

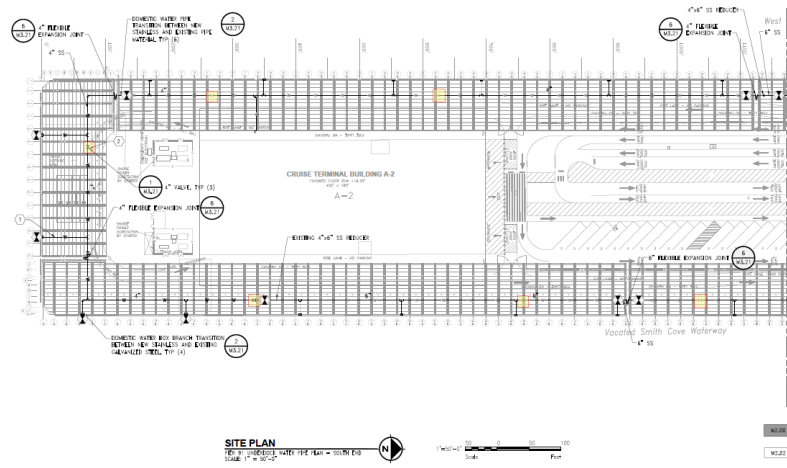
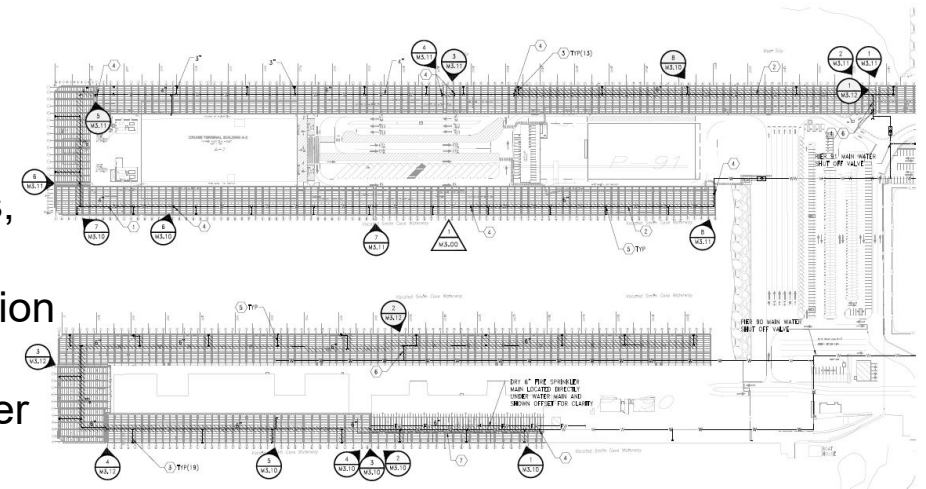
Item No.: 8h_Supp
Date of Meeting: February 13, 2024

Terminal 91 Domestic Waterline Renewal

Robert Hoyman,
Facilities Project Manager

Scope

- Remove existing galvanized pipe, fittings, supports and flex-Connections. Approximately 8,000 LF of replacement & upgrades.
- Replace all materials with new stainless steel grooved pipe, fittings, supports, bracing and flex-connections/expansion joints.
- Code Upgrades: Seismic Bracing, added support, expansion/isolation joints.
- Work will be performed with the least impact to operations and other project work.



GENERAL NOTES:

1. SEE THE NUMBER OF LINES FOR ALL UTILITIES AND SPECIAL CONTRACTS TO FIELD TEMPORARY EXISTING UTILITIES.
2. NEW EXISTING PIPE HANGERS SHALL BE PROVIDED FOR ALL NEW HANGING FROM PLUMB PIPE.
3. ALL HANGING FROM SHALL BE 2x4.
4. SEISMIC BRACING SHALL BE SUPPLIED FOR ALL RETAILER WATER PIPE. SEE W-10 SHEETS.

KEYED NOTES:

1. 3x12" 16# STAINLESS STEEL WATER SUPPLY TO UNDER WATER MAINS. SEE PIPING SCHEMATIC.
2. 4\"/>

SITE PLAN
 SCALE: 1" = 20'-0"

