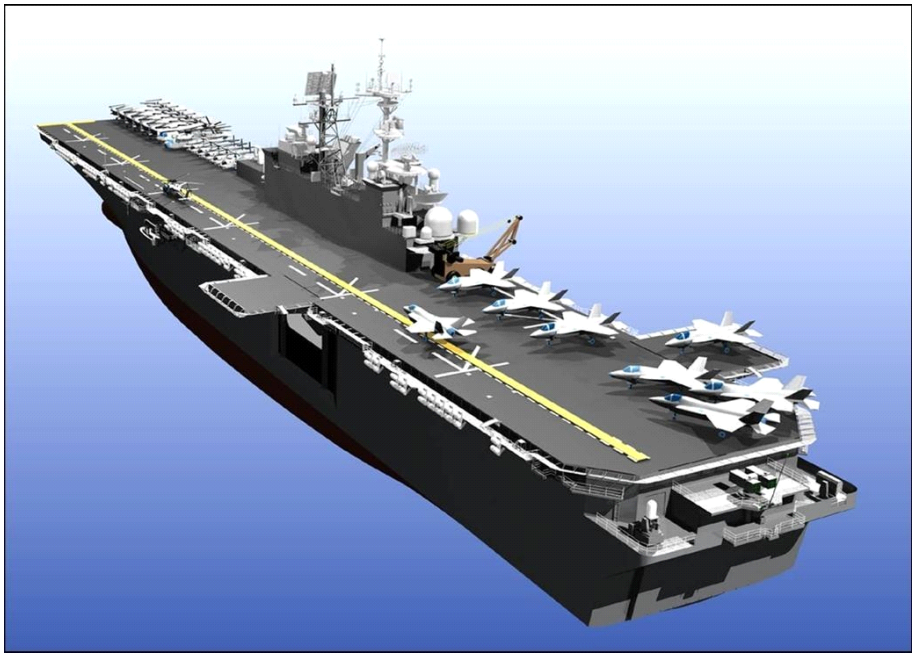
Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-333



LHA 6 AMERICA CLASS

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

LHA Replacement Amphibious Assault Ship

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned May 21, 2010

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 12, 2006

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated January 12, 2006

Mission and Description

The LHA Replacement (LHA(R)) Program is planned to replace existing LHA 1 Class Amphibious Assault Ships which reach the end of their extended service lives between 2011 and 2015.

The LHA(R) will be the key platform in the Expeditionary Strike Group (ESG)/ Amphibious Ready Group (ARG) of the future and will provide the Joint Force Commander options to project expeditionary power. The LHA 6 America Class, first ship of the LHA(R) Program, will embark and support all of the Short Take-off Vertical Landing (STOVL) and Vertical Take-off Landing (VTOL) Marine expeditionary aviation assets in the ESG/ARG, including the MV-22 and the F-35B, the STOVL model of the Joint Strike Fighter (JSF). The ship will embark over 1600 Marines and transport them and their equipment ashore by rotary-wing aircraft when the situation requires.

The LHA 6 America Class is an LHD 8 gas turbine variant with enhanced aviation capability.

Executive Summary

During 2010, Northrop Grumman Shipbuilding (NGSB) Gulf Coast (GC) has continued their design and production efforts on LHA 6 (AMERICA). Quarterly Progress and Design Reviews have been held on a routine basis throughout the year to monitor and assess the status of design and production on LHA 6 at NGSB-GC facilities in Pascagoula, Mississippi. 97% of detail design drawings have been issued to the craft and fabrication has started on all 216 unit assemblies. 61% of all units/combined units are now erected and 48% of weld outs are complete. Vessel progress on the ship's three super modules is estimated at 32% complete.

NGSB-GC outsourced sections of the bow assembly and island assembly to NGSB Newport News (NN), Virginia and Tecnico Marine of Mobile, Alabama respectively to help ease the workload and facility planning in the Pascagoula, Mississippi yard. Four units of Module 1 (bow section) were constructed at NGSB-NN. Module 3 (island) units were constructed at Tecnico. Units from both facilities have been delivered to NGSB-GC and are incorporated in erection sequencing. The outsourcing effort for Module 3 (island) units is expected to be repeated on LHA 7.

