CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMEN	CLATURE		
RESEARCH DEVELOPMENT TEST & EVALUATION	ON, NAVY /	BA-5			0604212N ASW &	OTHER HELO DE	VELOPMENT	
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:

(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

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

^{*} 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

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:		
							Februa	ry 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOME	NCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUAT	ION, NAVY /	BA-5			0604212N ASW & OTHER HELO DEVELOPMENT				
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	
H9057 H-60 FLIR Mount	2.524								
H9058 H-60 Helicopter Dynamic Component	2.503								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(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 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 in FY 02.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5	0604212N ASW & Other Helo	Development

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&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.

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.

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.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATUR	E
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5	0604212N ASW & Other He	elo Development
U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: (Cont'd)		
H9056-The non-availability of replacement parts is quickly becoming the number one reason for severly longer exist or are unable to respond to our requests for quotes. Sometimes organic depots locally man funding for FY02 establishes a NAVAIR program that will feature an advanced center for laser data acquicapability. This combined capability creates manufacturing ready technical data that can be offered to risignificantly reduced costs. This funding develops an organic NAVAIR-owned and managed capability (ready digital technical data packages (D-TDP), suitable for low-cost, high-precision manufacturing.	nufacture parts, one at a time, using manuausition and reverse engineering that levera multiple approved sources for rapid manufa	al processes and tooling. Congressional ages an existing solid model creation acturing of obsolete components, at
H9057 - H-60 FLIR Mount (Congressional Add).		
H9058 - H-60 Dynamic Component Life Cycle Engineering Evaluation to assess criteria and development	ent of component upgrades for Life Extens	sion (Congressional Add).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY								
RDT&E, N / BA-5	0604212N ASW &	OTHER HELO DE	VELOPMENT		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								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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&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 electronmagnetic vulnerability (EMV) assessment will be required for the affected and/or modified systems.

CLASSIFICATION:

RDT&E Articles Quantity

EXHIBIT R-2a, RDT&E Project Justifica	ition		DATE:
			February 2003
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NA	AME PROJECT NUMBER AND	NAME
T&E, N / BA-5	0604212N ASW & OTHER HELO DEVEL	LOPMENT H1109 CH/MH-53	
Accomplishments/Planned Program			
	FY 02 F	FY 03 FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000 1.	1.719 0.754	0.000
RDT&E Articles Quantity			
		T	
	FY 02 F	FY 03 FY 04	FY 05
	2.122		
Accomplishments/Effort/Subtotal Cost	0.162 0.	0.000 0.000	0.000
RDT&E Articles Quantity	0.162 0		
RDT&E Articles Quantity	mor Selection Test on aircraft.		

R-1 SHOPPING LIST - Item No. 88

Conduct Aircraft Cockpit Survivability and System Assessment. Model and test survivability design effectiveness.

CLASSIFICATION:

EXHIBIT IN Za, INDIGET	Project Justification				DATE: February 2003	
PROPRIATION/BUDGET AC	TIVITY	PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND N	IAME	
DT&E, N / BA-5		0604212N ASW & OTHER HELO DEVELOPMENT		H1109 CH/MH-53		
Accomplishments/Planned	Program (Cont.)					
		FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Sul	ototal Cost	0.000	0.577	0.710	0.477	
RDT&E Articles Quantity Design, model ,and test eff	ectiveness of ballistic v	rulnerability (armor) package.				
	ectiveness of ballistic v		EY 03	FY 04	FY 05	
Design, model ,and test eff		rulnerability (armor) package.	FY 03 0.000	FY 04 0.896	FY 05 1.712	
		FY 02				

	FY 02	FY 03	FY 04	FY 05
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.

CLASSIFICATION:

