

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: <b>February 2003</b>	
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 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	79.983	35.383	66.764	193.627	334.743	343.626	154.498	85.810
H1109 CH/MH-53	0.625	2.846	2.799	2.423	2.464	2.506	2.554	2.601
H2415 MH-60S DEVELOPMENT	39.411*	23.884**	59.113	81.711	34.703	8.481	5.910	6.022
H2463 LAMPS MKIII DATA LINK	23.558							
H3059 CH-53E SLEP	1.999	2.917	4.852	109.493	297.576	332.639	146.034	77.187
H3060 Integrated Mechanical Diagnostics System (IMD)	6.739							
H9055 SH-60 Laser Aim Scoring System (LASS)	0.963	0.977						
H9056 High Tech Training in Support of DoD Legacy	0.963	1.368						
H3058 VHXX Replacement	0.698***	3.391***						

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

\* The FY 2002 budget reflects a \$5.1M Congressional add for CSTRS which has been reduced by \$0.048 million for Congressional Rescissions and \$0.105 million for a SBIR assessment and will be executed under H2773.

\*\*The FY 2003 budget reflects a \$1.173M Congressional add for Advance Cable Design.

\*\*\*Starting in FY 04, project will be funded in PE 0604273N VHXX Executive Helo Development

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

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.

R-1 SHOPPING LIST - Item No.

88

UNCLASSIFIED

**Exhibit R-2, RDTEN Budget Item Justification**  
(Exhibit R-2, page 1 of 47)

**UNCLASSIFIED**

**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2, page 2 of 47)

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EXHIBIT R-2, RDT&E Budget Item Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /BA-5</b>	R-1 ITEM NOMENCLATURE 0604212N ASW & Other Helo Development	
<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>H3060 - Integrated Mechanical Diagnostics System (IMDS) adapts a BFGoodrich (BFG) Aerospace commercial mechanical diagnostic system for military use, and integrates and tests the system on the H-53 and H-60 helicopters. This health and usage monitoring system will reduce operational and support costs, improve operational readiness, and increase flight safety through the early identification and correction of degraded components in the engine, drive train, and rotor systems of the helicopter. IMDS provides continuous onboard monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, and rotor track and balance. This new development effort continues the ongoing COSSI initiative, and is required to support completion of the Navy-specific efforts associated with the IMDS program.</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>		

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 3 of 47)

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EXHIBIT R-2, RDT&E Budget Item Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /BA-5</b>	R-1 ITEM NOMENCLATURE 0604212N ASW & Other Helo Development	
<p>U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (Cont'd)</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> <p>H9057 - H-60 FLIR Mount (Congressional Add).</p> <p>H9058 - H-60 Dynamic Component Life Cycle Engineering Evaluation to assess criteria and development of component upgrades for Life Extension (Congressional Add).</p>		

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EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H1109 CH/MH-53			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.625	2.846	2.799	2.423	2.464	2.506	2.554	2.601
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>								

R-1 SHOPPING LIST - Item No. 88

**Exhibit R-2a, RDTE Project Justification**  
(Exhibit R-2a, page 5 of 47)

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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>																			
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Accomplishments/Effort/Subtotal Cost	0.000	1.719	0.754	0.000															
RDT&E Articles Quantity																			
Conduct cockpit architecture design to adress 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: 15%;">FY 02</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 style="text-align: center;">0.162</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.162	0.000	0.000	0.000	RDT&E Articles Quantity				
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Accomplishments/Effort/Subtotal Cost	0.162	0.000	0.000	0.000															
RDT&E Articles Quantity																			
Conducted Armor Threat Assessment and Armor Selection Test on aircraft.																			
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Accomplishments/Effort/Subtotal Cost	0.463	0.250	0.000	0.000															
RDT&E Articles Quantity																			
Conduct Aircraft Cockpit Survivability and System Assessment. Model and test survivability design effectiveness.																			

