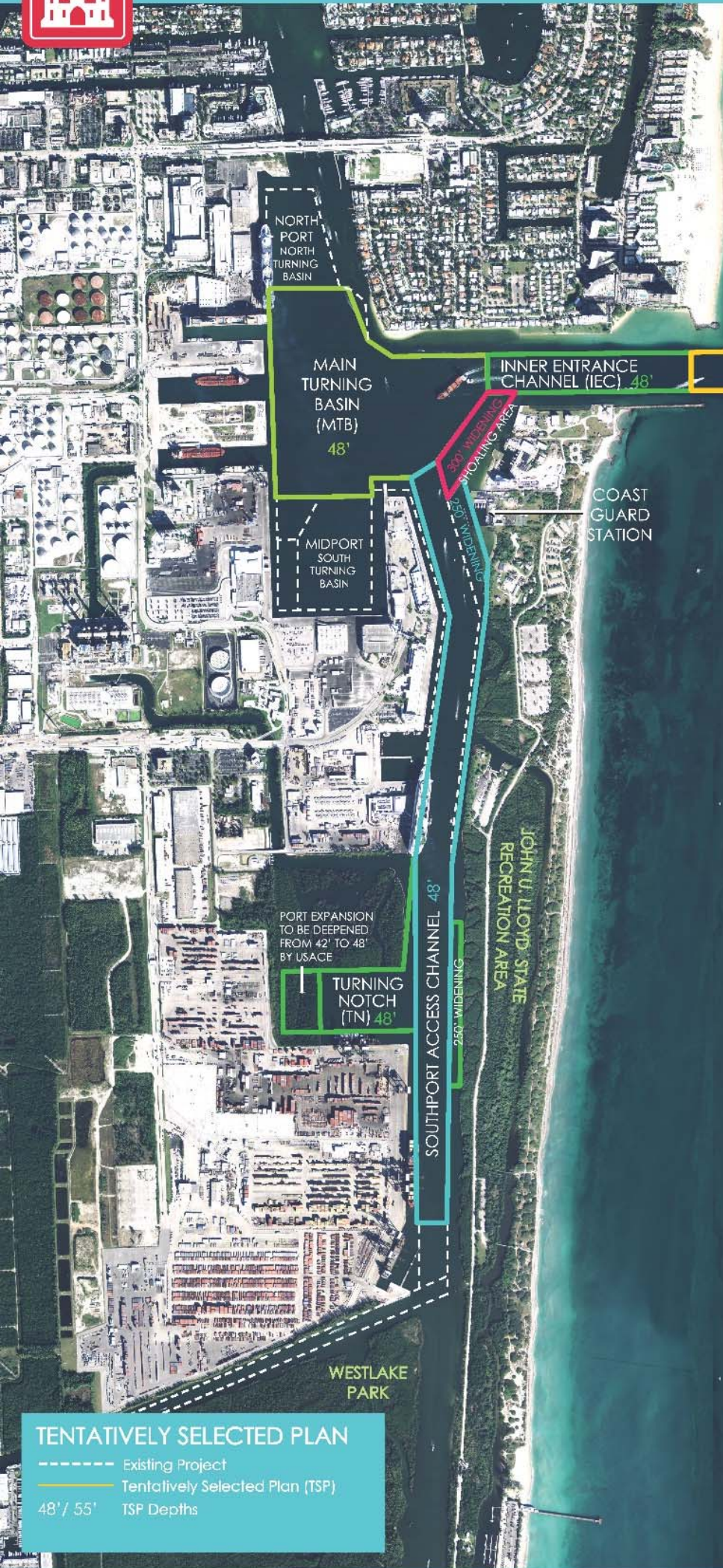




ECONOMIC CONSIDERATIONS DESIGN AND CONSTRUCTION



OUTER ENTRANCE CHANNEL (OEC) 55'

2,000' EXTENSION
800' WIDE

WHY DEEPEEN PORT EVERGLADES?

Larger ships - a result of global markets, as well as the anticipated 2015 expansion of the Panama Canal - are finding Port Everglades an increasingly attractive port to call. Port Everglades stands out because of its location relative to the Panama Canal, as well as its access to extensive intermodal connections including rail, highway, and air facilities.



