

## EXHIBIT R-2, RDT&amp;E Budget Item Justification

DATE:

February 2006

## APPROPRIATION/BUDGET ACTIVITY

RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /

BA 5

## R-1 ITEM NOMENCLATURE

0605212N, CH-53X RDTE

COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Total PE Cost	99.314*	267.860	362.672	463.634	621.656	605.621	554.456	
H3059 CH-53X USMC HEAVY LIFT REPLACEMENT	99.314*	267.860	362.672	463.634	621.656	605.621	554.456	

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

The CH-53 is the only marinized heavy-lift helicopter in the world, and the CH-53E is the Marine Corps only heavy-lift helicopter. An improved CH-53E is needed to support the Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53E mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from a sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. The CH-53X, an upgraded variant of the CH-53E, will provide improvements in range and payload performance, cargo handling and turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53X program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC), in Fiscal Year (FY) 2015. The CH-53X will replace the CH-53E, with Full Operational Capability (FOC) achieved by FY 2021.

FY05 RDT&E efforts focused on trade studies for the CH-53X. FY06-FY07 RDT&E efforts focus on CH-53X System Development and Demonstration (SDD) activities that accomplish a successful FY07 Preliminary Design Review and promote a successful FY09 Critical Design Review.

\* FY 2005 Project Costs in the amount of \$99.033 are from Program Element 0604212N.

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EXHIBIT R-2a, RDT&E Project Justification								DATE:
								February 2006
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME	
RDT&E, N /		0605212N, CH-53X RDTE					H3059, CH-53X USMC HEAVY LIFT REPLACEMENT	
COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
H3059 CH-53X USMC HEAVY LIFT REPLACEMENT	99.314*	267.860	362.672	463.634	621.656	605.621	554.456	
RDT&E Articles Qty					1	2	2	
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APPROPRIATION/BUDGET ACTIVITY

RDT&amp;E, N /

BA 5

PROGRAM ELEMENT NUMBER AND NAME

0605212N, CH-53X RDTE

PROJECT NUMBER AND NAME

H3059, CH-53X USMC HEAVY LIFT REPLACEMENT

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

	FY 2005	FY 2006	FY 2007	
<b>SYSTEMS ENGINEERING &amp; PROJECT MANAGEMENT</b>	15.843	28.083	30.685	
RDT&E Articles Qty				

In-house, field activities, and contractors support of Integrated Product Teams (IPTs) to allow for preparation of acquisition strategy, examination of equipment and avionics for the CH-53X, and development of acquisition documentation. Efforts include, but are not limited to, government development support, engineering support, program management support, systems engineering support, and travel for the CH-53X program.

	FY 2005	FY 2006	FY 2007	
<b>INTEGRATED LOGISTICS SUPPORT</b>	3.604	10.944	9.647	
RDT&E Articles Qty				

In-house, field activities, and contractors support of Integrated Logistics Support, including but not limited to planning, preparation, and management of data, support equipment, Government Furnished Equipment (GFE), and training elements of CH-53X development.

	FY 2005	FY 2006	FY 2007	
<b>AIR VEHICLE DEVELOPMENT</b>	79.868	228.833	322.340	
RDT&E Articles Qty				

Trade studies, risk reduction, design, development, and integration System Development and Demonstration (SDD) activities for the CH-53X air vehicle and its associated subsystems and components, and CH-53X ancillary systems.

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R-1 Shopping List Item No 138

 Exhibit R-2a, RDTE Project Justification  
 (Exhibit R-2a, Page 3 of 8)

