

C.1



Port Canaveral 21st Century Project

- 44-foot Project Status - section 204 (f)
 - Construction completion: June 2016
 - USACE assumption of maintenance approval: August 2016
- Next Steps Towards Cargo Growth
 - Deeper channel
 - Improved terminal facilities
 - Larger vessels
- 21st Century Project - section 204 (f)
 - 53-foot channel
 - State of the art container terminal
 - 12,000 to 18,000 TEU vessels

USEC Future Port Depths

USEC Port	Date Available	Internal depths	usable tide	max depth w/tide	max draft w/tide
NY	2016	50	4	54	51
Norfolk	2023	55	3	58	55
Charleston*	2020	52	4	56	53
Sav*	2018	47	6	53	50
Jax	2025	47	3	50	47
Miami	2015	50	2	52	49
PEV	2023	48	2	50	47
Canaveral	2018	48	3	51	48
Canaveral	2023	50	3	53	50
Canaveral	2028	53	3	56	53

* Bridge height constraints (185 ft vertical clearance)

Why Canaveral?

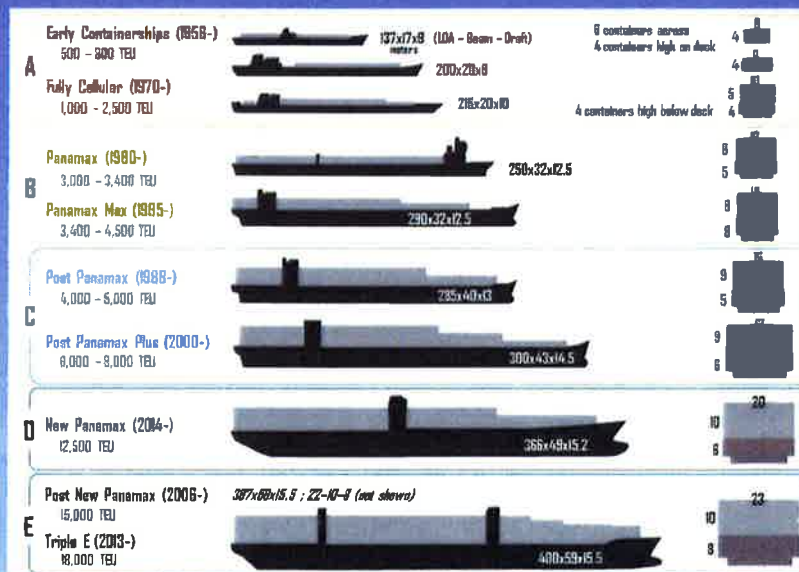
Competitive Advantage: Port Canaveral Location

- 575,000 TEUs would save at least 200 land transit miles one-way by using Port Canaveral (2020 estimate)
 - NYNJ: 403,00 TEUs; 553 one way miles per truck load
 - ORF: 28,000 TEUs; 493 one way miles per truck load
 - CHL: 48,000 TEUs; 383 one way miles per truck load
 - SAV: 96,000 TEUs; 237 one way miles per truck load
- Total trucking cost savings: \$100+ million per year
- Larger Vessels → More TEUs → Greater Savings

The Large Vessel Phenomenon

- Economies of Scale: Operating Cost Reduction/TEU
 - 9,000 TEU to 12,000 TEU: 14%
 - 14,000 TEU to 19,000 TEU: 12%
- Construction Trend
 - 83% of vessels on order 9,000 TEU to 20,000 TEU
 - 60% of vessels on order 14,000 to 20,000 TEU
- Industry Consolidation
 - 16 of top 20 carriers are in 4 consortia
 - 2M: Maersk & MSC
 - Ocean 3c: CMA, CS, USAC
 - CKYH+E: COSCO, Hanjin, YM, Kline & Evergreen
 - G6: Hapag/CSAV, MOL, APL, OOCL, NYK, and HMM

