# Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-374

# Littoral Combat Ship (LCS)

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

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## Program Information

**Program Name**

Littoral Combat Ship (LCS)

**DoD Component**

Navy

## Responsible Office

**Responsible Office**

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**Date Assigned** November 16, 2012

## References

**SAR Baseline (Development Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 7, 2011

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 7, 2011

## Mission and Description

The Littoral Combat Ship (LCS) will be optimized for flexibility in the littorals as a system of systems that is both manned and unmanned, mission reconfigurable, and deployed in LCS. It will focus on three primary anti-access mission areas: Littoral Surface Warfare operations emphasizing prosecution of small boats, mine warfare, and littoral anti-submarine warfare. Its high speed and ability to operate at economical loiter speeds will enable fast and calculated responses to small boat threats, mine laying and quiet diesel submarines. LCS employment of networked sensors for Intelligence, Surveillance, and Reconnaissance (ISR) in support of Special Operations Forces (SOF) will directly enhance littoral mobility. Its shallow draft will allow easier excursion into shallower areas for both mine countermeasures and small boat prosecution. Using LCS against these asymmetric threats will enable Joint Commanders to concentrate multi-mission combatants on primary missions such as precision strike, battle group escort and theater air defense.

## Executive Summary

The FY 2014 President’s Budget submission requests $1,793 million to procure LCS hulls 17 through 20 in FY 2014. These ships will be awarded under the Block Buy contracts to Lockheed Martin and Austal, USA as part of the FY 2010 - FY 2015 ship procurements.

The January 2013 Chief of Naval Operations (N8) report prepared for Congress titled "Navy Combatant Vessel Force Structure Requirement" outlines the reduction to the LCS total program procurement quantity of Seaframes from 55 to 52 ships which is consistent with the 2012 Defense Strategic Guidance for a 306-ship combatant force.

USS FREEDOM (LCS 1) deployed to Singapore on March 1, 2013 for eight months in theater. In coordination with OSD (DOT&E) and Commander Operational Test and Evaluation Force (COTF), LCS 1 completed a Special Trial and a Quick Reaction Assessment (QRA) to assess the ships readiness for deployment. LCS 1 also completed the second phase of its Post Shakedown Availability (PSA), and supported Developmental Testing (DT) of the Surface Warfare (SUW) Mission Package.

USS INDEPENDENCE (LCS 2) arrived at its homeport, Naval Base San Diego, California (CA) on May 2, 2012. LCS 2 is continuing with its post delivery test and trials phase. LCS 2 supported Mine Countermeasure (MCM) Mission Package DT, completed the first phase of its PSA, and will continue to support core Seaframe and MCM DT efforts.

USS FORT WORTH (LCS 3) delivered on June 6, 2012 at target cost and ahead of the contract delivery date. USS FORT WORTH was commissioned on September 22, 2012 in Galveston, Texas and arrived in its homeport of San Diego, CA in October 2012. LCS 3 Final Contract Trial (FCT) was conducted in April 2013. PSA is scheduled to begin in May 2013.

CORONADO (LCS 4) continues to accomplish production and test milestones, working towards the conduct and successful completion of trials. Delivery is planned for July 2013. LCS 4 is approximately 96 percent complete in physical production progress.

MILWAUKEE (LCS 5) continues in production. The shipbuilder has revised their Build Strategy to be on more of a manufacturing basis, and to level load the workforce over the multi-ship contract. Transition to the revised Build Strategy is being phased into the present construction and will be fully in place for LCS 9. The Navy has approved the shipbuilder's replan of the module construction sequences to improve shipyard effieciency. Launch is planned for early 2014. LCS 5 is approximately 45 percent complete in physical production progress.

JACKSON (LCS 6) Austal conducted a lay keel event October 18, 2012. Launch is planned for late 2013. LCS 6 is continuing in production and is approximately 55 percent complete in physical production progress.

DETROIT (LCS 7) completed a Production Readiness Review (PRR) and started fabrication in April 2012. A lay keel event was conducted November 8, 2012. The Navy has approved the shipbuilder's replan of the module construction sequences to improve shipyard effieciency with the revised Build Strategy. LCS 7 continues in production and is approximately 28 percent complete in physical production progress.

MONTGOMERY (LCS 8) conducted a PRR in May 2012. The start of fabrication began in June 2012. LCS 8 is continuing in production and is approximately 29 percent complete in physical production progress.

Contract funding was authorized for the four FY 2012 ships on March 16, 2012. LITTLE ROCK (LCS 9) and GABRIELLE GIFFORDS (LCS 10) completed PRRs and have been granted permission to proceed with start of full construction. LCS 9 and 10 are approximately 4 and 3 percent complete in physical production progress,

respectively. SIOUX CITY (LCS 11) and OMAHA (LCS 12) are in pre-production.

Contract funding was authorized for the four FY 2013 ships on March 4, 2013. WICHITA (LCS 13) and LCS 15 will be constructed by Lockheed Martin and MANCHESTER (LCS 14) and LCS 16 will be constructed by Austal, USA. LCS 15 and LCS 16 have not yet been named.

In April 2011, in conjunction with the LCS Seaframe Milestone B decision, the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) certified the LCS Seaframe program pursuant to section 2366b of title 10, United States Code, with waivers. Specifically, USD (AT&L) was unable to certify three provisions due to the determination that but for these waivers the Department would be unable to meet critical national security objectives. Provisions (a)1(B) (affordability) and 1(D) (funding available) were waived due to a total resource and funding shortfall in the period covered by the future-years defense program submitted in Fiscal Year 2011 when the certification was made. The majority of the resources and funding remain outside the future-years defense program (FYDP) as submitted for PB 2014. For the waiver to provision (a)1(C) (reasonable cost estimates with concurrence of Director, Cost Assessment and Program Evaluation, (D,CAPE)), the D,CAPE continues to monitor the cost estimates as the program progresses through the budget cycles and participates in annual Defense Acquisition Board In-Process Reviews conducted by USD (AT&L).

There are no significant software-related issues with this program at this time.