In the fall of 2008, NGSB-GC formally notified the Navy of a projected delay in ship delivery from August 31, 2012 to April 8, 2013. The Navy agreed to allow NGSB-GC to reschedule their baseline. The Navy is evaluating NGSB progress and indications of an additional slippage in scheduled ship delivery to October 2013 due to labor resource issues throughout their yard portfolio. The Navy is negotiating with NGSB-GC for appropriate contract considerations. The Navy Program Office is working with NGSB on efficiency improvement, increased productivity and risk mitigation. NGSB-GC's latest cost performance assessment for LHA 6 reflects a contract Most Likely Latest Revised Estimate (LRE) that exceeds the contract Target Price which could cause a potential budget shortfall. The Navy Program Office developed a Program Manager's Estimate at Completion (PMEAC) in October 2010 after vessel production progress exceeded 20%. The PMEAC exceeds Target Price, but evaluation is on-going to determine the possibility of mitigating costs and incorporating efficiencies to contain the overrun.

The next ship of the AMERICA Class is the LHA 7, a repeat design configuration of the LHA 6 with fact of life updates for equipment obsolescence. NGSB was awarded an Advance Procurement (AP) contract for Long Lead Time Material (LLTM) procurement and system engineering on June 30, 2010. A Request for Proposal (RFP) was released by the Navy to NGSB July 20, 2010 for the Detail Design and Construction (DD&C) modification to the contract.

Configuration and requirements for LHA(R) Flight 1 (LHA 8) are currently being studied under the direction of a 3 Star Board of Directors involving Assistant Secretary of the Navy Research, Development and Acquisition (ASN RD&A), Naval Sea Systems Command (NAVSEA), Office of the Chief of Naval Operations (OPNAV) and Marine Corps Combat Development Command (MCCDC) in support of a FY 2016 award.

There are no significant software related issues at this time.

Threshold Breaches

APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☑
	Procurement	☑
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

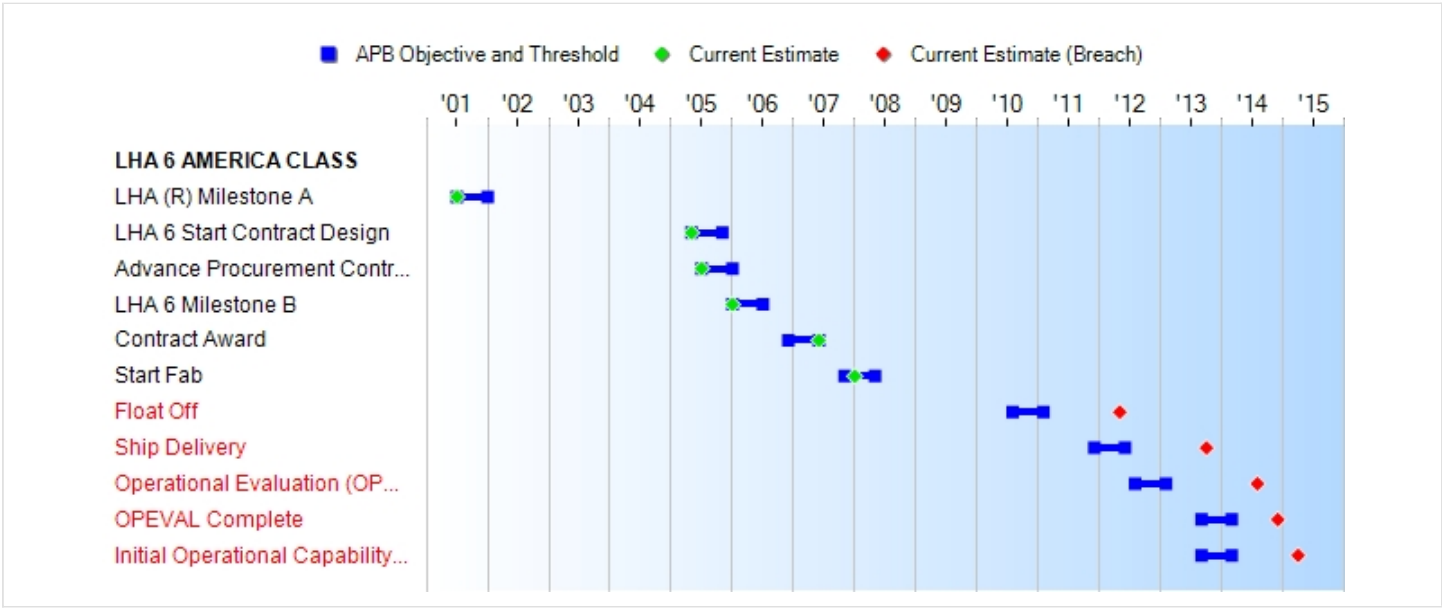
Northrop Grumman Shipbuilding (NGSB) is projecting an additional delay from April 2013 to October 2013 due to changing conditions in the shipyard portfolio which are driving increased labor demands in various trades and due to their Enterprise Resource Planning (MARS) implementation.

