

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification					DATE:		February 2006		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5				R-1 ITEM NOMENCLATURE SSN-21 Development/0604561N					
COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY2010	FY2011		
Total PE Cost	2.966	2.878	3.260	2.708	2.756	2.912	2.960		
SSN-21 Developments/1946	2.966	2.878	3.260	2.708	2.756	2.912	2.960		
Defense Emergency Response funds (DERF) Funds: Not Applicable									
A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:									
<u>1946 SSN-21 Developments</u> : The SEAWOLF Submarine is a multi-mission ship that provides unprecedented performance capabilities. It is the quietest, most heavily-armed attack submarine the Navy has ever built. The design of the SEAWOLF is based on an extensive research and development program and incorporates technological advancements to provide: order of magnitude improvement in ship quieting; improved acoustic sensors; more capable combat systems; greater weapon capacity and capability; quieter launch; weapon launch at high ship speed; advanced reactor; improved performance machinery program; an advanced propulsor; increased operating depth; improved ship control; and enhanced survivability. Beginnning in FY05, SEAFAC Range Upgrade funding is included in 1946 (FY05- \$1.5M, FY06 - \$2.0M, FY07 - \$1.5M).									
<u>9233 SEAFAC Range Upgrade</u> : The SEAWOLF Class submarine is a multi-mission ship that provides numerous unprecedented submarine performance capabilities such as more capable combat systems, greater weapons capacity and capability, advanced reactor, improved acoustic sensors, increased operating depth, improved ship control, and enhanced survivability. Among these capabilities is an unprecedented acoustic stealth performance as a result of an order of magnitude improvement in ship quieting.									
Maintaining the acoustic stealth advantage and upholding the effectiveness and survivability of the SEAWOLF and future class submarines require that radiated acoustic signatures are periodically measured and understood. To this end, Southeast Alaska Acoustic Measurement Facility (SEAFAC) range will be upgraded with new underwater acoustic measurement systems capable of measuring new generation quiet-class submarines stationed in the Pacific fleet. The SEAFAC Range Upgrade Program comprises of a multi-year effort to design, develop, procure, install and test High Gain Measurement Systems (HGMS) in the Static and Underway Sites at SEAFAC. Efforts to upgrade the Static Site began in FY03 and efforts to upgrade the Underway Site began in FY04. (Note: Please refer to RDT&E,N PE0604561N/1946 R2 and OPN BLI 094200/H1RC08 budget exhibits for associated SEAFAC Upgrade Program funding.)									

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604561N / SSN-21 Developments	PROJECT NUMBER AND NAME 1946 / SSN-21 Developments			
<b>B. Accomplishments/Planned Program</b>					
	FY 05	FY06	FY07		
Accomplishments/Effort/Subtotal Cost	0.968	0.574	0.000		
RDT&E Articles Quantity					
<p><u>FY 05 Accomplishment and FY-06 Plan:</u> Conduct follow-on OPEVAL testing for the class.</p>					
	FY 05	FY06	FY07		
Accomplishments/Effort/Subtotal Cost	0.175	0.000	0.000		
RDT&E Articles Quantity					
<p><u>FY-05 Accomplishment:</u> Completion of component shock tests and analysis for CFE and GFE in compliance with Class Plans and DOT&amp;E requirements. Perform shock qualifications for the Global Command and Control System (GCCS) for the Common Submarine Radio Room (CSRR).</p>					
	FY 05	FY06	FY07		
Accomplishments/Effort/Subtotal Cost	1.500	2.000	1.500		
RDT&E Articles Quantity					
<p><u>FY-05 Accomplishment, FY-06, FY-07 Plan:</u> System test and validation, and corrective action efforts are planned for the SEAFAC Static Site. System development, engineering, and integration efforts are planned for the SEAFAC Underway Site.</p> <p>Note: Please refer to RDT&amp;E,N PE0604561N/9233 R-2 and OPN BLI 094200/H1RC08 P5 budget exhibits for associated SEAFAC Upgrade Program funding.</p>					

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<b>B. Accomplishments/Planned Program (Cont.)</b>																							
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY06</th><th style="width: 15%;">FY07</th><th style="width: 15%;"></th><th style="width: 10%;"></th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.198</td><td style="text-align: center;">0.237</td><td style="text-align: center;">0.663</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"><p><u>FY-05 Accomplishment:</u> Re-engineering and correction of SCS and Dry Deck Shelter (DDS) Interface (TIDS Migration). <u>FY06 and FY07 Plan:</u> Re-engineering and correction of Ship Control System (SCS) and acoustic sail deficiencies.</p></div>							FY 05	FY06	FY07			Accomplishments/Effort/Subtotal Cost	0.198	0.237	0.663			RDT&E Articles Quantity					
	FY 05	FY06	FY07																				
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	FY 05	FY06	FY07																				
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	FY 05	FY06	FY07																				
Accomplishments/Effort/Subtotal Cost	0.000	0.000	1.037																				
RDT&E Articles Quantity																							

