Navy Still Plans to Start New Frigate Construction in April 2022

Then-Secretary of the Navy Kenneth J. Braithwaite announces USS Constellation (FFG 62) as the name for the first ship in the new guided missile frigate class of ships while aboard the museum ship Constellation in Baltimore Inner Harbor, Baltimore, Md., Oct. 7, 2020. *U.S. NAVY / Mass Communication Specialist 2nd Class Levingston Lewis*

ARLINGTON, Va. — As the first new U.S. Navy frigate works its way through detailed and functional design phases, officials still plan an April start for building the lead ship of the Constellation class.

“Right now, as far as construction, we’re targeting that date,” Capt. Kevin Smith, the frigate program manager told a briefing at the Surface Navy Association annual symposium. However, “there could be some risk to that [during the

detailed design phase] but we're looking hard at that," he said, adding, "the one thing that we want to make sure of is, that we don't start building a ship where the design is not mature."

After the design phases are completed, a critical design review and a production readiness review are slated to follow in fiscal 2022. Only "then, when we're ready" will construction begin on what will become the USS Constellation guided missile frigate (FFG 62), Smith told the Jan. 11 briefing.

The Navy began the acquisition process for a new multi-mission frigate FFG(X) in 2017, awarding a $795 million detailed design and construction contract in April 2020 to Marinette Marine, a Fincantieri company based in Marinette, Wisconsin. Marinette based its design on the Fincantieri FREMM frigate, which is in service with the French and Italian navies.

Among the capital improvements Fincantieri is making at Marinette to accommodate the first frigate's construction is a syncrolift platform to move the 496-foot hull from dry land into the water. Unlike the littoral combat ships Marinette is building in Wisconsin, the Constellation will be too big for a side launch down a slipway. Frigate construction will be in Marinette's Building 34, the new hull erection building, which Smith predicted would be a game changer. Big enough to accommodate two full-size frigate hulls and one-third of another, it will allow work to continue indoors during Wisconsin winters. The frigate will be "probably close to near completion before they float it off," and move on to integration of the propulsion plant and combat systems, Smith said.

The frigate will have a combination diesel electric and gas turbine propulsion system, which will be tried and assessed at a Land Based Engineering Test Site being built near the Naval Surface Warfare Center in Philadelphia. Testing on land will

feature a full configuration of the frigate's power plant so "we're not learning at the waterfront where it's a little more expensive" to fix problems, Smith said.

The Constellation will also have a beam of 64.6 feet, a draft of 18 feet and a fully loaded displacement of 7,300 tons. "The only thing aluminum on this ship is the mast. Everything else is steel," Smith said.

The layout is very similar to the FREMM frigate, although to meet U.S. Navy standards for reliability, survivability, maintainability, habitability and lethality, Fincantieri designers "had to lengthen the hull a bit" before submitting their proposal, Smith said. The only changes the Navy made after awarding the contract were to include "buy America" provisions mandated by Congress, he said.

SECNAV: Allies, Partners Are 'Huge Advantage' for U.S.

U.S. Navy Arleigh Burke-class guided-missile destroyers USS Gravely (DDG 107), front, and USS Roosevelt (DDG 80), rear, conduct maneuvering operations in the Mediterranean Sea in formation with Italian Carlo Bergamini-class frigate Carlo Margottini (F 592), Jan. 2, 2022. The Harry S. Truman Carrier Strike Group is on a regularly scheduled deployment in the U.S. 6th Fleet area of operations, which Navy Secretary Carlos Del Toro cited as an example of Navy flexibility. *U.S. NAVY / Mass Communication Specialist 3rd Class Theoplis Stewart II*

WASHINGTON – The secretary of the Navy stressed forward presence and engagement with U.S. allies and partners as advantageous in pacing the threat of China and Russia in the maritime domain.

Allies and partners “are our huge advantage,” said Navy Secretary Carlos Del Toro, speaking Jan. 18 at the U.S. Navy Memorial in Washington. The Chinese and Russians don’t have that.”

