Planning for Success

Organizing and Analyzing Risk

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Categories of Risk Analysis

- **Organizational** – Leadership and Accountability
- **Commercial** – Market Demand and Public Benefits
- **Financial** – Capital & Operating Costs
- **Construction** – Site, Technology, Design, Regulatory and Procurement
- **Operational** – Before, During and After Construction

Port of Long Beach

Middle Harbor Container Terminal, Long Beach, California

$1.5 B/3.3 M TEU *Automated Container Terminal for Largest Vessels*

- Organizational: POLB/OOCL partnership share
- Commercial: OOCL assumes
- Financial: OOCL assumes
- Construction:
  - Site geotech and utilities POLB assumes
  - Technology and equipment integration OOCL assumes
    - Operational fluidity during & after construction OOCL assumes
- Project strength is the continuous learning loop among organizational, commercial, financial, construction and operational risk managers

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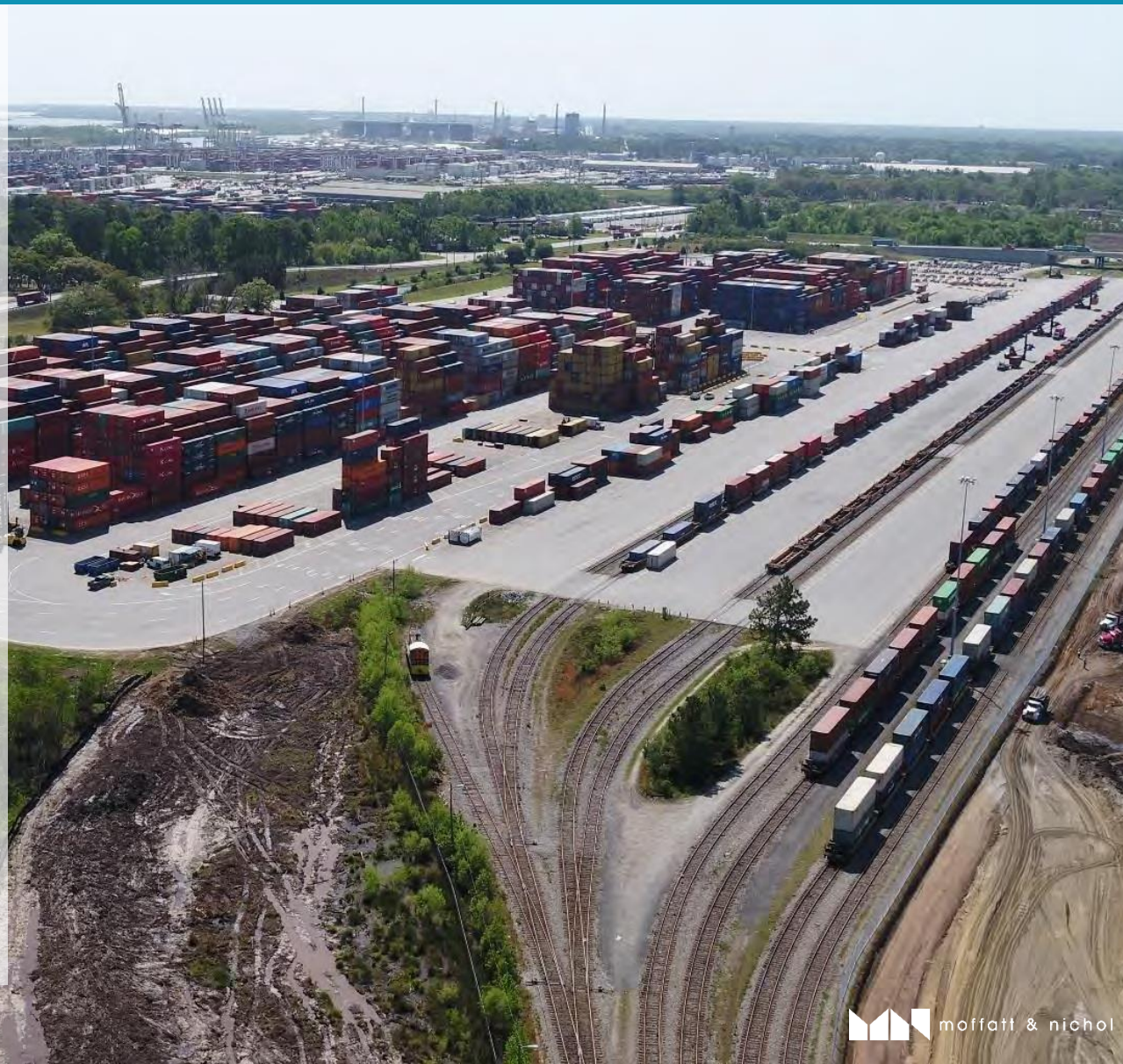
Georgia Ports Authority

Mason Mega Rail, Garden City Terminal, Savannah, Georgia

$127 M / 1M annual lift Capability *NS/CSX Intermodal Facility with Unit Train Capability*

- Organizational: GPA assumes
- Commercial: GPA/CSX/NS share and minimize with detailed hinterland & discretionary cargo analysis
- Financial: GPA assumes with $44M FASTLANE grant
- Construction: GPA assumes
  - Site, Geotech, Utilities & Equipment
  - Technology integration
- Operations: GPA/CSX/NS share
  - Fluidity during construction
  - Shared facility between two Class 1 RRs
- Project strength is the single owner & operator of all marine and rail terminals



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Port of Virginia and US Army Corps of Engineers

Craney Island Eastward Expansion & Marine Terminal, Portsmouth, Virginia

$4 Billion/5 Million TEU *Dual Function Project for Long Term Dredge & Cargo Needs*

- Organizational: USACE/VPA partnership share
- Commercial: USACE/VPA share and minimize through public benefit and long term demand forecast
- Financial: USACE/VPA share
  - 50/50% cost-share to expand dredged material capacity requires USACE & Congressional funding & coordination)
  - Marine terminal (100% VPA funded)
- Construction: VPA assumes terminal geotech risk including
  - Fill with dredged material
  - Soft clay foundation
  - Time constraints for filling (dredged material) and ground improvements (4+ years)
- Operations: USACE/VPA share
- Project Strength: Blue Ribbon Panel of experts & best practices from similar construction projects

Research and Risk Analysis

- **Organizational** – Leadership and Accountability
  - *Do decision makers have the authority, resources and incentives for a successful & sustainable project?*
- **Commercial** – Market Demand and Public Benefits
  - *Is there a clear demonstration of market demand? Are there quantitative or qualitative public benefits?*
  - *Does the project have long term performance indicators?*
- **Financial** – Capital & Operating Costs
  - *Does the cost model include both capital and operating costs?*
  - *Does the construction cost include an adequate contingency?*
  - *Do funding partners participate in the contingency?*

Research and Risk Analysis

- **Construction** – Site, Technology, Design, Regulatory and Procurement
  - *Are your NEPA and permit schedules realistic?*
  - *How detailed is your Geotech analysis?*
  - *Has the design been reviewed for operational efficiency? Can it accommodate changes or delays in technologies?*
  - *Have you explored alternative procurement techniques?*
- **Operational** – Before, During and After Construction
  - *Do you have a simulation model or an internal operations group involved in all project decisions?*
  - *Have you included construction impact on cargo operations and cargo operations impact on construction?*

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THANK YOU!

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