



South Ponte Vedra and Vilano Coastal Storm Risk Management Project

September 17, 2020

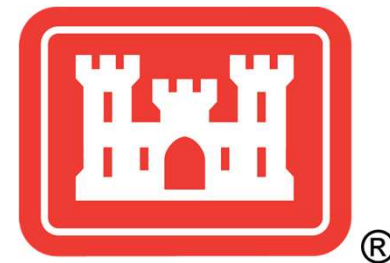
Presented by:

Rosie Pinto, EIT

USACE Coastal Engineer

Stephen Hammond, EIT

St. Johns County Coastal Environment Project Manager



Historic Coastal Damage

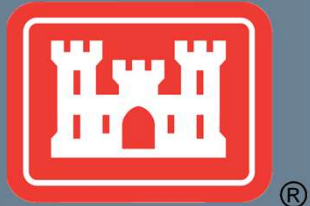


- **Historic Erosion**

- Past storms and increasing background erosion had begun threatening the coastline.
- Local project:
 - Began working toward a solution to manage the increasing erosion.
 - Could not come to an agreement on a local project.
- Federal project:
 - Authorization to survey coastal areas granted in 2000.
 - Began a feasibility study of 3.8 miles of critically eroded shoreline in 2004.
 - Project consensus had not coalesced by 2016 due to concerns with public access and cost share.



Hurricane Matthew 2016



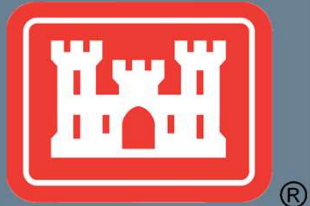
- **Severe Storm Impacts Mobilizes the Community.**

- Local project:
 - Post storm the County surveyed the oceanfront property owners.
 - MSTU development begins with the community.
 - State offers emergency funding.
 - Concepts and permitting for a local project.
 - 8-mile truck-haul dune restoration
 - 10 cubic yards per linear foot for \$20 million
 - MSTU created to levy 8.26 mils for 6 years.
- Federal project:
 - Feasibility study recommends a project.
 - Federal appropriations seem distant.



Hurricane Irma

2017

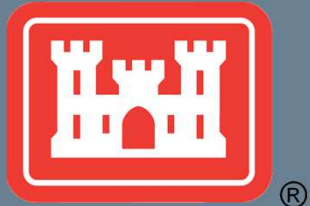


- **Changes on the ground and in Washington.**

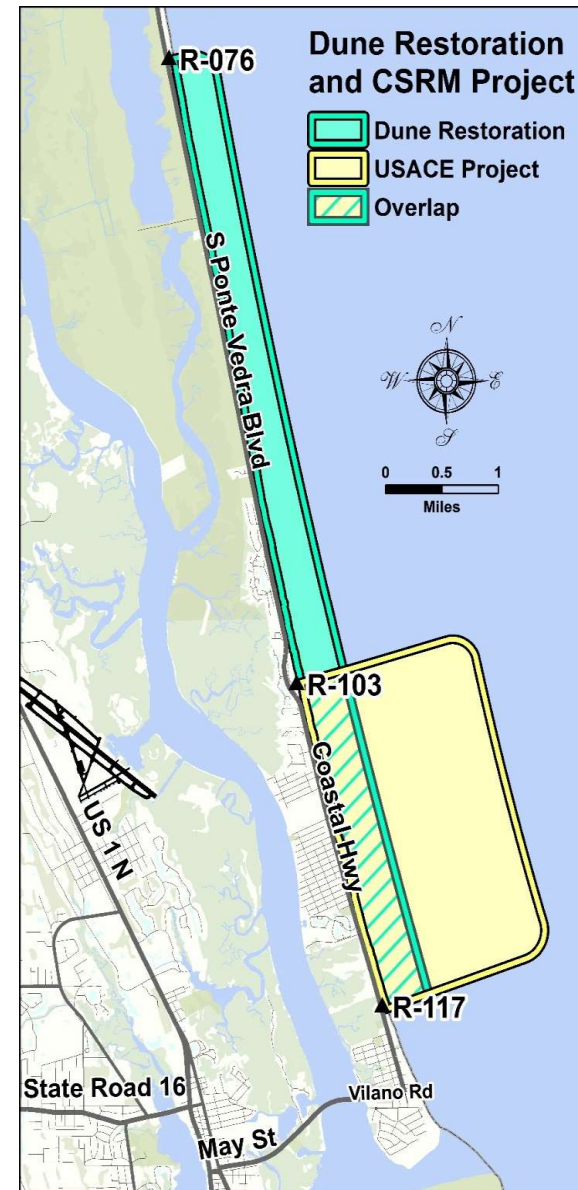
- Local project:
 - Beach conditions no longer favorable for a truck-haul.
 - Begin permitting offshore sand source.
 - 20 cubic yards per linear foot for \$24 million.
 - Additional Tourist Development Tax proposed.
 - Proposed MSTU extended to 8-12 years.
 - Federal project:
 - **2018 Bipartisan Budget Act provides funding**



