

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2004	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					0604212N ASW & OTHER HELO DEVELOPMENT			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
		***		****	****			
Total PE Cost		32.537	67.999	186.919	333.511	342.514	152.230	83.767
H1109 CH/MH-53		2.794	2.768	2.421	2.454	2.495	2.546	2.596
		*	**					
H2415 MH-60S DEVELOPMENT		24.390	60.433	81.231	34.338	8.156	3.838	3.997
H2463 LAMPS MKIII DATA LINK		0.200						
		***						
H3058 VHXX REPLACEMENT								
		*****						
H3059 CH-53E SLEP		2.832	4.798	103.267	296.719	331.863	145.846	77.174
H3060 Integrated Mechanical Diagnostics System (IMDS)								
H9055 SH-60 Laser Aim Scoring System (LASS)		0.953						
H9056 High Tech Training in Support of DoD Legacy		1.368						
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> *The FY 2003 budget reflects a \$1.2M Congressional add for Advance Cable Design which has been reduced by \$0.027 million for Congressional Rescission and \$.031 SBIR assesmentand will be executed under H9213. ** The FY 2004 budget reflects a \$2.0M Congressional add for Advance Cable Design which has been reduced by \$0.022 million for Congressional Rescission and will be executed under H9366 and H9367 ***Total does not include \$26.9M for PE 0604212N Project number H3058, VHXX Replacement (FY 2003, FY 2005, FY 2006) which has been included in PE 0604273N, Executive Helo Development Project number H3058. ****Due to a technical adjustment \$51K in FY05 and \$12K in FY06 funds for PE 0604273N, Executive Helo Development Project number H3058 remain in PE 0604273N, Executive Helo Development Project number H3058. *****Due to low expenditures in project H3059, \$3.7M in FY 03 funds were used to forward finance FY 04 requirements.								
<b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> H1109 - The H-53E helicopter is the premier heavy lift helicopter for the Marine Corps and the only operational airborne mine sweeping platform for the Navy. From FY-2002 to FY-2009, H-53E efforts will continue to develop and qualify components, prior to production approval decisions, in order to replace obsolete system components. Emphasis will be placed on incorporating supportability improvement modifications in conjunction with the H-53E Service Life Extension/Modernization program. These efforts combined, will significantly improve the readiness of the H-53E fleet while reducing long term operational and supportability costs. RDT&E efforts will also focus on trade studies and risk reduction measures for the CH-53E Service Life Extension/Modernization Program, including but not limited to, studies and risk reduction efforts to identify candidate survivability, avionics, cargo handling, cockpit and other airframe specific improvements to extend the service life to 2025. Modeling and simulation will be used to the maximum practical extent throughout this effort. Manned Flight Simulator (MFS) will be utilized to develop, install and test interim modifications to existing H-53E legacy avionics, while maintaining the original basic system footprint and functionality. As a part of this effort, a complete electromagnetic vulnerability (EMV) assessment will be required for the affected and/or modified systems.								

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 Exhibit R-2, RDTE Budget Item Justification  
 (Exhibit R-2, page 1 of 34)

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APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-5</b>						R-1 ITEM NOMENCLATURE 0604212N ASW & OTHER HELO DEVELOPMENT		
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>								
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (Cont'd) H2415 - The mission of Helicopter Combat Support (HC) is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo, internal transport of passengers and cargo, vertical on board delivery (VOD); airhead operations, and day/night search and rescue (SAR), Organic Airborne Mine Countermeasures (OAMCM) and Armed Helo. The MH-60S ORD was modified in May 2000 to add Organic Airborne Mine Countermeasures (OAMCM) as a primary mission, which provides Carrier Battle Groups (CVBGs) and Amphibious Readiness Groups (ARGs) an OAMCM capability. The Armed Helo will provide Combat Search and Rescue, Anti Surface Warfare (SUW) and Force Protection to include Link 16. The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations (NEO), Sea Air Land (SEAL) and Explosive Ordnance Disposal (EOD) support.								
H2463 - The Light Airborne Multi-Purpose System (LAMPS) MK III helicopter is deployed on Ticonderoga Class cruisers, Oliver Hazard Perry Class frigates, Arleigh Burke Class Destroyer and Spruance Class destroyers. LAMPS provides an all-weather capability for detection, classification, and localization of ships and submarines and is an integrated ship-to-helicopter, computer-to-computer weapon system designed to increase the effectiveness of the surface combatant in the performance of its mission. Currently the LAMPS helicopter is tied to its host surface ship via a C-Band bi-directional data link. This data link transfers FLIR, radar, Electronic Support Measures (ESM), Identification Friend or Foe (IFF), voice, tactical symbology, and acoustic information between the helicopter and ship making the helicopter an extension of the ships sensors and increasing the sensor horizon of the ship. The recent introduction of Cooperative Engagement Capability (CEC) into the fleet has created an Electro Magnetic Interference (EMI) problem because it operates within the same C-Band frequency spectrum as the data link. In some CEC operating modes, it completely masks the LAMPS data link resulting in loss of information exchange between the ship and helicopter. To resolve this EMI issue, the LAMPS data link is being moved from the C-Band frequency to the KU-Band. Funding supports development and delivery of 5 air and 4 surface test articles.								