KUPKIA HUN/	BUDGET ACTIVITY	PROGRAM ELEMENT NU	MBER AND NAME	PROJECT NUMBER AND N	February 2003	
T&E, N /	BA-5	0604212N ASW & OTHER	HELO DEVELOPMENT	H1109 CH/MH-53		
				1		
ccomplishme	nts/Planned Program (Cont.)					
		FY 02	FY 03	FY 04	FY 05	
Accomplishme	nts/Effort/Subtotal Cost	0.000	0.000	0.289	0.234	
RDT&E Articles		5.555		5.25		
		•		•		
Conduct Busine	ess Case Analyses to determine	e impact of high Operation and sup	port (O&S) cost drivers and	address alternatives for obsole	escence issues.	
		FY 02	FY 03	FY 04	FY 05	
	nts/Effort/Subtotal Cost	0.000	0.150	0.000	0.000	
RDT&E Articles	s Quantity					
Select and test	antenna and other electronic co	omponents.				
Select and test	antenna and other electronic co	omponents.				
Select and test	antenna and other electronic co	omponents.				
Select and test	antenna and other electronic co	omponents.				
Select and test	antenna and other electronic of	omponents.				
Select and test	antenna and other electronic of	omponents.				
Select and test	antenna and other electronic of	omponents.				
Select and test	antenna and other electronic of	omponents.				
Select and test	antenna and other electronic of	omponents.				
Select and test	antenna and other electronic of		57/00		57.05	
		FY 02	FY 03	FY 04	FY 05	
Accomplishme	nts/Effort/Subtotal Cost		FY 03 0.000	FY 04 0.150	FY 05 0.000	
	nts/Effort/Subtotal Cost	FY 02				
Accomplishme	nts/Effort/Subtotal Cost	FY 02				
Accomplishme RDT&E Articles	nts/Effort/Subtotal Cost s Quantity	FY 02 0.000	0.000			
Accomplishme RDT&E Articles	nts/Effort/Subtotal Cost s Quantity	FY 02	0.000			
Accomplishme RDT&E Articles	nts/Effort/Subtotal Cost s Quantity	FY 02 0.000	0.000			
Accomplishme RDT&E Articles	nts/Effort/Subtotal Cost s Quantity	FY 02 0.000	0.000			
Accomplishme RDT&E Articles	nts/Effort/Subtotal Cost s Quantity	FY 02 0.000	0.000			
Accomplishme RDT&E Articles	nts/Effort/Subtotal Cost s Quantity	FY 02 0.000	0.000			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBER	R AND NAME	
RDT&E, N / BA-5	0604212N ASW & OTHER HELC	DEVELOPME	NT	H1109 CH/MH-53		
C. PROGRAM CHANGE SUMMARY:						
Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
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 reductio	ns	-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		
Schedule:						
Not Applicable						
Technical:						
Not Applicable						
Νοι Αρριιοανίο						
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CLASSIFICATION:

EXHIBIT R-2a, RDT&E P	roject Justification								DATE:			
										Februa	ary 2003	
APPROPRIATION/BUDGET A			PROGRAM E	LEMENT NUM	IBER AND NAM	ИΕ	PROJECT NU	IMBER AND N	IAME			
RDT&E, N /	BA-5		0604212N AS	W & OTHER H	HELO DEVELO	PMENT	H1109 CH/MF	l-53				
D. OTHER PROGRAM	FUNDING SUMMARY:									T .	Total	
Line Item No. & Name	<u>2</u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>	
Not Applicable												
E. ACQUISITION STRAT	EGY:											
This is a non-ACAT	program with no specific	acquisition stra	ategies.									

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	ge 1)									February 200)3	
APPROPRIATION/BUDGET ACTIV		PROGRAM E	LEMENT			PROJECT NU	JMBER AND I	NAME				
RDT&E, N / BA-5		0604212N AS	SW & OTHER I	HELO DEVELO		H1109 CH/MH	l-53					
Cost Categories		Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s Cost	FY 03 Cost	Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date		Total Cost	Target Value of Contract
Deinson Handware Development	& Type	Location		1		Cost	Date	Cost	Date	Complete		1
Primary Hardware Development	Various	Raytheon	0.702		Various	0.222	Various			Continuina	1.097	
Ancillary Hardware Development	Various Various	Various NAWCAD Pax River, MD	0.883	0.208	Various	0.233	Various Various			Continuing Continuing	Continuing Continuing	
Aircraft Integration Ship Integration	various	NAWCAD Pax River, MD				0.311	various			Continuing	0.000	
Ship Suitability											0.000	
Systems Engineering	Various	NAWCAD Pax River, MD						0.572	Various	Continuing	Continuing	
, , , , , , , , , , , , , , , , , , , ,	various	NAWCAD Pax River, MD						0.572	various	Continuing	- U	
Training Development											0.000	
Licenses											0.000	+
Tooling												+
GFE A seed Free											0.000	
Award Fees Subtotal Product Development			1.585	0.603		0.544		0.572		Continuing	0.000 Continuing	
Cabiotai i Todact Developinent	-1		1.500	0.000		0.544	1	0.572		Continuing	Continuing	
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:												