R-1 SHOPPING LIST - Item No. 88

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Accomplishments/Effort/Subtotal Cost	0.000	0.577	0.710	0.477															
RDT&E Articles Quantity																			
Design, model ,and test effectiveness of ballistic vulnerability (armor) package.																			
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RDT&E Articles Quantity																			
Evaluate, test and analyze recommended improvements to the legacy T-64 engine and related systems.																			
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Accomplishments/Effort/Subtotal Cost	0.000	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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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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Accomplishments/Effort/Subtotal Cost	0.000	0.150	0.000	0.000															
RDT&E Articles Quantity																			
Select and test antenna and other electronic components.																			
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Accomplishments/Effort/Subtotal Cost	0.000	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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<p><b>C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 35%;"></th> <th style="text-align: right; width: 15%;">FY 2002</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>Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">2.300</td> <td style="text-align: right;">2.910</td> <td style="text-align: right;">2.870</td> <td style="text-align: right;">2.485</td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">0.625</td> <td style="text-align: right;">2.846</td> <td style="text-align: right;">2.799</td> <td style="text-align: right;">2.423</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-1.675</td> <td style="text-align: right; border-top: 1px solid black;">-0.064</td> <td style="text-align: right; border-top: 1px solid black;">-0.071</td> <td style="text-align: right; border-top: 1px solid black;">-0.062</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional program reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.017</td> <td></td> <td></td> </tr> <tr> <td>    Congressional rescissions</td> <td style="text-align: right;">-0.005</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td style="text-align: right;">-0.027</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td style="text-align: right;">-0.007</td> <td style="text-align: right;">-0.047</td> <td style="text-align: right;">-0.068</td> <td style="text-align: right;">-0.060</td> </tr> <tr> <td>    Reprogrammings</td> <td style="text-align: right;">-1.636</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Other Navy/OSD adjustments</td> <td></td> <td></td> <td style="text-align: right;">-0.003</td> <td style="text-align: right;">-0.002</td> </tr> <tr> <td>    Congressional increases</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Subtotal</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-1.675</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.064</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.071</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.062</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule:</p> <p style="margin-left: 40px;">Not Applicable</p> <p style="margin-top: 20px;">Technical:</p> <p style="margin-left: 40px;">Not Applicable</p>						FY 2002	FY 2003	FY 2004	FY 2005	Funding:					Previous President's Budget:	2.300	2.910	2.870	2.485	Current BES/President's Budget	0.625	2.846	2.799	2.423	Total Adjustments	-1.675	-0.064	-0.071	-0.062	Summary of Adjustments					Congressional program reductions					Congressional undistributed reductions		-0.017			Congressional rescissions	-0.005				SBIR/STTR Transfer	-0.027				Economic Assumptions	-0.007	-0.047	-0.068	-0.060	Reprogrammings	-1.636				Other Navy/OSD adjustments			-0.003	-0.002	Congressional increases					Subtotal	-1.675	-0.064	-0.071	-0.062
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EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</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					
<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>										
<u>Line Item No. &amp; Name</u>	<u>FY 2002</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>
Not Applicable										
<b>E. ACQUISITION STRATEGY:</b>										
This is a non-ACAT program with no specific acquisition strategies.										

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

# UNCLASSIFIED

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2003</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	0.883	0.208	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			1.585	0.603		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:												

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2003</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	0.550	Various	0.219	Various	0.577	Various	Continuing	Continuing	
Operational Test & Evaluation												
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	0.105	11/02	0.127	11/03	0.138	11/04	Continuing	Continuing	
Transportation												
SBIR Assessment												
Subtotal Management			0.512	0.285		0.507		0.538		Continuing	Continuing	
Remarks:												
Total Cost			4.020	2.846		2.799		2.423		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 12 of 47)

## R-1 SHOPPING LIST - Item No. 88

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

**UNCLASSIFIED**

**Exhibit R-4, Schedule Profile**  
(Exhibit R-4, page 13 of 47)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 88

**UNCLASSIFIED**

**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 14 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</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 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	39.411*	23.884**	59.113	81.711	34.703	8.481	5.910	6.022
RDT&E Articles Qty								
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> 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.</p> <p>* The FY 2002 budget reflects a \$5.1M Congressional add for CSTRS which has been reduced by \$0.048 million for Congressional Rescissions and \$0.105 million for a SBIR assessment and will be executed under H2773.</p> <p>**The FY 2003 budget reflects a \$1.173M Congressional add for Advance Cable Design.</p>								

