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THE SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER

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BEFORE THE

SEAPOWER SUBCOMMITTEE OF THE

SENATE ARMED SERVICES COMMITTEE

ON

THE STATE OF CONVENTIONAL SURFACE SHIPBUILDING

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Introductions and Welcome

Chairman Scott, Ranking Member Kaine, and distinguished members of the Subcommittee, thank you for the opportunity to appear before you today to address the status of conventionally powered surface shipbuilding. Building and maintaining a world-class and globally deployable Navy and Marine Corps as a first line of defense for the United States is a continuous effort. We can only achieve our strategic goals of strengthening maritime dominance, executing a culture of warfighting excellence, and remaining the most lethal force in the world by building and maintaining resilient supply chains, engaging in flexible acquisition practices as current authorities allow, employing sound economic deterrence principles, and training and retaining a robust and knowledgeable workforce.

The presence of the Navy and Marine Corps team reassures international allies and partners, deters potential adversaries and responds to those who threaten the lives of our Sailors, Marines and civilian merchant mariners engaged in lawful operations and international commercial activities. A strong, resilient, and effective shipbuilding industrial base, composed of shipyards, depots, original equipment manufacturers (OEMs), suppliers, ship designers, and associated supply chains, is essential to accomplishing and sustaining operational readiness. Growing and modernizing vital production and repair facilities is a national security imperative. We, alongside our industry partners, must invest in our industrial base with a collective goal to accelerate the production, throughput, and sustainment of the ships and submarines we require. We, alongside our industry partners, must continue to hold ourselves accountable and we will.

The security of our country and preservation of our national interests remains reliant on a superior naval force, strategically postured to deter conflict and, if necessary, fight and win America's wars. Global events have continued to pressurize the need for rapid change and the Department of the Navy (DON) has taken note. We are aggressively seeking and implementing new and improved ways to operate, integrate, and sustain our forces and maintain a solid industrial base. The Navy and Marine Corps team must continue to provide unmatched operational capability to best support the geographic Combatant Commanders in countering constantly evolving geopolitical challenges and threats.

Ensuring timely delivery of ships that are capable and on-budget is critical to maintaining our national security and maritime dominance. The DON appreciates the support of Congress and this Committee for the Department's acquisition, sustainment, research, and development

programs that allow us to continue to build and operate a lethal, capable, integrated, and forward-postured Navy and Marine Corps.

State of Conventional Surface Shipbuilding

U.S. shipbuilders continue to produce the highest quality, safest, and most advanced warships on the globe. At a time when outstanding performance against adversaries is needed in contested maritime commons from the Red Sea to the Western Pacific, the U.S. Navy continues to provide unmatched capability. However, the U.S. shipbuilding industry is challenged to produce the quantity of ships at the rate required to effect lasting, sustainable growth in the battle force inventory and the Navy is challenged in providing reliable direction as the underpinning for their success. On balance, cost and schedule performance remain challenged; deliveries are approximately one to three years late and costs continue to rise faster than overall inflation. These challenges are prevalent across the nuclear and conventional shipbuilding communities with both Navy and Industry sharing responsibility. Identified challenges include atrophy of our manufacturing industrial base, pre-COVID contracts, workforce shortages related to macroeconomic and demographic trends, diminished workforce proficiency, supply chain disruptions, iterative technical requirement updates, design immaturity, and inconsistent industry investment across the shipbuilding industrial base.

Similar pressures affect the Tier 2 and 3 shipyards, providing opportunity for the Navy to more consistently level load workload where additional capacity remains. The Navy must continue to provide reliable demand signal to the industrial base to broaden interest, strengthen commitment, and encourage investment at all levels.

The U.S. share of global shipbuilding – commercial and military – and the number of naval vessels delivered per year are not meeting the desired targets. The current industrial base is optimized for the efficient, peacetime production of ships and munitions. Historic underinvestment and industry consolidation following the end of the Cold War have reduced competition and capacity at the Tier 1 shipyards and their suppliers, leading to workforce-constrained build schedules that do not meet Navy targets. The remaining prime shipbuilders and subcontractors face shortages of available skilled workers in both the trades (welders, pipefitters, electricians, etc.) and design/engineering workforce leading to schedule disruptions, delayed delivery of critical components, and associated cost and schedule challenges.