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<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (Cont'd)</p> <p>H3059 - The CH-53E is the Marine Corps only heavy lift helicopter for transport of troops, heavy weapons and equipment and support of combat assault operations, tactical retrieval and recovery operations. The CH-53E is unable to support the current Marine Corps Aviation Implementation Plan that calls for assault support and heavy lift through the year 2025 and the capability to lift large, mission representative, external and internal loads to complement the range and speed of the MV-22. The modernized CH-53E, which will be developed through this program, will have the capability required to execute our national military strategy through the year 2025. FY03-FY05 RDT&amp;E efforts will focus on trade studies for the CH-53E Service Life Extension/Modernization Program including identification of candidate improvements, risk reduction measures, survivability engineering studies, engine selection, Developmental and Operational Test requirements definition, Business Case Analyses (BCAs) to refine and support the acquisition plan, cost model refinement and development of acquisition documentation.</p> <p>H9055- The Laser Aim Scoring System (LASS) provides real-time, quantitative feedback on critical aspects of laser guided weapon employment not currently available from existing Navy laser scoring systems. This feedback has been proven to significantly improve flight crew weapon delivery capabilities during nearly a decade of use by the U.S. Army. The system consists of three major components: A Base Station, Target Kit and Aircraft Flight Data Unit. LASS will be adapted to existing Navy seaborne target to support Navy H-60 armed helicopter training and readiness events requiring laser scoring capability.</p> <p>H9056-The non-availability of replacement parts is quickly becoming the number one reason for severely reduced readiness of our weapon systems. Many of the sub-tier OEM suppliers no longer exist or are unable to respond to our requests for quotes. Sometimes organic depots locally manufacture parts, one at a time, using manual processes and tooling. Congressional funding for FY02 establishes a NAVAIR program that will feature an advanced center for laser data acquisition and reverse engineering that leverages an existing solid model creation capability. This combined capability creates manufacturing ready technical data that can be offered to multiple approved sources for rapid manufacturing of obsolete components, at significantly reduced costs. This funding develops an organic NAVAIR-owned and managed capability (equipment and personnel) to reverse engineer weapon system parts into manufacturing-ready digital technical data packages (D-TDP), suitable for low-cost, high-precision manufacturing.</p>		

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Exhibit R-2, RDTEN Budget Item Justification  
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EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H1109 CH/MH-53			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		<b>2.794</b>	<b>2.768</b>	<b>2.421</b>	<b>2.454</b>	<b>2.495</b>	<b>2.546</b>	<b>2.596</b>
RDT&E Articles Qty								
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> The H-53E helicopter is the premier heavy lift helicopter for the Marine Corps and the only operational airborne mine sweeping platform for the Navy. From FY-2002 to FY-2009, H-53E efforts will continue to develop and qualify components, prior to production approval decisions, in order to replace obsolete system components. Emphasis will be placed on incorporating supportability improvement modifications in conjunction with the H-53E Service Life Extension/Modernization program. These efforts combined, will significantly improve the readiness of the H-53E fleet within the Navy and Marine Corps while reducing long term operational and supportability costs. RDT&amp;E efforts will also focus on trade studies and risk reduction measures for the CH-53E Service Life Extension/Modernization Program, including but not limited to, studies and risk reduction efforts to identify candidate survivability, avionics, cargo handling, cockpit and other airframe specific improvements to extend the service life to 2025. Modeling and simulation will be used to the maximum practical extent throughout this effort. Manned Flight Simulator (MFS) will be utilized to develop, install and test interim modifications to existing H-53E legacy avionics, while maintaining the original basic system footprint and functionality. As a part of this effort, a complete electromagnetic vulnerability (EMV) assessment will be required for the affected and/or modified systems.</p>								

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Exhibit R-2a, RD TEN Project Justification  
(Exhibit R-2a, page 4 of 34)

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H1109 CH/MH-53																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">1.667</td><td style="text-align: center;">0.723</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		1.667	0.723	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		1.667	0.723	0.000															
RDT&E Articles Quantity																			
Conduct cockpit architecture design to address communication deficiencies, bread board testing, information display shortfalls, navigation upgrades/modifications and obsolescence issues.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000															
RDT&E Articles Quantity																			
Conducted Armor Threat Assessment and Armor Selection Test on aircraft.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.250</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.250	0.000	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.250	0.000	0.000															
RDT&E Articles Quantity																			
Conduct Aircraft Cockpit Survivability and System Assessment. Model and test survivability design effectiveness.																			

