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<b>Exhibit R-2, RDT&amp;E Budget Item Justification: PB 2011 Navy</b>	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	372.036	422.746	226.288	0.000	226.288	183.419	110.261	82.202	87.285	Continuing	Continuing
3096: <i>Littoral Combat Ship</i>	103.288	121.407	75.675	0.000	75.675	71.585	31.302	25.233	26.712	Continuing	Continuing
3129: <i>LCS Mission Package Development</i>	168.082	162.458	109.048	0.000	109.048	111.834	78.959	56.969	60.573	Continuing	Continuing
4018: <i>Littoral Combat Ship Construction</i>	90.393	75.147	41.565	0.000	41.565	0.000	0.000	0.000	0.000	0.000	1,279.015
9999: <i>Congressional Adds</i>	10.273	63.734	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.139

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

**A. MISSION DESCRIPTION:**

This Program Element (PE) provides funds for detailed design, development, construction, integration and testing of the Littoral Combat Ship (LCS). LCS will be a fast, agile, and networked surface combatant with capabilities optimized to defeat asymmetric threats, and assure naval and joint force access into contested littoral regions. It will use open-systems-architecture design, modular weapons, and sensor systems, and a variety of manned and unmanned vehicles to expand the battle space and project offensive power into the littoral. LCS will operate with focused-mission packages that deploy manned and unmanned vehicles to execute a variety of missions, including littoral anti-submarine warfare (ASW), anti-surface warfare (SUW) and mine countermeasures (MCM). LCS will also possess inherent capabilities, regardless of mission package installed, including intelligence, surveillance, reconnaissance (ISR), homeland defense, Maritime Interdiction/Interception Operations (MIO), anti-terrorism/force protection (AT/FP), air self-defense, joint littoral mobility, and Special Operating Forces (SOF) and logistic support for movement of personnel and supplies. This relatively small, high-speed surface combatant will complement the U.S. Navy's AEGIS Fleet and DDG 1000 by operating in environments where it is less desirable to employ larger, multi-mission ships. LCS will have the capability to deploy independently to overseas littoral regions, remain on station for extended periods of time either with a battle group or through a forward-basing arrangement and will be capable of underway replenishment. LCS will operate with Carrier Strike Groups, Surface Action Groups, in groups of other similar ships, or independently for diplomatic and presence missions. Additionally, LCS will have the capability to operate cooperatively with the U.S. Coast Guard and Allies.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0603581N: Littoral Combat Ship (LCS)			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	367.840	360.518	0.000	0.000	0.000
Current President's Budget	372.036	422.746	226.288	0.000	226.288
Total Adjustments	4.196	62.228	226.288	0.000	226.288
• Congressional General Reductions		-1.762			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.010			
• Congressional Adds		64.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	9.999	0.000			
• SBIR/STTR Transfer	-5.803	0.000			
• Program Adjustments	0.000	0.000	226.288	0.000	226.288
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 9999: Congressional Adds				FY 2009	FY 2010
Congressional Add: Revised Acquisition Strategy				0.000	59.751
Congressional Add: MIW Modules Prog - Cong				0.000	3.983
Congressional Add: Autonomous Acoustic Array Advanced Tubular Solid O				1.995	0.000
Congressional Add: LCS Common Mission Package Training Environmnet				4.488	0.000
Congressional Add: Alternative Use of Mine Warfare Modules				3.790	0.000
Congressional Add Subtotals for Project: 9999				10.273	63.734
Congressional Add Totals for all Projects				10.273	63.734
Change Summary Explanation					
FY09 Program Adjustment reflects a below threshold reprogramming for USS FREEDOM (LCS 1) Early Deployment					
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 3096: Littoral Combat Ship			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3096: Littoral Combat Ship	103.288	121.407	75.675	0.000	75.675	71.585	31.302	25.233	26.712	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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

The RDT&E portion of the LCS Program is comprised of design and development efforts required to deliver the Flight 0 Class Ships, including integration with modular MCM, ASW, and SUW mission packages, and construction of the first two Flight 0 Class Ships, the USS FREEDOM (LCS 1) delivered September 2008 and the USS INDEPENDENCE (LCS 2) delivered December 2009. It includes the design and development effort required to support the introduction and deployment of a Flight 0+ baseline for the ships awarded in FY09 with the incorporation of lessons learned from the design and construction of USS FREEDOM (LCS 1) and USS INDEPENDENCE (LCS 2), including improved waterjets and a waterjet tunnel extension on the Lockheed Martin (LM) LCS Design. Additionally, it includes design and development efforts required to support the introduction of a new down selected design baseline for a five year block buy in FY10-15. This new baseline will include lessons learned from the LCS 1 through 4 and the introduction of various cost reduction initiatives of a second source for the down selected design in FY12 built to a Technical Data Package (TDP) developed in FY10-12, with selected ship systems provided as GFE.

The LCS Program achieved Milestone A and Program Initiation in May 2004, and underwent a Milestone A update in FY09. Milestone B is planned for third quarter 2010.

The LCS design and development phases include platform design and development, experimentation and ship system design and integration, hull platform testing, development of a Technical Data Package, total ship system engineering and integration, planning and conduct of system testing, including procurement of ordnance.

The R&D portion of LCS funding is also comprised of formal Developmental and Operational Assessment testing of the LCS Ships and Mission Packages. Test and Evaluation will concentrate on verifying integration and interoperability of employed technologies and systems in the LCS Seaframe designs and modular mission packages to achieve the mission capabilities and performance requirements as defined in the LCS Program's Flight 0 and Flight 0+ Capabilities Development Documents (CDD). T&E functions will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), and Key Performance Parameters (KPP) for the core Seaframe and the focused missions. Operational testing will also include the conduct of formal Live Fire Test and Evaluation (LFT&E) efforts including Full Scale Shock Trials (FSST) through FY15.

**B. Accomplishments/Planned Program (\$ in Millions)**

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
LCS Class Design Services  Provides for Class Design Services efforts and a contract to both industry design teams for continued design refinement of the Flight 0 and 0+ baseline configurations and design development of future LCS Class ships of the down selected design.  FY 2009 Accomplishments: Maintain configuration management of multiple LCS baselines. Develop, review, approve and implement various Engineering Change Proposals determined necessary to the Flight 0 and Flight 0+ Seaframes resulting from production design drawing refinement, cost reduction initiatives, and improvements to systems and components of each design. Examples include, Engine Room Airborne Noise Abatement, Multiple Fire Alarm System stations, Anti-Terrorism Force Protection improvements, Production and Modeling and Simulation Improvements. These changes will then be incorporated in the drawing packages used by the shipbuilders as the baseline for production.  FY 2010 Plans: Award Class Design Services contracts for both LCS industry teams. Conduct Industry Systems Engineering design activities supporting the completion and transition to detailed design of the Flight 0+ and FY10 Block Buy baselines, including all required reporting documentation. Translate the Flight 0+ and FY10 Block Buy baseline design drawings and associated documentation, any systems/ component standardization along with information obtained as a result of the Post Delivery Test and Trials into new design baselines, which incorporate production, assembly and fabrication lessons learned from the previous Seaframes as well as operator feedback from the Seaframe and Mission Package Crews obtained during the Testing and Trials Period. Develop, review, and approve changes identified by the industry and/or government team. Maintain configuration management of multiple LCS baselines.	20.540	23.000	0.000	0.000	0.000
LCS Program Management	6.318	6.000	1.600	0.000	1.600