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	ge 2)									February 20	03	
APPROPRIATION/BUDGÉT ACTIV	/ITY	PROGRAM E	LEMENT			PROJECT N	UMBER AND	NAME				
RDT&E, N / BA-5		0604212N AS	SW & OTHER	HELO DEVELO	OPMENT	H1109 CH/MI	H-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	1.0			0.219		0.577	Various	Continuing		
Operational Test & Evaluation											1	1
Live Fire Test & Evaluation	Various	NAWCWD China Lake, CA						0.477	' Various	Continuino	Continuing	1
Test Assets		,									Ĭ	1
Tooling												
GFE												
Award Fees												
Subtotal T&E			1.0	54 0.55	0	0.219	9	1.054	ı	Continuing	Continuing	1
		,					_	<u> </u>				
Contractor Engineering Support												
Government Engineering Support	Various	NAWCAD Pax River, MD		0.18	0 Various					Continuing	,	,
Program Management Support	Various	Various				0.380	0 Various	0.400) Various	Continuing	Continuing	1
Travel	WX	NAWCAD Pax River, MD	0.5	12 0.10	5 11/02	0.127	7 11/03	0.138	11/04	Continuing	Continuing	1
Transportation												
SBIR Assessment												
Subtotal Management			0.5	12 0.28	5	0.507	7	0.538	3	Continuing	Continuing	j
Remarks:												
Total Cost			4.0	20 2.84	6	2.799	9	2.423	3	Continuing	Continuing]
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule F																									DATE		F	ebrua	ry 20	03		
APPROPRIATION/BUDGET RDT&E, N /	ACTIVI BA-5													R AND			Γ				PROJ H1109		IUMBE 1H-53	R AN	D NAM	ΊE						
Fiscal Year		20	02			20	03			20	04			20	05			200	06			20	07			20	08			200	09	
	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																																
Engineering Milestones																																
External Cargo Handling System Design																																
Aircraft Survivability Assmt			1																													
Armor Threat Assessment & Selection Test																																
Cockpit & A/C System Assessment																																
Other A/C Cockpit Integration Cadidates																																
Design Armor Package																																
Cockpit Upgrade Architecture Selection																																
Baseline Vulnerability Study																																
Hydraulic & Electric Actuator Assessment Fuel Sponson Ballistic																																
Vulnerability Assessment																																<u> </u>
Obsolesence Issues/Studies																								L								
Survivability Analysis																								1				1				
Legacy P3I Efforts																																
T&E Milestones	Armor	Selec	tion Te	est	Cockp	kpit De	esign Te sign Te ics SW	est Int.	Tech I Contra	Data S	tudy ard		Co Liv	mplete e-Fire	Initial Vulner	 Phase ability	- Test															

^{*} Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA		
RDT&BA-5	0604212N AS	W & OTHER H	ELO DEVELOI	PMENT	H1109 CH/MF	I-53		
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Aircraft Survivability Assessment	1Q-4Q							
Armor Threat Assessment & Selection Test	1Q-4Q							
Cockpit & A/C System Assessment	1Q-4Q							
Design Armor Package		1Q-4Q						
Cockpit Upgrade Architecture Selection		1Q-4Q	1Q-3Q					
Tech Data Study Contract Award			2Q					
Baseline Vulnerability Study		2Q-4Q	1Q-4Q					
Hydraulic & Electric Actuator Assessment			1Q-4Q	1Q-4Q				
Fuel Sponson Ballistic Vulnerability Assessment				1Q-4Q				
Initial Phase Live Fire Vulnerability Test				4Q				
Obsolesence Issues/Studies					1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Survivability Analysis					1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Legacy P3I Efforts					1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:		
							Februa	ry 2003	
APPROPRIATION/BUDGET ACTIVITY									
RDT&E, N / BA-5	0604212N ASW & Other Helo Development 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									

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.

R-1 SHOPPING LIST - Item No.

^{*} 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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	1		DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E, N / BA-5	0604212N ASW & Other Helo Development	H2415 MH-60S Developmen	nt
		<u> </u>	

B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	13.095	10.765	27.596	36.287
RDT&E Articles Quantity				

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&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 inititatives: Improved organizational level oil analysis technology, replacement of flight control self containing bolts (FY04), and weight reduction (FY04-FY05).

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	21.369	11.946	31.517	45.424
RDT&E Articles Quantity				

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.).

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.947			
RDT&E Articles Quantity				

(Congressional Plus-up) Development of Carriage, Stream, Tow, & 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.

