



# Navy Bringing Well Decks Back to Amphibs

By Kris Osborn

January 18th, 2014 1:00 am

The Navy has begun early design work, affordability studies and planning with industry partners for its third big-deck America-Class Amphibious Assault Ship, or LHA 8, slated to enter service in 2024, service officials said Jan. 15 at the Surface Navy Association Annual Symposium, Crystal City, Va.

Unlike the first two America-Class amphibs now in development, the USS America and the USS Tripoli designed as aviation-centric large-deck amphibs, LHA 8 will be built with a classic amphibious assault ship well deck designed to move personnel, vehicles and equipment from ship to shore, said Capt. Chris Mercer, amphibious warfare program manager.

“This is a very classic, in-house Navy design,” he said.

Navy design work and affordability initiatives on LHA 8 are now underway through a cooperative deal with Huntington Ingalls and NASSCO shipbuilding firms, Mercer explained. Following the early design work and some advanced procurement dollars in 2015 and 2016, detailed design and construction work is slated for 2017 and 2018.

Mercer said the well deck will be important for the Pacific rebalance and linked the decision to return to a well deck with LHA 8 to a capabilities based assessment in 2011 run by the Office of the Chief of Naval Operations, or OPNAV. This effort examined the total amphibious footprint in light of current and anticipated future threat and conflict scenarios.

“This was an assessment by our requirements folds and the Marine Corps were involved – looking at the total footprint including vehicle lift and cargo. You’ve got more up-armored vehicles from all of our experience in Iraq and Afghanistan, so air assets are not going to be the sole answer,” Mercer explained.

One analyst agreed that re-introducing the well deck and surface connectors such as Landing Craft Air Cushions, or LCACs, could allow for easier and more efficient ship-to-shore transport of heavier vehicles and amphibious units.

“It is expensive and labor intensive to bring a large amount of equipment through airlift. Vehicles have gotten heavier and complex over time,” said Ben Friedman, research fellow in defense and homeland security, Cato Institute, a D.C.-based think tank.

Friedman explained that during the late ‘90s and early ‘00’s the Pentagon was quick to emphasize lighter vehicles, sensors and the notion that heavier combat assets might be less crucial than was historically the case. This approach, however, was overturned by lessons learned during wars in Iraq and Afghanistan which led to up-armorings and use of increasingly heavier vehicles.

“Even in a counterinsurgency environment there are a lot of advantages to a heavy vehicle,” Friedman added.

The requirements for the LHA 8 have been set for several years now, however some small changes here and there have led to tweaks of the Capabilities Development Document, Mercer said.

Bringing the well deck back to the ship will require that the ship’s island to be slightly smaller compared to the first two America-class amphibians.

Aviation-centric big-deck amphibians are configured with more deck-space than their predecessors. Wasp and Tarawa-class amphibians are engineered with more hangar space to accommodate the MV-22 Osprey and F-35B Joint Strike Fighter as well as other aviation assets.

LHA 6, the USS America, recently completed builder’s trials and is slated for formal delivery to the Navy later this year and fabrication and steel-work recently begun on the USS Tripoli or LHA 7, Mercer said.

Mercer said as many as 14 different design changes were made to the big-deck amphibians so that the ship could accommodate the heat generated by landings of the F-35B.

“Some changes were as small as putting covers over life rafts and covers over refueling stations and relocating antennas. These are all to help the flight deck accept heat input,” Mercer said.

Overall, the America-class amphibians are large warships. The 40,000-ton USS America, which completed sea trials in November of last year, can reach speeds of 24 knots and is 844 feet –long, Mercer said.

Also, the America-class amphibians use a hybrid-electric drive system, he added. Hybrid-electric drive for amphibians started in the 90s with Wasp-class amphibians, Mercer said.

“As we were delivering LHD 7 (USS Iwo Jima), it was very clear that we had to get away from steam plants with the inefficiencies and dangers and the training and maintenance and costs. In the late 90s large deck amphibians had a big change. We went with an electric drive option,” he said. “We put that in the USS Makin Island. Fuel savings efficiencies that we gained from a

hybrid electric drive in a large deck amphib is moving forward and will only get better as we develop more electronics.”