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Provides for overall LCS Program operations including technical, production, and logistics oversight, and acquisition, contract, Earned Value (EV), risk, science and technology and financial management.						
FY 2009 Accomplishments: Continued support of Joint Requirements Oversight Council (JROC) reviews and conducted Integrated Product Team (IPT) and Overarching Integrated Product Team (OIPT) events in support of program updates to the Defense Acquisition Executive (DAE). Continued oversight and analyses of contractor Earned Value (EV). Completed Naval Audit Service reviews of USS INDEPENDENCE and USS FREEDOM construction contractors, and continued implementation and monitoring of corrective actions. Completed development of required documentation for proposal solicitation and evaluation for FY09 Flight 0+ Class Ships. Conducted source selection for 2 Flight O+ Seaframes. Initiated development of documentation required for contract completion of USS INDEPENDENCE and USS FREEDOM. Conducted contract administration of transition of new design baseline for Flight 0+ and FY10-FY14 Block Buy ships. Managed initiation of USS INDEPENDENCE and USS FREEDOM formal Developmental and Operational Testing, including integration efforts with Mission Packages. Conducted contract administration of the development of new design baselines, including supporting business cases. Developed Milestone A required documents as directed by DAE. Developed acquisition strategy for FY09 and FY10 ships and developing acquisition strategies for FY11 and future ships. Supported successful Milestone A prime DAE Review. Supported delivery of USS INDEPENDENCE to the Navy.						
FY 2010 Plans: Supported the delivery of USS FREEDOM to the Navy in December 2009. Continue contract administration of transition to new design baselines for Flight 0+ and down selected FY10-14 Block Buy ships. Complete development of all required Milestone B documentation, including new CDD and supporting JROC reviews. Continue to manage execution of USS INDEPENDENCE and USS FREEDOM formal Developmental and Operational Testing, including integration efforts with Mission Packages. Conduct contract administration of the development of new design baselines						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
for future ships, including supporting affordability business cases. Finalize new LCS acquisition strategy. Finalize strategy and planning activities for follow on ships contract awards including the introduction of new second source for down selected design. Finalize all Milestone B activities. Manage development of LCS Technical Data Package.  FY 2011 Base Plans: Continue contract administration for all Flight 0+ ships. Continue all follow-on Milestone B activities to include all required Joint and Service reviews of products. Continue to manage execution of USS INDEPENDENCE and USS FREEDOM formal Developmental and Operational Testing, including integration efforts with the Mission Packages. Continue management of LCS TDP development and preparations for FY12 introduction of second source shipyard.						
LCS System-of-Systems Development, Engineering & Experimentation  Provides for LCS Program systems engineering in support of Flight 0, Flight 0+ and new FY10 Block Buy baseline design, development, certification, production (including ship system design and integration) combat system and C4I design, integration, and test, aviation (manned and unmanned) integration, modular MCM, ASW, and SUW mission package integration, logistics product development and various systems engineering activities required to perform risk analyses of new design and production technology concepts.  FY 2009 Accomplishments: Conducted systems engineering for Flight 0 design and build including multiple engineering, integration, production, and logistics activities. For the USS INDEPENDENCE (LCS 1), continued post-delivery systems engineering support including multiple certifications, tests and trials, and continued technical baseline management through two industrial availabilities and preparations for deployment. For the USS FREEDOM (LCS 2), continued pre-delivery systems engineering support including multiple certifications, tests and trials, and continued technical baseline management through Builder's Trials and preparations for Acceptance Trials and delivery. Managed integration of SUW		35.682	33.777	11.014	0.000	11.014

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Mission Package components and Independent Verification and Validation (IV&V) for implementation on Flight 0 (USS INDEPENDENCE and USS FREEDOM). Implemented Tactical Common Data Link (TCDL) integrated solution on Flight 0. Completed USS FREEDOM (LCS 2) design aluminum "grillage" and initiated associated material testing. Initiated efforts on SH-60B Datalink integration. Developed facilities support plans for CONUS LCS locations. Conducted systems engineering special studies and analyses in response to numerous emergent design/production issues highlighted in USS INDEPENDENCE and USS FREEDOMtesting. Managed the development, approval and transitioning to production of Flight 0+ technical baselines (Build Specifications), including review, approval and implementation of numerous Engineering Change Proposals (ECPs). Continued development of training equipment to support Train to Qualify.						
FY 2010 Plans: Conduct systems engineering activities for Flight 0, 0+, and FY10 Block Buy baselines including multiple engineering, integration, production, and logistics activities. Support the completion of Acceptance Trials and Delivery for USS FREEDOM. For Flight 0 (USS INDEPENDENCE and USS FREEDOM), continue post-delivery systems engineering support including multiple certifications, tests and trials, and technical baseline management through LCS 1 CMAV and deployment/testing and LCS 2 industrial availabilities and testing. Manage the integration of Mission Package components and Independent Verification and Validation (IV&V) for implementation. Complete USS FREEDOM design associated material testing. Complete efforts on SH-60B Datalink integration. Develop facilities support plans for CONUS LCS locations. Conduct systems engineering special studies and analyses in response to numerous emergent design/production issues highlighted in USS INDEPENDENCE and USS FREEDOM testing and LCS 3 and LCS 4 production. Continue management and transition into production of the Flight 0+ technical baselines (LCS 3 and LCS 4) including review, approval and implementation of numerous Engineering Change Proposals (ECPs). Continue development of training equipment to support Train to Qualify. Manage the development, approval and transition to production of FY10 Block Buy technical baseline (ICDs, SPDs, Build Specifications, Technical Data Package, etc.), including review, approval and implementation of numerous Engineering Change						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Proposals (ECPs). Complete all required systems engineering Milestone (MS) B documents and facilitate the approval process in support of MS B OIPTs and DAB. Conduct systems engineering efforts as part of the FY10 Block Buy source selection and down select/award.  FY 2011 Base Plans: Conduct systems engineering activities for Flight 0, 0+, and FY10 Block Buy baselines including multiple engineering, integration, production, and logistics activities. For Flight 0 (USS INDEPENDENCE and USS FREEDOM), continue post-delivery systems engineering support throughout testing and industrial availabilities. Manage the integration of Mission Package components and Independent Verification and Validation (IV&V) for implementation. Conduct systems engineering special studies and analyses as necessary. Continue management and transition into production of the Flight 0+ technical baselines (LCS 3 and LCS 4) including review, approval and implementation of numerous Engineering Change Proposals (ECPs). Continue development of training equipment to support Train to Qualify. Manage the development, approval and transition to production of FY10 Block Buy technical baseline (ICDs, SPDs, Build Specifications, Technical Data Package, etc.), including review, approval and implementation of numerous Engineering Change Proposals (ECPs). Conduct systems engineering efforts as part of the definition of the technical baseline for the FY12 award of the down selected LCS to a second source.						
LCS Total System Training Architecture  Provides for an LCS shore-based training capability to satisfy individual, unit, team and force training to meet Train to Qualify CDD requirements. Leverages DDG 1000 Total Ship Training System efforts, as well as trainers previously procured for LCS.  FY 2009 Accomplishments: Complete upgrade to USS INDEPENDENCE (LCS 1) Trainer to Navy Training vice Vendor Training. Continue development and implementation of the USS FREEDOM (LCS 2) Trainer.		9.100	9.900	10.835	0.000	10.835

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Update Trainers to ship as-built configurations to meet train to qualify certification requirements. Begin enhancements of other trainers for USS INDEPENDENCE and USS FREEDOM configuration. Develop trainers at Surface Warfare Officer's school for LCS training. Complete the LCS 1 Trainer variant.						
FY 2011 Base Plans: Completion of enhancements to presentations for LCS 1 and LCS 2 configurations. Provides crew training to meet Train to Qualify requirements and provide shore training facility with Navy Continuous Training Environment (NCTE) capability for multiple crews to complete required battlegroup training from shore facility. Develop additional trainers based on the LCS Training Front End Analysis.						
LCS Test & Evaluation  Execute formal LCS Test and Evaluation (T&E) program, Developmental Testing and Operational Testing (DT/OT) including Live Fire Test and Evaluation (LFT&E) and procurement of T&E Ordnance. Developmental Test and Evaluation (DT&E) will concentrate on verifying integration and interoperability of employed technologies and systems in the Sea Frame designs and modular mission packages to achieve the mission capabilities and performance requirements as defined in the LCS Program's Capabilities Development Document (CDD). DT&E functions will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), and Key Performance Parameters (KPP) for the core Seaframe and the focused missions. Operational Testing for the LCS will be conducted in multiple phases; multiple phases of Initial Operational Test and Evaluation (IOT&E) on each Seaframe design to support the development of the initial seaframe deliveries and a specific mission package, and Follow-on Operational Test and Evaluation (FOT&E), as required, when new capabilities are developed or refined.		31.180	48.730	52.226	0.000	52.226