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<b>B. Accomplishments/Planned Program (Cont.)</b>																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.577	0.710	0.475															
RDT&E Articles Quantity																			
Design, model ,and test effectiveness of ballistic vulnerability (armor) package.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.000	0.896	1.712															
RDT&E Articles Quantity																			
Evaluate, test and analyze recommended improvements to the legacy T-64 engine and related systems.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.150	0.000	0.000															
RDT&E Articles Quantity																			
Integrate software applique for cockpit and avionics improvements, to include the development of new sensors and the impact on flight control computers.																			

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<b>B. Accomplishments/Planned Program (Cont.)</b>																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.000	0.289	0.234															
RDT&E Articles Quantity																			
Conduct Business Case Analyses to determine impact of high Operation and support (O&S) cost drivers and address alternatives for obsolescence issues.																			
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.150	0.000	0.000															
RDT&E Articles Quantity																			
Select and test antenna and other electronic components.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.150</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.000	0.150	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.000	0.150	0.000															
RDT&E Articles Quantity																			
Update CH-53E baseline vulnerability assessment (last full assessment was in 1979)																			

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Exhibit R-2a, RDTEN Project Justification  
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APPROPRIATION/BUDGET ACTIVITY <b>RDTE, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H1109 CH/MH-53

**C. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget:	2.846	2.799	2.423
Current BES/President's Budget	2.794	2.768	2.421
Total Adjustments	-0.052	-0.031	-0.002
Summary of Adjustments			
Congressional program reductions			
Congressional undistributed reductions		-0.031	
Congressional rescissions			
SBIR/STTR Transfer	0.000		
Economic Assumptions			-0.001
Reprogrammings	-0.052		
Other Navy/OSD adjustments			
Congressional increases			
Reprioritization			-0.001
Subtotal	-0.052	-0.031	-0.002

Schedule:

Not Applicable

Technical:

Not Applicable

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<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>									
<u>Line Item No. &amp; Name</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
N/A									
<b>E. ACQUISITION STRATEGY:</b>									
This is a non-ACAT program with no specific acquisition strategies.									

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Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2004</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H1109 CH/MH-53						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Raytheon	0.702	0.395	Various						1.097	1.097
Ancillary Hardware Development	Various	Various	0.888	0.163	Various	0.233	Various			Continuing	Continuing	
Aircraft Integration	Various	NAWCAD Pax River, MD				0.311	Various			Continuing	Continuing	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering	Various	NAWCAD Pax River, MD						0.572	Various	Continuing	Continuing	
Training Development											0.000	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			1.590	0.558		0.544		0.572		Continuing	Continuing	
Remarks:												
Development Support	Various	NAWCAD Pax River, MD		0.406	Various					Continuing	Continuing	
Software Development	Various	Various		0.327	Various					Continuing	Continuing	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data	Various	Various				0.194	Various			Continuing	Continuing	
Studies & Analyses	Various	Various	0.869	0.550	Various	1.335	Various	0.259	Various	Continuing	Continuing	
GFE	Various	NAWCAD Pax River, MD		0.125	Various					Continuing	Continuing	
Award Fees											0.000	
Subtotal Support			0.869	1.408		1.529		0.259		Continuing	Continuing	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2004</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDTE, N / BA-5</b>			PROGRAM ELEMENT 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H1109 CH/MH-53						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various	1.054	0.420	Various	0.219	Various	0.577	Various	Continuing	Continuing	
Operational Test & Evaluation	WX	COMOPTEVFOR		0.130								
Live Fire Test & Evaluation	Various	NAWCWD China Lake, CA						0.477	Various	Continuing	Continuing	
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			1.054	0.550		0.219		1.054		Continuing	Continuing	
Remarks:												
Contractor Engineering Support												
Government Engineering Support	Various	NAWCAD Pax River, MD		0.180	Various					Continuing	Continuing	
Program Management Support	Various	Various				0.380	Various	0.400	Various	Continuing	Continuing	
Travel	WX	NAWCAD Pax River, MD	0.512	0.098	11/02	0.096	11/03	0.136	11/04	Continuing	Continuing	
Transportation												
SBIR Assessment												
Subtotal Management			0.512	0.278		0.476		0.536		Continuing	Continuing	
Remarks:												
Total Cost			4.025	2.794		2.768		2.421		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 83

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 11 of 34)

