NOT FOR PUBLICATION UNTIL RELEASED BY
THE SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

JOINT STATEMENT OF

REAR ADMIRAL CASEY J. MOTON
PROGRAM EXECUTIVE OFFICER, AIRCRAFT CARRIERS

AND

REAR ADMIRAL JONATHAN E. RUCKER
PROGRAM EXECUTIVE OFFICER, ATTACK SUBMARINES

AND

REAR ADMIRAL TODD S. WEEKS
PROGRAM EXECUTIVE OFFICER, STRATEGIC SUBMARINES

AND

MR. MATTHEW D. SERMON
DIRECT REPORTING PROGRAM MANAGER, MARITIME INDUSTRIAL BASE

BEFORE THE

SEAPOWER SUBCOMMITTEE OF THE

SENATE ARMED SERVICES COMMITTEE

ON

THE STATE OF NUCLEAR SHIPBUILDING

APRIL 8, 2025

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Introduction

Chairman Scott, Ranking Member Kaine, and distinguished members of the Subcommittee: thank you for the opportunity to appear before you today to provide an update on the Navy's nuclear shipbuilding programs—programs that are foundational to America's military strength, global leadership, and national security.

This year marks the 250th anniversary of the United States Navy—a moment to reflect on two and a half centuries of unwavering commitment to defending American interests at sea. Since Congress authorized the Navy's first six frigates in 1794, the United States has built and sustained the most powerful and capable naval force the world has ever known. That success was not inevitable—it was earned through foresight, sustained investment, and an enduring partnership between industry, Congress and the Navy.

Today, that legacy is under pressure. Our adversaries are investing heavily to challenge our maritime dominance and assert themselves as the world's preeminent naval power. They are building fleets, expanding shipyards, modernizing capabilities, and positioning forces to undermine the international order and threaten regional stability. We cannot afford to cede the advantage we have built. Maintaining our position as the world's foremost maritime power requires bold action, clear resolve, and continued National support.

A superior naval force has long been a pillar of American deterrence and global influence. At the core of that force is our nuclear powered fleet—a critical asset that ensures global presence, credible deterrence, and sustained combat power. Ballistic missile submarines provide the most survivable leg of the Nation's nuclear triad. Attack submarines deliver unmatched lethality and stealth in undersea environments. Nuclear-powered aircraft carriers and their strike groups enable rapid, sustained operations across the globe—reassuring allies, deterring adversaries, and responding decisively in times of crisis.

But this fleet's effectiveness depends on the strength of the industrial base behind it. America's shipyards, suppliers, engineers, and tradespeople are the engine of maritime readiness—and they must be modern, resilient, and resourced to meet both today's operational demands and tomorrow's challenges. Together with our industry partners, we must focus on growing capacity, driving innovation, accelerating deliveries, and modernizing production and sustainment to ensure we stay ahead of those who seek to surpass us. We are executing a generational shipbuilding increase as we ramp to the one Columbia Class and two Virginia Class

serial production per year, often referred to as "1+2". Subsequent to this, we will further ramp to 1+2.33 to support delivery of a conventionally-armed, nuclear powered attack submarine capability to Australia under Pillar 1 Optimal Pathway of the tri-lateral AUKUS Security Pact.

As the current security environment becomes more complex, the U.S. Navy is aggressively implementing new, agile ways of operating, integrating, and maintaining our forces. We are harnessing innovation, strengthening partnerships, and investing in the people and infrastructure that make our maritime dominance possible. The future of American sea power depends on the decisions we make now.

State of Maritime Industrial Base

The U.S. maritime industrial base is a 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 shipyards, private industry partners, highly skilled workforces, original equipment manufacturers, complex supply chains, and organic resources. While U.S. shipbuilders continue to produce the highest quality, safest, and most advanced warships in the world, our maritime industrial base faces significant challenges and, as a result, cost and schedule performance remain poor. These challenges are common across nuclear and conventional shipbuilding with both Navy and industry sharing responsibility. Identified challenges in nuclear shipbuilding include atrophy of our manufacturing industrial base, workforce shortages related to macroeconomic and demographic trends, diminished workforce and supervisor proficiency, supply chain disruptions, slow adaptation of advanced manufacturing technology, and limited overall investment across the industrial base.

