

## **Executive Summary**

### **LPD-17 to LSD (Modified Repeat)** **LTjg Chris MacLean, USN, LT Andrew Privette, USN, LCDR John Campbell, USN, CDR Ken Shepard, USN**

Of the 12 active dock landing ships (LSD) in the United States Navy (USN), eight were commissioned between 1985 and 1989. The Marine Corps and Navy officials require an amphibious force consisting of 12 LSDs to meet the 2.0 Marine Expeditionary Brigade (MEB) Amphibious lift goal. The first of the USS WHIDBEY ISLAND (LSD-41) class is scheduled for decommissioning in the 2015, and a number of replacement concepts are being considered.

This study evaluated using the ongoing USS SAN ANTONIO (LPD-17) class production line as a basis for a modified repeat to meet the role currently filled by the LSD 41/49 class of ships. This modified repeat was designed with cost as a primary driver for design decisions. The final design removed the aviation hangar facilities, a large portion of the aft superstructure, removed many Radar Cross Section Reduction (RCSR) features, and reduced the Command, Control, Computer and Information (C4I) systems. The current LPD-17 data, arrangements, weights, and drawings were modified to transform the ship into a LSD variant. This variant was analyzed for structural strength and stability along with various seakeeping scenarios to determine feasibility.

Based on this study, the LPD-17 can be utilized as a basis for an LSD-41/49 class replacement. The LSD(X) is a feasible solution from both an economic and capability perspective and can meet all LSD-41/49 mission objectives.