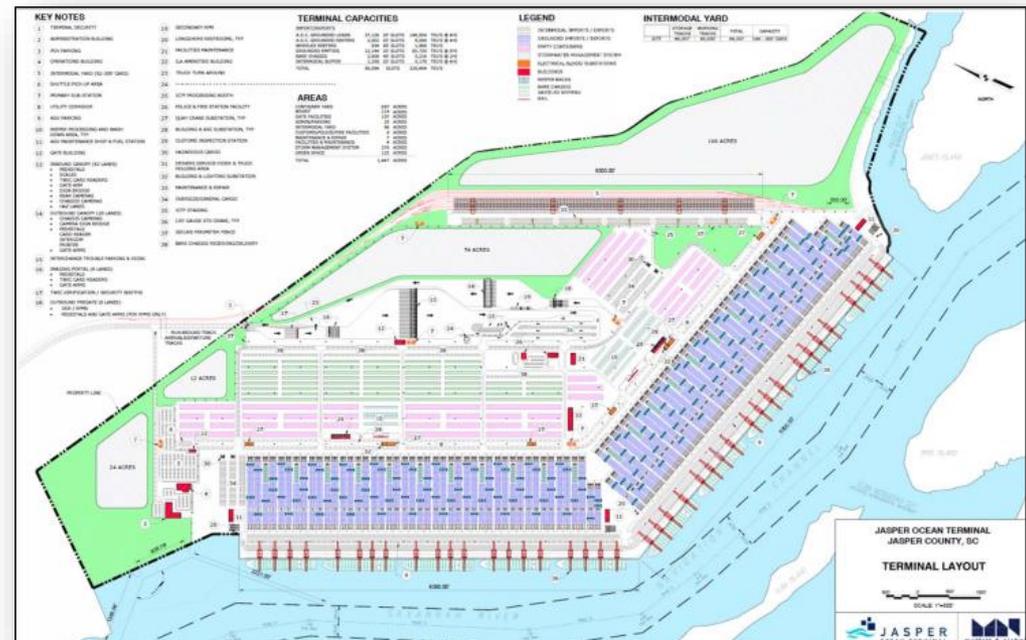
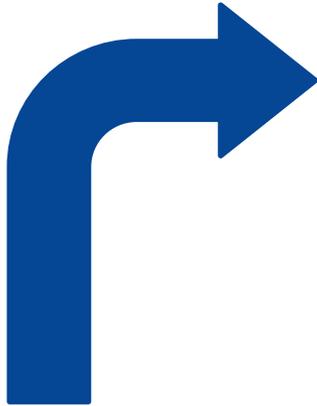


Outline:

- Cost Information
- Ongoing Environmental Impact Statement Work
- Basis of Concept – TBA Simulation
- SCPA Capacity
- GPA Capacity
- Timeline for Completion
- Landside Infrastructure Needs
- Waterway Infrastructure Needs



