

CHARLESTON HARBOR POST 45 STATUS UPDATE

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Project Manager

17 MAY 2018



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AGENDA



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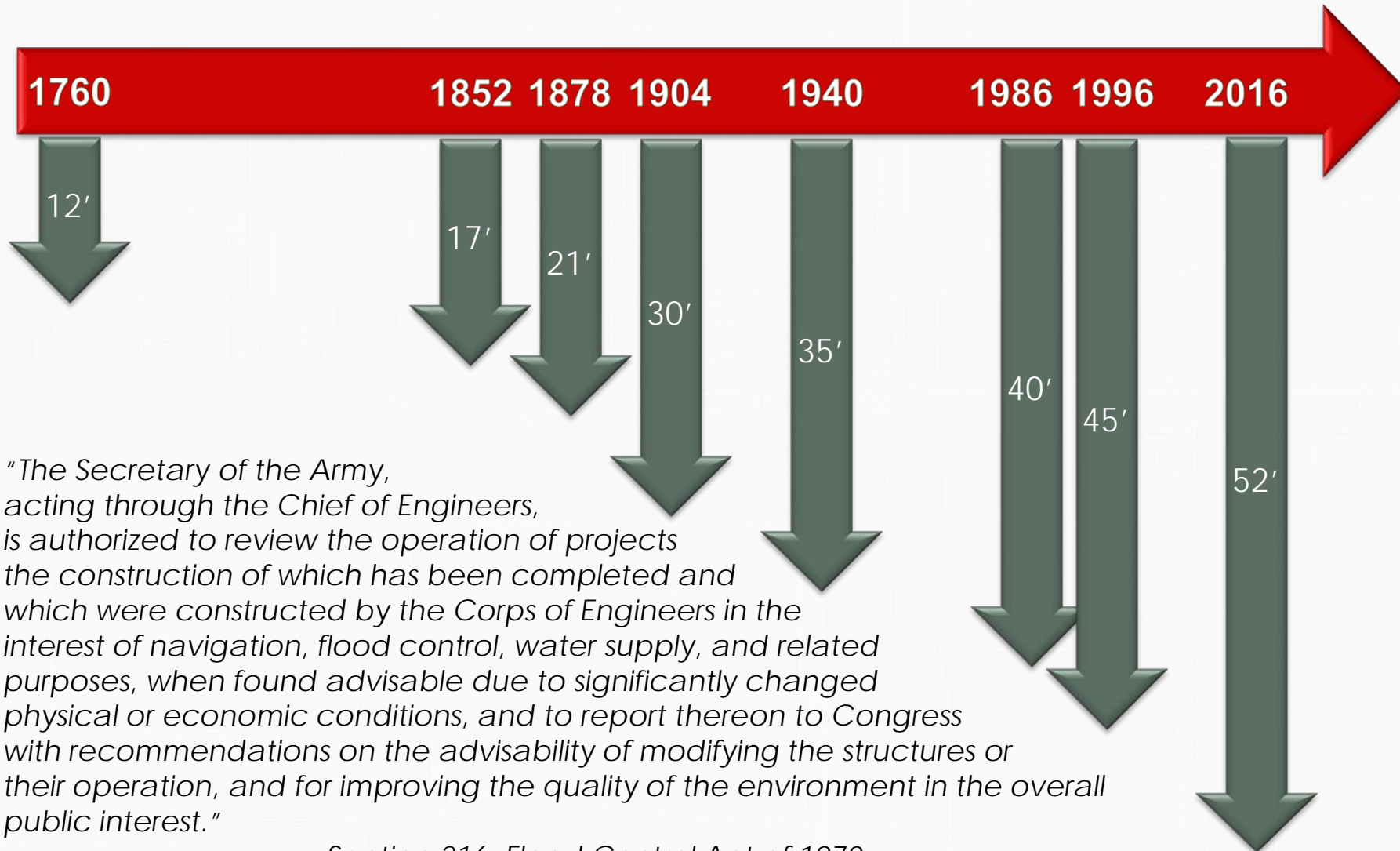
- Post 45 Project Overview
- Post 45 Project Phases
- Construction Plans to Completion
- Environmental Requirements
- Questions



LEGISLATIVE AUTHORITY & TIMELINE



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"The Secretary of the Army, acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed by the Corps of Engineers in the interest of navigation, flood control, water supply, and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest."

- Section 216, Flood Control Act of 1970



POST 45 PROJECT OVERVIEW



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- Priority project in the 2012 “We Can’t Wait” Initiative
- Project Sponsor: South Carolina State Ports Authority
- Charleston Harbor Facts:
 - In FY 16 ranked 9th in U.S. for container traffic, \$23 M Short Tons of Cargo (Waterborne Commerce Statistics Center)
 - 2017 value of waterborne commerce is \$70 B (US Department of Commerce)
 - Designated as one of 17 Strategic Ports for national defense.
- One of the first Feasibility Studies completed under USACE SMART Planning:
 - Cost: reduced estimate from \$19M to \$11.75M
 - Schedule: reduced from 8 to 3 yrs
- Recommended Plan: 52-foot Deepening
- Benefit-Cost Ratio: 4.6 (2.75%)
- Construction Authorization:
 - Authorized First Costs (FY 17): \$502,693,000
 - Authorized: 16 December 2016



