

PROJECT PAMPHLET

MULTI-MISSION DRY DOCK

**DELIVERING THE FOUNDATION OF
FLEET READINESS**





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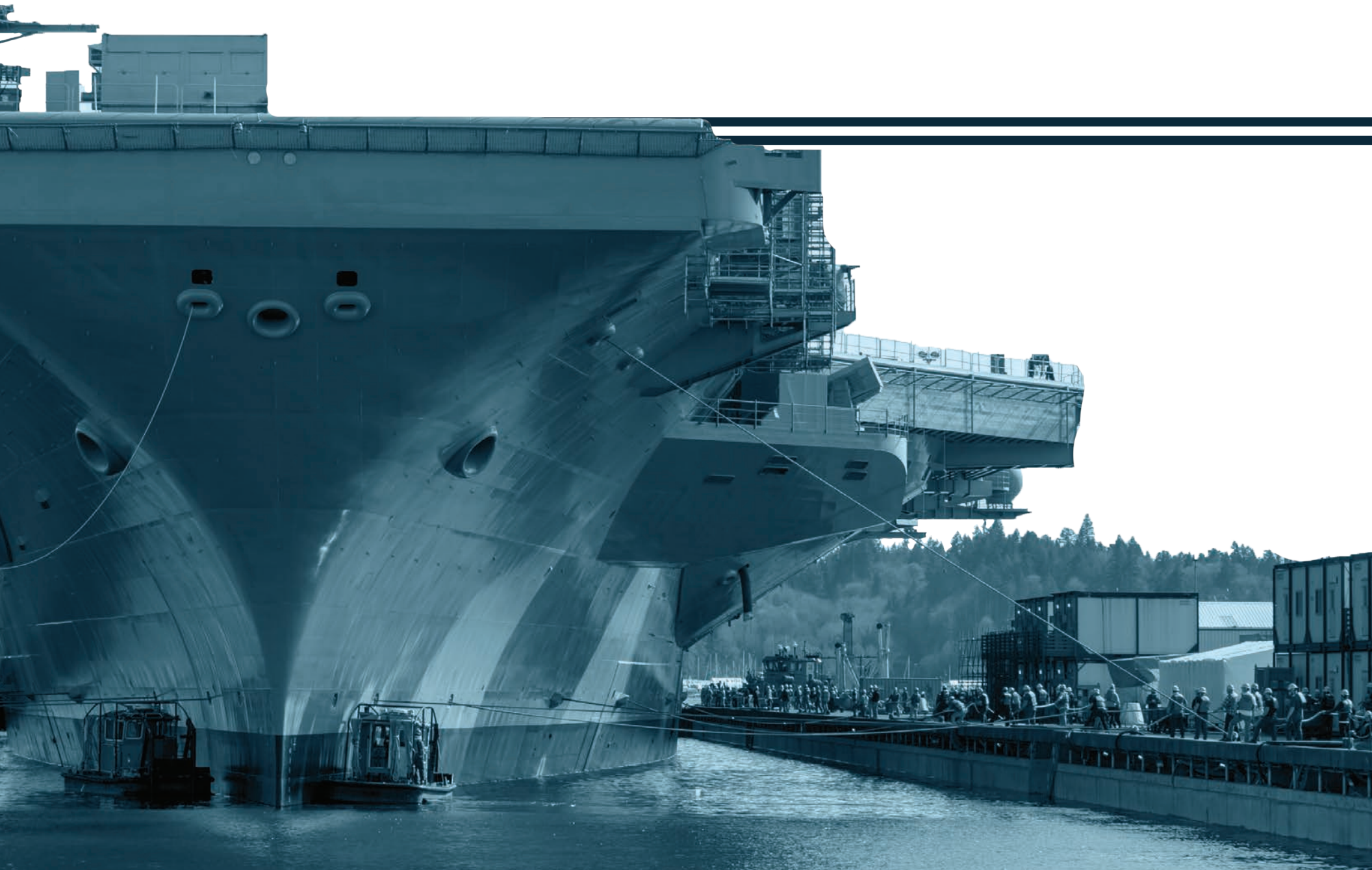
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PROJECT INTRODUCTION

MISSION NEED

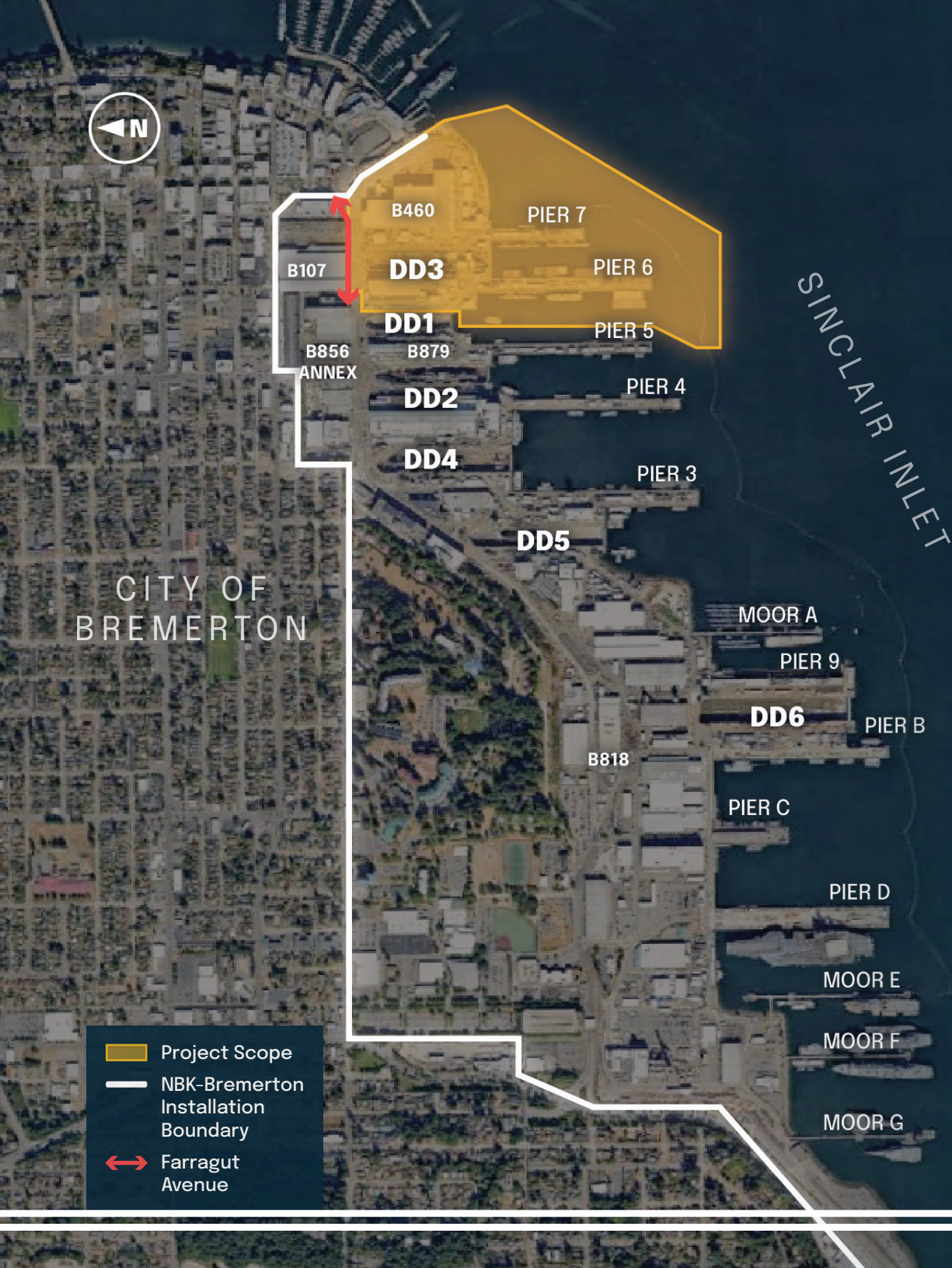
The Navy does not currently have the capacity and capability to perform depot-level maintenance on a Gerald R. Ford-class aircraft carrier in the Pacific. The only dry dock on the West Coast able to accommodate a current Nimitz-class aircraft carrier does not meet seismic resiliency standards and cannot fully accommodate Ford-class aircraft carriers.