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Initiate the development of test plans for USS INDEPENDENCE and USS FREEDOM that consolidates the specific test and associated testing time. Continue LCS LFT&E Modeling and Simulation and validation testing. Initiate USS INDEPENDENCE (LCS 1) Developmental Testing. DT&E will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), Key Performance Parameters (KPP), and additional attributes for the core Seaframe and the focused mission capabilities. Complete procurement of T&E Ordnance to support LCS Class tests and trials. Perform accelerated testing on USS INDEPENDENCE (LCS 1).						
FY 2010 Plans: Continue LCS LFT&E Modeling and Simulation and validation testing. Continue USS INDEPENDENCE (LCS 1) Developmental Testing and initiate Developmental Testing of USS FREEDOM (LCS 2). Conduct SUW MP Developmental Testing. DT&E will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), Key Performance Parameters (KPP), and additional attributes for the core Seaframe and the focused mission capabilities. Complete procurement of T&E Ordnance to support LCS Class test and trials. Conduct testing on USS INDEPENDENCE and USS FREEDOM for the benefit of the LCS Class (testing and certification will continue into FY11 for both USS INDEPENDENCE and USS FREEDOM).						
FY 2011 Base Plans: Continue LCS LFT&E Modeling and Simulation and validation testing. Complete USS INDEPENDENCE (LCS 1) Development Testing and continue USS FREEDOM (LCS 2) DT. DT&E will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), Key Performance Parameters (KPP), and additional attributes for the core Seaframe and focused mission capabilities. Conduct tests on USS INDEPENDENCE and USS FREEDOM for the benefit of the LCS Class.						
Acquisition Workforce		0.468	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Acquisition Workforce											
FY 2009 Accomplishments: Acquisition Workforce											
Accomplishments/Planned Programs Subtotals						103.288	121.407	75.675	0.000	75.675	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 2127: Littoral Combat Ship	1,016.952	1,076.669	1,509.335	0.000	1,509.335	1,808.128	2,333.833	2,416.574	2,747.939	Continuing	Continuing
• 1600: LCS Modules	6.332	116.898	82.951	0.000	82.951	121.958	179.857	194.369	306.691	Continuing	Continuing
• 4221: LCS Module Weapons	0.000	0.000	9.808	0.000	9.808	5.585	3.235	9.722	7.729	Continuing	Continuing
• 0443: Aircraft Procurement, Navy	50.189	77.377	47.484	0.000	47.484	46.242	67.442	89.553	89.485	Continuing	Continuing
• 1B4B: Ship Maintenance	11.746	9.115	6.218	0.000	6.218	6.571	6.166	8.478	9.885	Continuing	Continuing
• 1B1B: Mission and Other Ship Operations	0.000	0.000	1.190	0.000	1.190	3.285	4.696	6.845	9.499	Continuing	Continuing
• 1B5B: Ship Depot Operations	25.792	18.873	31.019	0.000	31.019	24.417	33.945	21.341	19.891	Continuing	Continuing
• 1C1C: Combat Communications	1.422	1.683	2.108	0.000	2.108	2.723	3.676	3.757	3.823	Continuing	Continuing
• 5100: Outfitting / Post Delivery	0.000	0.000	2.787	0.000	2.787	68.794	75.712	104.504	90.958	Continuing	Continuing
D. Acquisition Strategy											
The LCS Program takes an evolutionary approach to acquisition that emphasizes competition as the key to achieving affordability. Initially, two industry teams competed against each other with two different LCS designs LCS 1-4, over two flights, Flight 0 and Flight 0+. A down select will be conducted in FY10 to a single design, and a second source introduced in FY12 for continued competition.											

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<p>The incorporation of lessons learned from the design, construction, and testing of the initial two ships, as well as introduction of improved waterjets and a waterjet tunnel extension on the LM LCS design will comprise the Flight 0+ baseline awarded in FY09. A new baseline will be implemented in the FY10-14 Block Buy and maintained in the FY12-14 second source Block Buy, both built to a common Technical Data Package.</p> <p>The LCS Program achieved Milestone A and Program Initiation in May 2004, and conducted a Defense Acquisition Executive (DAE) review in FY09. Milestone B is planned for third quarter 2010 prior to the award of the FY10 ships.</p> <p><b><u>E. Performance Metrics</u></b></p> <p>The LCS Program achieved Milestone A and Program Initiation in May 2004, and underwent a Milestone A update in FY09. Milestone B is planned for third quarter 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)					PROJECT 3096: Littoral Combat Ship				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Final Design (Flight 0)	C/CPAF	LM, BIW Various	175.263	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Class Design Services	SS/CPAF	TBD Various	25.340	23.000	Oct 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing	
LCS 1 & 2 Shore Trainers	C/CPAF	LM, BIW Various	26.860	9.900	Oct 2009	10.835	Oct 2010	0.000		10.835	Continuing	Continuing	Continuing	
SH-60B Datalink	C/CPAF	LM, BIW Various	2.435	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Flight 0 C4I	WR	PEO C4I Various	5.215	0.291	Oct 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing	
Subtotal			235.113	33.191		10.835		0.000		10.835				
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Engineering Support	WR	NSWC/DD Dahlgren, VA	32.303	7.170	Oct 2009	2.433	Oct 2010	0.000		2.433	Continuing	Continuing	Continuing	
Government Engineering Support	WR	NSWC/PC Panama City, FL	22.437	0.340	Oct 2009	0.115	Oct 2010	0.000		0.115	Continuing	Continuing	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 3096: Littoral Combat Ship					
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Engineering Support	WR	NUWC Newport, RI	8.355	0.452	Oct 2009	0.154	Oct 2010	0.000		0.154	Continuing	Continuing	Continuing	
Government Engineering Support	WR	NAWC AD Pax River, VA	13.264	3.547	Oct 2009	1.204	Oct 2010	0.000		1.204	Continuing	Continuing	Continuing	
Government Engineering Support	WR	NSWC/CR Crane, IN	15.907	0.033	Oct 2009	0.011	Oct 2010	0.000		0.011	Continuing	Continuing	Continuing	
Government Engineering Support	WR	NSWC/SSES Philadelphia, PA	33.902	9.030	Oct 2009	3.064	Oct 2010	0.000		3.064	Continuing	Continuing	Continuing	
Government Engineering Support	Various/ Various	Government Activities Various	22.990	3.911	Oct 2009	1.327	Oct 2010	0.000		1.327	Continuing	Continuing	Continuing	
Contractor Engineering Support	C/CPAF	Alion Arlington, VA	28.026	8.820	Oct 2009	2.644	Oct 2010	0.000		2.644	Continuing	Continuing	Continuing	
Contractor Engineering Support	C/CPAF	Various Various	17.903	0.183	Oct 2009	0.062	Oct 2010	0.000		0.062	Continuing	Continuing	Continuing	
Subtotal			195.087	33.486		11.014		0.000		11.014				
Remarks														