Fiscal Year 2019 Budget



Total Operating Revenue for FY 2019 is \$2,207,000

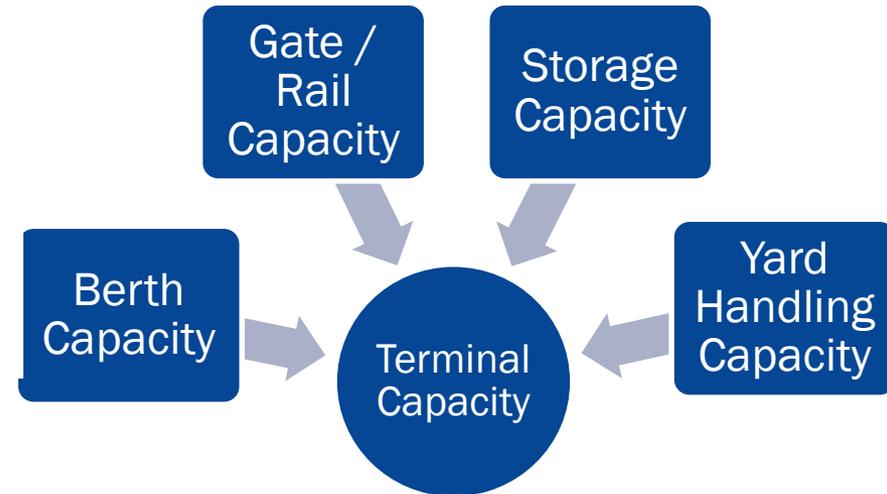
Operating Expenses	FY 2019
Program Mgmt/Consolidation	\$600,000
Task 1 - Basis of Design	
Task 2 - Easement Release Plan - Sediment Tracing	
Task 3 - Access Corridor, Alt 4	
Task 4 - Geotechnical Test Embankment Monitoring	\$62,000
Task 5 - Economic Impact Study	
Task 6 - Third-Party Contractor Solicitation	
Task 7 - Channel Modifications	
Task 8 - Property Management & Geotechnical Support	\$100,000
Task 9 - Section 10/404 Review Process Support	\$900,000
Task 10 - Section 408 Review Process Support	
Task 11 - Section 4084/204 Review Process Support	
Task 12 - Planning and Design	
Task 13 - Geotechnical Investigation	
Task ?? - Section 203	
Total Development Expenses	\$1,762,000
Total Office & Admin Expenses	\$445,000
Total Operating Expenses	\$2,207,000

JOT Joint Venture – Expenses to Date

FY11 Contributions From Sponsors	\$3,800,000
FY12 Contributions	\$800,000
FY13 Contributions	\$800,000
FY14 Contributions	\$600,000
FY15 Contributions	\$2,100,000
FY16 Contributions	\$2,000,000
FY17 Contributions	\$3,750,000
FY18 Contributions - estimate	\$3,750,000
Total	\$17,600,000

JOT Capacity Basis of Concept – TBA Analysis

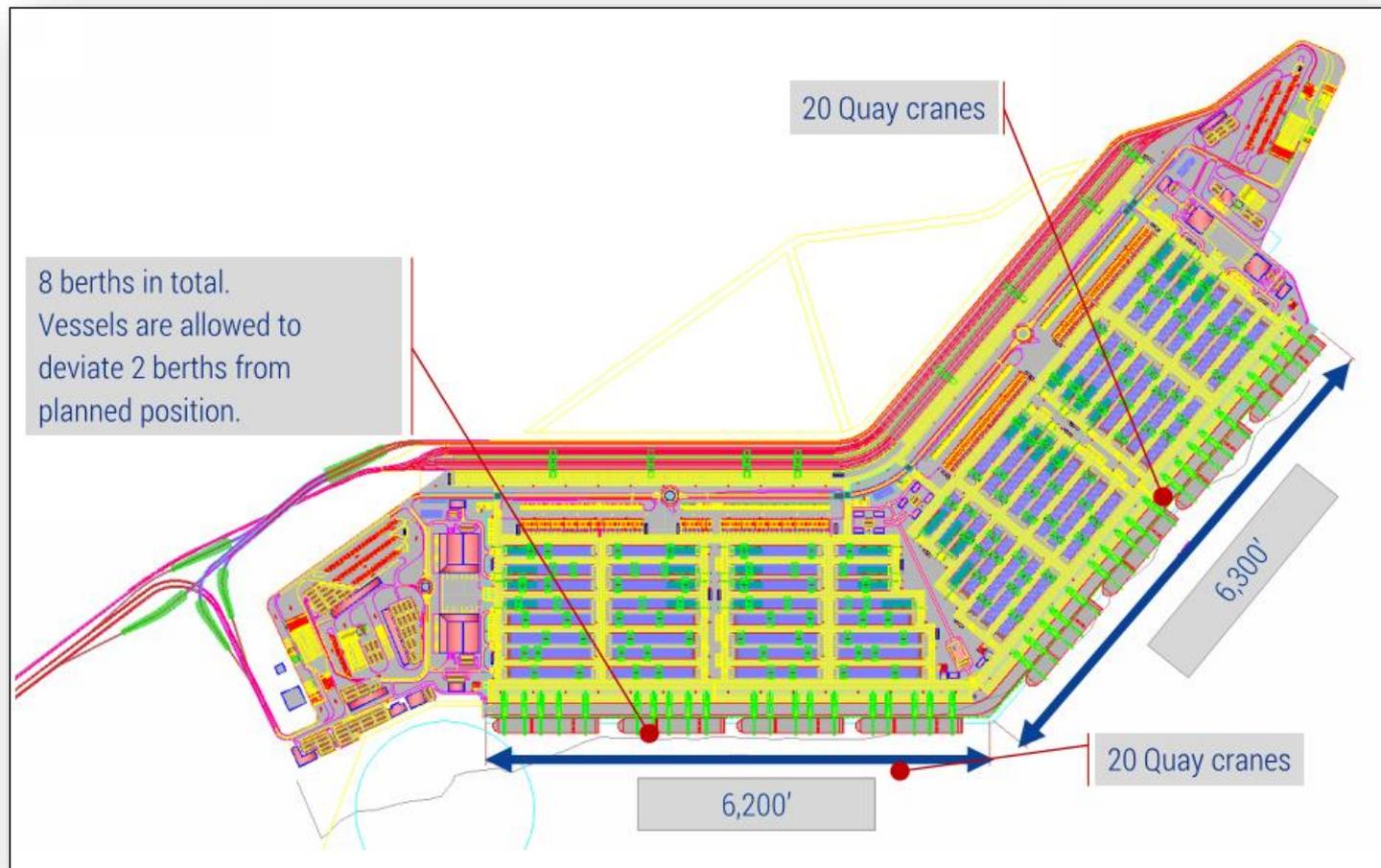
- TBA reevaluated the Basis of Concept design to verify capacity
- Evaluated 5 operational concepts using variations of parallel and perpendicular yard arrangements for manual and automated transport equipment
 - Option 0: E-RTG + terminal truck (reference design)
 - Option 1: Parallel cantilever RMG + terminal truck
 - Option 2: Parallel RMG + automated shuttle carrier
 - Option 3: Perpendicular RMG + manual shuttle carrier
 - Option 4: Perpendicular RMG + Battery Lift AGV
- All options achieve approximately 8.0M TEU operational capacity at full build out
 - RTG option limited by storage capacity
 - RMG options limited by handling capacity