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604561N / SSN-21 Developments	PROJECT NUMBER AND NAME 1946 / SSN-21 Developments

**C. PROGRAM CHANGE SUMMARY:**

	FY 2005	FY 2006	FY 2007
Funding:			
FY 06 President's Budget	2.972	2.928	3.462
FY 07 President's Budget	2.966	2.878	3.260
Total Adjustments	-0.006	-0.050	-0.202
Summary of Adjustments			
Contract Support Reduction			-0.017
NWCF Civpers Efficiencies			-0.037
N7 Respread of Contractor Support			-0.003
SBIR FY05	-0.008		
Nuclear Physical Security	0.001		
NAVSEA Civilian Personnel Funding			-0.167
Trusted Foundry (OSD-14)	0.003		
Inflation			0.015
Fuel Price Adjustments			0.005
CIVPERS Pay Raise Rate			0.002
Sec. 8026(f): Federally Funded R&D Centers		-0.006	
Sec. 8125 Revised Economic Assumptions		-0.013	
Congressional Action 1% Reduction		-0.031	
Dept. of Energy Transfer	-0.002		
Subtotal	-0.006	-0.050	-0.202

Schedule:

Not applicable.

Technical:

Not applicable.

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<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>										
<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
(U) SCN #201200	17.079	6.511	0.000	0.000	0.000	0.000	0.000	0.000		8086.156
(U) MILCON P-398										27.300
(U) Related RDT&E:										
(U) P.E. 0603570N (Advanced Nuclear Power Systems)										
(U) P.E. 0604524N (Submarine Combat Systems)										
(U) P.E. 0604567N (Ship Contract Design/Live Fire T&E)										
<b>E. ACQUISITION STRATEGY:</b>										
(U) Delivered three SEAWOLF submarines under cost cap.										
(U) To continue to correct SEAWOLF Acoustics deficiencies.										
(U) To increase commonality with Virginia Class Submarines.										
(U) Continue to review all areas for possible cost reductions.										
<b>F. MAJOR PERFORMERS:</b>										
Naval Surface Warfare Center (NSWC) Carderock, MD - FY-05 \$2.095 , FY06 - \$2.095M, FY07 \$3.020 M (Acoustics, NPE, Shock, Test & Evaluation, SEAFAC and Tech Insertion). Contract awards were Oct 2004 for FY05. Contract awards scheduled for Jan 2006 (FY06), and October 2006 (FY07).										
Naval Undersea Warfare Center (NUWC) Newport RI - FY-05 \$.595K (Test and Evaluation) FY06 - \$302K (Test and Evaluation). Contract was awarded on Oct 2004 for FY05 and contract award is scheduled for Jan 2006 for FY06.										

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Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604561N / SSN-21 Developments			PROJECT NUMBER AND NAME 1946 / SSN-21 Developments								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY 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
Primary Hardware Development		NSWC Carderock/Various		1.500		2.000		1.500					5.000	
Ancillary Hardware Development														
Systems Engineering	SS/CPFF	General Dynam Groton CT	369.671	0.000	Various	0.000	Various	0.000	Various			0.000	369.671	369.671
Systems Engineering	SS/CPFF	NGNN Newport News VA	119.530	0.000	Various	0.000	Various	0.000	Various			0.000	119.530	119.530
Systems Engineering	WR/RC	NSWC Carderock, MD	320.331	0.000	Various	0.095	Various	1.520	Various			3.599	325.545	
Systems Engineering	WR/RC	NUWC Newport, RI	50.337	0.595	Various	0.302	Various	0.000	Various			0.000	51.234	
Systems Engineering	Various	Various	470.629	0.165	Various	0.108	Various	0.110	Various			7.335	478.347	
Licenses													0.000	
Tooling													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal Product Development			1,330.498	2.260		2.505		3.130				10.934	1,349.327	
Remarks:														
Development Support													0.000	
Software Development													0.000	
Training Development													0.000	
Integrated Logistics Support													0.000	
Configuration Management													0.000	
Technical Data													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal Support			0.000	0.000		0.000		0.000				0.000	0.000	
Remarks:														

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 6 of 8)