The Navy needs to upgrade and improve the shipyard's capabilities and capacities to ensure the Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS & IMF) can continue to meet its important mission to maintain, modernize, and retire the Navy's fleet into the foreseeable future. PSNS & IMF is the only maintenance activity in the Pacific Theater that can support periodic docking planned incremental availabilities (DPIA) and emergent repair of the Pacific Fleet's nuclear-powered aircraft carriers (CVN). PSNS & IMF currently performs 50 percent of all CVN DPIAs.

To meet this need, the Navy is investing in the new, multi-phased, megaproject, the Multi-Mission Dry Dock at PSNS & IMF at Naval Base Kitsap (NBK)-Bremerton.

A fully pressure-relieved dry dock will be capable of accommodating shipyard repair services for the new Ford-class CVN, the current Nimitz-class carriers, and other surface and subsurface ships served by PSNS & IMF.





The dry dock facility includes drainage and flooding systems, a caisson gate, roadways and portal crane tracks, access and egress elements, mechanical, electrical, and communication systems, supporting facilities, and utility routing tunnels. The project also includes demolition of facilities and utilities, including the existing Dry Dock 3, Pier 6, and Pier 7. Dredging on the project site will be needed to support construction of the cofferdams, removal of the pier bells, and achievement of berthing depths at the future wharves.

Multi-Mission Dry Dock on-site construction is planned to be executed as three separate contracts as part of a multiple construction contract approach. Constructing the Multi-Mission Dry Dock is a strategic priority for the Navy and critical for operational readiness. Access to adequate maintenance facilities on the West Coast mitigates risk and allows available assets in the Pacific to respond to threats.

Construction of Multi-Mission Dry Dock will:

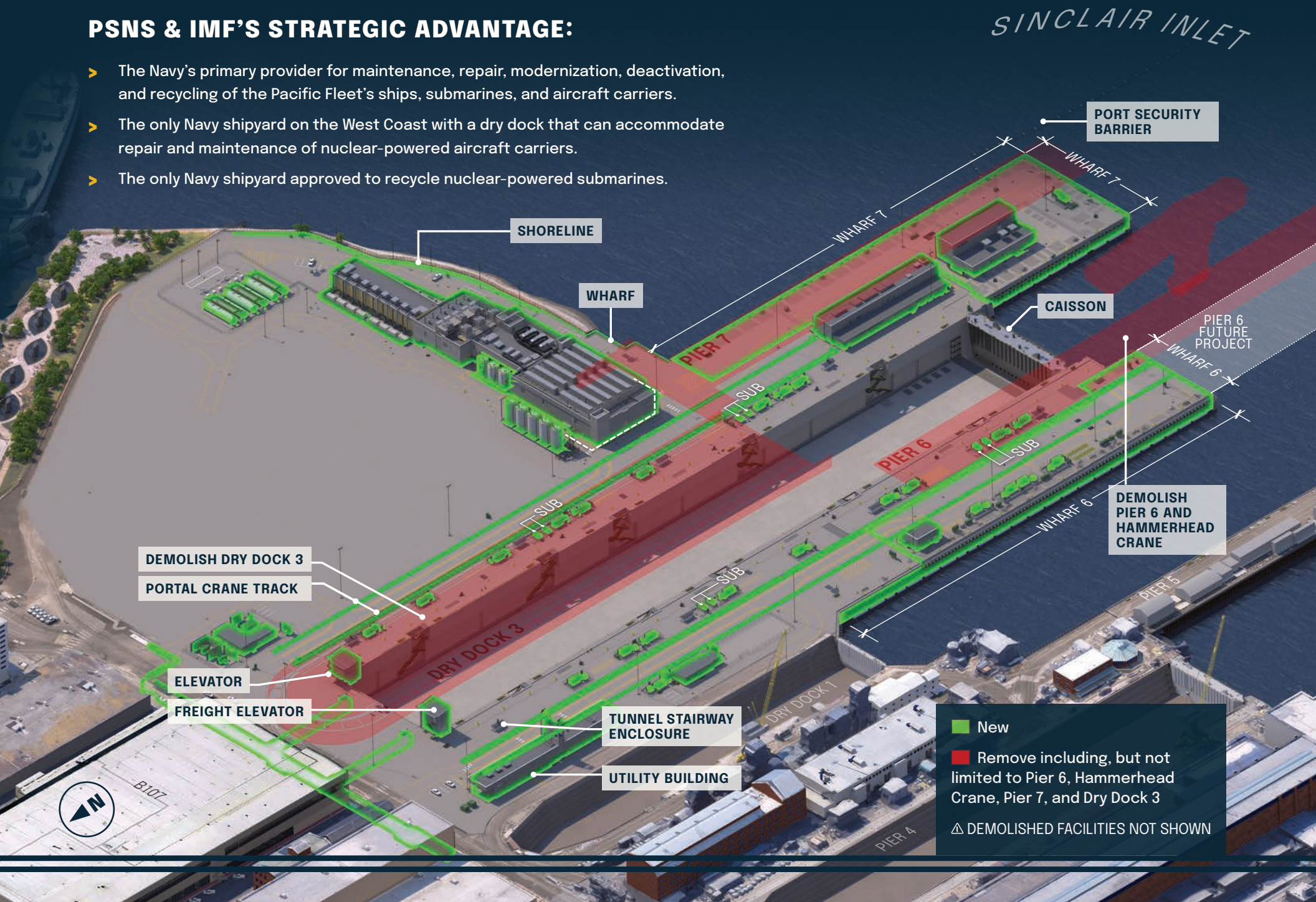
- Keep a Ford-class aircraft carrier in U.S. Pacific Command (USPACOM) area of responsibility.
- Improve shipyard capacity by 25 percent.
- Enable portal crane access to all areas for material and component lifts.
- Maintain Dry Dock 6 availability for submarine recycling, contingency, and other work.

Project Scope
 NBK-Bremerton Installation Boundary
 Farragut Avenue



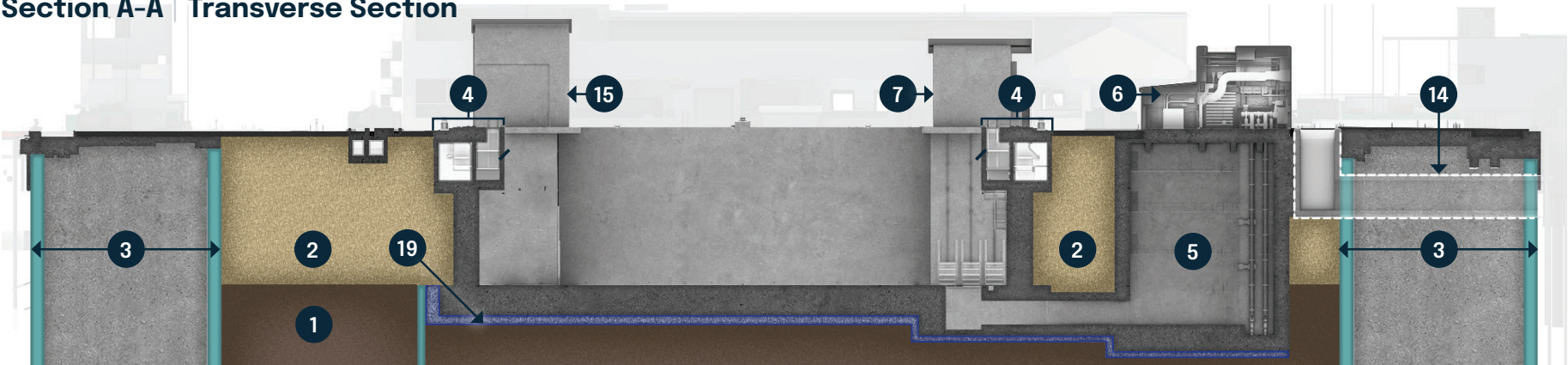
PSNS & IMF'S STRATEGIC ADVANTAGE:

- > The Navy's primary provider for maintenance, repair, modernization, deactivation, and recycling of the Pacific Fleet's ships, submarines, and aircraft carriers.
- > The only Navy shipyard on the West Coast with a dry dock that can accommodate repair and maintenance of nuclear-powered aircraft carriers.
- > The only Navy shipyard approved to recycle nuclear-powered submarines.

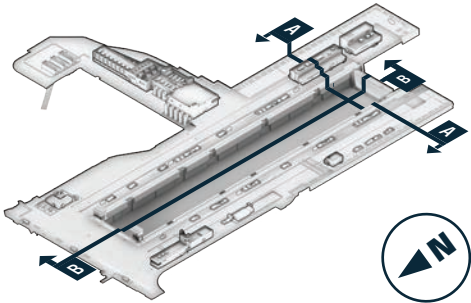
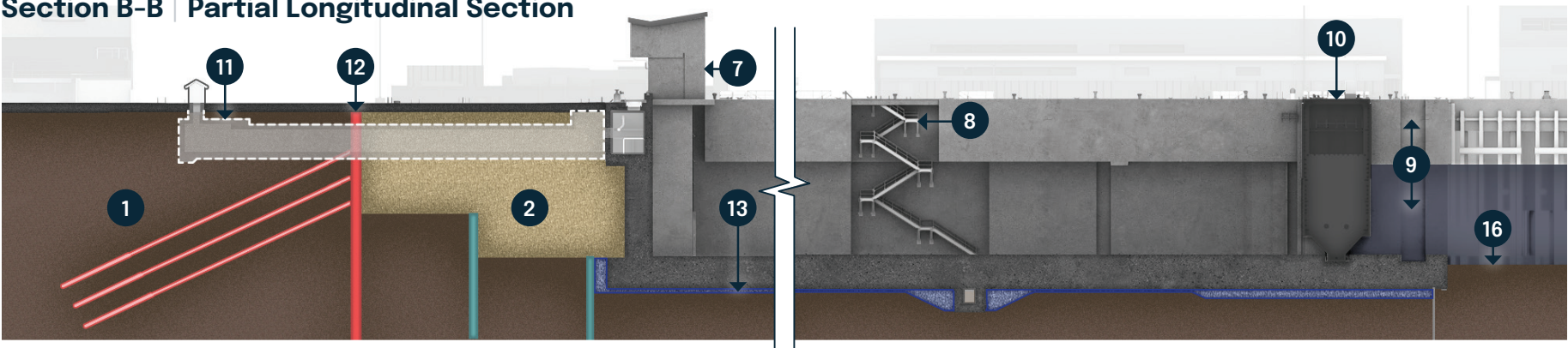


DESIGN FEATURES

Section A-A | Transverse Section



Section B-B | Partial Longitudinal Section



Features

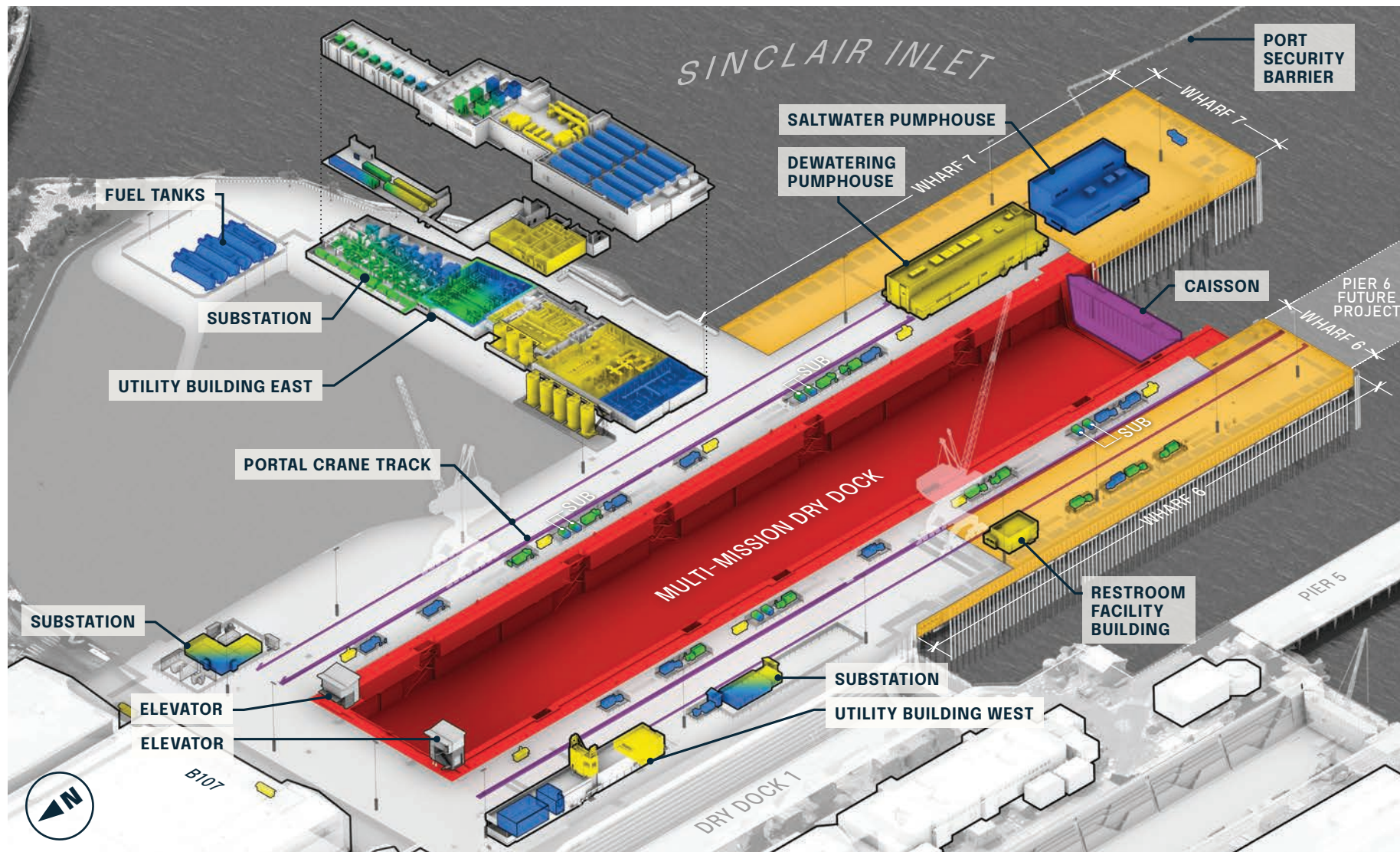
KEY	TYPE
1	Existing Soil
2	Engineered Backfill
3	Double Wall Cofferdam
4	Service Gallery and Mechanical Tunnel
5	Dewatering Pumpwell
6	Dewatering Pumphouse