Det Toro noted the integrated defense strategy as an all-of-government approach to execution of foreign policy, “using all of the capabilities that the United States has,” plus those of

allies and partners.

The U.S. Navy in recent years has increased its presence and patrols in the South China Sea and the Black Sea, both areas of international tension. Del Toro noted the current presence of the USS Harry S. Truman carrier strike group in the Mediterranean Sea – normally absent of a CSG in recent years – and the presence of the USS Carl Vinson CSG in the South China Sea as examples of the flexibility of naval forces and their presence that potential adversaries have to take into account.

“You’ve got to be present,” Del Toro said.

The SECNAV, himself a former destroyer skipper, stressed the importance of building relationships with allies and partner nations. He also praised the initiatives of Chief of Naval Operations Michael Gilday and Marine Corps Commandant David Berger to “rethink strategy” and make U.S. naval forces more expeditionary, with the ability to move distributed forces more quickly to an area of operations. He cited the Marine littoral regiments being formed as an example of mobility and ability to operate within the Pacific island chain closest to China.

Record Seizures in 2021 after NAVCENT and CMF Increase Patrols

U.S. and international forces operating under U.S. Naval Forces Central Command, U.S. 5th Fleet and Combined Maritime Forces have seized record amounts of illicit cargo during maritime interdictions in 2021. *U.S. NAVY*

MANAMA, Bahrain – U.S. and international forces operating under U.S. Naval Forces Central Command, U.S. 5th Fleet and Combined Maritime Forces have seized record amounts of illicit cargo during maritime interdictions in 2021, the forces said Jan. 18.

Led by Vice Adm. Brad Cooper, the maritime organizations conducted more seizures in 2021 after increasing patrols in the Gulf of Oman and Arabian Sea.

CMF seized illegal drugs worth more than $193 million (at regional wholesale prices) during counter-narcotics operations at sea in 2021. This is a higher total value than the drugs CMF interdicted in the previous four years combined.

CMF is the world's largest multinational naval partnership and includes 34 nations. It is headquartered in Bahrain with U.S.

Naval Forces Central Command and U.S. 5th Fleet.

U.S. 5th Fleet warships seized approximately 8,700 illicit weapons in 2021, including 1,400 AK-47 assault rifles confiscated from a stateless fishing vessel in the North Arabian Sea, Dec. 20.

The stateless vessel was assessed to have originated in Iran and transited international waters along a route historically used to traffic weapons unlawfully to the Houthis in Yemen. The direct or indirect supply, sale or transfer of weapons to the Houthis violates U.N. Security Council Resolutions and U.S. sanctions.

Guided-missile cruiser USS Monterey (CG 61) seized dozens of advanced Russian-made anti-tank guided missiles, thousands of Chinese Type 56 assault rifles, and hundreds of PKM machine guns, sniper rifles and rocket-propelled grenade launchers from a stateless vessel transiting the North Arabian Sea in May.

In February, guided-missile destroyer USS Winston S. Churchill (DDG 81) seized a cache of weapons off the coast of Somalia, including thousands of AK-47 assault rifles, light machine guns, heavy sniper rifles, rocket-propelled grenade launchers and crew-served weapons. The inventory also included barrels, stocks, optical scopes and weapon systems.

Since mid-July, U.S. and international maritime forces under CMF have conducted more than 50 boardings of vessels suspected of smuggling illicit cargo in the Gulf of Oman and Arabian Sea, resulting in 14 narcotics seizures and the Dec. 20 weapons seizure.

“We have enhanced our presence and vigilance across regional waters,” said Cooper. “This reflects our continued commitment to confront destabilizing activities that disrupt the rules-

based international order which underlies maritime security in the Middle East.”

U.S. and international naval forces regularly conduct maritime security and counter-terrorism operations across the region to disrupt criminal and terrorist organizations and their related illicit activities, including the movement of personnel, weapons, narcotics and charcoal. These efforts help ensure legitimate commercial shipping transits the region free from non-state threats.