Historic underinvestment and industry consolidation following the end of the Cold War have led to inadequate capacity at our nuclear shipbuilders and in their supply chains, leading to workforce-constrained build schedules that do not meet the needs of the Navy and the Nation today. 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. The Navy faces its own challenges, as well, with burdensome acquisition processes and overly cumbersome technical and logistics requirement and processes, along with historically inconsistent demand signals – factors that discourage

innovation and participation from non-traditional industry partners.

Columbia Class Submarine Program Overview

The Columbia Class Ballistic Missile Submarine (SSBN) is the Navy's top acquisition priority and is a critical once-in-a-generation nuclear recapitalization effort for the Navy and the Nation's nuclear triad. The current Ohio Class SSBN force is reaching the end of its operational life and must be replaced to meet U.S. Strategic Command (USSTRATCOM) strategic deterrence requirements.

The first Columbia Class submarine, the future USS District of Columbia, must be ready for patrol by FY 2031 to meet USSTRATCOM requirements. The Columbia Class is the largest, most powerful, and most advanced submarine this nation has ever designed or built - approximately 2.5 times the size of a current Virginia Class submarine, and 10 percent larger than the existing Ohio Class submarines. It is designed for a longer service life, better operational availability, and better survivability than the Ohio Class – designed to be effective and relevant through at least the 2080s. Columbia, with the TRIDENT D5 Life Extension 2 (D5LE2) missile, will ensure the effectiveness and availability of the Nation's sea based strategic deterrent through the rest of this century.

The lead ship of the class started full construction in FY 2021 and is more than 50 percent complete. This ship is the first SSBN built in 30 years, and the first lead ship of an SSBN class built in almost 50 years. Based on shipbuilder performance, supply chain challenges, and the complexity of first-of-class construction and testing of this new submarine, delivery is projected to be 12-18 months late to contract delivery date. The Navy is working with both General Dynamics Electric Boat (GDEB) and Huntington Ingalls Newport News Shipbuilding (HII-NNS) to implement an aggressive, alternative build strategy to recover up to 12 months of schedule, improve overall performance, and deliver the lead ship as rapidly as possible.

The second ship of the class, the future USS Wisconsin, commenced full construction in October 2023. Relative to the lead ship, performance is improving through learning, updated build plans, and increased proficiency. This ship is on schedule to deliver within contractual schedules.

Through the Polaris Sales Agreement, the Navy is supporting the United Kingdom's

four-ship Dreadnought Class SSBN, a generational recapitalization of the UK's Continuous At-Sea Deterrent. With the Common Missile Compartment, the shipbuilders provide missile tubes and associated components for both Columbia and Dreadnought.

Continued adequate and on-time funding for advance procurement, advance construction, and continuous production for the class, as reflected in our budget requests, is critical to improved supply chain performance, reducing construction schedule risk, enabling cost savings, and meeting USSTRATCOM requirements throughout the Ohio to Columbia transition. The Navy appreciates Congress's continued support of the Columbia Class as a national priority.

Virginia Class Submarine Program Overview

Virginia Class fast attack submarines (SSN) provide critical multi-mission undersea warfighting capabilities. As of February 2025, the Navy has taken delivery of 24 Virginia Class submarines with 14 additional under contract. USS New Jersey (SSN 796) delivered in April 2024 and USS Iowa (SSN 797) delivered in December 2024. The Navy and industry team is tracking to deliver two more submarines in 2025, the future USS Massachusetts (SSN 798) and the future USS Idaho (SSN 799). The second ship of the Block V contract (future USS Arizona (SSN 803)) will introduce the Virginia Payload Module, which incorporates four additional large diameter payload tubes to help mitigate the loss of undersea strike capability with the retirement of Ohio Class guided missile submarines (SSGN). All Block V ships will incorporate acoustic superiority improvements.

Beginning in 2011, the Virginia Class program began a ramp to achieve a production rate of two SSNs per year in support of Navy force structure requirements. Construction performance achieved a build rate close to 1.9 per year for approximately 3 years, but post-COVID performance has dropped to a production rate of 1.13 at the end of CY 2024. Key drivers of the drop in production include workforce challenges, first time quality, material and supplier delays, and lead ship issues associated with the Virginia Payload Module variant. The Navy is working closely with the shipbuilders to drive improvement throughout the Virginia enterprise.