In addition, the current relative wage rate for shipbuilders is behind historical averages. In the 1980s, approximately 38% of the workforce was engaged in manufacturing activity. Today, that number is closer to 12%. It is also true that, historically, manufacturing sector workers earned approximately 3-4 times the minimum wage, irrespective of geography. Today, shipyard workers' wages are only marginally above inflation-adjusted living wages, which leads to significant competition with local service sectors and adjacent labor pools. The Navy encourages the shipyards to make continued and increased investment in their workforce, alongside efforts to improve quality of service for their shipbuilders, which is critical to increasing hiring, reducing attrition, and developing the workforce. The Navy has recently funded initiatives aimed at improving transportation and parking options, addressing housing and childcare shortages, and providing retention bonuses to address these challenges at some of our major prime shipbuilders. The Navy acknowledges that additional opportunities remain and is working with the Administration to identify and support them.

The Navy faces its own challenges as well. Burdensome acquisition processes and contracts that were established prior to the COVID-19 pandemic also contribute to the current situation. We are committed to improving our acquisition, oversight, and cost estimation and budgeting processes, holding ourselves accountable, implementing innovative contracting strategies, and continuing to develop the acquisition workforce.

Path Forward

With the help of Congress, the U.S. Navy is a key participant in a whole-of-government effort to enhance the national shipbuilding industry. In addition to investments in the nuclear shipbuilding industrial base and surface combatant industrial base, the Navy is in the middle of a generational increase in demand for shipbuilding.

With 92 ships on contract and 56 hulls under construction, the Navy assesses industry has sufficient backlog to continue materiel investments and labor force hiring, retention, and improvement initiatives. The Navy is assisting with capital expenditure projects at each of the Tier 1 shipyards, workforce development initiatives, and investing in growing the labor pool for critical trades. The Navy is also pursuing strategic outsourcing efforts to smartly shift some workload to smaller shipyards and key suppliers to enable long-term sustainable growth in capacity at the prime shipbuilders delivering our battle force ships, including the innovative

partnership with private equity and industry to create the United Submarine Alliance Fund and the subsequent purchase of the Alabama Shipyard.

The Navy is working to improve the cost realism between cost estimates, budgeting, and contracting for shipbuilding programs. Cost estimates must continue to adapt to the changing workforce and supply chain.

In September 2024, the Navy established the Maritime Industrial Base (MIB) Program Office to lead enterprise efforts to restore America's shipbuilding capacity and to ensure the Navy can build and sustain the fleet required to support the National Defense Strategy. This strategic reorganization integrates the Submarine Industrial Base and Surface Combatant Industrial Base programs into a cohesive entity focused on the overall health of the maritime enterprise. The transition to the MIB Program represents a comprehensive approach to revitalizing America's shipbuilding and ship sustainment ecosystems, enabling the Navy to holistically address challenges and opportunities, respond to a comprehensive Navy demand signal, while also opening the aperture on efforts and investments to meet future defense demands more efficiently.

The U.S. maritime industrial base is the critical enabler of the Navy's ability to deliver and maintain combat capability necessary to execute its missions around the world. The industrial base consists of public and private naval shipyards, private industry partners, highly skilled workforces, OEMs, complex supply chains, and organic resources. Since 2018, approximately $9 billion has been appropriated for submarine industrial base efforts. Congress has also appropriated $1.2 billion for the large surface combatant and frigate industrial base. The Navy's strategy to improve the health of our maritime industrial base is focused on six key lines of effort: growing capability and capacity in the supply chain, modernizing shipbuilder infrastructure, expanding capacity of key suppliers to take on work traditionally executed by shipbuilders, developing the critical maritime manufacturing workforce, operationalizing advanced manufacturing technology, and increasing government oversight.

The Navy has implemented a data-driven and data-informed process to ensure our investments and initiatives are targeting the primary needle-movers and enablers of shipbuilding and ship sustainment schedules. As part of this process, we assess and track impacts of Navy investment at multiple levels. At the individual project level, the Navy implements discrete, measurable return on investment metrics for each project with a mandated feedback loop to

measure progress. At the aggregate level, we assess multiple individual projects with shared objectives; and at the portfolio level, we assess projects and aggregate-level impacts relative to production schedule drivers. The Navy's data-based assessment and decision-making process for industrial base investment enables a standard approach to assessing impact and identifying challenges and opportunities, improving coordination, and integrating perspectives among a range of stakeholders. Collectively, these efforts support flexible decision making to meet a dynamic supply chain environment.