## Threshold Breaches

| APB Breaches | | |
|---|---|---|
| **Schedule** | | ☐ |
| **Performance** | | ☐ |
| **Cost** | RDT&E | ☐ |
| | Procurement | ☐ |
| | MILCON | ☐ |
| | Acq O&M | ☐ |
| **O&S Cost** | | ☐ |
| **Unit Cost** | PAUC | ☐ |
| | APUC | ☐ |

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

## Schedule


| Milestones | SAR Baseline Dev Est | Current APB Development Objective/Threshold | | Current Estimate | |
|---|---|---|---|---|---|
| Milestone A/Program Initiation | MAY 2004 | MAY 2004 | MAY 2004 | MAY 2004 | |
| Final Design and Construction Contract Award | MAY 2004 | MAY 2004 | MAY 2004 | MAY 2004 | |
| Lead Ship Award | DEC 2004 | DEC 2004 | DEC 2004 | DEC 2004 | |
| First Ship Delivery | SEP 2008 | SEP 2008 | SEP 2008 | SEP 2008 | |
| FY 2010 Contract Award | DEC 2010 | DEC 2010 | JUN 2011 | DEC 2010 | |
| Milestone B | FEB 2011 | FEB 2011 | AUG 2011 | FEB 2011 | |
| Milestone C | JAN 2012 | JAN 2012 | JUL 2012 | JAN 2012 | (Ch-1) |
| Initial Operational Capability | JAN 2014 | JAN 2014 | JUL 2014 | MAR 2013 | (Ch-2) |
| IOT&E LCS 1 with one Mission Package | DEC 2013 | DEC 2013 | JUN 2014 | JUN 2014 | (Ch-3) |
| IOT&E LCS 2 with one Mission Package | DEC 2013 | DEC 2013 | JUN 2014 | JUN 2014 | (Ch-3) |
| IOC LCS 2 | JAN 2014 | JAN 2014 | JUL 2014 | JUL 2014 | (Ch-3) |

**Acronyms And Abbreviations**

IOC - Initial Operational Capability
IOT&E - Initial Operational, Test and Evaluation

**Change Explanations**

(Ch-1) Milestone C current estimate revised from May 2012 to January 2012 as requirement to conduct a Milestone C was rescinded by the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) in October 2012. The LCS program is required to conduct annual In-Process Reviews with the USD(AT&L).

(Ch-2) IOC current estimate revised from January 2014 to March 2013. Per the Flight 0 Capability Development Document (CDD), Initial Operational Capability (IOC) is the first attainment of the minimum capability to effectively employ a weapon, item of equipment, or system of approved specific characteristics, and which is manned or operated by an adequately trained, equipped and supported military unit or force. The milestone has been demonstrated with the deployment of LCS 1 to Singapore on March 1, 2013.

(Ch-3) IOC LCS 2 current estimate revised from January 2014 to July 2014, and IOT&E LCS 1 with one Mission Package and IOT&E LCS 2 with one Mission Package planning dates revised from DEC 2013 to JUN 2014 to align with current approved Seaframe and Mission Package Test & Evaluation schedule.

## Performance

| Characteristics | SAR Baseline Dev Est | Current APB Development Objective/Threshold | | Demonstrated Performance | Current Estimate | |
|---|---|---|---|---|---|---|
| Sprint Speed (kts) | 50 | 50 | 40 | 40 kts | 40 kts | |
| Navigational Draft (ft) | 10 | 10 | 20 | 14ft | 14ft | |
| Range at Transit Speed (includes payload) | 4,300 nm @ 16 kts | 4,300 nm @ 16 kts | 3,500 nm @ 14 kts | TBD | 3,777 nm @ 14 kts | (Ch-1) |
| Mission Package Payload (Weight) | 210 MT (130 MT) mission package/80 MT mission package fuel) | 210 MT (130 MT) mission package/80 MT mission package fuel) | 180 MT (105 MT mission package/75 MT mission package fuel) | 180 MT | 180 MT (105 MT) mission package/75 MT mission package fuel) | |
| Core Crew Manning (# Core Crew Members) | 15 | 15 | 50 | 40 Core Crew Members | 40 Core Crew Members | |
| Net- Ready: The system must support Net-Centric military operations. The system must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. The system must continuously provide survivable, interoperable, secure, and operationally effective information exchanges to enable a Net-Centric military capability. | The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in | The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in | The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles | TBD | The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in | |

| | | | | | |
|---|---|---|---|---|---|
| | the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views. | the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views. | identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an IATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture | | the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticatio n, confidentiality , and nonrepudiati on, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | views. | | | |
| Materiel Availability | 0.712 | 0.712 | 0.64 | TBD | 0.64 | (Ch-2) |
| Systems Training (Core Crew) | Trained-to-Certify at all Team (Watch Section) levels | Trained-to-Certify at all Team (Watch Section) levels | Trained-to-Qualify at individual level (billet/watch station) | TBD | Trained-to-Qualify at individual level (billet/watch station) | |

**Requirements Source:** Flight 0+ Capability Development Document (CDD) dated June 17, 2008

## Acronyms And Abbreviations

ATO - Authority to Operate
DAA - Designated Approval Authority
DISR - DoD IT Standards Registry
ft - Feet
GIG - Global Information Grid
IA - Information Assurance
IATO - Interim Authority to Operate
IT - Information Technology
KIP - Key Interface Profile
kts - Knots
MT - Metric Ton
NCOW RM - Net-Centric Operations Warfare Reference Model
nm - Nautical Miles
TBD - To Be Determined
TV - Technical View

## Change Explanations

(Ch-1) Range at Transit Speed current estimate revised from 4,300 nm @ 16 kts to 3,777 nm @ 14 kts per Naval Sea Systems Command (NAVSEA) 05D assessment of range at transit speed for LCS Flight 0+ designs.

(Ch-2) Material Availability current estimate revised from 0.712 percent to 0.64 percent based on updated 2012 maintenance data and USS FREEDOM deployment data for previously limited data quality and availability.

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

## Memo

LCS 1 and LCS 2 represent Flight 0 CDD ships and although some performance has been demonstrated and captured, Flight 0+ (LCS 3 and follow ships) is most representative of the LCS production baseline. Once demonstrated performance is captured and validated to appropriately report against all KPPs for both the FREEDOM and INDEPENDENCE variants it will be made available. As part of the LCS Sustainment Strategy, interim performance data is collected under the Interim Support Plan (ISP). The data collected has been used to inform the structure and requirements of the Product Support Plan (PSP) to be awarded in FY 2014, at which point the program will begin reporting Demonstrated Performance data.

## Track To Budget

| | | | | |
|---|---|---|---|---|
| **RDT&E** | | | | |
| APPN 1319 | BA 04 | PE 0603581N | (Navy) | |
| | Project 3096 | Littoral Combat Ship/Littoral Combat Ship Development | | |
| | Project 4018 | Littoral Combat Ship/Littoral Combat Ship Construction | | |
| | Project 9999 | Littoral Combat Ship/Revised Acquisition Strategy | | (Sunk) |
| | Congressional Add | | | |
| **Procurement** | | | | |
| APPN 1611 | BA 02 | PE 0204230N | (Navy) | |
| | ICN 2127 | Littoral Combat Ship | | |
| APPN 1611 | BA 05 | PE 0204230N | (Navy) | |
| | ICN 5110 | Outfitting/Post Delivery | (Shared) | |
| APPN 1810 | BA 01 | PE 0204230N | (Navy) | |
| | ICN 0944 | LCS Class Equipment | | |
| | ICN 1320 | Seaframe LCS Training | (Shared) | |
| **MILCON** | | | | |
| APPN 1205 | BA 01 | PE 0203176N | (Navy) | |
| | Project 00245500 | LCS Training Facility | | (Sunk) |
| | Project 60201425 | LCS Logistics Support Facility | (Shared) | |
| APPN 1205 | BA 01 | PE 0815976N | (Navy) | |
| | Project 60201423 | LCS Operational Trainer Facility | (Shared) | |
| APPN 1205 | BA 03 | PE 0901211N | (Navy) | |
| | Project 64482044 | Planning | (Shared) | |