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Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2006</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604561N / SSN-21 Developments			PROJECT NUMBER AND NAME 1946 / SSN-21 Developments								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY 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	SS/CPFF	General Dynam Groton C	68.994	0.000		0.000		0.000				0.000	68.994	68.994
Developmental Test & Evaluation	WR	NSWC Carderock MD	96.091	0.000	Various	0.000		0.000				0.000	96.091	
Developmental Test & Evaluation	Various	Various	124.795	0.666	Various	0.333	Various	0.090	Various			0.402	126.286	
Operational Test & Evaluation													0.000	
Tooling													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal T&E			289.880	0.666		0.333		0.090				0.402	291.371	
Remarks:														
Contractor Engineering Support													0.000	
Government Engineering Support													0.000	
Program Management Support & ET	Various	Various	48.435	0.000		0.000		0.000				0.000	48.435	
Travel			0.038	0.040		0.040		0.040				0.000	0.158	
Labor (Research Personnel)													0.000	
SBIR Assessment			0.043										0.043	
Subtotal Management			48.516	0.040		0.040		0.040				0.000	48.636	
Remarks:														
Total Cost			1,668.894	2.966		2.878		3.260				11.336	1,689.334	
Remarks:														

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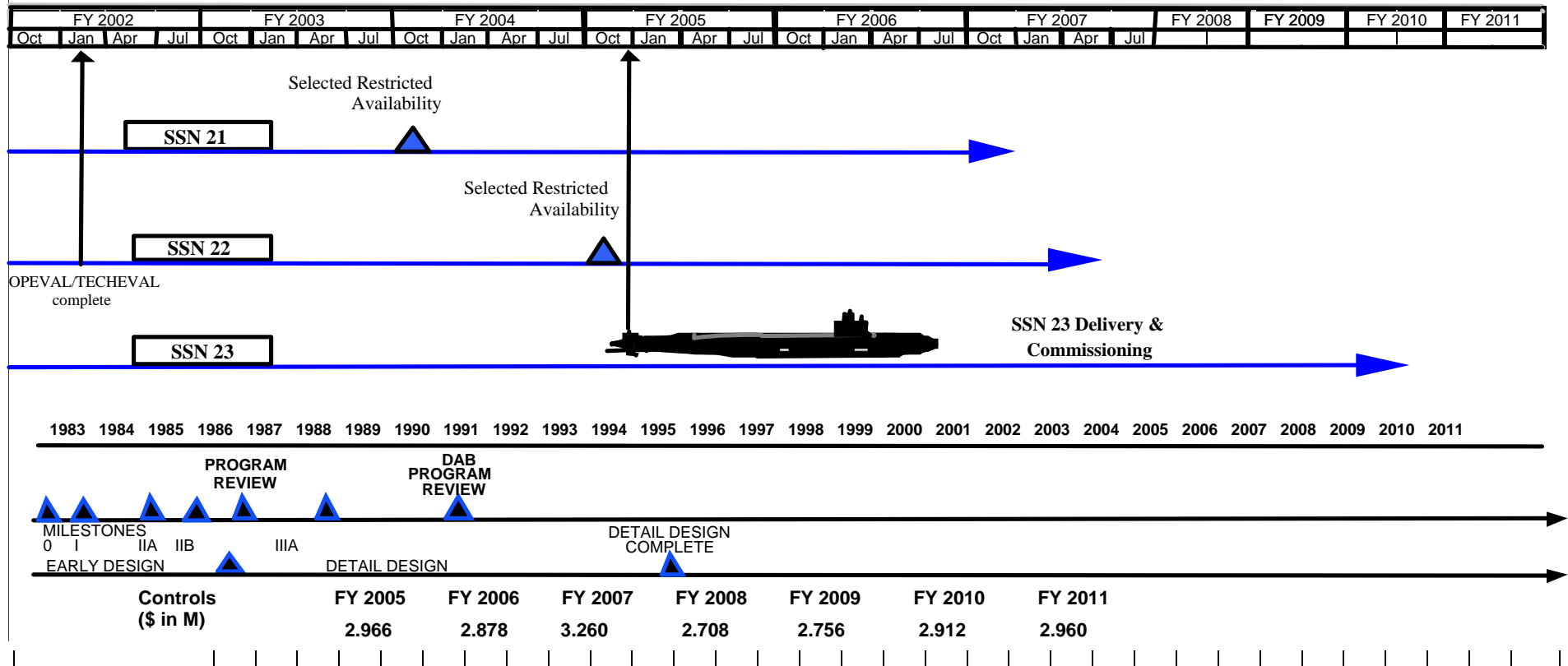
Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 7 of 8)

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EXHIBIT R4, Schedule Profile						DATE:	
						February 2006	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME	

## Program Timeline



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

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 8 of 8)