The Navy is seeing early indications that investments appropriated to date are helping to stabilize targeted sectors of the industrial base that provide critical materials for in-service ships as well as new construction programs. Since Fiscal Year 2018 (FY 2018), we have launched more than 725 supplier development projects with more than 300 suppliers across 33 states to add capability, capacity, and resiliency to the supply chain, including developing alternate suppliers for critical components. The Navy has invested more than $1 billion since FY 2018 to improve the performance of companies that supply sequence-critical material for new construction programs – material that must be delivered on time to maintain production schedules. The Navy's six regional Talent Pipeline Programs have placed more than 6,400 trades workers in the maritime sector and, through our partnership with the Southeastern New England Defense Industry Alliance, more than 6,750 workers have been trained and placed in the shipbuilding industrial base.

The Accelerated Training in Defense Manufacturing rapid trades training program in Danville, VA has trained more than 775 students in key maritime trades, and in January 2025, opened the National Training Center which will scale the program to 1,000 graduates per year by 2025. The Additive Manufacturing Center of Excellence (AM CoE) in Danville, VA made significant progress in maturing and operationalizing additive manufacturing, printing more than 270 parts and leading efforts to scale AM by producing production-ready Technical Data Packages, responding to emergent material needs, centralizing non-recurring engineering, and qualifying AM suppliers to enable parts production at scale. The AM CoE is already helping get our ships back to sea, with more than 15 examples where the AM CoE has printed parts for ships and submarines in response to emergent needs, saving over 900 days of delay relative to traditional procurement paths.

Recent Accomplishments

Flight III DDG 51s will provide enhanced Integrated Air and Missile Defense (IAMD) with the AN/SPY-6(V)1 (SPY-6) radar and Aegis Baseline 10 (BL10) combat system. These combat system enhancements meet the growing ballistic missile threat by improving radar sensitivity and enabling longer range detection of more numerous and increasingly complex threats. The Flight III program demonstrated design maturity through its successful completion of phase 1 developmental testing and the SPY-6 radar program is in serial production to support delivery for Flight III and DDG Modernization 2.0 ships. August 2024 marked the successful completion of initial shipboard Developmental Testing on the first DDG 51 Flight III ship, USS Jack H Lucas (DDG 125), which delivered in June 2023.

The Navy is extending a number of Arleigh Burke class (DDG 51) Destroyers beyond their 35-year Expected Service Life, which will provide additional years of ship service life through the mid-2030s. Over the last 15 years the Navy has made significant investments in DDG 51 Class Maintenance and Modernization, allowing them to continue providing credible capacity to the Fleet thanks to combat system upgrades and compliance with lifecycle maintenance plans.

The Zumwalt Class (DDG 1000) guided missile destroyers are multi-mission surface combatants designed to provide long-range, offensive surface strike capabilities. The DON is developing a hypersonic weapon system that will enable precise and timely strike capability against deep inland targets in contested environments. In collaboration with the Army, the Department is leveraging a common All Up Round missile design and test opportunities to field a conventional hypersonic weapon system. Zumwalt Class DDGs will be the first Navy platform to field hypersonic capability in the late-2020s, followed by Block V Virginia Class SSNs starting in the early 2030s. The development and demonstration of hypersonic strike weapon systems supports the U.S. ability to deter, and if necessary, defeat potential adversaries.

The DDG 1000 program continues to accomplish first-time integration of unique combat systems elements, complete Post Delivery Test and Trials, demonstrate operational performance and start the installation of the first Conventional Prompt Strike (CPS) hypersonic weapon system on a maritime platform.

The Constellation Class Frigate (FFG 62) is an essential program in pursuit of a larger and more lethal Joint Force in response to the urgent China threat. The FFG 62 acquisition strategy is informed by previous shipbuilding programs and takes advantage of proven systems

that increase commonality across platforms and decreases developmental risk, including the three-phased-array SPY-6(V)3 radar, Vertical Launch System (VLS) missile launchers, and Aegis combat system software. The first six ships are under contract with the future-USS Constellation under construction. The Navy acknowledges significant schedule delays for the lead ship due to a number of factors. The Navy and shipbuilder continue to surge resources in this area to complete design reviews and ensure achievement of required capability.

