



UMC DOCK EXPANSION

Dock Position III and IV Replacement

Public Involvement Meeting Two

January 13, 2016
6:00 PM

City Council Chambers



PUBLIC INVOLVEMENT MEETING 2

January 13, 2016 – Final Public Meeting

- City of Unalaska
 - Dave Martinson – City Manager
 - Peggy McLaughlin – Director

- PND Engineers, Inc. (PND)
 - Dempsey Thieman, P.E., S.E. – Principal in Charge
 - Branton Sorbel, P.E., - Project Engineer
 - Lisa Baughman – Permitting
 - Alexandra West - Public Involvement



TONIGHT'S OBJECTIVES

- **Project Background & Current Status**
- **Project Phases and Schedule**
- **Notable Dock Components**
- **Potential Future Improvements**
- **Next Steps**
- **Questions, Comments & Suggestions**
 - **Comment cards provided**

PROJECT BACKGROUND

■ Background:

- Replace two aging pile supported facilities which currently limit use
- Aligned with USCG Dock and existing UMC Positions V - VII
- Provide high capacity multi-purpose dock, expanded backreach, extended crane rails, utilities, cargo handling, ferry dock, etc.
- OPEN CELL SHEET PILE™ dock – similar to Positions V-VII, etc.



PROJECT STATUS

■ Current Project Status

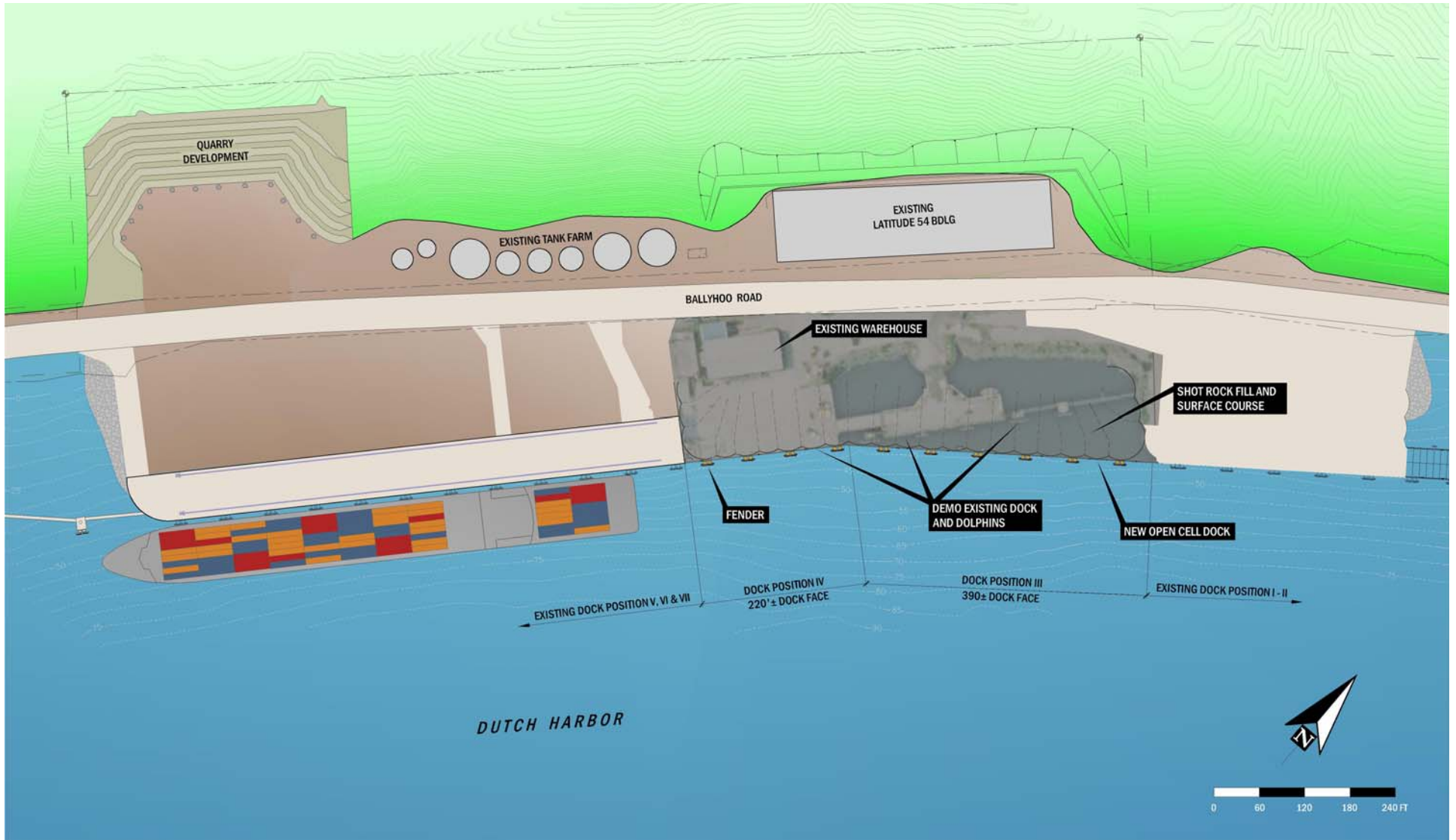
- Geotechnical exploration – **completed Spring 2014**
- Conceptual Design and Cost Estimate – **completed Fall 2014**
- Upland Survey and Bathymetry – **completed Summer 2015**
- Existing Warehouse Condition Assessment (struct./elect.)– **completed Summer 2015**
- 35% Design – **in progress, nearly complete**
- Permitting –**submitted March 2015, awaiting USACE**
 - All Section 7 consultations for threatened and endangered species with Fish and Wildlife Service, National Marine Fisheries Service - **completed**
 - US Coast Guard risk assessment - **completed, no issues**
 - Waiting on USACE permits - **expected April, 2015**
 - Currently collecting marine mammal observation data (IHA poss.)