## Cost and Funding

## Cost Summary

**Total Acquisition Cost and Quantity**

| | BY2010 $M | | | BY2010 $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 | 3433.3 | 3433.3 | 3776.6 | 3329.1 | 3481.7 | 3481.7 | 3387.1 |
| Procurement | 28369.2 | 28369.2 | 31206.1 | 24266.9 | 33720.5 | 33720.5 | 30331.8 |
| Flyaway | 28369.2 | -- | -- | 24266.9 | 33720.5 | -- | 30331.8 |
| Recurring | 28090.9 | -- | -- | 24266.9 | 33401.8 | -- | 30331.8 |
| Non Recurring | 278.3 | -- | -- | 0.0 | 318.7 | -- | 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 | 208.5 | 208.5 | 229.4 | 200.0 | 236.6 | 236.6 | 236.6 |
| Acq O&M | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 32011.0 | 32011.0 | N/A | 27796.0 | 37438.8 | 37438.8 | 33955.5 |

Confidence Level for Current APB Cost 50% - The estimate to support this program, like most cost estimates, is built upon a product-oriented work breakdown structure based on historical actual cost information to the maximum extent possible, and, most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which we have been successful.

It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Programs (MDAPs). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about as likely the estimate will prove too low or too high for the program as described.

Cost and Funding data represented in this SAR supports the LCS Milestone B Defense Acquisition Board decisions as approved in February 2011 with a reduction to the LCS Seaframe program from 55 to 52 ships per the January 2013 30 year shipbuilding plan guidance. It represents a 50 percent confidence level when considering 25 of the 52 ships of the LCS Seaframe program will be funded outside the 2014 Future Years Defense Program (FYDP) budget submission.

| Quantity | SAR Baseline Dev Est | Current APB Development | Current Estimate |
|---|---|---|---|
| RDT&E | 2 | 2 | 2 |
| Procurement | 53 | 53 | 50 |
| Total | 55 | 55 | 52 |

The January 2013 Chief of Naval Operations (N8) report prepared for Congress titled "Navy Combatant Vessel Force Structure Requirement" outlines the reduction to the LCS total program procurement quantity of Seaframes from 55 to 52 ships which is consistent with the 2012 Defense Strategic Guidance for a 306-ship combatant force.

## Cost and Funding

## Funding Summary

**Appropriation and Quantity Summary**
**FY2014 President's Budget / December 2012 SAR (TY$ M)**

| Appropriation | Prior | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | To Complete | Total |
|---|---|---|---|---|---|---|---|---|---|
| RDT&E | 2384.8 | 233.6 | 202.6 | 170.8 | 42.0 | 40.6 | 41.1 | 271.6 | 3387.1 |
| Procurement | 5643.9 | 1885.6 | 1946.6 | 2022.0 | 1195.3 | 1328.9 | 1354.2 | 14955.3 | 30331.8 |
| MILCON | 0.0 | 65.6 | 17.4 | 40.0 | 0.0 | 0.0 | 0.0 | 113.6 | 236.6 |
| Acq O&M | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PB 2014 Total | 8028.7 | 2184.8 | 2166.6 | 2232.8 | 1237.3 | 1369.5 | 1395.3 | 15340.5 | 33955.5 |
| PB 2013 Total | 8049.9 | 2182.7 | 2197.5 | 2181.6 | 1241.0 | 1230.3 | 1931.3 | 18426.2 | 37440.5 |
| Delta | -21.2 | 2.1 | -30.9 | 51.2 | -3.7 | 139.2 | -536.0 | -3085.7 | -3485.0 |

Program funding and production quantities listed in this SAR are consistent with the FY 2014 President's Budget (PB). The FY 2014 PB did not reflect the enacted DoD appropriation for FY 2013, nor sequestration; it reflected the President's requested amounts for FY 2013.

| Quantity | Undistributed | Prior | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | To Complete | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Development | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Production | 0 | 10 | 4 | 4 | 4 | 2 | 2 | 2 | 22 | 50 |
| PB 2014 Total | 2 | 10 | 4 | 4 | 4 | 2 | 2 | 2 | 22 | 52 |
| PB 2013 Total | 2 | 10 | 4 | 4 | 4 | 2 | 2 | 2 | 25 | 55 |
| Delta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 |

## 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 |
|---|---|---|---|---|---|---|---|
| 2003 | -- | -- | -- | -- | -- | -- | 35.8 |
| 2004 | -- | -- | -- | -- | -- | -- | 116.8 |
| 2005 | -- | -- | -- | -- | -- | -- | 369.8 |
| 2006 | -- | -- | -- | -- | -- | -- | 384.5 |
| 2007 | -- | -- | -- | -- | -- | -- | 573.1 |
| 2008 | -- | -- | -- | -- | -- | -- | 200.9 |
| 2009 | -- | -- | -- | -- | -- | -- | 197.4 |
| 2010 | -- | -- | -- | -- | -- | -- | 260.1 |
| 2011 | -- | -- | -- | -- | -- | -- | 99.0 |
| 2012 | -- | -- | -- | -- | -- | -- | 147.4 |
| 2013 | -- | -- | -- | -- | -- | -- | 233.6 |
| 2014 | -- | -- | -- | -- | -- | -- | 202.6 |
| 2015 | -- | -- | -- | -- | -- | -- | 170.8 |
| 2016 | -- | -- | -- | -- | -- | -- | 42.0 |
| 2017 | -- | -- | -- | -- | -- | -- | 40.6 |
| 2018 | -- | -- | -- | -- | -- | -- | 41.1 |
| 2019 | -- | -- | -- | -- | -- | -- | 31.5 |
| 2020 | -- | -- | -- | -- | -- | -- | 42.8 |
| 2021 | -- | -- | -- | -- | -- | -- | 43.4 |
| 2022 | -- | -- | -- | -- | -- | -- | 32.6 |
| 2023 | -- | -- | -- | -- | -- | -- | 23.0 |
| 2024 | -- | -- | -- | -- | -- | -- | 31.2 |
| 2025 | -- | -- | -- | -- | -- | -- | 43.5 |
| 2026 | -- | -- | -- | -- | -- | -- | 23.6 |
| **Subtotal** | **2** | **--** | **--** | **--** | **--** | **--** | **3387.1** |