KEY	TYPE
7	Personnel Elevators
8	Stairway to Dry Dock
9	Entrance Structure and Caisson Seats
10	Caisson (shown in inner seat)
11	Farragut Avenue Tunnel
12	Concrete Shoring Wall

KEY	TYPE
13	Pressure Relief Underdrainage System
14	Main Dewatering Discharge Culvert
15	Freight Elevator
16	Sea Bed



SURFACE MAP & FEATURES

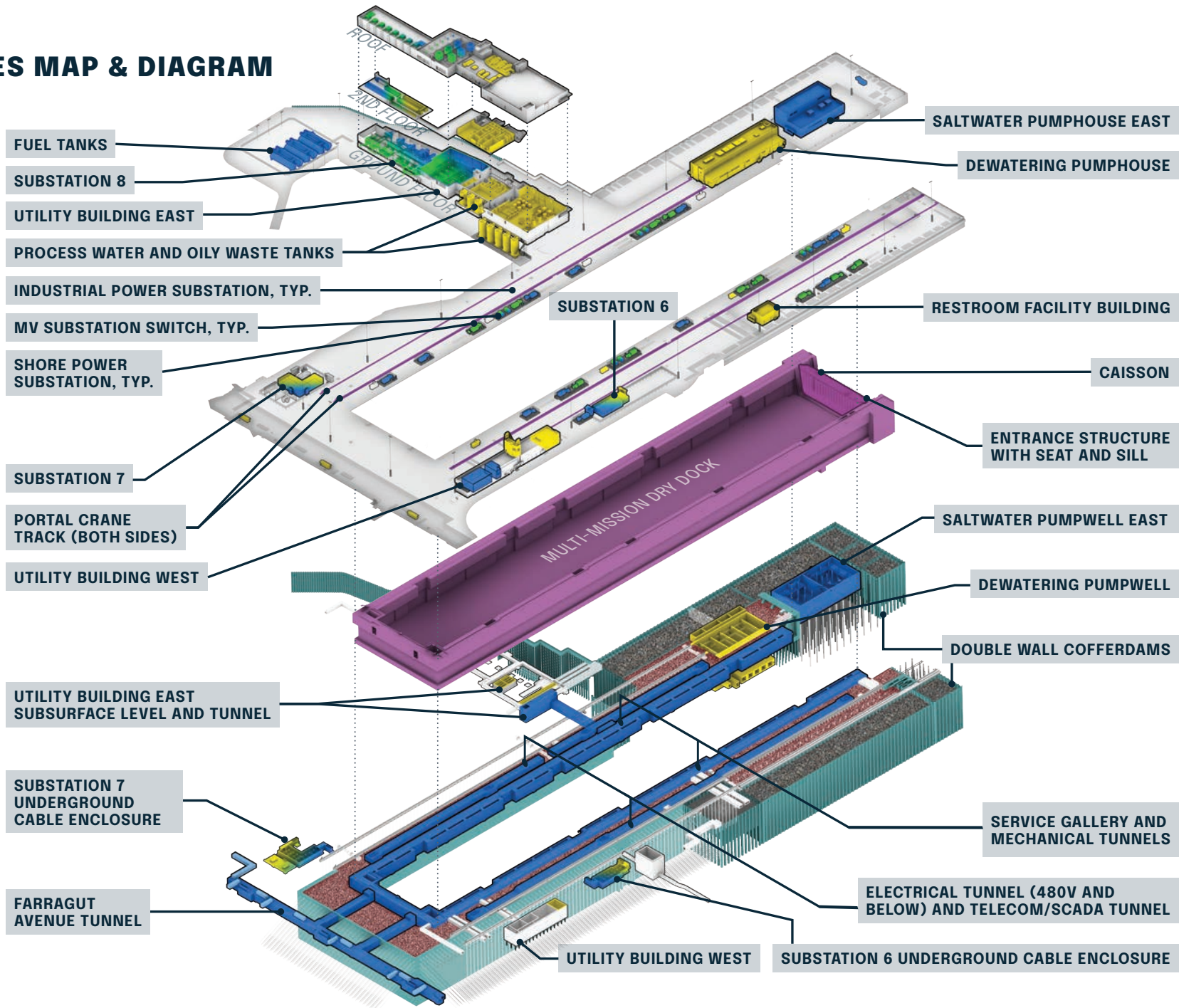


LEGEND

Vessel Support Utilities	Vessel, DD, and Site Support	DD and Entrance Structure
DD and Site Support	Vessel and Industrial Activities	Functional Criteria
Industrial Activities Support	Vessel, DD, Site, and Industrial	Wharves



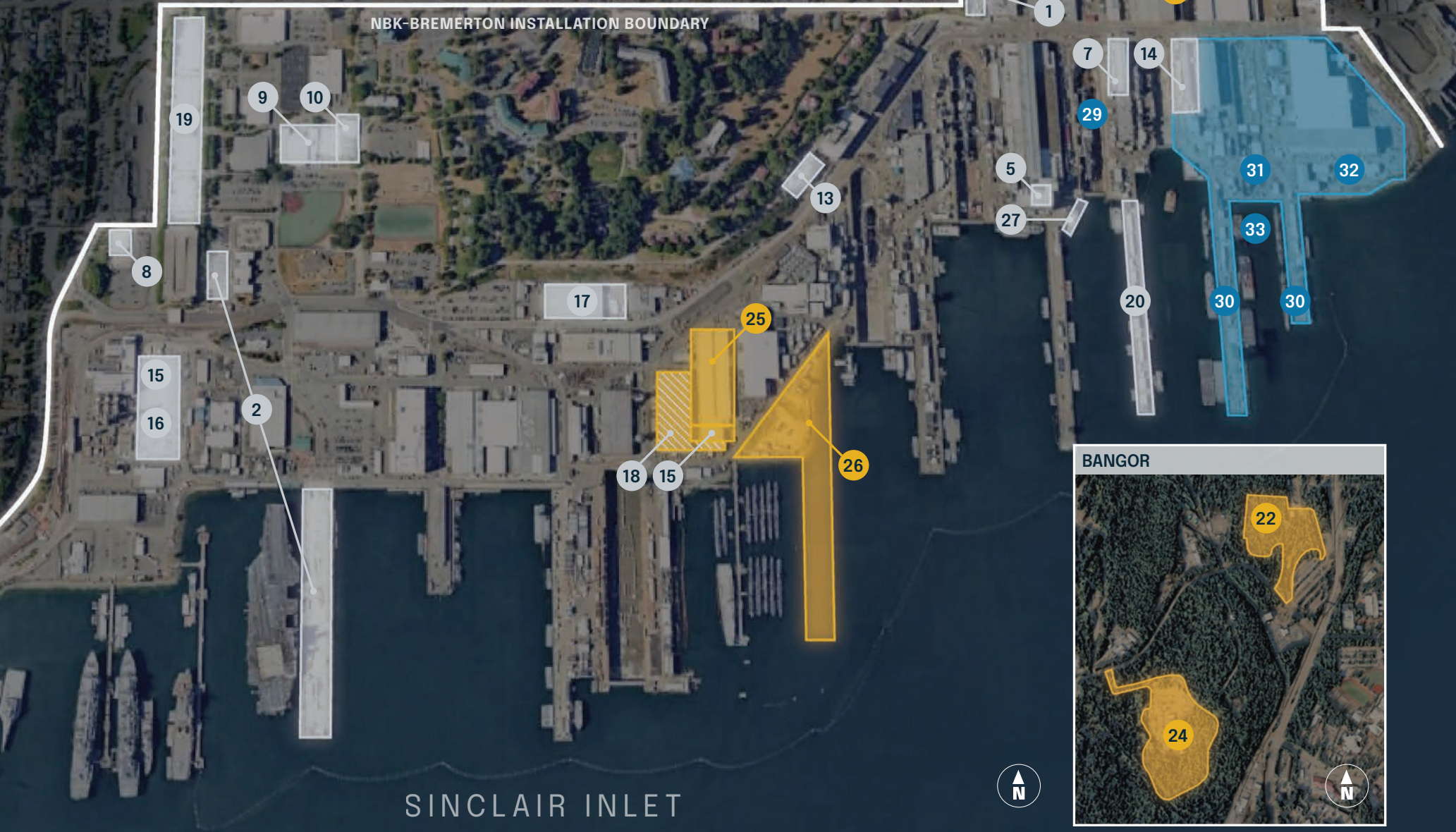
FEATURES MAP & DIAGRAM





CITY OF BREMERTON

NBK-BREMERTON INSTALLATION BOUNDARY



BANGOR





PHASED PROJECT LIST WITH MAP

PHASE 0

Phase 0 projects are nearing completion.

