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THE SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER
SUBCOMMITTEE ON READINESS

STATEMENT OF

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BEFORE THE

SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

AND

SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER

ON

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THE SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER
SUBCOMMITTEE ON READINESS

Distinguished members of the Subcommittees, we are pleased to appear before you today to discuss the Department of the Navy's Shipyard Infrastructure and Optimization Program (SIOP). SIOP is a once-in-a-century opportunity to revitalize our Nation's public shipyards, ensuring that these critical national security facilities are properly positioned to meet the future needs of the Navy Fleet. With the strong support of this committee and the Congress, SIOP efforts continue to mature, creating momentum as a cross-organizational initiative committed to predictable delivery of critical infrastructure for the four public shipyards. Funding provided in the Fiscal Year (FY) 2022 Consolidated Appropriations Act will ensure that priority projects are completed in time to serve the first Virginia Class mission need date in FY 2027 and that other crucial planning and design efforts are completed to support the Navy's future nuclear submarine and aircraft carrier force.

BACKGROUND

The Navy's four public shipyards – Norfolk Naval Shipyard (NNSY), Portsmouth Naval Shipyard (PNSY), Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS), and Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNS) – are pillars of our national defense. The average age of the naval shipyard facilities and related infrastructure is over 60 years while the average dry dock age is approaching 100 years. Shipyard facilities, equipment, and their workforce have served the Fleet for generations, and we could not afford to build them from scratch today.

The Navy established SIOP in 2018 to take a holistic approach to recapitalization of the four public shipyards. SIOP integrates all infrastructure and capital equipment investments to support nuclear fleet maintenance requirements and improve maintenance capabilities by expanding shipyard capacity and optimizing shipyard configuration. From the beginning, SIOP has led the Navy in depot infrastructure transformation efforts and has become a model for all domains seeking to improve their infrastructure capabilities. The program consists of three primary Lines of Effort (LOE) in support of the four public shipyards:

1. Construct and recapitalize dry docks, including necessary investments to sustain certification requirements.
2. Recapitalize and reconfigure infrastructure towards optimization.
3. Modernize capital equipment.

Dry dock recapitalizations must be completed to accommodate the configuration of the future force platforms. Along with the dry dock recapitalizations, the modernization and equipment recapitalization elements of SIOP are essential to meeting and subsequently reducing the timelines associated with completing maintenance and modernization work; maximizing the operational availability of these platforms in support of fleet requirements. Our shipyard re-capitalizations also must integrate with ongoing and planned carrier and submarine maintenance availabilities. SIOP activities are closely tied to each shipyard's planning and execution of ongoing and future availabilities for the current nuclear force and are scheduled to balance the needs of the shipyards to conduct ongoing work with the needs of the shipyard recapitalization work.

FISCAL YEAR 2023 BUDGET REQUEST

The Navy's FY 2023 budget demonstrates our commitment to SIOP by requesting $1.7 billion for the program in FY 2023, and requesting a total of $8.3 billion across the Future Years Defense Program (FYDP) to fund the three LOEs. Combined with the SIOP funds enacted by Congress in FY 2021 and FY 2022, this FYDP request will enable critical Military Construction (MILCON) projects ($6.1 billion) such as the replacement of Dry Dock (DD) 3 at Pearl Harbor, Hawaii; Multi-Mission Dry Dock #1 Extension in Kittery, Maine; and Dry DD 8 Saltwater System in Portsmouth, Virginia to proceed on pace to meet fleet requirements. The request will support modernization of Capital Equipment ($679 million) and will enable advanced planning activities, required environmental assessments, and program management ($1.5 billion). These additional investments will facilitate program oversight, proper planning and cost development of projects to better inform future budget estimates.

PROGRAM GOVERNANCE

To ensure disciplined oversight of cost, schedule and performance within the program, while maintaining uninterrupted support to the Fleet, the Navy updated its reporting relationships and established a Program Executive Office Industrial Infrastructure (PEO II), aligned with Naval Facilities Engineering Systems Command (NAVFAC), and reporting directly to the Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN (RD&A)).