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Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Test & Evaluation	C/CPAF	Alion Arlington, VA	5.730	2.660	Oct 2008	3.500	Oct 2009	0.000		3.500	0.000	11.890	Continuing	
Test & Evaluation	WR	NSWC/PHD Port Hueneme, CA	14.742	4.829	Oct 2008	5.500	Oct 2009	0.000		5.500	0.000	25.071	Continuing	
Test & Evaluation	WR	NSWC/SSES Philadelphia, PA	20.021	6.200	Oct 2008	5.900	Oct 2009	0.000		5.900	0.000	32.121	Continuing	
Test & Evaluation	WR	NSWC/PC Panama City, FL	1.385	1.846	Oct 2008	2.500	Oct 2009	0.000		2.500	0.000	5.731	Continuing	
Test & Evaluation	WR	COMOPTEVFOR Norfolk, VA	3.414	2.000	Oct 2008	2.300	Oct 2009	0.000		2.300	0.000	7.714	Continuing	
Test & Evaluation	WR	NSWC/COR Corona, CA	2.606	0.800	Oct 2008	0.800	Oct 2009	0.000		0.800	0.000	4.206	Continuing	
Test & Evaluation	WR	Various Various	21.259	12.723	Oct 2008	17.385	Oct 2009	0.000		17.385	0.000	51.367	Continuing	
T&E Ordnance	WR	IWS 3 Not Specified	5.677	0.000	Oct 2008	0.000	Oct 2009	0.000		0.000	0.000	5.677	Continuing	
Test & Evaluation	C/CPAF	LM/GD Various	4.345	16.700	Oct 2008	12.641	Oct 2009	0.000		12.641	0.000	33.686	Continuing	
T&E	WR	PEO C4I Charleston, SC	3.296	0.972	Oct 2008	1.700	Oct 2009	0.000		1.700	0.000	5.968	Continuing	
Subtotal			82.475	48.730		52.226		0.000		52.226	0.000	183.431		
Remarks														

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>				<b>PROJECT</b> 3096: <i>Littoral Combat Ship</i>					
<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 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>
CODB	Various/ Various	PEO Ships Washington, DC	3.489	1.140	Oct 2009	0.304	Oct 2010	0.000		0.304	Continuing	Continuing	Continuing
Program Management Support	C/CPAF	Alion Arlington, VA	18.079	2.314	Oct 2009	0.617	Oct 2010	0.000		0.617	Continuing	Continuing	Continuing
Program Management Support	Various/ Various	Various Various	3.942	2.088	Oct 2009	0.557	Oct 2010	0.000		0.557	Continuing	Continuing	Continuing
Program Management Support	C/CPAF	JJMA Arlington, VA	1.480	0.458	Oct 2009	0.122	Oct 2010	0.000		0.122	Continuing	Continuing	Continuing
DAWDF	Various/ Various	Not Specified Not Specified	0.468	0.000		0.000		0.000		0.000	0.000	0.468	Continuing
<b>Subtotal</b>			27.458	6.000		1.600		0.000		1.600			
<b>Remarks</b>													
			<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			540.133	121.407		75.675		0.000		75.675			
<b>Remarks</b>													

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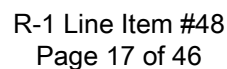


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DATE: February 2010

### R-1 ITEM NOMENCLATURE

PE 0603581N: *Littoral Combat Ship (LCS)*

3096: *Littoral Combat Ship*

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>	<b>PROJECT</b> 3096: <i>Littoral Combat Ship</i>	

## Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Shock Planning/Test (LFT&E) - Flight 0	1	2009	3	2013
Planning; Post Delivery Developmental Testing/Operational Testing Flight 0	2	2009	4	2013
Flight 0 DT / OT	4	2009	4	2013
Shock Planning/Test (LFT&E) - Flight 0+	1	2009	2	2015
Planning: Post Delivery Developmental Testing / Operational Testing Flight 0+	1	2012	3	2015
Flight 0+ DT / OT	2	2013	1	2015
Class Design Services	1	2009	1	2011
Combat System & C4I Spiral Development	1	2009	3	2011
Milestone B	3	2010	3	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 3129: LCS Mission Package Development				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
3129: LCS Mission Package Development	168.082	162.458	109.048	0.000	109.048	111.834	78.959	56.969	60.573	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
A. Mission Description and Budget Item Justification												
Program provides focused war fighting capabilities in littoral mine warfare, countering small boat threats and littoral anti-submarine warfare to provide assured access to enable the US Joint Force operations in the littoral. Mission module development includes architectures, interfaces and development of mission module. Mission systems development also includes the procurement of the first mission packages to be used on the Flight 0 Littoral Combat Ships (LCS).												
Mine Countermeasures (MCM) Mission Modules will provide the Joint Force Commander with the capability to conduct Mine Countermeasure (MCM) operations ranging from first response mine detection and avoidance, to neutralization and sweeping in littoral conditions, enabling Joint Forcible Entry. This will open transit lanes and operating areas for naval forces. MCM operations will reduce the access timeline in contested littorals.												
Anti-Submarine Warfare Modules will provide ASW capabilities while operating in a contested littoral environment. Leveraging multiple distributed sensors netted together, LCS will exploit real time undersea data, using maneuver and deception to enhance detection, classification, identification, targeting and destruction of enemy submarines.												
Surface Warfare Mission Modules will provide the capability to detect, track and engage small boat threats, giving the joint force commander the ability to maximize striking power, shield high value units, or successfully move through a restricted area.												
B. Accomplishments/Planned Program (\$ in Millions)												
								FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
System Engineering								2.489	2.734	2.619	0.000	2.619

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continuation of Information Assurance (IA), modeling and simulation, Configuration Management (CM), Incremental Development, and safety engineering efforts.						
FY 2010 Plans: Continuation of modeling and simulation, program safety, and CM.						
FY 2011 Base Plans: Continuation of modeling and simulation, program safety, and CM.						
Program Management		7.704	8.733	4.150	0.000	4.150
FY 2009 Accomplishments: Continue program-level program management efforts, including Contract Advisory and Assistance Services (CAAS): business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives which are not associated with specific hardware elements and are not included in systems engineering. Maintain and execute logistic plans, processes and programs to assist in the management and support of Mission Modules and Mission Packages.						
FY 2010 Plans: Continue program-level program management efforts, including Contract Advisory and Assistance Services (CAAS): business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives which are not associated with specific hardware elements and are not included in systems engineering. Maintain and execute logistic plans, processes and programs to assist in the management and support of Mission Modules and Mission Packages.						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)		PROJECT 3129: LCS Mission Package Development		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Continue program management efforts: business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives which are not associated with specific hardware elements and are not included in systems engineering.						
System Test and Evaluation  FY 2009 Accomplishments: Continuation of Mission Package certification efforts for MCM Mission Package (MP), conduct Developmental Testing (DT) of the MCM MP on board USS INDEPENDENCE.  FY 2010 Plans: Continuation of Mission Package certification efforts for ASW, and SUW. Initiate ASW DT on board USS FREEDOM. MCM and SUW Form, Fit, and Function (FF&F) Test on USS FREEDOM. MCM Launch, Handling, and Recovery (LH&R) test on USS FREEDOM.  FY 2011 Base Plans: Conduct MCM DT on board USS FREEDOM. Conduct SUW Structural Test Firing (STF) on USS FREEDOM; conduct SUW DT / TECHEVAL and IOT&E on board USS INDEPENDENCE. Complete ASW DT on board USS FREEDOM.		5.864	10.419	34.262	0.000	34.262
Integration, Assemble, Test and Checkout  FY 2009 Accomplishments: Continue program-level Integration, Assembly, Test & Checkout efforts: technical and functional activities associated with the design, development, and production of mating surfaces, structures, equipment, parts, materials, and software required to assemble hardware/software elements into mission equipment.		1.474	1.064	0.797	0.000	0.797

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Continue program-level Integration, Assembly, Test & Checkout efforts: technical and functional activities associated with the design, development, and production of mating surfaces, structures, equipment, parts, materials, and software required to assemble hardware/software elements into mission equipment.						
FY 2011 Base Plans: Continue program-level Integration, Assembly, Test & Checkout efforts: technical and functional activities associated with the design, development, and production of mating surfaces, structures, equipment, parts, materials, and software required to assemble hardware/software elements into mission equipment.						
Training  FY 2009 Accomplishments: Complete the incorporation of all MP information into the Navy Training Systems Plan (NTSP). Continue the implementation and management of a proactive training program, continue program-level training efforts: Design, develop, produce, and deliver training services, devices, accessories, aids and equipment.  FY 2010 Plans: Start the development of the software for the technical trainer in support of the Capabilities Development Document (CDD) requirements for Train-to-Certify and Train-to-Qualify. First years efforts will focus on MCM.  FY 2011 Base Plans: Continue the development of the technical training software by adding the SUW requirements into the Train-to-Certify and Train-to-Qualify applications.		1.631	13.235	7.623	0.000	7.623