1 Shipyard Electrical Backbone

2 CVN 78 Electrical Upgrade

3 Poulsbo Warehouse Lease
(Code 350 & Shop 26/99)

4 Belfair Laydown Lease
(Code 350 & Shop 11/71)

5 Radar Relocation

6 Bremerton Office Lease (Code 101/400)

7 B78 Renovation (Activations &
Code 900F)

8 B995 Renovation (Shop 26)

9 B502 Renovation (Code 132)

10 B434 Renovation (Code 101/400)

11 B844 Renovation (Code 1120)

12 Keyport Relocatables Utility/Site
Improvements (Code 250)

13 Farragut Relocatables
(BMTC & Code 350)

14 B58 Marine Machine Shop Demo

15 Pure Water/Chiller Systems Relocation
Site Improvements

16 U-Lot Relocatable (Code 500 & Shop 38/51)

17 B367 Utilities/Seismic/Energy
Improvements (Shop 99)

18 Shop 99 Move-Out & B368/462 Demo*

19 Montgomery Modular Parking (U-Lot)

20 Pier 5 Pile Replacement & Platform
Support Rail

21 Camp Wesley Harris Laydown (RCD &
Shop 99)

PHASE 1

22 PSNS & IMF Regional Forge and Heat
Treat Shop

23 Shipyard Support Building

24 Radio Hill Complex

25 Shipfitter-Welder Facility

26 Pier 2 Marine Repair Facility

PHASE 2

27 Saltwater Cooling System

28 Construction Water Treatment

29 Existing Buildings Heating Replacement

30 Package 1: Marine Works

31 Package 2: Dry Dock Construction

32 Package 3: Infrastructure & Systems

33 Package 4: Caisson Gate

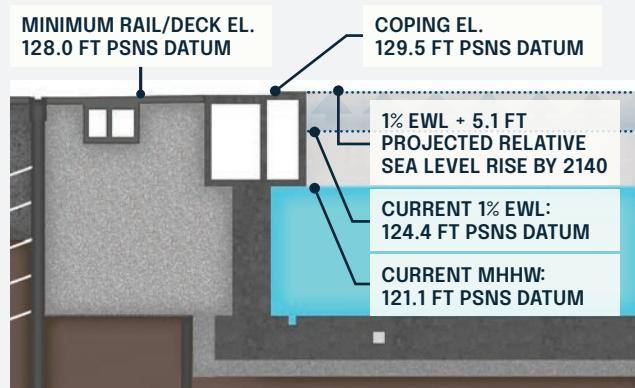
*Project 18 will include demolition of two buildings, B368/B462. Project 25 will include new construction.



KEY PROJECT ELEMENTS



Coastal Resiliency



▲ Legend below under the graphic.

LEGEND

EL	Elevation
EWL	Extreme Water Level
PSNS	Puget Sound Naval Shipyard
MHHW	Mean Higher High Water

1% EWL refers to a water level that has a 1% annual exceedance probability or 1 in 100 chance of being equaled or exceeded in any one year, commonly referred to as the 100-year water level.

Site Topography

The project site, along with other portions of NBK-Bremerton, sits in a relatively low-lying area along the north shoreline of Sinclair Inlet.

Coastal Hazards

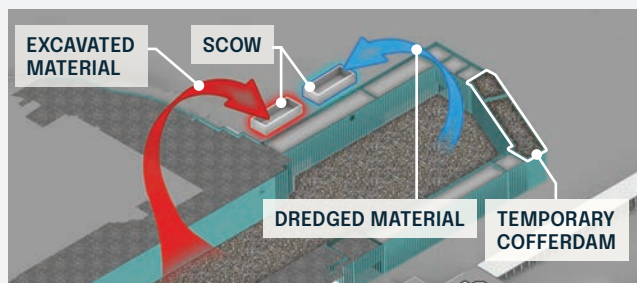
The project site is sheltered from energetic wind waves and swell (less than 3 feet). Primary coastal hazards for the project site include coastal flooding due to extreme high tides and storm surge, as well as tsunamis.

Designing with Sea Level Rise and its Impacts

Sea-level change projections and coastal hazards were considered in the dry dock design and used to establish the design flood elevations for associated upland facilities. The Multi-Mission Dry Dock is designed to be resilient against flooding during current 100-year extreme water level events, although more severe events, such as tsunamis, could result in limited flooding along the shoreline.



Project Dredging



- ▲ Installation of temporary cofferdam and supporting berm to dewater site. Dredged and excavated materials will be loaded into scows for transportation, processing, and disposal.

The existing Dry Dock 3 is much shallower than the proposed Multi-Mission Dry Dock, so to prepare the site for construction of the Multi-Mission Dry Dock, sediment and soil will be removed from within the footprint of the future dry dock, adjacent pier, and caisson berthing areas. Following installation of the temporary cofferdam and dewatering of the site, excavation will continue to achieve the final design grades needed for construction. Materials removed during dredging and excavation will be transported to approved upland or in-water disposal locations in accordance with regulatory requirements.

Base Access During Construction



PSNS & IMF will remain operational throughout construction of the Multi-Mission Dry Dock. Infrastructure improvements will be carefully phased to maintain essential utilities, transportation networks, and mission-critical maintenance facilities. Construction planning prioritizes uninterrupted access to key shipyard operations while providing temporary systems and facilities as needed to support ongoing naval readiness and workforce activities.

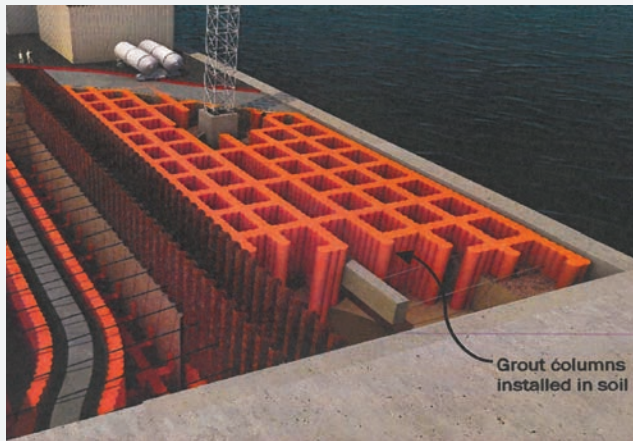
The controlled industrial area (CIA) fence and port security barrier (PSB) will be relocated to provide a construction enclave outside of the secure area. Enclaving the construction site area will minimize construction costs related to base access, limit gate congestion, and expand the construction labor force capable of working on the project. The security barriers will be restored to their current orientation following substantial construction completion.



Geotechnical



▲ Construction of Dry Dock 3 showing historical backfill (looking north).



