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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					R-1 ITEM NOMENCLATURE 0604727N Joint Standoff Weapon System			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	4.910	10.874	13.517	13.009	6.351	0.534	0.586	0.638
2068 Joint Standoff Weapon (JSOW)	0.744	10.874	13.517	13.009	6.351	0.534	0.586	0.638
9393 Pulsed Radio Frequency Emitters (PRFE)	4.166							
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program.</p> <p>The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B or BLU-111 payload. This weapon is designed up front for pre-planned product improvements. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 is deferred. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomous Target Acquisition (ATA) capability, and a Broach lethal package to enable the attack of blast/fragmentation and penetration type targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. Operational Testing of the JSOW-C was successfully completed in December 2004. Approval for Milestone-III/Full Rate Production was granted on 20 December 2004.</p> <p>The FY 2004 budget includes a Congressional add to complete a test and evaluation program for Pulsed Radio Frequency Emitters (PRFE).</p> <p>FY 2005-2006 includes funding to integrate a Selective Availability Anti-Spoofing Module (SAASM) based GPS receiver per the Joint Chiefs of Staff mandate. Concurrent with the SAASM integration, a new computer processor will be integrated to replace the existing obsolete 486 processor. The effort will focus on concurrent cost reduction opportunities. FY 2005-2011 includes funding to integrate new functionality into the Joint Mission Planning Systems (JMPS) and Common Unique Planning Component (CUPC). FY 2006-2008 includes funding for development, integration, and qualification of a moving/relocatable target capability into the JSOW-C (AGM-154C) variant.</p> <p>JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces, weight, and dimension considerations, JSOW is compatible with Air Force and NATO aircraft.</p>								

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Exhibit R-2, RDTEN Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon System				PROJECT NUMBER AND NAME 2068 Joint Standoff Weapon (JSOW)			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	0.744	10.874	13.517	13.009	6.351	0.534	0.586	0.638
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

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

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The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B or BLU-111 payload. This weapon is designed up front for pre-planned product improvements. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 is deferred. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomous Target Acquisition (ATA) capability, and a Broach lethal package to enable the attack of blast/fragmentation and penetration type targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. Operational Testing of the JSOW-C was successfully completed in December 2004. Approval for Milestone-III/Full Rate Production was granted on 20 December 2004.

FY 2005-2006 includes funding to integrate a Selective Availability Anti-Spoofing Module (SAASM) based GPS receiver per the Joint Chiefs of Staff mandate. Concurrent with the SAASM integration, a new computer processor will be integrated to replace the existing obsolete 486 processor. The effort will focus on concurrent cost reduction opportunities. FY 2005-2011 includes funding to integrate new functionality into the Joint Mission Planning Systems (JMPS) and Common Unique Planning Component (CUPC). FY 2006-2008 includes funding to development, integration, and qualification of a moving/relocatable target capability into the JSOW-C (AGM-154C) variant.

JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces and weight and dimension considerations. JSOW is compatible with Air Force and NATO aircraft.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon System	PROJECT NUMBER AND NAME 2068 Joint Standoff Weapon (JSOW)		
B. Accomplishments/Planned Program				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		10.343	12.400	
RDT&E Articles Quantity				
Insert a Selective Availability Anti-Spoofing Module (SAASM) based Guidance Electronics Unit (GEU) into the weapon and demonstrate compatability with currently integrated aircraft.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.744	0.531	0.371	0.311
RDT&E Articles Quantity				
Perform baseline JMPS Migration; plan new functions into JSOW Common Unique Planning Component (CUPC) and develop new software releases of CUPC. The FY04 effort resulted in the initial release of CUPC Software version 1.1. The FY05-FY07 efforts will address compliance with new imagery architectures and new mission planning functionality.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			0.746	12.698
RDT&E Articles Quantity				
Develop and integrate the moving/relocatable target capability of AGM-154C. The FY 2006-2007 effort will involve updates to the seeker software weapon upgrade to enable receipt of revised target coordinates after missile launch and the integration of a weapon datalink.				