PROJECT PHASES AND SCHEDULE

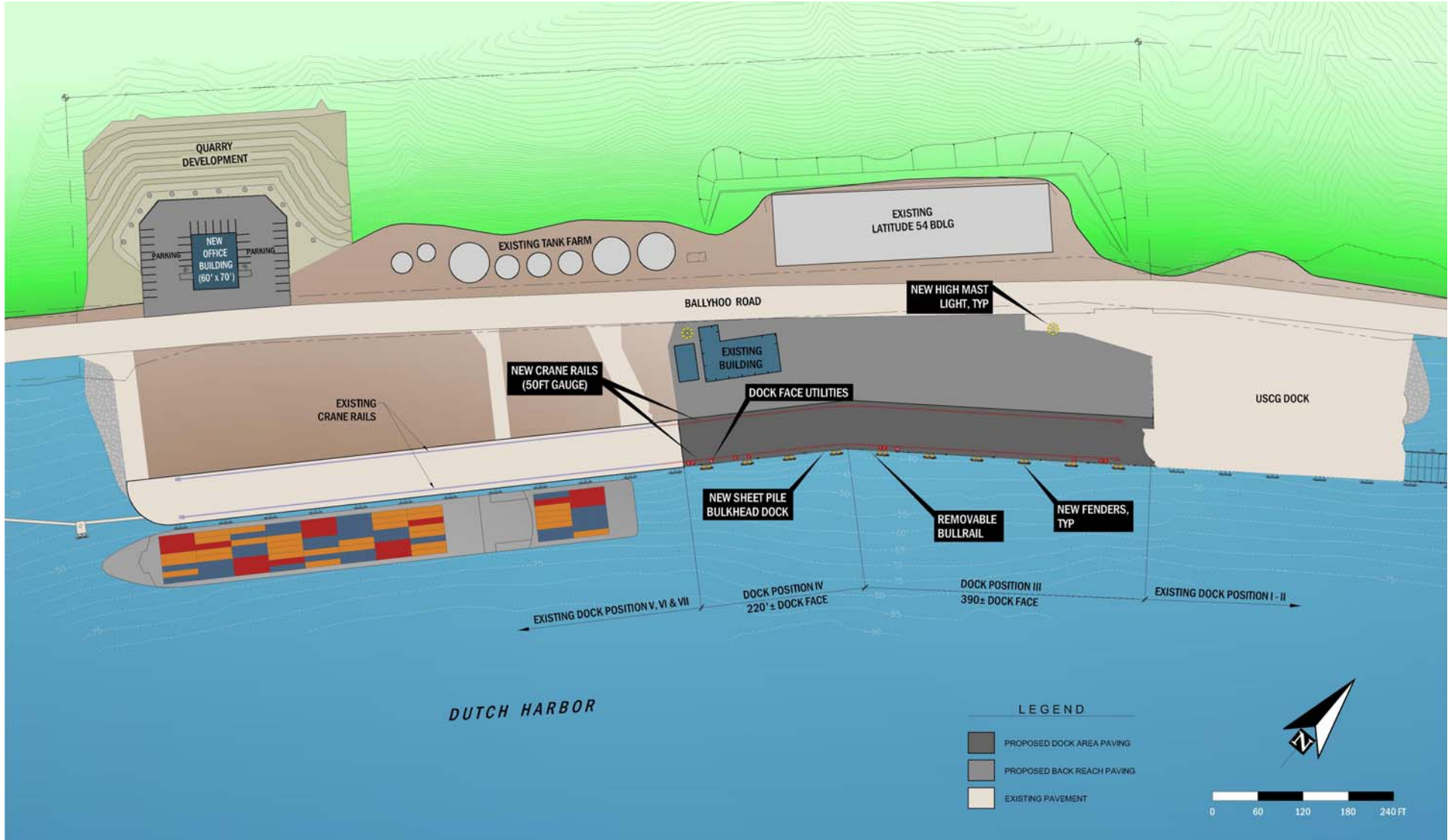
	PHASE I	PHASE II
TASKS:	<ul style="list-style-type: none"> • Demolition of Existing Docks • Quarry Development • Sheet Pile Installation • Shot Rock Backfill and Surface Course • Underground Utilities (W, S, F, SD, E) • Crane Rail Foundation System • Dock Fender System 	<ul style="list-style-type: none"> • Utilities (W, S, F, SD) • Electrical and Lighting • Conc. Surfacing (face and backreach) • Extend Crane Rails (thru Pos. III) • Port Shop/Office Building
CONST. COST (incl. 20% Contingency)	\$28M	\$22M
CONSTR. SCHEDULE	March 2017 – October 2017	May 2018 – October 2018



UMC POSITION III AND IV PHASE I (2017)