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

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 2010 $M | Non End Item Recurring Flyaway BY 2010 $M | Non Recurring Flyaway BY 2010 $M | Total Flyaway BY 2010 $M | Total Support BY 2010 $M | Total Program BY 2010 $M |
|---|---|---|---|---|---|---|---|
| 2003 | -- | -- | -- | -- | -- | -- | 41.1 |
| 2004 | -- | -- | -- | -- | -- | -- | 130.5 |
| 2005 | -- | -- | -- | -- | -- | -- | 402.7 |
| 2006 | -- | -- | -- | -- | -- | -- | 406.1 |
| 2007 | -- | -- | -- | -- | -- | -- | 590.8 |
| 2008 | -- | -- | -- | -- | -- | -- | 203.4 |
| 2009 | -- | -- | -- | -- | -- | -- | 197.3 |
| 2010 | -- | -- | -- | -- | -- | -- | 256.1 |
| 2011 | -- | -- | -- | -- | -- | -- | 95.0 |
| 2012 | -- | -- | -- | -- | -- | -- | 138.7 |
| 2013 | -- | -- | -- | -- | -- | -- | 215.6 |
| 2014 | -- | -- | -- | -- | -- | -- | 183.5 |
| 2015 | -- | -- | -- | -- | -- | -- | 151.8 |
| 2016 | -- | -- | -- | -- | -- | -- | 36.6 |
| 2017 | -- | -- | -- | -- | -- | -- | 34.8 |
| 2018 | -- | -- | -- | -- | -- | -- | 34.5 |
| 2019 | -- | -- | -- | -- | -- | -- | 26.0 |
| 2020 | -- | -- | -- | -- | -- | -- | 34.6 |
| 2021 | -- | -- | -- | -- | -- | -- | 34.5 |
| 2022 | -- | -- | -- | -- | -- | -- | 25.4 |
| 2023 | -- | -- | -- | -- | -- | -- | 17.6 |
| 2024 | -- | -- | -- | -- | -- | -- | 23.4 |
| 2025 | -- | -- | -- | -- | -- | -- | 32.0 |
| 2026 | -- | -- | -- | -- | -- | -- | 17.1 |
| **Subtotal** | **2** | **--** | **--** | **--** | **--** | **--** | **3329.1** |

Research, Development, Test, and Evaluation (RDT&E) for the LCS Seaframe Program includes the detail design and construction of two Flight 0 ships in addition to the program development, test and evaluation, training development, and sustained engineering.

**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 |
|---|---|---|---|---|---|---|---|
| 2006 | -- | 500.0 | -- | -- | 500.0 | -- | 500.0 |
| 2007 | -- | -- | -- | -- | -- | -- | -- |
| 2008 | -- | -- | -- | -- | -- | -- | -- |
| 2009 | 2 | 1017.0 | -- | -- | 1017.0 | -- | 1017.0 |
| 2010 | 2 | 1079.3 | -- | -- | 1079.3 | -- | 1079.3 |
| 2011 | 2 | 1246.1 | -- | -- | 1246.1 | -- | 1246.1 |
| 2012 | 4 | 1781.1 | -- | -- | 1781.1 | -- | 1781.1 |
| 2013 | 4 | 1845.1 | -- | -- | 1845.1 | -- | 1845.1 |
| 2014 | 4 | 1872.8 | -- | -- | 1872.8 | -- | 1872.8 |
| 2015 | 4 | 1959.1 | -- | -- | 1959.1 | -- | 1959.1 |
| 2016 | 2 | 1131.8 | -- | -- | 1131.8 | -- | 1131.8 |
| 2017 | 2 | 1241.4 | -- | -- | 1241.4 | -- | 1241.4 |
| 2018 | 2 | 1267.2 | -- | -- | 1267.2 | -- | 1267.2 |
| 2019 | 3 | 1894.6 | -- | -- | 1894.6 | -- | 1894.6 |
| 2020 | 3 | 1862.0 | -- | -- | 1862.0 | -- | 1862.0 |
| 2021 | 3 | 1887.0 | -- | -- | 1887.0 | -- | 1887.0 |
| 2022 | 3 | 1860.3 | -- | -- | 1860.3 | -- | 1860.3 |
| 2023 | 3 | 1908.6 | -- | -- | 1908.6 | -- | 1908.6 |
| 2024 | 3 | 2042.5 | -- | -- | 2042.5 | -- | 2042.5 |
| 2025 | 3 | 2048.0 | -- | -- | 2048.0 | -- | 2048.0 |
| 2026 | 1 | 920.2 | -- | -- | 920.2 | -- | 920.2 |
| 2027 | -- | 171.8 | -- | -- | 171.8 | -- | 171.8 |
| 2028 | -- | 174.1 | -- | -- | 174.1 | -- | 174.1 |
| 2029 | -- | 140.4 | -- | -- | 140.4 | -- | 140.4 |
| 2030 | -- | 45.8 | -- | -- | 45.8 | -- | 45.8 |
| **Subtotal** | **50** | **29896.2** | **--** | **--** | **29896.2** | **--** | **29896.2** |

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

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 2010 $M | Non End Item Recurring Flyaway BY 2010 $M | Non Recurring Flyaway BY 2010 $M | Total Flyaway BY 2010 $M | Total Support BY 2010 $M | Total Program BY 2010 $M |
|---|---|---|---|---|---|---|---|
| 2006 | -- | 535.7 | -- | -- | 535.7 | -- | 535.7 |
| 2007 | -- | -- | -- | -- | -- | -- | -- |
| 2008 | -- | -- | -- | -- | -- | -- | -- |
| 2009 | 2 | 979.4 | -- | -- | 979.4 | -- | 979.4 |
| 2010 | 2 | 1005.7 | -- | -- | 1005.7 | -- | 1005.7 |
| 2011 | 2 | 1126.7 | -- | -- | 1126.7 | -- | 1126.7 |
| 2012 | 4 | 1578.5 | -- | -- | 1578.5 | -- | 1578.5 |
| 2013 | 4 | 1604.5 | -- | -- | 1604.5 | -- | 1604.5 |
| 2014 | 4 | 1598.2 | -- | -- | 1598.2 | -- | 1598.2 |
| 2015 | 4 | 1640.7 | -- | -- | 1640.7 | -- | 1640.7 |
| 2016 | 2 | 930.2 | -- | -- | 930.2 | -- | 930.2 |
| 2017 | 2 | 1001.2 | -- | -- | 1001.2 | -- | 1001.2 |
| 2018 | 2 | 1003.0 | -- | -- | 1003.0 | -- | 1003.0 |
| 2019 | 3 | 1471.6 | -- | -- | 1471.6 | -- | 1471.6 |
| 2020 | 3 | 1419.3 | -- | -- | 1419.3 | -- | 1419.3 |
| 2021 | 3 | 1411.6 | -- | -- | 1411.6 | -- | 1411.6 |
| 2022 | 3 | 1365.6 | -- | -- | 1365.6 | -- | 1365.6 |
| 2023 | 3 | 1375.0 | -- | -- | 1375.0 | -- | 1375.0 |
| 2024 | 3 | 1444.0 | -- | -- | 1444.0 | -- | 1444.0 |
| 2025 | 3 | 1420.9 | -- | -- | 1420.9 | -- | 1420.9 |
| 2026 | 1 | 626.5 | -- | -- | 626.5 | -- | 626.5 |
| 2027 | -- | 114.8 | -- | -- | 114.8 | -- | 114.8 |
| 2028 | -- | 114.2 | -- | -- | 114.2 | -- | 114.2 |
| 2029 | -- | 90.3 | -- | -- | 90.3 | -- | 90.3 |
| 2030 | -- | 28.9 | -- | -- | 28.9 | -- | 28.9 |
| **Subtotal** | **50** | **23886.5** | **--** | **--** | **23886.5** | **--** | **23886.5** |