Cooper: LCS Deploying to U.S. 5th Fleet in 2022

The Freedom-variant littoral combat ship USS Billings (LCS 15)

fires a 57mm MK 110 gun from the fo'c'sle, Jan. 8, 2022. *U.S. NAVY / Mass Communication Specialist 3rd Class Aaron Lau*

ARLINGTON, Va. – The long-planned forward deployment of littoral combat ships to the Persian Gulf is approaching execution, with the anticipated first deployment of an LCS to the U.S. 5th Fleet, the fleet commander said.

Vice Adm. Brad Cooper, commander, U.S 5th Fleet; commander, Naval Forces U.S. Central Command; and commander, Maritime Forces, speaking in a moderated discussion sponsored by the U.S. Naval Institute and the Center for Strategic and International Studies, a Washington think tank, said the fleet expects to welcome its first LCS in 2022. The ship will be a Freedom-class LCS.

Cooper said planning is underway to receive and support the ship.

"We're in a much better position today than we were last year" to receive the LCS, he said. "I'm very familiar with all of the nuances from my last job at SurfLant [Naval Surface Force, Atlantic].

The LCS is slated to replace the Cyclone-class coastal patrol ships and Avenger-class mine countermeasures ships in the 5th Fleet.

Cooper said there is "no comparison between a PC and what an LCS will bring," noting the littoral combat ship's aviation component with MH-60 helicopters and Fire Scout unmanned helicopters, more kinetic strike capability and greater range and endurance.

"The Navy, over a period of time, has bought the logistics and sustainment component of this that is already prepositioned at Bahrain," he said.

The LCS would be the latest ship modernization of the U.S. naval forces in the 5th Fleet area of responsibility. The

Coast Guard’s Patrol Force Southwest Asia has received two Sentinel-class fast response cutters – with two more en route and two more planned – to replace the six Island-class patrol cutters.

An expeditionary sea base ship – the USS Lewis B. Puller – is serving as a platform for mine countermeasures and naval special warfare forces. Cooper said the ship is operating in the North Arabian Sea in addition to the Persian Gulf.

In addition, the newly organized Task Force 59 is experimenting with unmanned vessels, including persistent surveillance of the Gulf of Aqaba with Saildrone unmanned surface vessels. Cooper said the 23-foot-long Saildrones have been operated in the area for more than 30 days.

Task Force 59 also has integrated and evaluated Mantas T-12 and T-38 unmanned surface vessels in the region.

Navy Trains to Counter Drone Threats at Point Mugu

Naval Air Warfare Center Weapons Division's Pacific Target Marine Operations and Threat/Target Systems Department recently deployed small drones over Naval Base Ventura County, Point Mugu to provide cost-effective unmanned aerial system familiarization and threat training. *U.S. NAVY / Ensign Drew Verbis*

VENTURA COUNTY, Calif. – The Pacific Target Marine Operations, a division of Naval Air Warfare Center Weapons Division's Threat/Target Systems Department, recently deployed small drones over Naval Base Ventura County, Point Mugu, to provide cost-effective unmanned aerial system familiarization and threat training.

"The Low-Speed Aerial Target- Small [LSAT-S] program developed a cost-effective target training and deployment program that directly represents the UAS threat the fleet faces daily," said Pete Pena, PTMO program lead. "UAS are classified by their size, range, and speed, and are broken into five groups based on those attributes. We're flying group 1 drones which are considered to be the greatest threat to military forces across the globe due to their unique range of capabilities as

well as their relatively low cost and small size.”

In 2021, speaking at a U.S. Senate committee, Gen. Kenneth McKenzie, commander of U.S. Central Command, referred to the proliferation of small drones as the “most concerning tactical development” since the emergence of improvised explosive devices.

Groups 1-3 can range from over-the-counter handheld drones to medium sized drones with sensors and the capacity to deliver weaponized payloads. However, the main threat that comes from groups 1-3 is intelligence, surveillance, and reconnaissance. These drones can be difficult to detect and destroy due to their low flying altitude and small size.

