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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Navy	<b>DATE:</b> April 2013
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>System Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604311N: <i>LPD-17 Class Systems Integration</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	29.669	0.858	0.824	1.214	-	1.214	0.830	0.855	0.871	0.887	Continuing	Continuing
2283: <i>LPD-17 Class System Integration</i>	29.669	0.858	0.824	1.214	-	1.214	0.830	0.855	0.871	0.887	Continuing	Continuing

**MDAP/MAIS Code(s):** 542

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 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. LSD(X) moved to RDT&E,N PE 0603564N Project 2474 starting in FY12 and out.

<b><u>B. Program Change Summary (\$ in Millions)</u></b>	<b><u>FY 2012</u></b>	<b><u>FY 2013</u></b>	<b><u>FY 2014 Base</u></b>	<b><u>FY 2014 OCO</u></b>	<b><u>FY 2014 Total</u></b>
Previous President's Budget	0.884	0.824	0.840	-	0.840
Current President's Budget	0.858	0.824	1.214	-	1.214
Total Adjustments	-0.026	0.000	0.374	-	0.374
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.026	0.000			
• Program Adjustments	0.000	0.000	0.374	-	0.374

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy		DATE: April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>System Development &amp; Demonstration (SDD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0604311N: <i>LPD-17 Class Systems Integration</i>
<b><u>Change Summary Explanation</u></b> Technical: Not applicable.  Schedule: Not applicable.		

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604311N: LPD-17 Class Systems Integration				PROJECT 2283: LPD-17 Class System Integration			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2283: LPD-17 Class System Integration	29.669	0.858	0.824	1.214	-	1.214	0.830	0.855	0.871	0.887	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 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. LSD(X) moved to RDT&E,N PE 0603564N Project 2474 starting in FY2012 and out years.

## B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
<b>Title:</b> Systems Engineering/Integration	0.858	0.824	1.214
<b>Articles:</b>	0	0	0
<b>Description:</b> 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.			
<b>FY 2012 Accomplishments:</b> Completed Probability of Raid Annihilation (PRA) Testbed Development. Completed the training system process and GAP Analysis to identify and validate manpower and training, USMC Communication Exercise Support, LPD 17 Joint Interoperability Test Command (JITC) Certification/OPEVAL Support, Follow-on Operational Test and Evaluation (FOT&E) MARCORSYSCOM			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Navy							<b>DATE:</b> April 2013				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>System Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604311N: <i>LPD-17 Class Systems Integration</i>			<b>PROJECT</b> 2283: <i>LPD-17 Class System Integration</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>		
Support, Advanced Enclosed Mast/Sensor (AEM/S) Access Study, and Radar Cross-section Reduction (RCSR) Testing of Motor Gasoline (MOGAS) Rack.											
<b>FY 2013 Plans:</b> Continue the Reliability and Obsolescence studies for shipboard network/electronics/machinery systems, and Environmental Qualification Testing (EQT) for obsolescence replacements. Start Windows 7/ Operating System Migration feasibility study, and MK 46 Gun Weapon System (GWS) Reliability and Interoperability study.											
<b>FY 2014 Plans:</b> Continue Reliability and Obsolescence studies for Mission System (Hanger Bridge Crane, Improved Flight Deck Ramp Closures and CPP software/wiring studies) as well as Windows 7 Operating System migration feasibility studies. EQT is also required for new Electromagnetic Pulse/Electromagnetic Interference (EMP/EMI) cable, Ship Wide Area Network (SWAN) Switch and server cabinets, Navigational Data Distribution System (NDDS) cabinet, Ship Control System (SCS) workstation/computer, and Magnetic Signature Control System (MSCS) Bipolar Amplifier Unit (BPAU). SWAN Hull, Mechanical, and Electrical (HM&E) as a part of integrating Consolidated Afloat Networks and Enterprise Services (CANES) into the LPD-17 Class.											
<b>Accomplishments/Planned Programs Subtotals</b>							0.858	0.824	1.214		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• SCN/3036: <i>LPD 17</i>	1,911.436	0.000	0.000		0.000	53.685	37.705	24.442	0.000	0.000	12,640.368
• SCN/5300: <i>Completion of Prior Year Shipbuilding Programs</i>	0.000	80.888	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1,816.688
<b>Remarks</b>											
<b>D. Acquisition Strategy</b> FY12 and out: continue developmental sole source efforts											
<b>E. Performance Metrics</b> LPD-17 Class ships will conduct Follow On Test and Evaluation as outlined in the test and evaluation Master Plan.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604311N: LPD-17 Class Systems Integration				PROJECT 2283: LPD-17 Class System Integration					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering and Integration	WR	NSWC Crane:Crane, IN	12.538	0.373	Dec 2011	0.358	Dec 2012	0.354	Dec 2013	-		0.354	Continuing	Continuing	Continuing
Systems Engineering and Integration	C/CPFF	Raytheon Company:San Diego, CA	0.985	0.485	Dec 2011	0.466	Dec 2012	0.860	Dec 2013	-		0.860	Continuing	Continuing	Continuing
LSD(X) Systems Integration (Next Gen.)	C/CPFF	CSC, Alion Science:Washington, DC	0.549	0.000		0.000		0.000		-		0.000	0.000	0.549	
LSD(X) Systems Integration (Next Gen.)	WR	NSWC Carderock, NSWC Dahlgren:NSWC Beth, MD; NSWC Dahlgren, VA	0.100	0.000		0.000		0.000		-		0.000	0.000	0.100	
DAWF	Various	Various:Various	0.005	0.000		0.000		0.000		-		0.000	0.000	0.005	
Subtotal			14.177	0.858		0.824		1.214		0.000		1.214			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OT&E/Interoperability	WR	OPTEVFOR:WR	15.492	0.000		0.000		0.000		-		0.000	0.000	15.492	
Subtotal			15.492	0.000		0.000		0.000		0.000		0.000	0.000	15.492	
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			29.669	0.858		0.824		1.214		0.000		1.214			
Remarks															