▲ An example of grout column ground improvement.
Source: Haley and Aldrich

Historical Backfill

The historical development of PSNS & IMF resulted in the placement of uncontrolled fill above the former tide flats up to the yard grade existing at the time. Later, excavation and backfilling were performed to construct Dry Dock 3, which will be demolished for construction of the Multi-Mission Dry Dock. The historical backfill is susceptible to earthquake-induced liquefaction and lateral spreading, and has shown ongoing settlement caused by internal soil erosion into the existing dry dock's pressure relief system.

Ground Improvement

Multi-Mission Dry Dock construction will include ground improvement along the east and west sides of the new dry dock to mitigate liquefaction that would otherwise compromise the dry dock walls, utilities, and other overlying structures.

Ground improvement will also be included along the existing shoreline east of the new dry dock to control liquefaction-induced lateral soil deformation. In addition to ground improvement, at-grade buildings and structures will be placed on deep foundations to control vertical settlement.

The new dry dock, pump well, quay walls, and double wall cofferdams will bear upon glacially overridden soils at depths that are very dense and stiff relative to the overlying Holocene soils. These soils include man-made fill and other natural deposits, such as recessional outwash and beach/estuarine deposits that are susceptible to seismic degradation or are naturally weak and compressible.

The new backfill to be placed between and adjacent to the new dry dock, shoring, and double wall cofferdams will be poorly graded, angular gravel with low fines content, high permeability, and will be properly compacted during placement.

Compared to historical backfills at PSNS & IMF, this new backfill will be non-liquefiable under design earthquake hazards and resistant to internal erosion and settlement.



Environmental



Site Characterization

The project is located within the Bremerton Naval Complex Superfund Site. Oversight is jointly managed by the Washington State Department of Ecology and the U.S. Environmental Protection Agency. The construction design will apply best management practices and comply with local regulations for handling soils, groundwater, and sediments to protect human health and the environment.

Industrial water from construction will be treated prior to discharge, and unsuitable materials will be disposed of at approved landfill facilities.

Characterization studies of upland soils, dredged materials, and groundwater have been completed to determine proper disposal, handling, and cost requirements.

Hazardous Building Materials

Surveys conducted during the site engineering investigation identified hazardous building materials in structures scheduled for demolition. Abatement will be required for asbestos-containing materials, lead-based paint, PCBs, mercury, and ozone-depleting substances such as A/C refrigerants.

EIS Support

The Bremerton Waterfront Infrastructure Improvements Environmental Impact Statement (EIS) includes the Multi-Mission Dry Dock as part of Alternative 2, which was identified as the Navy's Preferred Alternative. Designers and environmental staff have been working with the EIS developers to align their project description with the design and to provide technical data to inform associated consultations, such as those conducted under the Endangered Species Act and the National Historic Preservation Act.



Multiple Award Construction Contracts



The Multi-Mission Dry Dock program will be delivered through three main construction packages organized by major construction discipline and scope. Additional supporting contracts will deliver specialized facilities and systems that complement the three primary packages and complete the overall Multi-Mission Dry Dock modernization project. This phased delivery strategy is intended to help reduce schedule risk and improve bid competition while supporting the successful integration of the project's many interconnected elements.

Package 1: Marine Works will prepare the site for dry dock construction by relocating existing infrastructure, establishing temporary utilities, and constructing the water cutoff and shoring systems needed to support the future excavation.

Package 2: Dry Dock Construction will dewater and excavate the site, as well as construct the primary dry dock basin and pumpwells.

Package 3: Infrastructure & Systems will install the utility, transportation, and industrial process systems necessary to operate the dry dock and integrate it with the shipyard's existing infrastructure.

A more detailed description of the packages can be found in the Phase 2 section of this brochure (pages 26–31).



PHASE 1 PROJECTS

Phase 1 will set the stage for the Multi-Mission Dry Dock, relocating and constructing four new critical facilities to support maintenance operations, support services, equipment storage, and shipfitting activities.

- **PSNS & IMF Regional Forge and Heat Treat Shop**
- **Shipyard Support Building**
- **Radio Hill Complex**
- **Shipfitter-Welder Facility**
- **Pier 2 Marine Repair Facility**



CITY OF BREMERTON

NBK-BREMERTON INSTALLATION BOUNDARY

23

25

26

SINCLAIR INLET

LEGEND

- 22 PSNS & IMF Regional Forge and Heat Treat Shop
- 23 Shipyard Support Building
- 24 Radio Hill Complex
- 25 Shipfitter-Welder Facility
- 26 Pier 2 Marine Repair Facility



BANGOR

22

24





PSNS & IMF Regional Forge and Heat Treat Shop

Advanced Metallurgy for a
21st-Century Fleet



THE MISSION IMPACT:

To support advanced repairs for our nation's aircraft carriers and submarines, the Navy is designing a modern, seismically resilient Forge and Heat-Treating Facility. This facility will replace Shop 452 (which will be demolished to clear space for the Multi-Mission Dry Dock), ensuring the shipyard never loses its world-class, heavy-industrial metalworking and casting capabilities. The facility will include a 77,000-square-foot shop production floor, operations offices, an equipment calibration and maintenance area, a material properties work area, shipping and receiving area, a break room, locker rooms for men and women, a shower room, conference and training areas, storage, restrooms, hazardous material storage, and spaces for mechanical and electrical equipment.

ECONOMIC & COMMUNITY INVESTMENT:

This design-build project will construct an 86,000-square-foot industrial facility. The construction will feature deep pile foundations, two massive industrial bays equipped with heavy-duty bridge cranes, dedicated parking for 35 vehicles, and paved access roads.

ENVIRONMENTAL & SUSTAINABLE SOLUTIONS:

Designed to meet Department of War sustainability standards, it will incorporate low impact development (LID) site design, including advanced stormwater detention basins, pedestrian sidewalks, and robust physical security layouts, while remaining entirely outside local floodplains.



Shipyard Support Building

The Consolidated Industrial Hub of the Shipyard



THE MISSION IMPACT:

By consolidating critical shops, specialized training facilities, and engineering divisions currently scattered across dozens of aging buildings into a single, centralized facility, the Navy will drastically reduce transit times and maximize carrier maintenance efficiency. Design of the Shipyard Support Building will have a similar general footprint of the existing Building 147 (B147) and is intended to house functions and missions displaced by construction of the Multi-Mission Dry Dock.

ECONOMIC & COMMUNITY INVESTMENT:

Currently in the planning phase, this proposed five-story facility will feature a 68,000-square-foot footprint and 280,736 gross square feet of highly adaptable space. Sized to accommodate 1,289 personnel, the building will house heavy-bay shops, advanced applied-training mockups, administrative suites, and central muster/locker facilities for over 500 personnel.

ENVIRONMENTAL & SUSTAINABLE SOLUTIONS:

The building will include a high-performance building envelope optimized for local climate conditions. The rooftop will include a centralized 1,200-square-foot HVAC plant, complemented by localized zone-handling mechanical rooms on each floor. The facility will rely entirely on electric heating and feature eco-friendly materials, such as recycled-content steel, low-VOC finishes, and acoustic rubber flooring.



Radio Hill Complex

Connecting Materials,
Equipment, and Operations
Across the Region



THE MISSION IMPACT:

The Multi-Mission Dry Dock will require a massive staging ground to manage materials, equipment, and trailers without congesting the active shipyard. The Radio Hill Complex will serve as the primary off-site logistical staging area, providing a secure, organized footprint to receive, sort, and deploy materials and supplies to uses throughout the region. The project will include a building designed to accommodate 35 people. According to the Basic Facility Requirements (BFR), the facility will provide open office space for five individuals, heated and dry storage areas, a laydown area, dedicated women's and men's locker rooms and showers, and a break room with multiple functions to support both meals and meetings.

