Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-247

JHSV

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

Joint High Speed Vessel (JHSV)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned June 1, 2007

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated February 11, 2009

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated February 11, 2009

Mission and Description

The Joint High Speed Vessel (JHSV) is a shallow draft, commercial-based ship capable of intra-theater personnel and cargo lift providing combatant commanders high-speed sealift mobility with inherent cargo handling capability and the agility to achieve positional advantage over operational distances. Bridging the gap between low-speed sealift and high-speed airlift, the JHSV will transport personnel, equipment, and supplies over operational distances with access to littoral offload points including austere, minor and degraded ports in support of the Global War on Terrorism (GWOT)/Theater Security Cooperation Program (TSCP); Intra-theater Operational/Littoral Maneuver and Sustainment; and Seabasing. The JHSV will enable the rapid projection, agile maneuver, and sustainment of modular, tailored forces in response to a wide range of military and civilian contingencies such as Non-Combatant Evacuation Operations, humanitarian assistance, and disaster relief.

Executive Summary

The JHSV program is an Acquisition Category (ACAT) 1D program that has entered the Engineering and Manufacturing Development phase for Low Rate Initial Production (LRIP) of 10 ships, which were originally to be procured for the Army and Navy. Initially, the Army was to receive five of the LRIP end items and the Navy was to receive five. However, Army-Navy “Warfighter” talks of December 2010 concluded with a recommendation that the Navy should assume the role of single lifecycle manager and operator for all JHSVs. This is now awaiting approval from the respective Service Secretaries pending a Memorandum of Agreement between the Services.

Austal's construction of the lead ship (JHSV 1) transitioned from the building of individual ship modules in the new Module Manufacturing Facility (MMF) to ship erection in the assembly bay. Ship erection start was commemorated in the Keel Laying ceremony in July 2010. Several intermediate construction milestones have been achieved, including the landing of the main propulsion engines in December 2010. Launch of the vessel is scheduled for the summer of 2011, with delivery in December 2011.

Austal started construction of the second ship in the class (JHSV 2) in September 2010. Currently JHSV 2 construction is limited to modular fabrication in the MMF, but the ship’s modules will transition to the assembly bay once JHSV 1 is launched. In addition, contract options were exercised with Austal for ships 3 (FY 2009), 4 (FY 2010), and 5 (FY 2010).

A formal production Integrated Baseline Review (IBR) was conducted with Austal in December 2010 for JHSV 1. An IBR for JHSV 2 is scheduled for April 28, 2011. Additionally, an IBR for JHSV 3 is planned for the summer of 2011.

Of the 18 ships certified at Milestone B, the FY 2012 President's Budget requests a total of 16 ships prior to and within the Future Years Defense Program (FYDP), extending the two remaining ships beyond the FYDP.

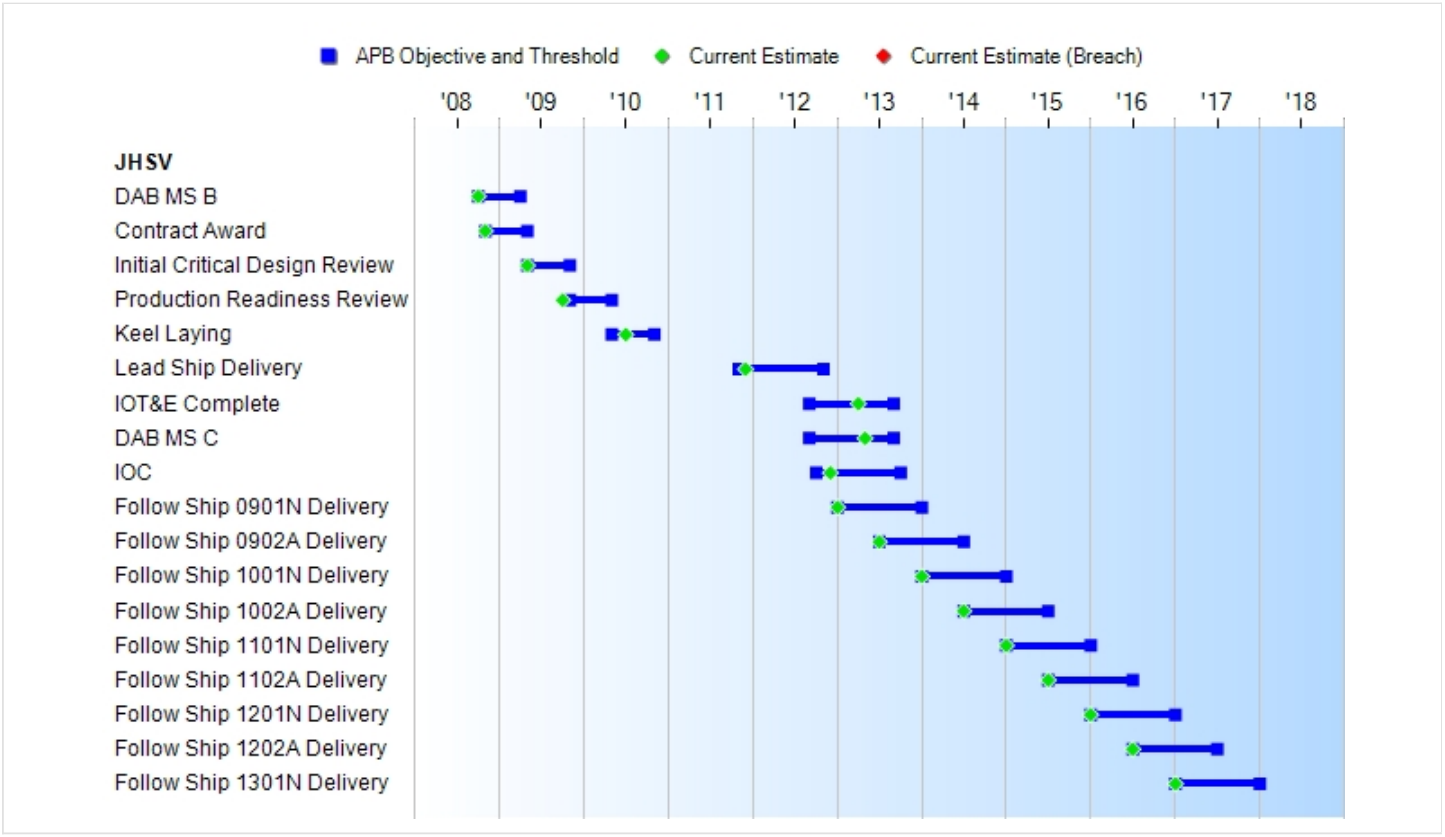
There are no significant software related issues with this program at this time.