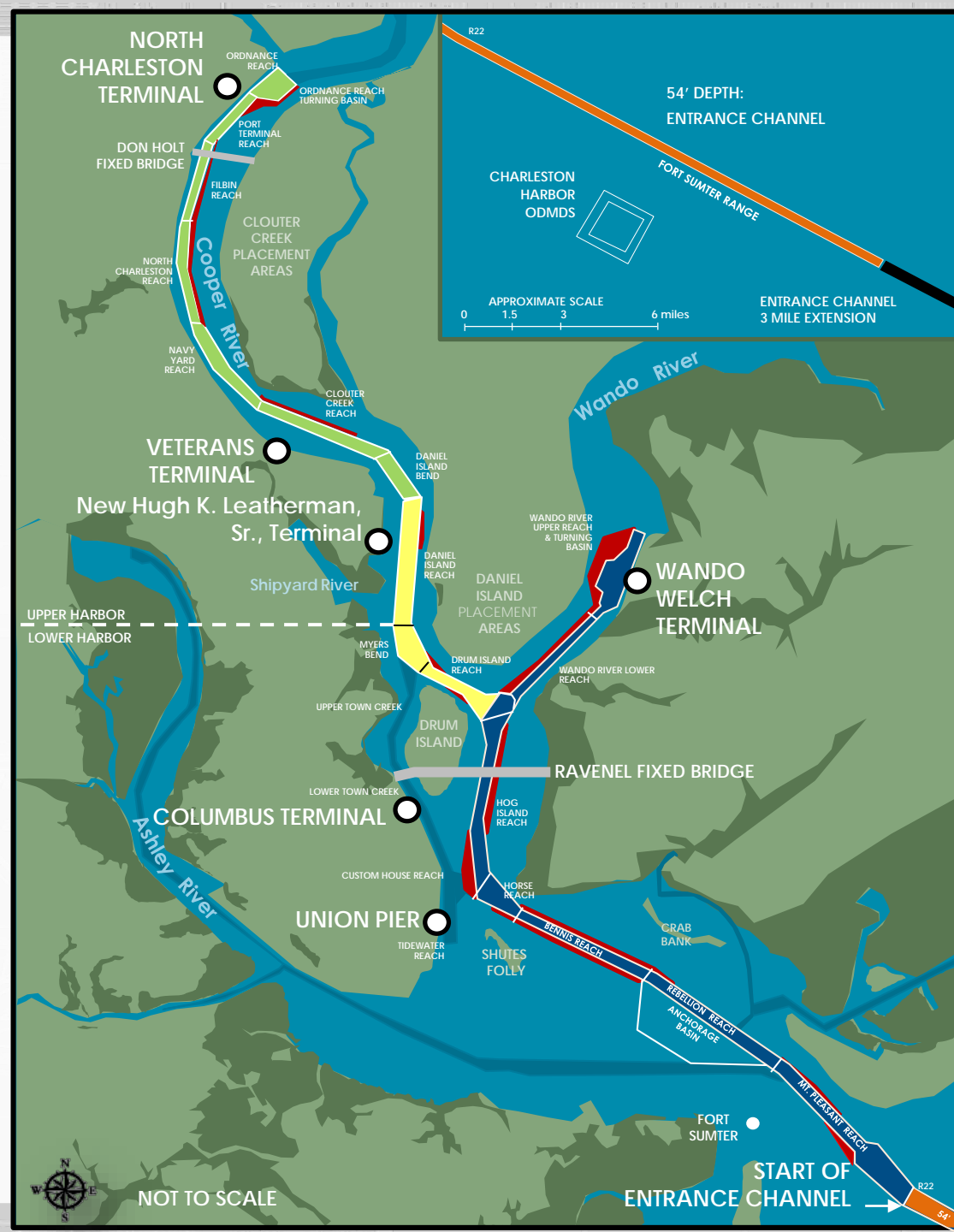
AUTHORIZED PLAN OVERVIEW

- Entrance channel: 54' depth
- Entrance channel
3-mile extension
- Segment 1: 52' depth
- Segment 2: 52' depth
- Segment 3: 48' depth
- Widening in select areas

FY 18 Price Levels, Fully Funded Costs:

- Federal Cost: \$330 M
- Non-federal Cost: \$199 M
- Total Project Cost: \$529 M

- Construction Duration: 40 to 76 Months



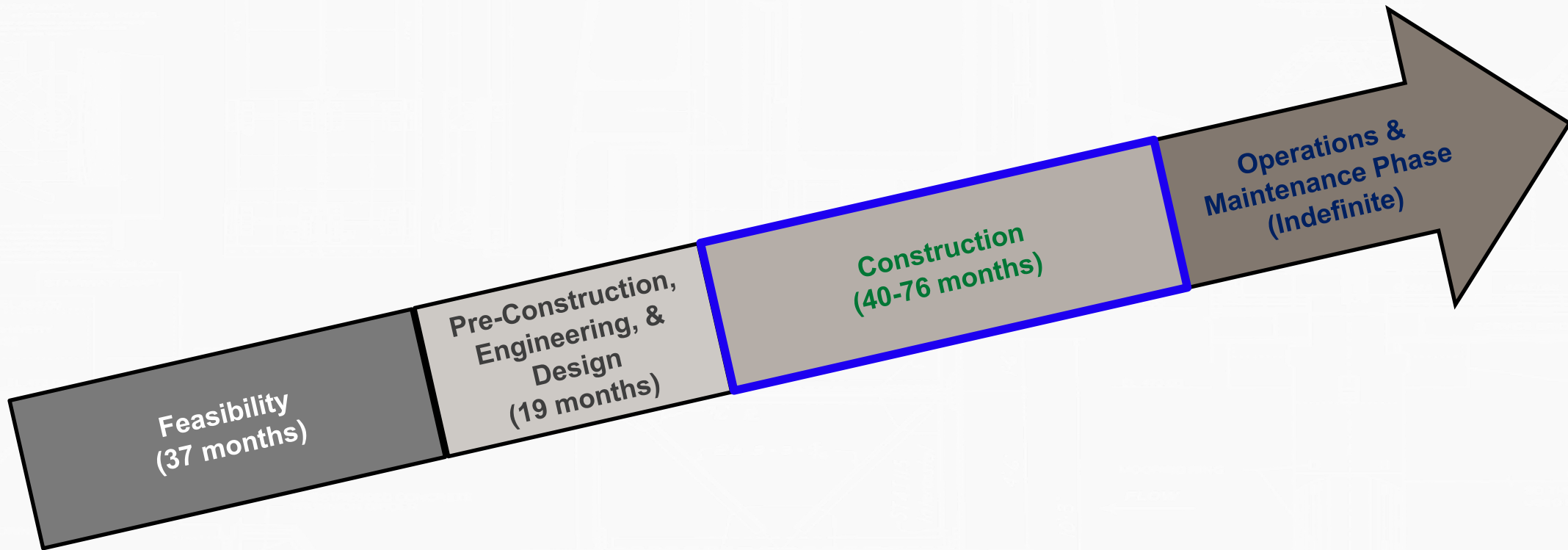
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POST 45 PROJECT PHASES



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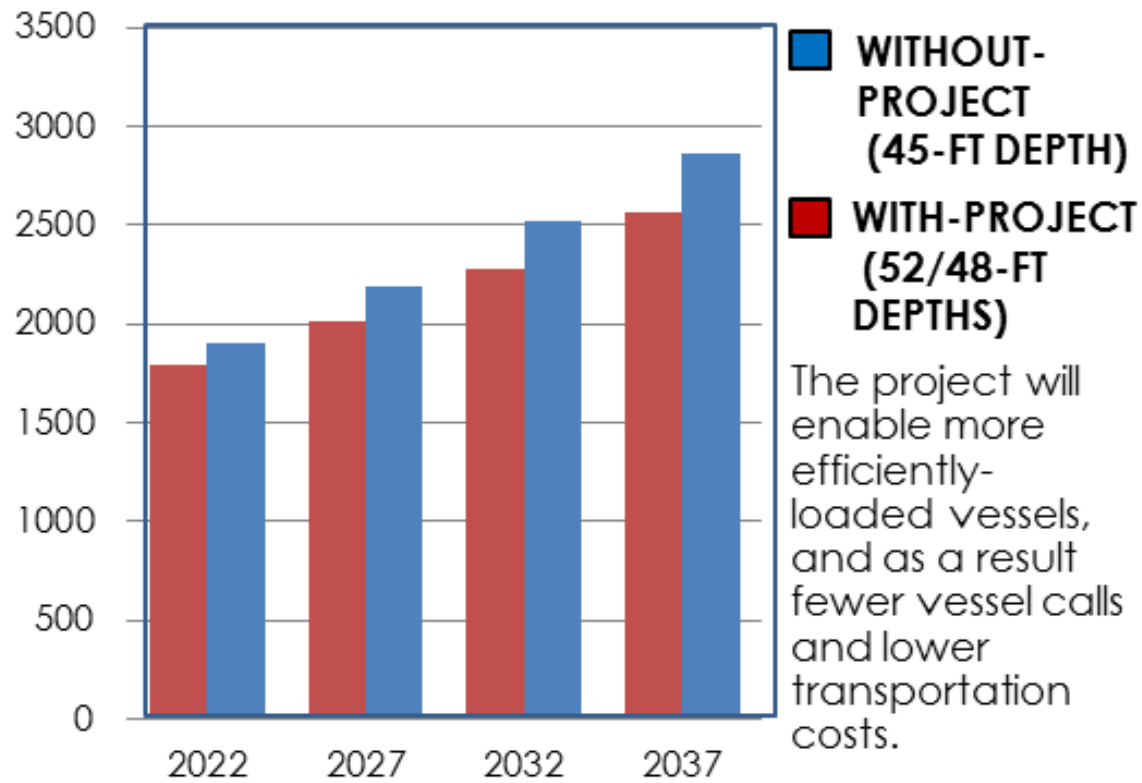