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)		PROJECT 3129: LCS Mission Package Development		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Common Equipment		47.036	31.515	17.968	0.000	17.968
<p><i>FY 2009 Accomplishments:</i></p> <p>Mission Package Computing Environment (MPCE) - Mission Package Operating Environment (MPOE) Platform Development - manage software configuration(s), identify and acquire required components, test for compatibility, and deliver post-installation security lock-down scripts. Develop MPOE Integrated Logistics support (ILS) documentation, conduct vendor training. Document the LCS mission package concept of operations, functional &amp; performance requirements, interfaces, and computing environment. Conduct MPCE Integration and Test events on the Seaframes and at USS INDEPENDENCE and USS FREEDOM land-based facilities.</p> <p>Multi-Vehicle Communication System (MVCS) - The Mission Package Off Board Communications will provide the communications systems capabilities that support LCS mission package unmanned vehicle requirements. Conduct installation and checkout (INCO) on LCS Seaframe.</p> <p>MH-60 B/R/S - Initiate the design, development, and prototyping of the Ku-band Common Data Link (CDL) Kit for installation in an SH-60B helicopter to allow the SH-60B to communicate with LCS via its shipboard CDL system. Design and development of a C4ISR Multiplexer / De-Multiplexer Interface Unit. Design and development of Fast Track Imaging(FTI) sets for installation in an MH-60S helicopter.</p> <p><i>FY 2010 Plans:</i></p> <p>MPCE - Support the conduct of Mission Package developmental testing; correct deficiencies observed during testing.</p> <p>MVCS - Support MVCS Full Capability ship installation; update technical data package after ship installation. Integrate Beyond Line of Sight (BLOS) capability into MVCS. Conduct DT of MVCS increment 1 capability onboard LCS Seaframe.</p> <p>MH 60 B/R/S - Complete the development of the Ku-Band CDL Helo Support Functional segment; install onboard LCS Seaframe and conduct integration testing.</p>						

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: MPCE - Support DT and OT events with each Mission Package with the seaframe; identify interface issues and correct deficiencies. MVCS - Support MVCS full operational testing onboard LCS sea frame, correct deficiencies observed during testing.					
Mine Countermeasures (MCM) Mission Package  FY 2009 Accomplishments: Continue integration of Spiral A Mission Modules. Design, develop, integrate and test mission modules for remainder of systems needed to complete Spiral A baseline. Develop, integrate and test USV and Sweep systems. Develop test procedures and documentation. Integrate the MCM MP with LCS sea frame.  FY 2010 Plans: Conduct at sea integration (end-to-end) testing. Conduct integration with sea frame. Correct of deficiencies observed during testing. Conduct Certification of MCM MP to include weapons system certification, Human Systems Integration (HSI), IA, and Safety. MCM Form, Fit, and Function (FF&F) Test on USS FREEDOM. MCM Launch, Handling, and Recovery (LH&R) test on USS FREEDOM.  FY 2011 Base Plans: Conduct MCM DT on board USS FREEDOM. Correct deficiencies observed during testing. Integrate the Surface Mine Countermeasures Unmanned Undersea Vehicle with Low frequency Broadband (SMCM UUV w/LFBB). Continue development, integration and testing of USV and Sweep systems. Validate and verify test procedures and documentation. Incorporate high priority problem trouble reports (PTRs).	22.746	12.532	13.412	0.000	13.412
Anti-Submarine Warfare (ASW) Mission Package	5.897	8.676	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Complete integration of the ASW MP, conduct at-sea testing of ASW MP#1.					
FY 2010 Plans: Complete end-to-end testing of ASW MP#1, integrate the ASW MP with the LCS sea frame and initiate DT events.					
Surface Warfare (SUW) Mission Package  FY 2009 Accomplishments: Provide required funding to PEO Missiles & Space for Non Line of Site (NLOS) development. Develop the power converter solution for the NLOS Mission Module. Develop and maintain the LCS SUW T&E Road-map and Master Test Plan. Conduct testing of the Gun Mission Module (GMM), the Container Launch Unit (CLU), and the Mission Module. Develop Training and Preliminary Maintenance Plans for the GMM.  FY 2010 Plans: Purchase NLOS Precision Attack Missile (PAM) Test Missiles. Conduct GMM integration testing with sea frame and combat systems, and End-to-End testing of the GMM. SUW Form, Fit, and Function (FF&F) Test on USS FREEDOM.  FY 2011 Base Plans: Purchase NLOS Precision Attack Missile (PAM) Test Missiles. Purchase NLOS test targets, integrate NLOS with sea frame, and conduct Non Line of Site Launch System (NLOS-LS) Mission Module radio design. Conduct SUW Structural Test Firing (STF) on USS FREEDOM; conduct SUW DT / TECHEVAL and IOT&E on board USS INDEPENDENCE.	66.364	67.412	26.500	0.000	26.500
Mission Package Portable Control Station (MP-PCS) (Formally Portable Mission Package Computing Environment)	1.600	1.947	1.717	0.000	1.717