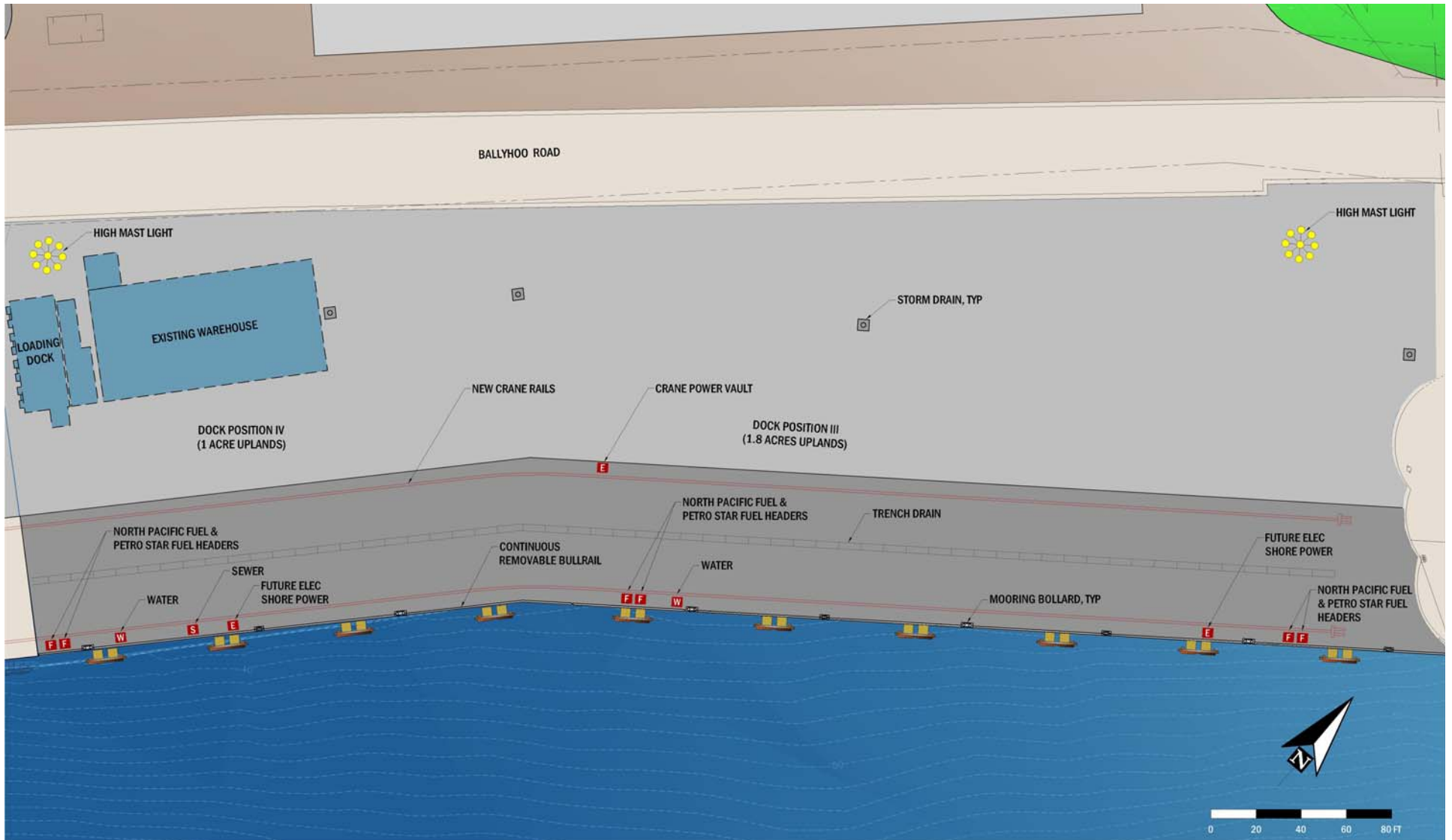
UMC POSITION III AND IV PHASE II (2018)



NOTABLE DOCK COMPONENTS

- **Dock Utilities - Fuel, Elect., Water, Sewer and Crane Power Elect. Vault**
- **Flush Surface Vault lids (F, W, S, E)**
- **Shore-to-Ship Elect. Vaults (future power)**
- **Drainage and Stormwater Collection**
- **Removable Bullrails (all)**
- **50ft Crane Rails - Extend Existing Through Positions III and IV**
- **High Mast Lights**

DOCK SITE PLAN POSITION III & IV



DOCK COMPONENTS: VAULTS

- Water/Fuel/Elect. Vaults:
 - Flush surface, hinged access vaults
 - Heavy duty traffic rated
 - Eliminates bullrail around vault



Existing Vault with Bullrails



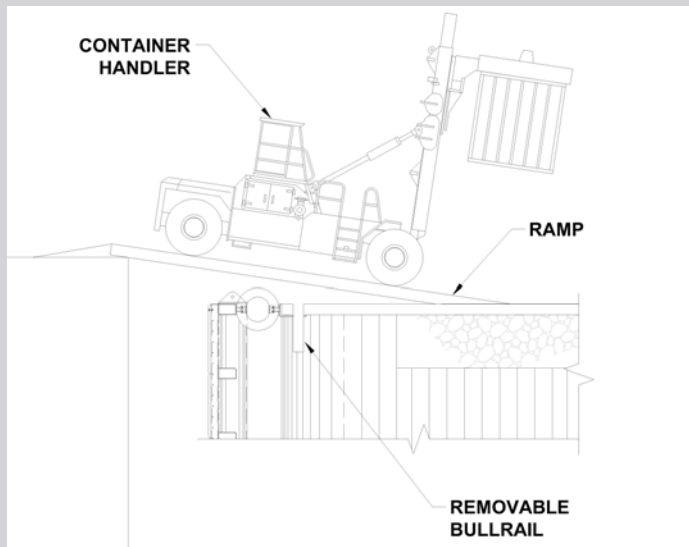
Airport Hatch Opening. Video Courtesy of EJ Group, Inc.