Adapting to Opportunity



- **The federal authorization prompts reconfiguration of local plans.**
 - Three miles of the local project now in the federal project.
 - Local project:
 - Reduction from 8 miles to 5 miles reduces project cost.
 - Can reduce MSTU from 8 mils to 4 mils.
 - Project permitting still underway.
 - Federal project:
 - Entirely new proposal to property owners.
 - Larger Project
 - 0.5 mil MSTU
 - Perpetual easements





Challenges



BUILDING STRONG

- 1. Design
- 2. Real Estate



Trusted Partners Delivering Value Today for a Better Tomorrow





Design Challenges



BUILDING STRONG

Non-Uniform armoring that varied in:

- Height
- Material
- Position
- Condition



Trusted Partners Delivering Value Today for a Better Tomorrow





Design Question



BUILDING STRONG

- How do you design a beach with the presence of varying armoring?
 - **Immense** Data Acquisition



Trusted Partners Delivering Value Today for a Better Tomorrow





Data Acquisition



BUILDING STRONG

- Beach Profiles
- Lidar
- Aerial Photography
- Drone Footage
- Walkthrough of **entire** project area with geo-referenced photography of all seawalls





LiDAR Data Collection



BUILDING STRONG



2015 Condition



2019 Condition

Trusted Partners Delivering Value Today for a Better Tomorrow





Real Estate Challenge



BUILDING STRONG

- How do you secure required perpetual easements for the unique shoreline condition?
 - The details matter to property owners