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

| Fiscal Year | Quantity | End Item Recurring Flyaway (Aligned with Quantity) BY 2010 $M |
|---|---|---|
| 2006 | -- | -- |
| 2007 | -- | -- |
| 2008 | -- | -- |
| 2009 | 2 | 1604.6 |
| 2010 | 2 | 1087.2 |
| 2011 | 2 | 1204.8 |
| 2012 | 4 | 1723.2 |
| 2013 | 4 | 1711.8 |
| 2014 | 4 | 1688.3 |
| 2015 | 4 | 1684.9 |
| 2016 | 2 | 905.5 |
| 2017 | 2 | 920.6 |
| 2018 | 2 | 933.5 |
| 2019 | 3 | 1385.6 |
| 2020 | 3 | 1387.0 |
| 2021 | 3 | 1416.3 |
| 2022 | 3 | 1402.1 |
| 2023 | 3 | 1387.5 |
| 2024 | 3 | 1441.3 |
| 2025 | 3 | 1404.0 |
| 2026 | 1 | 598.3 |
| 2027 | -- | -- |
| 2028 | -- | -- |
| 2029 | -- | -- |
| 2030 | -- | -- |
| **Subtotal** | **50** | **23886.5** |

**Annual Funding TY$**
**1810 | Procurement | Other Procurement, 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 |
|---|---|---|---|---|---|---|---|
| 2012 | -- | -- | 20.4 | -- | 20.4 | -- | 20.4 |
| 2013 | -- | -- | 40.5 | -- | 40.5 | -- | 40.5 |
| 2014 | -- | -- | 73.8 | -- | 73.8 | -- | 73.8 |
| 2015 | -- | -- | 62.9 | -- | 62.9 | -- | 62.9 |
| 2016 | -- | -- | 63.5 | -- | 63.5 | -- | 63.5 |
| 2017 | -- | -- | 87.5 | -- | 87.5 | -- | 87.5 |
| 2018 | -- | -- | 87.0 | -- | 87.0 | -- | 87.0 |
| **Subtotal** | **--** | **--** | **435.6** | **--** | **435.6** | **--** | **435.6** |

**Annual Funding BY$**
**1810 | Procurement | Other Procurement, Navy**

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 2010 $M | Non End Item Recurring Flyaway BY 2010 $M | Non Recurring Flyaway BY 2010 $M | Total Flyaway BY 2010 $M | Total Support BY 2010 $M | Total Program BY 2010 $M |
|---|---|---|---|---|---|---|---|
| 2012 | -- | -- | 19.1 | -- | 19.1 | -- | 19.1 |
| 2013 | -- | -- | 37.2 | -- | 37.2 | -- | 37.2 |
| 2014 | -- | -- | 66.4 | -- | 66.4 | -- | 66.4 |
| 2015 | -- | -- | 55.6 | -- | 55.6 | -- | 55.6 |
| 2016 | -- | -- | 55.1 | -- | 55.1 | -- | 55.1 |
| 2017 | -- | -- | 74.4 | -- | 74.4 | -- | 74.4 |
| 2018 | -- | -- | 72.6 | -- | 72.6 | -- | 72.6 |
| **Subtotal** | **--** | **--** | **380.4** | **--** | **380.4** | **--** | **380.4** |

**Annual Funding TY$**
**1205 | MILCON | Military Construction, Navy and Marine Corps**

| Fiscal Year | Total Program TY $M |
|---|---|
| 2013 | 65.6 |
| 2014 | 17.4 |
| 2015 | 40.0 |
| 2016 | -- |
| 2017 | -- |
| 2018 | -- |
| 2019 | 113.6 |
| **Subtotal** | **236.6** |

**Annual Funding BY$**
**1205 | MILCON | Military Construction, Navy and Marine Corps**

| Fiscal Year | Total Program BY 2010 $M |
|---|---|
| 2013 | 58.9 |
| 2014 | 15.3 |
| 2015 | 34.6 |
| 2016 | -- |
| 2017 | -- |
| 2018 | -- |
| 2019 | 91.2 |
| **Subtotal** | **200.0** |

## Low Rate Initial Production

| | Initial LRIP Decision | Current Total LRIP |
|---|---|---|
| **Approval Date** | 2/18/2011 | 2/18/2011 |
| **Approved Quantity** | 24 | 24 |
| **Reference** | Milestone B Acquisition Decision Memorandum | Milestone B Acquisition Decision Memorandum |
| **Start Year** | 2005 | 2005 |
| **End Year** | 2015 | 2015 |

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the Milestone B decision that includes the ships through FY 2015 in order to cover the LCS Seaframe program requirements.

The LRIP decision of 24 ships includes two ships procured with Research, Development, Test and Evaluation (RDT&E), two ships procured in FY 2009, and the 20 ships being procured in a block buy arrangement in FY 2010 through FY 2015.

