

ALLIANCE NORTHWEST

Shipyard Infrastructure Optimization Program (SIOP)



Shipyard Infrastructure Optimization Program (SIOP) Overview

For: Alliance Northwest 2025

Presenter: David Gibson, NAVFAC NW

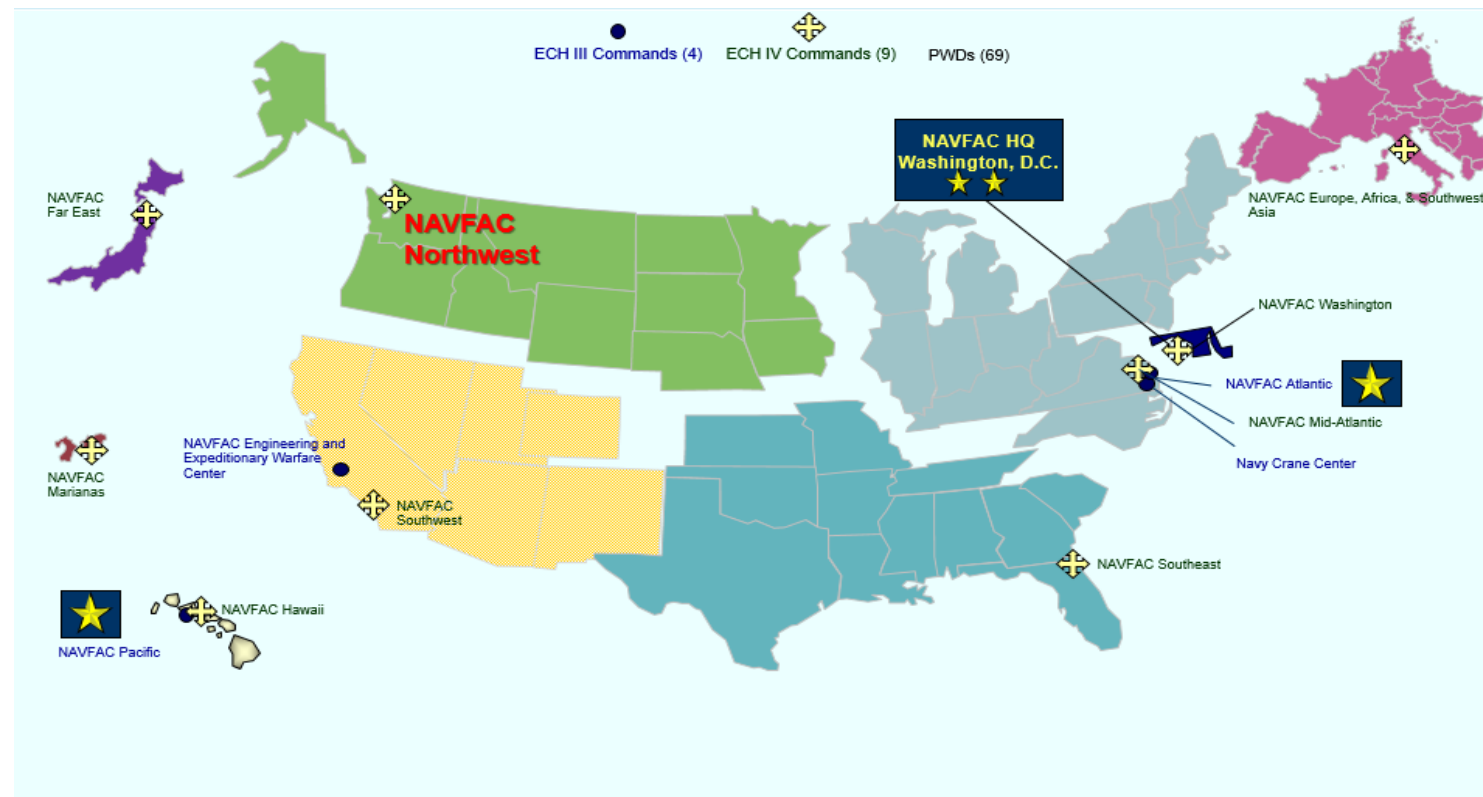
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FACILITIES ENGINEERING EXPERTISE WORLDWIDE

At NAVFAC Northwest, our mission is to drive performance and outcomes of Systems Command capabilities to effectively enable Fleet readiness and Marine Corps force generation.



