NAVSEA SIOP Office Leading $21 billion Naval Shipyard Modernization

WASHINGTON – A new Navy program office will centrally coordinate a plan to recapitalize its four public shipyards, the Naval Sea Systems Command Office of Corporate Communication said in an April 3 release.

The Naval Sea Systems Command (NAVSEA) Shipyard Infrastructure Optimization Plan (SIOP) Program Office, PMS-555, established in June 2018, is working in concert with Commander, Navy Installations Command (CNIC), and Naval Facilities Engineering Command (NAVFAC) to recapitalize and modernize the infrastructure at the four public nuclear shipyards to include critical dry dock repairs, restoring needed shipyard facilities and optimizing their placement, and replacing aging and deteriorating capital equipment.

Executing this plan will improve the naval shipyards' productivity and increase their maintenance throughput to support the combat readiness of the Navy.

Without major upgrades and reconfigurations, the shipyards would not be able to meet the fleet's future aircraft carrier and submarine depot maintenance and inactivation requirements looking out through 2040.

"The Navy relies on NAVSEA to deliver combat-ready ships and submarines out of planned maintenance availabilities on time," said NAVSEA Cmdr. Vice Adm. Tom Moore. "Modernizing our four naval shipyards – a massive task under any circumstance – is critical because it's the only way we will be able to meet our future mission requirements."

"This is a comprehensive plan, developed in partnership with

NAVFAC and CNIC, that will allow the Navy to bring its organic shipyards into the 21st century to fully support the Navy the nation needs," Moore added.

The Navy's four public shipyards – Norfolk Naval Shipyard, Portsmouth, Virginia; Portsmouth Naval Shipyard, Kittery, Maine; Puget Sound Naval Shipyard and Intermediate Maintenance Facility, Bremerton, Washington; and Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility, Pearl Harbor, Hawaii – were originally designed and built in the 19th and 20th centuries to support construction of sail- and conventionally-powered ships using industrial models of the time. As a result, they are not configured to maintain and modernize nuclear-powered aircraft carriers and submarines.

Developing, programming and executing the plan falls to the PMS-555 program office, which is staffed by industrial engineers, process improvement specialists, facilities engineers, regulatory compliance specialists, strategic and financial analysts, Civil Engineer Corps officers, construction managers and construction schedulers from NAVSEA, CNIC and NAVFAC.

"The Shipyard Infrastructure Optimization Plan articulated a vision that shipyard infrastructure has three interdependent components: the dry docks, the facilities and the capital equipment; and that these configurations are fundamentally linked to the shipyards' ability to execute the mission they are tasked to do," said Steven Lagana, PMS-555 program manager.

"We are utilizing modeling and simulation as a tool to integrate these components to better inform the desired infrastructure layout. Through this, the Navy will be in a better position to make meaningful, long-lasting investments that not only address the condition of the facilities and equipment but also change the way the work is conducted. Once we're finished, the Navy will recover more than 300,000 work

days per year, every year.”

The first milestone PMS-555 is scheduled to achieve is the development of a “digital twin” of the naval shipyards. This will be a virtual representation of the shipyards that will be used to conduct modeling and simulations of the shipyard environment to aid in evaluations and decisions for the future shipyard infrastructure. The program office is also developing comprehensive strategies to address historic preservation and environmental compliance during this recapitalization effort.

The program office is hosting its first industry day April 8 at the Washington Navy Yard.

“We’re sold out,” Lagana said. “We have more than 100 companies from 19 states and the District of Columbia who are coming to hear about the program and see how they can be part of this once-in-a-century team that will deliver the shipyards the Navy needs.”

HII Completes Acceptance Trials for National Security Cutter Midgett

PASCAGOULA, Miss. – National Security Cutter (NSC) Midgett (WMSL-757) has finished its acceptance trials, Huntington Ingalls Industries’ (HII) shipbuilding division announced. Midgett, the eighth NSC Ingalls has built for the U.S. Coast Guard, spent two days in the Gulf of Mexico proving the ship’s systems.

“The success of these trials is a direct result of the hard work and expertise of our shipbuilders, the INSURV team and our U.S. Coast Guard customer,” said George S. Jones, Ingalls’ vice president of operations.