## Foreign Military Sales

None

## Nuclear Cost

None

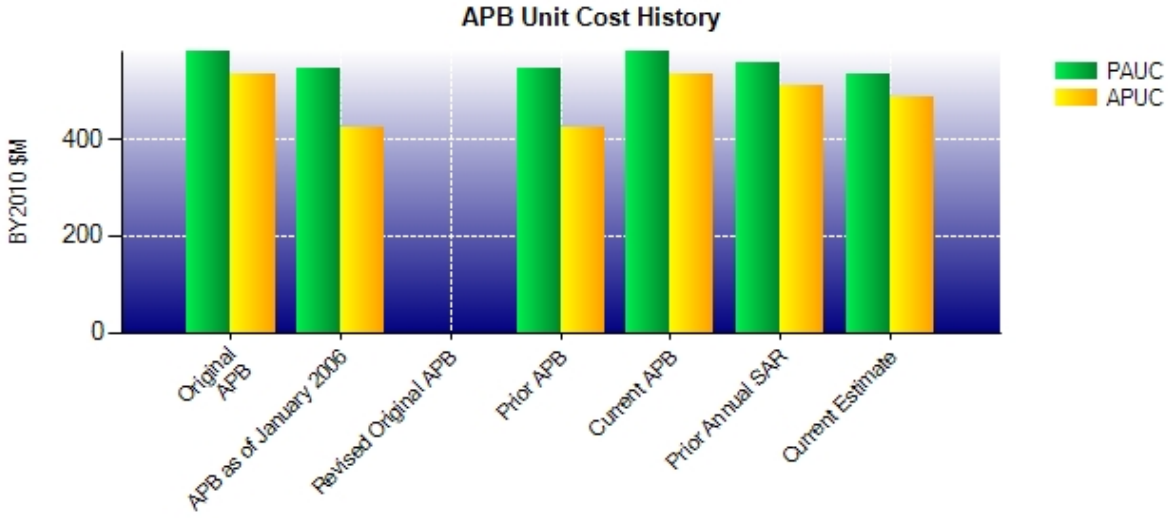
## Unit Cost

## Unit Cost Report

| | BY2010 $M | BY2010 $M | |
|---|---|---|---|
| **Unit Cost** | **Current UCR Baseline (APR 2011 APB)** | **Current Estimate (DEC 2012 SAR)** | **BY % Change** |
| Program Acquisition Unit Cost (PAUC) | | | |
| Cost | 32008.2 | 27796.0 | |
| Quantity | 55 | 52 | |
| Unit Cost | 581.967 | 534.538 | -8.15 |
| Average Procurement Unit Cost (APUC) | | | |
| Cost | 28369.2 | 24266.9 | |
| Quantity | 53 | 50 | |
| Unit Cost | 535.268 | 485.338 | -9.33 |

| | BY2010 $M | BY2010 $M | |
|---|---|---|---|
| **Unit Cost** | **Original UCR Baseline (APR 2011 APB)** | **Current Estimate (DEC 2012 SAR)** | **BY % Change** |
| Program Acquisition Unit Cost (PAUC) | | | |
| Cost | 32008.2 | 27796.0 | |
| Quantity | 55 | 52 | |
| Unit Cost | 581.967 | 534.538 | -8.15 |
| Average Procurement Unit Cost (APUC) | | | |
| Cost | 28369.2 | 24266.9 | |
| Quantity | 53 | 50 | |
| Unit Cost | 535.268 | 485.338 | -9.33 |

## Unit Cost History




| | | BY2010 $M | | TY $M | |
|---|---|---|---|---|---|
| | Date | PAUC | APUC | PAUC | APUC |
| **Original APB** | APR 2011 | 582.018 | 535.268 | 680.705 | 636.236 |
| **APB as of January 2006** | MAY 2004 | 547.200 | 424.450 | 502.925 | 400.000 |
| **Revised Original APB** | N/A | N/A | N/A | N/A | N/A |
| **Prior APB** | MAY 2004 | 547.200 | 424.450 | 502.925 | 400.000 |
| **Current APB** | APR 2011 | 582.018 | 535.268 | 680.705 | 636.236 |
| **Prior Annual SAR** | DEC 2011 | 557.773 | 511.008 | 680.736 | 636.728 |
| **Current Estimate** | DEC 2012 | 534.538 | 485.338 | 652.990 | 606.636 |

### 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 | |
| 680.705 | 46.646 | -7.380 | -8.729 | 0.000 | -58.252 | 0.000 | 0.000 | -27.715 | 652.990 |

## Current SAR Baseline to Current Estimate (TY $M)

| Initial APUC Dev Est | Changes | | | | | | | | APUC Current Est |
|---|---|---|---|---|---|---|---|---|---|
| | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | |
| 636.236 | 47.454 | -10.344 | -7.436 | 0.000 | -59.274 | 0.000 | 0.000 | -29.600 | 606.636 |

## SAR Baseline History

| Item/Event | SAR Planning Estimate (PE) | SAR Development Estimate (DE) | SAR Production Estimate (PdE) | Current Estimate |
|---|---|---|---|---|
| Milestone A | MAY 2004 | MAY 2004 | N/A | MAY 2004 |
| Milestone B | JAN 2007 | FEB 2011 | N/A | FEB 2011 |
| Milestone C | DEC 2010 | JAN 2012 | N/A | JAN 2012 |
| IOC | OCT 2007 | JAN 2014 | N/A | MAR 2013 |
| Total Cost (TY $M) | 1211.7 | 37438.8 | N/A | 33955.5 |
| Total Quantity | 2 | 55 | N/A | 52 |
| Prog. Acq. Unit Cost (PAUC) | 605.850 | 680.705 | N/A | 652.990 |

## Cost Variance

| Summary Then Year $M | | | | |
|---|---|---|---|---|
| | RDT&E | Proc | MILCON | Total |
| SAR Baseline (Dev Est) | 3481.7 | 33720.5 | 236.6 | 37438.8 |
| Previous Changes | | | | |
| Economic | +22.0 | +1176.7 | +5.5 | +1204.2 |
| Quantity | -- | -- | -- | -- |
| Schedule | -6.3 | +519.6 | -5.5 | +507.8 |
| Engineering | -- | -- | -- | -- |
| Estimating | -40.1 | -1670.2 | -- | -1710.3 |
| Other | -- | -- | -- | -- |
| Support | -- | -- | -- | -- |
| Subtotal | -24.4 | +26.1 | -- | +1.7 |
| Current Changes | | | | |
| Economic | +20.4 | +1196.0 | +5.0 | +1221.4 |
| Quantity | -- | -2425.9 | -- | -2425.9 |
| Schedule | -70.3 | -891.4 | -- | -961.7 |
| Engineering | -- | -- | -- | -- |
| Estimating | -20.3 | -1293.5 | -5.0 | -1318.8 |
| Other | -- | -- | -- | -- |
| Support | -- | -- | -- | -- |
| Subtotal | -70.2 | -3414.8 | -- | -3485.0 |
| Adjustments | -- | -- | -- | -- |
| Total Changes | -94.6 | -3388.7 | -- | -3483.3 |
| CE - Cost Variance | 3387.1 | 30331.8 | 236.6 | 33955.5 |
| CE - Cost & Funding | 3387.1 | 30331.8 | 236.6 | 33955.5 |

| Summary Base Year 2010 $M | | | | |
|---|---|---|---|---|
| | RDT&E | Proc | MILCON | Total |
| SAR Baseline (Dev Est) | 3433.3 | 28369.2 | 208.5 | 32011.0 |
| Previous Changes | | | | |
| Economic | -- | -- | -- | -- |
| Quantity | -- | -- | -- | -- |
| Schedule | +0.9 | -- | -3.3 | -2.4 |
| Engineering | -- | -- | -- | -- |
| Estimating | -42.8 | -1285.8 | -2.5 | -1331.1 |
| Other | -- | -- | -- | -- |
| Support | -- | -- | -- | -- |
| Subtotal | -41.9 | -1285.8 | -5.8 | -1333.5 |
| Current Changes | | | | |
| Economic | -- | -- | -- | -- |
| Quantity | -- | -1522.3 | -- | -1522.3 |
| Schedule | -45.4 | -288.8 | +1.2 | -333.0 |
| Engineering | -- | -- | -- | -- |
| Estimating | -16.9 | -1005.4 | -3.9 | -1026.2 |
| Other | -- | -- | -- | -- |
| Support | -- | -- | -- | -- |
| Subtotal | -62.3 | -2816.5 | -2.7 | -2881.5 |
| Adjustments | -- | -- | -- | -- |
| Total Changes | -104.2 | -4102.3 | -8.5 | -4215.0 |
| CE - Cost Variance | 3329.1 | 24266.9 | 200.0 | 27796.0 |
| CE - Cost & Funding | 3329.1 | 24266.9 | 200.0 | 27796.0 |