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

	tion			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUME	BER AND NAME	PROJECT NUMBER AND I	NAME	
RDT&E, N / BA-5	0604216N Multi-Mission Heli	copter Upgrade Developme	H9213 Adv Cable Design		
B. Accomplishments/Planned Program			-		
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	1.173	0.000	0.000	
RDT&E Articles Quantity					

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

HIBIT R-2a, RDT&E Project Justification					Feb	ruary 2003			
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBER AN		y			
T&E, N / BA-5	0604212N ASW & Other Helo Dev	elopment		H2415 MH-60S Develop	evelopment				
C. PROGRAM CHANGE SUMMARY:									
Funding:	FY 2002	FY 2003	FY 2004	FY 2005					
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 Assumtions	-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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604212N ASW & Other Helo Development	H2415 MH-60S Development

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>
017900 APN-1 MH-60S AMCM (Included in numbers above)	251.484 10.202	352.738 27.155	431.508 61.321	401.767 56.180	592.817 36.420	695.151 61.458	685.026 66.819	895.054 92.322	349.242 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

CLASSIFICATION:

								DATE:							
Exhibit R-3 Cost Analysis (page	e 1)									February 200	3				
APPROPRIATION/BUDGET ACTIVIT		PROGRAM EL	EMENT			PROJECT NUMBER AND NAME H2415 MH-60S Development FY 04									
RDT&E, N / BA-5		0604212N AS\	N & Other Hel	o Development		H2415 MH-60	S Developme	nt							
Cost Categories			Total		FY 03										
	Method		PY s	FY 03	Award										
	& Type		Cost	Cost	Date			+		· ·					
Primary Hardware Development, Airfi			35.653				various		various						
Primary Hardware Development, Avid		_	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				
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:															

CLASSIFICATION:

								DATE:										
Exhibit R-3 Cost Analysis (pag	e 2)									February 200)3							
APPROPRIATION/BUDGET ACTIVI		PROGRAM EL	EMENT			PROJECT NU	MBER AND I	NAME	February 2003 ME FY 05 Award Cost to Total Target Value									
RDT&E, N / BA-5		0604212N AS	N & Other Hel	o Developmen	t	H2415 MH-60	S Developme	nt										
Cost Categories	Contract		Total		FY 03		FY 04											
	Method	,	PY s	FY 03	Award		Award	FY 05										
	& Type		Cost	Cost	Date		Date	Cost		· ·		of Contract						
Developmental Test & Evaluation	WX	NRWATS, NAWCAD & NSW	7.871	3.770		3.311	11/03	4.856	various									
Operational Test & Evaluation	WX	NAWCAD & NRWATS	0.814	0.303	+					1.000								
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		5.71		5.144	29.237							
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		8.08		Continuing	Continuing							
Remarks:																		
Total Cost			137.946	23.884		59.113		81.71		Continuing	Continuing							
Remarks:																		

CLASSIFICATION:

EXHIBIT R4, Schedule AMCM	Profile																								DATE	:	Fe	ebrua	ary 20)03		
APPROPRIATION/BUDGET														R AND											D NAM	ΙE						
RDT&E, N /	BA-	5							06042	12N A	SW ar	nd Oth	er Held	Deve	lopmer	nt					H241	5 MH-6	0S De	velop	ment T				l			
Fiscal Year		20	02	1		20	03			20	04			20	05			20	06			200)7	П		20	08	П		200)9	
	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					٨							В	IPR III lock 2#	`		IOC Block	2A				PR IV lock 2I	3								Blc	FOC ock 2B
\	WSIT AWA	\RD				SIT AW ock 2B	/ARD						I/_\ SIT AWA ock 2B	ARD																		
MH-60S AMCM Aircraft Development		SDR		PDR	CDR				FCA		PCA																					
AMCM Mission Kits CSTRS & Common Console							FIT Gro	 und T€	esting																							
Test & Evaluation Milestones						_																										
MH-60S AMCM Block 2A					СТ			СТ	\Box	OT-IIC		OT-II0																				
MH-60S AMCM Block 2B											CT				DT-IID			OT-IID														
									Ь					ļ		_	Ì	01 110	-		J									\sqcup		
Production Milestones AMCM Mission Kits			Cor	tract A	ward								Co	ntract .	Award							ract Av										
Initial Production FRP														Block	2A								>									
Deliveries CSTRS								2		3		3	1				<u>6</u>				<u>6</u>				<u>6</u>				<u>6</u>			
AFCS						\triangle																									ı	
Common Console					Te	st Articl	e 				<u> </u>	3		3			<u>6</u>				<u>6</u>				<u>6</u>				<u>6</u>			
																														ш		

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.