Trusted Partners Delivering Value Today for a Better Tomorrow





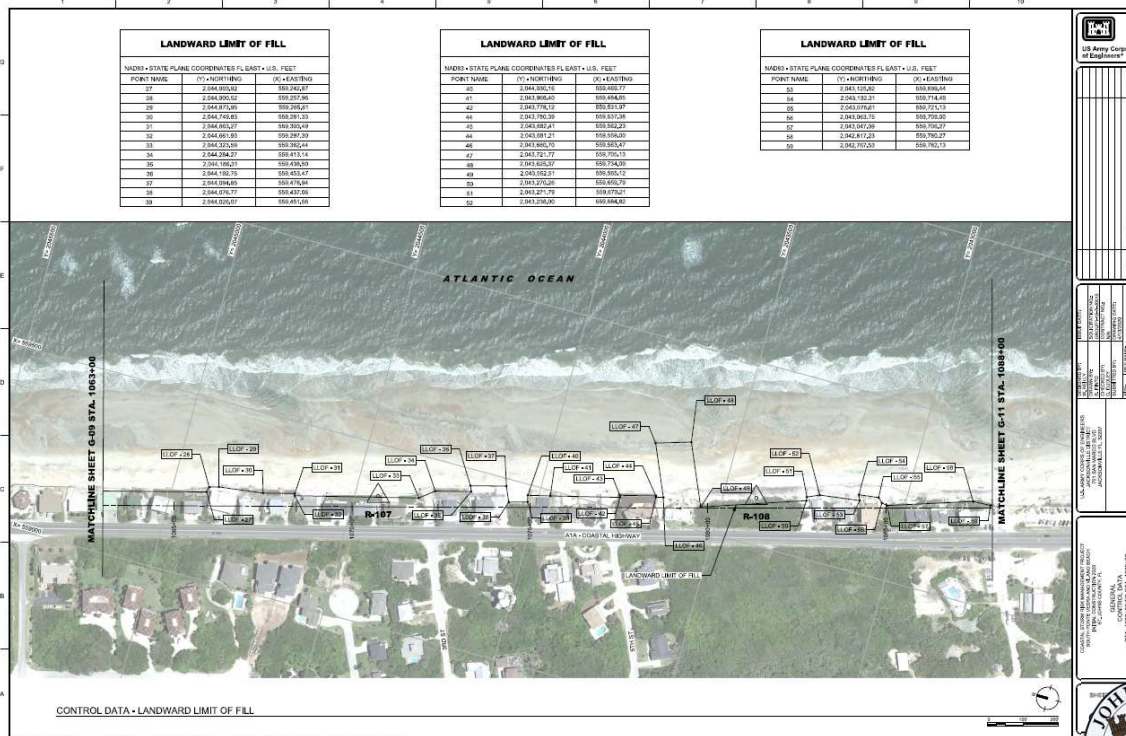
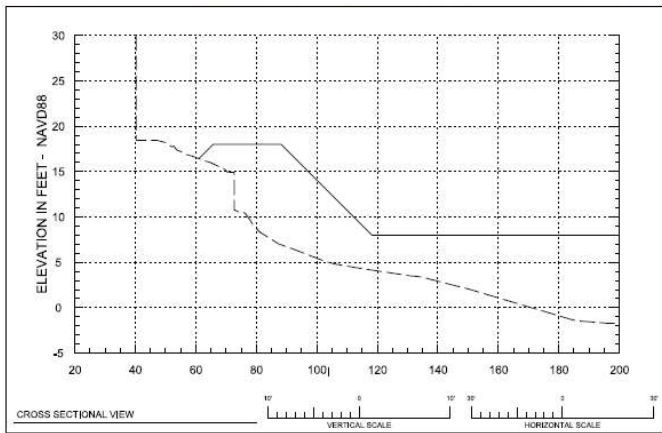
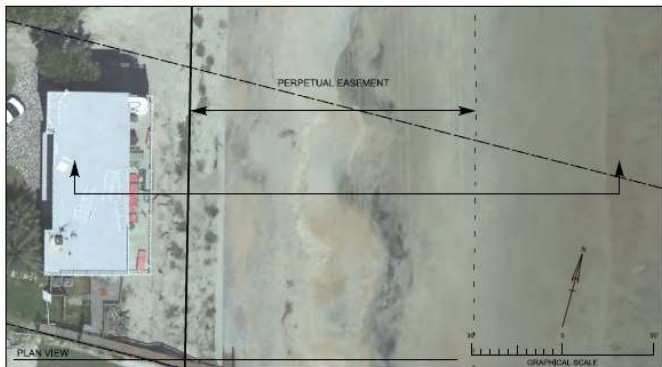
Real Estate – Parcel Exhibit Book



BUILDING STRONG

PARCEL ID: 1423200050

4450 COASTAL HWY



LANDWARD LIMIT OF FILL		
POINT NAME	XY-AWORTHING	XY-KAUFING
37	2,044,900.02	589,262.07
38	2,044,900.02	589,267.99
39	2,044,871.09	589,266.71
40	2,044,748.83	589,261.33
41	2,044,632.37	589,265.44
42	2,044,661.89	589,287.32
43	2,044,573.68	589,306.44
44	2,044,264.27	589,475.14
45	2,044,188.21	589,438.53
46	2,044,198.76	589,453.47
47	2,044,098.85	589,478.61
48	2,044,078.77	589,487.68
49	2,044,025.07	589,481.05

LANDWARD LIMIT OF FILL		
POINT NAME	XY-AWORTHING	XY-KAUFING
41	2,044,900.02	589,267.99
42	2,044,776.12	589,251.97
43	2,044,786.39	589,257.28
44	2,044,693.41	589,282.23
45	2,044,681.21	589,268.60
46	2,044,666.00	589,282.47
47	2,044,721.72	589,265.13
48	2,044,626.27	589,274.30
49	2,044,782.21	589,268.72
50	2,044,272.26	589,480.79
51	2,044,307.78	589,486.72
52	2,044,308.00	589,484.82