Hinged Hatch Access. Photo Courtesy of EJ Group, Inc.

DOCK COMPONENTS: REMOVABLE BULLRAIL

- Removable Bullrail Sections:
 - Steel insert similar to Light Cargo Dock
 - Allows barge ramp placement and state ferry ramp access
 - Removed/inserted by forklift



Removable Bullrail Detail



Removable Bullrail Example

DOCK COMPONENTS: SHORE-TO-SHIP POWER SUPPLY

■ Shore-to-Ship Power Supply Space for Future Use:

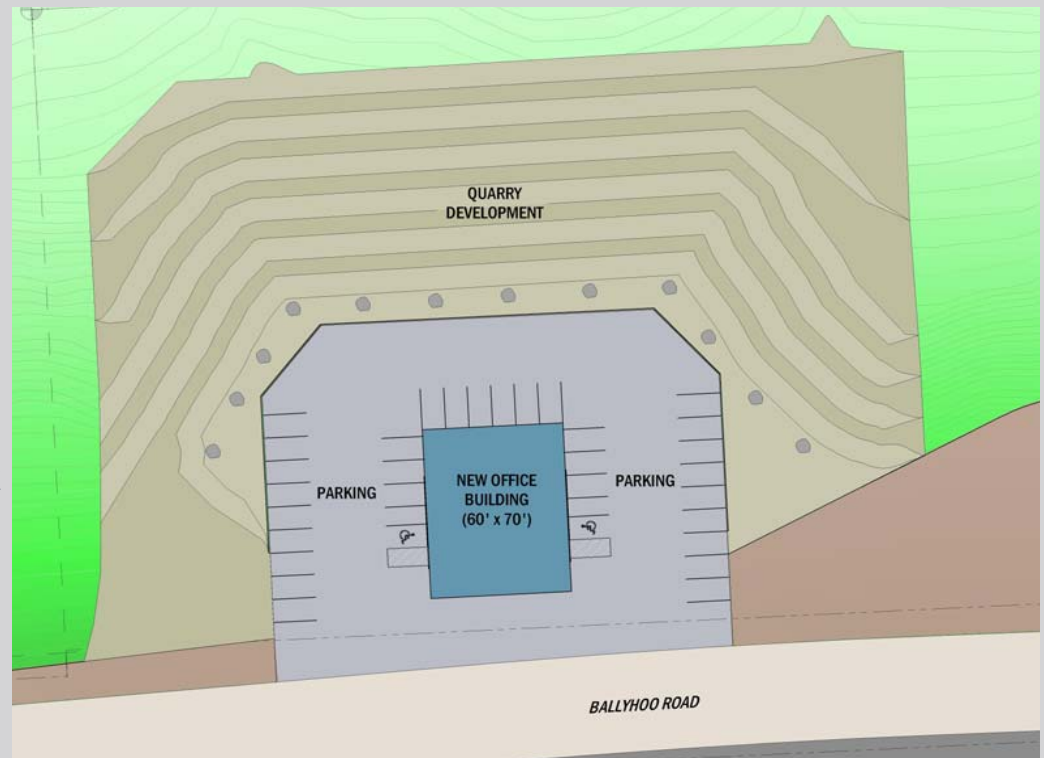
- Hatch and necessary conduit will be included for future installation of high voltage shore power supply system
- Ships can shut down their engines while berthed and plug into an onshore power source eliminating emissions
- **Evaluation / upgrade of utility capacity needed prior to implementation – vault/conduit allows future connection**



Shore-to-Ship Power System (image courtesy of ABB)

DOCK COMPONENTS: NEW PORT OFFICE BUILDING

- **New Office Building:**
 - 2-story, 8400 SF building at the proposed quarry site
 - Space will consist of port offices, shop/garage, locker, restrooms, conference room
 - Parking/storage spaces (City and dock users)
 - Quarry face may have rock bolting and fencing if needed to protect building – building located away from quarry face



New Office Building at Quarry Site

DOCK COMPONENTS: CRANE RAILS

■ 50-ft Crane Rails

■ Advantages:

- Majority of users preferred 50-ft over 100-ft
- 50-ft crane rails reduces impacts (backreach/bldgs.)
- Lower cost (new rails not needed at existing UMC)

■ Disadvantages:

- 50-ft crane rails has limited reach for future vessels – New Panamax, Post Panamax
- Results in higher load to front rail for equivalent reach of 100 ft gauge crane