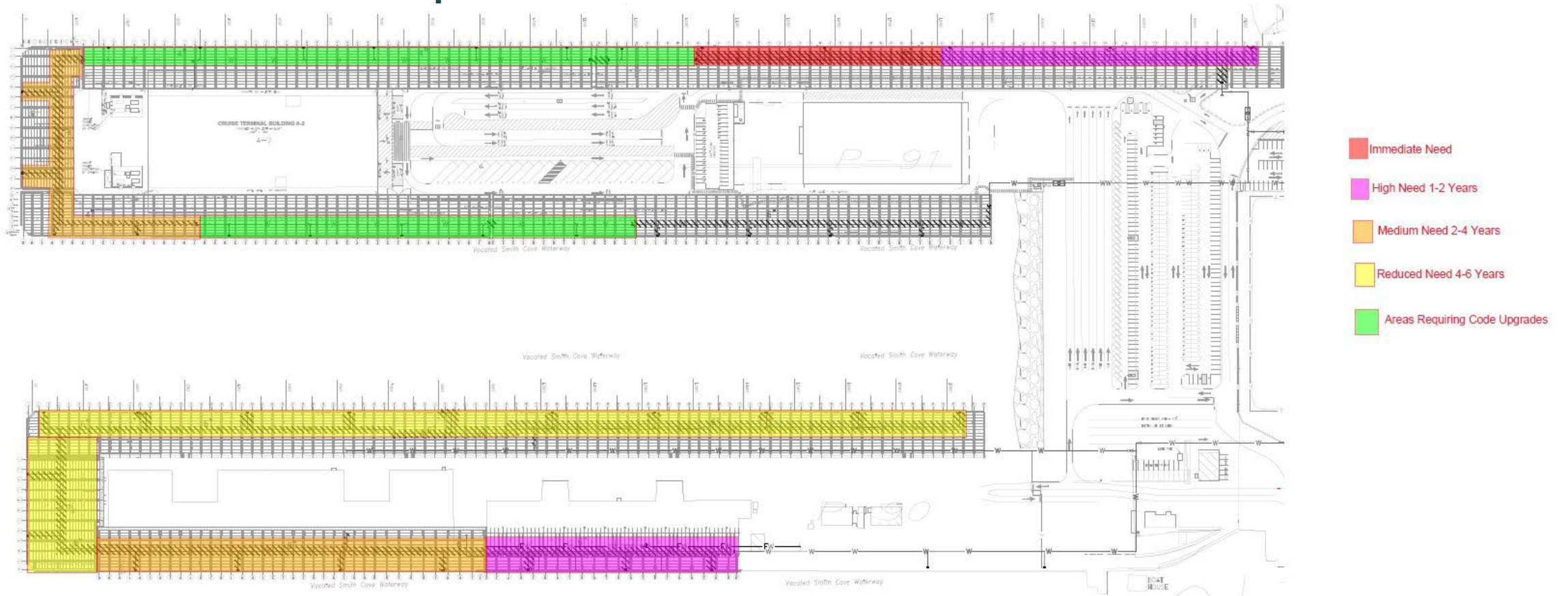


Limitations

- Work at Pier 91-South will be performed outside the Cruise Season (October to April)
- Work hours under the piers will be contingent on tidal action.
- Work to be planned over extended duration based on level of need and coordination with other project work and operational needs.