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						ı	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND N	AME	
RDT&BA-5	0604212N AS	W and Other H	elo Developme	ent	H2415 MH-60	S Developmen	t	
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					1			4Q
Full Rate Production (FRP) Decision 2B						2Q		
Full Rate Production Delivery							1Q	1Q

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R4, Schedule P	rofile																								DATE	:						
Link 16 APPROPRIATION/BUDGET A	CTIVIT	-V							DBOO	DAM	ELEM	ENIT N	IUMBE	D AND	NIAMI						DDO I	ECT N	II IMADI	ER AN	D NAM	ıE	Fe	ebrua	ry 20	03		
RDT&E, N /	BA-5								06042															evelopr		IE						
RDTGE, IV 7									00042	. 1211 /	OVV ai	ia Otin	er rieic	Deve	юртнет	ıı					112410) IVII I-C	000 De	evelopi	TIGHT	2008 2009 2 3 4 1 2 3 4						
Fiscal Year		20	02			20	03	ı		20	04	ı		200	05			200	06	1		20	07	1		20	08			200)9	1
	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					MS III	(MH-6	0S)	,								,	\					/	\ \	~								
(Block 3B)								IPF	┌─ [\] २ 1 							L IPI	R 2						R 3	10)C /							
MH-60S Block 3B Development									Desig	ın & In	tegrati	on																				
Design and Build												E	Build																			
MH-60S Block 3B Development Milestones									Z SF	RR SDI	A A	CDR	4											FC,	Ā	PC	_ CA					
Aircraft Block 3B Mod Delivery															$\triangle \angle$																	
Software										ss	FR SF	RR I	R	elease	x.0	/ Relea	se x.1	Relea	ase x.2	2												
Test & Evaluation Milestones																Z	\TRI	R		\triangle	OTRF	2										
Contractor Test															СТ																	
Development Test																	DT IIE			Regre	ssion T	est										
Operational Test																						T IIE										
Reports																						R	eports	; ; 								

 $^{^{\}star}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						į i	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND N	AME	
RDT&BA-5	0604212N AS	W and Other H	elo Developme	ent	H2415 MH-60	S Developmen	t	
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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEM	ENT NUMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, N / BA-5	0604212N ASW &	OTHER HELO DE	VELOPMENT		H3059 CH-53E SL	EP		
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								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E, N /BA-5	0604212N ASW & OTHER HELO DEVELOPMENT	H3059 CH-53E SLEP	

B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.200	0.275	0.290
RDT&E Articles Quantity				

Navy field activity systems engineering support of the requirements generation process, including identification of candidate survivability enhancements and improvements for CH-53E modernization.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.883	2.107	12.575
RDT&E Articles Quantity				

NAVAIR Integrated Product Team and Navy field activity systems engineering and logistics efforts to prepare the Acquisition Strategy, examine equipment and avionics for the modernized CH-53E, develop acquisition milestone documentation and prepare Request for Proposal (RFP) documentation for the System Development and Demonstration (SDD) contract.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	1.999	1.834	2.290	0.000
RDT&E Articles Quantity				

Perform trade studies to develop a System Requirements Analysis, refine the baseline configuration and perform risk reduction efforts including modeling and simulation.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E, N / BA-5	0604212N ASW & OTHER HELO DEVELOPMENT	H3059 CH-53E SLEP	
	·	-	

B. Accomplishments/Planned Program

	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.

	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.

	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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBE	R AND NAME	
RDT&E, N / BA-5	0604212N ASW & OTHER HELO	DEVELOPME	NT	H3059 CH-53E SL	EP	
C. PROGRAM CHANGE SUMMARY:						
Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
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	-0.049	-0.116	-2.300		
Other Navy/OSD Adjustments	1.000		-0.005	-0.317		
Congressional increases						
Subtotal	1.999	-0.066	-0.123	-2.697		
Schedule:						
Not Applicable						
Technical:						
Not Applicable						
T						
	D 1 SHODD	INCLICT I	N- 00	1		

CLASSIFICATION:

HIBIT R-2a, RDT&	E Project Justification								DATE:	Februa	ary 2003	
PROPRIATION/BUDGE	T ACTIVITY		PROGRAM EI	EMENT NUM	BER AND NAM	ИΕ	PROJECT NU	MBER AND N	AME			
T&E, N /	BA-5		0604212N AS	W & OTHER H	IELO DEVELO	PMENT	H3059 CH-53E	SLEP				
D. OTHER PROGR	AM FUNDING SUMMARY:											
										То	Total	
Line Item No. & N	<u>lame</u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost	
P-1 Procureme	nt Line: BLI 015800/CH-53E	SLEP						192.4	267.2	TBD	TBD	
E. ACQUISITION ST	RATEGY:											
	The Operational Requiremental Thing in FY03/04.	nts Document (ORD) and an A	nalysis of Alter	natives (AOA)	are under dev	velopment; will b	e used by Mar	ine Corps lead	ership to develop	o an Acquisition	

