

PORTMIAMI™

PREPARING FOR 2014

PRESENTED MAY 2012

PORTMIAMI



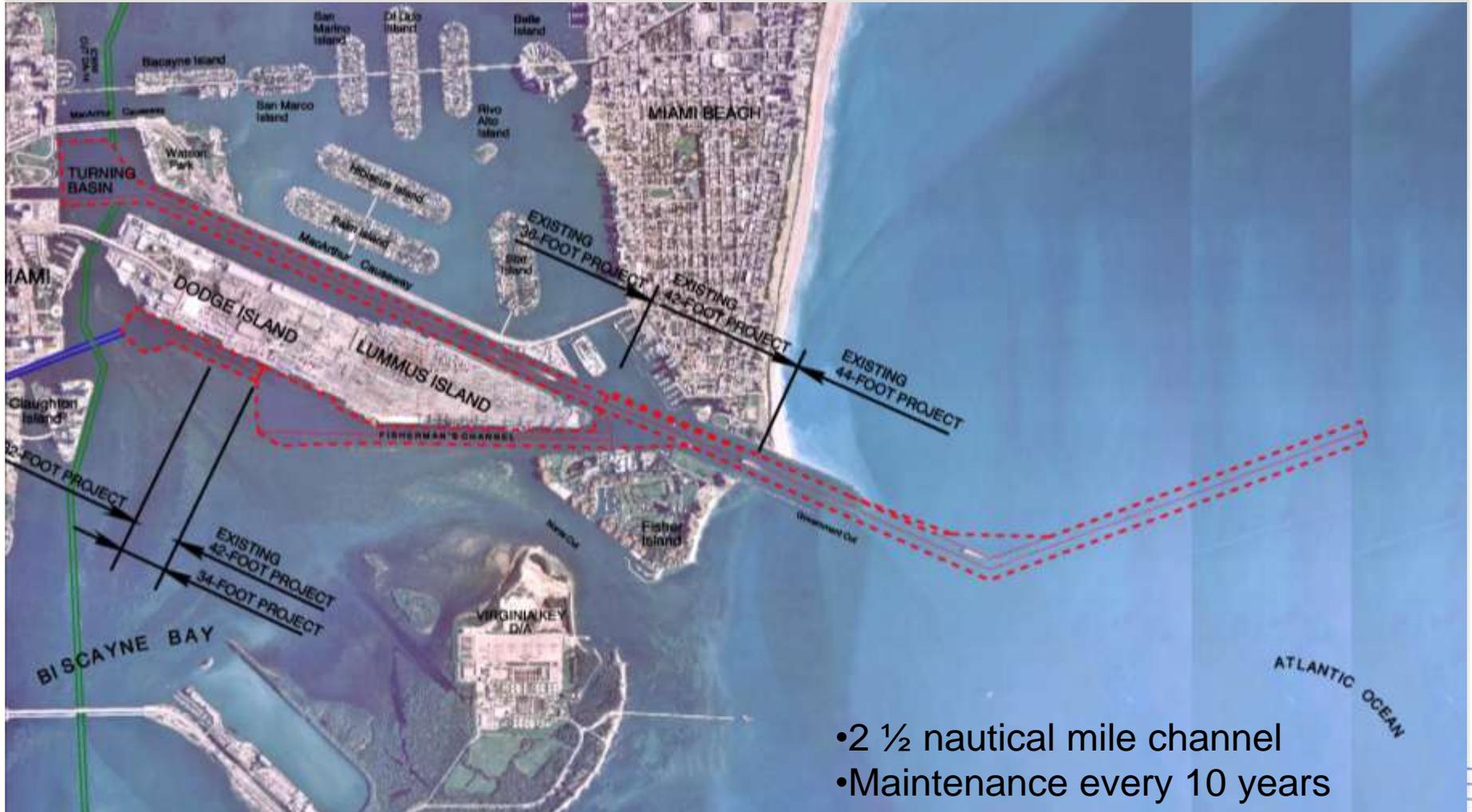
PortMiami Statistics

Economic Impact: Over \$18 Billion

- Supports 180,000 jobs directly and indirectly
- “Cargo Gateway of the Americas”
 - Approximately 900,000 TEUs in 2011
 - Top Trading Partners: China, Hong Kong, Honduras, Dominican Republic, & Germany
 - Top Imports: tiles, textiles, fruits, & vegetables
- “Cruise Capital of the World”
 - More than 4 million passengers in 2011

Where We Are Today

Miami Harbor, Florida



PortMiami Tomorrow



PORTMIAMI.