The schedule change will reflect a seven month delay for Float Off (from October 2011 to May 2012), a six month delay for Delivery (from April 2013 to October 2013); a seven month delay for Operational Evaluation (OPEVAL) Start (from January 2014 to August 2014); seven month delay for OPEVAL Complete (from May 2014 to December 2014); and a six month delay for Initial Operational Capability (IOC) (from October 2014 to April 2015).

Acquisition Program Baseline (APB) Cost Breach for Research, Development, Test and Evaluation (RDT&E) due to including LHA 7 and LHA 8 through the Future Years Defense Program (FYDP).

APB Cost Breach for procurement due to including LHA 7 and LHA 8 Shipbuilding and Conversion, Navy (SCN) through 2017.

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
LHA (R) Milestone A	JUL 2001	JUL 2001	JAN 2002	JUL 2001	
LHA 6 Start Contract Design	MAY 2005	MAY 2005	NOV 2005	MAY 2005	
Advance Procurement Contract	JUL 2005	JUL 2005	JAN 2006	JUL 2005	
LHA 6 Milestone B	JAN 2006	JAN 2006	JUL 2006	JAN 2006	
Contract Award	DEC 2006	DEC 2006	JUN 2007	JUN 2007	
Start Fab	NOV 2007	NOV 2007	MAY 2008	JAN 2008	
Float Off	AUG 2010	AUG 2010	FEB 2011	**MAY 2012**[1]	(Ch-1)
Ship Delivery	DEC 2011	DEC 2011	JUN 2012	**OCT 2013**[1]	(Ch-1)
Operational Evaluation (OPEVAL) Start	AUG 2012	AUG 2012	FEB 2013	**AUG 2014**[1]	(Ch-1)
OPEVAL Complete	SEP 2013	SEP 2013	MAR 2014	**DEC 2014**[1]	(Ch-1)
Initial Operational Capability (IOC)	SEP 2013	SEP 2013	MAR 2014	**APR 2015**[1]	(Ch-1)

[1] *APB Breach*

Acronyms And Abbreviations

APB - Acquisition Program Baseline
Fab - Fabrication
IOC - Initial Operational Capability
OPEVAL - Operational Evaluation

Change Explanations

(Ch-1) Northrop Grumman Shipbuilding (NGSB) is projecting an additional delay in ship delivery from April 2013 to

October 2013 due to changing conditions in the shipyard portfolio which are driving increased labor demands in various trades and due to their Enterprise Resource Planning (MARS) implementation. The schedule change will reflect a seven month delay for Float Off (from October 2011 to May 2012), a six month delay for Delivery (from April 2013 to October 2013); a seven month delay for OPEVAL Start (from January 2014 to August 2014); Seven month delay for OPEVAL Complete (from May 2014 to December 2014); and a six month delay for IOC (from October 2014 to April 2015).

Memo

Schedule reflects October 2013 Delivery for LHA 6.

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Net Ready	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture	TBD	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture
Vertical Take Off and Landing land/launch spots	9 CH-53E/MV-22	9 CH-53E/MV-22	9 CH-53E/MV-22	TBD	9 CH-53E/MV-22
F-35B capacity	23 Aircraft	23 Aircraft	20 Aircraft	TBD	23 Aircraft
Aviation operations	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	TBD	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)
Vehicle space	12,000 sq. ft.	12,000 sq. ft.	10,000 sq. ft.	TBD	11,760 sq. ft.
Total manpower (includes ship's force and all embarked elements such as troops, staffs, detachments, etc.)	2,891 Persons	2,891 Persons	2,891 Persons	TBD	2,891 Persons
Cargo space	160,000 cu. ft.	160,000 cu. ft.	130,000 cu. ft.	TBD	160,000 cu. ft.
Troop accomodations	1,686 Persons	1,686 Persons	1,626 Persons	TBD	1,686 Persons
Survivability: Navy Survivability Policy for Surface Ships	Equals threshold, implement	Equals threshold, implement	Level II per OPNAV-INST 9070.1	TBD	Equals threshold, implement