After overcoming significant challenges in design and production, the LCS Class continues to mature, and the Navy continues to invest in making the ships more lethal and survivable to elevate their value in the future fight. The Navy will continue to invest in systems like the Naval Strike Missile (NSM) and Lethality and Survivability (L&S) upgrades. L&S upgrades address system obsolescence, enhance cyber security protection to LCS computing environments, provide weapons system performance enhancements, and add survivability systems.

The Navy reached a significant milestone in modernizing mine countermeasure (MCM) capability, as the MCM Mission Package (MP) declared IOC in March 2023. The Navy has since embarked three LCS MCM MPs onto Independence Variant LCSs, starting in April 2024. The MCM MP is slated to begin deployments in FY 2025, and MCM MPs remain on track to fully replace the aging Avenger-Class MCM and MH-53E Airborne MCM (AMCM) fleet by the end of FY 2027.

Our Navy and Marine Corps integrate resources across disparate domains and elements of national power to deter adversaries and campaign forward. Procuring our amphibious ships affordably and efficiently is essential. On September 24, 2024, the Navy awarded an amphibious Multi-Ship Procurement (MSP) contract for three San Antonio Class (LPD 17) and one America Class (LHA). The amphibious ship MSP demonstrates the Navy's commitment to maintaining 31 amphibious warfare ships and prudence with taxpayer funds. This multi-billion-dollar award reflects Navy's commitment to build and sustain our maritime dominance and allows for critical investment and sustainment of our shipbuilding industrial base, helping to ensure stability and jobs for the next decade.

In addition to large, manned battle force ships, the Navy continues to identify and pursue opportunities for manned-unmanned teaming to increase overall lethality of the joint force. The DON continues to invest and mature the enabling and core technologies needed to deliver

unmanned surface and undersea capabilities. These capabilities along with the platforms to support them are foundational to creating the hybrid fleet of the future. Manned-unmanned teaming will increase capacity, standoff, reach, and enable maneuver and Distributed Maritime Operations while reducing risk to our sailors and marines. Unmanned Surface Vehicles (USV) will expand information operations and missile magazine depth. The Navy continues to work with our industry partners on maturing reliable Hull, Mechanical and Electrical capability; advancing the required networks and radios; developing a common core USV Combat System and vessel control software; improving sensory perception and autonomy; and prototyping platform and USV payloads. In FY 2024, the Navy successfully completed six 720-hour propulsion configuration tests in accordance with the 2021 NDAA language. These successful tests will allow certification of multiple propulsion configurations for use on future USVs. Our fleet of five USV prototypes provide valuable fleet training opportunities as we continue to develop Tactics, Techniques, and Procedures. These prototypes are helping us to mature technology in support of future USV procurement.

Conclusion

Maintaining and enhancing the conventional surface shipbuilding industry is critical to sustaining the operational readiness and strategic posture of the Navy and Marine Corps. The challenges faced by the shipbuilding industry require a collective and sustained effort from the Department of the Navy and our industry partners to continue holding ourselves accountable to the warfighter and the taxpayer. By investing in the industrial base, modernizing facilities, developing a skilled workforce, and holding ourselves accountable we can ensure that the Navy and Marine Corps team remains capable and prepared to meet evolving geopolitical challenges and threats. The Department of the Navy is committed to improving acquisition processes, employing innovative contracting strategies, and continuing to support the shipbuilding industry to accelerate production and maintain a resilient supply chain.

The Navy is a key participant in the whole-of-government effort to enhance the national shipbuilding industry. Combined with generational investments in the maritime industrial base, we are collaborating with Congress, industry, academia and training organizations, trade associations, and all levels of government in pursuit of improved cost and schedule performance. Together, we can build and sustain a lethal, capable, and forward-postured Navy and Marine Corps that will continue to safeguard our national security and maritime dominance. Our nation

and the world need the strength of our Navy, and our intent is to do everything in our power to deliver on that promise.