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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0305149N/COBRA JUDY			PROJECT NUMBER AND NAME 4021/CJR System Engineering		
COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	92.661	117.749	135.372	138.266	89.766	49.853	26.255
RDT&E Articles Qty	0	0	0	0	0	0	0

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

A. (U) Mission Description

Cobra Judy Replacement is a program that has been transferred from the Air Force to the Navy, per an Office of the Secretary of Defense (OSD) Milestone A Acquisition Decision Memorandum dated 6 August 2002. Funding depicted herein represents approximately half of the total budget.

Cobra Judy funds will replace the current U.S. Naval Ship (USNS) Observation Island which has become unsustainable and due to leave service no later than 2012. This program will fund the development of a single ship-based radar suite for world wide technical data collection against ballistic missiles in flight. Prior funding provided instrumentation of quality radar data and imaging, detailing threat assessment of ballistic missile development, testing and range augmentation and monitored or verified specific aspects of United States treaties with other countries. To avoid vulnerabilities in our national security it is imperative we replace the current capability of Cobra Judy in a timely manner to prevent any potential gap in coverage. Prior studies have indicated that a ship-based radar replacement is the most timely and cost effective solution.

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 1 of 9)

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B. Accomplishments/Planned Program														
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 33%;"></th><th style="width: 16.5%;">FY 05</th><th style="width: 16.5%;">FY 06</th><th style="width: 16.5%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">68.493</td><td style="text-align: center;">82.423</td><td style="text-align: center;">92.982</td></tr><tr><td>RDT&E Articles Quantity</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></tbody></table>				FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	68.493	82.423	92.982	RDT&E Articles Quantity	0	0	0
	FY 05	FY 06	FY 07											
Accomplishments/Effort/Subtotal Cost	68.493	82.423	92.982											
RDT&E Articles Quantity	0	0	0											
DESIGN AND RISK REDUCTION Planned: Complete critical detailed designs for prime mission (X-band & S-band) radars														
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Accomplishments/Effort/Subtotal Cost	6.000	9.701	28.500											
RDT&E Articles Quantity	0	0	0											
SHIPBUILDING Accomplishments: <ul style="list-style-type: none">- Completed ship selection studies- Awarded ship concept and preliminary design contract Planned: <ul style="list-style-type: none">- Initiate ship detailed design and commence construction														
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 33%;"></th><th style="width: 16.5%;">FY 05</th><th style="width: 16.5%;">FY 06</th><th style="width: 16.5%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">14.310</td><td style="text-align: center;">20.725</td><td style="text-align: center;">5.206</td></tr><tr><td>RDT&E Articles Quantity</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></tbody></table>				FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	14.310	20.725	5.206	RDT&E Articles Quantity	0	0	0
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Accomplishments/Effort/Subtotal Cost	14.310	20.725	5.206											
RDT&E Articles Quantity	0	0	0											
SYSTEM ENGINEERING Planned: <ul style="list-style-type: none">- Development of specifications / interface design documents and detailed test plans- Complete designs for non-prime mission equipment (C4I, data handling, classified mission equipment)														

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B. Accomplishments/Planned Program (Cont.)

	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.788	2.425	5.977
RDT&E Articles Quantity	0	0	0

TEST & EVALUATION

Planned:

- Maintain Test and Evaluation master Plan (TEMP)
- Develop and maintain detailed test and integration plans
- Support Technical Interchange Meetings (TIMs)

	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	3.070	2.475	2.707
RDT&E Articles Quantity	0	0	0

PROGRAM MANAGEMENT SUPPORT

Planned:

- Program planning, assessment of technical alternatives, risk identification and mitigation.
- Cost and schedule development and execution