“Point Mugu is a no drone zone,” said Fire Controlman 1st Class Petty Officer Michael Jordan, assigned to NBVC. “It is difficult to obtain authorization to operate drones in this controlled airspace, even for military units. So, this demonstration provided a rare opportunity for watch standers to experience live drone flights and provide identification, which is the first step in countering threats.”

In 2019, Ellen Lord, the former undersecretary of defense for acquisition and sustainment, established a waiver system to authorize drone operations on military ranges in highly controlled conditions, to test the U.S. military’s counter-UAS capabilities.

Civilian and military operators had a chance to fly multiple different scenarios onboard Point Mugu, Pena added. Each test presented a range of conditions, spanning from the direction a UAS was flying to a variance in flight patterns, altitudes, airspeeds, and representative threats.

“This demo is a force multiplier which allows us to offer more frequent and robust counter-UAS presentations to the fleet and

installation commanders," said Cmdr. Todd "Jazz Hands" Faurot, LSAT-S pilot. "This increases our defenses during peacetime and also providing for a war time surge capability."

The first step in countering the rising threat from UAS is target acquisition and identification. The proliferation of UAS, especially group 1-3, the downsizing of the technology, and its decreasing costs of production will make threat detection difficult.

"Our demonstrations provide the fleet with important UAS familiarization and training to face this increasing airborne threat," added Pena.

NBVC is comprised of three distinct operational facilities: Point Mugu, Port Hueneme and San Nicolas Island. It is Ventura County's largest employer and protects Southern California's largest coastal wetlands through its award-winning environmental program.

Official: Navy Seeks Integration of Combat Systems Across the Fleet

A SPY-6 radar displayed at the Navy League's Sea-Air-Space Exposition in 2019. *RAYTHEON TECHNOLOGIES*

ARLINGTON, Va. – A senior Navy program executive said that the service is moving toward integration of combat systems across the fleet to achieve commonality of sensors and weapons and the benefits derived from fielding common and scalable systems.

Bob Shevock, executive director of Program Executive Office – Integrated Warfare Systems, speaking Jan. 13 at the Surface Navy Association's annual symposium in Arlington, used the Raytheon-built SPY-6 radar as an example of commonality and scalability across numerous ship classes that would yield benefits in cost and sustainment.

The SPY-6 Air and Missile Defense Radar, being installed on the Flight III of the Arleigh Burke-class guided-missile destroyers, is also scalable into the three versions of the SPY-6 Enterprise Air Search Radar which will be installed in various configurations on most aircraft carriers plus amphibious assault ships, amphibious transport dock ships and

guided-missile frigates, as well as some Flight IIA Arleigh Burke-class guided-missile destroyers, replacing a number of legacy radars.

Another example cited by Shevock is the SM-6 Standard missile, which is a refined development of a surface-to-air missile into a more versatile tactical missile with anti-ship capabilities and "a multitude of missions," Shevock said.

He also cited the SLQ-32 Surface Electronic Warfare Improvement Program, the RIM-62 Evolved SeaSparrow Missile and the RIM-116 Rolling Airframe Missile "being integrated across a multitude of different platforms."

He listed common technology, common parts, similar interfaces and similar training as benefits of the commonality.

Overarching Combat System

Development and proliferation of an integrated combat system is another part of the Navy's strategy, with the ultimate goal, he said, of an overarching combat system across the fleet, with the first step being an integrated combat system across platforms.

The beginning of that first step, Shevock said, would be the merging of the Aegis Combat System – the combat system built by Lockheed Martin and installed on cruisers, destroyers and soon the future Constellation-class frigates – with the Surface Ship Defense System, the combat system built by Northrop Grumman and installed on many aircraft carriers and amphibious warfare ships.

"That really give us the leverage when we have those common combat systems to scale up to where we really have an overarching integrated combat system across the fleet and across the battle group," he said.

Shevock reminded the audience of the original five

cornerstones of Aegis: reaction time, power, availability, coverage and environmental immunity.