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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: 15%;">FY 02</td> <td style="width: 15%;">FY 03</td> <td style="width: 15%;">FY 04</td> <td style="width: 15%;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>13.095</td> <td>10.765</td> <td>27.596</td> <td>36.287</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	13.095	10.765	27.596	36.287	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	13.095	10.765	27.596	36.287															
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 containing 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: 15%;">FY 02</td> <td style="width: 15%;">FY 03</td> <td style="width: 15%;">FY 04</td> <td style="width: 15%;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>21.369</td> <td>11.946</td> <td>31.517</td> <td>45.424</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	21.369	11.946	31.517	45.424	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	21.369	11.946	31.517	45.424															
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: 15%;">FY 02</td> <td style="width: 15%;">FY 03</td> <td style="width: 15%;">FY 04</td> <td style="width: 15%;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>4.947</td> <td></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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	4.947				RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	4.947																		
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <p>(Congressional Plus-up) 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>																			

R-1 SHOPPING LIST - Item No.

88

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 16 of 47)



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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</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 H9213 Adv Cable Design		
<b>B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	1.173	0.000	0.000
RDT&E Articles Quantity				
Design, develop, integrate and support the Advanced Cable Design for the MH-60S.				

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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 2002	FY 2003	FY 2004	FY 2005
Funding:				
Previous President's Budget:	41.721	23.241	20.158	13.056
Current BES/President's Budget	39.411	23.884	59.113	81.711
Total Adjustments	-2.310	0.643	38.955	68.655
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.144		
Congressional rescissions	-0.089			
SBIR/STTR Transfer	-1.213			
Economic Assumptions	-0.110	-0.413	-1.493	-1.819
Reprogrammings	-0.898			
Congressional increases		1.200		
Other Navy/OSD Adjustments			40.448	70.474
Subtotal	-2.310	0.643	38.955	68.655

Schedule:

AMCM SDR , PDR and CDR (formerly shown as Common Console/AFCS CDR) was added to reflect total system review vice component. AMCM CDR slipped to 1Q FY04 due to a delay in PDR. Common Console delivery slipped due to delay in spending authorization and subsequent contract award. FY 2004 through FY 2009 schedule reflects an updated Acquisition Program Baseline (APB) approved during the Navy Program Decision Meeting and the addition of Link 16, Block 3B. The revision to the APB better defines the Evolutionary Acquisition Strategy as it pertains to the MH-60S block upgrades. FY 2003 AMCM Weapon System Integration Contract Award identified separately to distinguish Block 2B. FY 2004 T&E Milestone previously reported as AMCM OT-IIIa reclassified as AMCM OT-IIC.

Technical:

Not applicable.

R-1 SHOPPING LIST - Item No. 88

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 18 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2003</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 2002</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	251.484	352.738	431.508	401.767	592.817	695.151	685.026	895.054	349.242	
AMCM (Included in numbers above)	10.202	27.155	61.321	56.180	36.420	61.458	66.819	92.322	32.330	
060510 APN-6 MH-60S	21.781	13.627	13.938	20.366	29.722	4.069	4.684	3.276		
0604216N, H3053, MH-60S AMCM	11.978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604212N ASW & Other Helo Development				PROJECT NUMBER AND NAME 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 Development, Airfr	SS/CPAF	Sikorsky, Stratford, CT	35.653			18.439	various	24.386	various	8.172	86.650	86.650
Primary Hardware Development, Avio	SS/CPAF	Lockheed Martin, Owego, NY	37.768	10.660	02/03	22.357	various	33.521	various	23.766	128.072	128.072
Primary Hardware Development, CS	SS/CPFF	CTC, Johnstown, PA	22.992								22.992	22.992
Training Development	Various	NAWCAD & NAWC-TSD	0.806			0.733	02/04	1.700	various	1.800	5.039	
Systems Engineering	CPFF	Cortland Cable, NY		1.173	03/03						1.173	
GFE	TBD	TBD				1.300	01/04				1.300	
Award fees	SS/CPAF	Sikorsky & Lockheed Martin	1.815			1.900	various	3.600	various	1.600	8.915	8.915
Subtotal Product Development			99.034	11.833		44.729		63.207		35.338	254.141	
Remarks:												
Development Support												
Software Development, Airframe												
Software Development, Avionics												
Integrated Logistics Support	Various	Various	3.313	1.061	12/02	3.071	12/03	4.712	12/04	Continuing	Continuing	
Configuration Managemnet												
Technical Data										0.100	0.100	
Studies & Analysis	Various	NAWCAD	2.674								2.674	
GFE												
Subtotal Support			5.987	1.061		3.071		4.712		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 88