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APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon System	PROJECT NUMBER AND NAME 2068 Joint Standoff Weapon (JSOW)		

C. PROGRAM CHANGE SUMMARY:

	FY 04	FY 05	FY 06	FY 07
Funding:				
Previous President's Budget:	0.766	9.531	13.271	12.811
Current BES/President's Budget:	0.744	10.874	13.517	13.009
Total Adjustments	-0.022	1.343	0.246	0.198
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.097		
Congressional rescissions				
SBIR/STTR Transfer	-0.021			
OSD		-0.260	0.121	0.033
Navy (FMB/Sponsor/NAVAIR)			0.125	0.165
Economic Assumptions				
Reprogrammings	-0.001			
Congressional increases		1.700		
Subtotal	-0.022	1.343	0.246	0.198

Schedule:

- 1) Removed the following efforts that completed: Missile Integration FY03, Missile Level Qual FY03, Development Test FY03, Operational Assessment FY03.
- 2) Full Rate Production AGM-154A reflects last procurement in 1Q FY05.
- 3) SAASM design/integration effort is to be completed in 2Q FY06, Development Test and Operational Test efforts are accelerated to FY06.
- 4) Moving/Relocateable Target engineering study/design/integration/qualification effort is added and begins in 1Q FY06 and ends 4Q FY08.

Technical:

Not Applicable

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EXHIBIT R-2a, RDT&E Project Justification								DATE:	
								February 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
RDT&E, N / BA-5		0604727N Joint Standoff Weapon System			2068 Joint Standoff Weapon (JSOW)				

D. OTHER PROGRAM FUNDING SUMMARY:

<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>	<u>To Complete</u>	<u>Total Cost</u>
USN WP, N; BLI 223000 JSOW	117.346	142.853	144.449	139.632	150.240	160.636	164.905	169.400	1670.710	2860.171
Qtys*	328	405	420	400	453	496	494	502	4724	8222
USAF WP F; BLI 27324F JSOW	78.423									
Qtys	307									

E. ACQUISITION STRATEGY:

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts were used for the Engineering and Manufacturing Development program effort. Fixed price type contracts will be used for production.

*Does not include spares.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE&E, N / BA-5			0604727N Joint Standoff Weapon System			2068 Joint Standoff Weapon (JSOW)						
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
Primary Hardware Development	C/CPIF	Raytheon Tucson, AZ	272.295								272.295	272.295
Primary Hardware Development	SS/CPIF	Raytheon Tucson, AZ	247.809								247.809	247.809
Ancillary Hardware Development	SS/CPIF	Textron	2.923								2.923	2.923
Ancillary Hardware Development	SS/FPFF	BAE Chorley, England	12.450								12.450	12.450
Aircraft Integration	SS/CPIF	Mtech/McDonnell Douglas	21.455								21.455	21.455
Aircraft Integration	WX	NAWCWD China Lake	15.058								15.058	
Systems Engineering	WX	NAWCWD China Lake	107.710	0.000		0.000		0.000		0.000	107.710	
Award Fees	Fee	Textron/Raytheon	7.198								7.198	
SAASM Integration	CPNF	Raytheon Tucson, AZ	0.000	10.243	11/04	4.350	11/05				14.593	14.593
Moving/Relocatable Target Development	CPFF	Raytheon Tucsc	0.000	0.000		0.746	11/05	12.548	12/06	6.010	19.304	19.304
											0.000	
Subtotal Product Development			686.898	10.243		5.096		12.548		6.010	720.795	
Remarks:												
Software Development (JMPS)	SS/CPFF	Raytheon Tucson, AZ	3.135	0.531	11/04	0.371	11/05	0.311	11/06	2.099	6.447	6.447
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			3.135	0.531		0.371		0.311		2.099	6.447	
Remarks:												

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Exhibit R-2, RDTE Budget Item Justification
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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-5			PROGRAM ELEMENT 0604727N Joint Standoff Weapon System				PROJECT NUMBER AND NAME 2068 Joint Standoff Weapon (JSOW)					
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	WX	NAWCWD, China Lake	26.680			3.031	11/05				29.711	
Operational Test & Evaluation	WX	OPTEVFOR, Norfolk	7.662			4.869	11/05				12.531	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			34.342	0.000		7.900		0.000		0.000	42.242	
Contractor Engineering Support	Various	Various	18.136								18.136	
Travel	Various	Various	7.092	0.100	11/04	0.150	11/05	0.150	11/06		7.492	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			25.228	0.100		0.150		0.150		0.000	25.628	
Remarks:												
Total Cost			749.603	10.874		13.517		13.009		8.109	795.112	
Remarks:												