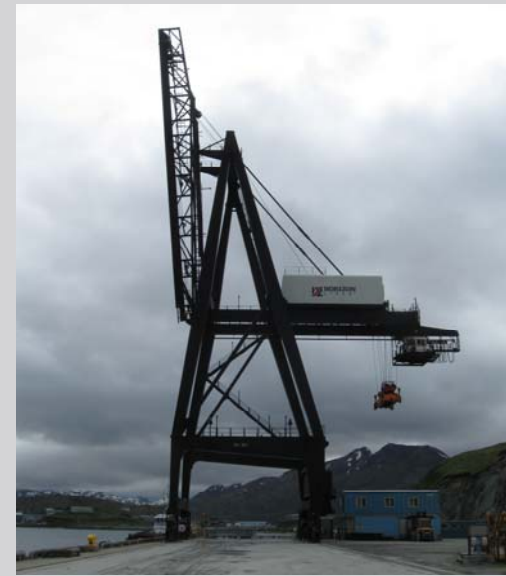
■ Extend Existing Crane Rails:

■ Advantages:

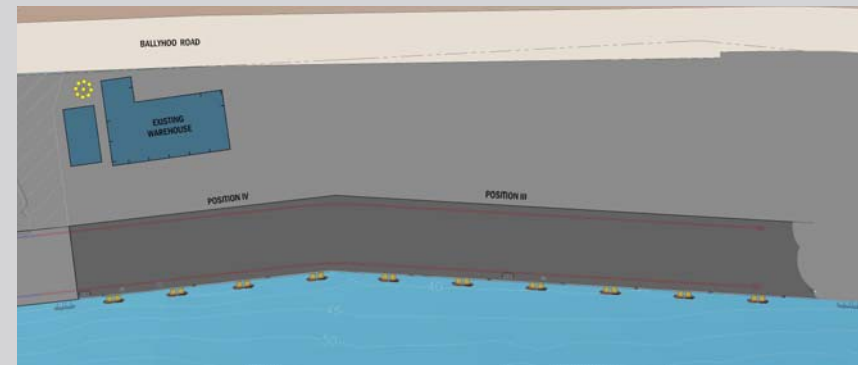
- Rail extension provides 600+ lineal feet of additional loading/offloading rail space.
- Rail extension provides room to accommodate additional crane, increasing handling efficiency

■ Disadvantages:

- Additional cost
- Additional logistical challenges (i.e. space, building proximity)



Existing 50-ft Gauge Crane at UMC



Extended Crane Rails

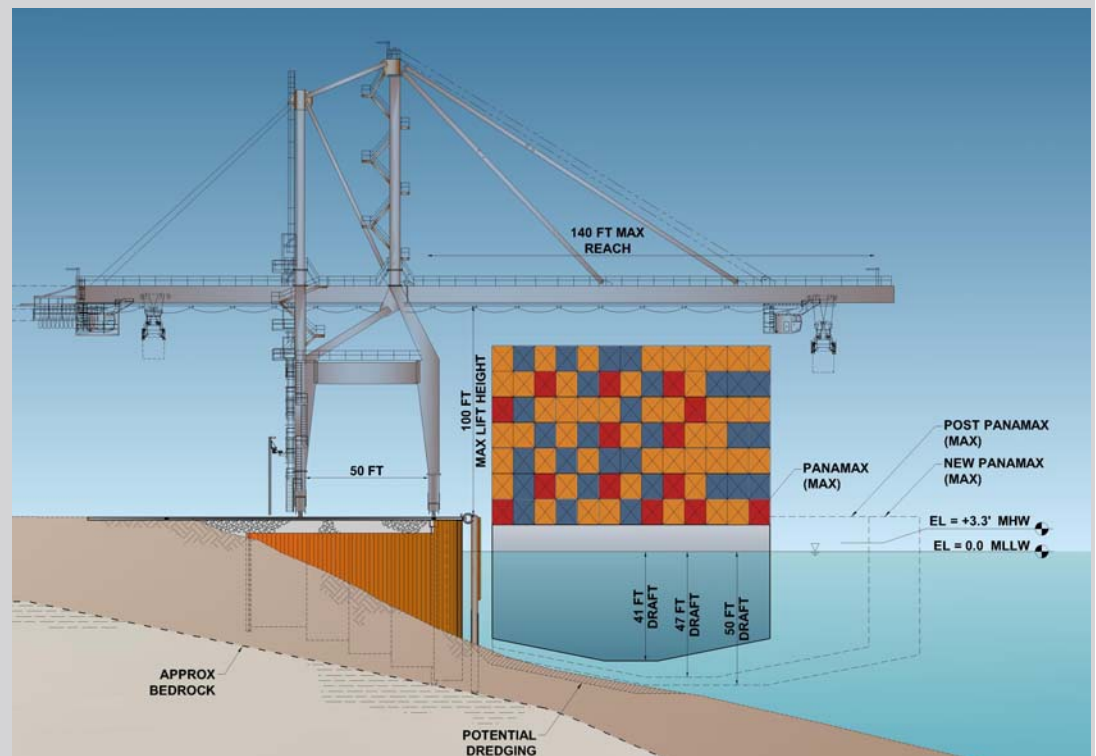
DOCK CROSS SECTION

Potential Future Vessels

Ship Class	Length (ft)	Beam (ft)	Draft (ft)	Containers Wide (each)
Panamax (Max)	965	106	41	13
Post-Panamax (Plus)	1000	141	47	17
New Panamax (Max)	1200	160	50	20