Threshold Breaches

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

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

Schedule


APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'08
'09
'10
'11
'12
'13
'14
'15
'16
'17
'18
JHSV
DAB MS B
Contract Award
Initial Critical Design Review
Production Readiness Review
Keel Laying
Lead Ship Delivery
IOT&E Complete
DAB MS C
IOC
Follow Ship 0901N Delivery
Follow Ship 0902A Delivery
Follow Ship 1001N Delivery
Follow Ship 1002A Delivery
Follow Ship 1101N Delivery
Follow Ship 1102A Delivery
Follow Ship 1201N Delivery
Follow Ship 1202A Delivery
Follow Ship 1301N Delivery

Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
DAB MS B	OCT 2008	OCT 2008	APR 2009	OCT 2008	
Contract Award	NOV 2008	NOV 2008	MAY 2009	NOV 2008	
Initial Critical Design Review	MAY 2009	MAY 2009	NOV 2009	MAY 2009	
Production Readiness Review	NOV 2009	NOV 2009	MAY 2010	OCT 2009	
Keel Laying	MAY 2010	MAY 2010	NOV 2010	JUL 2010	(Ch-1)
Lead Ship Delivery	NOV 2011	NOV 2011	NOV 2012	DEC 2011	(Ch-2)
IOT&E Complete	SEP 2012	SEP 2012	SEP 2013	APR 2013	
DAB MS C	SEP 2012	SEP 2012	SEP 2013	MAY 2013	
IOC	OCT 2012	OCT 2012	OCT 2013	DEC 2012	
Follow Ship 0901N Delivery	JAN 2013	JAN 2013	JAN 2014	JAN 2013	
Follow Ship 0902A Delivery	JUL 2013	JUL 2013	JUL 2014	JUL 2013	
Follow Ship 1001N Delivery	JAN 2014	JAN 2014	JAN 2015	JAN 2014	
Follow Ship 1002A Delivery	JUL 2014	JUL 2014	JUL 2015	JUL 2014	
Follow Ship 1101N Delivery	JAN 2015	JAN 2015	JAN 2016	JAN 2015	
Follow Ship 1102A Delivery	JUL 2015	JUL 2015	JUL 2016	JUL 2015	
Follow Ship 1201N Delivery	JAN 2016	JAN 2016	JAN 2017	JAN 2016	
Follow Ship 1202A Delivery	JUL 2016	JUL 2016	JUL 2017	JUL 2016	
Follow Ship 1301N Delivery	JAN 2017	JAN 2017	JAN 2018	JAN 2017	

Acronyms And Abbreviations

DAB - Defense Acquisition Board
IOC - Initial Operational Capability
IOT&E - Initial Operational Test & Evaluation
MS - Milestone

Change Explanations

(Ch-1) Keel laying ceremony date changed from June 2010 to July 2010 to accommodate senior dignitaries' availabilities.

(Ch-2) Lead ship delivery date changed from November 2011 to December 2011 due to a one-month delay in start of construction.