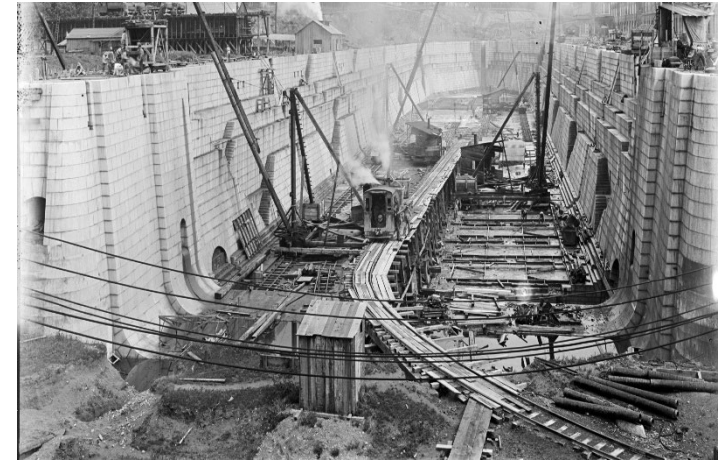


Shipyard Infrastructure Optimization Program (SIOP)

- **Problem Statement**
 - Condition, capacity, and configuration of facilities, dry docks, and equipment at the four public shipyards contribute to inadequate throughput and loss of fleet operational availability
- **Baseline Performance**
 - Inadequate facilities and equipment led to maintenance delays that contributed, in part, to >1,300 lost operational days for carriers and >12,500 lost operational days for submarines (FY00-16, GAO-17-548)
 - Measures (2018 Report to Congress (RTC)):
 - Dry dock capability/survivability gaps: 14 of 18 certified dry docks
 - Average production shop facility condition rating: 66/80 (poor)
 - Average age of equipment: 24 years (industry standard = 7-10 years)
- **Root Causes / Priority Levers**
 - Shipyard infrastructure historically lags behind new platform development
 - Average production shop facility age for all shipyards (SY) is 76 years
 - Average annual Facilities, Sustainment, Restoration, and Modernization (FSRM) investment below sustainment model
 - Average Capital Investment Program (CIP) investment below requirement
 - Infrastructure not procured as aligned systems according to master plans, resulting in inefficient layouts and configurations

Current PSNS Dry Dock Capabilities

- PSNS & IMF is a National Historic Landmark District
 - This requires compliance with National Historic Preservation Act (adding project planning/development time and cost)
- Most buildings and structures were built during three distinct historical periods:
 - **1891 – 1919** (DD1: 1896; DD2: 1913; DD3: 1919)
Establishment of the Navy Yard at Puget Sound. The shipyards basic physical configuration was established during this time.
 - **1941 – 1945** (DD4: 1940; DD5: 1941)
WW II build-up, the workforce at PSNS was nearly 32,500
 - **1959 – 1975** (DD6: 1962)
Post-Korean War build-up to support America's nuclear Navy
 - **2026 – Future** (Multi-Mission Dry Dock, ~2034)
SIOP, DD6 cannot support Ford-class aircraft carriers. After the last Los Angeles-class availability (recycling), DD1 and DD3 will be *functionally obsolete*



Puget Sound Dry Dock #2 Construction (circa 1913)



USS Nimitz (CVN 68) docking in DD #6



SIOP Definition and Lines of Effort (LOE)

- SIOP is a holistic investment plan that integrates all infrastructure and industrial plant equipment (IPE) investments at the Navy's four public shipyards in order to meet nuclear fleet maintenance requirements, as well as improve Navy maintenance capabilities by expanding shipyard capacity and optimizing shipyard configuration.