The U.S. Navy’s Board of Inspection and Survey (INSURV) were on board, as Ingalls’ test and trials team led the sea trials and conducted extensive testing of the propulsion, electrical, damage control, anchor-handling, small boat operations and combat systems. The team finished the trials with a completed full-power propulsion run on Midgett.

“With the success of these trials, NSC 8 is one step closer to becoming another highly capable, vital asset to the men and women of our Coast Guard,” said Derek Murphy, Ingalls’ Coast Guard program manager. “Our dedicated NSC team has proven themselves once again, and we could not be more proud of what they have accomplished.”

Ingalls has delivered seven Legend-class NSCs and has two more under construction, including Midgett, set to be delivered before the end of 2019. Stone (WMSL-758) is scheduled for delivery in 2020. In December of 2018, Ingalls received two fixed-price incentive contracts with a combined value of $931 million to build NSCs 10 and 11.

NSC 8 is named to honor the hundreds of members of the Midgett family who have served in the U.S. Coast Guard and its predecessor services. At least 10 members of the Midgett family earned high honors from the Coast Guard for their heroic lifesaving deeds. Seven Midgett family members were awarded the Gold Lifesaving Medal, the Coast Guard’s highest award for saving a life, and three were awarded the Silver Lifesaving Medal.

State Department OKs Possible Sale of MH-60R Helicopters to India

WASHINGTON – The State Department has approved a possible sale to India of 24 MH-60R Seahawk helicopters for an estimated cost of $2.6 billion, the Defense Security Cooperation Agency (DSCA) said in an April 2 release, the day the DSCA delivered the required certification notifying Congress.

India requested the MH-60R helicopters along with mission equipment, crew-served weapons and spare systems. The request includes 1,000 sonobuoys, 10 Hellfire missiles, four Hellfire training missiles, 30 Mk54 torpedoes and four Naval Strike Missile inert training missiles.

Support also would include spare engine containers; facilities study, design and construction; spare and repair parts; support and test equipment; communication equipment; ferry support; publications and technical documentation; personnel training and training equipment; U.S. Government and contractor engineering, technical and logistics support services; and other related elements of logistical and program support. The total estimated cost is $2.6 billion.

The proposed sale will provide India the capability to perform anti-surface and anti-submarine warfare missions along with the ability to perform secondary missions including vertical replenishment, search and rescue, and communications relay. India will use the enhanced capability as a deterrent to regional threats and to strengthen its homeland defense. India will have no difficulty absorbing these helicopters into its armed forces.

The principal contractor will be Lockheed Martin Rotary and

Mission Systems of Owego, New York.

Leonardo Submits TH-119 for Navy Training Helicopter Competition

PHILADELPHIA – Leonardo submitted to the U.S. Navy its proposal to manufacture and support up to 130 training helicopters, the company said in an April 2 release.

Manufactured in Philadelphia and featuring a Pratt & Whitney PT-6 engine, the TH-119 boasts the highest power margins in its class. Its Genesys Aerosystems' avionics equip pilots to fly safely during low visibility and challenging weather while providing a foundation for transitioning to combat helicopters.

The "hot" pressure refueling in the TH-119 allows fuel tanks to be filled without shutting the engine down, leading to quicker turnaround and more time spent flying. A durable metal box-beam airframe stands up to the daily grind of training and enables repairs to be conducted on-site, unlike the repairs on most composite aircraft, which require lengthier off-site attention.

The TH-119 has completed its flight tests and meets all FAA requirements and safety standards for IFR certification. Based on the successful AW119 helicopter – in service in 40 countries and selected by military and government customers such as the Portuguese Air Force and New York City Department of Environmental Protection Police – the TH-119 is

manufactured on an FAA-certified Part 21 production line within the United States. Leonardo's Philadelphia plant also is building the U.S. Air Force MH-139 for Boeing.

Navy Awards Two Contracts for MQ-4C for Upgrades, Advance Acquisition

ARLINGTON, Va. – The Navy has awarded two contracts to Northrop Grumman Systems Corp. to advance the fielding of the new MQ-4C Triton high-altitude, long-endurance unmanned aerial vehicle.

Naval Air Systems Command (NAVAIR) on April 1 awarded a $12.8 million contract modification to upgrade three Tritons "from a baseline Integrated Functional Capability (IFC) 3 software configuration to a Multi-IFC 4 software configuration," the contract announcement said. "This modification updates drawings and associated technical data in support of the MQ-4C IFC software configuration upgrade."

