Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy											Date: March 2014	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604311N *I LPD-17 Class Systems Integration*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	30.527	0.741	1.214	0.376	-	0.376	0.751	0.771	0.789	0.807	Continuing	Continuing
2283: *LPD-17 Class System Integration*	30.527	0.741	1.214	0.376	-	0.376	0.751	0.771	0.789	0.807	Continuing	Continuing
MDAP/MAIS Code: 542												

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The LPD-17 Class ships are functional replacements for 41 ships of four classes of amphibious ships. These new ships embark, transport, and land elements of Marine landing forces in an amphibious assault by helicopters, landing craft, and amphibious vehicles. Tactics, techniques, and tools for naval expeditionary warfare continue to evolve. The LPD-17 Class configuration must continue to adapt to this evolutionary process as these ships are expected to be in service until almost 2050. The LPD-17 design includes system configurations that reduce operating and support costs and facilitate operational performance improvements. The RDT&E,N funding will be used for system engineering and integration efforts to resolve obsolescence issues facing the LPD-17 Class components, as well as develop further reductions in life cycle costs, and will integrate performance upgrades in a rapid, affordable manner. These efforts will result in well-defined specifications and drawings in system integration design packages that provide technical baselines for follow-on ship procurements. This program is funded under Engineering and Manufacturing Development because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	0.824	1.214	0.830	-	0.830
Current President's Budget	0.741	1.214	0.376	-	0.376
Total Adjustments	-0.083	-	-0.454	-	-0.454
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.013	-			
• Rate/Misc Adjustments	-	-	-0.454	-	-0.454
• Congressional General Reductions Adjustments	-0.070	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy	Date: March 2014
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604311N *I LPD-17 Class Systems Integration*

Change Summary Explanation

FY 2013 reductions reflect Congressionally mandated sequestration and general reductions.

FY 2015 reductions reflect the Department's decision to reduce contracted services and other rate/misc adjustments.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy												Date: March 2014
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604311N / *LPD-17 Class Systems Integration*				Project (Number/Name) 2283 / *LPD-17 Class System Integration*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
2283: *LPD-17 Class System Integration*	30.527	0.741	1.214	0.376	-	0.376	0.751	0.771	0.789	0.807	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The LPD-17 Class ships are functional replacements for 41 ships of four classes of amphibious ships. These new ships embark, transport, and land elements of Marine landing forces in an amphibious assault by helicopters, landing craft, and amphibious vehicles. Tactics, techniques, and tools for naval expeditionary warfare continue to evolve. The LPD-17 Class configuration must continue to adapt to this evolutionary process, because these ships are expected to be in service until almost 2050. The LPD-17 design includes system configurations that reduce operating and support costs and facilitate operational performance improvements. System engineering and integration efforts that began in FY 1997 will develop further reductions in life cycle costs and will integrate performance upgrades in a rapid, affordable manner. Possible improvements include advanced sensors, advanced computers, advanced command and control software, advanced information systems technologies, and ship based logistics concepts. Cost reduction and improved performance will be accomplished through sustained modeling and simulation efforts, continued personnel reductions efforts, system performance tradeoff evaluation, and naval expeditionary warfare systems engineering. Feedback from the operational forces for integrating system configurations will be accomplished through the Naval Expeditionary Warfare Centers in Quantico, Dahlgren, China Lake, Naval Research Lab, and Little Creek, Virginia. These efforts will result in well-defined specifications and drawings in system integration design packages that provide technical baselines for follow-on ship procurements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Systems Engineering/Integration	0.741	1.214	0.376
Articles:	-	-	-
Description: Continuing Naval Expeditionary Warfare Systems Engineering efforts and integration efforts for unique LPD 17 Class systems, including efforts to resolve obsolescence issues impacting the class.			
FY 2013 Accomplishments: Continued the Reliability and Obsolescence studies for shipboard network/electronics/machinery systems, and Environmental Qualification Testing (EQT) for obsolescence replacements. Tasked reliability design improvements for the Hangar Aviation Bridge Crane, Watermist, and piping chlorination systems. Conducted environmental testing of composite structure grating. Participated in SBIR projects for chlorine control sensor, and transparent armor windows. Started Integrated Voice Network (IVN) inter-system requirements studies and testing for introduction to the class.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604311N / *LPD-17 Class Systems Integration*	**Project (Number/Name)** 2283 / *LPD-17 Class System Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continue Reliability and Obsolescence studies for Mission Systems such as Hanger Aviation Bridge Crane, Improved Flight Deck Ramp Closures, and CPP control wiring issues. Environmental Qualification Testing (EQT) is also required for new Electromagnetic Pulse/Electromagnetic Interference (EMP/EMI) cable, and multiple Raytheon provided systems such as Ship Wide Area Network (SWAN) and Integrated Voice Network (IVN). Investigate integration of SWAN Hull, Mechanical, and Electrical (HM&E) as a part of Consolidated Afloat Networks and Enterprise Services (CANES) install on the LPD-17 Class. ***FY 2015 Plans:*** Environmental Qualification Testing (EQT) and Information Assurance (IA) of Raytheon systems, such as Ship Wide Area Network (SWAN)/ Consolidated Afloat Networks and Enterprise Services (CANES) and machinery obsolescence issues. Hull, Mechanical, and Electrical (HM&E) reliability and obsolescence improvements for seawater systems and mission systems such as boat cranes, davits, and A/C plants.			
Accomplishments/Planned Programs Subtotals	0.741	1.214	0.376

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• SCN/5300: *Completion of Prior Year Shipbuilding Programs*	-	-	54.096	-	54.096	38.733	-	-	-	-	1,902.629
• SCN/3036: *LPD-17*	323.757	-	12.565	-	12.565	34.054	20.800	-	-	-	17,940.219

Remarks

D. Acquisition Strategy

FY13 and out: continue developmental sole source efforts

E. Performance Metrics

LPD-17 Class ships will conduct Environmental Qualification Testing (EQT) and Information Assurance (IA) certification.

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604311N / *LPD-17 Class Systems Integration*	**Project (Number/Name)** 2283 / *LPD-17 Class System Integration*