LOE 1. Construct and recapitalize dry docks

- New capabilities to support dimensions and utility requirements of Virginia-class submarines and Ford-class aircraft carriers
- Foundational investment to meet class maintenance plans

Create capability for new platforms
Increase capacity for existing platforms



LOE 2. Recapitalize and reconfigure infrastructure toward improved industrial performance

- Phased industrial modeling and simulation process
- Advanced planning and engineering studies inform optimum shipyard configuration

Recapitalize aged infrastructure



LOE 3. Modernize Industrial Plant Equipment

- Capital equipment (>\$250K) to maintain, modernize, and establish new industrial capabilities
- Focus on reducing total ownership cost of ship depot-maintenance operations

Modernize towards optimization



LOE 1 – Dry Docks



Portsmouth Naval Shipyard – New Multi-Mission Dry Docks

On plan for FY27 Docking of USS Virginia-Class (Awarded FY21)



Pearl Harbor Naval Shipyard – New Dry Dock 5

On plan for FY28 Docking of USS Virginia-Class (Awarded FY23)

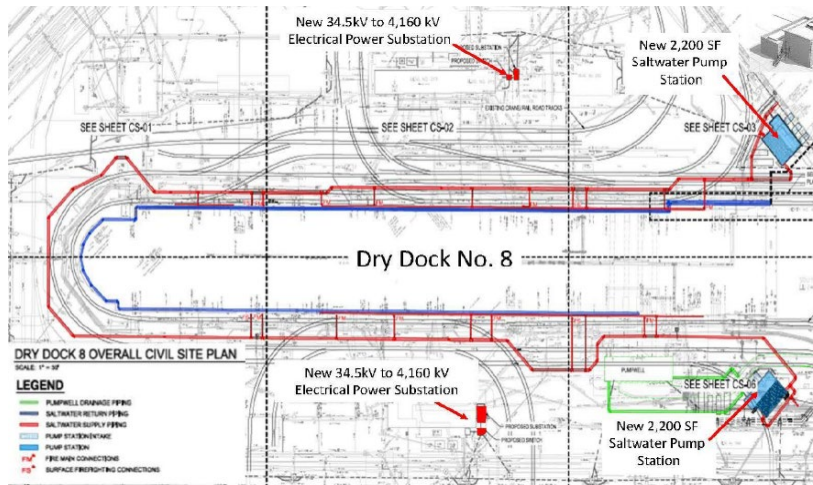


P-209 DD3 Replacement

July 22, 2021 DRAFT

Norfolk Naval Shipyard – Dry Dock 8 Upgrades

On plan for FY28 Docking of USS Ford-Class (Awarded FY22)



Puget Sound Naval Shipyard – New Multi-Mission Dry Dock

On plan for FY38 Docking of USS Ford-Class (Award FY30)





Puget Sound Naval Shipyard New Multi-Mission Dry Dock (part of EIS Alternative #2)



■ Purpose

- Construct a new, multi-mission dry dock to support CVN-78 Class nuclear powered aircraft carriers and all classes of nuclear powered submarines.
- Timeline: FY22-FY25 Design, FY30 Construction Start

■ Project Includes

- Demolition of existing Dry Dock 3, Pier 6 (including the Hammerhead Crane), Pier-7, and several existing adjacent shipyard buildings.
- Construction of 1250ft long x 190ft wide dry dock.
- Replacement Wharf-7. (Pier-6 replacement is accomplished with New Pier 2 project).
- Building renovation/construction to relocate displaced shipyard functions.
- New rail networks, utility systems & tunnels, including replacement of 700ft of Farragut Ave tunnel.

