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**Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				PE 0204413N: <i>Amphibious Tactical Supt Units</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	1.142	4.357	5.214	-	5.214	5.571	4.798	4.571	3.435	Continuing	Continuing
2231: <i>LCU Replacement and DMFD</i>	1.142	4.357	5.214	-	5.214	5.571	4.798	4.571	3.435	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

TECHNOLOGY TRANSITION: Provides for research efforts on Landing Craft Air Cushioned (LCAC) Future Naval Capabilities to transfer technologies to functional uses on current LCACs. Current technology initiatives include the following: sustainability/readiness/performance analysis; LCAC communications improvements; development and qualification of full authority digital engine controller for LCAC engines, new torque meter design for ETF40B engines and fuel efficiency trials.

Landing Craft, Utility Replacement (LCU(R)) Capabilities Based Assessment (CBA) will define mission, identify and evaluate capabilities, identify and assess potential solutions, and evaluate operational risk in order to provide recommendations for validation authority for high speed, high capacity assault craft replacement.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	2.314	4.357	4.802	-	4.802
Current President's Budget	1.142	4.357	5.214	-	5.214
Total Adjustments	-1.172	-	0.412	-	0.412
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-1.127	-			
• SBIR/STTR Transfer	-0.003	-			
• Program Adjustments	-	-	0.700	-	0.700
• Section 219 Reprogramming	-0.042	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.288	-	-0.288

**Change Summary Explanation**

Technical: Not applicable.

Schedule: Added funds to begin LCU(R) CBA.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0204413N: <i>Amphibious Tactical Supt Units</i>				<b>PROJECT</b> 2231: <i>LCU Replacement and DMFD</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2231: <i>LCU Replacement and DMFD</i>	1.142	4.357	5.214	-	5.214	5.571	4.798	4.571	3.435	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

Current technology initiatives include the following: sustainability/readiness/performance analysis; LCAC communications improvements; development and qualification of full authority digital engine controller (FADEC) for LCAC engines, new torque meter design for ETF40B engines and fuel efficiency trials.

LCU (R): CBA for replacement program.

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

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> LCU Replacement and DMFD	1.142	4.357	5.214
<b>Articles:</b>	0	0	0
<b>FY 2010 Accomplishments:</b> Began development of functional specification for PC tablet software and continued development of virtual tour software and maintenance tablets.			
<b>FY 2011 Plans:</b> Award contract for development of PC tablet software and accomplish successful testing. Begin redevelopment of full authority digital engine controller for LCAC engines. Deliver approved plan for redesign of ETF40B engine torque meters. Begin development of FADEC. Conduct LCAC fuel efficiency trials.			
<b>FY 2012 Plans:</b> Complete development and achieve qualification of full authority digital engine controller. Begin redesign of ETF40B engine torque meters. Initiate LCU(R) CBA process.			
<b>Accomplishments/Planned Programs Subtotals</b>	1.142	4.357	5.214

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPN 0970: <i>Amphibious Tactical Support Units</i>	4.900	9.142	0.000	0.000	0.000	22.632	14.411	8.238	6.649	0.000	65.972
	2.436	6.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.769

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204413N: <i>Amphibious Tactical Supt Units</i>	<b>PROJECT</b> 2231: <i>LCU Replacement and DMFD</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPN 0981/1: <i>Items less than \$5M (Material)</i>											
• OPN 0981/2: <i>Items less than \$5M (Installation)</i>	11.826	13.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.828
• SCN 5139: <i>LCAC SLEP</i>	63.660	83.035	84.076	0.000	84.076	85.777	84.649	86.190	87.376	153.100	727.863

**D. Acquisition Strategy**

TECHNOLOGY TRANSFER - RDT&E efforts commenced in FY06. Multiple contracts and Field Activities are involved through FY16 to complete the various projects.

**E. Performance Metrics**

- FY10 - Development of functional specification for PC tablet software and continued development of virtual tour software and maintenance tablets.
- FY11 - Award contract for development of PC tablet software and accomplish successful testing. Begin development of FADEC. Deliver approved plan for redesign of ETF40B engine torque meters. Begin redevelopment of full authority digital engine controller. Conduct LCAC fuel efficiency trials.
- FY12 - Complete development and achieve qualification of full authority digital engine controller. Begin redesign of ETF40B engine torque meters.
- FY12 - Begin LCU(R) CBA process.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204413N: <i>Amphibious Tactical Supt Units</i>	<b>PROJECT</b> 2231: <i>LCU Replacement and DMFD</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Component Development	WR	NSWC CD:Philadelphia, PA	2.911	1.659	Feb 2011	1.702	Jan 2012	-		1.702	4.327	10.599	
Systems Engineering	WR	NSWC CD:Philadelphia, PA	1.348	0.560	Feb 2011	1.000	Jan 2012	-		1.000	4.000	6.908	
<b>Subtotal</b>			4.259	2.219		2.702		-		2.702	8.327	17.507	

**Remarks**  
Systems Engineering contains \$843K for LCU Replacement efforts

<b>Support (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Development Support	WR	NSWC PCD:Panama City, FL	1.001	1.450	Jul 2011	1.645	May 2012	-		1.645	6.580	10.676	
<b>Subtotal</b>			1.001	1.450		1.645		-		1.645	6.580	10.676	

**Remarks**  
Contract for PC Tablet estimated for award Jul 2011  
Development Support contains \$157K for LCU Replacement Efforts

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Developmental T & E	WR	Various:Various	0.287	-		-		-		-	0.000	0.287	
Operational T & E	WR	NSWC PCD:Panama City, FL	0.167	0.198	Mar 2011	0.216	Mar 2012	-		0.216	0.848	1.429	
Test Assets	WR	NSWC PCD:Panama City, FL	0.316	0.198	Mar 2011	0.221	Mar 2012	-		0.221	0.900	1.635	
<b>Subtotal</b>			0.770	0.396		0.437		-		0.437	1.748	3.351	

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204413N: <i>Amphibious Tactical Supt Units</i>	<b>PROJECT</b> 2231: <i>LCU Replacement and DMFD</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204413N: <i>Amphibious Tactical Supt Units</i>	<b>PROJECT</b> 2231: <i>LCU Replacement and DMFD</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2231</b>				
LCAC Technology Initiatives	1	2010	4	2016
LCU (R) CBA	2	2012	4	2013