Memo

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate	
Transport Capability	JHSV shall be capable of transporting 700 ST 1200 NM at an average speed of 35 kts in a significant wave height of 1.25 meters prior to needing refueling.	JHSV shall be capable of transporting 700 ST 1200 NM at an average speed of 35 kts in a significant wave height of 1.25 meters prior to needing refueling.	JHSV shall be capable of transporting 600 ST of troops, supplies, and equipment 1200 NM at an average speed of 35 kts in a significant wave height of 1.25 meters prior to needing refueling.	TBD	JHSV shall be capable of transporting 600 ST 1200 NM at an average speed of 35 kts in a significant wave height of 1.25 meters prior to needing refueling.	(Ch-1)
Draft	JHSV shall have a draft of less than or equal to 10 ft.	JHSV shall have a draft of less than or equal to 10 ft.	JHSV shall have a draft of less than or equal to 15 ft.	TBD	JHSV shall have a draft of less than or equal to 13 ft.	
Ramp (M1A2 Capable)	JHSV shall have a ramp capable of interfacing with RRDFs, piers with curb heights of up to 15 in., quay walls and other austere on- and off-load points and on/off-loading a combat-loaded M1A2 with articulation from dead astern to 40 deg abaft	JHSV shall have a ramp capable of interfacing with RRDFs, piers with curb heights of up to 15 in., quay walls and other austere on- and off-load points and on/off-loading a combat-loaded M1A2 with articulation from dead astern to 40 deg abaft	JHSV shall have a ramp capable of interfacing with RRDFs, piers with curb heights of up to 15 in., quay walls and other austere on- and off-load points and on/off-loading a combat-loaded M1A2 with articulation from dead astern to 40 deg abaft	TBD	JHSV shall have a ramp capable of interfacing with RRDFs, piers with curb heights of up to 15 in., quay walls and other austere on- and off-load points and on/off-loading a combat-loaded M1A2 with articulation from dead astern to 40 deg abaft	

	the beam to either side.	the beam to either side.	the beam towards one side.		the beam to one side.
Cargo movement between mission deck and flight deck; between pier and mission deck.	JHSV shall have the capability to move 27,000 lbs of cargo in a single lift between the flight deck and the mission deck in a significant wave height of 1.25 meters. JHSV shall have the capability to move 40,000 lbs of cargo in a single lift between the mission deck and the pier in a significant wave height of 0.1 meters.	JHSV shall have the capability to move 27,000 lbs of cargo in a single lift between the flight deck and the mission deck in a significant wave height of 1.25 meters. JHSV shall have the capability to move 40,000 lbs of cargo in a single lift between the mission deck and the pier in a significant wave height of 0.1 meters.	JHSV shall have the capability to move 27,000 lbs of cargo in a single lift between the flight deck and the mission deck in a significant wave height of 1.25 meters. JHSV shall have the capability to move 40,000 lbs of cargo in a single lift between the mission deck and the pier in a significant wave height of 0.1 meters.	TBD	JHSV shall have the capability to move 27,000 lbs of cargo in a single lift between the flight deck and the mission deck in a significant wave height of 1.25 meters. JHSV shall have the capability to move 40,000 lbs of cargo in a single lift between the mission deck and the pier in a significant wave height of 0.1 meters.
Net-Ready KPP	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-	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-	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	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, authentication, confidentiality, and nonrepudiation, 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	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, authentication, confidentiality, and nonrepudiation, 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	to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs issuance of an IATO by the DAA, and 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, 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		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, authentication, confidentiality, and nonrepudiation, 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 applicable joint and system integrated architecture views.	specified in the applicable joint and system integrated architecture views.		the applicable joint and system integrated architecture views.
Force Protection	The JHSV shall possess a force protection system to sense, identify and lethally engage surface threats such as patrol boats and Boghammer type threats. The SST) function shall provide the capability to sense, identify and track potential surface threats in nighttime, low light, and limited visibility conditions such as haze and light fog throughout 360 degrees. The SST function shall provide JHSV watch standers capability to sense potential surface threats at a	The JHSV shall possess a force protection system to sense, identify and lethally engage surface threats such as patrol boats and Boghammer type threats. The SST) function shall provide the capability to sense, identify and track potential surface threats in nighttime, low light, and limited visibility conditions such as haze and light fog throughout 360 degrees. The SST function shall provide JHSV watch standers capability to sense potential surface threats at a	JHSV shall be equipped with a crew-served weapons system. Additionally, JHSV shall provide the space, weight and power for obtaining the objective.	TBD	JHSV shall be equipped with a crew-served weapons system. Additionally, JHSV shall provide the space, weight and power for obtaining the objective.

	range no less than the effective line-of-sight of the JHSV's navigation radars. The SST function shall provide simultaneous and continuous visual auto-tracking of no less than two operator selected surface threats at a range of no less than 750 meters during daytime, nighttime (low-light conditions) and during limited visibility conditions such as haze or light fog. JHSV shall possess sufficient small arms gun mounts to engage threat surface platforms throughout no less than 360 deg. The gun mounts shall be stabilized in at least 2 axis in sea states with a significant wave heights of up to 6-8	range no less than the effective line-of-sight of the JHSV's navigation radars. The SST function shall provide simultaneous and continuous visual auto-tracking of no less than two operator selected surface threats at a range of no less than 750 meters during daytime, nighttime (low-light conditions) and during limited visibility conditions such as haze or light fog. JHSV shall possess sufficient small arms gun mounts to engage threat surface platforms throughout no less than 360 deg. The gun mounts shall be stabilized in at least 2 axis in sea states with a significant wave heights of up to 6-8			

	ft. during wind conditions of 17-21 kts. The gun mount(s) shall have the capability to lethally engage patrol boats / Boghammer threats with a hit probability of no less than 70 % at 500 yds. Gun mounts shall be remotely linked to the SST and be capable of being slaved to the SST tracking function or being remotely operated by JHSV watchstander (s). Gun mounts shall be capable of hosting a variety of small arms to include: M2 .50 caliber machine guns and MK-19 grenade launchers. The surface force protection system shall be completely operable	ft. during wind conditions of 17-21 kts. The gun mount(s) shall have the capability to lethally engage patrol boats / Boghammer threats with a hit probability of no less than 70 % at 500 yds. Gun mounts shall be remotely linked to the SST and be capable of being slaved to the SST tracking function or being remotely operated by JHSV watchstander (s). Gun mounts shall be capable of hosting a variety of small arms to include: M2 .50 caliber machine guns and MK-19 grenade launchers. The surface force protection system shall be completely operable			