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**Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy**

**DATE:** April 2013

**APPROPRIATION/BUDGET ACTIVITY**















1319: *Research, Development, Test & Evaluation, Navy*  
BA 5: *System Development & Demonstration (SDD)*

**R-1 ITEM NOMENCLATURE**

PE 0604311N: *LPD-17 Class Systems Integration*

**PROJECT**

2283: *LPD-17 Class System Integration*

Fiscal Year	2012				2013				2014				2015				2016				2017				2018			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Follow-On Operational Test and Evaluation (FOT&E)																												
Rel. Obsolescence Studies																												
-Int. Shipboard Elec. & EQT																												
-Windows & MK 46 studies																												
-Future Obsol. issue resolution																												
SWAN /CANES Integration																												
Deliveries																												
	LPD 22			LPD 23	LPD 24			LPD 25									LPD 26				LPD 27							

LPD 27 Delivery is TBD

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Navy			<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>System Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604311N: <i>LPD-17 Class Systems Integration</i>	<b>PROJECT</b> 2283: <i>LPD-17 Class System Integration</i>	

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2283</b>				
Delivery (LPD 22)	1	2012	1	2012
Delivery (LPD 23)	4	2012	4	2012
Delivery (LPD 24)	1	2013	1	2013
Delivery (LPD 25)	4	2013	4	2013
Delivery (LPD 26)	2	2016	2	2016
Delivery (LPD 27)	3	2017	3	2017
Follow-On Operational Test and Evaluation (FOT&E) Completion	1	2012	4	2012
SWAN/CANES Integration	1	2014	4	2014
Rel. Obsolescence Studies: Int. Shipboard Elec. & EQT	1	2012	4	2013
Rel. Obsolescence Studies: Windows & MK 46 Studies	1	2013	2	2014
Rel. Obsolescence Studies: Future Obsol. Issue Resolution	1	2013	4	2018