Previous Estimate: December 2011

| RDT&E | $M | |
|---|---|---|
| **Current Change Explanations** | **Base Year** | **Then Year** |
| Revised escalation indices. (Economic) | N/A | +20.4 |
| Revised estimate for rephasing of testing and early deployment from FY 2014 to FY 2015. (Schedule) | +3.5 | +4.7 |
| Revised estimate for proper phasing of Research and Development activities for FY 2026- FY 2029. (Schedule) | -48.9 | -75.0 |
| Adjustment for current and prior escalation. (Estimating) | -4.5 | -4.8 |
| Revised estimate to reflect the application of new outyear escalation indices. (Estimating) | -12.4 | -15.5 |
| RDT&E Subtotal | -62.3 | -70.2 |

| Procurement | $M | |
|---|---|---|
| **Current Change Explanations** | **Base Year** | **Then Year** |
| Revised escalation indices. (Economic) | N/A | +1196.0 |
| Total Quantity variance resulting from a decrease of 3 ships from 53 to 50 (Navy). (Subtotal) | -1428.2 | -2275.9 |
| Quantity variance resulting from a decrease of 3 ships from 53 to 50 (Navy). (Quantity) (QR) | (-1522.3) | (-2425.9) |
| Allocation to Schedule resulting from Quantity change. (Schedule) (QR) | (-42.5) | (-67.8) |
| Allocation to Estimating resulting from Quantity change. (Estimating) (QR) | (+136.6) | (+217.8) |
| Additional schedule variance associated with the decrease of program quantity from 53 to 50 ships (including Outfitting and Post Delivery). (Schedule) (QR) | -246.3 | -303.8 |
| Additonal schedule variance associated with realignment of LCS in the 30 year shipbuilding plan (FY 2019 to FY 2034). (Schedule) | 0.0 | -519.8 |
| Revised estimate reflects component level adjustments to Seaframe requirements (FY 2012-FY 2018). (Estimating) | -326.0 | -406.3 |
| Revised estimate for pricing of trainer and battle spare requirements. (Estimating) | +77.7 | +90.6 |
| Adjustment for current and prior escalation. (Estimating) | -143.1 | -160.5 |
| Revised estimate to reflect application of new outyear escalation indices (Other Procurement Navy). (Estimating) | -2.6 | -3.0 |
| Revised estimate to reflect application of new outyear escalation indices (Shipbuilding and Conversion, Navy). (Estimating) | -748.0 | -1032.1 |
| Procurement Subtotal | -2816.5 | -3414.8 |

(QR) Quantity Related

| MILCON | $M | |
|---|---|---|
| **Current Change Explanations** | **Base Year** | **Then Year** |
| Revised escalation indices. (Economic) | N/A | +5.0 |
| Revised estimate for proper phasing of Military Construction requirements (FY 2013 - FY 2015 and FY 2019). (Schedule) | +1.2 | 0.0 |

| | | |
|---|---|---|
| Adjustment for current and prior escalation. (Estimating) | -1.0 | -1.1 |
| Revised estimate to reflect application of new outyear escalation indices. (Estimating) | -2.9 | -3.9 |
| MILCON Subtotal | -2.7 | 0.0 |

## Contracts

| Appropriation: Procurement | |
|---|---|
| Contract Name | **Construction - LCS 4** |
| Contractor | General Dynamics |
| Contractor Location | 700 Washington St<br>Bath, ME 04530 |
| Contract Number, Type | N00024-09-C-2302/101, FPIF |
| Award Date | May 01, 2009 |
| Definitization Date | May 01, 2009 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 357.2 | 410.2 | 1 | 381.8 | 438.1 | 1 | 398.1 | 418.0 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (2/24/2013) | -52.9 | -8.0 |
| Previous Cumulative Variances | -28.7 | -18.8 |
| Net Change | -24.2 | +10.8 |

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to inefficiencies in compartment completion and system test and activation.

The favorable net change in the schedule variance is due to Austal's facility re-prioritization plan.

**Contract Comments**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

LCS 4 is scheduled to deliver to the Navy in July 2013.

This report contains the construction Contract Line Item Number (CLIN) 0101 only. It does not include the value of material reused from the FY 2006 terminated ship contracts.

**Appropriation: Procurement**

| | |
|---|---|
| Contract Name | **Construction - LCS 5** |
| Contractor | Lockheed Martin |
| Contractor Location | 2323 Eastern Blvd<br>Baltimore, MD 21220 |
| Contract Number, Type | N00024-11-C-2300/1, FPIF |
| Award Date | December 29, 2010 |
| Definitization Date | December 29, 2010 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 436.8 | 498.1 | 1 | 441.0 | 502.5 | 1 | 454.9 | 459.1 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (2/24/2013) | -12.0 | -32.5 |
| Previous Cumulative Variances | +0.3 | -9.7 |
| Net Change | -12.3 | -22.8 |

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to re-planning of the module construction sequences as the shipyard completes transition into the new Build Strategy.

The unfavorable net change in the schedule variance is due to inefficiencies as the yard transitions to serial production in new facilities and the new Build Strategy.

**Contract Comments**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

**Appropriation: Procurement**

| | |
|---|---|
| Contract Name | **Construction - LCS 6** |
| Contractor | Austal USA |
| Contractor Location | 1 Dunlap Dr.<br>Mobile, AL 36601 |
| Contract Number, Type | N00024-11-C-2301/1, FPIF |
| Award Date | December 29, 2010 |
| Definitization Date | December 29, 2010 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 432.0 | 480.4 | 1 | 440.9 | 489.9 | 1 | 440.9 | 464.5 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (2/24/2013) | -10.7 | -13.9 |
| Previous Cumulative Variances | -3.5 | -17.3 |
| Net Change | -7.2 | +3.4 |

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to inefficiencies in construction trades.

The favorable net change in the schedule variance is due to Austal's facility re-prioritization plan.