	from the watch standing bridge.	from the watch standing bridge.			
Survivability	JHSV will be built to commercial ABS standards and will not be shock hardened.	JHSV will be built to commercial ABS standards and will not be shock hardened.	JHSV will be built to commercial ABS standards and will not be shock hardened.	TBD	JHSV will be built to commercial ABS standards and will not be shock hardened.
Mission Deck Weight Loading	Mission deck capable of supporting a maximum vehicle size/weight to on/offload a combat ready M1A2 main battle tank (total weight); a fully loaded HEMTT-PLS with a 20 ft ISO container loaded (point loading).	Mission deck capable of supporting a maximum vehicle size/weight to on/offload a combat ready M1A2 main battle tank (total weight); a fully loaded HEMTT-PLS with a 20 ft ISO container loaded (point loading).	Mission deck capable of supporting a maximum vehicle size/weight to on/offload a combat ready M1A2 main battle tank (total weight); a fully loaded HEMTT-PLS with a 20 ft ISO container loaded (point loading).	TBD	Mission deck capable of supporting a maximum vehicle size/weight to on/offload a combat ready M1A2 main battle tank (total weight); a fully loaded Heavy Expanded Mobility Tactical Truck - Palletized Load System (HEMTT-PLS) with a 20 ft ISO container loaded (point loading).

Requirements Source:
Joint High Speed Vessel (JHSV) Capability Development Document (CDD), JROCM 020-07, January 29, 2007

Acronyms And Abbreviations

ABS - American Bureau of Shipping
ATO - Approval to Operate
DAA - Designated Approval Authority
deg - Degrees
DISR - DOD Information Technology Standards and Profile Registry

ft - Feet/Foot
GIG - Global Information Grid
HEMTT-PLS - Heavy Expanded Mobility Tactical Truck- Palletized Load System
IA - Information Assurance
IATO - Interim Approval to Operate
in - Inches
ISO - International Standard for Organizations
IT - Information Technology
KIP - Key Interface Profile
KPP - Key Performance Parameter
kts - Knots
lbs - Pounds
NCOW-RM - Net Centric Operations Warfare Reference Model
NM - Nautical Mile
RRDF - Roll-on/Roll-off Discharge Facillities
SST - Search, Sense and Tracking
ST - Short Tons
TBD - To Be Determined
TV - Technical Standards View
yd - Yards

Change Explanations

(Ch-1) The current estimate has changed from 650 ST to 600 ST based on refined ship weight calculations.

Memo

Track To Budget

RDT&E				
APPN 1319	BA 07	PE 0208058N	(Navy)	
	Project 3131	Intratheater Connectors (Concept Studies)		(Sunk)
	Project 3134	Intratheater Connectors (Contract Design)		
APPN 1319	BA 04	PE 0603564N	(Navy)	
	Project 3131	Intratheater Connectors		(Sunk)
APPN 1319	BA 05	PE 0604567N	(Navy)	
	Project 3134	Intratheater Connectors		(Sunk)
APPN 2040	BA 07	PE 0208058A	(Army)	
	Project JH1	Joint High Speed Vessel (JHSV)		
Procurement				
APPN 1611	BA 03	PE 0208058N	(Navy)	
	ICN 3043	JOINT HIGH SPEED VESSEL (JHSV)		
APPN 1611	BA 05	PE 0208058N	(Navy)	
	ICN 5110	JOINT HIGH SPEED VESSEL (JHSV)		
APPN 2035	BA 03	PE 0208058A	(Army)	
	ICN M11203	JOINT HIGH SPEED VESSEL (JHSV)		

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2008 $M			BY2008 $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	122.2	122.2	134.4	131.3	124.8	124.8	133.8
Procurement	3337.8	3337.8	3671.6	3364.6	3767.5	3767.5	3804.2
Flyaway	3079.2	--	--	3104.2	3463.0	--	3496.9
Recurring	3079.2	--	--	3065.0	3463.0	--	3456.8
Non Recurring	0.0	--	--	39.2	0.0	--	40.1
Support	258.6	--	--	260.4	304.5	--	307.3
Other Support	143.5	--	--	143.4	170.1	--	169.6
Initial Spares	115.1	--	--	117.0	134.4	--	137.7
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	3460.0	3460.0	N/A	3495.9	3892.3	3892.3	3938.0

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	0	0	0
Procurement	18	18	18
Total	18	18	18

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	103.0	6.8	7.3	5.4	3.3	4.6	3.4	0.0	133.8
Procurement	956.5	386.9	414.6	417.6	425.4	434.0	236.4	532.8	3804.2
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	1059.5	393.7	421.9	423.0	428.7	438.6	239.8	532.8	3938.0
PB 2011 Total	1059.7	393.5	449.2	413.8	430.8	440.1	623.3	125.1	3935.5
Delta	-0.2	0.2	-27.3	9.2	-2.1	-1.5	-383.5	407.7	2.5