How We Get There

Tunnel



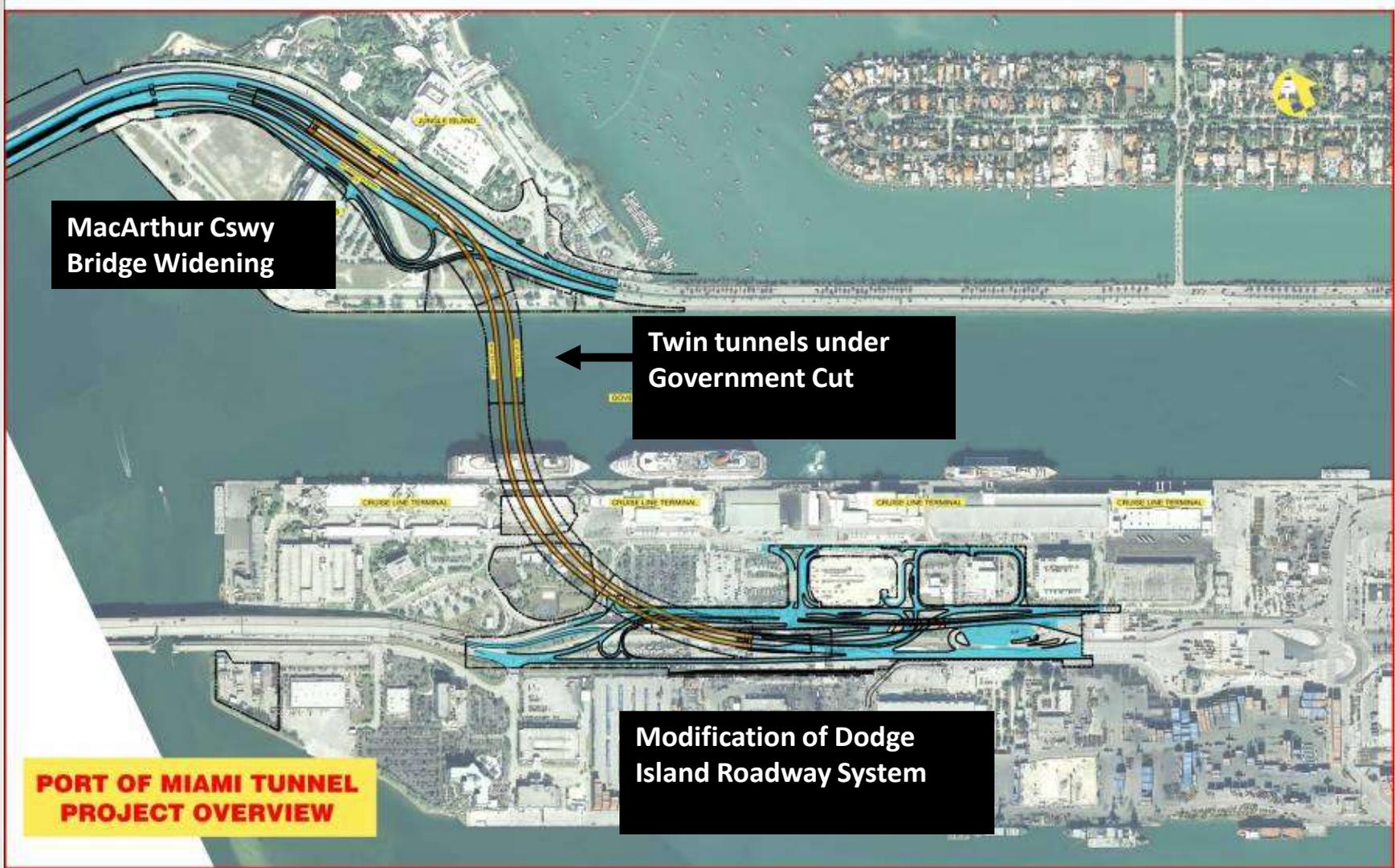
Rail



Dredge



PortMiami Tunnel Project



PortMiami Tunnel Project

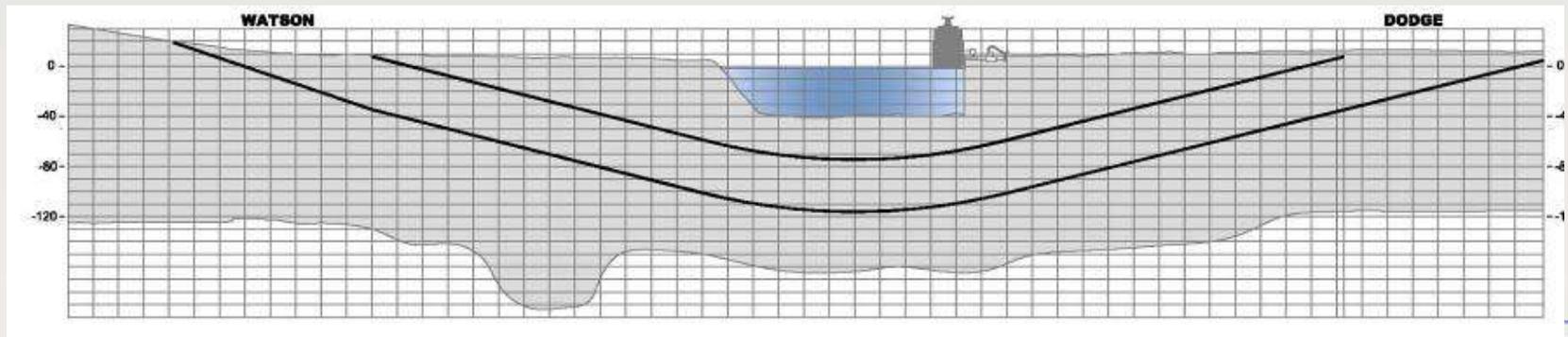
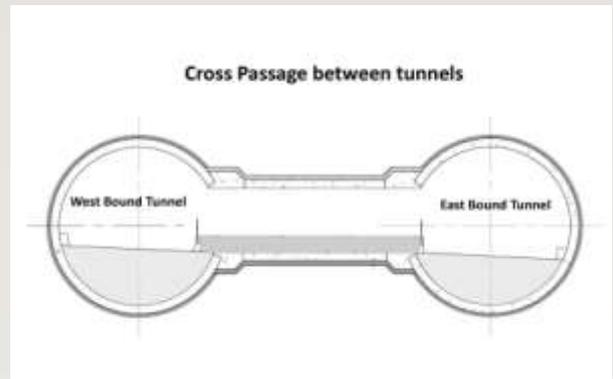


Tunnels are 3900 ft. long
+40 ft. under the bottom
of Main Channel



5% Grade

5 cross passages