RTG = Rubber Tire Gantry Crane
RMG = Rail Mounted Gantry Crane

JOT - TBA Recommendation

- A perpendicular RMG yard layout
- Both manual shuttle carrier and Lift AGV are suitable



SCPA - Charleston Capacity Assumptions

Terminal	Original	Revised
Wando Welch	2.0 Million TEU	2.4 Million TEU
North Charleston	0.8 Million TEU	0.4 Million TEU*
Navy Base Terminal	1.4 Million TEU	2.4 Million TEU
Total TEU	4.2 Million TEU	5.2 Million TEU

*North Charleston reduced due to bridge height for big ships.



When is Charleston Capacity Reached?



Typically at 80-85% of capacity a terminal reaches its limit

This equates to a 2035-2037 timeframe

Very dependent on global trade growth, most experts say 3-4%

Where is GPA on Capacity Today?



- CY 2017 carried 4.0 Million TEU
- Stated Capacity 6.5 Million TEU
- \$2.5 Billion plan to grow to 8 Million TEU capacity by 2028
- Plan includes:
 - Mason Mega Rail facility
 - New equipment purchases
 - Gate and container storage expansions
 - Berth improvements
 - Off terminal road additions
- Future infrastructure improvements
 - Talmadge Bridge air draft capacity

New timeframe for Phase One JOT 2035 based on best estimates

- Substantial work is required on SC road and rail infrastructure beginning now:
 - 20 year effort
 - In excess of \$1 billion investment
 - GPA cannot invest in SC land infrastructure
- This will be focus of FY 2019 JVA efforts
- Jasper Legislative Delegation must champion this process in SC Legislature

SCPA New Facilities Timeline

2003

- Filed permit application for Navy Base Terminal

2007

- Permit received for Navy Base Terminal

2008

- Intergovernmental Agreement for JOT signed by SCPA/GPA
- Lawsuit by CCL against Navy Base Terminal