	recommenda t-ions of the NAVSEA USS COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003	recommenda t-ions of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003	of 23 Sep 1988 (LHA (R) cargo magazine protection as stated in para. 6.b.17 of the CDD		recommenda tions of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003
Force Protection: Collective Protection System (CPS)	Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated into ship design	Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated into ship design	CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities	TBD	CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities
Force Protection: Decontamination Stations	Four decontaminat -ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per	Four decontaminat -ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per	Four decontaminat -ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per	TBD	Four decontaminat ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per

	station	station	station		station

Requirements Source: Capability Development Document (CDD), dated December 19, 2005 and Capability Development Document (CDD), dated December 17, 2009.

Acronyms And Abbreviations

Apr - April
avg - average
CBR - Chemical, Biological, and Radiological
CDD - Capability Development Document
cu. - cubic
etc. - Etcetera
ft. - feet
hrs - hours
INST. - Instruction
LHA(R) - LHA(R) Amphibious Assault Ship Replacement Program
NAVSEA - Naval Sea Systems Command
OPNAV - Office of the Chief of Naval Operations
sq. - Square
TBD - To be determined

Change Explanations

None

Classified Performance information is provided in the classified annex to this submission.

Track To Budget

RDT&E				
APPN 1319	BA 04	PE 0603564N	(Navy)	
	Project 0408	Ship Preliminary Design & Feasibility Studies/Ship Development	(Shared)	(Sunk)
APPN 1319	BA 05	PE 0604567N	(Navy)	
	Project 2465	Ship Contract Design/Live Fire Test & Evaluation/LHA(R)	(Shared)	
	Project 9235	Ship Contract Design/Live Fire Test & Evaluation/LHA (R) DESIGN	(Shared)	(Sunk)
	Project 9236	Ship Contract Design/Live Fire Test & Evaluation/LHA(R) DESIGN	(Shared)	(Sunk)
Procurement				
APPN 1611	BA 03	PE 0204411N	(Navy)	
	ICN 304100	LHA Replacement		
APPN 1611	BA 05	PE 0204411N	(Navy)	
	ICN 511000	Outfitting	(Shared)	
	ICN 530000	Completion of Prior Year Shipbuilding Programs	(Shared)	
Acq O&M				
APPN 1804	BA 01	PE 0204411N	(Navy)	
	Subactivity Group 6C	LHA(R) TADTAR	(Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2006 $M			BY2006 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	199.9	199.9	219.9	**317.5**[1]	197.5	197.5	327.2
Procurement	2677.5	2677.5	2945.2	**8815.3**[1]	2896.0	2896.0	10996.8
Flyaway	2677.5	--	--	8815.3	2896.0	--	10996.8
Recurring	2501.5	--	--	8815.3	2710.0	--	10996.8
Non Recurring	176.0	--	--	0.0	186.0	--	0.0
Support	0.0	--	--	0.0	0.0	--	0.0
Other Support	0.0	--	--	0.0	0.0	--	0.0
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	1.3	0.0	0.0	1.3
Total	2877.4	2877.4	N/A	9134.1	3093.5	3093.5	11325.3

[1] ***APB Breach***

LHA 6 is the first LHA Replacement Ship of the LHA 6 AMERICA Class. The Acquisition Program Baseline (APB) reflects the LHA 6 only. The Current Estimate reflects funding for the LHA 6, LHA 7 and LHA 8.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	0	0	0
Procurement	1	1	3
Total	1	1	3

Procurement reflects a quantity of three units: LHA 6 (2007), LHA 7 (2011), and LHA 8 (2016)