## R-1 SHOPPING LIST - Item No. 83

\* Not required for Budget Activities 1, 2, 3, and 6

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February 2004

**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 12 of 34)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 83

**UNCLASSIFIED**

**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 13 of 34)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME H2415 MH-60S Development			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		24.390*	60.433**	81.231	34.338	8.156	3.838	3.997
RDT&E Articles Qty								

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The Helicopter Combat Support (HC) mission is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical on board delivery (VOD); airhead operations, and day/night search and rescue (SAR) , Organic Airborne Mine Countermeasures (OAMCM) and Armed Helo. The MH-60S ORD was modified in May 2000 to add Organic Airborne Mine Countermeasures (OAMCM) as a primary mission for the MH-60S. The AMCM mission will provide Carrier Battle Groups (CVBGs) and Amphibious Readiness Groups (ARGs) with an OAMCM capability. The Armed Helo will provide Combat Search and Rescue, Anti Surface Warfare (SUW) and Force Protection to include Link 16. The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations (NEO), Sea Air Land (SEAL) and Explosive Ordnance Disposal (EOD) support.

\*The FY 2003 budget reflects a \$1.2M Congressional add for Advance Cable Design which has been reduced by \$0.027 million for Congressional Rescission and \$.031 SBIR assesment and will be executed under H9213.

The FY 2004 budget reflects a \$2.0M Congressional add for Advance Cable Design which has been reduced by \$0.022 million for Congressional Rescission and will be executed under H9366 and H9367.

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & Other Helo Development	PROJECT NUMBER AND NAME H2415 MH-60S Development																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">13.737</td> <td style="text-align: center;">27.267</td> <td style="text-align: center;">36.412</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		13.737	27.267	36.412	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		13.737	27.267	36.412															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <p>The design, development, integration and support of the AMCM unique items into the MH-60S airframe. Designed, developed, integrated and supported the interoperability of Automatic Flight Control System (AFCS) (Completed in FY02). T&amp;E on AMCM Mission Kits as each weapon system is introduced to the MH-60S. AMCM Training systems engineering and development; including training situation analysis, and instructional system development (ISD) documentation. Live Fire Test and Evaluation for the MH-60S program. Navy field activity systems engineering, program management support and travel. Design, develop, integrate and support the Link 16 development (FY04 - cont.). Integrate Link16 training situation analysis, instructional system development (ISD) document (FY05 - cont.). RTOC initiatives: Improved organizational level oil analysis technology, replacement of flight control self retaining bolts (FY04), and weight reduction (FY04-FY05).</p> </div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">7.443</td> <td style="text-align: center;">31.188</td> <td style="text-align: center;">44.819</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		7.443	31.188	44.819	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		7.443	31.188	44.819															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <p>Developmental efforts on the avionics architecture and systems of the MH-60S helicopter. Development of the consoles, as well as software modifications, to support AMCM sensors and palletized system. Navy field activity systems engineering and test support, program management, and travel. Continue AMCM Training systems engineering and development; including training situation analysis, and instructional system development (ISD) documentation. AMCM sensor systems test and evaluation support (FY03 - continuing). Engineering and integration effort to incorporate AMCM requirements into the aircraft and ship C4I structure (FY04 - cont.). Design, develop, integrate and support the Link 16 development (FY04- cont.). Integrate Link16 training situation analysis, instructional system development (ISD) document (FY05 - cont.).</p> </div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">0.968</td> <td></td> <td></td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.968			RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.968																	
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <p>Development of Carriage, Stream, Tow, &amp; Recovery System (CSTRS) prototypes. Engineering analysis and trade studies to define unique requirements for all five AMCM sensors. Navy field activity systems engineering and test support, program management, and travel.</p> </div>																			

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604216N Multi-Mission Helicopter Upgrade Developme	PROJECT NUMBER AND NAME H2415 MH-60S Development																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 25%;"></th><th style="width: 20%;">FY 03</th><th style="width: 20%;">FY 04</th><th style="width: 10%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">1.100</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		1.100	0.000	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		1.100	0.000	0.000															
RDT&E Articles Quantity																			
Design, develop, integrate and support the Advance Concept Technology Demonstration (ACTD) .																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 25%;"></th><th style="width: 20%;">FY 03</th><th style="width: 20%;">FY 04</th><th style="width: 10%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">1.142</td><td style="text-align: center;">1.978</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		1.142	1.978	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		1.142	1.978	0.000															
RDT&E Articles Quantity																			
Design, develop, integrate,testing and support the Advanced Cable Design for the MH-60S.																			