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (pa	ige 1)										February 20	03	
APPROPRIATION/BUDGET ACTI	VITY	F	PROGRAM ELEM	MENT			PROJECT N	UMBER AND	NAME				
RDT&E, N / BA-5		0	0604212N ASW 8	OTHER H	HELO DEVELO	OPMENT	H3059 CH-5	3E SLEP					
Cost Categories	Contract Method & Type	Performing Activity & Location	Tot PY Co:	s	FY 03 Cost	FY 03 Award	FY 04 Cost	FY 04 Award	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Drive and Handriana Davidson and	TBD			St	Cost	Date	Cost	Date			731.399	ł	
Primary Hardware Development	IBD	Contractor TBD	'		+		+		96.27	3 12/04	731.398	827.672	827.672
Ancillary Hardware Development			+		+		+						
Training Development			+		+		+						
Aircraft Integration			+		+		+						
Ship Suitability	TDD	Contropte a TDD			0.500	00/00	4.05	0 40/00				0.467	0.467
Systems Engineering	TBD	Contractor TBD	'		0.508	3 03/03	1.65	9 12/03				2.167	2.167
Licenses Tooling													
GFE													
Award Fees													
Subtotal Product Development				0.000	0.50		1.65	0	96.27	2	731.399	829.839	
Development Support													
Software Development											1.650	1.650	
Integrated Logistics Support	Various	NAWCAD Pax Ri	ver, MD				0.66	5 11/03	1.12	3 11/04	11.364		
Configuration Management											0.900		
Technical Data													
Studies & Analyses	CPFF	Booz Allen Hamil	ton, MD	1.999	9 0.83	5 03/03	0.73	8 12/03	0.33	7 12/04		3.909	3.909
GFE													
Award Fees													
Subtotal Support				1.999	0.83	5	1.40	3	1.46	D	13.914	19.611	
Remarks:													

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	ge 2)									February 200	3	
APPROPRIATION/BUDGET ACTIV		PROGRAM E	LEMENT			PROJECT NU	JMBER AND N	NAME				
RDT&E, N / BA-5			SW & OTHER F			H3059 CH-53						
Cost Categories	Contract	Performing	Total		FY 03		FY 04		FY 05			
	Method & Type	Activity & Location	PY s Cost		Award Date	FY 04 Cost	Award Date		Award Date		Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	NAWCAD Pax River, MD	Cost	Cost	Date	Cost	Date	0.175	11/04	23.246		or Contract
Operational Test & Evaluation	Various	OPTEVFOR (HMX)						0.175	11/04	12.764	12.939	
Live Fire Test & Evaluation	Various	NAWCWD China Lake, CA						0.175	11/04	1.453	1.453	
	various	NAWCWD China Lake, CA								1.453	1.453	
Test Assets						+						
Tooling						+						
GFE												
Award Fees												
Subtotal T&E			0.000	0.000		0.000	<u> </u>	0.350		37.463	37.813	
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:												

CLASSIFICATION:

EXHIBIT R4, Schedule P	rofile																								DATE	:	Fe	brua	rv 20	03		
APPROPRIATION/BUDGET A	CTIVI	ΓΥ							PROC	SRAM	ELEM	ENT N	UMBE	R AND	NAM	=					PRO	ECT N	IUMBE	R AN	D NAM	E			., _0			
RDT&E, N /	BA-5	5							06042	212N A	SW &	OTHE	R HEL	O DE	/ELOF	MENT	-				H305	9 CH-5	3E SL	EP	1							
Fiscal Year		20	02			20	03			20	04			20	05			20	06	•		20	07			20	08			200	09	
	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												-	MS _	\ [
						1		Acqu	lisition	Docur	nentati	on/Co	ntract	Prepara	ation																	
							Tra	L de Stu	l dies &	Analys	sis															IV	sc ∧					
										ĺ																Z	\vdash					
Prototype Phase																																
Engineering Milestones													TE /	МР	PDR		CDR															
Test & Evaluation Milestones Development Test (FY09-FY10)																									D	evelor	omental	Test				
																										0.0.0						
Operational Test (FY10-FY11)																									ОТ	-IIA						OT-IIB
Production Milestones																											LRIP ∧					
LRIP FY08																											\triangle					
FRP (MS C) - FY10																																
Deliveries (FY12 - 20)																																