“After 40 years, it’s about time to add another cornerstone, and that’s agility,” he said. “We know we’re going to very quickly identify, assess and develop and deliver improvements to our Integrated Combat System to respond to the changing threat characteristics at performance, speed and scale. This ICS is going to enable us to achieve that cornerstone.”

Shevock’s program executive office has established a new program office, IWSX, responsible for planning and implementing the ICS.

Caudle: Russian, Chinese Submarine Threat Taken Seriously

A P-8A Poseidon multi-mission maritime patrol and reconnaissance aircraft flies over the guided-missile destroyer USS Porter (DDG 78) during a photo exercise in 2020. *U.S. NAVY / Mass Communication Specialist 2nd Class Juan Sua*

ARLINGTON, Va. – A senior Navy admiral said the U.S. Navy takes seriously the increasingly lethal submarine forces of Russia and China but that the U.S. Navy is increasingly able to counter that threat.

“Make no mistake about it: submarines are lethal,” said Adm. Daryl Caudle, commander U.S. Fleet Forces Command, speaking Jan. 12 at the Surface Navy Association’s annual symposium in Arlington. “They are really, really good at what they do – China and Russia. They are quite motivated. … It is a major threat vector for us.”

Caudle said he is happy to report that the Russian and Chinese submarine threat is taken seriously.

“I don’t think any time in my history have I ever seen

undersea warfare taken as a team sport more so than in this current stage," he said. "It is practiced, it is command and controlled properly now, it is through a spectrum. It is not uncommon that our surface forces are holding contact on enemy submarines for a majority that we hold contact. The cueing and the ability to vector in MPRA [maritime patrol reconnaissance aircraft] to gain contact has probably never been better than it is now.

"So, this full-spectrum approach that has been going on I quite healthy," Caudle said, noting that it is easy for a ship to worry about weapon-engagement zones "and the next thing you know there's going to be two torpedoes there that you didn't predict.

"So, we need to be very wide-eyed about that threat," he said. "I think we are, and I think we're going the right way, and that's being well-practiced."

Caudle also noted the "Holy Grail" of undersea warfare since the development of nuclear-powered submarines which could stay submerged for long periods has been effective command and control of the submarines.

"We've grown over time to be very mission-command oriented," he said. "But you've still got to communicate because you've got to mass the effects at the right place and the right time."

He said communicating with submarines at depth and speed is a full-spectrum effort with systems on board surface ships, MPRA, submarines, fixed systems and with partners and allies.

"Essentially, we're getting the oceans and areas of interest wired to communicate with submarines," he said, noting the systems allow the brevity needed to assure communications security so submarines can avoid coming to periscope depth to communicate.

Rep. Gallagher: Navy Must be Ready to Counter China if Taiwan Is Attacked

U.S. Navy Boatswain's Mate 3rd Class Nicholas Rodriguez, right, and Boatswain's Mate Seaman Tony Williams move in to remove chocks and chains from an MH-60R Sea Hawk on the flight deck of the USS John Finn (DDG 113) March 10, 2021, in the Taiwan Strait. *U.S. NAVY / Mass Communication Specialist 3rd Class Jason Waite*

ARLINGTON, Va. — A member of Congress on the House Armed Services Committee said the Navy must be ready by 2025 to counter a Chinese invasion of Taiwan.

Citing the assertion of former commander of Indo-Pacific

Command, Adm. Phil Davidson, that China could move against Taiwan by 2025, Rep. Mike Gallagher (R-Wisconsin), speaking Jan 12 at the Surface Navy Association's annual symposium in Arlington, said the Unites States "must prepare for the reality that war that starts in the territorial waters around Taiwan may not stay there."

Gallagher was critical of the concept of integrated deterrence in that it fosters a false hope that soft power can deter a determined enemy.

"My concern is that integrated deterrence is the latest in a series of Pentagon buzzwords that ultimately serve as a smoke screen for dis-investing in defense and making do with a force that is too small to meet global requirements," he said. "This jargon provides pseudo-intellectual cover for political leadership that is too weak or too distracted to give the military what it needs to execute its missions and to make hard choice between military services that might actually free up resources for the main effort: deterring China from invading Taiwan."