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	215.8	10.4	26.7	29.2	26.9	14.3	3.9	0.0	327.2
Procurement	3358.2	958.6	2044.3	74.9	18.9	145.4	1657.3	2739.2	10996.8
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.0	1.3
PB 2012 Total	3574.1	969.2	2071.2	104.3	46.0	159.9	1661.4	2739.2	11325.3
PB 2011 Total	3571.8	969.2	2208.1	23.0	30.9	23.8	0.0	0.0	6826.8
Delta	2.3	0.0	-136.9	81.3	15.1	136.1	1661.4	2739.2	4498.5

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	1	1	0	0	0	0	1	0	3
PB 2012 Total	0	1	1	0	0	0	0	1	0	3
PB 2011 Total	0	1	1	0	0	0	0	0	0	2
Delta	0	0	0	0	0	0	0	1	0	1

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2001	--	--	--	--	--	--	15.2
2002	--	--	--	--	--	--	4.9
2003	--	--	--	--	--	--	38.1
2004	--	--	--	--	--	--	52.9
2005	--	--	--	--	--	--	43.0
2006	--	--	--	--	--	--	21.6
2007	--	--	--	--	--	--	12.9
2008	--	--	--	--	--	--	10.9
2009	--	--	--	--	--	--	7.6
2010	--	--	--	--	--	--	8.7
2011	--	--	--	--	--	--	10.4
2012	--	--	--	--	--	--	26.7
2013	--	--	--	--	--	--	29.2
2014	--	--	--	--	--	--	26.9
2015	--	--	--	--	--	--	14.3
2016	--	--	--	--	--	--	3.9
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**327.2**

Annual Funding BY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2001	--	--	--	--	--	--	16.6
2002	--	--	--	--	--	--	5.3
2003	--	--	--	--	--	--	40.7
2004	--	--	--	--	--	--	55.0
2005	--	--	--	--	--	--	43.5
2006	--	--	--	--	--	--	21.2
2007	--	--	--	--	--	--	12.4
2008	--	--	--	--	--	--	10.3
2009	--	--	--	--	--	--	7.1
2010	--	--	--	--	--	--	8.0
2011	--	--	--	--	--	--	9.4
2012	--	--	--	--	--	--	23.8
2013	--	--	--	--	--	--	25.6
2014	--	--	--	--	--	--	23.2
2015	--	--	--	--	--	--	12.1
2016	--	--	--	--	--	--	3.3
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**317.5**

Annual Funding TY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2005	--	149.3	--	--	149.3	--	149.3
2006	--	350.4	--	--	350.4	--	350.4
2007	1	1131.1	--	--	1131.1	--	1131.1
2008	--	1365.8	--	--	1365.8	--	1365.8
2009	--	192.1	--	--	192.1	--	192.1
2010	--	169.5	--	--	169.5	--	169.5
2011	1	958.6	--	--	958.6	--	958.6
2012	--	2044.3	--	--	2044.3	--	2044.3
2013	--	74.9	--	--	74.9	--	74.9
2014	--	18.9	--	--	18.9	--	18.9
2015	--	145.4	--	--	145.4	--	145.4
2016	1	1657.3	--	--	1657.3	--	1657.3
2017	--	2739.2	--	--	2739.2	--	2739.2
Subtotal	**3**	**10996.8**	**--**	**--**	**10996.8**	**--**	**10996.8**

Annual Funding BY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2005	--	141.9	--	--	141.9	--	141.9
2006	--	322.0	--	--	322.0	--	322.0
2007	1	999.6	--	--	999.6	--	999.6
2008	--	1175.2	--	--	1175.2	--	1175.2
2009	--	161.9	--	--	161.9	--	161.9
2010	--	140.4	--	--	140.4	--	140.4
2011	1	782.2	--	--	782.2	--	782.2
2012	--	1641.4	--	--	1641.4	--	1641.4
2013	--	59.1	--	--	59.1	--	59.1
2014	--	14.7	--	--	14.7	--	14.7
2015	--	111.0	--	--	111.0	--	111.0
2016	1	1244.1	--	--	1244.1	--	1244.1
2017	--	2021.8	--	--	2021.8	--	2021.8
Subtotal	**3**	**8815.3**	**--**	**--**	**8815.3**	**--**	**8815.3**

Cost Quantity Information
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2006 $M
2005	--	--
2006	--	--
2007	1	2752.3
2008	--	--
2009	--	--
2010	--	--
2011	1	2737.4
2012	--	--
2013	--	--
2014	--	--
2015	--	--
2016	1	3325.6
2017	--	--
Subtotal	**3**	**8815.3**

