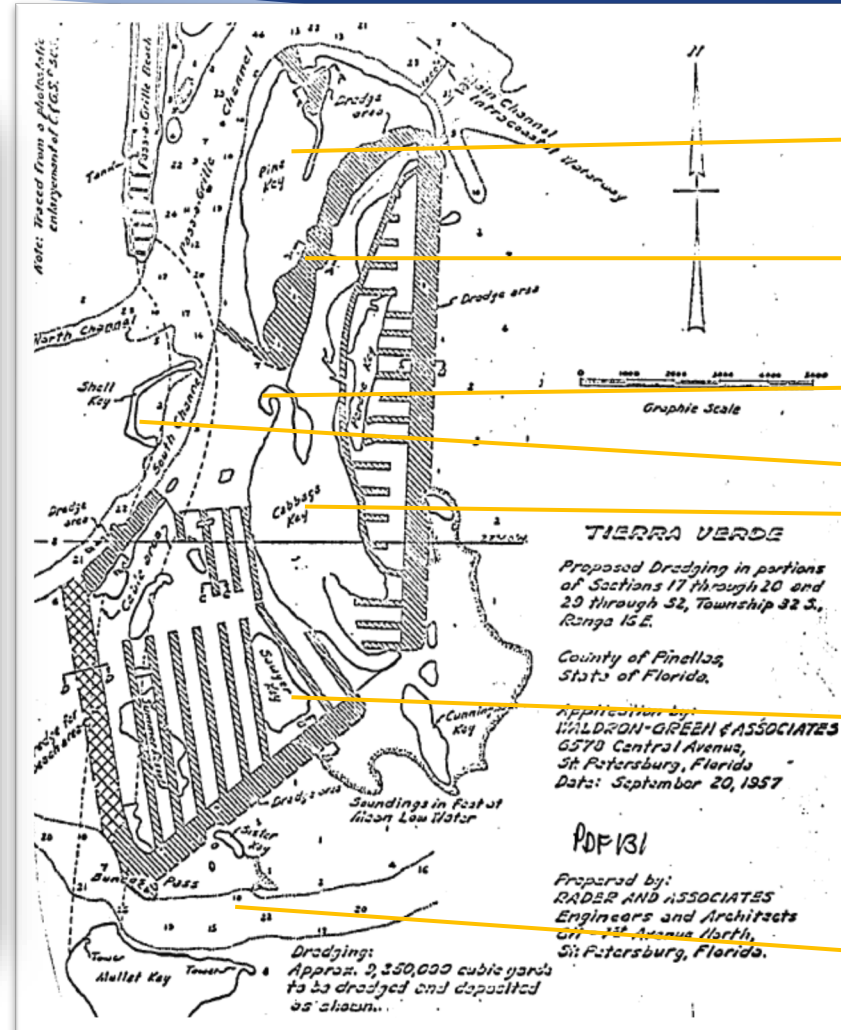
Our Vision: To Be the Standard for Public Service in America