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<b>RDT&amp;E, N /</b>	<b>BA 5</b>	<b>0605212N, CH-53X RDTE</b>																																																
<p>C. PROGRAM CHANGE SUMMARY</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Funding:</th> <th style="text-align: right;">FY 2005</th> <th style="text-align: right;">FY 2006</th> <th style="text-align: right;">FY 2007</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">102.326</td> <td style="text-align: right;">271.941</td> <td style="text-align: right;">300.069</td> </tr> <tr> <td>Current BES / President's Budget:</td> <td style="text-align: right;">99.314</td> <td style="text-align: right;">267.860</td> <td style="text-align: right;">362.672</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right;">-3.012</td> <td style="text-align: right;">-4.081</td> <td style="text-align: right;">62.603</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional Reductions</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional Rescissions</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional Undistributed Reductions</td> <td style="text-align: right;">-2.325</td> <td style="text-align: right;">-2.843</td> <td></td> </tr> <tr> <td>    Congressional Increases</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td></td> <td style="text-align: right;">-1.238</td> <td style="text-align: right;">1.703</td> </tr> <tr> <td>    Miscellaneous Adjustments</td> <td style="text-align: right;">-0.687</td> <td></td> <td style="text-align: right;">60.900</td> </tr> <tr> <td style="text-align: right;">Subtotal</td> <td style="text-align: right;">-3.012</td> <td style="text-align: right;">-4.081</td> <td style="text-align: right;">62.603</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule: Schedule has matured as CH-53X Engineering Trade Studies have been completed and requirements have been defined. MS B was approved 1QFY06, MS C has moved to FY13 from FY12, with corresponding adjustments to key events between MS B and MS C.</p> <p style="margin-top: 40px;">Technical: Not Applicable</p>			Funding:	FY 2005	FY 2006	FY 2007	Previous President's Budget:	102.326	271.941	300.069	Current BES / President's Budget:	99.314	267.860	362.672	Total Adjustments	-3.012	-4.081	62.603	Summary of Adjustments				Congressional Reductions				Congressional Rescissions				Congressional Undistributed Reductions	-2.325	-2.843		Congressional Increases				Economic Assumptions		-1.238	1.703	Miscellaneous Adjustments	-0.687		60.900	Subtotal	-3.012	-4.081	62.603
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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2006																					
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N /</b>			PROGRAM ELEMENT NUMBER AND NAME <b>BA 5 0605212N, CH-53X RDTE</b>			PROJECT NUMBER AND NAME H3059, CH-53X USMC HEAVY LIFT REPLACEMENT																							
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Exhibit R-3 Cost Analysis (page 1)									DATE:			
February 2006												
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E, N / BA 5		0605212N, CH-53X RDTE				H3059, CH-53X USMC HEAVY LIFT REPLACEMENT						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
Primary Hdw Development	C-FFP	SIKORSKY AIRCRAFT CORPORATION, STR		79.868	12/04	228.833	1/06	322.340	TBD	2,731.694	3,362.735	TBD
Systems Engineering	C-FFP	SIKORSKY AIRCRAFT CORPORATION, STR	2.085								2.085	2.085
SUBTOTAL PRODUCT DEVELOPMEN			2.085	79.868		228.833		322.340		2,731.694	3,364.820	
Remarks:												
SUPPORT												
Integrated Logistics Sup	WX	NAWCAD, PATUXENT RIVER MD	.665	1.293	11/04	7.634	1/06	8.534	11/06	263.900	282.026	
Studies & Analyses	VARIOUS	VARIOUS	3.572	2.310	12/04	2.500	1/06				8.382	
SUBTOTAL SUPPORT			4.237	3.604		10.134		8.534		263.900	290.408	
Remarks:												
TEST & EVALUATION												
Dev Test & Eval	VARIOUS	VARIOUS								265.800	265.800	
Live Fire Test & Eval	VARIOUS	NAWCWD, CHINA LAKE CA				.810	1/06	1.113	11/06	13.323	15.246	
SUBTOTAL TEST & EVALUATION						.810		1.113		279.123	281.046	
Remarks:												
MANAGEMENT												
Contractor Eng Sup	VARIOUS	NAWCAD, PATUXENT RIVER MD	.530	1.826	11/04	1.750	11/04	2.100	11/04		6.206	
Government Eng Sup	WX	NAWCAD, PATUXENT RIVER MD	1.833	11.111	11/04	19.200	11/05	21.318	11/06	203.549	257.011	
Program Mgmt Sup	VARIOUS	NAWCAD, PATUXENT RIVER MD	.805	2.780	11/04	6.778	11/05	6.870	11/06	45.880	63.113	
Travel	WX	NAWCAD, PATUXENT RIVER MD	.030	.125	11/04	.355	11/05	.397	11/06	5.589	6.496	
SUBTOTAL MANAGEMENT			3.198	15.843		28.083		30.685		255.018	332.826	
Remarks:												
Total Cost			9.520	99.314		267.860		362.672		3,529.735	4,269.101	
Remarks:												

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#### EXHIBIT R4, Schedule Profile

DATE:

February 2006

[illegible]

RDT&amp;E, N /

BA-5

[illegible]

0605212N. CH-53X RDTE

PROJECT NUMBER AND NAME	
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H3059. CH-53X USMC HLR

[illegible]

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R-1 Shopping List Item No 138

**Exhibit R-4, Schedule Profile**

(Exhibit R-4, page 7 of 8)

**CLASSIFICATION: UNCLASSIFIED**

Exhibit R-4a, Schedule Detail				DATE: <b>February 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp; BA-5</b>	PROGRAM ELEMENT 0605212N, CH-53X RDTE			PROJECT NUMBER AND NAME H3059, CH-53X USMC HLR			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
ORD Update	1Q-4Q						
Acquisition Documentation	1Q-4Q						
Trade Studies & Analysis	1Q-4Q	1Q					
System Requirements Review		2Q					
Alternative Live Fire T&E (ALFT&E) Plan	3Q						
Test & Evaluation Master Plan (TEMP)		1Q					
Independent Logistics Assessment (ILA)	4Q				2Q		
Milestone (MS) B		1Q					
System Development and Demonstration (SDD) phase		2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Initial System Development & Demonstration (iSDD) Contract Award (KA)		2Q					
System Development & Demonstration (SDD) KA		2Q					
System Functional Review (SFR)		4Q					
Preliminary Design Review (PDR)			4Q				
Critical Design Review (CDR)					2Q		
Design Readiness Review (DRR)					3Q		
Flight Readiness Review (FRR)							1Q
Integrated Test & Evaluation (IT-B1)							2Q-4Q
SDD Fabrication				3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Ground Test Vehicle (GTV)						4Q	
Engineering Development Model (EDM)							3Q-4Q
Fixed Avionics System Integration Laboratory (SIL)					1Q-4Q	1Q-4Q	1Q-4Q
Flight Control SIL					3Q-4Q	1Q-4Q	1Q-4Q
Portable/Flight Test Avionics SIL							2Q-4Q