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & Other Helo Development	PROJECT NUMBER AND NAME H2415 MH-60S Development	

**C. PROGRAM CHANGE SUMMARY:**

	FY 2003	FY 2004	FY 2005
Funding:			
Previous President's Budget:	23.884	59.113	81.711
Current President's Budget:	24.390	60.433	81.231
Total Adjustments	0.506	1.320	-0.480
Summary of Adjustments			
Congressional program reductions		-0.680	
Congressional undistributed reductions			
Congressional rescissions			
SBIR/STTR Transfer	-0.370		
Economic Assumptions			-0.225
Reprogrammings			
Congressional increases		2.000	
Reprioritization	0.876		-0.255
Subtotal	0.506	1.320	-0.480

Schedule:

Block 2A test articles and testing have been rescheduled due to delays in modifications and delivery of the test aircraft. Block 2A Initial Production deliveries updated to reflect the revised production schedule for Common Console and weight reduced CSTRS. Block 2A Full Rate Production events have been updated based on revised completion date for Operational Testing (OT-IIC). Block 2B system development and testing adjusted to more accurately reflect revised contract award date and availability of sensors for integration. The Block 3B scheduled IPR 1 date moved from early first quarter 04 to late first quarter 04 due to refinement of the original, long-term plan. Development and test milestones were adjusted to accommodate the shift for the IPR.

Technical:

Not applicable.

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**Exhibit R-2a, RDTE Project Justification**  
(Exhibit R-2a, page 17 of 34)

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME H2415 MH-60S Development				

**D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
017900 APN-1 MH-60S AMCM (Included in numbers above)	352.503	408.454	400.754	591.412	681.589	657.703	876.597	357.010	
060510 APN-6 MH-60S	13.571	17.697	18.638	35.717	8.907	3.586	12.393	0.000	

**E. ACQUISITION STRATEGY:**

Airborne Mine Countermeasures (AMCM) and Armed Helo are elements of the existing MH-60S ACAT IC Program. MH-60S will employ an evolutionary acquisition approach via the MH-60S Block Upgrade. This allows for future modification for systems still in early development. The block upgrades will maximize commonality across all MH-60S missions and all AMCM/Armed Helo weapon systems, including logistics, training and maintenance. The MH-60S block upgrade are as follows.

- Block 1 - Combat Support Helicopter
- Block 2- Airborne Mine Countermeasures
- Block 3 - Armed Helo

**F. MAJOR PERFORMERS:**

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 18 of 34)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & Other Helo Development			H2415 MH-60S Development						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Dev, Airframe	SS/CPAF	Sikorsky, Stratford, CT	46.666	9.728	Various	18.110	Various	20.201	Various	7.072	101.777	101.777
Primary Hardware Dev, Avionics	SS/CPAF	Lockheed Martin, Owego, NY	57.867	3.435	Various	22.028	Various	28.606	Various	21.940	133.876	133.876
Primary Hardware Dev, CSTRS	SS/CPFF	CTC, Johnstown, PA	30.507	0.968	Various						31.475	31.475
Training Development	Various	NAWCAD &NAWC-TSD	1.162	0.240	Various	0.733	02/04	1.700	Various	1.800	5.635	
Aircraft Integration											0.000	
Ship integration											0.000	
Systems Engineering	SS/CPAF	Cortland Cable, NY		1.142	08/03	1.978	06/04				3.120	3.120
TCDL	TBD	TBD						8.800	Various	1.500	10.300	
GFE	TBD	TBD				1.300	02/04				1.300	
Award fees	SS/CPAF	Sikorsky & Lockheed Martin	1.815			1.900	Various	3.600	Various	1.600	8.915	8.915
ACTD	MIPR	Bolling AFB		1.100	Various						1.100	
Subtotal Product Development			138.017	16.613		46.049		62.907		33.912	297.498	
Remarks:												
Development Support											0.000	
Software Development, Airframe											0.000	
Software Development, Avionics											0.000	
Integrated Logistics Support	Various	Various	3.982	0.808	12/02	3.071	12/03	4.712	Various	Continuing	Continuing	
Configuration Managemnet											0.000	
Technical Data	Various	Various								0.100	0.100	
Studies & Analysis	Various	NAWCAD	2.674								2.674	
GFE											0.000	
Subtotal Support			6.656	0.808		3.071		4.712		Continuing	Continuing	
Remarks:												