2009

- SC Ports completes loss of 40% of container volume and delays need for Navy Base Terminal

2010

- Navy Base Terminal lawsuit settled

2012

- Original intended opening date of Navy Base Terminal
- Savannah Harbor Expansions Chief's Report

2015

- First Federal funding for SHEP
- JOT Intergovernmental Agreement replaced by JV Agreement

2017

- Begin pre-permitting effort on JOT

2018

- GPA announces 8 Million TEU capacity goal at September State of the Port address

2020

- Late Fall opening of Navy Base Terminal Phase One in Charleston

2025

- Estimated Charleston out of capacity based on 2003 volume track

2026

- Phase Two Navy Base Terminal

2032

- Phase Three Navy Base Terminal

2035

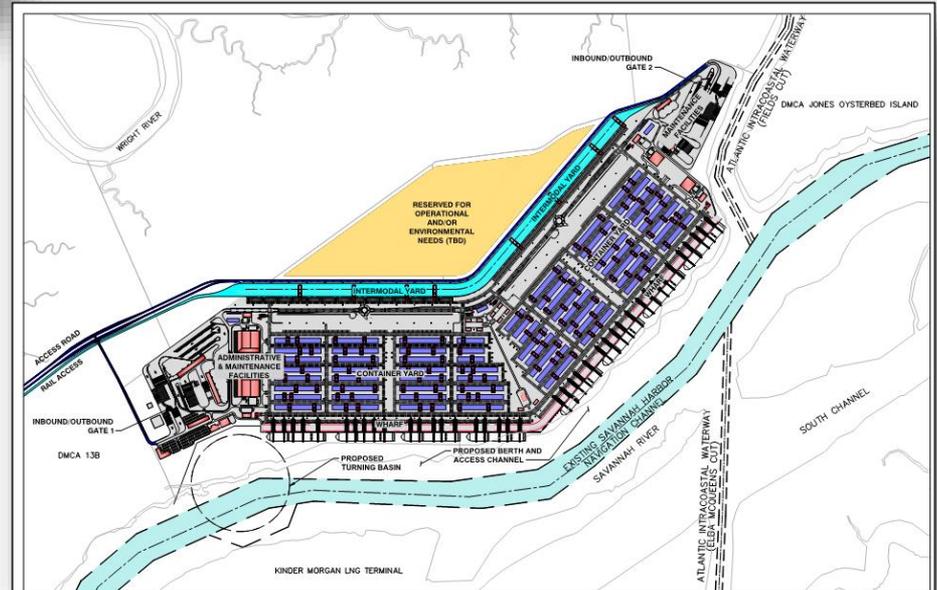
- Phase One JOT

Joint Venture Agreement Goals and Objectives



- JOT shall have handling capacity of 7 million TEU
- JOT shall accommodate draft and beam requirements of a fully loaded 14k – 20k TEU vessel without tidal restriction

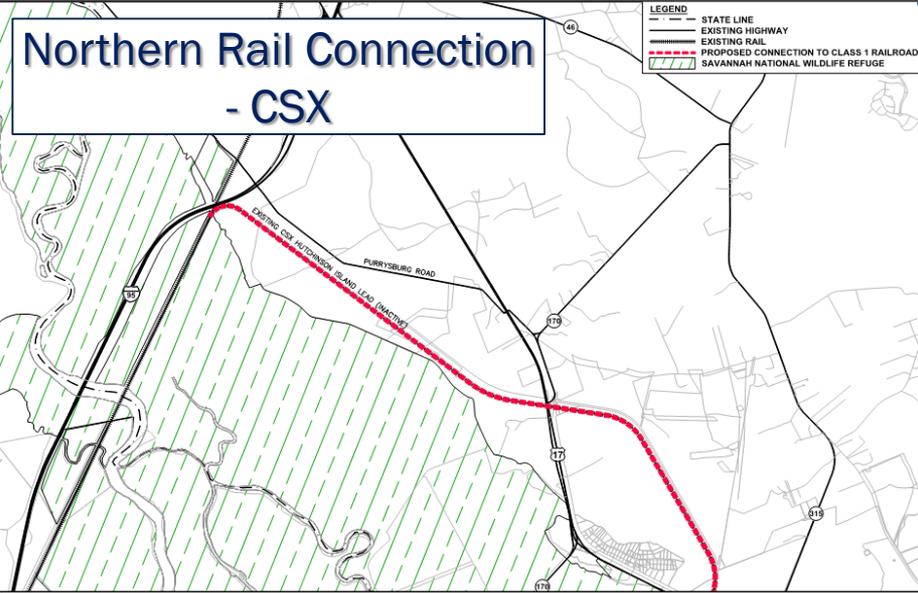
- Savannah River channel shall be modified as authorized in future WRDA to provide for 2 way traffic
- Dual rail access on terminal
- Sufficient highway access