Tunnel Progress

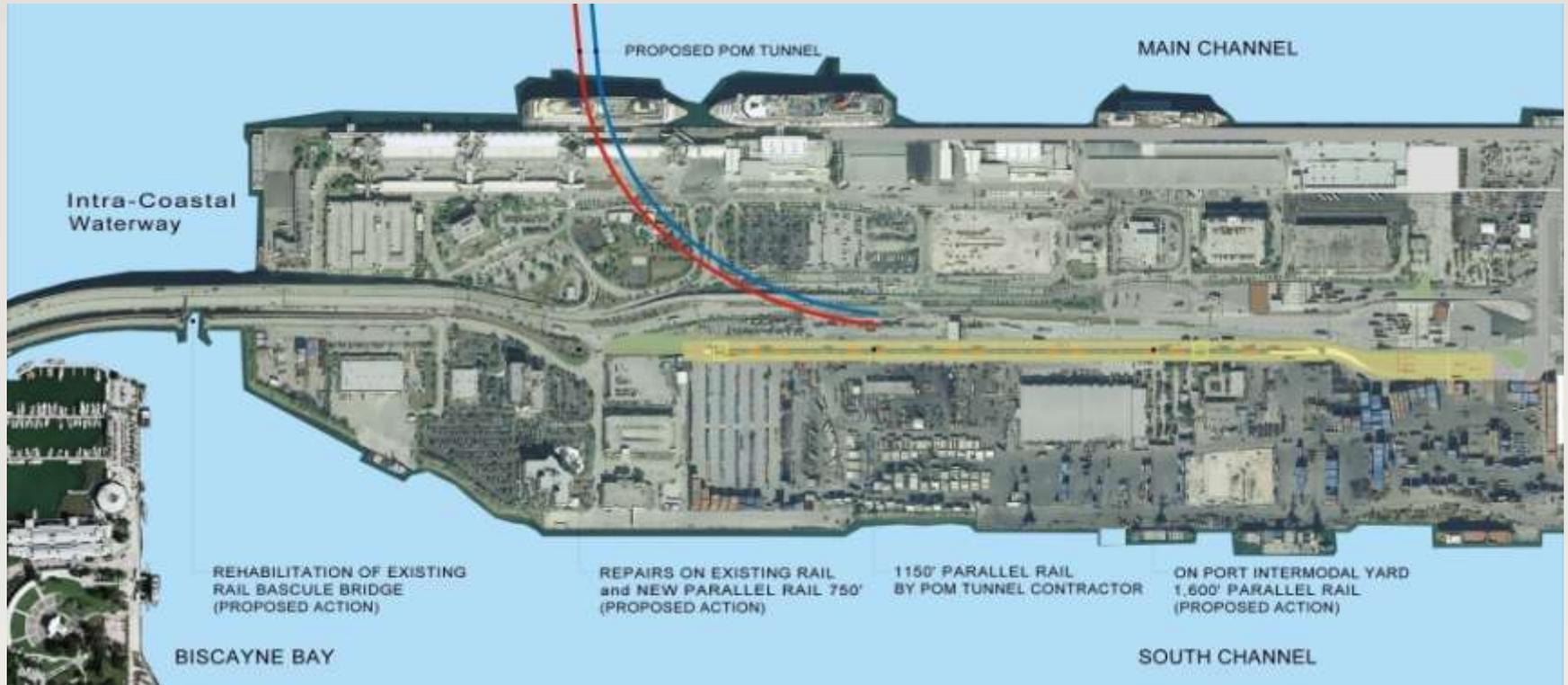


Restoration of Rail

- TIGER II award of \$22.7M
- Partnership with Florida East Coast Railway and Florida Department of Transportation
- Project includes
 - Intermodal Yard on the Port
 - Rail Bridge Improvements
 - Upgrade existing rail track to accommodate double stack freight