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## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)									DATE: <b>February 2004</b>			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RDTE&amp;E, N / BA-5</b>			0604212N ASW & Other Helo Development			H2415 MH-60S Development						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NRWATS, NAWCAD & NSW	9.624	2.143	Various	3.311	12/03	1.910	Various	4.144	21.132	
Operational Test & Evaluation	WX	NAWCAD & NRWATS	1.552					2.946	Various	1.000	5.498	
Live Fire Test & Evaluation	WX	NAWCAD & China Lake	1.138	0.464	Various	0.946	02/04	0.855	Various		3.403	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			12.314	2.607		4.257		5.711		5.144	30.033	
Remarks:												
Contractor Engineering Support	Various	Various	4.671	0.275	01/03	0.525	Various	0.300	Various	Continuing	Continuing	
Government Engineering Support	Various	Various	16.293	2.176	01/03	4.890	Various	5.372	Various	Continuing	Continuing	
Program Management Support	Various	Various	7.597	1.611	01/03	1.541	Various	2.029	Various	Continuing	Continuing	
Travel	WX	NAWCAD	0.489	0.300	11/02	0.100	Various	0.200	Various	0.400	1.489	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			29.050	4.362		7.056		7.901		Continuing	Continuing	
Total Cost			186.037	24.390		60.433		81.231		Continuing	Continuing	
Remarks:												

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																									DATE:								
AMCM																									February 2004								
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME													
RDT&E, N / BA-5										0604212N ASW and Other Helo Development										H2415 MH-60S Development													
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Acquisition Milestones	IPR II																IPR III Block 2A		IOC Block 2A					PR IV Block 2B		IOC Block 2B							FOC AMCM
	▲																△		☆					△		☆						☆	
	WSIT AWARD (Block 2A)						WSIT AWARD Block 2B																										
MH-60S AMCM Aircraft Development		SDR			PDR	CDR				FCA		PCA																					
		▲			▲	▲				△		△																					
AMCM Mission Kits CSTRS & Common Console							FIT																										
							△																										
Test & Evaluation Milestones																																	
MH-60S AMCM Block 2A																																	
MH-60S AMCM Block 2B																																	
Production Milestones																																	
AMCM Mission Kits																																	
Initial Production																																	
FRP																																	
Deliveries																																	
CSTRS																																	
AFCS																																	
Common Console																																	

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Notes: T&E Milestones: Block 2A and 2B contain overarching test periods that include the applicable sensor systems within their respective Blocks. Each Block involves concurrent testing of the AMCM systems within the Block that includes the requisite time periods between test events.

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Exhibit R-2a, RD TEN Project Justification  
(Exhibit R-2a, page 21 of 34)

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## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&BA-5	0604212N ASW and Other Helo Development				H2415 MH-60S Development			
Schedule Profile - AMCM	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Block 2A								
WSIT Contract Award Block 2A	1Q							
In-Process Review	1Q							
System Development	1Q-4Q							
System Design Review (SDR)	2Q							
Preliminary Design Review (PDR)	4Q							
Contract Award Initial Production	4Q							
Start Initial Production	4Q							
Critical Design Review (CDR)		1Q						
AFCS Test Article Delivery		3Q						
Functional Integration Test		3Q						
Ground Testing		4Q	1Q					
Contractor Test		4Q	1Q-3Q					
Initial Production Delivery			1Q-4Q	1Q				
Functional Configuration Audit			1Q					
Physical Configuration Audit			3Q					
Developmental Testing (DT-IIC)			3Q-4Q	1Q				
Operational Testing (OT-IIC)				2Q-3Q				
Contract Award - Production				3Q				
Full Rate Production (FRP) Decision 2A/IPR III				3Q				
Initial Operational Capability - Block 2A					1Q			
Full Rate Production Delivery					2Q			
Block 2B								
WSIT Contract Award Block 2B		3Q						
Contractor Test			4Q	1Q-3Q				
Developmental Testing (DT-IID)				3Q-4Q	1Q			
Initial Production Delivery					2Q-3Q			
Operational Testing (OT-IID)					1Q-4Q			
Initial Operational Capability - Block 2B						4Q		
Full Rate Production (FRP) Decision 2B/ IPR IV						2Q		
Contract Award - Production						2Q		
Full Rate Production Delivery							1Q-3Q	1Q-3Q
Full Operational Capability - Block 2B								4Q

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Exhibit R-4a, Schedule Detail

(Exhibit R-4a, page 22 of 34)

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 23 of 34)

EXHIBIT R4, Schedule Profile																									DATE:							
Link 16																									February 2004							
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME												
RDT&E, N / BA-5										0604212N ASW and Other Helo Development										H2415 MH-60S Development												
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Acquisition Milestones				▲ MS III (MH-60S)																												
(Block 3B)												△ IPR 1							△ IPR 2					△ IPR 3		☆ IOC						
MH-60S Block 3B Development																																
Design/Build/Integration												Design & Integration																				
MH-60S Block 3B Development Milestones												△ SRR	△ SDR	△ PDR	△ CDR									△ FCA		△ PCA						
Aircraft Block 3B Mod Delivery																△																
Software												△ SSR	△ SRR			△ Release x.0			△ Release x.1			△ Release x.2										
Test & Evaluation Milestones																			△ DTRR			△ OTRR										
Contractor Test																			CT-IIF													
Development Test																			DT-IIF			Regression Test										
Operational Test																						OT-IIF										