Range of Need

- Timeline Perspective

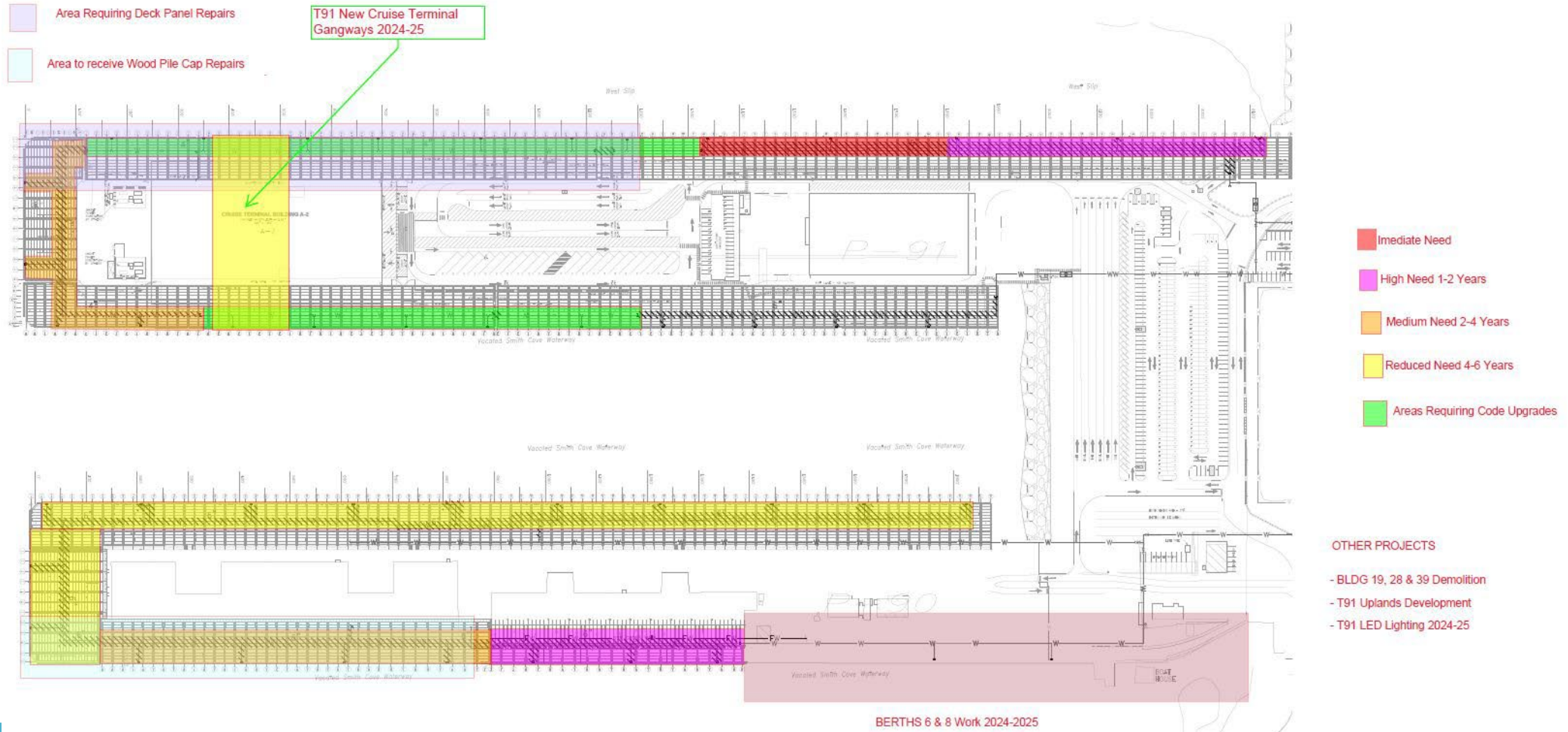


Project Risks

RISK	DESCRIPTION	PROBABILITY	IMPACT	MITIGATION
Permitting	Compliance with Federal In-Water Permit During Fish Window	Low	Med	Perform work using skiffs or floating platforms rather than attached scaffold.
Cruise Schedule Coordination	Work at Pier 91 outside of Cruise Season	Low	Med	Perform work at Pier 91 October thru April
Major Construction Activities	Avoidance of re-work or interference by other project work being performed over the next 8-years	Low	Med	Schedule work to avoid overlapping construction activities. Coordinate replacement to avoid re-work.
Material Availability	Availability of 316 Stainless Pipe and fittings.	Med	High	Prepurchase quantities of pipe and fittings to avoid timing challenges.

Major Project Coordination

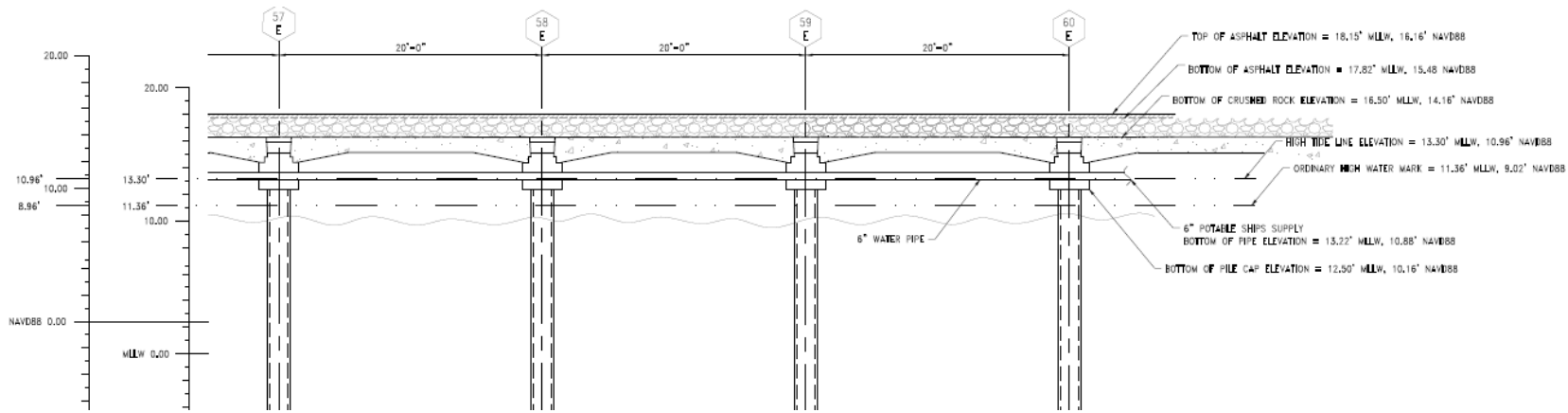
- Impact-Coordination Perspective



Budget and Cost Drivers

- T91 Domestic Waterline at Piers 90 & 91 \$4,750,000
 - 2021 \$250,000 Design, Permitting & Emergency Work
 - 2024 \$4,500,000 Construction funding over eight years
- Primary cost drivers:
 - Material costs (316 stainless steel) for longevity.
 - Code upgrades: seismic bracing, expansion joints and added supports.
 - Construction logistics, coordination with operations & Cruise schedules, other major projects.

Current State



Extended Approach

- Use of Port Crews
 - Schedule Flexibility
 - Aversion to construction impacts, change orders
 - Avoidance of Re-Work related to other Capital Projects
 - Contract Costs control
 - Opportunities to utilize WMBE Firms and Small Businesses in conjunction with self-performed work.
 - Job Protection (Plumbers, Carpenters, Laborers, Millwrights), opportunities for apprenticeships within the Port
 - Reduction in construction cost

Project Schedule

Item	Anticipated Date
Design Completion	Q4 2023
Permit Drawings, Environmental Permitting	Q1 2024
Commission Authorization, Major Construction	Q1 2024
Construction Duration	2024-2032