LANDWARD LIMIT OF FILL		
POINT NAME	XY-AWORTHING	XY-KAUFING
53	2,044,152.82	589,508.64
54	2,044,192.21	589,714.49
55	2,044,193.67	589,713.13
56	2,044,363.76	589,709.20
57	2,044,197.28	589,708.27
58	2,044,817.23	589,782.27
59	2,044,797.03	589,782.13

PARCEL EXHIBITS NOT FOR CONSTRUCTION
 DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
 JACKSONVILLE, FLORIDA

COASTAL STORM RISK MANAGEMENT PROJECT
SOUTH PONTE VEDRA AND VILANO BEACH
ST. JOHNS COUNTY, FL

1423200050
 PARCEL ID
 LOG #31

ST. JOHNS COUNTY
 FLORIDA

PROJECT NO. 1423200050
 SHEET NO. 31
 DATE: 10/20/2014
 DRAWN BY: J. B. BROWN
 CHECKED BY: J. B. BROWN
 APPROVED BY: J. B. BROWN

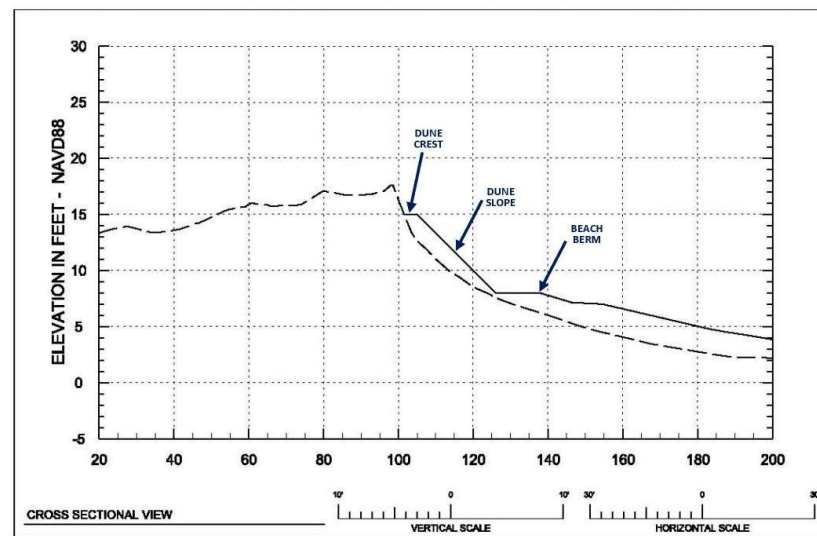
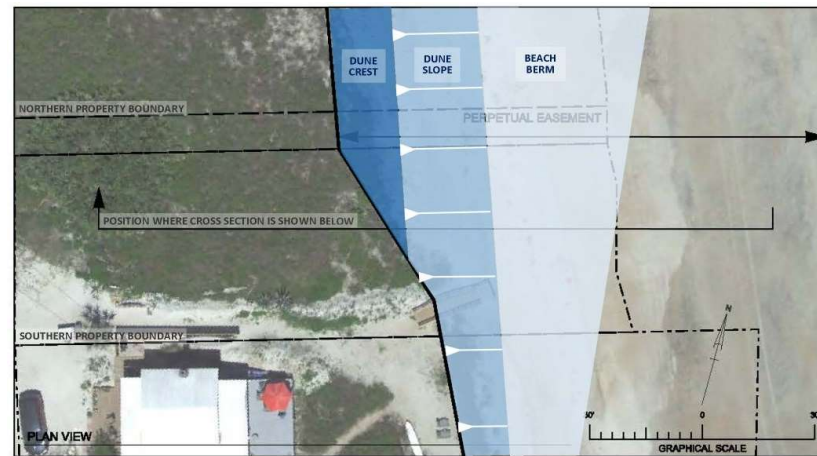


Real Estate – Public Engagement



BUILDING STRONG

- Public workshops
- Emails
- Phone calls
- Follow-up figures
- Property site visits
- More meetings
- More meetings





Thank You!