 $^{^{\}star}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:				
							February 20	03		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU					
RDT&BA-5	0604212N AS	W & OTHER H	ELO DEVELO	PMENT	H3059 CH-53E SLEP					
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		
Prototype Phase				2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q		
Milestone B				1Q						
Contract Preparation		1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q					
Trade Studies & Analysis	4Q	1Q-4Q	1Q-4Q	1Q-2Q						
Preliminary Design Review (PDR)				3Q						
Critical Design Review (CDR)					1Q					
Developmental Testing						2Q-4Q	1Q-4Q	1Q-3Q		
Test and Evaluation Master Plan (TEMP)				1Q						
Milestone C (MS C)							3Q			
Operational Testing (OT-IIA)						4Q	1Q-3Q			
Operational Testing (OT-IIB)								3Q-4Q		
Low-Rate Initial Production							3Q			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMI	ENT NUMBER AND	NAME		PROJECT NUMBE	ER AND NAME		
RDT&E, N / BA-5	0604212N ASW ar	nd Other Helo Deve	lopment		H9055 SH-60 Lase	er Aim Scoring Syst	tem (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 Aircrraft 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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	n			DATE: February 2003	
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NU	JMBER AND NAME	PROJECT NUMBER AND		
DT&E, N / BA5	0604212N ASW and Othe		H9055 SH-60 Laser Aim So		
Accomplishments/Planned Program	'		•		
	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 rec	quired for adaptation of an existi	ing LASS base station, tar	get 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					
Accomplishments/Effort/Subtotal Cost	FY 02	FY 03	FY 04	FY 05	
RDT&E Articles Quantity					

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
·						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBER	R AND NAME	
RDT&E, N / BA5	0604212N ASW and Other Helo [Development		H9055 SH-60 Laser	Aim Scoring System (L	ASS)
C. PROGRAM CHANGE SUMMARY:	•					
Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
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	3	-0.006				
Congressional rescissions	-0.002					
SBIR/STTR Transfer	-0.025					
Economic Assumtions	-0.003	-0.017				
Reprogrammings	0.002					
Congressional increases		1.000				
Subtotal	-0.028	0.977	0.000	0.000		
Schedule:						
Not Applicable						
Technical:						
Not Applicable						

CLASSIFICATION:

., ,									Februa	ry 2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EI	LEMENT NUM	BER AND NAN	ΛE	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA5		0604212N AS	W and Other H	lelo Developme	ent	H9055 SH-60	Laser Aim Sco	ring System (L	ASS)		
D. OTHER PROGRAM FUNDING SUMMARY:									То	Total	
Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	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	

E. ACQUISITION STRATEGY:

EXHIBIT R-2a, RDT&E Project Justification

FY03 RDT&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.

R-1 SHOPPING LIST - Item No. 88

DATE:

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMI	ENT NUMBER AND	O NAME		PROJECT NUMBE	ER AND NAME		
RDT&E, N / BA-5	0604212N ASW &	OTHER HELO DE	VELOPMENT		H9056 High Tech	Training in Support	of DoD Legacy Par	rts
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								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The non-availability of replacement parts is quickly becoming the number one reason for severly reduced readiness of our weapon systems. Many of the sub-tier OEM supppliers 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.

CLASSIFICATION:

XHIBIT R-2a, RDT&E Project Justificat	ion			DATE: February 2003	
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	BER AND NAME	PROJECT NUMBER AND N		
T&E, N / BA-5	0604212N ASW & OTHER H		H9056 High Tech Training ir		
				- с арр от ст. – с – с – с дасеј т в по	
Accomplishments/Planned Program					
	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 L	aser scanning Process				
riaramare and contrare dequicition to capport	14001 0041111119 1 100000.				
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	FY 02 0.225	FY 03 0.000	FY 04 0.000	FY 05 0.000	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity					
RDT&E Articles Quantity	0.225				
	0.225				
RDT&E Articles Quantity	0.225				
RDT&E Articles Quantity	0.225				
RDT&E Articles Quantity	0.225				
RDT&E Articles Quantity	0.225				
RDT&E Articles Quantity Training development, documentation and deliverable a	0.225				
RDT&E Articles Quantity	very of complete training package.	0.000	0.000	0.000	

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justificat	ion	·		DATE:	·				
•				February 2003					
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUME	BER AND NAME	PROJECT NUMBER AND N	AME					
DT&E, N / BA-5	0604212N ASW & OTHER HI	ELO DEVELOPMENT	H9056 High Tech Training in						
Accomplishments/Planned Program									
	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	0.000	0.890	0.000	0.000					
RDT&E Articles Quantity									
In house support (both reimbursable and non r	ermbursable) of ongoing identification	FY 03	s system parts for implementation	FY 05					
Accomplishments/Effort/Subtotal Cost									
RDT&E Articles Quantity	0.000	0.478	0.000	0.000					
	1		ı						
Study/investigation of market analysis and sup	oportability for digital data package de	evelopment.							