Total Cost:	92.661	117.749	135.372
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<p>C. (U) PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></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>Funding:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY 2006 President's Budget:</td> <td style="text-align: right;">92.712</td> <td style="text-align: right;">121.261</td> <td style="text-align: right;">132.832</td> </tr> <tr> <td>FY 2007 President's Budget:</td> <td style="text-align: right;">92.661</td> <td style="text-align: right;">117.749</td> <td style="text-align: right;">135.372</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.051</td> <td style="text-align: right; border-top: 1px solid black;">-3.512</td> <td style="text-align: right; border-top: 1px solid black;">2.540</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>General Provisions</td> <td style="text-align: right;">-0.051</td> <td style="text-align: right;">-1.077</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Congressional Action 1% Reduction</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">-2.435</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Revised rates & inflation indices</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">1.140</td> </tr> <tr> <td>Programmatic adjustments</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">1.400</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">-0.051</td> <td style="text-align: right; border-top: 1px solid black;">-3.512</td> <td style="text-align: right; border-top: 1px solid black;">2.540</td> </tr> </tbody> </table> <p>Schedule:</p> <p style="padding-left: 20px;">Not Applicable.</p> <p>Technical:</p> <p style="padding-left: 20px;">Not Applicable.</p>					FY 2005	FY 2006	FY 2007	Funding:				FY 2006 President's Budget:	92.712	121.261	132.832	FY 2007 President's Budget:	92.661	117.749	135.372	Total Adjustments	-0.051	-3.512	2.540	Summary of Adjustments				General Provisions	-0.051	-1.077	0.000	Congressional Action 1% Reduction	0.000	-2.435	0.000	Revised rates & inflation indices	0.000	0.000	1.140	Programmatic adjustments	0.000	0.000	1.400		-0.051	-3.512	2.540
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<p>D. OTHER PROGRAM FUNDING SUMMARY:</p> <table> <thead> <tr> <th><u>Line Item No. & Name</u></th> <th><u>FY 2004</u></th> <th><u>FY 2005</u></th> <th><u>FY 2006</u></th> <th><u>FY 2007</u></th> <th><u>FY 2008</u></th> <th><u>FY 2009</u></th> <th><u>FY 2010</u></th> <th><u>FY 2011</u></th> <th>To Complete Continuing</th> <th>Total Cost Continuing</th> </tr> </thead> <tbody> <tr> <td>P.E. 0303901N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="11">* Details and funding profile for this Program Element are classified.</td> </tr> </tbody> </table>												<u>Line Item No. & Name</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>FY 2010</u>	<u>FY 2011</u>	To Complete Continuing	Total Cost Continuing	P.E. 0303901N											* Details and funding profile for this Program Element are classified.										
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<p>E. ACQUISITION STRATEGY:</p> <p>The acquisition strategy calls for leveraging ongoing Navy Ballistic Missile Defense (BMD) radar development, updating existing user interface/communications/data handling equipment designs from a similar operational unit, and purchasing and integrating the mission equipment aboard an appropriate merchant-class hull. System design will be accomplished using in-hand technologies and commercial standards to lower schedule risk and produce a product with the lowest possible life-cycle cost.</p>																																												
<p>F. MAJOR PERFORMERS:</p> <p>Raytheon Company - Sudbury, Massachusetts Northrop Grumman (subcontractor) - Baltimore, Maryland</p>																																												