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## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
<b>RDT&amp;BA-5</b>	0604212N ASW and Other Helo Development				H2415 MH-60S Development			
Schedule Profile - Link 16	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
BLOCK 3B								
IPR 1			1Q					
System Design, Build, and Integration			2Q-4Q	1Q-3Q				
Systems Requirements Review (SRR)			2Q					
System Design Review (SDR)			3Q					
Software Specification Review (SSR)			3Q					
Preliminary Design Review (PDR)			4Q					
Software Readiness Review (SRR)			4Q					
Critical Design Review (CDR)				1Q				
Software Delivery x.0				3Q				
Aircraft Block 3B Mod Delivery				4Q				
Contractor Test (CT-IIF)				4Q	1Q			
IPR 2					1Q			
Software Delivery x.1					1Q			
Developmental Test Readiness Review (DTRR)					1Q			
Software Delivery x.2					2Q			
Developmental Testing (DT-IIF)					2Q-3Q			
Operational Test Readiness Review					4Q			
Operational Testing (OT-IIF)					4Q	1Q		
IPR 3						3Q		
Functional Configuration Audit (FCA)						4Q		
IOC						4Q		
Physical Configuration Audit							3Q	

R-1 SHOPPING LIST - Item No. 83

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Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 24 of 34)



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H3059 CH-53E SLEP			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		2.832	4.798	103.267	296.719	331.863	145.846	77.174
RDT&E Articles Qty								
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> The CH-53E is the Marine Corps only heavy lift helicopter for transport of troops, heavy weapons and equipment and support of combat assault operations, tactical retrieval and recovery operations. The CH-53E is unable to support the current Marine Corps Aviation Implementation Plan that calls for assault support and heavy lift through the year 2025 and the capability to lift large, mission representative, external and internal loads to complement the range and speed of the MV-22. The modernized CH-53E, that will be developed through this program, will have the capability required to execute our national military strategy through the year 2025. FY03-FY05 RDT&E efforts will focus on trade studies for the CH-53E Service Life Extension/Modernization Program including identification of candidate improvements, risk reduction measures, survivability engineering studies, engine selection, Developmental and Operational Test requirements definition, Business Case Analyses (BCAs) to refine and support the acquisition plan, cost model refinement and development of acquisition documentation.								

R-1 SHOPPING LIST - Item No. 83

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 25 of 34)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H3059 CH-53E SLEP																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.200</td><td style="text-align: center;">0.275</td><td style="text-align: center;">0.290</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.200	0.275	0.290	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.200	0.275	0.290															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; min-height: 60px; margin-top: 5px;"></div>																			
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R-1 SHOPPING LIST - Item No. 83

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 26 of 34)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H3059 CH-53E SLEP																	
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		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.175															
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R-1 SHOPPING LIST - Item No. 83

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EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>																																																													
APPROPRIATION/BUDGET ACTIVITY <b>RDTE, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H3059 CH-53E SLEP																																																														
<p><b>C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Funding:</th> <th style="text-align: right; width: 15%;">FY 2003</th> <th style="text-align: right; width: 15%;">FY 2004</th> <th style="text-align: right; width: 15%;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">2.917</td> <td style="text-align: right;">4.852</td> <td style="text-align: right;">109.493</td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">2.832</td> <td style="text-align: right;">4.798</td> <td style="text-align: right;">103.267</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.085</td> <td style="text-align: right; border-top: 1px solid black;">-0.054</td> <td style="text-align: right; border-top: 1px solid black;">-6.226</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional program reductions</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.054</td> <td></td> </tr> <tr> <td>    Congressional rescissions</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td style="text-align: right;">0.000</td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td></td> <td></td> <td style="text-align: right;">-0.323</td> </tr> <tr> <td>    Reprogrammings</td> <td style="text-align: right;">-0.085</td> <td></td> <td></td> </tr> <tr> <td>    Other Navy/OSD Adjustments</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional increases</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Reprioritization</td> <td></td> <td></td> <td style="text-align: right;">-5.903</td> </tr> <tr> <td>    Subtotal</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.085</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.054</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-6.226</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule:</p> <p style="margin-left: 20px;">Not Applicable</p> <p style="margin-top: 20px;">Technical:</p> <p style="margin-left: 20px;">Not Applicable</p>					Funding:	FY 2003	FY 2004	FY 2005	Previous President's Budget:	2.917	4.852	109.493	Current BES/President's Budget	2.832	4.798	103.267	Total Adjustments	-0.085	-0.054	-6.226	Summary of Adjustments				Congressional program reductions				Congressional undistributed reductions		-0.054		Congressional rescissions				SBIR/STTR Transfer	0.000			Economic Assumptions			-0.323	Reprogrammings	-0.085			Other Navy/OSD Adjustments				Congressional increases				Reprioritization			-5.903	Subtotal	-0.085	-0.054	-6.226
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R-1 SHOPPING LIST - Item No. 83