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	5	2	2	2	2	2	1	2	18
PB 2012 Total	0	5	2	2	2	2	2	1	2	18
PB 2011 Total	0	5	2	2	2	2	2	3	0	18
Delta	0	0	0	0	0	0	0	-2	2	0

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
2006	--	--	--	--	--	--	6.5
2007	--	--	--	--	--	--	14.1
2008	--	--	--	--	--	--	18.4
2009	--	--	--	--	--	--	11.5
2010	--	--	--	--	--	--	8.2
2011	--	--	--	--	--	--	3.6
2012	--	--	--	--	--	--	4.1
2013	--	--	--	--	--	--	2.1
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	1.2
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**69.7**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 $M	Non End Item Recurring Flyaway BY 2008 $M	Non Recurring Flyaway BY 2008 $M	Total Flyaway BY 2008 $M	Total Support BY 2008 $M	Total Program BY 2008 $M
2006	--	--	--	--	--	--	6.7
2007	--	--	--	--	--	--	14.2
2008	--	--	--	--	--	--	18.2
2009	--	--	--	--	--	--	11.2
2010	--	--	--	--	--	--	7.9
2011	--	--	--	--	--	--	3.4
2012	--	--	--	--	--	--	3.9
2013	--	--	--	--	--	--	1.9
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	1.1
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**68.5**

Annual Funding TY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

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	--	--	--	--	--	--	10.0
2006	--	--	--	--	--	--	3.1
2007	--	--	--	--	--	--	20.2
2008	--	--	--	--	--	--	5.0
2009	--	--	--	--	--	--	2.9
2010	--	--	--	--	--	--	3.1
2011	--	--	--	--	--	--	3.2
2012	--	--	--	--	--	--	3.2
2013	--	--	--	--	--	--	3.3
2014	--	--	--	--	--	--	3.3
2015	--	--	--	--	--	--	3.4
2016	--	--	--	--	--	--	3.4
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**64.1**

Annual Funding BY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 $M	Non End Item Recurring Flyaway BY 2008 $M	Non Recurring Flyaway BY 2008 $M	Total Flyaway BY 2008 $M	Total Support BY 2008 $M	Total Program BY 2008 $M
2005	--	--	--	--	--	--	10.6
2006	--	--	--	--	--	--	3.2
2007	--	--	--	--	--	--	20.3
2008	--	--	--	--	--	--	4.9
2009	--	--	--	--	--	--	2.8
2010	--	--	--	--	--	--	3.0
2011	--	--	--	--	--	--	3.0
2012	--	--	--	--	--	--	3.0
2013	--	--	--	--	--	--	3.0
2014	--	--	--	--	--	--	3.0
2015	--	--	--	--	--	--	3.0
2016	--	--	--	--	--	--	3.0
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**62.8**

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
2009	1	181.3	--	--	181.3	--	181.3
2010	1	177.4	--	--	177.4	--	177.4
2011	1	180.7	--	--	180.7	3.4	184.1
2012	1	185.1	--	--	185.1	5.7	190.8
2013	2	375.9	--	--	375.9	23.7	399.6
2014	2	388.1	--	--	388.1	18.7	406.8
2015	2	397.5	--	--	397.5	17.4	414.9
2016	1	207.4	--	--	207.4	29.0	236.4
2017	2	413.6	--	--	413.6	26.7	440.3
2018	--	--	--	--	--	43.2	43.2
2019	--	--	--	--	--	22.1	22.1
2020	--	--	--	--	--	27.2	27.2
Subtotal	**13**	**2507.0**	**--**	**--**	**2507.0**	**217.1**	**2724.1**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 $M	Non End Item Recurring Flyaway BY 2008 $M	Non Recurring Flyaway BY 2008 $M	Total Flyaway BY 2008 $M	Total Support BY 2008 $M	Total Program BY 2008 $M
2009	1	168.1	--	--	168.1	--	168.1
2010	1	161.7	--	--	161.7	--	161.7
2011	1	162.2	--	--	162.2	3.1	165.3
2012	1	163.5	--	--	163.5	5.1	168.6
2013	2	326.6	--	--	326.6	20.6	347.2
2014	2	331.6	--	--	331.6	15.9	347.5
2015	2	333.9	--	--	333.9	14.6	348.5
2016	1	171.3	--	--	171.3	24.0	195.3
2017	2	335.9	--	--	335.9	21.7	357.6
2018	--	--	--	--	--	34.5	34.5
2019	--	--	--	--	--	17.4	17.4
2020	--	--	--	--	--	21.0	21.0
Subtotal	**13**	**2154.8**	**--**	**--**	**2154.8**	**177.9**	**2332.7**

Funding request adjustments in FY 2012 from TY$15.5 million to TY$5.7 million and in FY 2013 from TY$14.1 million to TY$23.7 million were made to account for actual adjustments in ship deliveries after the FY 2012 President's Budget (PB12) was locked in the Program Resource Collection Process (PRCP) database. The funding request shown in the final PB12 budget exhibits, as submitted to the Justification Management System (JMS), is reflected in the SAR.