Additionally, the Program Management Office that previously reported to Naval Sea Systems Command (NAVSEA) has been realigned to report directly to PEO II.

The PEO and program office are implementing agile acquisition methodologies to coordinate the programmatic execution of this complex effort, similar to those the Navy employs for major defense acquisition programs (MDAPs). The Navy is establishing an overall SIOP Acquisition Strategy (AS) and Acquisition Program Baselines (APBs) for each shipyard that will be the guiding documents for managing SIOP program execution. These documents will establish threshold and objective parameters for the overall cost, schedule, and performance of SIOP execution at each shipyard. The PEO also remains integrated with NAVSEA and the Naval Sustainment System – Shipyards (NSS-SY) efforts to improve shipyard performance.

Whereas SIOP is a holistic, Navy-wide approach to upgrading the shipyards' physical infrastructure and capital equipment, NSS-SY is focused on improving and standardizing the shipyards' business practices to improve the on-time delivery of submarines and aircraft carriers out of maintenance. Like SIOP, NSS-SY assigns Flag Officers from across the Navy to address functional areas affecting execution and performance in our public shipyards. Specific focus areas include planning, material procurement, engineering, waterfront execution, facilities, information technology, and Fleet partnership. NSS-SY has established target metrics to manage the duration of current nuclear force availabilities through processes, workflows, and procedural improvements. The opportunities for facility improvements identified will be utilized to achieve the overall SIOP efficiency targets that, enabling the Navy to better balance funding decisions associated with facility improvement and construction projects in a fiscally constrained environment.

SIOP FIVE-YEAR PLAN

With the start of the SIOP efforts in 2018, the Navy developed rough order of magnitude estimates for the duration and cost of the three Lines of Effort across the four public shipyards. An initial detailed SIOP "next five-year plan" with higher fidelity schedules and costs estimates was provided in the fall of 2021, and in April 2022, the Navy updated the SIOP next Five-Year Plan to include measurable near-term goals, known project costs, project sequencing to deconflict with required maintenance availabilities and environmental planning timelines. The Navy is aggressively implementing lessons learned from recently awarded projects for upcoming

efforts to include acquisition, design, cost estimation, and organizational and process changes. The Department has also re-assessed construction and procurement timelines to effectively implement SIOP activities, while executing ongoing and planned submarine and aircraft carrier maintenance availabilities.

Line of Effort 1: Construction and Recapitalization of Dry Docks

Construction and recapitalization of dry docks must be completed to accommodate the size and systems of future forces platforms such as the USS Gerald R Ford Class aircraft carriers and Virginia Class submarines. The first construction project for dry dock recapitalization was awarded last year for the construction of two new dry docks at PNSY. Construction is on schedule to support the Virginia Class maintenance availabilities planned for these new dry docks at the shipyard in FY 2027. Upgrades to DD 8 at NNSY are scheduled to award this fiscal year to support future Ford Class availability, and renovations to DD 4 at the shipyard are scheduled to be completed next year. The dry dock work, along with all other SIOP activities, are closely tied to each shipyard's planning and execution of ongoing and future availabilities in order to balance the needs of the shipyards' ongoing work with the needs of the shipyard recapitalization work.

The DD 3 replacement project at PHNS remains on track to award in FY 2023. The Draft Environmental Impact Statement for DD 3 and the Waterfront Support Facility was released in February and is on schedule to issue a Record of Decision during the fall of this year. Both projects are critical to readiness of our Pacific Fleet.

Planning and early design work is underway for the Multi-Mission Drydock at PSNS to accommodate a Ford Class aircraft carrier mission need date in FY 2034, with a final configuration decision expected this year on the type and extent of the drydock work needed to support the Ford Class aircraft carriers.