Northrop Grumman also was awarded a $7.2 million acquisition contract modification to extend "the period of performance and provides additional funding to procure long-lead components, material, parts and associated efforts required to maintain the MQ-4C Triton Unmanned Aircraft System planned low-rate initial production Lot 4 production schedule."

Two MQ-4Cs have been delivered to the Navy's Unmanned Patrol Squadron 19 detachment at Naval Air Station Point Mugu, California. The Triton was slated to reach Early Operational

Capability last year with a deployment to Guam, but the deployment was put on hold after one of the MQ-4Cs was damaged in a landing mishap at Point Mugu.

Marine Pilots Killed in AH-1Z Helicopter Crash; First Naval Aviation Loss of 2019

ARLINGTON, Va. – The loss of a Marine Corps AH-1Z helicopter March 30 was the first crash of a U.S. naval aviation aircraft since the beginning of the calendar year.

Two Marine pilots were killed when the AH-1Z Viper helicopter gunship crashed in the vicinity of Yuma, Arizona, at about 8:45 p.m. March 30, according to a Marine Corps release.

“Both pilots were conducting a routine training mission as part of the Weapons and Tactics Instructor course 2-19,” the release said.

The training was being conducted by Marine Aviation Weapons and Tactics Squadron One based at Marine Corps Air Station Yuma. The helicopter was assigned to a Marine helicopter light attack squadron, but the identity of the specific squadron has not been released.

An AH-1Z carries a crew of two.

The cause of the crash is under investigation. The names of the deceased pilots have been withheld pending notification of their next of kin.

Coast Guard Cutter Seneca Returns Home After 86-Day Atlantic Patrol

BOSTON – Coast Guard Cutter Seneca returned to its homeport in Boston on March 30 after an 86-day patrol in the northern Atlantic Ocean, the Coast Guard 5th District said in a release.

During the patrol, Seneca's crew responded to four search-and-rescue cases. One notable case involved a disabled fishing boat taking on water 100 miles offshore during blizzard conditions. The crew rescued four fishermen and put the fishing boat in tow. The tow was later transferred to a 47-foot motor lifeboat crew from Station Rockland, Maine, for escort to shore.

Seneca boarding teams completed 31 living marine resource boardings to ensure safety and environmental regulations are being followed. The Coast Guard is the primary agency for at-sea enforcement of federal laws concerning U.S. aquatic food resources.

"I am incredibly proud of this crew's accomplishments during this patrol," said Cmdr. John J. Christensen, Seneca's commanding officer. "Their efforts ensured the continued preservation of our national fisheries, the safety of our offshore fishermen and the security of sea lanes to some of our largest marine transportation hubs. They did this all while keeping our 34-year-old cutter fully operational, enabling us to meet every mission, every time."

Seneca is a 270-foot medium endurance cutter with a crew of 14 officers and 86 enlisted personnel.

Richardson Prepares Sailors to Out-Learn and Be Ready to Out-Fight Adversaries

Admiral John M. Richardson, Chief of Naval Operations, in an interview with SEA POWER on Wednesday, March 27, 2019 at the Pentagon.

Adm. John M. Richardson began serving as the 31st chief of naval operations on Sept. 18, 2015, and he's in his last year at the helm of the U.S. Navy. During the intervening years, Richardson has focused the Navy on the emerging "Great Power Competition" with Russia and China and has pushed for more agility and lethality in the fleet, higher velocity learning and rapid technological innovation.

At sea, Richardson served on two attack submarines and one ballistic-missile submarine before commanding the attack submarine USS Honolulu.

He also served as commodore of Submarine Development Squadron 12; commander, Submarine Group 8; commander, Submarine Allied Naval Forces South; deputy commander, U.S. 6th Fleet; chief of staff, U.S. Naval Forces Europe and U.S. Naval Forces Africa; commander, Naval Submarine Forces; and director of Naval Reactors. He also served as naval aide to the president.

The CNO discussed the Navy's posture with Senior Editor Richard. R. Burgess. Excerpts follow.

From the start of your tour as CNO, you spoke of the return of the "Great Power Competition." How has the Navy's posture shifted to counter that?