R-1 SHOPPING LIST - Item No. 88

Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, page 41 of 47)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBI	ER AND NAME	
RDT&E, N / BA-5	0604212N ASW & OTHER HELO	DEVELOPME	NT	H9056 High Tech	Training in Support of D	oD Legacy Parts
C. PROGRAM CHANGE SUMMARY:						
Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
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 tridistributed reductions Congressional rescissions	-0.002	-0.009				
SBIR/STTR Transfer	-0.002					
Economic Assumtions	-0.023	-0.023				
Reprogrammings	0.002	-0.023				
Other Navy/OSD adjustments	0.002					
Congressional increases		1.400				
Subtotal	-0.028	1.368	0.000	0.000		
Schedule:						
Not Applicable						
Technical:						
Not Applicable						
	D_1 QHODD	INCLICT I	N- 00			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E P	roject Justification								DATE:		
										Februa	ry 2003
APPROPRIATION/BUDGET A					BER AND NAI		PROJECT NU				
RDT&E, N /	BA-5		0604212N AS	W & OTHER H	IELO DEVELO	PMENT	H9056 High T	ech Training in	Support of Do	D Legacy Parts	
D. OTHER PROGRAM	FUNDING SUMMARY:									-	Tatal
Line Item No. & Name	<u> </u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>
Not Applicable											
E. ACQUISITION STRAT	EGY:										
This is a non-ACA	program with no specific	acquisition stra	ategies.								
	program man no opocine	aoquiomon one	210g.001								

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (pa	ge 1)										February 200)3	
APPROPRIATION/BUDGET ACTIV	VITY		PROGRAM E	LEMENT			PROJECT NU	JMBER AND N	NAME				
RDT&E, N / BA-5			0604212N A	SW & OTHER H					n Support of Do		ts		
Cost Categories	Contract	Performing		Total		FY 03		FY 04	E) / 05	FY 05			
	Method & Type	Activity & Location		PY s Cost		Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WX	NAWCAD, P	av River MD	0.250		Date	Cost	Date	COST	Date	Complete	0.250	
Ancillary Hardware Development	VVX	TWO/LD, T	ax raver, wib	0.250	1							0.200	'
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	D	0.000	0.250)
Development Support													
Software Development	WX	NAWCAD, Pa	x River, MD	0.250)							0.250	
Integrated Logistics Support	WX	NAWCAD, Pa	x River, MD	0.225	5							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 SHOP	PPING LIST -	Item No	88						

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysi	s (page 2)									February 200)3	
APPROPRIATION/BUDGET	ACTIVITY	P	ROGRAM ELEMENT			PROJECT N	UMBER AND	NAME		,	· ·	
RDT&E, N / BA	-5	00	604212N ASW & OTHER H	ELO DEVELO	PMENT	H9056 High	Tech Training	in Support of De	D Legacy Pai	rts		
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s 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 & Evalua												
Operational Test & Evaluation	ı											
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.000	0.000		0.00	0	0.00	0	0.000	0.000	
		T		ı	.	1	ı	ı	Т	T	T	
Contractor Engineering Support	Various	NAWCAD Pax Riv	ver, MD	0.363	Various						0.363	
Government Engineering Support	rt WX	NAWCAD Pax Riv	ver, MD 0.191								0.191	
Program Management Support	Various	NAWCAD Pax Riv	ver, MD 0.047	0.527	Various						0.574	
Travel												
Transportation												
SBIR Assessment												
Subtotal Management			0.238	0.890		0.00	0	0.00	0	0.000	1.128	
Remarks:												
Total Cost			0.963	1.368		0.00	0	0.00	0	0.000	2.331	
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule I																									DATE		F	ebrua	ry 20	03		
APPROPRIATION/BUDGET RDT&E, N /	ACTIVI BA-5													R AND							PROJ H9056						of DoD	Legad	y Part	S		
Fiscal Year		20	002			20	03		2004 2005 2006				20	07			20	08			200)9										
	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																																

 $^{^{\}ast}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PROJECT NU	MBER AND N	AME	
RDT&BA-5	0604212N AS	W & OTHER H	ELO DEVELO	PMENT	H9056 High T	ech Training in	Support of Dol	D Legacy Parts
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Perform hardware/software installation, integration & acceptance	1Q-4Q							
Laser acquisition training program development	1Q-4Q							
Definition & modification of existing facility	1Q-4Q							
Trade Studies		2Q-4Q						