The Navy appreciates the support of Congress in providing an additional $5.7 billion of FY 2025 supplemental funding to fully fund cost increases in the two FY 2024 boats and the single FY 2025 boat, as well as providing wage increases and funding shipyard productivity enhancements across the nuclear shipbuilding portfolio. These investments are critical to address

issues associated with workforce development and retention along with recapitalization of shipyard industrial facilities and equipment.

State of Submarine Construction & Path Forward

In February 2023, the submarine Program Executive Officers (PEOs) and shipbuilders (GDEB and HII-NNS) established a production execution plan to ramp to serial production of 1+2 by the end of CY2028 "),which would then serve as the foundation to ramp to 1+2.33 in the early 2030s to support AUKUS.

With the Navy's additional investments to strengthen the submarine industrial base as well as ongoing Navy and industry actions, we've seen performance improvements in the following areas: hiring at shipbuilders increased by 41% in 2023 and exceeded hiring targets in 2024; capacity of vendors in key market spaces has increased, shoring up single source suppliers and developing new suppliers to ensure material is available; and strategic outsourcing and manufacturing technology are on track to support increased production and material availability.

Despite these improvements, we have not observed the needed and expected ramp-up in Columbia Class and Virginia Class submarine production rates necessary to keep pace with the 1+2 strategy. The Navy, submarine shipbuilders, and supply chain enterprise underestimated the effort required to transition from the peace-dividend era, low-rate submarine production and sustainment to the increased 1+2 production needed for an era of near-peer competition. While both submarine programs have experienced delays, there are unique challenges in each program that we are aggressively working to correct.

To help address this, both Columbia Class and Virginia Class Submarine Programs, in coordination with Supervisor of Shipbuilding, GDEB, and HII-NNS, have instituted intrusive program office deck plate presence to help inform and drive improvement. In addition, the Navy and the shipbuilders conducted in-depth reviews into the underlying drivers of performance issues to execute lines of effort to drive increased production and inform new production rate projections. Looking ahead, increased improvement efforts will continue, and – coupled with ongoing investments – are expected to produce improvements in CY2025 with additional gains projected across the FYDP.

Ford Class Aircraft Carrier Program

Ford Class aircraft carriers (CVN) are the next generation of aircraft carriers designed to improve survivability, increase lethality, and significantly drive down total ownership cost over their expected 50-year service life. The replacement of legacy systems and multiple improved design features are meant to reduce maintenance and manning needs and allow service for decades with reduced periods of downtime. Despite enduring their own higher first-in-class and subsequent platform cost and schedule challenges, Ford Class carriers are beginning to make an impact on the Fleet.

The USS Gerald R Ford (CVN 78) completed a highly successful deployment in January 2024 in support of Combatant Commander objectives, including the initial response to the Hamas attack on Israel, with critical new systems performing well. CVN 78 spent 239 days underway, sailed over 83,476 nautical miles, and worked with 17 nations throughout its deployment during critical strategic exercises. Her crew and embarked air wing logged over 17,826 flight hours and 10,396 sorties, conducted 33,444 flight deck moves, 3,124 hangar bay aircraft moves, 2,883 aircraft elevator moves, 16,351 aircraft fueling evolutions, and transferred 8,850 pallets of cargo and mail. CVN 78 is currently completing workups for her next deployment, upcoming shortly.

John F Kennedy (CVN 79) is nearly 95 percent construction complete and has a contract delivery date of July 2025, however, we assess significant pressure to that date. The pressure meet the contractual delivery date is driven by critical path challenges, primarily in the Advanced Weapons Elevators and Aircraft Launch and Recovery Equipment. Initial class design challenges are resolved, as evidenced by Ford's successful operations, however, early class production-focused challenges and associated learning continue on CVN 79. All lessons learned and improvements by both the Navy and industry teams are being implemented in-construction on CVN 80 and 81. The Navy and shipbuilder HII-NNS are hyper-focused on a CVN 79 delivery plan that results in the fastest path to a combat ready CVN, crew, and air wing.

Enterprise (CVN 80) construction is 44 percent complete, and Doris Miller (CVN 81) 20 percent complete, with Doris Miller's material procurements pacing significantly ahead of previous Ford Class carriers thanks to the two-ship buy. CVN 80 continues to experience schedule challenges driven by late sequence critical material that will significantly delay delivery past the contractual date. The Navy continues to work with our shipbuilding partners and critical path vendors to identify levers for schedule risk reductions. CVN 81 risk is also reduced by

earlier material procurement and the completion of the shipbuilder's new construction dry dock for simultaneous CVN construction.