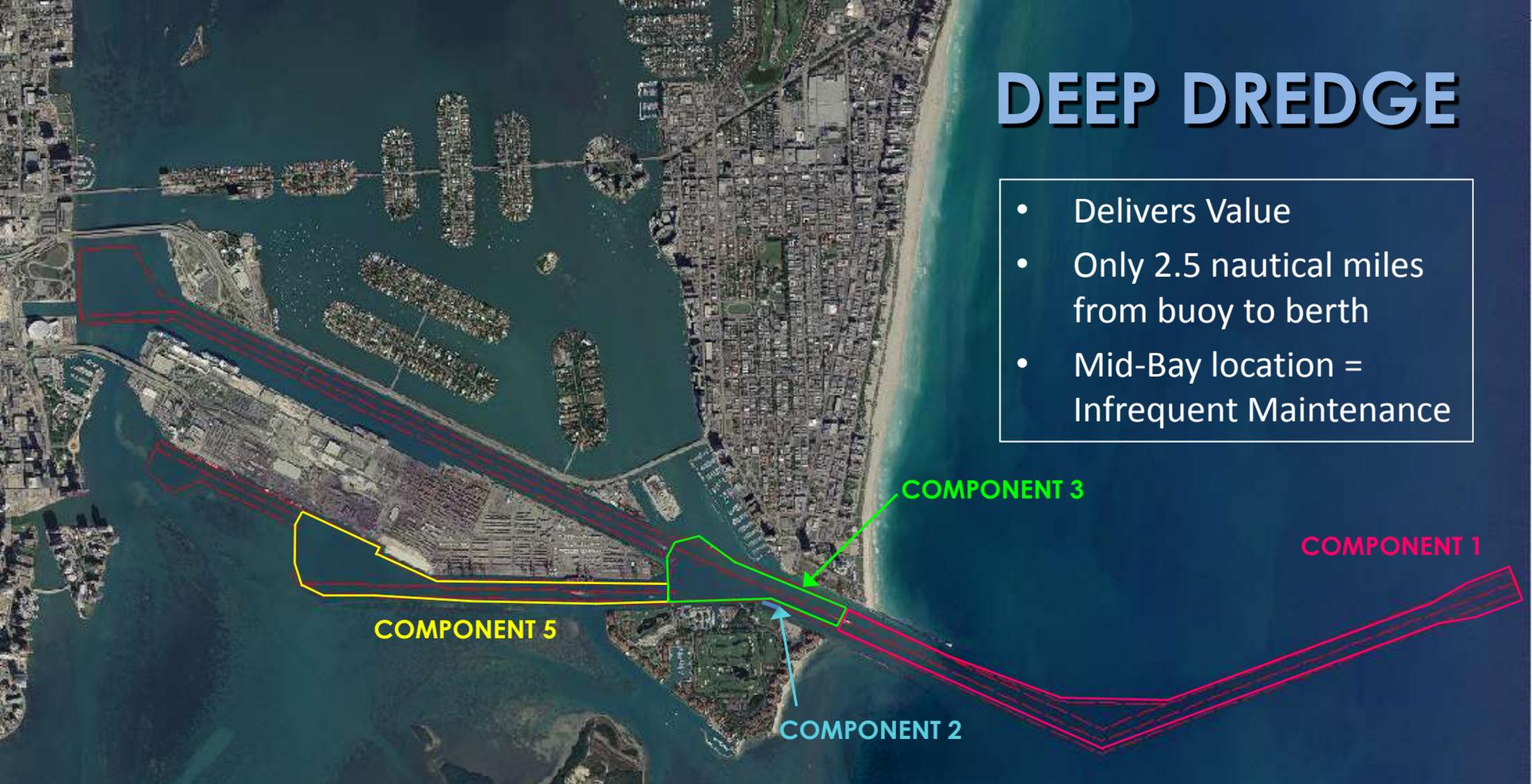


Intermodal Yard



DEEP DREDGE

- Delivers Value
- Only 2.5 nautical miles from buoy to berth
- Mid-Bay location = Infrequent Maintenance



Component 1:

Widen seaward portion of Cut-1 from 500 to 800 feet; deepen Cut-1 and Cut-2 from 44 to 52 feet

Component 2:

Add turn widener at the southern intersection of Cut-3 with Fisherman's Channel and deepen to 50 feet

Component 3:

Increase Fisher Island turning basin from 1200 to 1500 feet; truncate NE section of the turning basin to minimize seagrass impacts; deepen from 42 to 50 feet

Component 5:

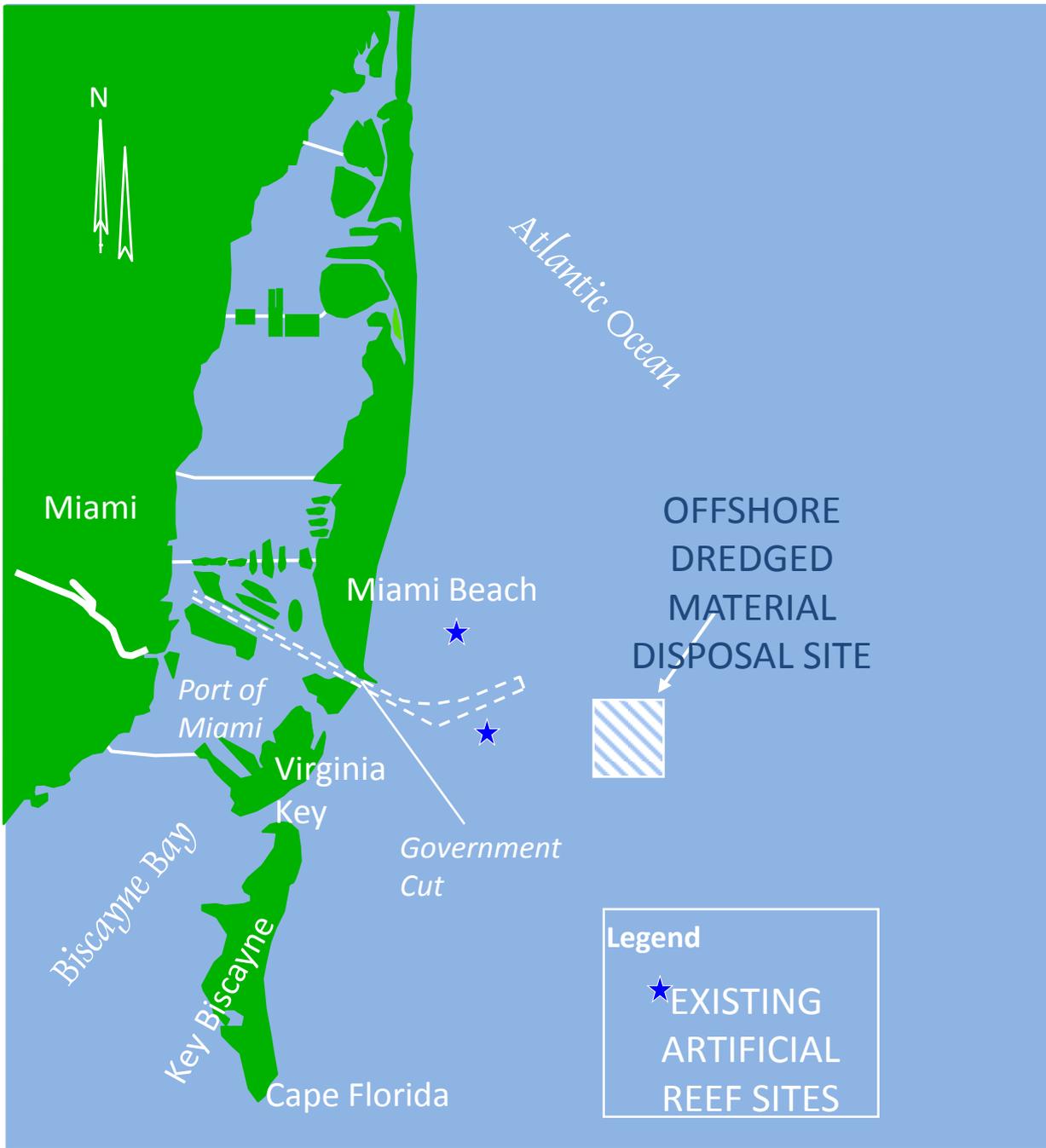
Expand berthing area by 60 feet and widen southern edge of Fisherman's Channel 40 ft; reduce Lummus Island turning basin to a 1500 ft dia.; deepen from 42 to 50 ft

Project Scope

- Request for Proposal
 - Approximately 5,000,000 CY of dredging
 - EPA designated offshore site
 - Rock material for artificial reef habitat
 - Borrow sites for seagrass mitigation
 - Estimate 4,000,000 CY of Rock
 - Confined Blasting will be Allowed