Annual Funding TY$
1804 | Acq O&M | Operation and Maintenance, Navy

Fiscal Year	Total Program TY $M
2010	0.1
2011	0.2
2012	0.2
2013	0.2
2014	0.2
2015	0.2
2016	0.2
Subtotal	**1.3**

Annual Funding BY$
1804 | Acq O&M | Operation and Maintenance, Navy

Fiscal Year	Total Program BY 2006 $M
2010	0.1
2011	0.2
2012	0.2
2013	0.2
2014	0.2
2015	0.2
2016	0.2
Subtotal	**1.3**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	2/14/2006	2/14/2006
Approved Quantity	1	1
Reference	LHA(R)/LHA-6 -Acquistion Decision Memorandum	LHA(R)/LHA-6 -Acquistion Decision Memorandum
Start Year	2007	2007
End Year	2013	2013

End year reflects Delivery of LHA 6.

Foreign Military Sales

None

Nuclear Cost

None

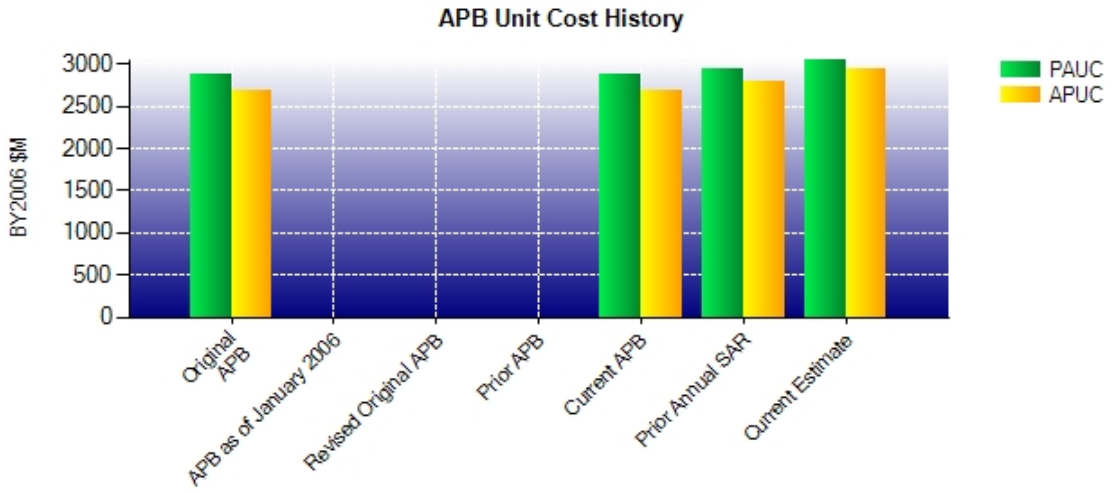
Unit Cost

Unit Cost Report

Unit Cost	BY2006 $M Current UCR Baseline (JAN 2006 APB)	BY2006 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2877.4	9134.1	
Quantity	1	3	
Unit Cost	2877.400	3044.700	+5.81
Average Procurement Unit Cost (APUC)			
Cost	2677.5	8815.3	
Quantity	1	3	
Unit Cost	2677.500	2938.433	+9.75

Unit Cost	BY2006 $M Original UCR Baseline (JAN 2006 APB)	BY2006 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2877.4	9134.1	
Quantity	1	3	
Unit Cost	2877.400	3044.700	+5.81
Average Procurement Unit Cost (APUC)			
Cost	2677.5	8815.3	
Quantity	1	3	
Unit Cost	2677.500	2938.433	+9.75

Unit Cost History



		BY2006 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JAN 2006	2877.400	2677.500	3093.500	2896.000
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	JAN 2006	2877.400	2677.500	3093.500	2896.000
Prior Annual SAR	DEC 2009	2933.050	2801.100	3413.400	3280.600
Current Estimate	DEC 2010	3044.700	2938.433	3775.100	3665.600

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
3093.500	76.700	566.566	0.000	0.000	-52.333	90.667	0.000	681.600	3775.100

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2896.000	77.200	698.233	0.000	0.000	-96.500	90.667	0.000	769.600	3665.600