ECONOMIC & COMMUNITY INVESTMENT:

This project will expand an existing 38,000-square-yard unpaved site by 17,000-square-yards for a total of 55,000-square-yard heavy industrial staging complex. Planned scopes of work include grading, utility trenching, constructing paved roadways, and building a 4,000-square-foot, single-story support building to house staging operations, administrative offices, and break rooms.

ENVIRONMENTAL & SUSTAINABLE SOLUTIONS:

Federal sustainability guiding principles will be followed to lower the project's impact on the site. The enlarged laydown area will require stormwater management including native-planted detention ponds to filter runoff naturally. The Navy will offset unavoidable local wetland impacts at a 2:1 ratio by removing invasive species and planting native vegetation.



Shipfitter-Welder Facility

A High-Capacity
Manufacturing Center



THE MISSION IMPACT:

To make way for the Multi-Mission Dry Dock, the existing welding and shipfitting facilities must be relocated out of their current Building 460 construction zone location east of existing Dry Dock 3. The new Shipfitter-Welder Facility will establish a high-capacity, seismically resilient manufacturing center that ensures structural steel fabrication, welding, and hull repairs can proceed continuously.

ECONOMIC & COMMUNITY INVESTMENT:

This project will construct a state-of-the-art, multi-story industrial facility spanning 310,088 square feet. It will feature specialized, heavy-load pile foundations and multiple manufacturing bays outfitted with high-capacity cranes (including two 100-ton, two 75-ton, and two 25-ton overhead bridge cranes) to handle massive structural hull components.

ENVIRONMENTAL & SUSTAINABLE SOLUTIONS:

The future mechanical plant will feature closed-loop cooling water, non-potable process water recycling, and steam-looped configurations to maximize resource efficiency. Demolition of outdated structures (Buildings 368 and 462) will clear the way for the facility. State-of-the-art localized exhaust and air filtration systems will protect indoor air quality during heavy welding operations.



Pier 2 Marine Repair Facility

The Next-Generation,
Deep-Draft Repair Pier



THE MISSION IMPACT:

As the primary repair pier supporting submarines, Pier 2 is designed to withstand modern seismic demands and sea-level rise. It will serve as the sole mitigation for the demolition of older piers, ensuring the Pacific Fleet maintains uninterrupted, pier-side repair availability. The pier construction will include two independent structures separated by a seismic joint. The north portion will be a wharf that is designed to resist or mitigate seismically induced liquefaction. The south portion will be a pier of more typical northwest waterfront construction.

Utility trenches are located around the perimeter of the pier, with a crane track being located just inboard of the utility trenches. Various utility equipment, including substations, light poles, the high-pressure compressed air (HPCA) building, and water treatment equipment, will be located along the centerline of the pier. A new oily waste treatment system (OWTS) and fire water pumphouse (FWP) will be located onshore adjacent to the pier bulkhead. Two restroom facilities and a fixed fighting position will also be located on the pier to support shipyard operations. Additional vaults will be added to Lift Station 4 (LS-4) to support the additional flows expected from the pier. The Recycled Material Transfer Station (RMTS), which currently exists at the Pier 2 site, will be relocated to the Building 922 (B922) parking lot north of Mooring F.



**ECONOMIC &
COMMUNITY
INVESTMENT:**

This historic maritime project will construct a 1,580-foot-long by 132-foot-wide reinforced concrete pile founded repair pier. The project will include extensive dredging of the berthing basin, installing heavy portal crane rail tracks, renovating Moorings E, F, and G with cathodic steel sheet pile protection.

**ENVIRONMENTAL
& SUSTAINABLE
SOLUTIONS:**

Environmental protection will be a key focus throughout construction. Measures such as stormwater, erosion, and sediment controls will help protect surrounding waterways, while underwater noise-mitigation techniques, including bubble curtains during pile driving, will be used to reduce impacts on local salmonids and marine mammals.

Pier 2 is designed for long-term resilience and sustainability, incorporating modern stormwater treatment, enhanced seismic performance, electric vehicle charging, and microgrid support. The pier deck is elevated above the surrounding shipyard grade and projected flood elevations to maintain reliable operations under future climate conditions.



PHASE 2 PROJECTS

Phase 2 will bring Multi-Mission Dry Dock to life through four packages that establish the marine systems, dry dock construction, advanced electrical and mechanical systems, and the final caisson that seals the Multi-Mission Dry Dock entrance from Sinclair Inlet.

PACKAGE 1

Marine Works

PACKAGE 2

**Dry Dock
Construction**

PACKAGE 3

**Infrastructure &
Systems**

PACKAGE 4

Caisson Gate



CITY OF BREMERTON

NBK-BREMERTON INSTALLATION BOUNDARY

SINCLAIR INLET

LEGEND*

- 1 Package 1: Marine Works
- 2 Package 2: Dry Dock Construction
- 3 Package 3: Infrastructure & Systems
- 4 Package 4: Caisson Gate



*These packages are captured in Projects 27-33 on the larger project map. See Page 11.



PACKAGE 1

Marine Works

Establishing the Perimeter & Marine Foundation

Upon completion of the Marine Works package, the future dry dock site will be cleared of most existing infrastructure and supported by temporary utilities to maintain ongoing shipyard operations. By the end of Package 1, the site will include marine access facilities and a water cutoff and shoring system, creating a construction-ready perimeter for the dewatering, excavation, and dry dock construction activities that follow.

THE MISSION IMPACT:

Package 1 is the foundational contract for Multi-Mission Dry Dock, establishing the water cutoff systems, in-water cofferdams, and structural perimeter needed to construct the dry dock entirely in the dry. By removing legacy waterfront structures and isolating the basin footprint from Sinclair Inlet, this package clears the site while ensuring adjacent shipyard maintenance activities remain fully operational.

ECONOMIC & COMMUNITY INVESTMENT:

Package 1 represents a massive civil-marine contracting opportunity. Primary scopes include:

- Demolition and removal of legacy Pier 6, Pier 7, and the historic Hammerhead Crane.
- Extensive marine dredging and construction of supporting underwater stone berms.
- Installation of upland shoring walls.
- Extensive ground improvement via jet grouting and deep soil mixing.
- Construction of a temporary contractor access pier to facilitate the movement of personnel, equipment, and materials while minimizing impacts to ongoing shipyard operations.
- Construction of a Double Wall Cofferdam (DWC) combi-wall system that provides water cutoff, temporary contractor berthing, and construction laydown.

ENVIRONMENTAL & SUSTAINABLE SOLUTIONS:

Package 1 incorporates comprehensive environmental management for dredging and in-water work. Dredged materials undergo testing to maximize open-water disposal at the approved Elliott Bay site, with contaminated materials sent to licensed upland landfills. In-water pile driving operations will deploy continuous hydroacoustic monitoring and bubble curtain noise mitigation to protect marine mammals and migratory fish in compliance with the Clean Water Act and Endangered Species Act.

**PACKAGE 2**

Dry Dock Construction

Building the Heavy Concrete Graving Basin

Upon completion of the Dry Dock package, Dry Dock 3 will have been demolished, the site excavated to its final depth, and the primary dry dock basin and pumpwells constructed. Portions of the dry dock and pumpwells will remain open to allow for easier installation of utility and process systems which will be installed as part of the Infrastructure package.

**THE MISSION
IMPACT:**

Package 2 delivers the core structural components of Multi-Mission Dry Dock through large-scale excavation and construction activities within the enclosed site established under Package 1. The package includes the centerpiece of this modernization program: a massive, 1,210-foot-long, 210-foot-wide reinforced concrete graving dock capable of servicing the Navy's flagship Gerald R. Ford-class aircraft carriers. Engineered to meet strict seismic standards, this package demolishes the 19th-century Dry Dock 3 and erects a durable, 100-year dry dock chamber.