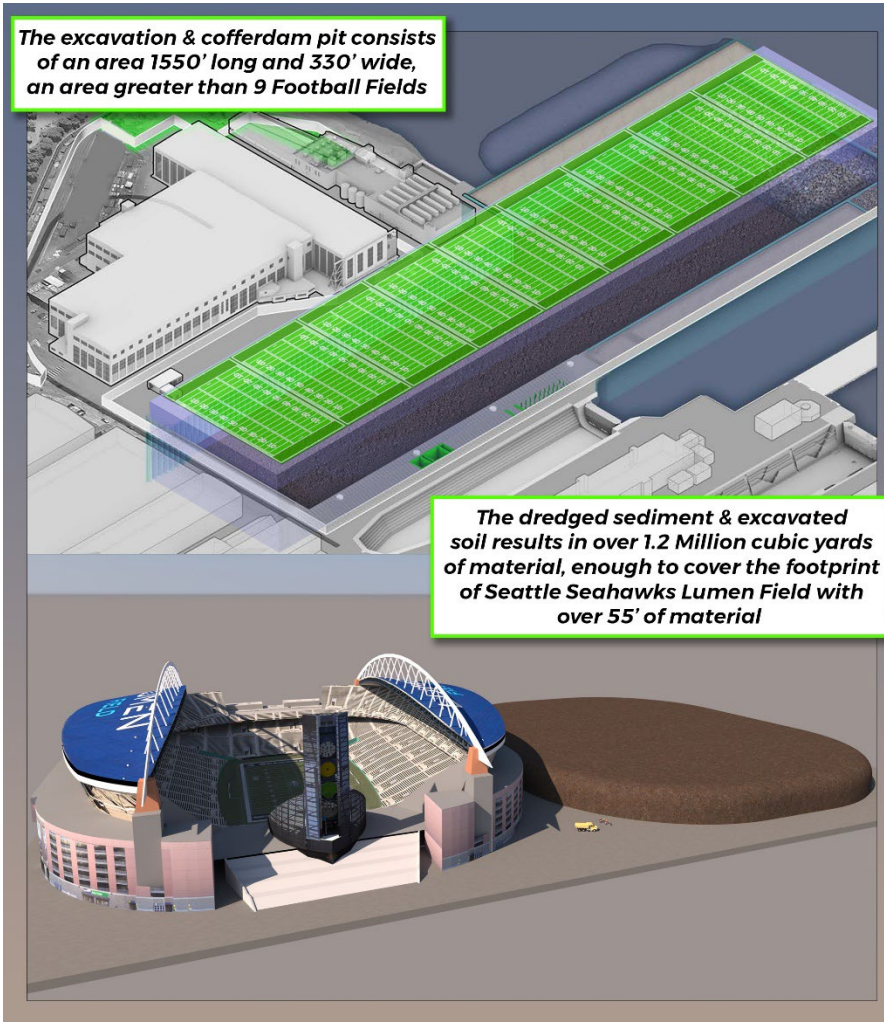


PRE-DECISIONAL / INFORMATIONAL



Puget Sound Naval Shipyard New Multi-Mission Dry Dock

(part of EIS Alternative #2)