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 20 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME 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	7.871	3.770	various	3.311	11/03	4.856	various	4.144	23.952	
Operational Test & Evaluation	WX	NAWCAD & NRWATS	0.814	0.303	various					1.000	2.117	
Live Fire Test & Evaluation	WX	NAWCAD & China Lake	0.786	0.581	various	0.946	01/04	0.855	various		3.168	
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			9.471	4.654		4.257		5.711		5.144	29.237	
Remarks:												
Contractor Engineering Support	Various	Various	3.935	0.688	01/03	0.525	various	0.300	various	Continuing	Continuing	
Government Engineering Support	Various	Various	12.103	3.872	01/03	4.890	various	5.492	various	Continuing	Continuing	
Program Management Support	Various	Various	7.027	1.477	01/03	1.541	various	2.089	various	Continuing	Continuing	
Travel	WX	NAWCAD	0.389	0.299	11/02	0.100	various	0.200	various	0.400	1.388	
Transportation												
SBIR Assessment												
Subtotal Management			23.454	6.336		7.056		8.081		Continuing	Continuing	
Remarks:												
Total Cost			137.946	23.884		59.113		81.711		Continuing	Continuing	
Remarks:												

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																										DATE:						
AMCM																										February 2003						
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 ▲ WSIT AWARD						WSIT AWARD Block 2B							IPR III Block 2A ▲ WSIT AWARD Block 2B			IOC Block 2A ★				IPR IV Block 2B ▲										FOC Block 2B ★	
MH-60S AMCM Aircraft Development		SDR ▲			PDR ▲	CDR ▲			FCA ▲		PCA ▲																					
AMCM Mission Kits CSTRS & Common Console							FIT ▲ Ground Testing	▲																								
Test & Evaluation Milestones																																
MH-60S AMCM Block 2A					CT1				CT2				DT-IIC	OT-IIC																		
MH-60S AMCM Block 2B																	CT	DT-IID	OT-IID													
Production Milestones																																
AMCM Mission Kits																																
Initial Production							Contract Award ▲																									
FRP																																
Deliveries																																
CSTRS									2		3		3	1			6				6				6				6			
AFCS							Test Article ▲						3	3		3					6				6							
Common Console																																

R-1 SHOPPING LIST - Item No. 88

**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-4, Schedule Profile**  
(Exhibit R-4, page 22 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2003		
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- UCA	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		2Q						
Functional Integration Test		3Q						
Ground Testing		4Q						
Contractor Test		1Q/4Q	1Q					
Initial Production Delivery		4Q	2Q-4Q					
Functional Configuration Audit			1Q					
Physical Configuration Audit			3Q					
Developmental Testing (DT-IIC)			1Q-3Q					
Operational Testing (OT-IIC)			3Q-4Q	1Q				
Contract Award - Production				2Q				
Full Rate Production (FRP) Decision 2A				2Q				
Initial Operational Capability - Block 2A					1Q			
Full Rate Production Delivery					1Q	1Q		
Block 2B								
WSIT Contract Award Block 2B		2Q		1Q				
System Development		1Q-4Q	1Q-4Q					
Contractor Test			1Q-4Q	1Q-2Q				
Developmental Testing (DT-IID)				1Q-4Q	1Q			
Initial Production Delivery				1Q-2Q				
Operational Testing (OT-IID)				4Q	1Q-4Q			
Fleet Operational Capability - Block 2B								4Q
Full Rate Production (FRP) Decision 2B						2Q		
Full Rate Production Delivery							1Q	1Q

R-1 SHOPPING LIST - Item No.

