Arrival of Post-Panamax Ship-to-Shore Cranes
The Panama Canal Expansion

- 2007 expansion began
- 2016 expansion completed
- Completed expansion enables 14K TEU vessels to US East Coast
- Marine Terminal Operators had to prepare wharf structures and procure larger Ship-to-Shore Cranes

Current Locks: 14,000 TEU Vessel
Terminal Development

Staying Ahead of Panama Canal Expansion

Berth Four Investment

- $105M to provided a 14K TEU Vessel Berth
- Channel & Berth dredging to -50’
- Wharf structure was constructed
- Four new Ship-to-Shore Cranes
  - Capable of 22 row across
  - Spreader height of 42 meters
- Completed in 2013 – successfully in operation with heavy utilization
Terminal Development

Wharf & Ship-to-Shore Operations

Berth 3 Modernization
Terminal Development

High Berth Four Utilization & Larger Vessels

Berth Three Investment

- $116M Project will provide Seagirt with a second 14K TEU Vessel ready berth
- Planning began in 2018

- Planning & construction includes:
  - -50 Berth & Channel Dredging
  - Toe wall
  - Pile & Beam Maintenance
  - Wharf Strengthening
  - Mooring & Berthing Hardware
  - Medium voltage program – Energizing new STS Cranes

- Berth Three construction is underway
Terminal Development

Berth Three - Phase 1 → Crane Transition

• 2012 Berth Four Cranes have transitioned to Berth Three

• PAC purchased four new STS Cranes for Berth Four

• Cranes arrived September 9th

• Crane off-load was completed September 20th

• ZPMC USA is erecting the cranes now

• Cranes will be energized in late November

• Commissioning will be in late January 2022
Terminal Development

New Ship-to-Shore Cranes

- Capable of 23 row across
- Spreader height of 50 meters (~25 feet taller)
- Scalable capabilities – Larger vessels
Terminal Development

New STS Crane Purchase

• November 2018, PAC signed an agreement with Boos Navarre
• Created Specifications in early 2019 & issued a RFP in February 2019
• Clarification Meetings
• PAC selected ZPMC and executed an agreement in October 2019
Terminal Development

Design & Fabrication

• Restricted travel → Remote design review
• Focus on quality using third-party inspection agency
• April 2020, fabrication begins
• October 2020, Cranes erected at ZPMC
Terminal Development

Commissioning & Loading

• Full Crane operations are tested before being lowered

• Crane booms are raised to 80° and loaded on the Zhen Hua 24

• Zhen Hua 24 departs in Mid-June for the sixty day transit
Terminal Development

Zhen Hua 24 Route & Arrival

- Coordination of arrival
- Zhen Hua 24 arrives in Annapolis on September 4th
- Cranes booms are lowered to 20°
- Zhen Hua 24 departs Annapolis on September 9th for Seagirt

Marine Terminal Berth Four