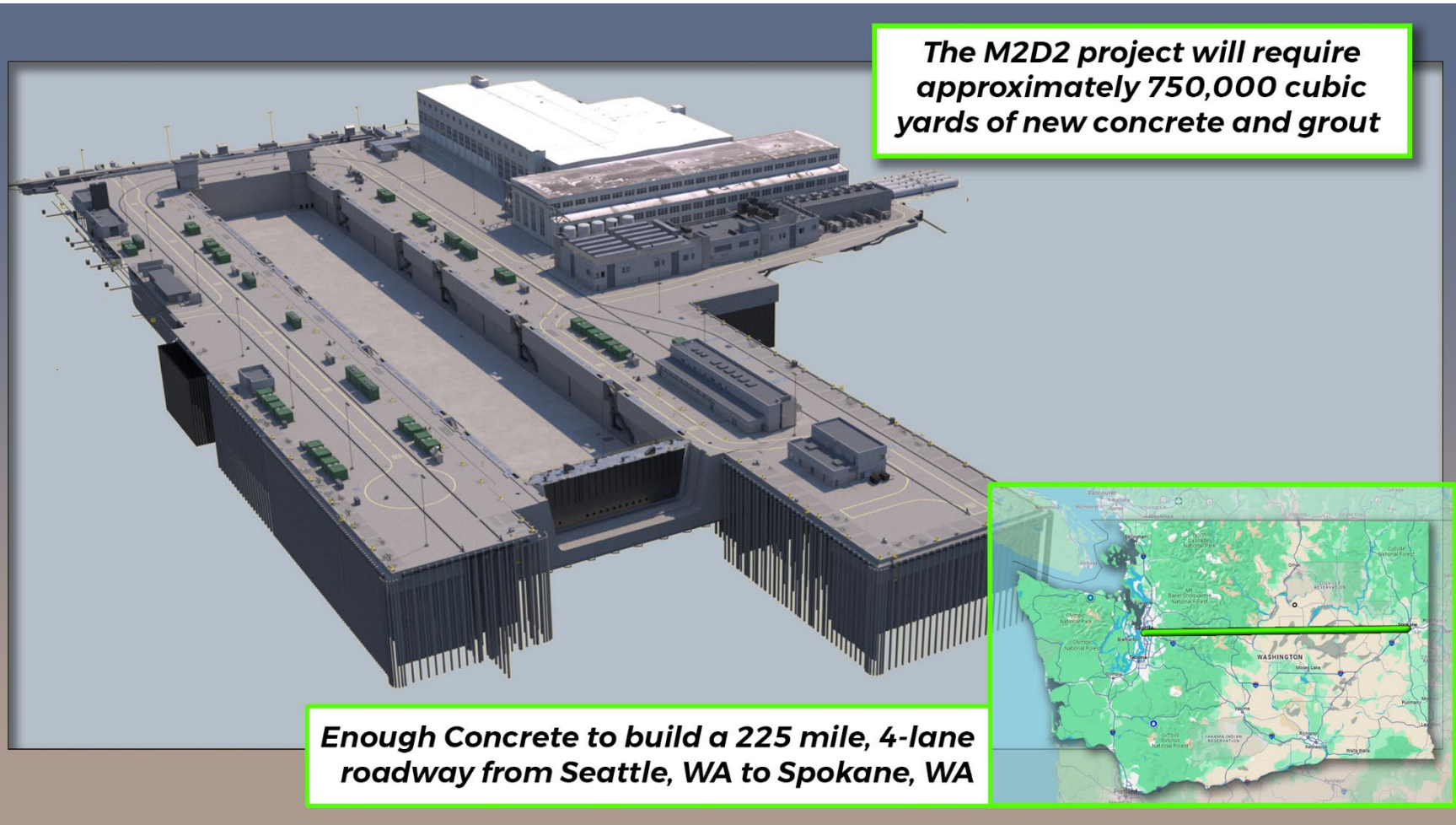


PRE-DECISIONAL / INFORMATIONAL



Puget Sound Naval Shipyard New Multi-Mission Dry Dock

(part of EIS Alternative #2)