Tierra Verde Development History

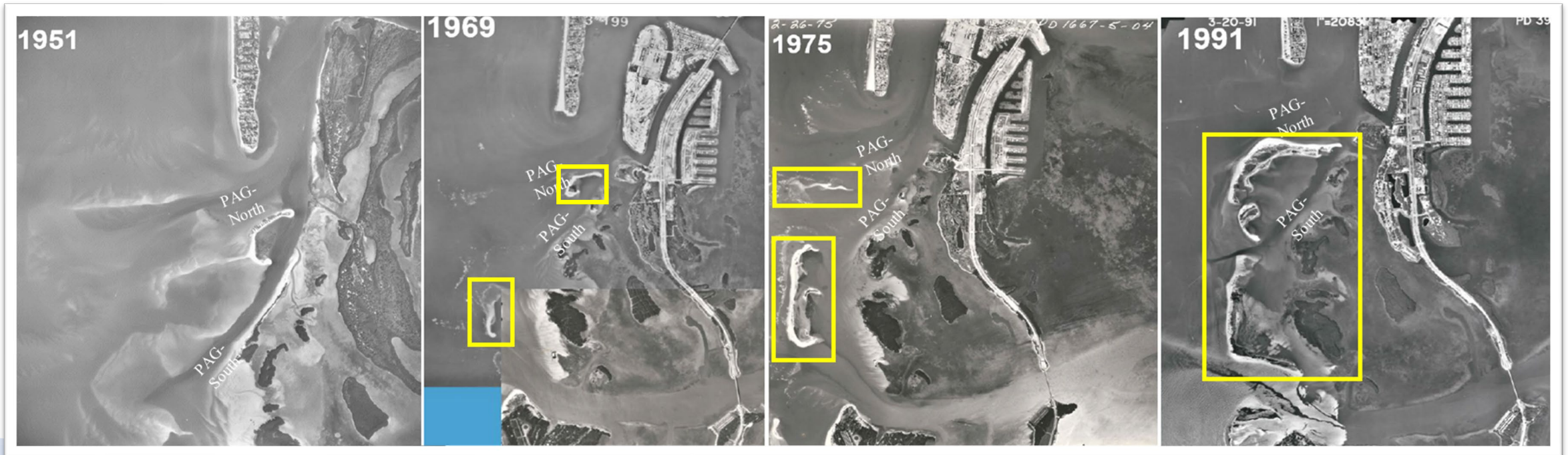


Tierra Verde Development History



2020 APTIM Study Findings

- Part of the inlet complex of the Tampa Bay entrance and Pass-A-Grille channel
- Significant regional changes to inlet shoals and island systems over 50-60 years
- Shell Key is a relatively modern island evolved from exposed shoals

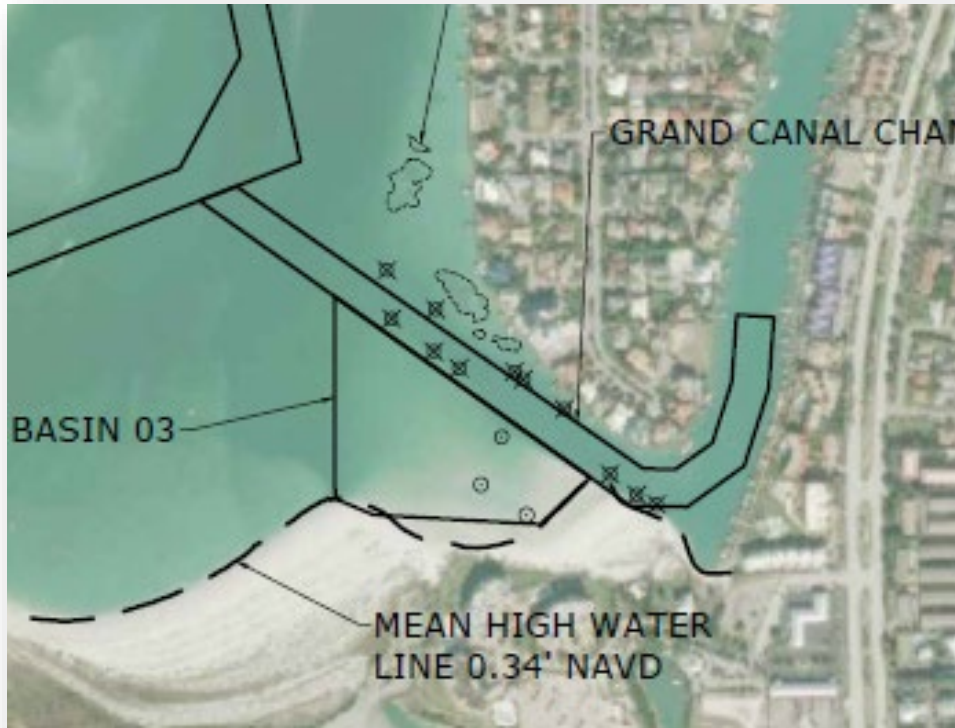


2020 APTIM Study Findings

- 30,000 cy/yr is moving east
- The rate of accretion has increased
- Water flow is low within Grand Canal (measured and modeled)
- Sand currently moving east will restrict Grand Canal
- Re-opening North Pass is not feasible
- **Alternatives that manage sediments in Grand Canal are the most permissible**