88

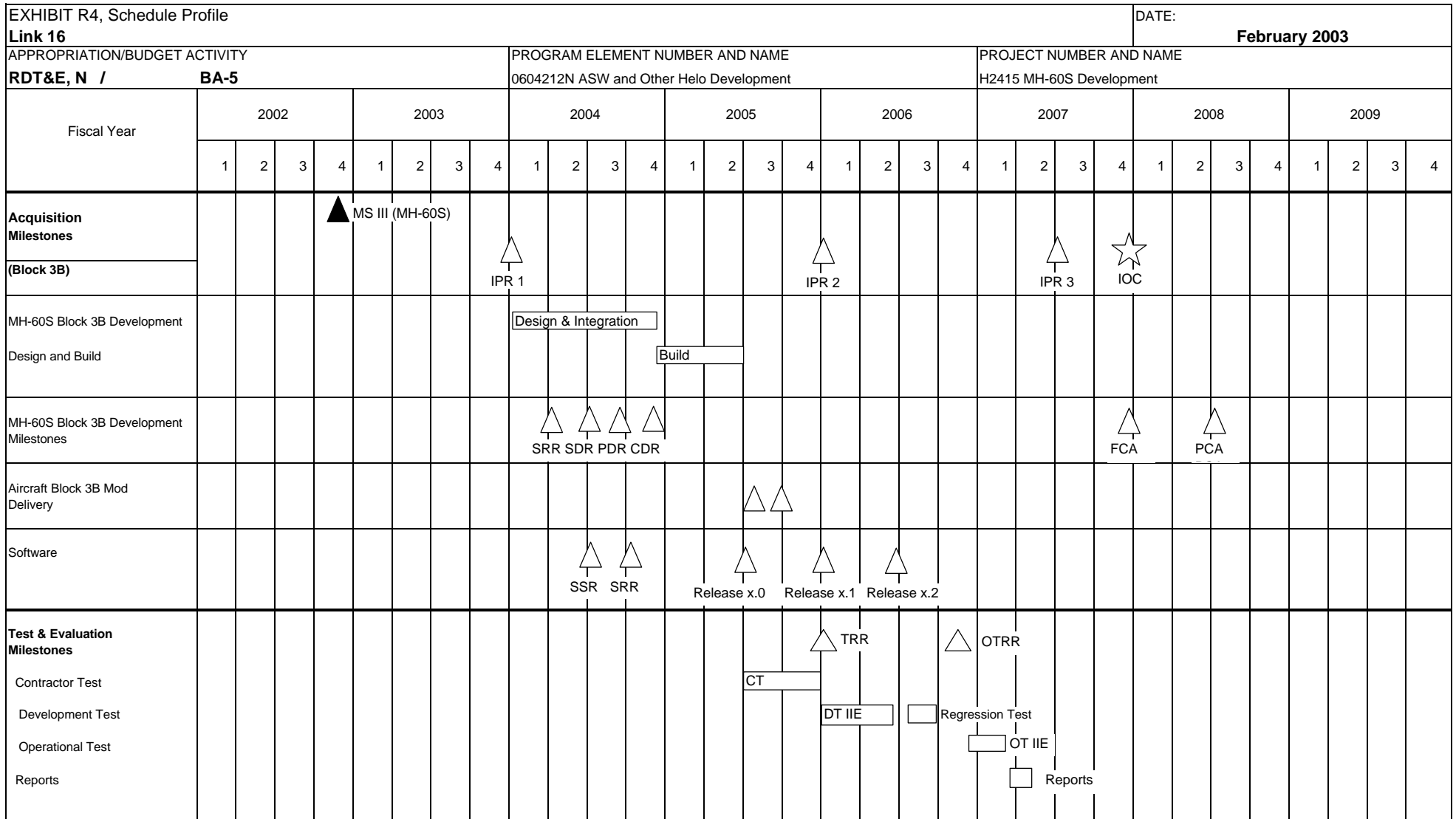
UNCLASSIFIED

Exhibit R-4a, Schedule Detail

(Exhibit R-4a, page 23 of 47)

UNCLASSIFIED

CLASSIFICATION:



R-1 SHOPPING LIST - Item No. 88

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

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 24 of 47)



# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
<b>RD&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
IPR 1			1Q					
System Design and Integration			1Q-4Q					
Systems Requirements Review (SRR)			2Q					
System Design Review (SDR)			3Q					
Software Specification Review (SSR)			3Q					
Preliminary Design Review (PDR)			3Q					
Software Readiness Review (SRR)			4Q					
Critical Design Review (CDR)			4Q					
Quality Design and Build			4Q	1Q-2Q				
Software Delivery x.0				3Q				
Aircraft Block 3B Mod Delivery				3Q				
Contractor Test (CT)				3Q-4Q				
IPR 2					1Q			
Software Delivery x.1					1Q			
Test Readiness Review (TRR)					1Q			
Software Delivery x.2					2Q			
Developmental Testing (DT-IIE)					1Q-2Q			
Operational Test Readiness Review					4Q			
Operational Testing (OT-IIE)					4Q	1Q		
IPR 3						3Q		
Functional Configuration Audit (FCA)						4Q		
IOC						4Q		
Physical Configuration Audit							3Q	

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 25 of 47)

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</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 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	1.999	2.917	4.852	109.493	297.576	332.639	146.034	77.187
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. 88

Exhibit R-2a, RD TEN Project Justification  
(Exhibit R-2a, page 26 of 47)

# UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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: 15%;">FY 02</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 style="text-align: center;">0.000</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.200	0.275	0.290	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.000	0.200	0.275	0.290															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; min-height: 60px; margin-top: 10px;"></div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.000</td><td style="text-align: center;">0.883</td><td style="text-align: center;">2.107</td><td style="text-align: center;">12.575</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.883	2.107	12.575	RDT&E Articles Quantity				
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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	1.999	1.834	2.290	0.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; min-height: 60px; margin-top: 10px;"></div>																			

R-1 SHOPPING LIST - Item No. 88

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**Exhibit R-2a, RDTEN Project Justification**  
(Exhibit R-2a, page 27 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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: 15%;">FY 02</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 style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.180</td><td style="text-align: center;">0.180</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.180	0.180	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.180	0.180															
RDT&E Articles Quantity																			
Perform Business Case Analyses (BCAs) to refine and support the program definition and acquisition strategy.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.175</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	0.175	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	0.175															
RDT&E Articles Quantity																			
COMOPTEVFOR (HMX) test support to identify Operational Test (OT) requirements and ensure the aircraft satisfies the mission need.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">96.273</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	96.273	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	96.273															
RDT&E Articles Quantity																			
CH-53E System Development and Demonstration (SDD) contract for engineering and manufacturing development that will translate the design approach developed through the trade studies into a stable, producible and cost effective system design.																			

R-1 SHOPPING LIST - Item No. 88

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# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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		

**C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003	FY 2004	FY 2005
Funding:				
Previous President's Budget:	0.000	2.983	4.975	112.190
Current BES/President's Budget	1.999	2.917	4.852	109.493
Total Adjustments	1.999	-0.066	-0.123	-2.697
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.017		
Congressional rescissions				
SBIR/STTR Transfer				
Economic Assumptions		-0.049	-0.118	-2.380
Reprogrammings	1.999			
Other Navy/OSD Adjustments			-0.005	-0.317
Congressional increases				
Subtotal	1.999	-0.066	-0.123	-2.697

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 88

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</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					
<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>										
<u>Line Item No. &amp; Name</u>	<u>FY 2002</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>
P-1 Procurement Line: BLI 015800/CH-53E SLEP							192.4	267.2	TBD	TBD
<b>E. ACQUISITION STRATEGY:</b>										
Not applicable. The Operational Requirements Document (ORD) and an Analysis of Alternatives (AOA) are under development; will be used by Marine Corps leadership to develop an Acquisition Strategy beginning in FY03/04.										