Line of Effort 2: Recapitalization and Reconfiguration of Infrastructure for Optimization

Recapitalizing and reconfiguring infrastructure towards optimization relies on extensive master planning, informed by industrial modeling and simulation, for each shipyard to determine the optimum infrastructure configuration and process workflow necessary to sustain ongoing ship maintenance. The Navy has completed the first phase of modeling and simulation at all the

shipyards, and is on track to complete the first shipyard Area Development Plan (ADP) – or master plan – at PHNS in FY 2022. The second ADP was awarded for PSNS in March 2022 and is planned to complete by end of FY 2023. Integrating industrial modeling and simulation with infrastructure master planning is a first for the Navy in maximizing its investment in SIOP. The ADPs will include investment requirements to recapitalize shipyard infrastructure towards optimization, as well as a phasing plan to minimize the impact of SIOP implementation on critical shipyard operations.

Line of Effort 3: Modernization of Capital Equipment at Public Shipyards

The goal of the SIOP capital equipment program is to replace antiquated and outdated equipment to enable maintenance of critical components, improve efficiency, reduce costs, and to establish new industrial capabilities to achieve fleet readiness. This includes vital pieces of equipment to include industrial plant equipment, reactor-servicing equipment, and collateral equipment. The $679 million requested for capital equipment modernization across the FYDP in the President's FY 2023 budget request for SIOP will give our shipyards the equipment they need to fulfill their mission.

IMPROVEMENTS TO COST ESTIMATING

The Navy is continuing to improve confidence in SIOP costs and schedule targets, extrapolating data and methodology from ongoing projects to those in design and acquisition. Since inception of the program in 2018, the focus has been on providing dry dock capability and enabling industrial optimization analysis. The initial projects include PNSY DD improvements, planning and development of the PHNS DD 3 replacement and improvements in the NNSY DD 8 Saltwater System for CVN 78. To improve cost and schedule fidelity, we have incorporated industry best practices for mega projects including early third party cost estimate evaluation, improved cost and schedule management, early contractor involvement and industry engagement. As a result, the confidence factor is high for the costs of the PNSY DD project, and confidence in the cost of the PHNS DD project is increasing now that the design is 60 percent complete. Additionally, the first SIOP master plan at PHNS is mature and enabling a more comprehensive development of cost and schedule for future projects.

INTEGRATION WITH PLANNED AVAILABILITIES

Integral to SIOP's success is being able to start and complete projects on time. To that end, the program works closely with both the Fleet and NAVSEA, which operates the shipyards, to properly deconflict planned submarine and aircraft carrier availabilities and to keep all parties apprised of the status of on-going and planned SIOP work.

The Navy is working to better plan and execute maintenance - both to deliver submarines and aircraft carriers back to the fleet on time and to allow for SIOP to execute its critical mission on schedule. Efforts such as the Performance to Plan (P2P) that uses metrics and machine learning to better plan and execute maintenance availabilities and the NSS-SY that is focused on maximizing the productivity of the naval shipyard's engineering and production workforce are working in tandem to increase the Navy's on-time deliveries.

Taken independently, SIOP, NSS-SY, and P2P will each greatly improve the Navy's ability to plan and execute aircraft carrier and submarine maintenance. Together, these three initiatives represent a substantial improvement in how the Navy plans and executes nuclear-powered warship maintenance.

CONCLUSION

SIOP remains committed to accelerating its efforts to the greatest extent possible to provide the infrastructure and equipment our Navy needs, while ensuring it does not disrupt or interfere with the shipyards' mission to repair, maintain, and modernize the Navy's nuclear fleet. The program is aggressively and rapidly applying lessons learned and industry best practices where appropriate. SIOP understands that to succeed it must have continuous open communication with all stakeholders to properly plan and execute its work without impacting the shipyards' ability to execute their mission. Balancing SIOP's needs with that of the fleet and shipyards is, and will continue to be, an iterative process. We commit to working as a team to ensure the program is executed as expeditiously as possible without impacting fleet operations or ship maintenance.