PRE-DECISIONAL / INFORMATIONAL



Puget Sound Naval Shipyard New Multi-Mission Dry Dock



Projects Required in Advance of the Start of Dry Dock Construction

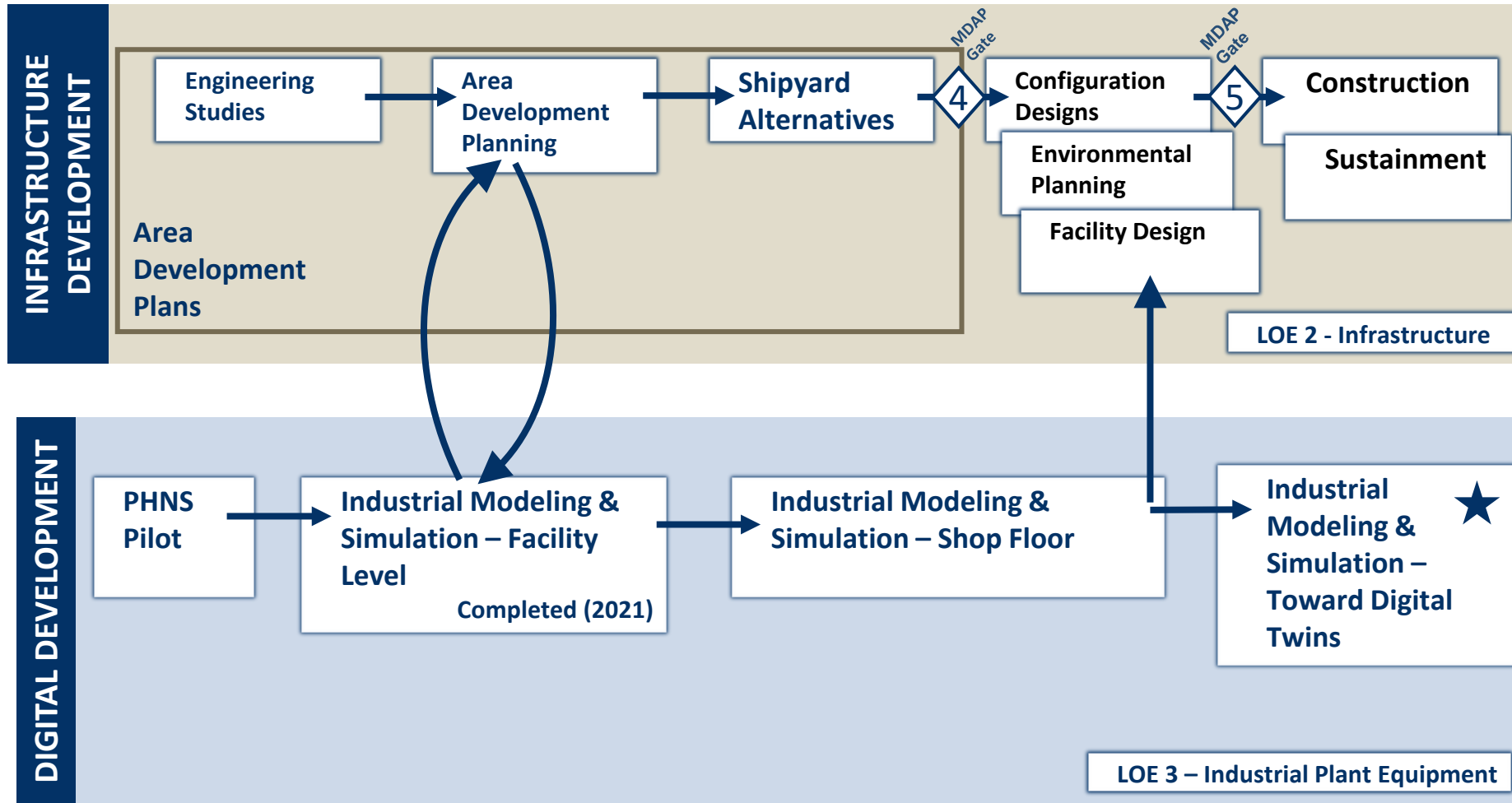
Project Title	Location	Planned Award Year	\$\$ Range
Demo Building 58	Puget Sound Naval Shipyard	2025	\$10M - \$20M
New Forge Shop	Naval Base Kitsap Bangor	2027	\$60M - \$80M
New Radio Hill Complex	Naval Base Kitsap Bangor	2028	\$10M - \$30M
Shipyard Support Facility	Puget Sound Naval Shipyard	2029	\$250M - \$300M
Shipfitter/Welder Shop	Puget Sound Naval Shipyard	2027	\$300M - \$400M
New Pier 2	Puget Sound Naval Shipyard	2027	\$600M - \$900M