Annual Funding TY$
2035 | Procurement | Other Procurement, Army

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
2008	1	196.4	--	30.1	226.5	--	226.5
2009	1	168.3	--	--	168.3	--	168.3
2010	1	193.0	--	10.0	203.0	--	203.0
2011	1	185.8	--	--	185.8	17.0	202.8
2012	1	206.3	--	--	206.3	17.5	223.8
2013	--	--	--	--	--	18.0	18.0
2014	--	--	--	--	--	18.6	18.6
2015	--	--	--	--	--	19.1	19.1
Subtotal	**5**	**949.8**	**--**	**40.1**	**989.9**	**90.2**	**1080.1**

Annual Funding BY$
2035 | Procurement | Other Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 $M	Non End Item Recurring Flyaway BY 2008 $M	Non Recurring Flyaway BY 2008 $M	Total Flyaway BY 2008 $M	Total Support BY 2008 $M	Total Program BY 2008 $M
2008	1	193.4	--	29.6	223.0	--	223.0
2009	1	163.8	--	--	163.8	--	163.8
2010	1	185.3	--	9.6	194.9	--	194.9
2011	1	175.7	--	--	175.7	16.1	191.8
2012	1	192.0	--	--	192.0	16.3	208.3
2013	--	--	--	--	--	16.5	16.5
2014	--	--	--	--	--	16.7	16.7
2015	--	--	--	--	--	16.9	16.9
Subtotal	**5**	**910.2**	**--**	**39.2**	**949.4**	**82.5**	**1031.9**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	11/12/2008	11/12/2008
Approved Quantity	10	10
Reference	JHSV ADM from Milestone B	JHSV ADM from Milestone B
Start Year	2008	2008
End Year	2013	2013

The Low Rate Initial Production quantity exceeds 10% of total initial planned production quantity of 18 to provide sufficient quantities to the initial contractor to assure adequate competition and a low unit cost.

Foreign Military Sales

There are no Foreign Military Sales data to display.

Nuclear Cost

None

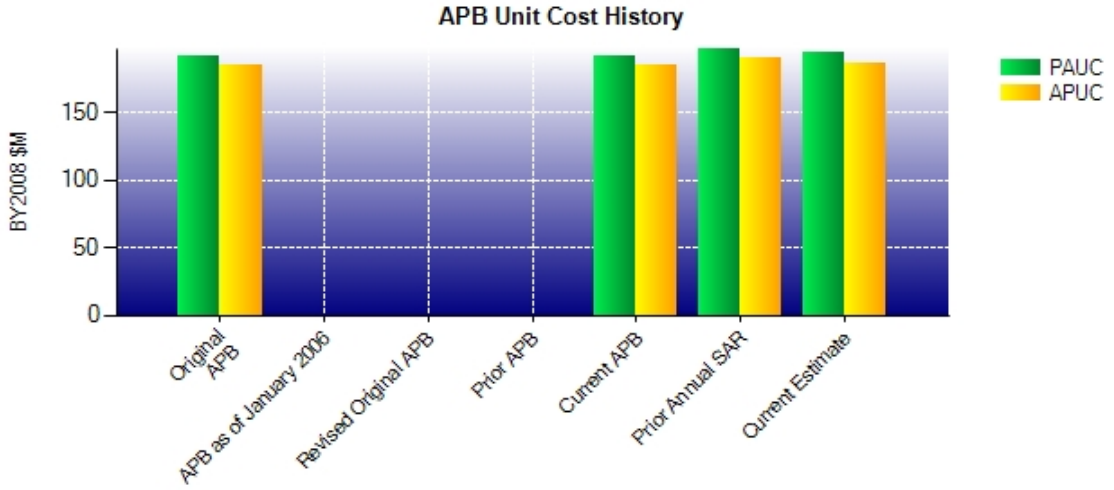
Unit Cost

Unit Cost Report

Unit Cost	BY2008 $M Current UCR Baseline (FEB 2009 APB)	BY2008 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3460.0	3495.9	
Quantity	18	18	
Unit Cost	192.222	194.217	+1.04
Average Procurement Unit Cost (APUC)			
Cost	3337.8	3364.6	
Quantity	18	18	
Unit Cost	185.433	186.922	+0.80

Unit Cost	BY2008 $M Original UCR Baseline (FEB 2009 APB)	BY2008 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3460.0	3495.9	
Quantity	18	18	
Unit Cost	192.222	194.217	+1.04
Average Procurement Unit Cost (APUC)			
Cost	3337.8	3364.6	
Quantity	18	18	
Unit Cost	185.433	186.922	+0.80

Unit Cost History



		BY2008 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	FEB 2009	192.222	185.433	216.239	209.306
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	FEB 2009	192.222	185.433	216.239	209.306
Prior Annual SAR	DEC 2009	196.867	190.122	218.639	211.806
Current Estimate	DEC 2010	194.217	186.922	218.778	211.344

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	
216.239	-2.033	0.000	2.166	0.000	1.978	0.000	0.428	2.539	218.778

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
209.306	-1.978	0.000	2.167	0.000	1.422	0.000	0.428	2.039	211.344

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	OCT 2008	N/A	OCT 2008
Milestone C	N/A	SEP 2012	N/A	MAY 2013
IOC	N/A	OCT 2012	N/A	DEC 2012
Total Cost (TY $M)	N/A	3892.3	N/A	3938.0
Total Quantity	N/A	18	N/A	18
Prog. Acq. Unit Cost (PAUC)	N/A	216.239	N/A	218.778