TRANSPORTATION COST SAVINGS

- Transportation Savings Benefits may result from the following:
1. Use of larger vessels
 2. More efficient use of larger vessels
 3. More efficient use of existing vessels
 4. Reduction in transit time
 5. Lower cargo handling and tug assist costs

Types of Vessels Transiting Port Everglades



Container

Bulker

Cruise

Tanker



THE NEED

TRADE ROUTES

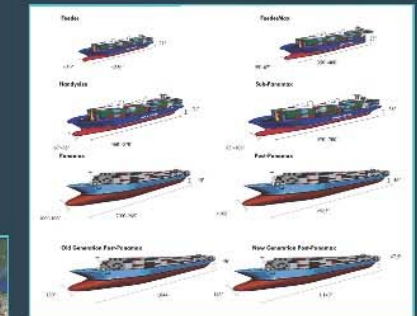
Geography and distance are major determinants of transportation costs. As such, a port's position along major trade routes is a factor in efficiently delivering both import and export products to end users.

Port Everglades is positioned along expanding trade routes including those to and from the Mediterranean, Northern Europe, and East and West Coasts of South America.



Port Everglades Major Container Ship Trade Routes

- Northern Europe
- Mediterranean
- West Coast South America
- East Coast South America



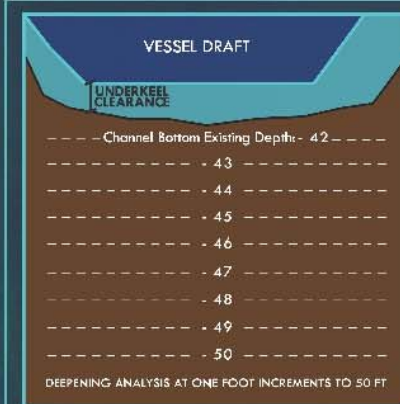
EVOLUTION OF MODERN SHIPS 1960-2013

Container ship carrying capability has evolved over the past 50 years from 100 containers circa 1960, to 6500 containers circa 2000, to a 10,000 - 12,000 TEUs (twenty-foot equivalent units) capacity range currently in development. Larger ships with greater capacity are less costly to operate per TEU, and offer potential economic savings to consumers worldwide.

MODERN CONTAINER SHIPS TYPICALLY NEED:

- Harbor depths in excess of 44 feet for fully loaded vessels
- Sufficient channel widths to accommodate increased ship widths (140 feet +) compared to past Panama Canal width standards of 106 feet
- Larger port facilities and turning areas for longer vessels (1000 to 1400 feet)

PANAMA CANAL EXPANSION GATUN LOCK
Images courtesy of PanCanal.com



THE ANALYSIS

$$\frac{\text{BENEFITS}}{\text{COST}} > 1$$

$$\text{BENEFITS} - \text{COSTS} = \text{NET BENEFITS}$$

The depth that maximizes net benefits is identified as the National Economic Development (NED) plan. Federal interest is established based on the justification of the net benefits that are in compliance with environmental laws and regulations.

THE TENTATIVELY SELECTED PLAN

DEEPENING:

- Outer Entrance Channel: 55-foot depth
- Inner Entrance Channel: 48-foot depth
- Shoaling Area: 48-foot depth
- Southport Access Channel: 48-foot depth (berth 23 to south end of berth 32)
- Main Turning Basin: 48-foot depth
- Turning Notch: 48-foot depth + minor widening features

WIDENING AND OTHER FEATURES:

- Outer Entrance Channel: 2,200-foot extension, 800 feet wide
- Shoaling Area: 300-foot widening; relocate Coast Guard Station
- Southport Access Channel: 250-foot widening at "knuckle;" shift channel easterly 65 feet (berths 26 to 29)

BENEFITTING VESSEL TYPES:

- CONTAINER** (beam - length - draft)
Panamax Vessel Sizes:
106 x 960 x 40 to 44.5 feet
Post-Panamax Vessel Sizes:
120 to 143 x 965 to 1140 x 45 to 48 feet
- TANKER** (Aframax 80 - 120k DWT)
- CRUISE**
- BULKER** (60-100k DWT)

TENTATIVELY SELECTED PLAN

- Existing Project
- Tentatively Selected Plan (TSP)
- 48' / 55' TSP Depths



Southport Access Channel



Petroleum Tanks



Cruise Terminal



Main Turning Basin



Container Terminal

PORT EVERGLADES HARBOR NAVIGATION PROJECT