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	JUL 2001	N/A	JUL 2001
Milestone B	N/A	JAN 2006	N/A	JAN 2006
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	SEP 2013	N/A	APR 2015
Total Cost (TY $M)	N/A	3093.5	N/A	11325.3
Total Quantity	N/A	1	N/A	3
Prog. Acq. Unit Cost (PAUC)	N/A	3093.500	N/A	3775.100

Cost Variance

Cost Variance Summary

Summary Then Year $M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Dev Est)	197.5	2896.0	--	--	3093.5
Previous Changes					
Economic	-1.5	+137.1	--	--	+135.6
Quantity	--	+3413.5	--	--	+3413.5
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+68.4	-157.4	--	+1.2	-87.8
Other	--	+272.0	--	--	+272.0
Support	--	--	--	--	--
Subtotal	+66.9	+3665.2	--	+1.2	+3733.3
Current Changes					
Economic	--	+94.5	--	--	+94.5
Quantity	--	+4473.2	--	--	+4473.2
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+62.8	-132.1	--	+0.1	-69.2
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+62.8	+4435.6	--	+0.1	+4498.5
Total Changes	+129.7	+8100.8	--	+1.3	+8231.8
CE - Cost Variance	327.2	10996.8	--	1.3	11325.3
CE - Cost & Funding	327.2	10996.8	--	1.3	11325.3

Summary Base Year 2006 $M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Dev Est)	199.9	2677.5	--	--	2877.4
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	+2816.6	--	--	+2816.6
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+62.8	-141.6	--	+1.2	-77.6
Other	--	+249.7	--	--	+249.7
Support	--	--	--	--	--
Subtotal	+62.8	+2924.7	--	+1.2	+2988.7
Current Changes					
Economic	--	--	--	--	--
Quantity	--	+3325.7	--	--	+3325.7
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+54.8	-112.6	--	+0.1	-57.7
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+54.8	+3213.1	--	+0.1	+3268.0
Total Changes	+117.6	+6137.8	--	+1.3	+6256.7
CE - Cost Variance	317.5	8815.3	--	1.3	9134.1
CE - Cost & Funding	317.5	8815.3	--	1.3	9134.1

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised Estimate to cover Preliminary Design and Contract Design efforts for the LHA 8. (Estimating)	+54.8	+62.8
RDT&E Subtotal	+54.8	+62.8

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+94.5
Quantity variance resulting from an increase of 1 ship from 2 to 3. (Quantity)	+3325.7	+4473.2
Adjustment for current and prior escalation. (Estimating)	-44.1	-52.0
Reduced funding to support the Department's current estimate and reduced contractor support for the LHA 7. (Estimating)	-68.5	-80.1
Procurement Subtotal	+3213.1	+4435.6

Acq O&M	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised estimate for LHA 8. (Estimating)	+0.1	+0.1
Acq O&M Subtotal	+0.1	+0.1

Contracts

Appropriation: Procurement

Contract Name	**LHA6 Detail Design & Construction**
Contractor	Northrop Grumman Shipbuilding
Contractor Location	Pascagoula, MS 39567
Contract Number, Type	N00024-05-C-2221, FPIF
Award Date	July 15, 2005
Definitization Date	June 01, 2007

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
2340.0	2521.6	1	2377.2	2546.5	1	2546.5	2546.5

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/26/2010)	-193.1	-164.8
Previous Cumulative Variances	-99.9	-91.6
Net Change	-93.2	-73.2

Cost And Schedule Variance Explanations

There was an unfavorable net change in cost variance of $93.2M and an unfavorable net change in schedule variance of $73.2M reflecting continued degrading shipyard performance.

The net change of -93.2M in the Cost Variance consists of Labor, -$34.5M; Material, -$30.6M; and Overhead, -$28.1M. Engineering change paper and inability to meet schedules continues to affect production efficiency. Material continues to reflect unfavorable variances in Major Procurements, Inventory Systems, and Construction Services. Additionally, rate changes anticipated to reflect the shipbuilder’s corporate restructure are a contributing factor to increasing unfavorable variances.

Schedule Variances continued to degrade as a result of the shipbuilder’s continued lack of progress versus the Most Likely plan. The largest variances presented in Major Procurements, Inventory Systems, and Outfitting & Furnishing Labor. The net change of -$73.2M in Schedule Variance consists of Labor, -$20.5; Material, -$14.7; and Overhead, -$37.9M.