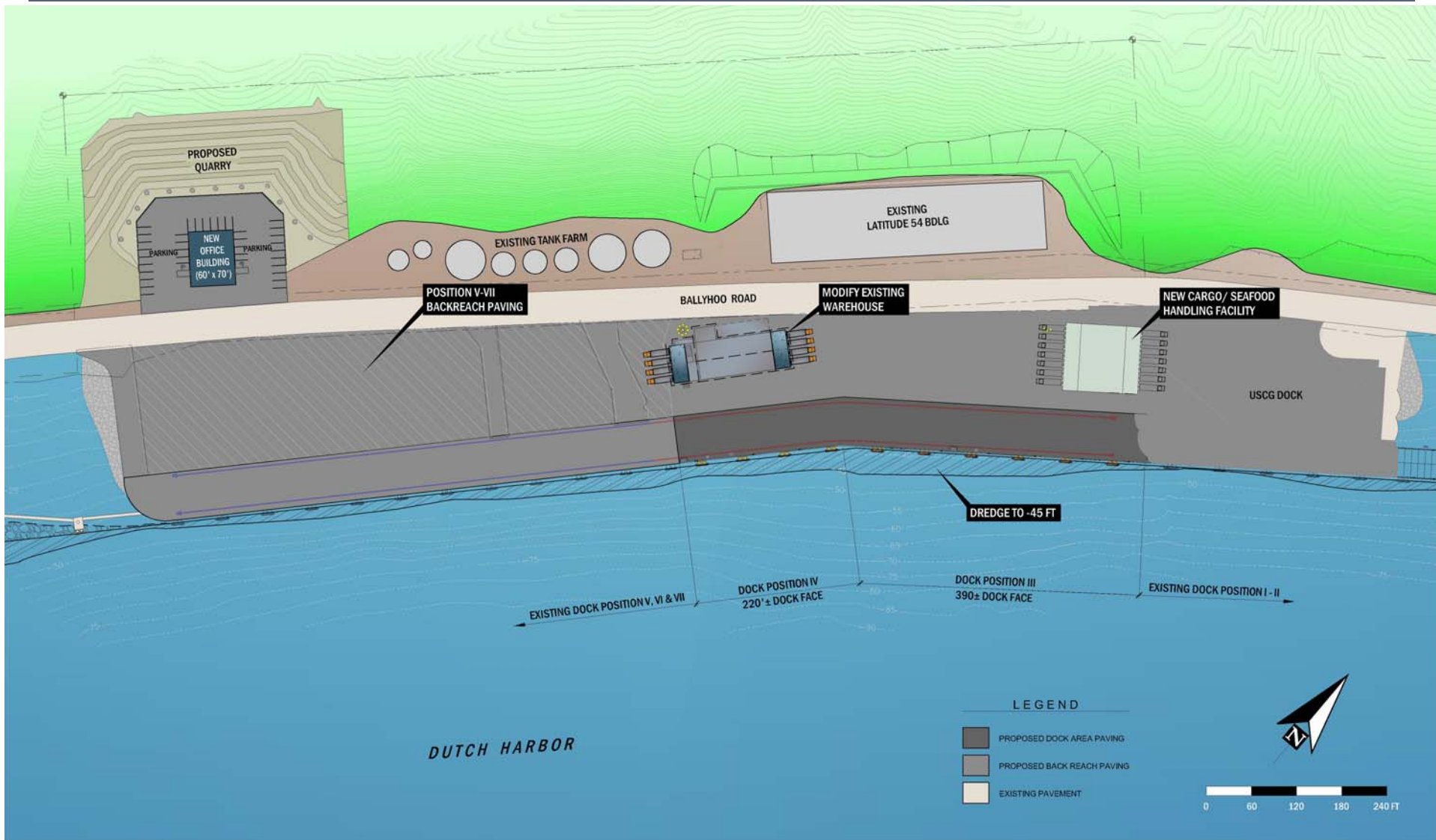
Future Crane:

- Additional crane would allow operations on multiple vessels or allow simultaneous operations – reducing timing issues
- Additional/new crane would reduce maintenance downtime and provide up-to-date technology
- New crane could be capable of reaching 16 containers wide