RICHARDSON: We've shifted in a number of different ways. One is that the way we train and educate our people has changed. [We've] adopted a competitive mindset. The very first thing that we do with people from all over the country when we bring them into the Navy is send them to boot camp. We've been fortunate enough to meet our recruiting goals for more than 12 years now even with a Navy that is growing about as fast as we can bring people in. Of late, we've made the assessment and the corresponding decision in the Navy that if we're going to truly be competitive, we've got to sort of start at the very beginning to instill the attributes that will be decisive in that competition including, if necessary, combat. Those attributes are things like toughness and initiative and accountability and integrity. And so, we've ramped up the difficulty level of boot camp. We've made it tougher or harder. The response of the recruits has been stunning. Our retention has gone up. We have more recruits finishing even with the new curriculum than we did before. We're teaching them a lot of resilience skills in terms of how to manage stress on their own and as a team. Those Sailors are reporting to their commands, ships, submarines and squadrons much more ready to contribute to the running of their commands. That is the feedback we're getting from their chiefs and LPOs [leading petty officers], which is about as honest a feedback as we could ever hope to get.

We've put a lot of emphasis in the acquisition of technologies, tools and capabilities that would be decisive in the Great Power Competition to make sure that we are moving forcefully into the future to evaluate and assimilate technologies like directed energy, hypersonics and unmanned things like autonomy, artificial intelligence and machine learning – all of those things that are going to be a decisive

part of Great Power Competition now and in the future. Not only are we moving into these technologies because they're important, but we're trying to move into them and get them into the hands of our Sailors much faster. We've had some successes moving acquisition into the future faster.

Finally, I would say that all of that is great, but you've got to go out and you've got practice, get ready, take your capability to sea and run it through its paces. That is the thing that combines both the people and the technology. We've been investing heavily in readiness since I got here, particularly in the last three years.

You were a submariner in the Cold War. The Russian and Chinese navies are increasing their capabilities and quantities? Comparing then to now, what do you see are differences and similarities?

RICHARDSON: The similarities are that it's really a global competition just as the Cold War was. It's a competition that I believe is going to define sort of the world order going forward. That's almost where the similarities leave off. This is a much more complex and complicated competition now with not just the bipolar Cold War phenomena that we had – really an exception to history to have the world in two camps – but now, a much more multipolar competition with both China and Russia already being global powers. With the idea of China being an Asian power, there are different aspects of that as we pivot to Asia. With the economic dimensions – with different allies and partners than during the Cold War – we've got to be mindful of the complexity that we face in this multipolar approach. Folks who take the approach that this is going to be a redux of the Cold War are really oversimplifying the challenge that faces us. We need to set our minds for the complexity that this new version of Great Power Competition brings to us.

You've interacted with your Chinese counterpart numerous

times. Has your interaction been able to affect the level of tensions in the South China Sea and the Taiwan Strait?

RICHARDSON: That's a difficult question to answer. I hope that, by virtue of having a relationship and communicating frequently, we gain a deeper understanding of each other's perspectives, be less likely to be surprised by one another and through that understanding we can make sure that there is a consistency. We can hold ourselves accountable to our actions being consistent with our words. We can also do everything we can to work together in areas where we have common interests. In those areas where we clearly have differing perspectives, we can manage and come to resolution on those perspectives in a way that minimizes the tension and particularly minimizes the chance for a miscalculation or something like that that could escalate. This communication channel allows us, if something should happen, to call one another up and, hopefully, keep it in perspective and de-escalate without it growing out of hand. Instead, we can mitigate that type of spread.

In a recent forum you talked about trying to move the ballistic-missile defense (BMD) mission of Aegis ships in the Sea of Japan, for example, ashore to free up the ships rather than keeping them in a box. Has that gotten any further or is that still just something in discussion?

RICHARDSON: I think it is moving forward. It is linked to this idea of dynamic force employment, which is linked to the idea that naval forces are fundamentally maneuver forces where ships are made to move on the sea and aircraft, obviously, are made to move through the sky. It's a bad matching of capability to mission if we have a ship that is persistently assigned to a BMD mission of a land asset. Often, it's a little bit mischaracterized. I'm 100% behind the BMD mission, which is a super important mission and one that the Navy can contribute to both with the Aegis weapons system afloat or ashore. My real comment is that in the execution of this

mission, if you have an emergent asset that you want to defend and a ship can get there and be effective in its defense, then by all means, the ship is a good answer to that emerging challenge. But years down the road, if it looks like this is going to be a persistent mission, then it seems to me that we should do something like build a capability ashore, a more permanent capability for a permanent mission. And then, you liberate that multimission ship to go back to its fundamental missions of being able to maneuver around the world and flow to where the challenges are.