PRE-DECISIONAL / INFORMATIONAL



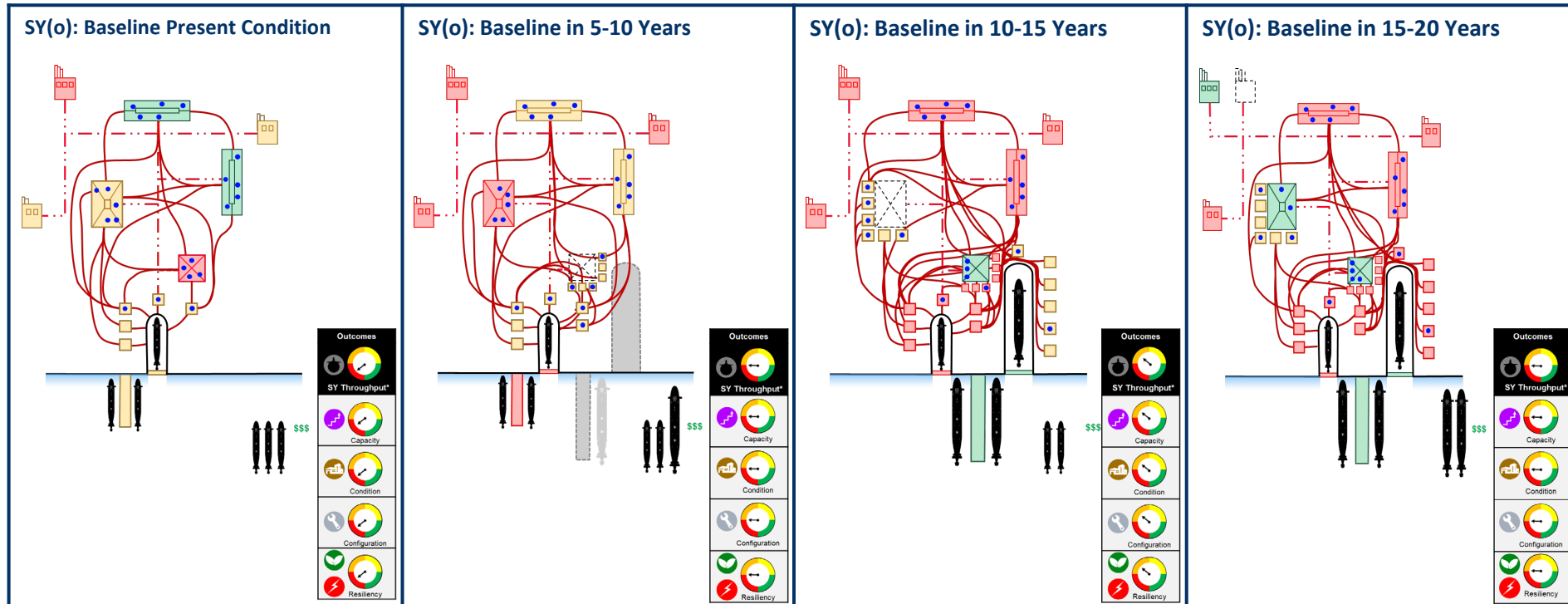
LOE 2/3 – Integrated Planning Approach

Master planning, industrial modeling and simulation, ship maintenance schedules



LOE 2 - Shipyard: Baseline Assessment

Status Quo – Traditional investment, reactive solutions to infrastructure degradation



Workflow Unchanged (Infrastructure)
Facilities Recapitalized (Reactionary)