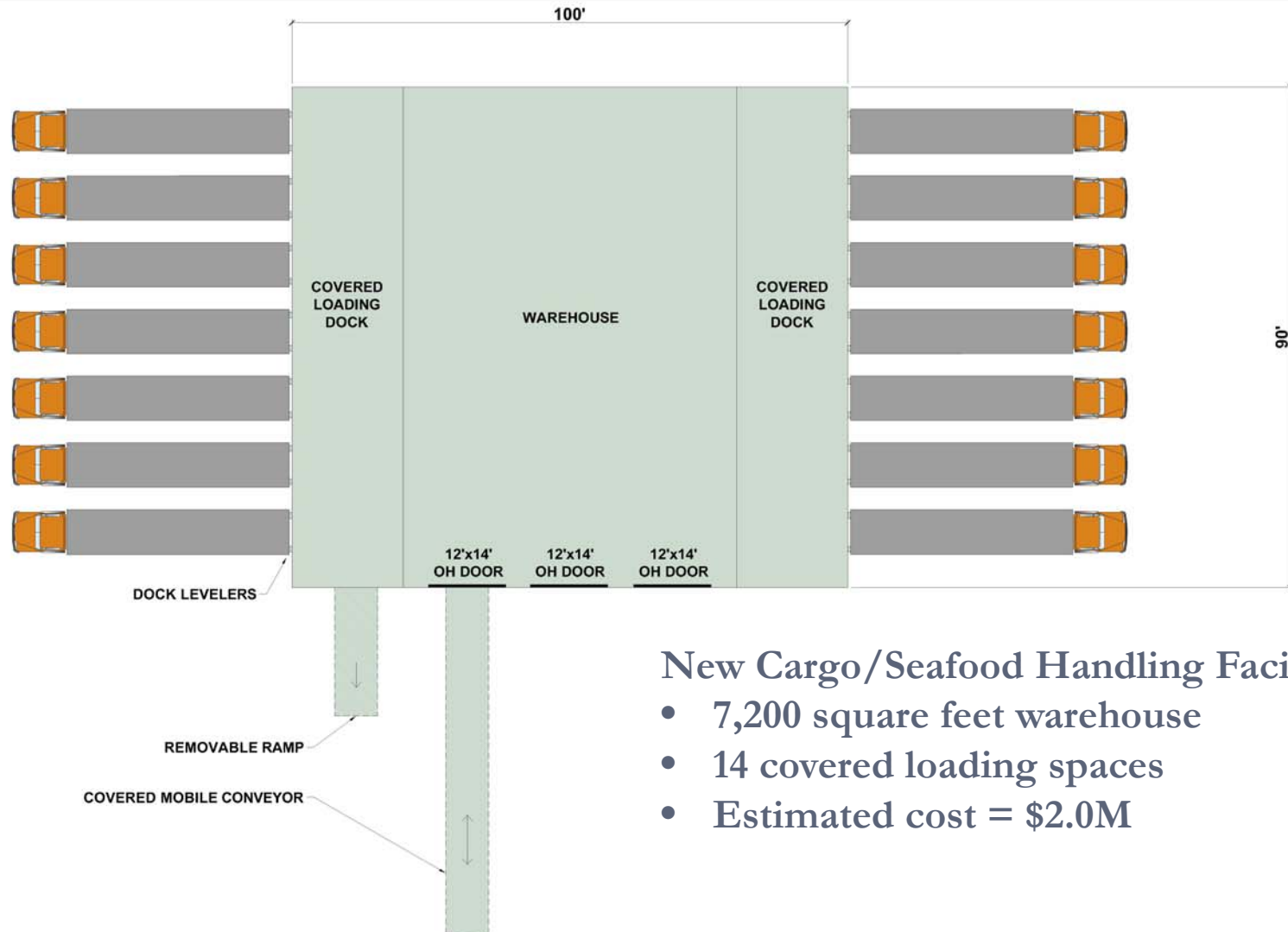


Dock Cross Section with Crane

POTENTIAL FUTURE IMPROVEMENTS



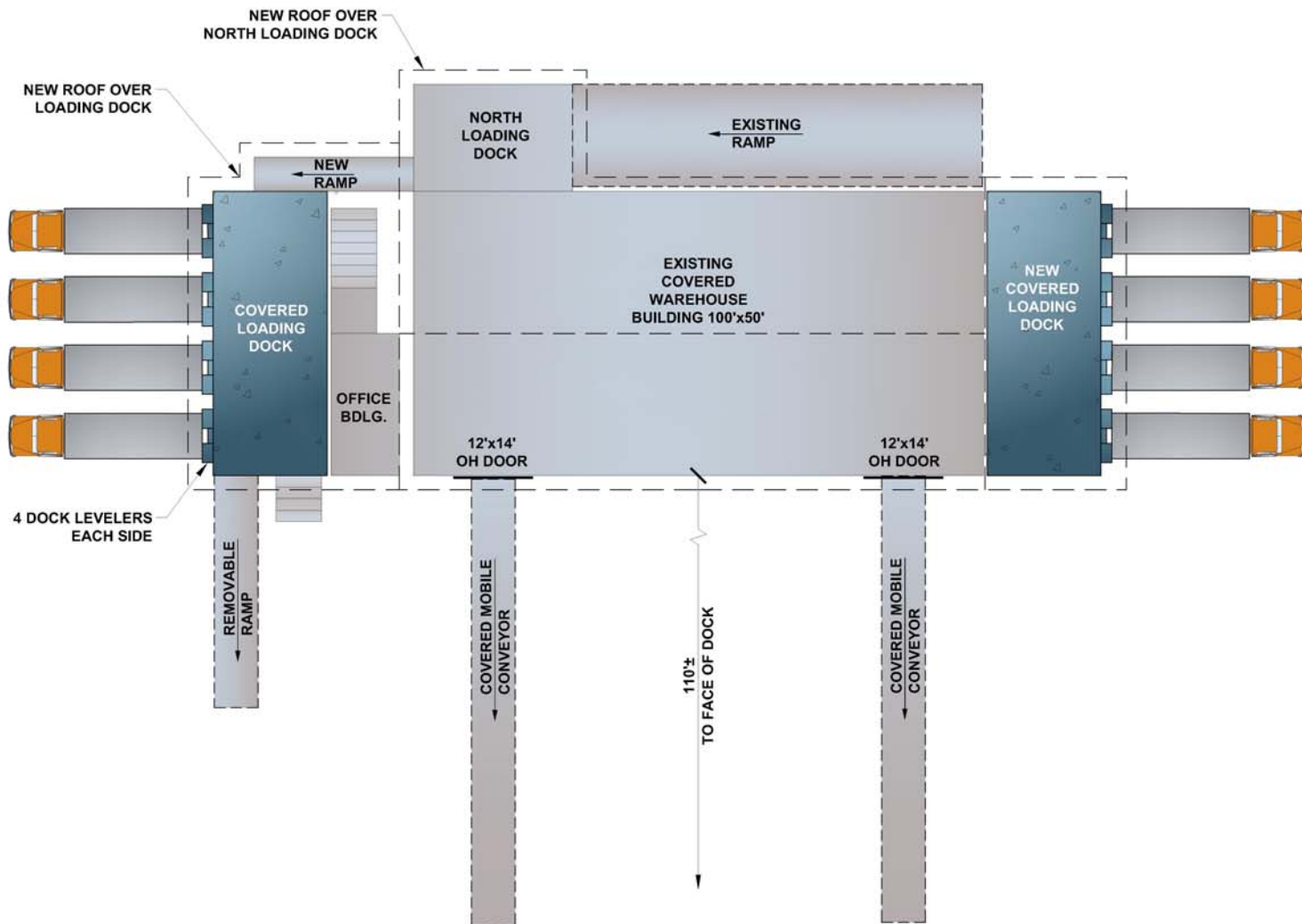
POTENTIAL FUTURE IMPROVEMENTS: CARGO/SEAFOOD HANDLING FACILITY



New Cargo/Seafood Handling Facility:

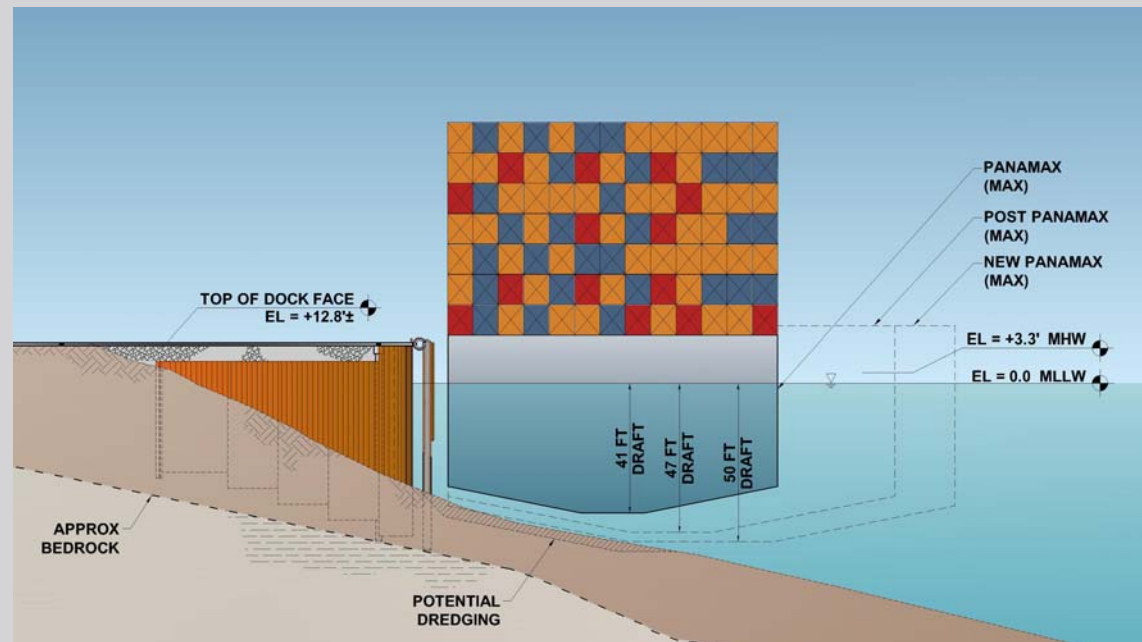
- 7,200 square feet warehouse
- 14 covered loading spaces
- Estimated cost = \$2.0M

POTENTIAL FUTURE IMPROVEMENTS: MODIFY EXISTING WAREHOUSE



POTENTIAL FUTURE IMPROVEMENTS: DOCK DREDGING

- Dredging:
 - Dredging desired at UMC I-VII and Light Cargo Dock
 - Dredging also needed in the channel entrance (USACE)
 - UMC can accommodate a dredge depth of -45 MLLW



Dock Cross Section with Future Vessels

NEXT STEPS (2016)

- Federal TIGER Grant Application (crane rails) – **in progress**
- Project Scope Definition and Public Input – **nearly complete**
- UMC Project Permitting – **in progress**, application submitted 3/2015, expect USACE permit 4/2016
 - Marine Mammals and Endangered Species near the project area
 - **Determine need for IHA** (approval takes 12-18 months if needed)
- 35% Design – **nearly complete**
- Begin Final Design of Phase I
- Begin 65% Design of Phase II
 - Define Port Office Building/Warehouse
- Construction planned to begin March 2017
- Design and Permit UMC/Light Cargo Dock Dredging Project

QUESTIONS?

Thank you for attending!

We are happy to answer questions and welcome your comments. We encourage you to fill out the comment form you received here tonight and leave it with PND, or Peggy McLaughlin.

Or you can mail/email it to PND

CONTACT INFORMATION

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