Contract Comments

The LHA Replacement Advance Procurement (AP) Contract was subsumed by the LHA Replacement Detail Design and Construction (DD&C) Contract on June 1, 2007. Target Price and Ceiling Price changes are due to a change in the Build Strategy and Engineering Change Proposals.

Appropriation: Procurement

Contract Name	**LHA(7) Advanced Procurement (AP)**
Contractor	Northrop Grumman Ship Building
Contractor Location	Pascagoula, MS 39567
Contract Number, Type	N00024-10-C-2229, CPFF
Award Date	June 30, 2010
Definitization Date	

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
175.5	N/A	1	223.6	N/A	1	223.6	223.6

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/26/2010)	+0.8	-7.7
Previous Cumulative Variances	--	--
Net Change	+0.8	-7.7

Cost And Schedule Variance Explanations

The favorable $0.8K Cost Variance is a result of more effective sharing of personnel on multiple contracts.

The unfavorable-$7.7K Schedule Variance is due to time phasing issues within Material and the decision to delay some engineering effort.

Contract Comments

The LHA 7 AP Contract consists of Systems Engineering, Detailed Design Engineering, and Long Lead Time Material (LLTM) Procurement. The LLTM Contract Line Item Number (CLIN) will be subsumed by the LHA 7 Detail Design and Construction Contract when awarded.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	3	0.00%
Total Program Quantities Delivered	0	0	3	0.00%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	11325.3	Years Appropriated	11
Expenditures To Date	1965.7	Percent Years Appropriated	64.71%
Percent Expended	17.36%	Appropriated to Date	4543.3
Total Funding Years	17	Percent Appropriated	40.12%

Expenditures current through March 10, 2011.

Operating and Support Cost

Assumptions And Ground Rules

The Operating and Support Cost Estimate was published in October 2005. The Operating and Support Cost Analysis Model (OSCAM) Naval Suite V7.0 was used for the LHA(R)/LHA 6 Milestone B Program Life Cycle Cost Estimate (PLCCE). OSCAM provides a means of analyzing O&S costs of Navy shipboard systems and ships and provides a tool for estimating O&S costs over a ship's service life. The OSCAM model comes with annually updated datasets based on historical data extracted from the Visibility and Management of Operating and Support Costs (VAMOSC) database. The FY04 Historical VAMOSC dataset for the LHD 1 Class serves as the baseline for the LHA 6 O&S estimate.

O&S costs for the LHA 6 were estimated as an annual cost based on one ship with an expected service life of 40 years while operating and supporting the ship in typical peacetime operations. Potential costs of currently unplanned and unknown future upgrades or configuration changes are assumed to occur in the same proportion as modernization work that has occurred on the LHA 1 and LHD 1 ship classes. OSCAM builds the O&S costs by month, and the results show the estimated cost by year based on the Operational Tempo (OPTEMPO) and maintenance cycle. Nominal OPTEMPO is assumed to be 2700 hours steaming underway and 1200 hours steaming not underway, based on the fuel burn rates and time profiles provided by the LHA 6 design team.

The average annual O&S cost for the LHA 6 only is estimated at $110.16 million (BY06$) without disposal costs included. LHA 7 O&S costs are in development. The total O&S cost for one ship over the 40 year life is estimated to be $4.452 billion (BY06$), including disposal costs. 2. The average annual O&S Costs for the LHA 6 was based on a 40 year Life Cycle. The average annual O&S Costs for an LHD 1 Class ship was based on a 35 year Life Cycle.

Costs BY2006 $M		
Cost Element	**LHA 6 AMERICA CLASS Average Annual Cost Per Ship**	**LHD 1 Average Annual Cost Per Ship**
Unit-Level Manpower	65.0	69.4
Unit Operations	11.8	15.6
Maintenance	14.6	14.7
Sustaining Support	15.7	12.1
Continuing System Improvements	0.0	0.0
Indirect Support	3.1	3.5
Other	0.0	0.0
Total Unitized Cost (Base Year 2006 $)	110.2	115.3

Total O&S Costs $M	LHA 6 AMERICA CLASS	LHD 1
Base Year	4452.0	4097.1
Then Year	9114.8	7929.2