He praised his colleague Rep. Elaine Luria (D-Virginia), also speaking at the symposium, for her "tracing the historical pattern of these calls for 'divesting to invest.'"

"What we need to integrate into deterrence is more conventional hard power: more ships, more long-range missiles, more long-range bombers in the Indo-Pacific, things that will make the PLA [People's Liberation Army] think twice," he said.

"Betting on tomorrow's transformative technology probably makes less sense than fielding reliable technologies that work today," he said.

Gallagher offered a few suggested initiatives to improve the Navy's position versus China:

- Using American territories such as Guam, Wake, and Midway to host long-range anti-air and anti-surface weapons and intelligence, surveillance and reconnaissance assets or serve as logistics nodes.
- Hardening existing defenses in the island chains.
- "Creatively use existing platforms and systems so they can better contribute to the 2025 near-term fight."
- Building a larger Navy, though he noted that ships authorized this year are not likely to be ready for combat by 2025.

He warned that the current unavailability of the Red Hill fuel farm in Hawaii was "unacceptable" and must be restored to operation. He termed it as "the beating heart of America's Pacific posture."

Gallagher – in whose district some littoral combat ships and frigates are built – listed some near-term initiatives that could improve the Navy's posture in the Pacific.

- Use littoral combat ships as stop-gap craft to enable distributed operations until the light amphibious warship comes on line.
- Put Marine anti-ship missiles on board littoral combat ships for expeditionary operations.
- Use the LCS as "mother ship for unmanned swarms" and as a command-and-control node.
- Use cruisers and early DDGs slated for retirement as missile barges and as missile-defense ships for harbors to keep valuable VLS [vertical launch system] cells "in the game" or for conventional prompt strike

Gallagher also said the Navy needs to move out on the DDG(X) next-generation destroyer and the Department of the Navy should commit to building two large surface combatants per year for 10 years.

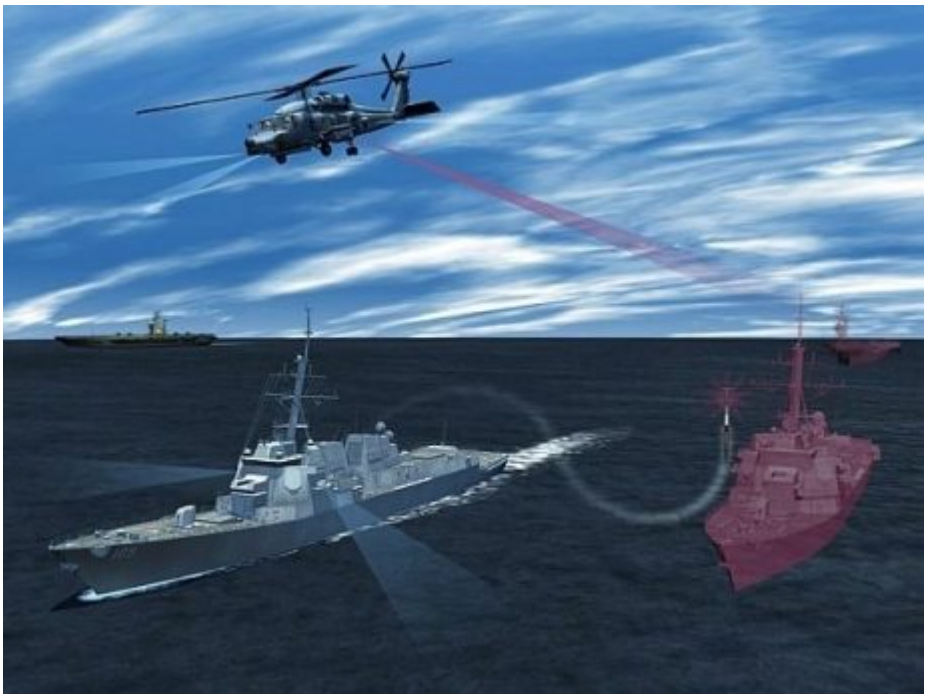
He asserted that the only short war for Taiwan would be a

Chinese victory.