Offshore Disposal Area

Miami Harbor, Florida

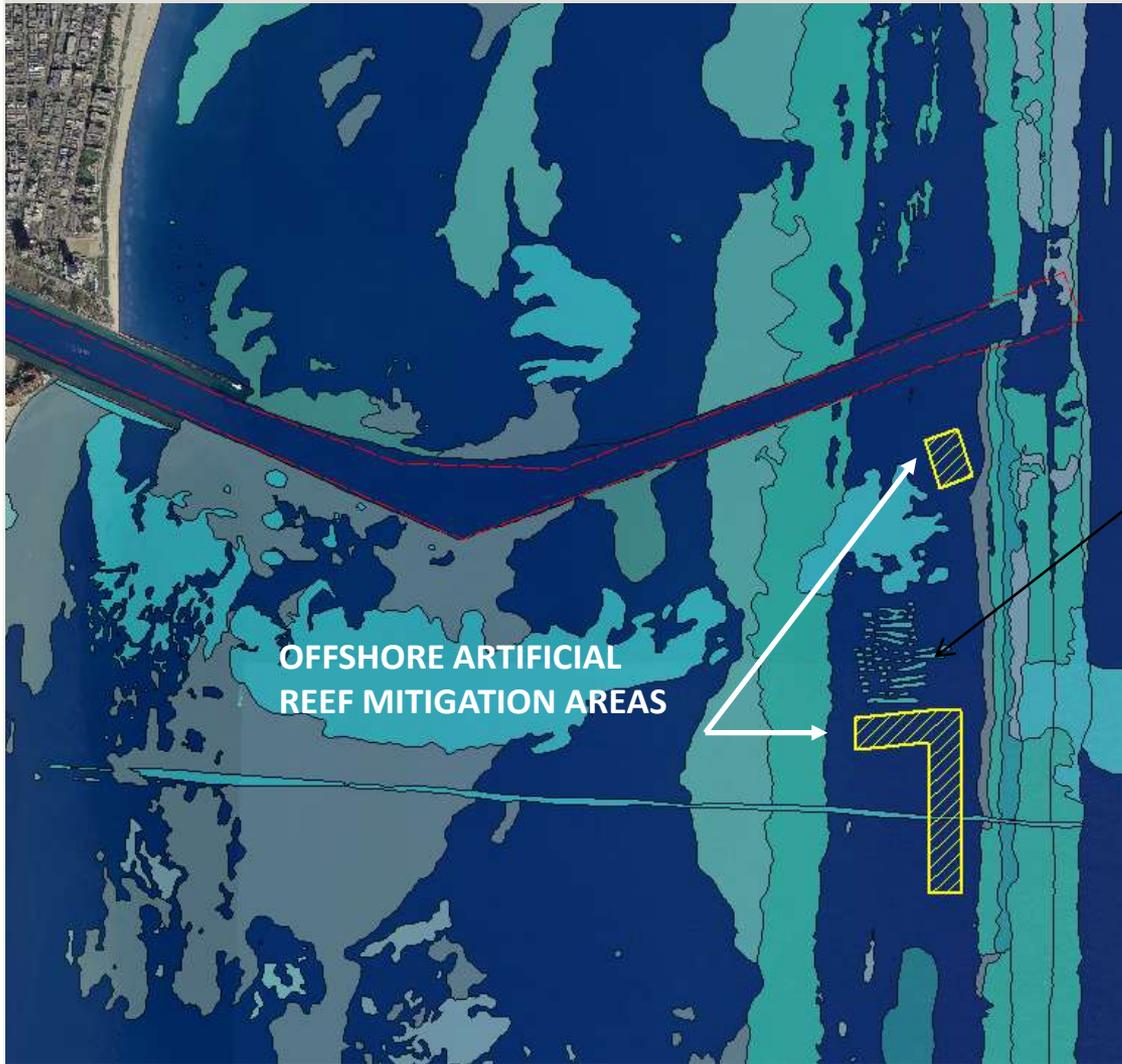


Mitigation for Hardbottom Impacts

- Artificial Reef Creation – 9.28 acres
- Coral Relocation
 - All hard corals >25cm
 - Up to 1300 hard corals between 10 and 25 cm