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	124.8	3767.5	--	3892.3
Previous Changes				
Economic	-1.0	-86.3	--	-87.3
Quantity	--	--	--	--
Schedule	--	+32.1	--	+32.1
Engineering	--	--	--	--
Estimating	-0.8	+90.7	--	+89.9
Other	--	--	--	--
Support	--	+8.5	--	+8.5
Subtotal	-1.8	+45.0	--	+43.2
Current Changes				
Economic	--	+50.7	--	+50.7
Quantity	--	--	--	--
Schedule	--	+6.9	--	+6.9
Engineering	--	--	--	--
Estimating	+10.8	-65.1	--	-54.3
Other	--	--	--	--
Support	--	-0.8	--	-0.8
Subtotal	+10.8	-8.3	--	+2.5
Total Changes	+9.0	+36.7	--	+45.7
CE - Cost Variance	133.8	3804.2	--	3938.0
CE - Cost & Funding	133.8	3804.2	--	3938.0

Summary Base Year 2008 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	122.2	3337.8	--	3460.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-0.8	+82.6	--	+81.8
Other	--	--	--	--
Support	--	+1.8	--	+1.8
Subtotal	-0.8	+84.4	--	+83.6
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+9.9	-57.6	--	-47.7
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+9.9	-57.6	--	-47.7
Total Changes	+9.1	+26.8	--	+35.9
CE - Cost Variance	131.3	3364.6	--	3495.9
CE - Cost & Funding	131.3	3364.6	--	3495.9

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised estimate for test and evaluation resulting from additional detailed planning and refinement of requirements (Navy). (Estimating)	+6.7	+7.2
Revised estimate based on updated testing requirements (Army). (Estimating)	+0.2	+0.2
Revised estimate for future engineering development for technology transfer (Army). (Estimating)	+3.0	+3.4
RDT&E Subtotal	+9.9	+10.8

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+50.7
Stretch-out of procurement buy profile (Navy) to reflect the delay of 2 ships from FY 2016 to FY 2017. (Schedule)	0.0	+6.9
Adjustment for current and prior escalation. (Estimating)	-9.3	-10.0
Update to current Navy cost estimate. (Estimating)	-24.4	-27.5
Estimate increase due to revisions in outyear inflation indices (Army). (Estimating)	+0.4	+0.4
Estimate decrease due to revisions in outyear inflation indices (Navy). (Estimating)	-24.3	-28.0
Adjustment for current and prior escalation. (Support)	+0.1	-0.1
Decrease in Other Support for current Navy cost estimate. (Support)	-0.9	-1.9
Increase in Initial Spares for current Navy cost estimate. (Support)	+0.7	+1.2
Increase in Other Support (Army). (Support)	+0.1	0.0
Procurement Subtotal	-57.6	-8.3

Contracts

General Contract Memo

There is one contract between the Navy and Austal USA for the detail design and construction of JHSVs. The contract was initially awarded for detailed design and construction of JHSV 1 with options for 9 additional ships. In addition to awarding the basic contract for JHSV 1, the Navy has exercised options for JHSV 2, JHSV 3, JHSV 4, and JHSV 5. These options are shown as separate contracts in this section.

Even though the basic contract and all options are Fixed Price Incentive Fee (FPIF), the contractor has not begun reporting cost and schedule variances for JHSV 3, JHSV 4, and JHSV 5 as explained in the individual contract sections. Thus, variance explanations are not yet provided for these ships.

Appropriation: Procurement

Contract Name	**Joint High Speed Vessel - JHSV 1**
Contractor	Austal USA
Contractor Location	Mobile, AL 36610
Contract Number, Type	N00024-08-C-2217/27, FPIF
Award Date	November 13, 2008
Definitization Date	November 13, 2008

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
185.4	216.4	1	186.2	217.3	1	198.1	197.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/30/2011)	-27.9	-14.1
Previous Cumulative Variances	-3.7	-2.9
Net Change	-24.2	-11.2

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance of -$24.2M reflects the expenditure of engineering hours above levels expected due to additional requirements needed to meet American Bureau of Shipping (ABS) standards. Also, production labor efficiency was negatively impacted by start-up supplier issues with friction stir welded panels and additional structure needed to meet ABS standards. The labor inefficiencies were magnified by the associated overhead increases. Overhead is costing more than anticipated due to the delay in shipyard work associated with the Navy's Littoral Combat Ship (LCS).

The unfavorable net change in the schedule variance of -$11.2M reflects delays in structural production in the shipyard due to adding additional structure and friction welded panel supply disruptions.

Contract Comments

The contract price information represents the effort associated with JHSV 1 only. The options exercised for the follow-on ships are shown as separate contracts in this section.

The Initial Contract Target Price increased from $185.4M to $186.2M due to two change orders representing an increase for a sewage treatment plant to replace the planned marine sanitary device to meet a new marine pollution requirement, offset by savings for using a prototype module in the ship build.

Appropriation: Procurement

Contract Name	**Joint High Speed Vessel - JHSV 2**
Contractor	Austal USA
Contractor Location	Mobile, AL 36610
Contract Number, Type	N00024-08-C-2217/2, FPIF
Award Date	June 17, 2009
Definitization Date	June 17, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
152.9	176.1	1	152.9	175.7	1	152.9	152.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/30/2011)	+2.6	-6.4
Previous Cumulative Variances	--	--
Net Change	+2.6	-6.4

Cost And Schedule Variance Explanations

The favorable cumulative cost variance of +$2.6M is caused by early production labor performance being better than expected.