**Contract Comments**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

**Appropriation: Procurement**

| | |
|---|---|
| Contract Name | **Construction - LCS 7** |
| Contractor | Lockheed Martin |
| Contractor Location | 2323 Eastern Blvd<br>Baltimore, MD 21220 |
| Contract Number, Type | N00024-11-C-2300/2, FPIF |
| Award Date | March 17, 2011 |
| Definitization Date | March 17, 2011 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 376.6 | 430.4 | 1 | 378.1 | 432.1 | 1 | 380.7 | 399.6 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (2/24/2013) | +0.1 | -28.7 |
| Previous Cumulative Variances | +4.0 | -0.7 |
| Net Change | -3.9 | -28.0 |

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to re-planning of the module construction sequences as the shipyard completes transition into the new Build Strategy.

The unfavorable net change in the schedule variance is due to delay in start of construction and inefficiencies as the yard transitions to serial production in new facilities and the new Build Strategy.

**Contract Comments**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

**Appropriation: Procurement**

| | |
|---|---|
| Contract Name | **Construction - LCS 8** |
| Contractor | Austal USA |
| Contractor Location | 1 Dunlap Dr<br>Mobile, AL 36601 |
| Contract Number, Type | N00024-11-C-2301/2, FPIF |
| Award Date | March 17, 2011 |
| Definitization Date | March 17, 2011 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 368.6 | 405.7 | 1 | 374.4 | 411.9 | 1 | 374.4 | 396.5 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (2/24/2013) | -2.5 | -22.4 |
| Previous Cumulative Variances | 0.0 | 0.0 |
| Net Change | -2.5 | -22.4 |

**Cost And Schedule Variance Explanations**

The unfavorable net change in the cost variance is due to inefficiencies in construction trades.

The unfavorable net change in the schedule variance is due to availability of resources to maintain production schedule. Austal has implemented a facility re-prioritization plan to recover unfavorable schedule variance.

**Contract Comments**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

**Appropriation: Procurement**

| | |
|---|---|
| Contract Name | **Construction - LCS 9** |
| Contractor | Lockheed Martin |
| Contractor Location | 2323 Eastern Blvd<br>Baltimore, MD 21220 |
| Contract Number, Type | N00024-11-C-2300/3, FPIF |
| Award Date | March 16, 2012 |
| Definitization Date | March 16, 2012 |

| Initial Contract Price ($M) | | | Current Contract Price ($M) | | | Estimated Price At Completion ($M) | |
|---|---|---|---|---|---|---|---|
| Target | Ceiling | Qty | Target | Ceiling | Qty | Contractor | Program Manager |
| 363.6 | 416.2 | 1 | 363.7 | 416.8 | 1 | 363.7 | 364.2 |

| Variance | Cost Variance | Schedule Variance |
|---|---|---|
| Cumulative Variances To Date (2/24/2013) | +1.7 | -0.8 |
| Previous Cumulative Variances | -- | -- |
| Net Change | +1.7 | -0.8 |

**Cost And Schedule Variance Explanations**

The favorable cumulative cost variance is due to lower than expected Level of Effort (LOE) tasking.

The unfavorable cumulative schedule variance is due to delays in the start of construction.

**Contract Comments**

This is the first time this contract is being reported.

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

## Deliveries and Expenditures

| Deliveries To Date | Plan To Date | Actual To Date | Total Quantity | Percent Delivered |
|---|---|---|---|---|
| Development | 2 | 2 | 2 | 100.00% |
| Production | 1 | 1 | 50 | 2.00% |
| Total Program Quantities Delivered | 3 | 3 | 52 | 5.77% |

| Expenditures and Appropriations (TY $M) | | | |
|---|---|---|---|
| Total Acquisition Cost | 33955.5 | Years Appropriated | 11 |
| Expenditures To Date | 4862.8 | Percent Years Appropriated | 39.29% |
| Percent Expended | 14.32% | Appropriated to Date | 10213.5 |
| Total Funding Years | 28 | Percent Appropriated | 30.08% |

The above data is current as of 3/19/2013.

# Operating and Support Cost

## LCS

### Assumptions and Ground Rules

Cost Estimate Reference:

Source of estimate is the Navy Service Cost Position and the Office of the Secretary of Defense (OSD) Independent Cost Estimate developed and approved in support of the LCS Seaframe Milestone B decision in February 2011. The Navy decision to reduce the procurement quanitity of Seaframes from 55 to 52 was announced in January 2013 and did not provide enough time to develop and approve an associated Operating and Support (O&S) cost estimate. The updated O&S cost estimate reflecting the decrease in ship quantity will be reported in next year's SAR.

Sustainment Strategy:

The Program Executive Office Littoral Combat Ship (PEO LCS) Fleet Introduction and Sustainment branch is responsible for the operation, maintenance, and support of the LCS Seaframe systems. Costs are incurred in preparation for and after the fielding of each LCS Seaframe. Operating and sustainment costs assume:

a) 55 Seaframes with a service life of 25 years

b) 83 Crews (40 personnel: 8 Officers/32 Enlisted per crew)

c) Steaming Hours underway/not underway (4421 underway/718 not underway)

d) Defense Energy Support Center (DESC) Price of Fuel (CY 2010) $117.60/barrel

e) Government Furnished Equipment and Contractor Furnished Equipment systems configurations are based on the equipment selected by each contractor

Sustainment execution includes maintenance execution planning, planned and emergent maintenance; planning for Chief of Naval Operations (CNO) scheduled availabilities, facilities maintenance; fly-away support; modernization and engineering support services of LCS ships homeported in San Diego, California and deploying worldwide. Core services and maintenance execution are currently being performed under an Interim Support Plan (ISP). Transition to In-Service sustainment under a Product Support Plan (PSP) is scheduled to occur in FY 2014.

Antecedent Information:

There is no Antecedent for LCS.

| Unitized O&S Costs BY2010 $K | | |
|---|---|---|
| **Cost Element** | **LCS 55 Seaframes average annual cost per ship** | **No Antecedent (Antecedent) N/A** |
| Unit-Level Manpower | 7.408 | 0.000 |
| Unit Operations | 8.054 | 0.000 |
| Maintenance | 6.121 | 0.000 |
| Sustaining Support | 5.214 | 0.000 |
| Continuing System Improvements | 7.237 | 0.000 |
| Indirect Support | 2.573 | 0.000 |
| Other | 0.000 | 0.000 |
| Total | 36.607 | -- |

Unitized Cost Comments:

Assumes a 25 year service life. The current affordability requirements match the affordability requirements approved in the Milestone B Acqusition Decision Memorandum (ADM). Does not include disposal costs.

| | Total O&S Cost $M | | | |
|---|---|---|---|---|
| | **Current Development APB Objective/Threshold** | | **Current Estimate** | |
| | **LCS** | | **LCS** | **No Antecedent (Antecedent)** |
| **Base Year** | 50479.0 | 55526.9 | 50334.6 | N/A |
| **Then Year** | 87089.3 | N/A | 86792.6 | N/A |

Total O&S Costs Comments:

The Acquisition Program Baseline (APB) objective and thresholds include $145 million of disposal costs for 55 ships. The Current Estimate does not include these disposal costs.

**Disposal Costs**

$145 million for 55 ships per the Milestone B decision in February 2011.