Design and Permitting



- Design: Grand Canal and Basin A
- Regulatory agency requirements
 - Resource assessment (natural and cultural)
 - Survey and bathymetry
 - Geotechnical evaluation
 - Modeling of alternatives (dredging scenarios)
 - Design
 - Grand Canal
 - Basin #3
 - Disposal and placement ★
- Permitting
 - USACE and FDEP

Design and Permitting Timeline



- Key Milestones
 - Permit submittals
 - State permit review process and issuance
 - Federal permitting
 - Contractor bidding and contract approvals
 - Dredging (~3 months)

Task	Start Date	End Date
<i>Notice to Proceed</i>	7/23/2020	7/23/2020
<i>Internal Kickoff/Project Setup</i>	7/23/2020	8/23/2020
<i>Pre-Application Meeting</i>	8/23/2020	9/23/2020
<i>Fieldwork Planning/Preperation</i>	8/23/2020	10/23/2020
<i>Topographic/Bathymetric Surveys</i>	9/23/2020	2/23/2021
<i>Geophysical Fieldwork</i>	9/23/2020	2/5/2021
<i>Geotechnical Fieldwork</i>	10/23/2020	2/23/2021
<i>Geologic Data Processing</i>	11/23/2020	2/23/2021
<i>Cultural Resources Reporting</i>	11/23/2020	1/23/2021
<i>Engineering Design</i>	12/23/2020	3/23/2021
<i>Disposal Design</i>	12/23/2020	3/23/2021
<i>Modeling of Final Design</i>	2/23/2021	4/23/2021
Permit Applications Preperation	3/23/2021	6/23/2021
Permit Submittals	6/23/2021	6/23/2021
State Permit Finalized	9/23/2021	12/23/2021
Federal Permit Processing (Exact Timeline Unknown)	6/23/2021	7/23/2022
Contractor Procurement	3/1/2022	11/30/2022
Grand Canal and Basin A Dredging	1/31/2023	4/30/2023
Maintenance Dredging	TBD	TBD

**Tasks in Italics indicate task is completed*

Project Cost Estimate

- **Project Costs**

- Feasibility study: \$197K
- Design & permitting: \$231K
- Construction: ~\$2.95M

- **Total Assessment Costs**

- Worst case: ~\$3.182M
- Best case: ~\$585K

- **5-year maintenance estimate**

- TBD



Property Type	Worst Case Estimate*	Best Case Estimate*
Condo Small (12 ln ft)	\$2,313	\$425
Condo Medium (17 ln ft)	\$3,276	\$602
Condo Large (38 ln ft)	\$7,323	\$1,346
SFR Small (25 ln ft)	\$4,818	\$886
SFR Medium (96 ln ft)	\$18,500	\$3,400
SFR Large (234 ln ft)	\$45,094	\$8,288
Marina	\$304,091	\$55,892

SFR: Single Family Residential

*Estimates: 192.71 per ln ft (worst case) and 35.42 per ln ft (best case)

Funding Options

- **Considered a local navigation project**
 - No federal interest or state grant programs
- **Non-ad valorem assessment**
 - Common tool for local navigation projects
 - Current County policy and Ordinance Ch. 110
 - Costs are charged to specially benefitting property owners
- **Use of other public funding (general fund, TDC)**
 - Appropriateness of use
 - Sets a precedent for repeating navigational dredging across the county
- **Design alternatives that maximize beneficial reuse of material**
 - Public funding used for % of project that is for a public purpose (PAG)
 - Remainder of costs assessed to specially benefitting property owners



Funding Options – Assessment Types

- Equal per parcel:
 - Naples, Manatee, Santa Rosa, Sanibel, St. Pete, Gulf Breeze, Lee County, St. John's County
- Property value:
 - North Myrtle Beach
- Water Access:
 - Fort Myers, Charlotte County, Punta Gorda
 - Very complicated, requires analysis of every property
- Linear Frontage Feet:
 - Hillsborough County, Fort Lauderdale
- **Evaluating assessment type(s) that is most appropriate to Grand Canal and the uses**

Funding Options – Recommendation

- Non-ad valorem assessment + County funds
 - County - Sand for PAG
 - Property owners – Silts/fines non-beneficial materials
 - Assessment can be collected over multiple years
- Properties Affected
 - 116 Single family residential
 - 1 Commercial
 - 30 Condo complexes





Discussion

1997