Do you have any concerns about the unpredictability of Dynamic Force Employment having a negative effect on the morale of crews with their schedules constantly in flux?

RICHARDSON: That's the Navy I joined in the early '80s when I was commissioned, a very dynamic, unpredictable time. You may recall that it wasn't uncommon for us to be hanging out at home and, if the ship was ready to get underway, you could get that late-night call that said, OK, it's time for us to move out. Report to the ship, grab your sleeping bag and get on down, we're getting underway. We'd get underway at night and head on out. In my case, my submarine would be missing from imagery the next day, missing from the pier where it was the day before. In order to compete effectively in this Great Power Competition, we just can't be super predictable, and so, this idea of dynamic assignments, agility, all of that is an important part. We've started to get into this a little bit with the Harry S. Truman strike group, and we're mindful that this is a little bit of a new thing for many of our families.

Overall, our Sailors and their families have responded really positively. Both our Sailors and their families joined the Navy because they wanted to go out and respond to those places where the nation needed them and still needs them. We're seeing crews lean into this mission with a lot of enthusiasm. I will tell you, though, we are learning some lessons, too, in terms of how we can better take care of our Sailors and their

families as we get back into this type of dynamic maneuvering. Each one of these deployments gets a little bit better than the one before.

Admiral John M. Richardson, Chief of Naval Operations, in an interview with SEA POWER on Wednesday, March 27, 2019 at the Pentagon.

Your No. 1 priority is strategic deterrence. How confident are you that the Columbia SSBN's tight schedule and hefty budget will be met?

RICHARDSON: It's not just the Navy's No. 1 priority, it's the nation's top priority to make sure that we maintain an effective strategic deterrent. Right now, the thinking is that the [nuclear deterrent] triad remains the best way at going about that. Of the three legs of the triad, the submarine is both the most responsive and survivable leg, so it's important for the whole nation, in fact, for the free world, to make sure that this is the capability that is reconstituted and is maintained. We've been on strategic alert since 1960, and it looks like we're going to need to remain on strategic alert. It's very important that this program deliver on time with the capabilities that it needs to do its job. It's got a tremendous amount of support across the entire enterprise – in Congress and the Department of Defense – that I feel pretty confident about. It's an incredibly complex thing to do, as you can imagine. We are challenging ourselves in terms of the timeframes in which we're going to need to build it, and so, that is my No. 1 call to the program. Right now, it's on track, but I need to get more margin into the schedule. It's complicated enough that once we start testing in sea trials, we're inevitably going to find things that are going to need fixing – unexpected things will pop up and we need to build time into it to get that done.

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a steady build rate — not only for submarines but for the rest of our Navy ships — that we've got inherent stability. In that way, we get the industrial base to a real healthy, stable condition."

The desired attack submarine force level currently is 66 boats. Do you think that's achievable in the budget climate, especially when it looks like the budget might level off for a while?

RICHARDSON: Yes, I think it is achievable. To get to a force level of 66 submarines, if it's a 33-year life, let's say, of a submarine, then that's two submarines per year. That's a pace that we've demonstrated that we can maintain. It's an interesting question you ask because it bears on shipbuilding. Our 30-year shipbuilding plan is a great read, if you're a scholar of this part of the business, and it advocates for exactly what you say — a steady approach, given the resources that we have so that the industrial base that builds and supports these ships can have some reliability and stability. The workforce and materiel base don't respond well to fits and starts, peaks and valleys. Our hope is that by laying in a steady build rate — not only for submarines but for the rest of our Navy ships — that we've got inherent stability. In that way, we get the industrial base to a real healthy, stable condition.

The new aircraft carrier, USS Gerald R. Ford, has had some difficulties. Are you confident that this class of ship is going to be affordable?