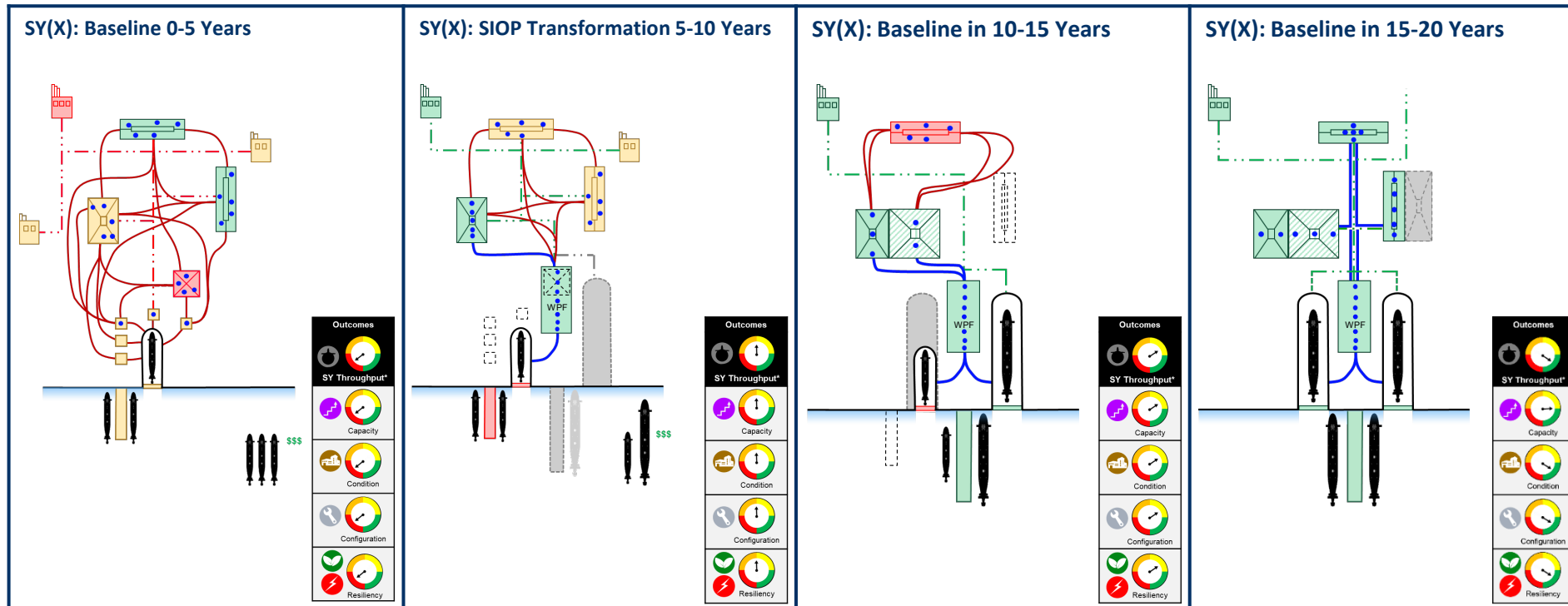
Legend

Utilities	— — — — —
Planned	— — — — —
Movement	— — — — —
Workcenters	●
Facility Condition	■ ■ ■

*Shipyard Throughput Gauge = Material component of sustained throughput toward Class Maintenance Plan

LOE 2 - Shipyard: SIOP Transformation

Deliberate Recapitalization, balancing Return on Investment (ROI) toward improved throughput



Proactive Facilities Modernization | Enabling Continual Workflow Improvement

Legend

- Utilities:
- Planned:
- Movement:
- Workcenters:
- Facility Condition:

**Shipyard Throughput Gauge = Material component of sustained throughput toward Class Maintenance Plan*



Subcontracting & Teaming Opportunities:

... Consider reaching out to the following primes contractors for subcontracting opportunities

NAVFAC PAC SIOP Contracts

Contract Title	Contract Capacity	Task Order Size	Duration	Contract Holders
Pacific SIOP MACC	\$8B	\$100K - \$5B	8-Year Contract	- Kiewitt-Alberici SIOP MACC JV - Dragados/Hawaiian Dredging/Orion JV - TPC-NAN JV - ECC Infrastructure - Bechtel National, INC
Pacific SIOP A/E IDIQ	\$500M	\$250K - \$500M	5-Year Contract	- WSM PAC SIOP JV



Subcontracting & Teaming Opportunities:

NAVFAC NW Planned Contracts

Contract Name	Contract Capacity	Task Order Size	(Planned) Award Date	(Planned) Expiration Date	Solicitation Number
Waterfront MACC	\$700M	\$100K - \$200M	TBD	TBD	25-R-1504
"Venti" MACC	\$9B	Minimum \$50M	November 2025	5 Years	25-R-1503
"Grande" MACC (SB)	\$1B	\$5M - \$30M	November 2025	5 Years	25-R-1502
Waterfront AE IDIQ	\$249M	TBD	TBD	2 year base with 3 option years	25-R-1501
Multidiscipline AE IDIQ	\$249	TBD	TBD	2 year base with 3 option years	25-R-1600



Contact Us

PUBLIC AFFAIRS OFFICER

Mrs. Sarah Lincoln

(360) 340-5592

navfacnwpao@us.navy.mil

DEPUTY FOR SMALL BUSINESS

Mr. Jim Niles

(360) 536-7135

james.m.niles4.civ@us.navy.mil

NAVFAC NORTHWEST WEBSITE

<https://pacific.navfac.navy.mil/Facilities-Engineering-Commands/NAVFAC-Northwest/>

NAVFAC NORTHWEST INDUSTRY ENGAGEMENT WEBPAGE

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In Closing...

NAVFAC NW cannot support the Fleet and their families, nor ensure our National Defense without your commitment.

Thank you for your continued support of the Navy mission.



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