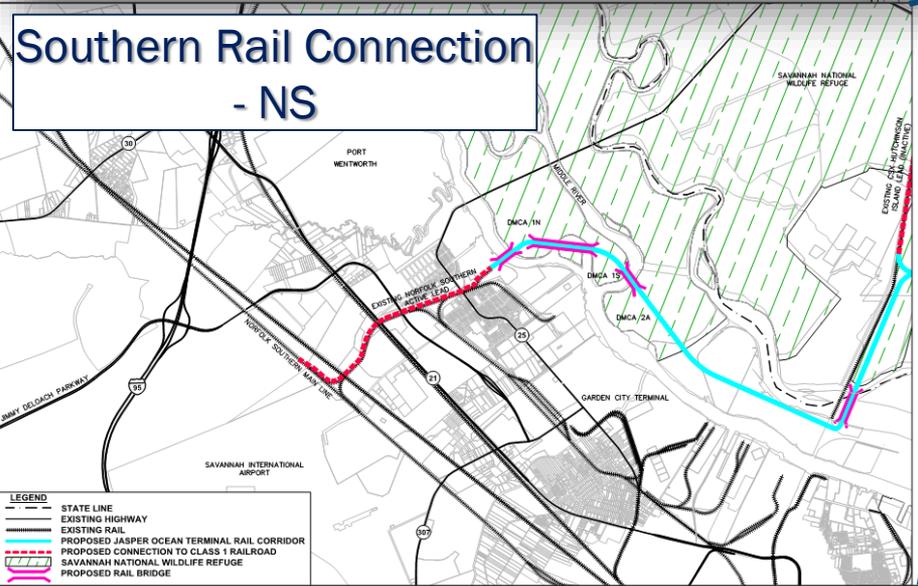
Landside Infrastructure Needs – Road and Rail

Northern Rail Connection - CSX

- LEGEND**
- STATE LINE
 - EXISTING HIGHWAY
 - EXISTING RAIL
 - PROPOSED CONNECTION TO CLASS 1 RAILROAD
 - SAVANNAH NATIONAL WILDLIFE REFUGE