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Exhibit R-3 Cost Analysis (page 1)											DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NAME AND NUMBER			PROJECT NUMBER AND NAME						
RDT&E, N / BA - 7			0305149N/COBRA JUDY			4021/CJR System Engineering						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Prototype Development	CPAF	Raytheon	69.532	68.493	03/05	82.423	02/06	92.982	TBD	Continuing	Continuing	TBD
	Various	PEO Ships	9.332	6.000	11/05	9.701	04/06	28.500	TBD	Continuing	Continuing	TBD
System Engineering	WX/RX	Various	1.252	2.457	11/05	0.155	02/06	5.206	TBD	Continuing	Continuing	TBD
	MIPR	Various	1.143	1.182	11/05	1.115	02/06					
	GSA	Various	1.691	0.000	N/A	0.000	N/A					
	CPAF	BAE	0.000	0.000	N/A	0.840	02/06					
	C NF	GTRI	0.850	0.645	11/05	0.580	02/06					
	CPFF	JHU/APL	3.124	1.400	11/05	2.160	03/06					
	MIPR	MIT/LL	1.844	1.000	11/05	1.620	02/06					
	WX	NRL	0.800	0.480	11/05	0.432	02/06					
	WX	NSWC CSS	2.942	0.000	N/A	0.000	N/A					
	WX	NSWC DD	5.559	1.902	11/05	3.080	02/06					
	WX	NSWC PHD	1.185	0.350	11/05	0.200	02/06					
	Various	PEO Ships	0.000	0.000	N/A	3.000	04/06					
	WX	SEG	1.195	0.000	N/A	0.000	N/A					
	WX/PD	SPAWAR	1.028	1.894	11/05	4.808	03/06					
Subtotal Product Development			101.477	85.803		110.114		126.688		Continuing	Continuing	TBD
Remarks:												
Test and Evaluation												
Test and Evaluation	CPAF/WX/RX	Various	0.000	0.000	TBD	0.828	02/06	1.328	TBD	Continuing	Continuing	TBD
	CPAF	Raytheon	0.100	0.300	03/05	1.187	02/06	4.649	TBD	Continuing	Continuing	TBD
		AFOTEC	0.135	0.050	11/05	0.050	02/06					
		COMOPTEVFOR	0.199	0.070	11/05	0.050	02/06					
		JITC	0.225	0.000	N/A	0.000	N/A					
	WX	NSWC DD	0.341	0.368	11/05	0.310	02/06					
		PMS 325	0.365	0.000	N/A	0.000	N/A					
		TSC	0.250	0.000	N/A	0.000	N/A					
Subtotal T&E:			1.615	0.788		2.425		5.977		Continuing	Continuing	TBD
Remarks:												
Total Cost			103.092	86.591		112.539		132.665		Continuing	Continuing	TBD

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 6 of 9)

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Exhibit R-3 Cost Analysis (page 2)											DATE: February 2006	
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RDT&E, N / BA-7			0305149N/COBRA JUDY					4021/CJR System Engineering				
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 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		Continuing	Continuing	TBD
Remarks:												
Contractor Engineering	WX/RX	Various	0.885									
	CPAF	BAE Systems	3.986	3.000	02/05	2.735	02/06					
	GSA	Computer Science Corp	3.155									
	GSA	Systems Planning & Analysis	1.900									
Program Management	CPAF	BAE Systems	5.476	3.000	02/05	2.425	02/06	2.657	TBD	Continuing	Continuing	TBD
	CPFF	DTI	0.435									
Travel			0.100	0.070	11/05	0.050	02/06	0.050	TBD			
Subtotal Management			15.937	6.070		5.210		2.707		Continuing	Continuing	TBD
Remarks:												
Total Cost			119.029	92.661		117.749		135.372		Continuing	Continuing	TBD
Remarks:												

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 8 of 9)

LEGEND			
CDR	Critical Design Review	OPEVAL	Operational Evaluation
DT&E	Developmental Test and Evaluation	OTRR	Operational Test Readiness Review
IOC	Initial Operational Capability	PDR	Preliminary Design Review
IPR	Interim Progress Review	PDTT	Post Delivery Test & Trials
IOC	Initial Operational Capability	SDR	System Design Review
IOT&E	Initial Operational Test & Evaluation	TECHEVAL	Technical Evaluation
MS	Milestone		

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Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
ACQUISITION MILESTONES & DECISION REVIEWS							
Interim Progress Review (IPR)		2Q		2Q		2Q	
System Development & Demonstration & Production	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	
Initial Operational Capability (IOC)							4Q
MISSION EQUIPMENT							
Delivery					4Q		
X-Band Radar							
Preliminary Design Review (PDR)	2Q						
Critical Design Review (CDR)		2Q					
S-Band Radar							
Preliminary Design Review (PDR)	2Q						
Critical Design Review (CDR)		2Q					
Radar Integration							
String Integration Start				3Q			
String Integration Complete					4Q		
ME I&T Complete						3Q	
SHIP							
Release RFP	2Q						
Ship Concept/Preliminary Design	4Q	1Q-3Q					
Ship Construction Down Select		3Q					
Delivery						2Q	
TEST AND EVALUATION							
Mission Equipment Developmental Test & Evaluation (DT&E)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q-3Q	
TECHEVAL / Post Delivery Test & Trials						3Q	1Q
OTRR							1Q
IOT&E/OPEVAL							2Q-3Q

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