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Provide technical expertise in the development and configuration of the MP-PCS. Conduct systems engineering, design, development, and integration tasks to support implementation of a MP-PCS core capability. Track/coordinate the development and installation of the MP-PCS components within the transportable support container. Perform software and hardware integration to support MPCE baseline, revise IA plan and network topology, conduct system groom, perform test and checkout of MPCE and ancillary systems.						
FY 2010 Plans: Provide technical expertise in the development and configuration of the MP-PCS. Conduct systems engineering, design, development, and integration tasks to support implementation of a MP-PCS core capability. Track/coordinate the development and installation of the MP-PCS components within the transportable support container. Perform software and hardware integration to support MPCE baseline, revise IA plan and network topology, conduct system groom, perform test and checkout of MPCE and ancillary systems.						
FY 2011 Base Plans: Provide technical expertise in the development and configuration of the MP-PCS. Conduct systems engineering, design, development, and integration tasks to support implementation of a MP-PCS core capability. Track/coordinate the development and installation of the MP-PCS components within the transportable support container. Perform software and hardware integration to support MPCE baseline, revise IA plan and network topology, conduct system groom, perform test and checkout of MPCE and ancillary systems.						
Pre-Production Engineering  FY 2009 Accomplishments: Convert existing MCM MP Technical Data Package (TDP) data to needed format and develop any needed drawings to complete the MP TDP.		4.230	4.191	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 3129: LCS Mission Package Development				
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
FY 2010 Plans: Convert existing ASW and SUW MP TDP data to needed format and develop any needed drawings to complete the MP TDP.												
Acquisition Workforce FY 2009 Accomplishments: Acquisition Workforce						1.047	0.000	0.000	0.000	0.000		
Accomplishments/Planned Programs Subtotals						168.082	162.458	109.048	0.000	109.048		
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost	
• 2127 : Littoral Combat Ship	1,016.952	1,076.669	1,509.335	0.000	1,509.335	1,808.128	2,333.833	2,416.574	2,747.939	Continuing	Continuing	
• 1600 : LCS Mission Modules	6.332	116.898	82.951	0.000	82.951	121.958	179.857	194.369	306.691	Continuing	Continuing	
• 4221: LCS Module Weapons	0.000	0.000	9.808	0.000	9.808	5.585	3.235	9.722	7.729	Continuing	Continuing	
• 0443 : Aircraft Procurement, Navy	50.189	77.377	47.484	0.000	47.484	46.242	67.442	89.553	89.485	Continuing	Continuing	
• 1B1B: Mission and Other Ship Operations	0.000	0.000	1.190	0.000	1.190	3.285	4.696	6.845	9.499	Continuing	Continuing	
• 1B4B : Ship Maintenance	11.746	9.115	6.218	0.000	6.218	6.571	6.166	8.478	9.885	Continuing	Continuing	
• 1B5B : Ship Depot Operations Support	25.792	18.873	31.019	0.000	31.019	24.417	33.945	21.341	19.891	Continuing	Continuing	
• 1C1C : Combat Communications	1.422	1.683	2.108	0.000	2.108	2.723	3.676	3.757	3.823	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 3129: LCS Mission Package Development			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 5110: Outfitting / Post Delivery	0.000	0.000	2.787	0.000	2.787	68.794	75.712	104.504	90.958	Continuing	Continuing
D. Acquisition Strategy											
The LCS acquisition strategy encompasses multiple phases: Phases I and II are Concept Refinement and Technology Development, consisting of Preliminary Design, Final Design and Detail Design and Construction for Flight 0 ships. A parallel three phase approach is planned for Flight 0+ ships. - Preliminary System Design, - Final System Design and - Detail Design and Construction.											
E. Performance Metrics											
Milestone Reviews											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>					R-1 ITEM NOMENCLATURE PE 0603581N: <i>Littoral Combat Ship (LCS)</i>				PROJECT 3129: <i>LCS Mission Package Development</i>					
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
1.1 System Engineering	WR	Various Various	6.757	2.734	Oct 2009	2.619	Oct 2010	0.000		2.619	0.000	12.110	Continuing	
1.3 System Test and Evaluation	WR	Various Various	21.064	10.419	Oct 2009	34.262	Oct 2010	0.000		34.262	0.000	65.745	Continuing	
1.4 Integration, Assembly, Test and Check	WR	Various Various	1.474	1.064	Oct 2009	0.797	Oct 2010	0.000		0.797	0.000	3.335	Continuing	
1.5 Training	WR	Various Various	3.798	13.235	Oct 2009	7.623	Oct 2010	0.000		7.623	0.000	24.656	Continuing	
1.12 Common Equipment Development	WR	Various Various	38.828	22.476	Oct 2009	12.468	Oct 2010	0.000		12.468	0.000	73.772	Continuing	
1.13 MCM MP	WR	Various Various	86.056	10.532	Oct 2009	11.412	Oct 2010	0.000		11.412	0.000	108.000	Continuing	
1.14 ASW MP	WR	Various Various	126.987	4.976	Oct 2009	0.000		0.000		0.000	0.000	131.963	Continuing	
1.15 SUW MP	WR	Various Various	55.264	43.862	Oct 2009	15.000	Oct 2010	0.000		15.000	0.000	114.126	Continuing	
1.19 Pre-Production Engineering	WR	Various Various	4.234	4.191	Oct 2009	0.000		0.000		0.000	0.000	8.425	Continuing	
1.12 Common Equipment	WR	Various Various	11.019	9.039	Oct 2009	5.500	Oct 2010	0.000		5.500	0.000	25.558	Continuing	
1.13 MCM MP Equipment	WR	Various Various	4.600	2.000	Oct 2009	2.000	Oct 2010	0.000		2.000	0.000	8.600	Continuing	
1.14 ASW MP Equipment	WR	Various Various	17.810	3.700	Oct 2009	0.000		0.000		0.000	0.000	21.510	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)					PROJECT 3129: LCS Mission Package Development				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
1.15 SUW MP Equipment	WR	Various Various	27.029	23.550	Oct 2009	11.500	Oct 2010	0.000		11.500	0.000	62.079	Continuing	
1.16 MP-PCS Equipment	WR	Various Various	1.600	1.947	Oct 2009	1.717	Oct 2010	0.000		1.717	0.000	5.264	Continuing	
Subtotal			406.520	153.725		104.898		0.000		104.898	0.000	665.143		
Remarks														
Management Services (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Acquisition Workforce	Various/ Various	Various Various	1.047	0.000		0.000		0.000		0.000	0.000	1.047	Continuing	
1.2 Program Management	WR	Various Various	12.805	8.733	Oct 2009	4.150	Oct 2010	0.000		4.150	0.000	25.688	Continuing	
Subtotal			13.852	8.733		4.150		0.000		4.150	0.000	26.735		
Remarks														

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Navy							<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>			<b>PROJECT</b> 3129: <i>LCS Mission Package Development</i>		
<b>Remarks</b>									

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	420.372	162.458	109.048	0.000	109.048	0.000	691.878	

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

## APPROPRIATION/BUDGET ACTIVITY

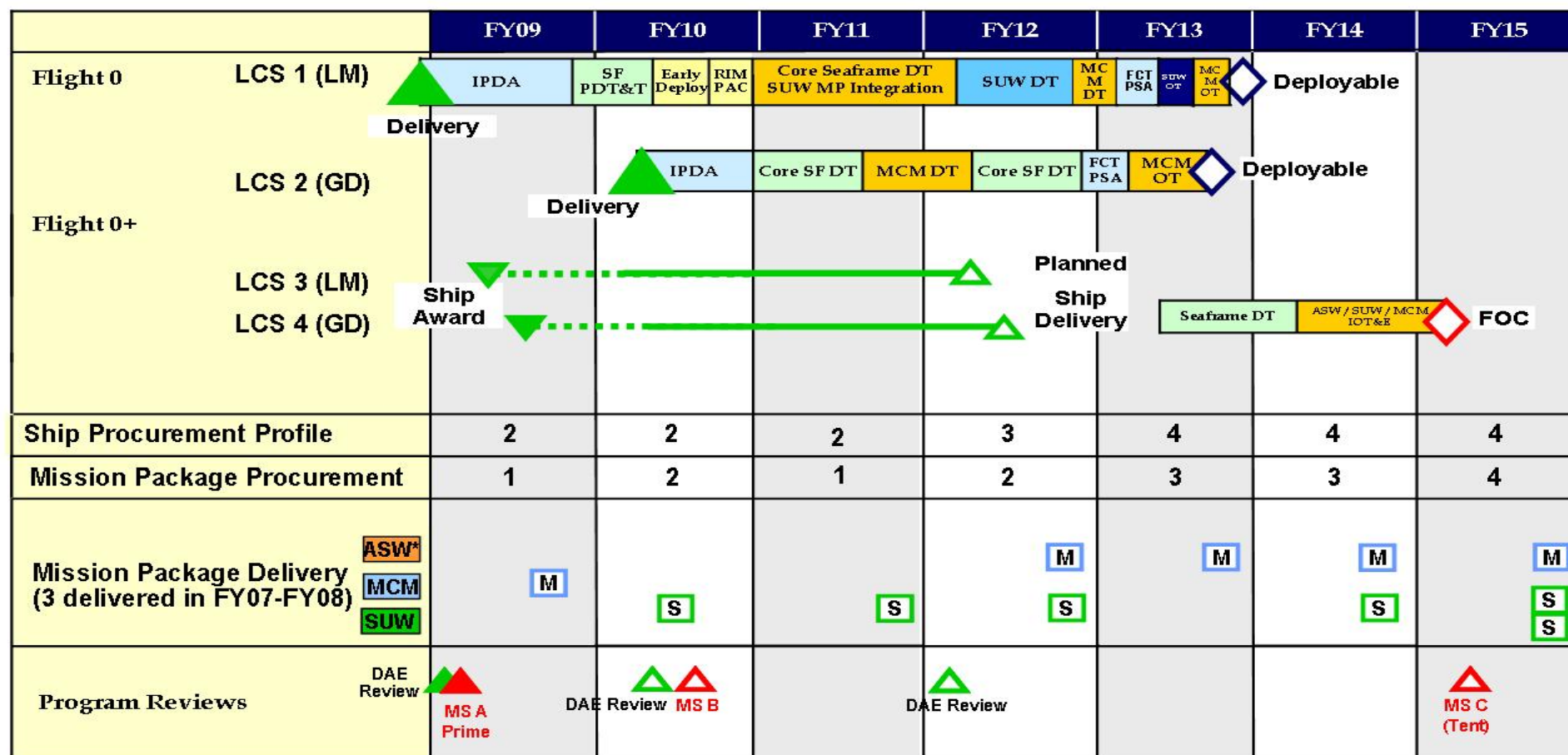
1319: Research, Development, Test & Evaluation, Navy  
BA 4: Advanced Component Development & Prototypes (ACD&P)

## R-1 ITEM NOMENCLATURE

PE 0603581N: Littoral Combat Ship (LCS)

## PROJECT

3129: LCS Mission Package Development



\*The Navy has determined that a classified capability will be incorporated into future ASW Mission Packages. This capability will address identified ASW MP requirements.