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EXHIBIT R4, Schedule Profile																								DATE:								
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME								
RDT&E, N / BA-5												0604727N Joint Standoff Weapon System												2068 Joint Standoff Weapon (JSOW)								
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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				
JSOW																																
Acquisition Milestones AGM-154C					MS III ★ IOC																											
Test & Evaluation Milestones AGM-154C																																
Development Test	■																															
Operational Test	▲ OTRR	OT/LFT&E																														
Production Milestones																																
LRIP/FRP AGM-154C	▲ LRIP-2				▲ FRP-1				△ FRP-2				△ FRP-3				△ FRP-4				△ FRP-5				△ FRP-6			△ FRP-7				
Deliveries/AGM-154C					LRIP1	LRIP-2				FRP-1				FRP-2				FRP-3				FRP-4				FRP-5				FRP-6		
Deliveries/AGM-154A	▲ FRP-5				▲ FRP-6																											
	FRP-3				FRP-4				FY03 Supplemental				FRP-5				FRP-6															
SAASM Engineering Milestones Integration																																
T & E Milestones Development Test/Operational Test																																
Moving/Relocatable Target Engineering Milestones Design/Integration/Qual																																

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Exhibit R-4a, Schedule Detail						DATE: February 2005			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&E, N /BA-5		0604727N Joint Standoff Weapon System				2068 Joint Standoff Weapon (JSOW)			
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Low Rate Initial Production (LRIP)/AGM-154C	1Q								
Operational Test Readiness Review (OTRR)/AGM-154C	1Q								
Operational Test/Live Fire Test and Evaluation (cont'd)									
(OT/LFT&E)/AGM-154C	1Q-4Q	1Q							
Milestone III (MS-III)/AGM-154C		1Q							
Initial Operational Capability (IOC)/AGM-154C		2Q							
Full Rate Production (FRP)/AGM-154C		1Q	1Q	1Q	1Q	1Q	1Q	1Q	
Full Rate Production (FRP)/AGM-154A	1Q	1Q							
LRIP-1 Deliveries-AGM-154C	4Q	1Q-2Q							
LRIP-2 Deliveries-AGM-154C		2Q-4Q	1Q-2Q						
FRP-1 Deliveries-AGM-154C			2Q-4Q	1Q-2Q					
FRP-2 Deliveries-AGM-154C				2Q-4Q	1Q-2Q				
FRP-3 Deliveries-AGM-154C					2Q-4Q	1Q-2Q			
FRP-4 Deliveries-AGM-154C						2Q-4Q	1Q-2Q		
FRP-5 Deliveries-AGM-154C							2Q-4Q	1Q-2Q	
FRP-6 Deliveries-AGM-154C								2Q-4Q	
FRP-3 Deliveries-AGM-154A	1Q-2Q								
FRP-4 Deliveries-AGM-154A	2Q-4Q	1Q							
FY03 Supplemental-AGM-154A		1Q-4Q	1Q-2Q						
FRP-5 Deliveries-AGM-154A			2Q-4Q	1Q					
FRP-6 Deliveries-AGM-154A				2Q-4Q					
SAASM									
Design/Integration		2Q-4Q	1Q-2Q						
Development Test (DT)			1Q-3Q						
Operational Test (OT)			3Q-4Q						
Moving /Relocatable Target									
Engineering Study			1Q-4Q						
Design/Integration/Qual				1Q-4Q	1Q-4Q				

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Termination Liability Funding
For Major Defense Acquisition Programs,
RDT&E Funding
(\$000)

Program	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
JSOW A2068	0	0	0	0	0	0	0	0

This program does not budget/fund termination liability separately. A Limitation of Funds (LoF) clause (FAR 52.232-22) is inserted in all incrementally funded R&D contracts. This clause is designed to limit the government's legal liability to the amount obligated.

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