Port of Alaska Modernization Program

Enterprise/Utility Oversight Committee Presentation on Results of the December 20, 2022 Design Advisory Board Meeting

June 9, 2023
The DAB Meeting Objective was:

- To affect a change to the PAMP cargo dock design from that which was approved by the Assembly on June 22, 2021, in AO 2021-56, to a cargo dock design that supports 100-foot gauge cranes and has a continuous deck of equal width end to end with crane rail that runs the entire length. Does the DAB concur?
Current Approved Cargo Dock Basis of Design (AO2021-56)
Proposed Cargo Dock Basis of Design (Aug 22)
Current Proposed Cargo Dock Basis of Design
Side View of Cargo Docks With 100-Gauge Cranes
Crane Size Growth:
1st Container Crane & Jumbo Crane
Why This Design Should Matter to the Owner?

- As the facility owner; we should require maximum flexibility from OUR port infrastructure
  - PUAs give the cargo users preferential cargo dock access 2 days/week. *The berths belong to the owner the other 5.*

- The Port has 3 missions to support:
  - Support to *commercial business* operations *(which is all the users are interested in)*
  - Support to *DoD* as a Commercial Strategic Seaport
  - Support to FEMA and SOA DHS&EM as a port of entry for *disaster response/recovery* ops

- It provides continued support of current cargo carrier business models with no loss of efficiency; as well as the space for alternate fuels infrastructure and the ability to handle outsized break bulk cargo more effectively

- At its simplest, this concept is a modern duplicate of the existing port infrastructure! *Here’s what I mean...*
We are NOT inventing a new idea... we are modernizing an old one!
Why You Don’t Need a Buss Bar

Georgia Ports Authority
Port of Savannah
Garden City Container Terminal

• 36 90-Gauge Cranes
• Powered by an electric cable
• Cable lays on the dock between the front legs and the bull rail and runs up to the spool on the crane
  • Cable rolls up or down off the spool as the crane changes position
• *That means no interference with TOTE’s RO-RO ramp ops model and cranes that can be used in 2 berths vs. 1!"
TOTE’s

**M/S Isla Bella**
(serves Puerto Rico)
Gross Tons: 36,751
LOA: 764’ x 105’
TEUs: 3,100
Draft: 29’

Matson’s

**M/S Lurline**
(Con-Ro serves Hawaii)
Gross Tons: 32,664
LOA: 870’ x 114’
TEUs: 2,750 (+ 800 cars)
Draft: 38’

*As responsible port owners, we must prepare for change of every kind!*
The fleet can be expected to grow

- Current fleet is in the 1500 to 2000 TEU range.
- 3500 TEU is likely at our port with new line vessels.
- Are 6000 TEU vessels possible in the next 75 years?
# Vessel Calls at Existing Facility*

**Terminal 3**
- TOTE North Star
- TOTE Midnight Sun
- BB Fuel Millie
- Military - Cape Hudson
- Military – SNL York

**Terminal 2**
- Matson Anchorage
- Matson Kodiak
- Matson Tacoma
- Matson Maunalei
- Matson Lihue
- GB Pacific Cargo
- Queen Elizabeth – Cruise Ship
- Military Cape Hudson
- Military Bob Hope
- Military Cape Rise
- Military Green Bay
- Military Cape Orlando
- ANP Ship So Yang
- Military - Cape Henry

**Terminal 1**
- Matson Kodiak
- Matson Tacoma
- Bearing Marine Arctic Bear
- Holland America New Amsterdam
- Holland America Maasdam
- Military Ocean Jazz
- Military USS Comstock

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*From POA berthing records

** Excludes POL vessels & tugs
With Room to Grow If/When the Business Case IDs the Need!
A Look at Container Ports Around the Country

< Port of Los Angeles

< Port of Tacoma

Ports of NY & NJ
*Did you spot the common theme?*
What RO-RO Is To Us
What RO-RO Is to the Rest of the Port Industry
This is also RO-RO At the Port of Alaska!

They too carry their ramps with them!
The Industry Standard Model for Container Delivery
What’s the Cost to the Real Stakeholders* of Not Being Prepared to Support Industry Standard Container Vessels?

• Loss of Terminal 2: While less efficient, TOTE can continue service in T1 by moving ramp(s) onto one or more T1 trestles. Other LO-LO vessels can be brought in to service the market temporarily if needed.

• Loss of Terminal 1: Only 2 vessels in the world can operate efficiently in this T2 configuration. The average LO-LO vessel will take 5 to 7 days to service because deck width can’t support the T1 mobile cranes.

*The citizens of Alaska
The Cost vs. Benefit of Changing (2 Points of View)

• **The User Asks:** Is the increased cost for changing the basis of design providing my company a level of benefit worth the value of the higher rates I have to pay?

• **The Owner Asks:** Is the increased cost for changing the basis of design providing a level of benefit to Alaskans—with respect to what is needed in facility resilience, flexibility, and business continuity to support our 3 missions—worth it when compared to the cost of doing so later, or of **NOT** having it when it was needed because we chose to wait?
Assumptions:
- $2,245/sq ft present-day structural cost of terminal deck (i.e. existing Terminal 1 design)
- Utilities built to accommodate STS crane operation
- One additional marine construction season needed
- 3% escalation per annum to midpoint of Terminal 2 construction schedule

<table>
<thead>
<tr>
<th></th>
<th>Widen to 120 ft</th>
<th>Widen to 134 ft</th>
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<tr>
<td>Structural Costs</td>
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<td>Utility Costs</td>
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<td>Additional Mobilization</td>
<td>$12,500,000</td>
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<td>General Conditions (8%)</td>
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<td>Contingency (10%)</td>
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<td><strong>TOTAL</strong></td>
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<td>Escalation to 2029 $$</td>
<td><strong>$175,000,000</strong></td>
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Modification of Terminal 1 to accommodate ORCA-class vessels

- Two trestles added to Terminal 1 layout
- Can be built in future, as independent structures
- Additional cost:

<table>
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<tr>
<th></th>
<th>Per Trestle</th>
<th>Trestle Pair</th>
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<tbody>
<tr>
<td>Backlands Stabilization</td>
<td>$6,000,000</td>
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<tr>
<td>Trestle Construction</td>
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<tr>
<td>Additional Mobilization</td>
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<td>Escalation to 2030 $$</td>
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- Assumptions:
  - Costs based on current Terminal 1 trestle design
  - Platforms without services built as independent structures
  - One-year total construction time
  - 3% escalation per annum to 2030, following Terminal 2 construction
Construction of additional trestles
It’s the Owner’s Responsibility to:

• Ensure that the 75-year design selected will have the flexibility to support the total Port of Alaska mission into the future—no matter what that future may look like—without adversely affecting the current users’ business models in the present;

• **NOT** to guarantee their profitability, and

• **NOT** to *knowingly* give one user a competitive advantage over another
In the end, how we proceed will be a **policy call that the Assembly—the facility owner—must make based on federal, state, and local operational needs...** and that we will execute to the best of our ability once it’s made!
Thank you!

Questions?