FEASIBILITY PHASE - ECONOMICS

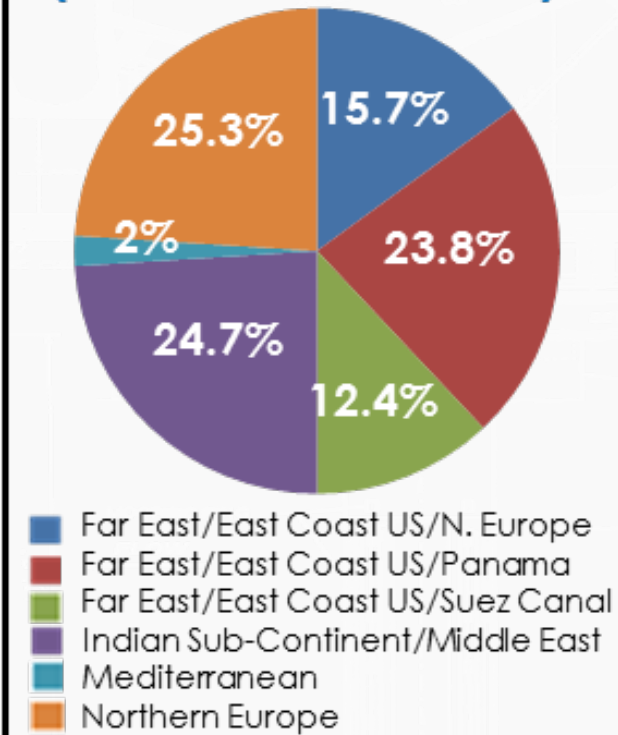


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FORECASTED CONTAINER VESSEL FLEET PER YEAR WITH AND WITHOUT-PROJECT CONDITIONS



TRANSPORTATION COST SAVINGS BY ROUTE (ORIGIN TO DESTINATION)

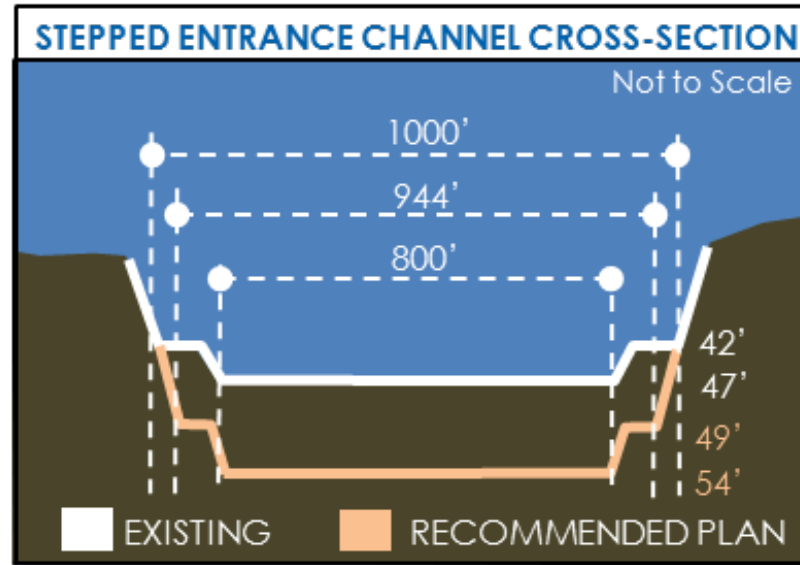
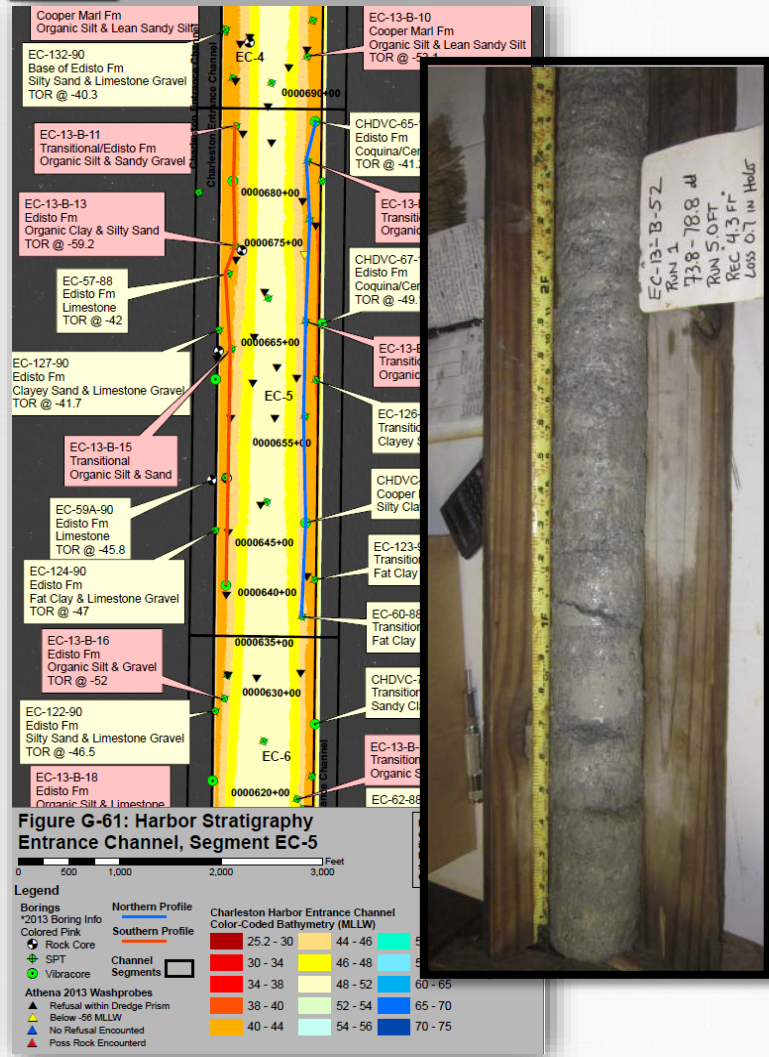




FEASIBILITY PHASE



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ENVIRONMENTAL

ENGINEERING



PED PHASE - SHIP SIMULATION



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Harbor Pilots Testing (Spring 2016)

- 1 Week Validation
- 5 Weeks of Testing

Design Ships

- Post Panamax Generation 3 to HLT and WWT
Daniella II Containership: 1201- x 160- x 49.9 ft
- Post Panamax Generation 2 to NCT
Konway Containership: 1102- x 141- x 45.9 ft