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>	<b>PROJECT</b> 3129: <i>LCS Mission Package Development</i>	

## Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SUW MP#2 Delivery	2	2010	2	2010
SUW MP Integration	1	2011	1	2012
MCM MP DT (LCS 2)	3	2011	1	2012
SUW MP#3 Delivery	4	2011	4	2011
SUW MP DT	2	2012	3	2012
MCM MP DT (LCS 1)	4	2012	1	2013
MCM MP OT (LCS 2)	2	2013	3	2013
SUW MP OT	3	2013	3	2013
MCM MP OT (LCS 1)	3	2013	4	2013
ASW/SUW/MCM MP IOT&E	2	2014	1	2015

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>				<b>PROJECT</b> 4018: <i>Littoral Combat Ship Construction</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
4018: <i>Littoral Combat Ship Construction</i>	90.393	75.147	41.565	0.000	41.565	0.000	0.000	0.000	0.000	0.000	1,279.015
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b> <p>The Littoral Combat Ship (LCS) will be a fast, agile, and networked surface combatant with capabilities optimized to defeat asymmetric threats, and assure naval and joint force access into contested littoral regions. The threats challenging our naval forces in the littorals include mines, attacks by small surface craft, and quiet diesel submarines armed with a variety of anti-ship weapons. Such threats have great potential to be effectively employed by many less capable countries and non-state actors to prevent access, and use, of littoral areas by U.S. forces.</p> <p>The LCS Program achieved Milestone A and Program Initiation in May 2004, and conducted a Milestone A update review in 2009. Milestone B is planned for third quarter 2010.</p> <p>The LCS construction phase includes the construction of two LCS Fight 0 Class Ships, one of each of two designs, and includes Government Furnished Equipment (GFE) for ships systems, Final System Design (FSD), Detail Design, introduction of final interface requirements for integration with mission packages from the Mission Systems and Ship Integration Team (MSSIT), and Outfitting and Post Delivery (OF/PD).</p> <p>USS FREEDOM (LCS 1)  Basic Construction: 521.0  Change Orders: 0.5  GFE: 12.0  Other: 3.5  Total Cost*: 537.0</p> <p>USS INDEPENDENCE (LCS 2)  Basic Construction: 589.0  Change Orders: 3.5</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)		PROJECT 4018: Littoral Combat Ship Construction	
GFE: 7.0 Other: 7.5 Total Cost*: 607.0					
Non End Cost Item FSD/MSSIT 25.0(LCS1), 54.0(LCS2) Non End Cost Item OF/PD 94.0(LCS1), 75.0(LCS2)					
FSD/MSSIT costs for USS INDEPENDENCE and USS FREEDOM are not true construction costs and are costs associated with design completion.					
* Does not include OF/PD and early design costs					
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Construction	63.153	32.000	0.000	0.000	0.000
Provides for the construction, production, test and trials of USS INDEPENDENCE and USS FREEDOM ships, including execution of Change Orders and procurement of Government Furnished Equipment (GFE).					
FY 2009 Accomplishments: Continued detail design and construction of LCS 1 (Lockheed Martin Design) and LCS 2 (General Dynamics - Bath Iron Works Design). Completed procurement of GFE for both USS INDEPENDENCE and USS FREEDOM. Supported and executed the ship pre-delivery test and trials and related certification efforts.					
FY 2010 Plans: Completion of USS FREEDOM.					
Support Costs	0.300	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)		PROJECT 4018: Littoral Combat Ship Construction		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Travel for SUPSHIPS						
Outfitting and Post Delivery  Provides for the integration and testing of the seaframe and separately acquired mission packages, implementation of instrumentation packages and validation of structural, seakeeping, hydrodynamic performance, emergent support during the execution of Post Delivery Test & Trials (PDT&T), post-shakedown availability (PSA) to incorporate Engineering Change Proposals that allow for correction of trial card deficiencies, and mission critical upgrades, as required.  FY 2009 Accomplishments: Initiated operation of installed instrumentation equipment, collection of data and the analysis of critical ship performance parameters. Conducted testing of supporting mission packages, seaframe, and the integrated product. Performed emergent repairs during PDT&T as required. Performed engineering, planning, work package development and procurement of long lead material for the Post-Shakedown Availabilities (PSA) for both USS INDEPENDENCE and USS FREEDOM. Conducted IPDAs for LCS 1 to correct trial card deficiencies and incorporate critical safety and mission critical ECPs that must be completed prior to delivery to the Fleet. Performed engineering, planning and procurement of long lead material for the Industrial Post Delivery Availabilities (IPDA), scheduled immediately after ship delivery. Provided technical support to the INSURV Board.  FY 2010 Plans: Perform emergent repairs to support IPDA for USS FREEDOM Post Delivery Test and Trials. Conduct Final Contract Trials and provide Technical Support for the INSURV Board. Correct Trial Card discrepancies. Perform advance planning, engineering, work package development and the procurement of material to support two fourteen week industrial Post Shakedown Availability (PSA) to include both USS INDEPENDENCE and USS FREEDOM. Complete instrumentation, data collection		26.719	43.147	41.565	0.000	41.565