RICHARDSON: Yes. We must step back and appreciate just what an amazing accomplishment the Gerald R. Ford-class aircraft carrier is. It's a brand-new class of super carrier, [with a] new propulsion plant, new reactor plant, lots of new technologies in terms of power generation, world-class electrical power generation — three times the electrical power

of its predecessor – and doing that for fewer people through a lot more adoption of reliable automation. What are we using that extra power for? Things like electromagnetic catapults, arresting gear that can be tuned to the aircraft type, dual-band radar [and] very powerful sensors, new technologies like these weapons elevators. We made the deliberate decision when we started this that we were going to put all these new technologies on the first ship of the class – so very, very ambitious.

By and large, we've got through all the technical difficulties for these technologies and are stepping through it. The electromagnetic catapults are working. The advanced arresting gear is working. The dual-band radar is on track. There are some other technologies – the weapons elevators – we're continuing to work through those. The ship is in PSA [post-shakedown availability] right now, the first PSA for the first ship of the class. It's not unexpected that you may learn some things that are going to cause you some delays. That is just the nature of doing innovation.

We're having that happen at a world-class level in the Gerald R. Ford, so, in the not-too-distant future, we're going to look back and say we did something that probably only the United States of America can do in terms of innovating something at this scale and complexity. It's going to break every record for every carrier that's ever sailed, and it's going to allow real innovation to occur at the air wing, the real punching power of the carrier. By virtue of all these technologies, we're going to be able to innovate an air wing that is going to be stunning in lots of variable types of aircraft, one of which is going to be the unmanned tanker, and so, we're going to, I think, really be happy.

Despite all of that aggressive approach to innovation, the first ship of the class, of any class, almost always sees some cost overrun. The overruns for the Ford have been below average for first ships of the class, and we just need to be

mindful of perspective. All the analysis that we have shows that these carriers are going to be survivable even in the face of some of the emerging technologies that people talk about. I'm looking very forward to seeing the Gerald R. Ford get back to sea.

With a new force structure assessment coming up at the end of the year, what conditions have changed since the last one was done that you think might have influence?

RICHARDSON: What hasn't changed? This Great Power Competition is getting sportier every day. Both of our competitors – China and Russia – have increasingly capable armed forces, especially navies, so there is the force-on-force technological change, with technologies that are not just new at sea but new altogether. The geostrategic landscape is changing quickly as nations rise and nations shrink. China is certainly a nation with strategic expansion having a greater influence in the Asia-Pacific and around the world. For all those reasons – the geopolitical, geostrategic, technological landscapes and the human dimension of those landscapes – all of that has changed and it's changing faster and faster. Even though the last force structure assessment was done in 2016, you'd think you get a little bit of runtime on that assessment, but things have changed quickly enough that it's time to go back in and make sure that our assumptions are still valid, that we haven't missed an opportunity to take advantage of an emerging technology or an emerging geostrategic opportunity and just do that assessment again.

Reading recently about the U.S. Asiatic Fleet in World War II and its submarine force, its performance was considered less-than-stellar. The Navy hasn't fought war at sea since World War II with the exception of a couple of confrontations like Operation Praying Mantis. What needs to be done to train our crews to be on the step for combat at sea?

RICHARDSON: That's a great question, one that we think about a

lot. You're exactly right. In that interwar period where we learned so much as a Navy, we had 20 years of practice to learn how to do naval aviation from aircraft carriers with visionaries like Adm. [William] Moffett and Adm. [Joseph Mason] Reeves. We did a lot of work in surface-to-surface types of engagements. And then we did a lot of the operational strategic level planning in the interwar period. We did some work with the submarines but, strategically, we just got that wrong in the interwar period and, therefore, we built a submarine force that was largely focused on scouting and reporting and maybe closing to engage another warship.

When the war broke out, we found out a number of things. One, there is nothing like combat, and so, even though we had a tremendous amount of work in surface tactics, we found that we needed to learn on the fly. We needed to learn our way from engagements like Savo Island, where we really got defeated. We had to learn on the fly in the whole Solomon Islands campaign such that almost exactly a year later we completely flipped the coin in terms of capability so that at the battle of Cape St. George it was complete victory – 5-to-0 – in terms of destroyers. And it's minds like Arleigh Burke's and such that led us through that, but also minds like our junior officers who designed the combat information center to make best use of technologies like radar. My point being that, with respect to preparing for combat, one, you must have a very sober view of what combat may bring. That's why we're making boot camp tougher. We're delivering tougher Sailors. We've got to do our very best to approximate what that might be, and then we've got to make our training as absolutely realistic and prototypic as possible. The more realistic you can make your training, the better you're going to be making that transition into combat.