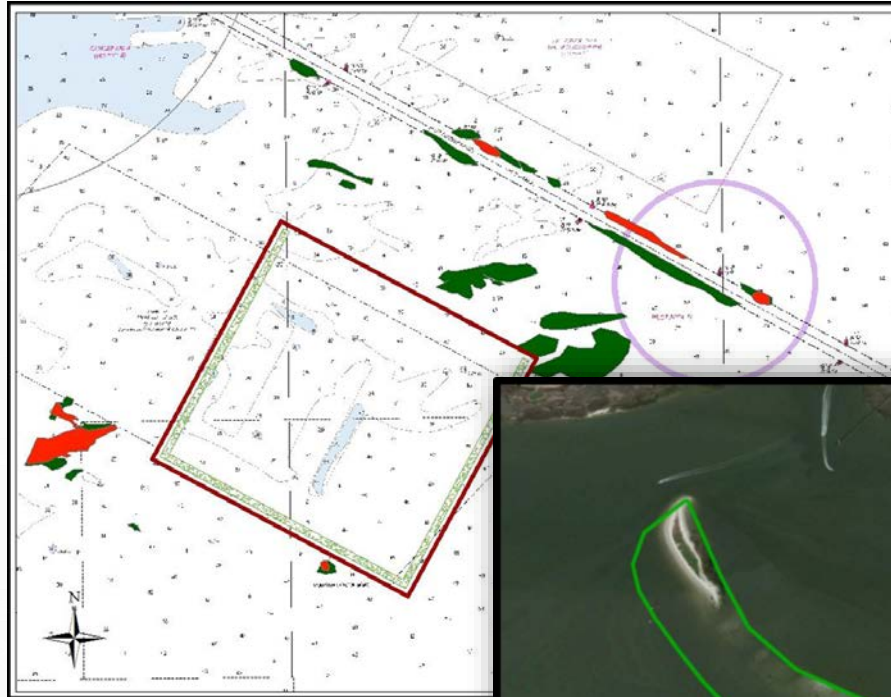


PED PHASE - BENEFICIAL USE OF DREDGED MATERIAL



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- Documented in the SEA,
 - Public Release Oct. 2016
 - FONSI: 3 January 2017
- Limestone Rock Material
 - ODMDS Berm
 - Beneficial Use Reefs (7)
- **Potential** uses for 65% Sand Content Material:
 - Placement at Crab Bank (**Added Cost** - Charleston Harbor CAP 204 Study)
 - Beach Placement Morris Island (**Added Cost** - South Jetty maintenance)



Post 45

Construction Contracts Overview



North Charleston

Mount Pleasant

Charleston

James Island

Upper Harbor
Deepening & Widening

Lower Harbor to HLT
Deepening & Widening

Upland Placement
Site Improvements

Lower Harbor to WWT
Deepening & Widening

EC Deepening
Contract I

EC Deepening
Contract II

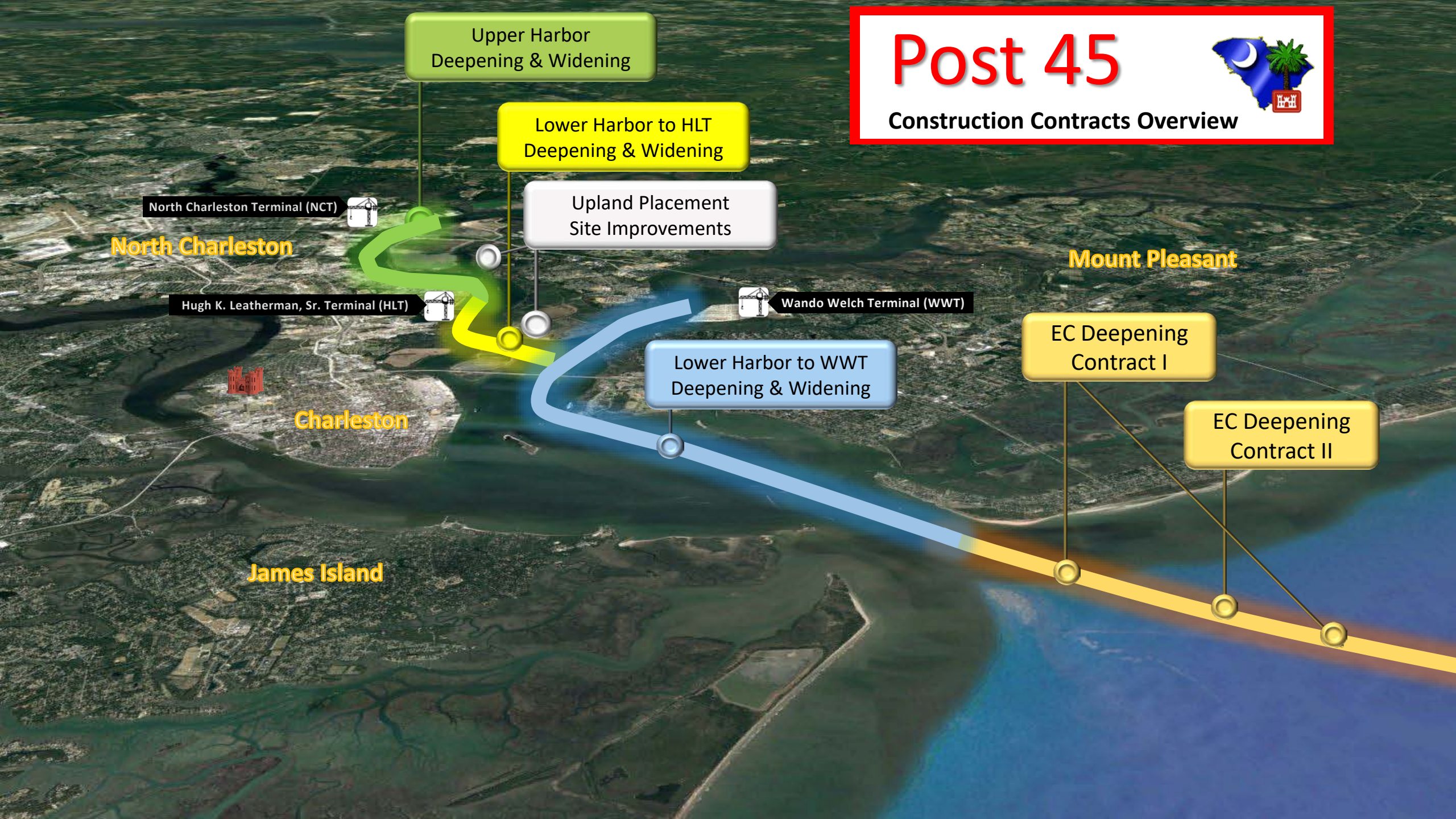
North Charleston Terminal (NCT)



Hugh K. Leatherman, Sr. Terminal (HLT)



Wando Welch Terminal (WWT)



POST 45 – ENTRANCE CHANNEL CONSTRUCTION

Contract 1

DREDGE TYPE: Hopper

PLACEMENT: ODMDS

QUANTITY: 6,100,000 cy

DEPTH: authorized 54 feet

AWARD: September 2017 (GLD&D)