**ECONOMIC &
COMMUNITY
INVESTMENT:**

As one of the largest mass-concrete and deep-foundation efforts on the Pacific Coast, Package 2 drives tremendous demand for regional suppliers, commercial trades, and heavy equipment operations. Following excavation, Package 2 constructs the principal dry dock structures, including the dry dock basin, entrance structure, quay walls, pressure-relief system, and the structural walls for the dewatering and saltwater pump wells. Scope highlights include:

- Installation and operation of a 2,500 gpm deep-well groundwater dewatering system.
- Excavation of the deep dry dock basin and full removal of Dry Dock 3.
- Tie-back tensioning along the perimeter concrete shoring walls.
- Mass-reinforced concrete placement for the floor slab, thick sidewalls, entrance sill, and quay walls.
- Substructure construction for the Dewatering Pumphouse (DPH) and Saltwater Pumpwell East.
- Installation of embedded features and interfaces needed to support subsequent utility, mechanical, electrical, and operational systems.

**ENVIRONMENTAL
& SUSTAINABLE
SOLUTIONS:**

The defining engineering achievement of Package 2 is its fully pressure-relieved drainage system. By continuously draining surrounding groundwater into a subterranean tunnel network, the design significantly reduces upward buoyant pressures on the dry dock floor and walls. This allows for a thinner concrete profile, conserving millions of pounds of cement and lowering the project's embodied carbon footprint.



PACKAGE 3

Infrastructure & Systems

Powering the Modern Shipyard Facility

Upon completion, the infrastructure package delivers a fully integrated dry dock complex with the utilities, support facilities, waterfront infrastructure, transportation systems, and operational services necessary to sustain future fleet maintenance operations.

**THE MISSION
IMPACT:**

Package 3 delivers the permanent infrastructure systems and facilities that transform the completed dry dock structure into a fully operational shipyard asset. Package 3 outfits the completed dry dock structure with the advanced electrical, mechanical, and industrial systems required to service 21st-century warships. This package provides redundant ship support utilities, walkable subterranean galleries, heavy lifting infrastructure, and permanent berthing wharves.

**ECONOMIC &
COMMUNITY
INVESTMENT:**

A major component of Package 3 is the construction of the operational infrastructure that supports vessel maintenance activities. This includes installation of drainage, dewatering, mechanical, electrical, communications, and utility systems serving the dry dock complex. This package offers extensive procurement opportunities across the electrical, mechanical, industrial piping, and commercial building sectors. Major scopes include:

- Construction of above-grade industrial buildings: Utility Building East (73,078 gross square footage [GSF]), Utility Building West (13,729 GSF), Restroom Facility Building (1,412 GSF), and Dewatering Pumphouse (14,994 GSF).
- Modernization of 615-feet of the Farragut Avenue Utility Tunnel, the primary utility backbone of the shipyard.
- Construction of subterranean mechanical and electrical galleries.
- Superstructure completion for Wharf 6 and Wharf 7, including deep pile caps, fendering, and deck hardware.
- Installation of continuous 40-foot-gauge portal crane rails and power trenches
- Final removal of the temporary cofferdams, post-flooding channel dredging, and multi-system commissioning.

**ENVIRONMENTAL
& SUSTAINABLE
SOLUTIONS:**

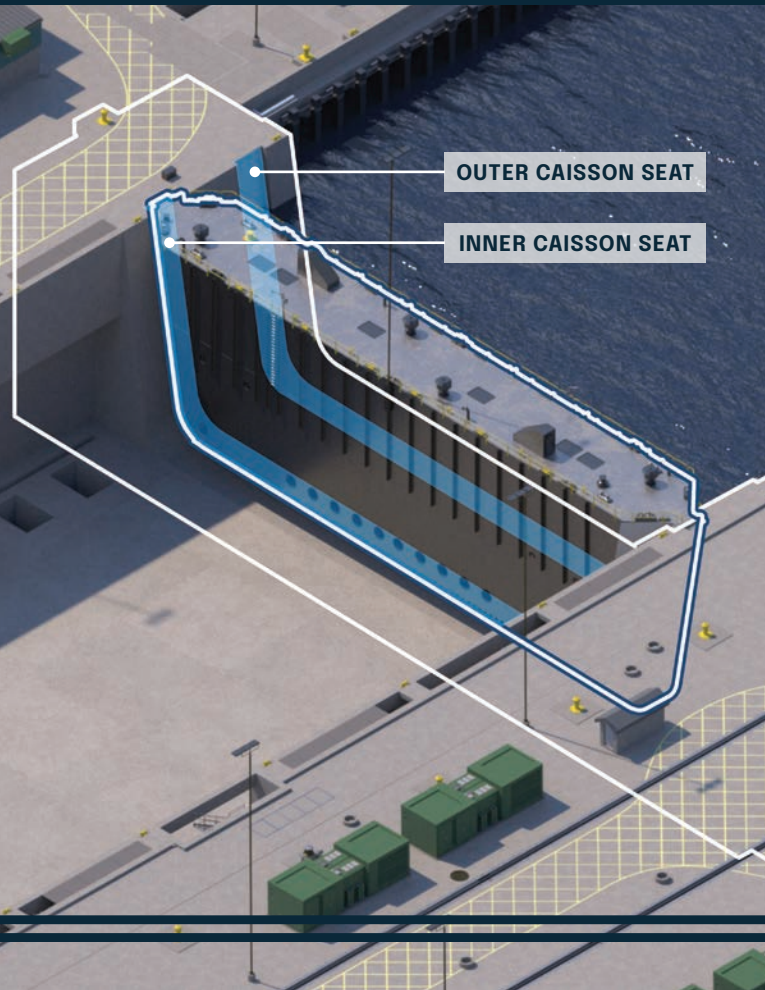
Package 3 incorporates major long-term sustainability systems, including a state-of-the-art Closed-Loop Cooling Plant that will serve as the primary cooling water source for dry dock operations. By recirculating cooling water, the system will significantly reduce thermal discharges to Sinclair Inlet and decrease reliance on traditional single-pass cooling systems. It also provides an on-site industrial wastewater treatment facility to collect and process washdown water, and delivers high-capacity medium-voltage shore power to allow docked aircraft carriers to “cold-iron” (shut down diesel generators while in dock), drastically reducing regional emissions.



PACKAGE 4

Caisson Gate

Precision Engineering for
Fleet Containment



THE MISSION IMPACT:

The caisson is the floating, reversible steel barrier that seals the Multi-Mission Dry Dock entrance from Sinclair Inlet, creating a watertight basin for ship repair. Engineered to resist hydrostatic and seismic loads, this critical system ensures dry dock water tightness and provides the primary mechanism for dock flooding.

ECONOMIC & COMMUNITY INVESTMENT:

Delivered as a specialized, off-site manufacturing and delivery contract, Package 4 engages premier naval architects and heavy marine fabricators. Key technical components include:

- Fabrication of a stiffened steel shell plating structure with watertight internal bulkheads.
- Four internal water ballast tanks and integrated ballast dewatering pump systems to control caisson draft and seating.
- External seismic restraint blocking designed to lock the caisson into the entrance structure seats during seismic loading.
- Industrial power integration, interior lighting, sensors, and remote monitoring systems.

ENVIRONMENTAL & SUSTAINABLE SOLUTIONS:

The caisson utilizes non-toxic, high-durability marine coating systems paired with sacrificial zinc/aluminum anodes to prevent corrosion and marine growth without leaching hazardous biocides into the marine ecosystem. Dock flooding is performed through 12 36-inch-diameter flood-through tubes equipped with interior gate valves, allowing controlled gravity filling that prevents bottom scouring and avoids sediment disturbance in the inlet.



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to get the latest updates and learn
more about the project.