Also, we are very mindful that, as much as we prepare, as good as our estimates are, it's going to be different when combat erupts on the opening rounds. So, we've got to remain flexible

and continue to learn in the early parts of conflict, because it's the nature of our business. It's not going to go perfectly the first time. It's not going to go exactly how we foresee it. We've got to build in flexibility. That's why the "Design for Maintaining Maritime Security," both version one and now version two, puts such a premium on the ability and the agility of learning, because the team that learns faster than the other is the team that wins. We basically just outlearned our enemies in World War II. That learning combined with our industrial capacity were the keys to victory. That learning happened at every single level in the Navy, from five-star Adm. [Chester] Nimitz all the way down to the junior officers and junior Sailors who were innovating and creating on the fly.

We've got to make sure that our connectivity – the network that connects us all – is more resilient than the enemy's. It will degrade, but we'll have to be more effective in the degraded state than our enemy, and we'll heal faster than they do, too, and we'll get reconnected faster. I think probably we'll see less operating independently than we did before.

I have great confidence that, as the network degrades and we're more autonomous, more on our own than maybe we are right now, we're going to be at a great advantage because of the way we train our officers to think on their own. The idea of mission command is an important part of our preparation for conflict right now.

Anything else you would like to add?

RICHARDSON: We're starting and ending a lot of our talks, speeches and conversations with, I would call them, first principles. Our first slide in many of our briefs right now has a picture of George Washington and this quote: "It follows then as certain as that night succeeds the day, that without a decisive naval force we can do nothing definitive, and with it, everything honorable and glorious." We spend some time

talking about what America means and represents to the world. That idea of life, liberty and the pursuit of happiness – those principles that are instilled in all our founding documents like the Declaration of Independence, the Constitution – are reflected in some of the greatest speeches that our leaders have given. Our Navy has been there since the very founding of the country defending those principles. We have a responsibility as a military power, but also as a diplomatic power. Very important diplomatic events have happened on Navy warships in sovereign U.S. territory – signing of treaties, hosting by our ambassadors, that contribution to national power. At the very start of the Navy, we were out around the world defending our sea lanes. America is a maritime nation. Two-thirds of our trade, two-thirds of our jobs, two-thirds of our economy are tied directly to the sea, so we continue to be out advocating for a system of rules and norms that allows free trade across those sea lanes to go to and from America's markets, that allows access to markets overseas for us to sell and purchase our goods. It's important that the American people and our Sailors understand that the Navy is a principal advocate for everything that America stands for, and an American Sailor in uniform on a liberty call ashore is often the first person, the first American, that somebody overseas may meet. It's a great responsibility, but our Sailors are magnificently prepared to be warfighters at sea, but also diplomats defending our prosperity. ■

Navy Secretary Names Destroyer in Honor of Korean

War Helicopter Crewman

WASHINGTON – Navy Secretary Richard V. Spencer named a future Arleigh Burke-class guided-missile destroyer (DDG-131) in honor of a Korean War veteran and Navy Cross recipient, Aviation Machinist's Mate 3rd Class George M. Neal, the secretary's public affairs officer said in a March 26 release.

Neal, a Springfield, Ohio, native, served with Helicopter Utility Squadron One (HU-1), a Navy helicopter rescue unit embarked from Australian light cruiser HMAS Sydney during the Korean War.

"At significant risk to his personal safety, Petty Officer Neal distinguished himself by volunteering to go into harm's way into North Korea to rescue a fellow service member," Spencer said. "He was a hero, and I am proud his legacy will live on in the future USS George M. Neal."

Neal was awarded the Navy Cross for his actions on July 3, 1951, when while serving with HU-1, he and pilot Lt. j.g. John Koelsch attempted to rescue Marine Corps Capt. James Wilkins. Wilkins crashed near Yondong in North Korea after his Corsair took antiaircraft fire.

Koelsch and Neal located Wilkins and, under increased enemy fire, lowered the rescue sling. However, the helicopter was disabled and crashed. For nine days, Neal assisted Koelsch and Wilkins in evading enemy forces before being captured and held as a prisoner of war. Koelsch died during captivity but Wilkins and Neal were released and returned to the United States in 1952 with more than 320 fellow POWs. Koelsch was posthumously awarded the Medal of Honor for his actions.