AWARD AMOUNT: \$47 M

COMMENCE DREDGING: March 2018

DREDGING COMPLETE: March 2020

Contract 2

DREDGE TYPE: Hopper, Excavator, Cutterhead

PLACEMENT: ODMDS

QUANTITY: 13,500,000 cy

DEPTH: authorized 54 feet

BASE AWARD: October 2017 (GLD&D)

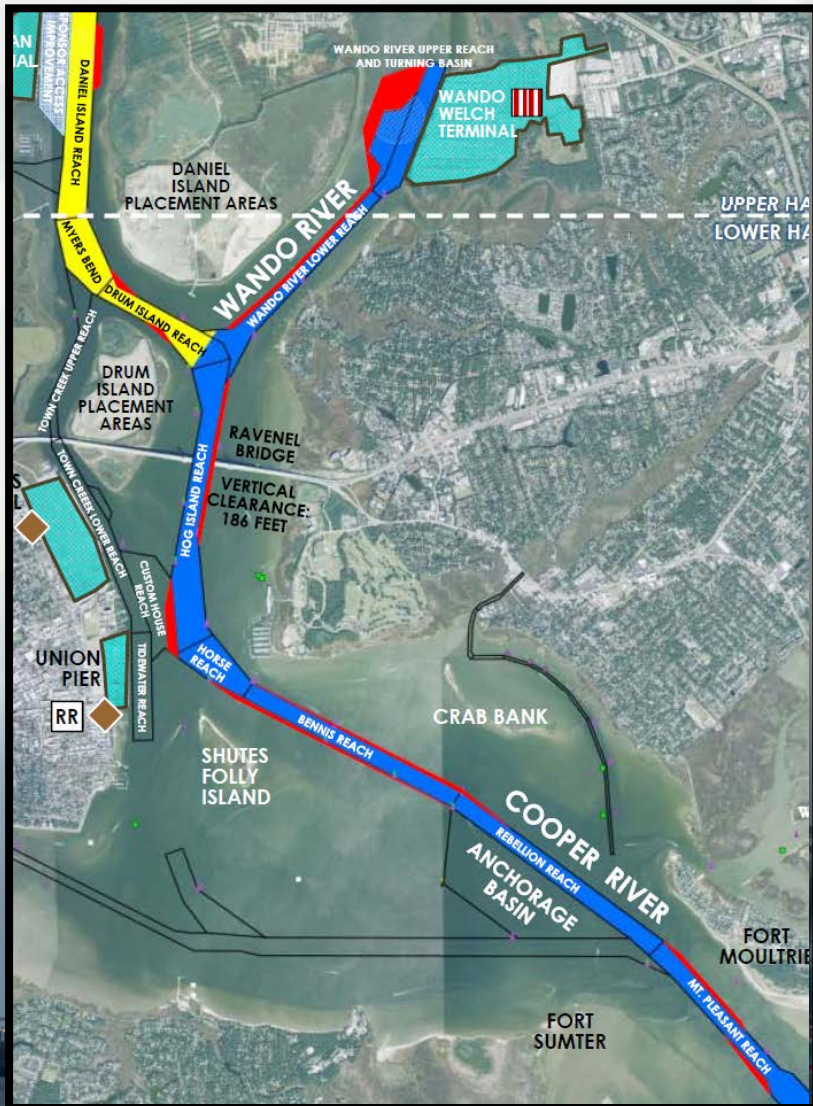
AWARD AMOUNT: \$278 M

COMMENCE DREDGING: May 2018

DREDGING COMPLETE: est. March 2021



POST 45 – LOWER HARBOR SEGMENT 1 CONSTRUCTION



DREDGE TYPE: Clamshell

PLACEMENT: ODMDS

QUANTITY: 12,700,000 cy

DEPTH: authorized 52 feet

ESTIMATED MILESTONES:

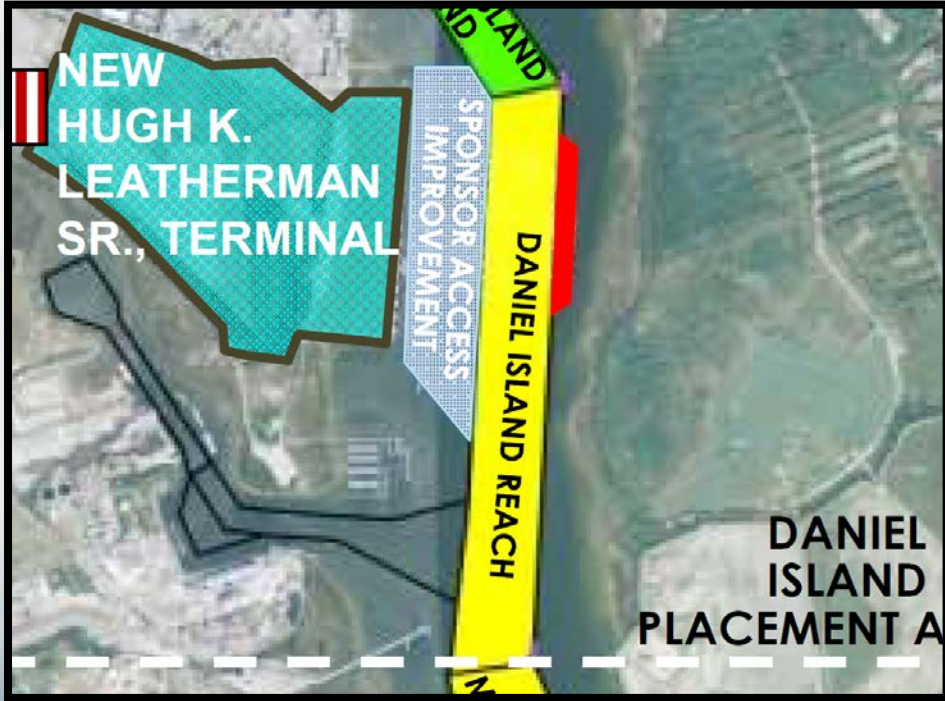
AWARD: January 2019

COMMENCE DREDGING: March 2019

DREDGING COMPLETE: October 2020



POST 45 – LOWER HARBOR SEGMENT 2 CONSTRUCTION



DREDGE TYPE: Pipeline

PLACEMENT: Upland

QUANTITY: 1,800,000 cy

DEPTH: authorized 52 feet

ESTIMATED MILESTONES:

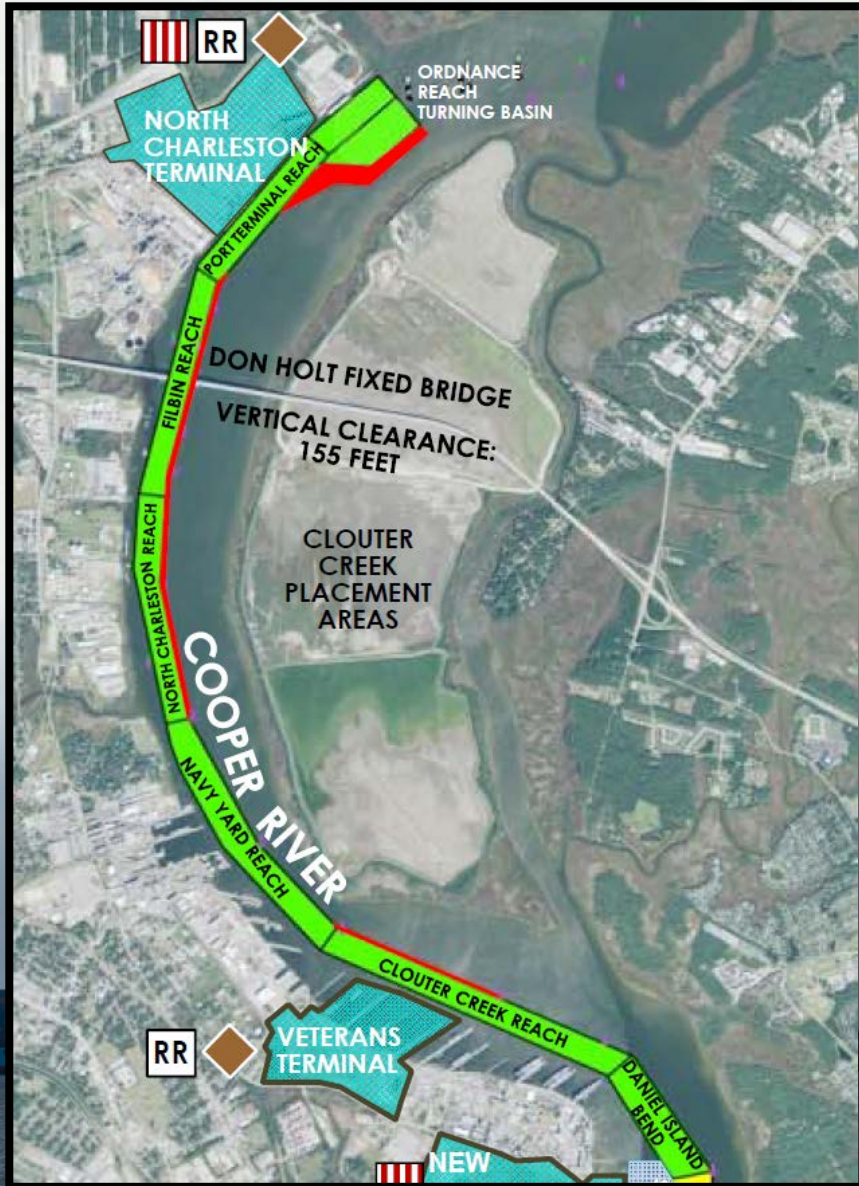
AWARD: June 2020

COMMENCE DREDGING: August 2020

DREDGING COMPLETE: December 2020



POST 45 – UPPER HARBOR SEGMENT 3 CONSTRUCTION



DREDGE TYPE: Pipeline

PLACEMENT: Upland

QUANTITY: 3,200,000 cy

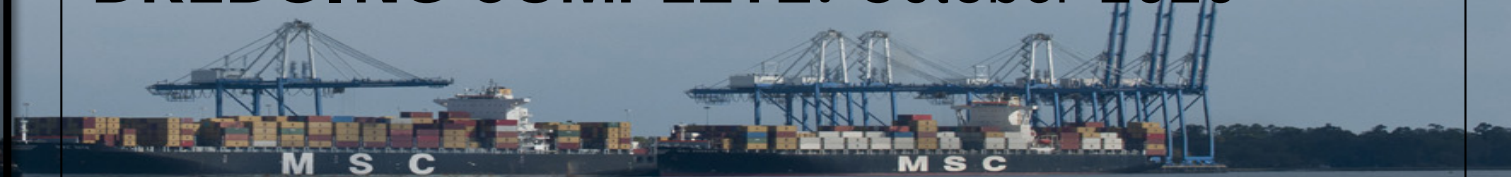
DEPTH: authorized 48 feet

ESTIMATED MILESTONES:

AWARD: December 2019

COMMENCE DREDGING: February 2020

DREDGING COMPLETE: October 2020



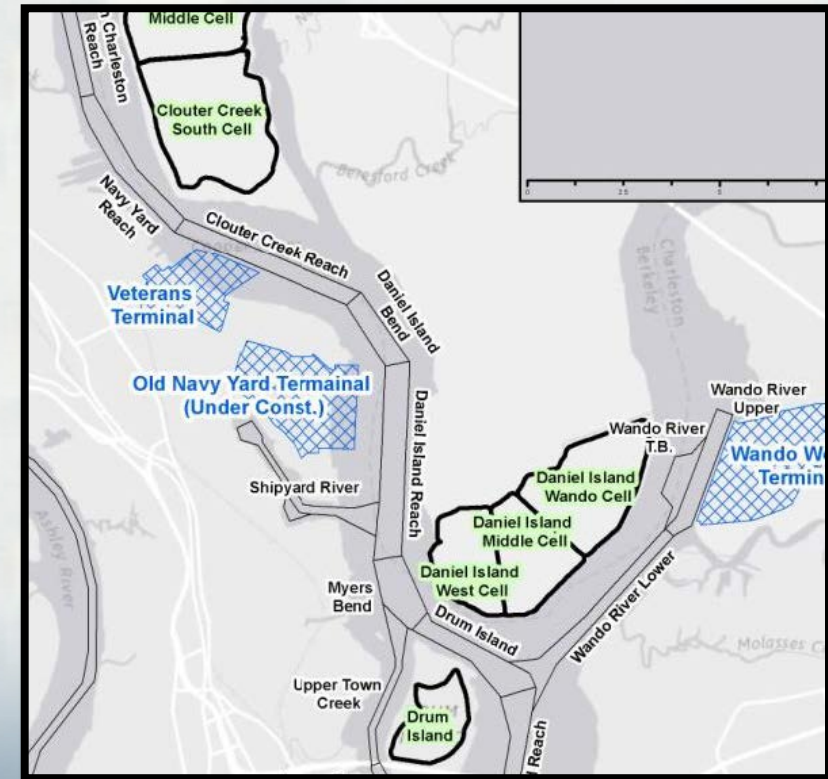
POST 45 – UPLAND PLACEMENT SITE IMPROVEMENTS

DANIEL ISLAND UPLAND PLACEMENT SITE IMPROVEMENTS

- FY 18 Middle Cell Ditching (Awarded)
- FY 18 Wando Cell Dike Improvements
- FY 19 Middle Cell Ditching
- FY 20 Middle Cell Dike Improvements