The Large Vessel Phenomenon

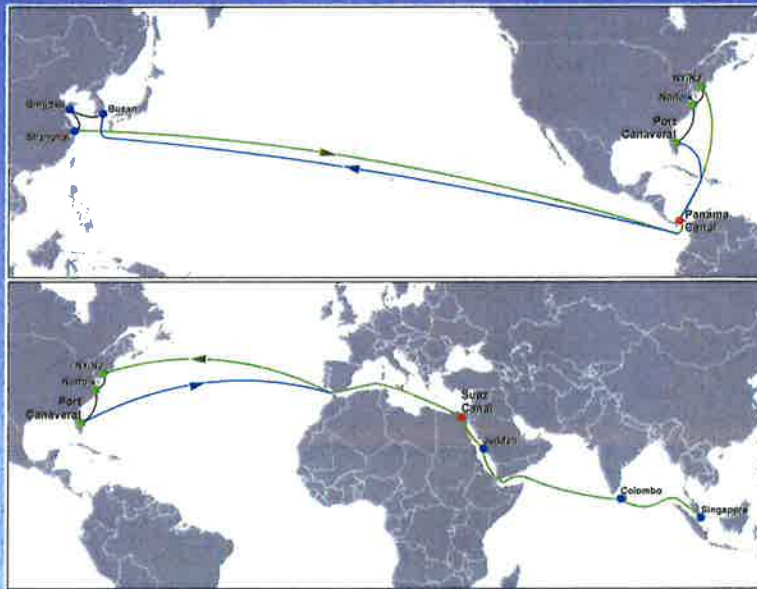


Advantage: Port Canaveral Vessel Capability



	Year	TEUs	Beam	Draft	LOA
CMA CGM Benjamin Franklin	2015	17,900	175	52.5	1,309
Maersk Edmonton - future Panamax	2011	13,100	158	52.5	1,202
Seaspan Hamburg - existing Panamax	2001	4,250	106	41	852

Advantage: Location and Vessel Capacity



Alternative Project Benefits

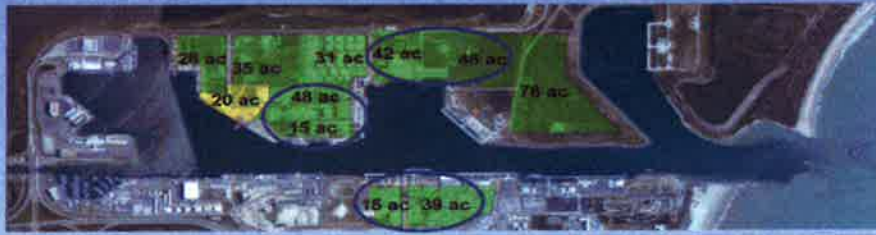
Vessel Size	TEUs per call	TEUs per year	Annual Cost Savings
12,500	4,638	241,167	\$ 93,458,587
14,000	5,194	270,107	\$ 104,673,617
16,000	5,936	308,693	\$ 119,626,991
18,000	6,678	347,280	\$ 134,580,365

Tentative Project Description

Channel Reach	Existing Channel Depth (ft, MLLW)	Proposed Channel Depth (ft, MLLW)
SCP1 to MTB	44	53
Inner Reach	44	53
Middle Reach	46	54
Turn Widener	46	55
Existing Outer Reach Seaward End	46	55
Proposed Outer Reach Seaward End	---	56

Three Potential Terminal Locations

- SCB 3&4, TB1 Rebuild
 - Construction & berth dredging = \$55 million
- NCB 3&4 Rebuild
 - Construction & berth dredging = \$65 million
- EUL
 - Construction & berth dredging = \$90 million



Project Dredging Costs

	Nominal Depth	Dredging Cost (\$mil)
Dredging Contract 1	-48	\$48.20
Dredging Contract 2	-50	\$37.00
Dredging Contract 3	-53	\$47.70
Deepen MTB	-53	\$8.40
Cove Wall Deepening		\$1.40
NCB 1,2,3,4	-53	\$2.10
CT2, SCP2,3,4 & TB1	-53	\$2.40
		\$147.20

Schedule Update

Activity	Due Date
Alternatives Scoping IPR	June 2016
Tentatively Selected Plan IPR	January 2017
Draft Section 204 Report	May 2017
DCW Approves 408 Request	August 2018
ASA Approves 204(f) Request	October 2018
Advertise Construction	May 2019
Initiate Construction	July 2019
Complete Construction	January 2021

Next Steps

- Engage USACE Deep Draft Navigation Center of Expertise
- Develop the Dredged Material Management Plan
 - ODMDS modification
- Agency Involvement
- Ship Simulation Modeling
- Cost Estimate Refinements
- Cost and Schedule Risk Analysis