Arleigh Burke-class destroyers conduct a variety of operations from peacetime presence and crisis response to sea control and power projection. The future USS George M. Neal will be a

Flight III destroyer capable of fighting air, surface and subsurface battles simultaneously and will contain a combination of offensive and defensive weapons systems designed to support maritime warfare, including integrated air and missile defense and vertical launch capabilities.

The ship will be built at Huntington Ingalls in Pascagoula, Mississippi. The ship will be 509 feet long, have a beam length of 59 feet and be capable of operating at speeds in excess of 30 knots.

Marines Perform 'Arduous' Evaluation of New Grenade Launcher

MARINE CORPS BASE QUANTICO, Virginia –The Marine Corps plans to introduce a new weapon intended to enhance the lethality of infantry Marines on the battlefield, the Marine corps Systems Command said in a March 26 release.

The M320A1 is a grenade launcher that can be employed as a stand-alone weapon or mounted onto another, such as the M27 Infantry Automatic Rifle. Scheduled to be fielded in fiscal year 2020, the system will give fleet Marines the ability to engage with enemies near and far, day or night.

"The M320A1 will provide good range and accuracy, making the infantry squad more lethal," said Lt. Col. Tim Hough, program manager for infantry weapons in Marine Corps Systems Command's Ground Combat Element Systems.

The functionality of the M320A1 makes it unique, Hough said. Its ability to be used as a stand-alone or in conjunction with a firearm should help warfighters combat enemy forces. The weapon will replace the M203 grenade launcher that is currently employed by Marines.

“The mounted version of the M320A1 is a capability we’re currently working on so that Marines have that option should they want it,” Hough added.

Before the Marine Air-Ground Task Force receives the M320A1, the Corps must draft technical documents for the weapon. These publications provide Marines with further information about the system.

In early March, Ground Combat Elements Systems collaborated with fleet maintenance Marines and logisticians from Albany, Georgia, to conduct various analyses to determine provisioning, sustainment and new equipment training requirements for the system.

The first evaluation was a Level of Repair Analysis, or LORA. A LORA determines when a system component will be replaced, repaired or discarded. This process provides information that helps operational forces fix the weapon should it break.

The LORA establishes the tools required to perform a task, test equipment needed to fix the product and the facilities to house the operation.

“It’s important to do the LORA now in a deliberate fashion so that we don’t do our work in front of the customer,” Hough said. “And it ensures the system they get is ready to go, helping them understand the maintenance that must be done.”

The second evaluation was a Job Training Analysis, which provides the operational forces with a training package that instructs them on proper use of the system to efficiently engage adversaries on the battlefield.

“This process helps us ensure this weapon is both sustainable and maintainable at the operator and Marine Corps-wide level,” said Capt. Nick Berger, project officer in infantry weapons at MCSC. “It sets conditions for us to field the weapon.”

Sustainability is key in any systems-acquisition process. The goal of the LORA and Job Training Analysis is to ensure the operator and maintenance technical publications of a system are accurate, which reduces operational ambivalence and improves the grenade launcher’s sustainability.

The LORA is an ongoing process that continues throughout the lifecycle of the M320A1 to establish sustainability, Hough said. After fielding the M320A1, the Corps will monitor the system to ensure it is functioning properly.

During this time, the program office will make any adjustments and updates necessary.

“We’re looking to have the new equipment training and fielding complete prior to fourth quarter of [fiscal 2019] to ensure they can be used and maintained properly once they hit the fleet,” said Berger.

The analyses, which occurred over the course of a week, were no easy task.

“This was an extensive and arduous process,” Hough said. “We scheduled three days for the LORA – all day – so you’re looking at about 24 hours of work for the LORA. And that doesn’t include reviews, briefs and refinements to the package.”

However, at the end of the week, Hough expressed gratitude for all parties involved in the M320A1 analyses, which he called a success. He said the tasks could not have been completed without the help of several key individuals.

“I will tell you what’s noteworthy is working with our

contract support, the outside agencies and the deliberate efforts by our team – specifically Capt. Nick Berger and Steve Fetherolf, who is a logistician," Hough said. "Those two have made a significant effort to get this together and move forward."

Berger also expressed pride about the accomplishments of the analyses.

"This week has been a success," he said. "We got the system in Marines' hands, worked out the kinks and began to understand how we're going to use this moving forward."