Despite the construction challenges on CVN 80, the Navy remains committed to reducing and controlling the cost of Ford Class aircraft carriers and continues to benefit from the $4 billion acquisition savings achieved through the two-ship block buy contract award for CVN 80 and CVN 81. Cost growth to date has not eroded the two-ship savings assessment. Additionally, the aircraft carrier industrial base has significant overlap with the submarine industrial base, both at the shipyard and at major suppliers. The Navy's investments in the submarine and maritime industrial bases have in many cases benefited aircraft carrier programs by improving performance, efficiency, and capacity at critical suppliers, which will help to realize the designed Ford Class life cycle cost savings of $5 billion per ship when compared to Nimitz class carriers.

Maritime Industrial Base Program

With the help of Congress, the U.S. Navy is addressing these challenges through a whole-of-government and whole-of-nation effort to develop and nurture the shipbuilding industry with significant investment in the industrial base that is required to meet a generational increase in demand for shipbuilding. Since 2018, over $10 billion has been appropriated for SIB efforts. The Navy's strategy to improve the health of our MIB 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 improving government oversight.

In September 2024, the Navy established the MIB Program Office to lead enterprise efforts to help 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 (SIB) 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 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 new construction programs and in-service ships. Since 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 over the past few years to improve the on-time delivery of components that are build sequence-critical for nuclear shipbuilding programs – material that must be delivered on time to maintain production schedules. The Navy is also executing strategic outsourcing efforts to smartly shift some workload to other shipbuilders and key suppliers to enable long-term sustainable growth in capacity to deliver the submarines that we must have. This includes the innovative partnership with private capital and industry to create the United Submarine Alliance Fund and the subsequent purchase of prime shipbuilding industry land in Mobile, Alabama.

The Navy's six regional Talent Pipeline Programs have placed more than 6,700 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, Virginia has trained more than 875 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 the end of 2025.

The Navy is working with shipbuilders, suppliers, and a consortium of non-traditional companies and academic partners to move shipbuilding into the era of advanced manufacturing and automation, leveraging commercially proven technologies like additive manufacturing (AM) and robotics at scale across the industrial base while working to integrate next generation capabilities like artificial intelligence to improve efficiency and productivity. The Navy's Additive Manufacturing Center of Excellence (AM CoE) in Danville made significant progress in maturing and operationalizing additive manufacturing, printing more than 350 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, where the AM CoE has printed numerous parts for ships and submarines in response to emergent needs, saving over 900 days of delay to date relative to traditional procurement paths. The CoE is on path to print an additional 50 parts in 2025. The combined efforts of the Navy's MIB Program are focused on improving elements that impact nuclear shipbuilding schedules.

Conclusion

As we commemorate the 250th anniversary of the U.S. Navy this year, we reflect on a legacy built on strength, sacrifice, and an enduring commitment to protect our Nation's interests at sea. That legacy endures today through the unmatched strategic power of our nuclear fleet.

Ballistic missile submarines form the bedrock of our nation's strategic deterrent, providing an enduring and survivable capability that ensures any adversary must think twice before threatening the United States or its allies. Fast attack submarines deliver asymmetric advantage—capable of operating undetected across the world's oceans to gather intelligence, hunt enemy submarines, and deliver precision strike. Nuclear-powered aircraft carriers serve as unmatched instruments of national power, enabling sustained air operations, supporting joint force integration, and reassuring allies through persistent presence in areas of strategic importance.

Together, these platforms form the backbone of the Navy's ability to deter aggression, defend the homeland, and uphold the international rules-based order. But their strength depends on the health and resilience of the industrial base that builds and sustains them. Maintaining and

enhancing this base is not just a strategic necessity, it is a generational obligation.

The Department of the Navy remains committed to working alongside Congress, industry, and our partners to accelerate production, strengthen our supply chains, and develop the skilled workforce we need to, deliver these vital assets on time and on budget. We owe it to our warfighters, our allies, and the American people.

As we look to the future, our responsibility is clear: to ensure the U.S. Navy remains the world's premier maritime force—ready, resilient, and capable—for the next 250 years and beyond.

Thank you for your continued support.