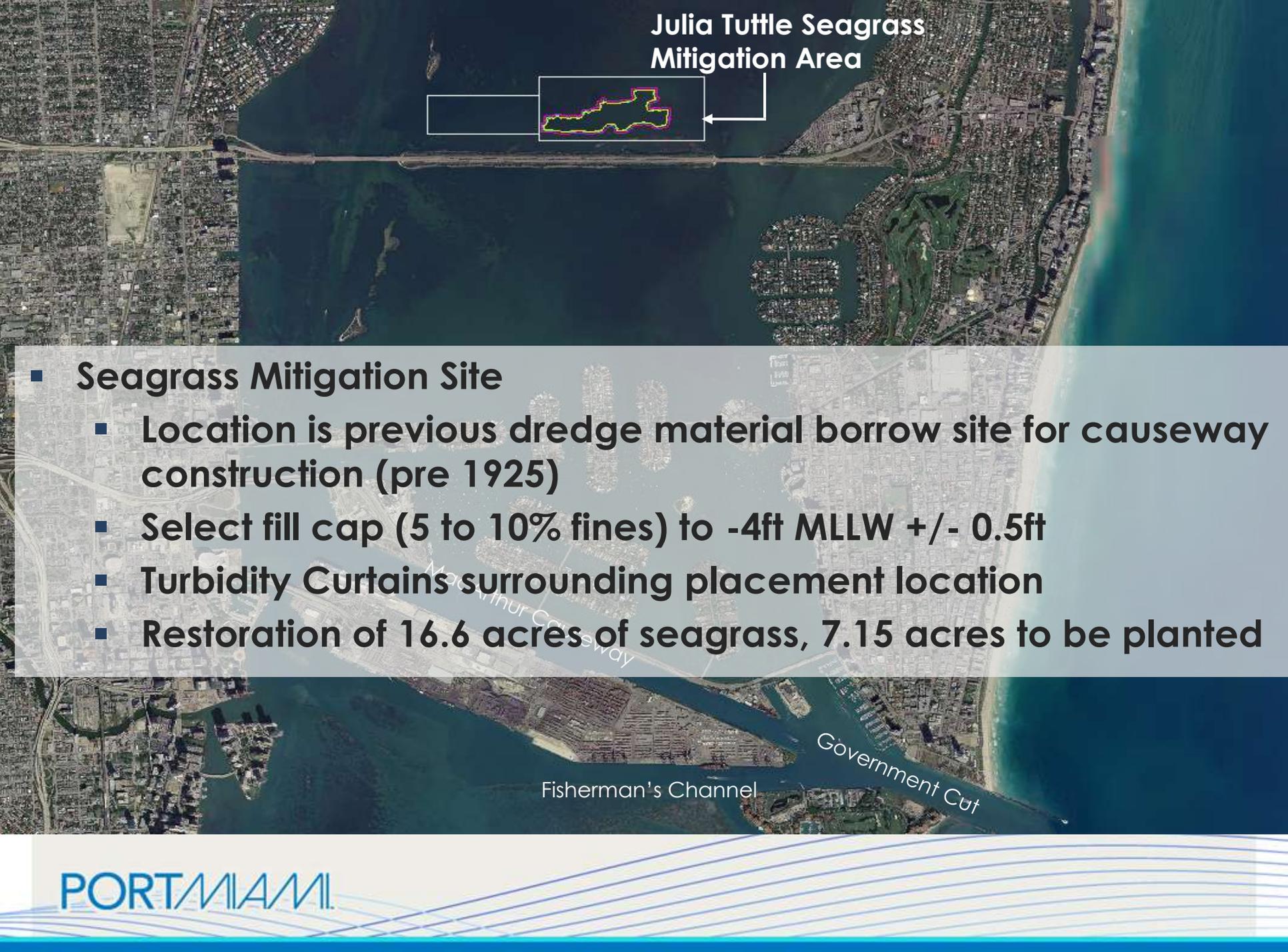


Reef Mitigation Success



ADJACENT SUCCESSFUL PREVIOUS
PORT MITIGATION SITE





**Julia Tuttle Seagrass
Mitigation Area**

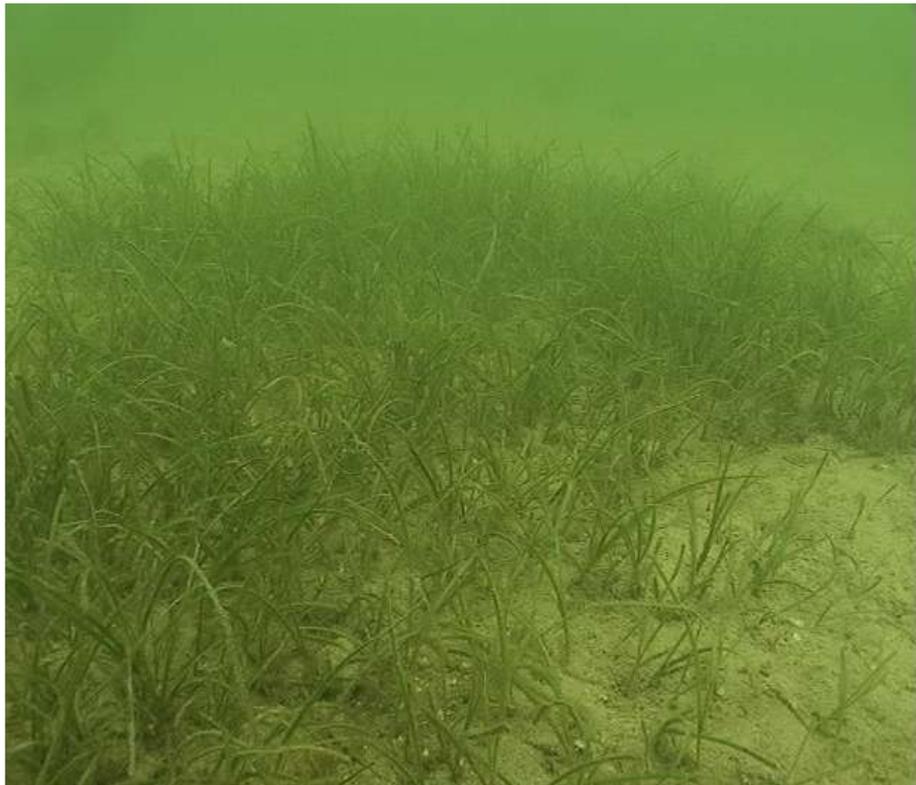
- **Seagrass Mitigation Site**

- Location is previous dredge material borrow site for causeway construction (pre 1925)
- Select fill cap (5 to 10% fines) to -4ft MLLW +/- 0.5ft
- Turbidity Curtains surrounding placement location
- Restoration of 16.6 acres of seagrass, 7.15 acres to be planted

Fisherman's Channel

Government Cut

Biscayne Bay, FL



- **Post construction success is expected to be high because the area is surrounded by existing high density seagrass beds**

Construction Monitoring

- Turbidity Monitoring
- Sedimentation Monitoring
- Secondary Impacts-Visual with Divers Twice a Week
 - Hardbottom and Corals
 - Seagrass Beds



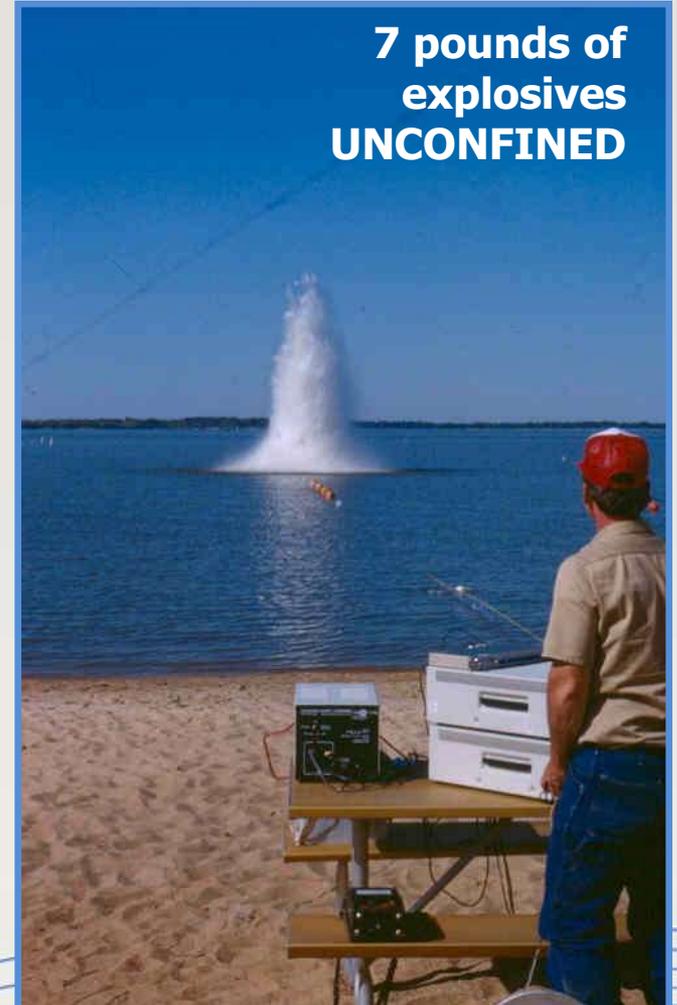
Natural Turbidity in the Bay

Confined vs Unconfined Blasts

**3000 pounds
of explosives
CONFINED**



**7 pounds of
explosives
UNCONFINED**



Monitoring Methods

- Observation techniques & data collection
- Ensure Safety of Marine Mammals and Protected Species
- Six Vessel and Aerial Observers



Aerial



Drill barge



Two small boats
on water – east
and west of drill
barge



Typical Blast Timeline

- 2 HOURS
Notice to Project
Team and Local
Authorities

- 1 HOUR
Marine Mammal
Watch Begins



- 15 MINUTES
Notice to
Mariners
(channel closes)

- 1 MINUTE
Fish Scare

← **DELAY CAPSULE:** If an animal is observed in either the danger or safety zones, the blast is delayed to monitor the animal until it leaves, on its own, from both the danger and safety zones. →

**BLAST
DETONATION**



+ 5 MINUTES
All Clear
Signal

+ 30 MINUTES
Marine
Mammal
Watch Ends

Project Schedule

- **May 2012 Design Complete**
- **Summer 2012 Advertise**
- **Fall 2012 Award Contract**
- **Winter 2013 Commence Work**
- **Winter 2015 Complete Work**



Thank You



PORT MIAMI

For more information
visit our website
www.miamidade.gov/portofmiami