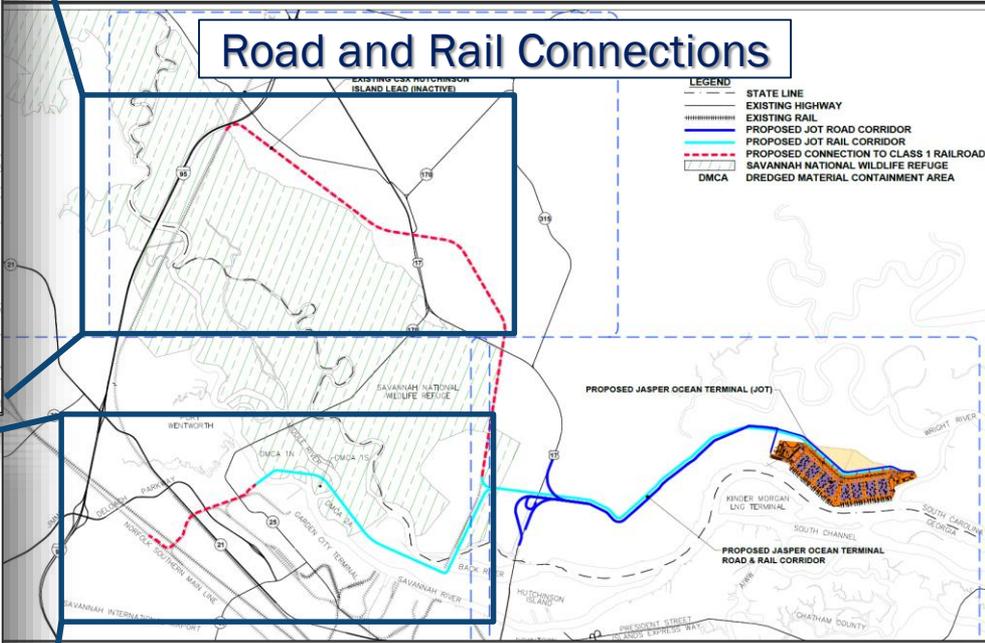


Southern Rail Connection - NS



Road and Rail Connections

- LEGEND**
- STATE LINE
 - EXISTING HIGHWAY
 - EXISTING RAIL
 - PROPOSED JOT ROAD CORRIDOR
 - PROPOSED JOT RAIL CORRIDOR
 - PROPOSED CONNECTION TO CLASS 1 RAILROAD
 - SAVANNAH NATIONAL WILDLIFE REFUGE
 - DMCA
 - DREDGED MATERIAL CONTAINMENT AREA



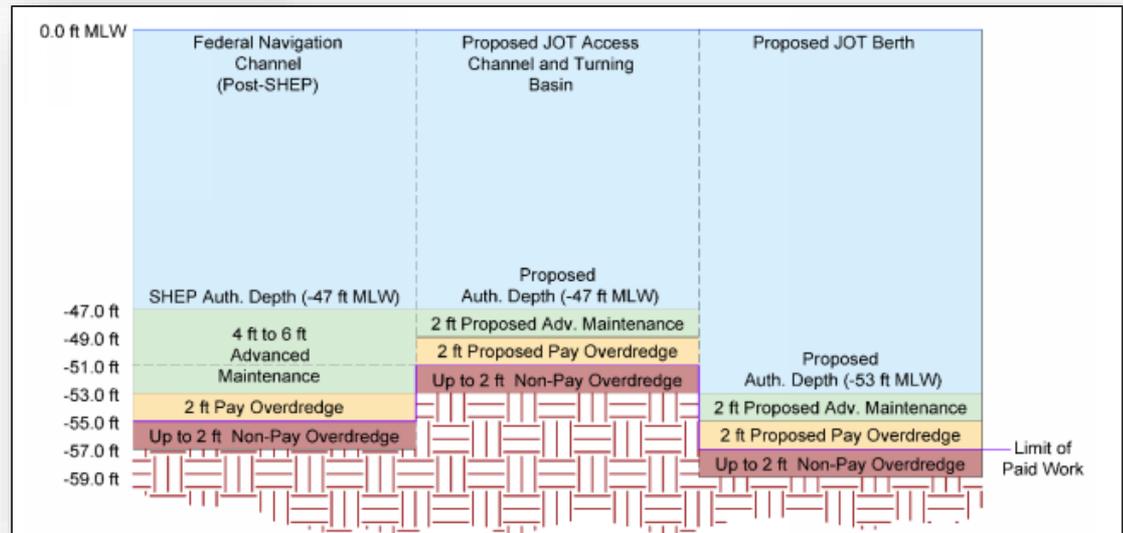
Atkins is preparing a traffic analysis during FY 19 to address any road network deficiencies

Waterway Infrastructure Needs



- JOT needs include additional dredging for:
 - Access channel
 - berth area
 - Turning basin

- The without project condition is the Post – SHEP channel conditions (e.g., -47ft MLW)



Waterway Infrastructure Needs

- Future conditions need to consider further deepening of the Federal Channel to accommodate larger ships
- Proposed dredging for JOT may be updated following analysis of sedimentation conditions for the Section 408 Study