The unfavorable cumulative schedule variance of -$6.4M is due to JHSV 1 schedule delays.

The program baseline for JHSV 2 has not been reviewed by the program office. It is currently being revised due to the initial schedule delays and the subsequent need to replan to meet the contractual delivery schedule.

The program office has scheduled an Integrated Baseline Review (IBR) for JHSV 2 on April 28, 2011, to review and validate the revised plan.

Contract Comments

Appropriation: Procurement

Contract Name	**Joint High Speed Vessel - JHSV 3**
Contractor	Austal USA
Contractor Location	Mobile, AL 36610
Contract Number, Type	N00024-08-C-2217/3, FPIF
Award Date	June 17, 2009
Definitization Date	June 17, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
150.9	173.3	1	150.9	173.3	1	150.9	150.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	--	--
Net Change	+0.0	+0.0

Cost And Schedule Variance Explanations

Cost and schedule variance explanations are not provided since the contractor is only reporting actuals to date.

Some long lead time material related costs have been incurred for JHSV 3 but no Earned Value Management (EVM) program baseline has been established, so there is no basis for determining variances.

The Integrated Baseline Review (IBR) is planned for the summer of 2011.

Contract Comments

Appropriation: Procurement

Contract Name	**Joint High Speed Vessel - JHSV 4**
Contractor	Austal USA
Contractor Location	Mobile, AL 36610
Contract Number, Type	N00024-08-C-2217/4, FPIF
Award Date	October 12, 2010
Definitization Date	October 12, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
151.7	174.2	1	151.7	174.2	1	151.7	151.7

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	--	--
Net Change	+0.0	+0.0

Cost And Schedule Variance Explanations

Cost and schedule variance explanations are not provided since the contractor is only reporting actuals to date.

Some long lead time material related costs have been incurred for JHSV 4 but no Earned Value Management (EVM) program baseline has been established, so there is no basis for determining variances.

Contract Comments

Appropriation: Procurement

Contract Name	**Joint High Speed Vessel - JHSV 5**
Contractor	Austal USA
Contractor Location	Mobile, AL 36610
Contract Number, Type	N00024-08-C-2217/5, FPIF
Award Date	October 12, 2010
Definitization Date	October 12, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
152.5	175.0	1	152.5	175.0	1	152.5	152.5

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	--	--
Net Change	+0.0	+0.0

Cost And Schedule Variance Explanations

Cost and schedule variance explanations are not provided since the contractor has not reported costs to date.

No costs have been incurred for JHSV 5 and no Earned Value Management (EVM) program baseline has been established, so there are no variances to report.

Contract Comments

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	18	0.00%
Total Program Quantities Delivered	0	0	18	0.00%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	3938.0	Years Appropriated	7
Expenditures To Date	275.3	Percent Years Appropriated	43.75%
Percent Expended	6.99%	Appropriated to Date	1453.2
Total Funding Years	16	Percent Appropriated	36.90%

Total Expenditures to Date as of January 7, 2011.

Operating and Support Cost

Assumptions And Ground Rules

There is no antecedent system to the JHSV. The program represents a new materiel solution for DoD in intra-theater sealift, leveraging international commerical best practices in high speed ferry technology.

These O&S costs are based on the JHSV Program Life Cycle Cost Estimate (PLCCE) of October 1, 2008, prepared in support of Milestone B. The OSD Cost Assessment and Program Evaluation (CAPE) organization concurred with the Service Cost Position in a Memorandum for the Under Secretary of Defense for Acquisition, Technology and Logistics (USD AT&L) dated November 6, 2008.

Estimates were calculated and analyzed using the Operating and Support Cost Analysis Model (OSCAM) Naval Suite, sponsored by the Naval Center for Cost Analysis (NCCA). Data was obtained from a variety of sources, including the Visibility and Management of Operating and Support Costs (VAMOSC) historical database, also sponsored by NCCA.

Below are a number of the critical assumptions, as detailed in the JHSV Cost Analysis Requirements Description (CARD) dated January 2008, and in the JHSV PLCCE:

- 18 ships total (5 Army, 13 Navy)
- Primary construction material/hull form: Aluminum/Catamaran
- Design standard: American Bureau of Shipping, High Speed Naval Craft (HSNC)
- Estimated service life: 20 years
- Nominal operational tempo (annually): 3000 hrs steaming underway; 1000 hrs steaming not underway

- Marine Diesel Fuel Cost (per barrel): $171
- Maintenance Concept: Two-level (Organizational and Depot-level)

Costs BY2008 $M		
Cost Element	**JHSV Average Annual Cost Per Hull**	**No Antecedent System**
Unit-Level Manpower	4.0	0.0
Unit Operations	16.8	0.0
Maintenance	5.6	0.0
Sustaining Support	0.2	0.0
Continuing System Improvements	0.2	0.0
Indirect Support	0.0	0.0
Other	0.0	0.0
Total Unitized Cost (Base Year 2008 $)	26.8	--

Total O&S Costs $M	JHSV	No Antecedent System
Base Year	9621.9	0.0
Then Year	11343.7	0.0