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
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						96.273	12/04	731.399	827.672	827.672
Ancillary Hardware Development												
Training Development												
Aircraft Integration												
Ship Suitability												
Systems Engineering	TBD	Contractor TBD		0.508	03/03	1.659	12/03				2.167	2.167
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.000	0.508		1.659		96.273		731.399	829.839	
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:												

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 31 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&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		0.196	01/03	0.340	11/03	1.865	11/04	14.516	16.917	
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		0.050	03/03	0.140	11/03	0.625	11/04	5.589	6.404	
Transportation												
SBIR Assessment												
Subtotal Management			0.000	1.574		1.790		11.410		89.720	104.494	
Remarks:												
Total Cost			1.999	2.917		4.852		109.493		872.496	991.757	
Remarks:												

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 32 of 47)



UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-5												0604212N ASW & OTHER HELO DEVELOPMENT												H3059 CH-53E SLEP											
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																																			
Prototype Phase																																			
Engineering Milestones																																			
Test & Evaluation Milestones																																			
Development Test (FY09-FY10)																																			
Operational Test (FY10-FY11)																																			
Production Milestones																																			
LRIP FY08																																			
FRP (MS C) - FY10																																			
Deliveries (FY12 - 20)																																			

R-1 SHOPPING LIST - Item No. 88

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

UNCLASSIFIED

Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 33 of 47)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 88

**UNCLASSIFIED**

**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 34 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development				PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.963	0.977						
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) A. 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.

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 35 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development	PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)		
<b>B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.963	0.977		
RDT&E Articles Quantity				
Continue the design and development efforts required for adaptation of an existing LASS base station, target and flight data unit to Navy H-60 configuration requirements.				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																																																																							
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<p><b>C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">FY 2002</th> <th style="text-align: right;">FY 2003</th> <th style="text-align: right;">FY 2004</th> <th style="text-align: right;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">0.991</td> <td style="text-align: right;">0.000</td> <td></td> <td></td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">0.963</td> <td style="text-align: right;">0.977</td> <td></td> <td></td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.028</td> <td style="text-align: right; border-top: 1px solid black;">0.977</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional program reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.006</td> <td></td> <td></td> </tr> <tr> <td>    Congressional rescissions</td> <td style="text-align: right;">-0.002</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td style="text-align: right;">-0.025</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td style="text-align: right;">-0.003</td> <td style="text-align: right;">-0.017</td> <td></td> <td></td> </tr> <tr> <td>    Reprogrammings</td> <td style="text-align: right;">0.002</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional increases</td> <td></td> <td style="text-align: right;">1.000</td> <td></td> <td></td> </tr> <tr> <td>    Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">-0.028</td> <td style="text-align: right; border-top: 1px solid black;">0.977</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</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>						FY 2002	FY 2003	FY 2004	FY 2005	Funding:					Previous President's Budget:	0.991	0.000			Current BES/President's Budget	0.963	0.977			Total Adjustments	-0.028	0.977	0.000	0.000	Summary of Adjustments					Congressional program reductions					Congressional undistributed reductions		-0.006			Congressional rescissions	-0.002				SBIR/STTR Transfer	-0.025				Economic Assumptions	-0.003	-0.017			Reprogrammings	0.002				Congressional increases		1.000			Subtotal	-0.028	0.977	0.000	0.000
	FY 2002	FY 2003	FY 2004	FY 2005																																																																						
Funding:																																																																										
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Congressional undistributed reductions		-0.006																																																																								
Congressional rescissions	-0.002																																																																									
SBIR/STTR Transfer	-0.025																																																																									
Economic Assumptions	-0.003	-0.017																																																																								
Reprogrammings	0.002																																																																									
Congressional increases		1.000																																																																								
Subtotal	-0.028	0.977	0.000	0.000																																																																						

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA5</b>			PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development			PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)			
<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>									
<u>Line Item No. &amp; Name</u>	<u>FY 2002</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> Total Cost
APN BLI-053000 H-60 Series	5.496	21.220	18.405	12.550	13.382	14.751	8.712	9.221	103.737
 <b>E. ACQUISITION STRATEGY:</b>									
<p>FY03 RDT&amp;E funding provided for Laser Aim Scoring System will be placed on an existing contract to complete a two year effort. The program will develop an aircrew training system which provides real-time feedback to H-60 flight crews on the effectiveness in designating targets with Laser energy through a forward looking infrared. The system will track effectiveness and tactical proficiency. If system proves effective, units may be purchased through fleet training funds.</p>									