CLOUTER CREEK UPLAND PLACEMENT SITE IMPROVEMENTS

- FY 20 South Cell Dike Improvements





POTENTIAL CONSTRUCTION EQUIPMENT



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Hopper dredge



Shore-based
Equipment



Bulldozer

Clamshell dredge



Cutterhead dredge



Offloader

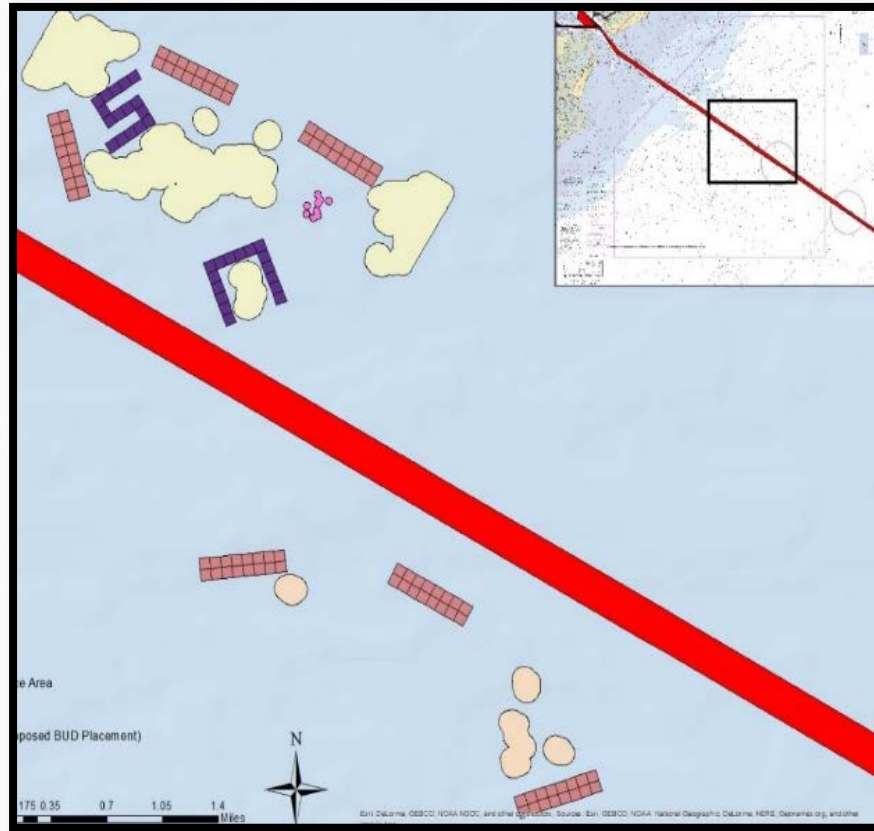




PROJECT MITIGATION



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**MITIGATION REEFS
(TWO - 33 ACRE REEFS)**

FRESHWATER WETLANDS CONSERVATION (665 ACRES)



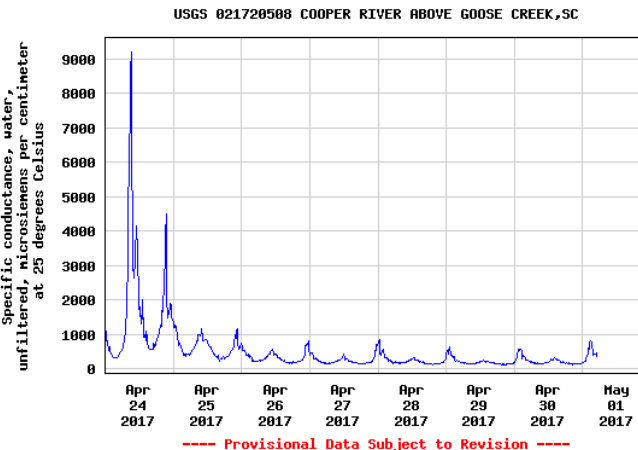
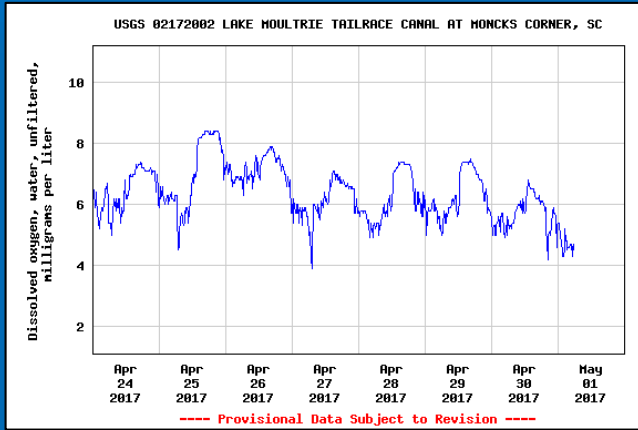


PROJECT MONITORING COMPONENTS



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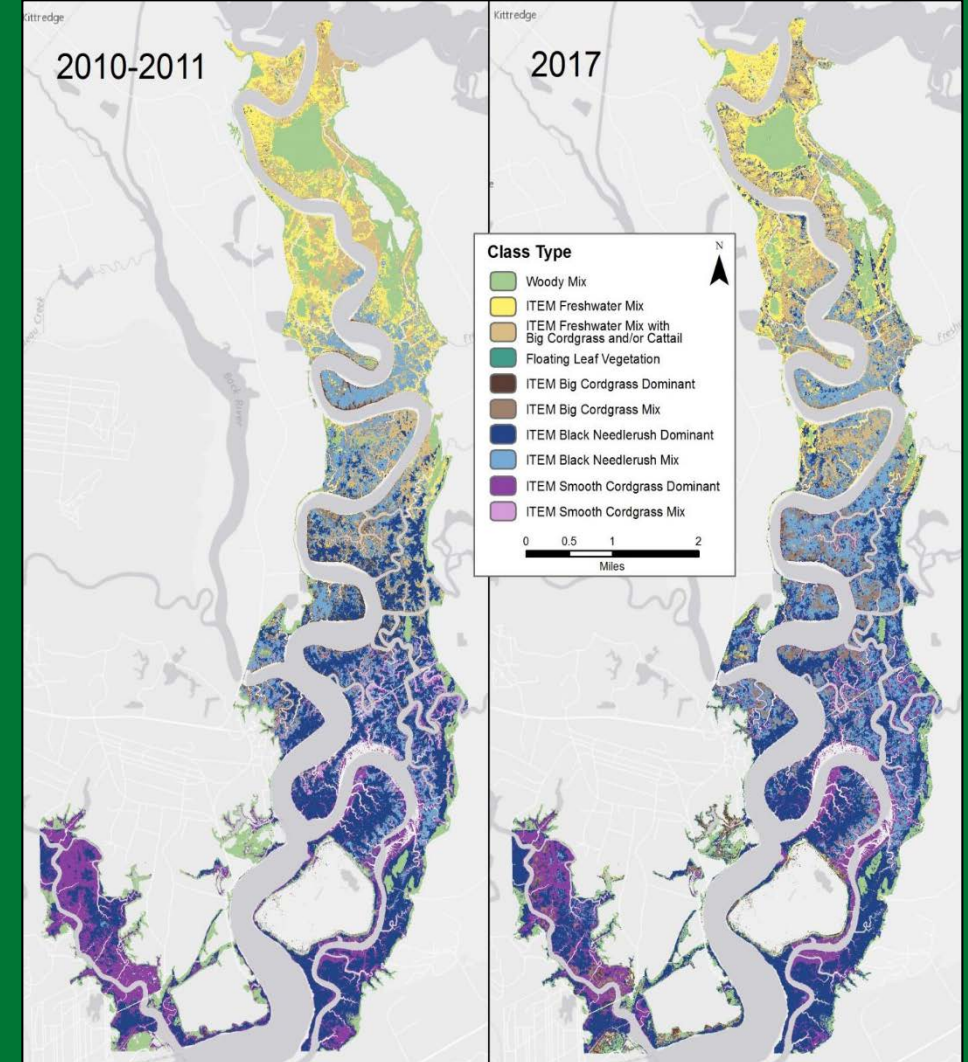
WATER QUALITY