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				R-1 ITEM NOMENCLATURE PE 0603581N: <i>Littoral Combat Ship (LCS)</i>				PROJECT 4018: <i>Littoral Combat Ship Construction</i>				
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
and analysis of critical ship performance. Conduct OF/PD efforts for the Early Deployment of USS INDEPENDENCE.  <i>FY 2011 Base Plans:</i> Perform Final Contract Trials for USS INDEPENDENCE and USS FREEDOM. Correct Trial Card discrepancies. Initiate Mission Package Developmental Testing (DT) and Initial Operational Test & Evaluation (IOT&E) and continue PSA preparations.												
Acquisiton Work Force  <i>FY 2009 Accomplishments:</i> Acquisition Workforce						0.221	0.000	0.000	0.000	0.000		
Accomplishments/Planned Programs Subtotals						90.393	75.147	41.565	0.000	41.565		
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost	
• 2127: <i>Littoral Combat Ship</i>	1,016.952	1,076.669	1,509.335	0.000	1,509.335	1,808.128	2,333.833	2,416.574	2,747.939	Continuing	Continuing	
• 1600: <i>LCS Modules</i>	6.332	116.898	82.951	0.000	82.951	121.958	179.857	194.369	306.691	Continuing	Continuing	
• 4221: <i>LCS Module Weapons</i>	0.000	0.000	9.808	0.000	9.808	5.585	3.235	9.722	7.729	Continuing	Continuing	
• 0443: <i>Aircraft Procurement, Navy</i>	50.189	77.377	47.484	0.000	47.484	46.242	67.442	89.553	89.485	Continuing	Continuing	
• 1B1B: <i>Mission and Other Ship Operations</i>	0.000	0.000	1.190	0.000	1.190	3.285	4.696	6.845	9.499	Continuing	Continuing	
• 1B4B: <i>Ship Maintenance</i>	11.746	9.115	6.218	0.000	6.218	6.571	6.166	8.478	9.885	Continuing	Continuing	
• 1B5B: <i>Ship Depot Operations Support</i>	25.792	18.873	31.019	0.000	31.019	24.417	33.945	21.341	19.891	Continuing	Continuing	
• 1C1C: <i>Combat Communications</i>	1.422	1.683	2.108	0.000	2.108	2.723	3.676	3.757	3.823	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 4018: Littoral Combat Ship Construction			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 5110: Outfitting / Post Delivery	0.000	0.000	2.787	0.000	2.787	68.794	75.712	104.504	90.958	Continuing	Continuing
D. Acquisition Strategy											
<p>The LCS Program takes an evolutionary approach to acquisition that emphasizes competition as a key to achieving affordability. Initially, two industry teams competed against each other with two different LCS designs, LCS 1-4, over two flights, Flight 0 and Flight 0+. A down select will be conducted in FY10 to a single design, and a second source introduced in FY12 for continued competition.</p> <p>The incorporation of lessons learned from the design, construction, and testing of the initial first two ships, as well as introduction of improved waterjets on both designs and a waterjet tunnel extension on the LM LCS design will comprise the Flight 0+ baseline to be awarded in FY09. The new baseline will be implemented in the FY10-14 Block Buy and maintained in the FY12-14 Second Source Block Buy, both built to a common Technical Data Package.</p> <p>The LCS Program achieved Milestone A and Program Initiation in May 2004, and conducted a Defense Acquisition Executive (DAE) review in FY09. Milestone B is planned for third quarter 2010 prior to the award of the FY10 ships.</p>											
E. Performance Metrics											
<p>The LCS Program achieved Milestone A and Program Initiation in May 2004, and underwent a Milestone A update in FY09. Milestone B is planned for the third quarter 2010.</p>											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603581N: Littoral Combat Ship (LCS)				PROJECT 4018: Littoral Combat Ship Construction				
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LCS Ship 1 Construction	C/CPAF	Lockheed Martin Moorestown, NJ	521.000	0.000		0.000		0.000		0.000	0.000	521.000	Continuing
LCS Ship 1 Change Orders	C/CPAF	Lockheed Martin Moorestown, NJ	0.500	0.000		0.000		0.000		0.000	0.000	0.500	Continuing
LCS Ship 1 GFE	C/CPAF	Lockheed Martin Moorestown, NJ	12.000	0.000		0.000		0.000		0.000	0.000	12.000	Continuing
LCS Ship 2 Construction	C/CPAF	General Dynamics Bath, ME	557.000	32.000	Oct 2009	0.000		0.000		0.000	0.000	589.000	Continuing
LCS Ship 2 Change Orders	C/CPAF	General Dynamics Bath, ME	3.500	0.000		0.000		0.000		0.000	0.000	3.500	Continuing
LCS Ship 2 GFE	C/CPAF	General Dynamics Bath, ME	7.000	0.000		0.000		0.000		0.000	0.000	7.000	Continuing
LCS Ship 1 FSD/MSSIT	C/CPAF	Lockheed Martin Moorestown, NJ	25.000	0.000		0.000		0.000		0.000	0.000	25.000	Continuing
LCS Ship 2 FSD/MSSIT	C/CPAF	General Dynamics Bath, ME	54.000	0.000		0.000		0.000		0.000	0.000	54.000	Continuing
Initial Outfitting	Various/ Various	Various Various	21.601	0.000		0.000		0.000		0.000	0.000	21.601	Continuing
Testing and Logistics	WR	Various Various	21.961	1.687	Oct 2009	2.665	Oct 2010	0.000		2.665	Continuing	Continuing	Continuing
Post Delivery ECP	C/CPAF	Lockheed Martin - General Dynamics	24.357	15.000	Oct 2009	24.900	Oct 2010	0.000		24.900	0.000	64.257	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: Littoral Combat Ship (LCS)				<b>PROJECT</b> 4018: Littoral Combat Ship Construction					
<b>Product Development (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Various											
PSA/PSA Planning/INSURV/OPTAR	WR	Various Various	6.271	26.460	Oct 2009	14.000	Oct 2010	0.000		14.000	0.000	46.731	Continuing
<b>Subtotal</b>			1,254.190	75.147		41.565		0.000		41.565			
<b>Remarks</b> Final Ship Design/Mission Ship System Integration Team costs for LCS 1 and LCS 2 are not true construction costs, and although funds were obligated against the 4018 construction project contracts, these costs were associated with MSSIT/FSD for design completion.													
<b>Support (\$ in Millions)</b>													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	WR	SUPSHIP Various	0.460	0.000		0.000		0.000		0.000	0.000	0.460	Continuing
Other Program Costs	WR	Various Various	11.000	0.000		0.000		0.000		0.000	0.000	11.000	Continuing
<b>Subtotal</b>			11.460	0.000		0.000		0.000		0.000	0.000	11.460	
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>				<b>PROJECT</b> 4018: <i>Littoral Combat Ship Construction</i>					
<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 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>
Acquisition Workforce	Various/ Various	Various Various	0.221	0.000		0.000		0.000		0.000	0.000	0.221	Continuing
<b>Subtotal</b>			0.221	0.000		0.000		0.000		0.000	0.000	0.221	
<b>Remarks</b>													
			<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			1,265.871	75.147		41.565		0.000		41.565			
<b>Remarks</b>													

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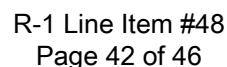
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### R-1 ITEM NOMENCLATURE

PE 0603581N: *Littoral Combat Ship (LCS)*

## 4018: Littoral Combat Ship Construction



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>	<b>PROJECT</b> 4018: <i>Littoral Combat Ship Construction</i>	

**Schedule Details**

<b>Event</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Detail Design and Construction - Flight 0	1	2009	4	2009
Milestone B	3	2010	3	2010
LCS 2 Delivery (Flight 0)	1	2010	1	2010
IPDA LCS 1	1	2009	4	2009
IPDA LCS 2	1	2010	4	2010
PSA LCS 1	1	2013	2	2013
PSA LCS 2	4	2012	1	2013

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>				<b>PROJECT</b> 9999: <i>Congressional Adds</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
9999: <i>Congressional Adds</i>	10.273	63.734	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.139
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b> Provides resources to support both LCS Mission Package Development and Ship Construction.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Revised Acquisition Strategy							0.000	59.751			
<b>FY 2010 Plans:</b> Design review to include all existing change pages. Design update will include new FY10 block buy baseline changes, both government and contract initiated or in response to technology obsolescence, update and completion of a neutral format 3-D model. Update of all design documentation into an LCS Technical Data Package (TDP).  Conduct a continuous independent review and approval by a Navy-led team to ensure LCS TDP is "industry neutral" so that any industry team can build the LCS, including reviews by other contractor/ industry teams and special studies for affordability, commonality, and producibility.  Develop a detailed Interface Control Document (ICD) between the Selected Ship Systems (S3), which is predominately Combat and C4I systems and networks, and the seaframe to enable the seaframe and S3 to be independently procured.  Update of industry TDP as necessary from baseline to enable use with FY12 block buy from a second industry source, with S3 provided as GFE.											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603581N: <i>Littoral Combat Ship (LCS)</i>	<b>PROJECT</b> 9999: <i>Congressional Adds</i>
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: MIW Modules Prog - Cong  <i>FY 2010 Plans:</i> Funding is provided to research and study methods to employ mine warfare mission modules independently of the LCS platform.	0.000	3.983
Congressional Add: Autonomous Acoustic Array Advanced Tubular Solid O  <i>FY 2009 Accomplishments:</i> Funding is provided for the application of Advanced Tubular Solid Oxide Fuel Cell (SOFC) technology to deliver clean, efficient, and quiet power generation as an alternate power source for the LCS ASW Mission Package (MP).	1.995	0.000
Congressional Add: LCS Common Mission Package Training Environmnet  <i>FY 2009 Accomplishments:</i> Funding is provided to accelerate the development of a common Mission Package Trainer to meet near term MCM Mission Package training requirements.	4.488	0.000
Congressional Add: Alternative Use of Mine Warfare Modules  <i>FY 2009 Accomplishments:</i> Funding is provided to research and study methods to employ mine warfare mission modules independently of the LCS platform.	3.790	0.000
Congressional Adds Subtotals	10.273	63.734

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	R-1 ITEM NOMENCLATURE PE 0603581N: <i>Littoral Combat Ship (LCS)</i>	PROJECT 9999: <i>Congressional Adds</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>D. Acquisition Strategy</b> N/A		
<b>E. Performance Metrics</b> Congressional Adds.		