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT			PROJECT NUMBER AND NAME H9056 High Tech Training in Support of DoD Legacy Parts			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.963	1.368						0.000
RDT&E Articles Qty								
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> 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. The efforts will include appropriate market analysis/trade studies required to assess market supportability of the associated technology. 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>								

R-1 SHOPPING LIST - Item No. 88

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 39 of 47)

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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 H9056 High Tech Training in Support of DoD Legacy Parts																	
<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: 15%;">FY 02</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 style="text-align: center;">0.500</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.500	0.000	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.500	0.000	0.000	0.000															
RDT&E Articles Quantity																			
Hardware and software acquisition to support Laser scanning Process.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.225</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.225	0.000	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.225	0.000	0.000	0.000															
RDT&E Articles Quantity																			
Training development, documentation and delivery of complete training package.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.191</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.191	0.000	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.191	0.000	0.000	0.000															
RDT&E Articles Quantity																			
Identified weapons system parts for implementation.																			

R-1 SHOPPING LIST - Item No. 88

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# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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 H9056 High Tech Training in Support of DoD Legacy Parts																	
<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: 15%;">FY 02</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 style="text-align: center;">0.047</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.047	0.000	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.047	0.000	0.000	0.000															
RDT&E Articles Quantity																			
Upgraded Facility to accommodate new hardware requirements.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.000</td><td style="text-align: center;">0.890</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.890	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.000	0.890	0.000	0.000															
RDT&E Articles Quantity																			
In house support (both reimbursable and non reimbursable) of ongoing identification of appropriate weapons system parts for implementation																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</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 style="text-align: center;">0.000</td><td style="text-align: center;">0.478</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 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.478	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.000	0.478	0.000	0.000															
RDT&E Articles Quantity																			
Study/investigation of market analysis and supportability for digital data package development.																			

R-1 SHOPPING LIST - Item No. 88

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</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 H9056 High Tech Training in Support of DoD Legacy Parts		

**C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003	FY 2004	FY 2005
Funding:				
Previous President's Budget:	0.991	0.000	0.000	0.000
Current BES/President's Budget	0.963	1.368	0.000	0.000
Total Adjustments	-0.028	1.368	0.000	0.000
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.009		
Congressional rescissions	-0.002			
SBIR/STTR Transfer	-0.025			
Economic Assumptions	-0.003	-0.023		
Reprogrammings	0.002			
Other Navy/OSD adjustments				
Congressional increases		1.400		
Subtotal	-0.028	1.368	0.000	0.000

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 88

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</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 H9056 High Tech Training in Support of DoD Legacy Parts					
<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>										
<u>Line Item No. &amp; Name</u>	<u>FY 2002</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>
Not Applicable										
<b>E. ACQUISITION STRATEGY:</b>										
This is a non-ACAT program with no specific acquisition strategies.										

R-1 SHOPPING LIST - Item No. 88

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# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2003</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:												

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 44 of 47)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDTE, 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
Developmental Test & Evaluation												
Operational Test & Evaluation												
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support	Various	NAWCAD Pax River, MD		0.363	Various						0.363	
Government Engineering Support	WX	NAWCAD Pax River, MD	0.191								0.191	
Program Management Support	Various	NAWCAD Pax River, MD	0.047	0.527	Various						0.574	
Travel												
Transportation												
SBIR Assessment												
Subtotal Management			0.238	0.890		0.000		0.000		0.000	1.128	
Remarks:												
Total Cost			0.963	1.368		0.000		0.000		0.000	2.331	
Remarks:												

R-1 SHOPPING LIST - Item No. 88

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 45 of 47)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-5												0604212N ASW & OTHER HELO DEVELOPMENT												H9056 High Tech Training in Support of DoD Legacy Parts											
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			
Program Milestones																																			
Perform hardware/software installation, integration & acceptance																																			
Laser acquisition training program development																																			
Definition & modification of existing facility																																			
Trade Studies																																			
Test & Evaluation Milestones																																			
Production Milestones																																			
Deliveries																																			

R-1 SHOPPING LIST - Item No. 88

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

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 88

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 47 of 47)