HISTORIC SHORELINES



WETLANDS MONITORING

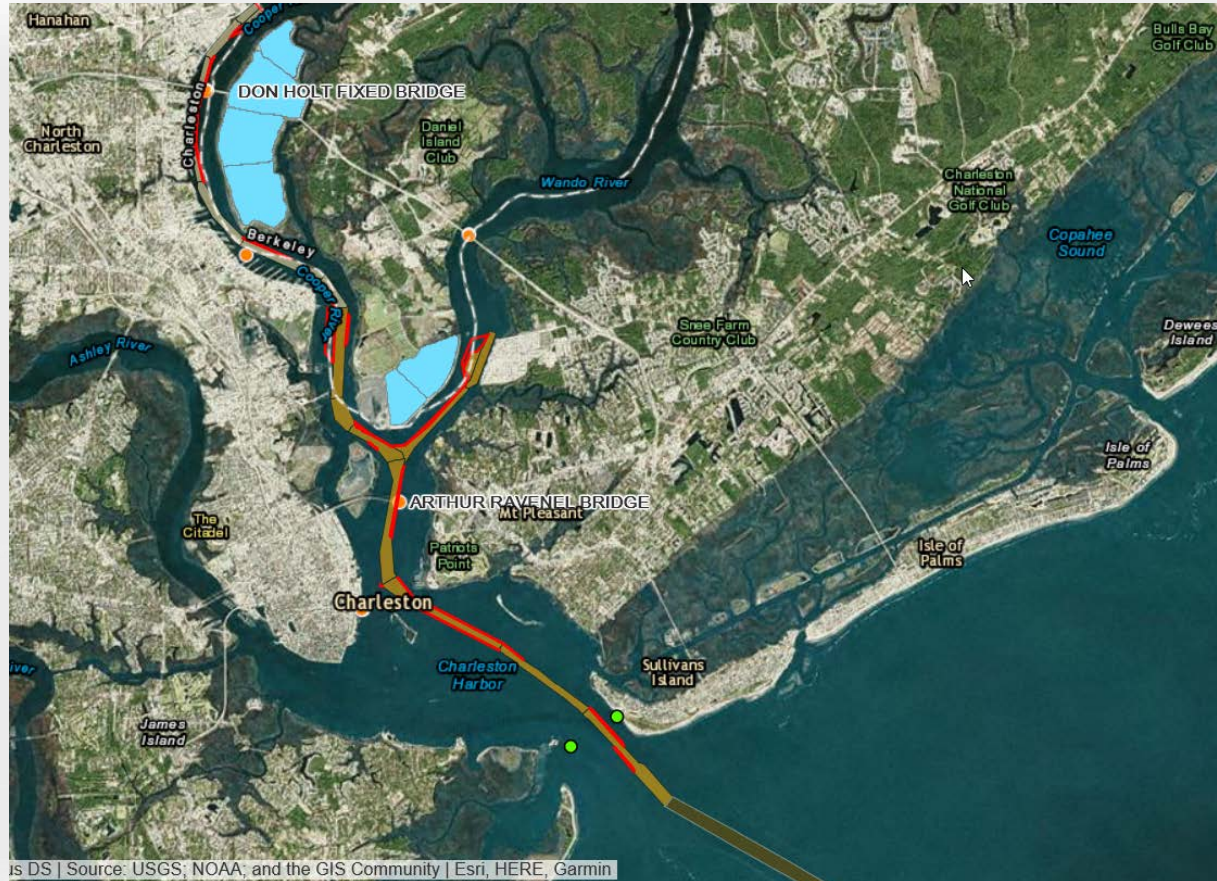




WEB MAP VIEWER



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- Channel footprint
- Channel extension
- Turning basin footprints
- ODMDS
- Artificial reefs
- Upland placement areas
- Wave and current monitoring
- Water quality gages

<https://cesac.maps.arcgis.com/apps/View/index.html?appid=e116e57bf5844459af30163f69af3cd9>



Questions



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Contact:

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Project Manager

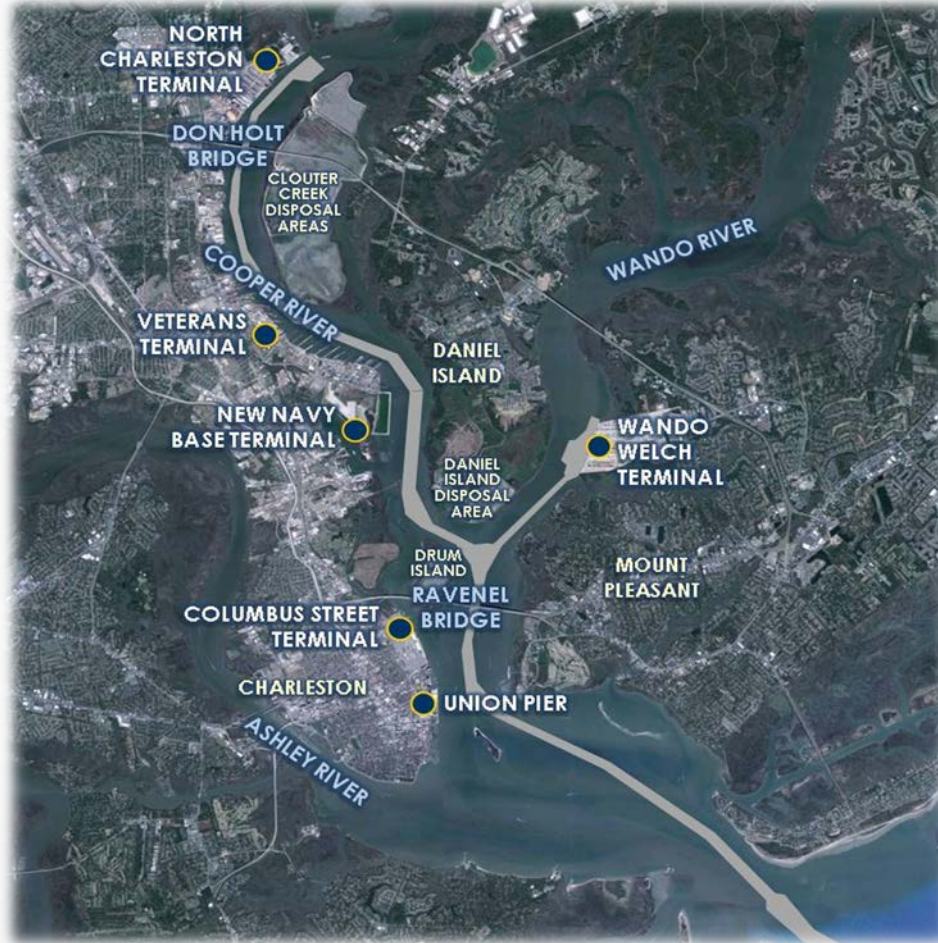
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CHARLESTON HARBOR OVERVIEW



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Charleston Harbor Terminal	Container	Roll On Roll Off	Break Bulk
North Charleston	X	X	X
Veterans		X	X
(New) Hugh. K Leatherman, Sr.	X		
Columbus Street		X	X
Union Pier		X	X
Wando Welch	X		

POST 45 FEASIBILITY TO CONSTRUCTION MILESTONES



PLANNED*:

*Construction completion ranges from 40 to 76 months dependent upon funding, industry availability and environmental factors.