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H3059 CH-53E SLEP			
<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>								
<u>Line Item No. &amp; Name</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>
P-1 Procurement Line: BLI 015800/CH-53E SLEP						192.6	268.1	TBD
								Total Cost
								TBD
<b>E. ACQUISITION STRATEGY:</b>								
<p>The AoA was approved 11 September 2003. The ORD was entered into the JCS Knowledge Management Distribution System 10 December 2003. MS-B is scheduled for first quarter FY2005. System Development and Demonstration contract award is scheduled for second quarter FY2005.</p>								

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UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & OTHER HELO DEVELOPMENT			H3059 CH-53E SLEP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	TBD	Contractor TBD						90.547	12/04	731.399	821.946	821.946
Ancillary Hardware Development												
Training Development												
Aircraft Integration												
Ship Suitability												
Systems Engineering	TBD	Contractor TBD		0.426	03/03	1.659	12/03				2.085	2.085
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.000	0.426		1.659		90.547		731.399	824.031	
Remarks: Primary Hardware Development contract not yet negotiated. Target Value of Contract will be available after contract award												
Development Support												
Software Development										1.650	1.650	
Integrated Logistics Support	Various	NAWCAD Pax River, MD				0.665	11/03	1.123	11/04	11.364	13.152	
Configuration Management										0.900	0.900	
Technical Data												
Studies & Analyses	CPFF	Booz Allen Hamilton, MD	1.999	0.835	03/03	0.738	12/03	0.337	12/04		3.909	3.909
GFE												
Award Fees												
Subtotal Support			1.999	0.835		1.403		1.460		13.914	19.611	
Remarks:												

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 30 of 34)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: <b>February 2004</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RD&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H3059 CH-53E SLEP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	NAWCAD Pax River, MD						0.175	11/04	23.246	23.421	
Operational Test & Evaluation	Various	OPTEVFOR (HMX)						0.175	11/04	12.764	12.939	
Live Fire Test & Evaluation	Various	NAWCWD China Lake, CA								1.453	1.453	
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.000	0.000		0.000		0.350		37.463	37.813	
Remarks:												
Contractor Engineering Support	Various	NAWCAD Pax River, MD		0.233	01/03	0.406	11/03	1.865	11/04	14.516	17.020	
Government Engineering Support	Various	NAWCAD Pax River, MD		1.013	03/03	0.820	11/03	4.802	11/04	37.376	44.011	
Program Management Support	Various	NAWCAD Pax River, MD		0.315	03/03	0.490	11/03	4.118	11/04	32.239	37.162	
Travel	Various	NAWCAD Pax River, MD		0.010	03/03	0.020	11/03	0.125	11/04	5.589	5.744	
Transportation												
SBIR Assessment												
Subtotal Management			0.000	1.571		1.736		10.910		89.720	103.937	
Remarks:												
Total Cost			1.999	2.832		4.798		103.267		872.496	985.392	
Remarks:												

R-1 SHOPPING LIST - Item No. 83

UNCLASSIFIED

Exhibit R-2a, RD&E Project Justification  
(Exhibit R-2a, page 31 of 34)

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\* Not required for Budget Activities 1, 2, 3, and 6

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**Exhibit R-2a, RD TEN Project Justification**  
(Exhibit R-2a, page 32 of 34)



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**CLASSIFICATION:**

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**Exhibit R-2a, RD TEN Project Justification**  
(Exhibit R-2a, page 33 of 34)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2004</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H9056 High Tech Training in Support of DoD Legacy Parts						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WX	NAWCAD, Pax River, MD	0.250								0.250	
Ancillary Hardware Development												
Aircraft Integration												
Ship Integration												
Ship Suitability												
Systems Engineering												
Training Development												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.250	0.000		0.000		0.000		0.000	0.250	
Remarks:												
Development Support												
Software Development	WX	NAWCAD, Pax River, MD	0.250								0.250	
Integrated Logistics Support	WX	NAWCAD, Pax River, MD	0.225								0.225	
Configuration Management												
Technical Data												
Studies & Analyses				0.478	Various						0.478	
GFE												
Award Fees												
Subtotal Support			0.475	0.478		0.000		0.000		0.000	0.953	
Remarks:												

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 34 of 34)