“So, if we’re going to win, we have to buy time to mass assets in the region while denying a Chinese invasion,” he said. “I’m concerned that our planning has not caught up to that reality.”

He advocates the re-establishment of U.S. Taiwan Defense Command to “fully integrate wartime planning with Taiwan.”

Heliborne Electronic Warfare Pod Set for Delivery to Navy in Summer 2022



An artist’s conception of the AOEWS at work. *LOCKHEED MARTIN*
ARLINGTON, Va. — Lockheed Martin expects to deliver the first production pods of a heliborne electronic warfare system to the Navy this summer.

Joe Ottaviano, director, Maritime & Air Cyber/Electronic Warfare for Lockheed Martin, told reporters Jan. 11 at the Surface Navy Association's annual symposium in Arlington that Lockheed Martin has completed flight testing of the Advanced Off-Board Electronic Warfare (AOEW) System and expects to deliver the first low-rate initial production examples to the Navy in July or August 2022.

The ALQ-248 AOEW is a self-contained pod designed to be taken aloft by an MH-60R or MH-60S Seahawk helicopter and serve as an offboard electronic attack system to counter anti-ship cruise missiles. The AOEW will be able to detect an incoming missile, evaluate its direction and use radio frequency countermeasures to deter the missile.

The pod can be attached to either side of the helicopter, which provides power and mobility for the pod, but the pod's operation is independent of the helicopter crew and linked to the SLQ-32(V)6 shipboard electronic warfare system. The AOEW can work independently or with the ship's onboard electronic surveillance sensor, SEWIP Block 2, to detect an incoming missile and then evaluate where it is going.

The AOEW will be linked in the future to the SLQ-32(V)7 with the Block III version improvements of the Surface Electronic Warfare Improvement Program.

In September 2021, the Naval Sea Systems Command awarded to Lockheed Martin Rotary and Mission Systems, Liverpool, New York, a $17.8 million firm-fixed-price contract modifications exercise options for AOEW LRIP units.

The Navy initially ordered four engineering and manufacturing development models for evaluation that were delivered by early 2020.

HII Achieves Significant Light-Off Milestone aboard First Flight III DDG

Ingalls Shipbuilding electrician Joe Ditsworth and electrical foreman Lisa Avery initiate light-off of the Aegis Combat System aboard Jack H. Lucas (DDG 125) in the ship's combat information center. *INGALLS SHIPBUILDING /* Luis Solis

PASCAGOULA, Miss. – Huntington Ingalls Industries' Ingalls Shipbuilding division recently achieved the Aegis light-off milestone on the Navy's first Flight III Arleigh Burke-class guided missile destroyer Jack H. Lucas (DDG 125), the company said Jan. 12.

This milestone marks the beginning of combat system testing as shipbuilders ready the ship for propulsion tests and

eventually sea trials.

“I am again very proud of our DDG 51 team and the work they have done,” said Kari Wilkinson, Ingalls Shipbuilding president. “Not only have they completed a significant program milestone aboard the first Flight III destroyer, but they have done so in the face of a pandemic. This team continues to prove it’s as strong as the ships it builds.”

The Flight III upgrade incorporates a number of design modifications that collectively provide significantly enhanced capability. Aegis light-off is an important milestone for integrating and activating all of the new electric plant equipment and combat systems.

“Through perseverance, a good plan, execution of that plan and relentless follow up, our shipbuilders have reached ALO,” said Jeff J. Davis, DDG 125 construction manager. “There is a huge collaboration effort between Ingalls, the Navy, industry partners and multiple other contractors.”

Arleigh Burke-class destroyers are highly capable, multi-mission ships and can conduct a variety of operations, from peacetime presence and crisis management to sea control and power projection, all in support of the United States military strategy. Guided missile destroyers are capable of simultaneously fighting air, surface and subsurface battles. The ship contains a myriad of offensive and defensive weapons designed to support maritime defense needs well into the 21st century.