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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Navy **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / <i>Joint Standoff Weapon Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	892.691	4.389	0.405	0.412	-	0.412	0.433	0.442	0.451	0.460	3.474	903.157
2068: <i>Joint Standoff Weapon (JSOW)</i>	892.691	4.389	0.405	0.412	-	0.412	0.433	0.442	0.451	0.460	3.474	903.157

**Program MDAP/MAIS Code:** 766

**A. Mission Description and Budget Item Justification**

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. 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 North Atlantic Treaty Organization aircraft.

The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System navigation capability, and a BLU-97/B payload. This weapon was 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. The JSOW Unitary (AGM-154C) variant has a terminal seeker, autonomous target acquisition capability, and a broach lethal package to enable the attack of blast/fragmentation and penetration type targets. The JSOW Unitary provides 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. JSOW-C Initial Operational Capability was achieved in February 2005.

FY 2015-2017 includes funding for development, integration, qualification, follow-on developmental and operational test and evaluation of a Network Enabled Weapon moving maritime target capability into the JSOW Unitary weapon (AGM-154C-1). The AGM-154C-1 capability will enable the weapon to be integrated with the network and attack sea moving maritime targets via real-time pre-and post-launch targeting updates. JSOW will continue to conduct analysis and development of solutions to system integration challenges, and continual enhancement of warfighter effectiveness in the employment of the JSOW weapon system. JSOW funding will provide enhancements to include the analysis of extended range and future improvements to the JSOW-C configuration to improve capability. In addition, FY 2015-2017 includes funding to integrate new functionality of the Common Unique Planning Component into the joint mission planning systems and precision guided munitions planning system. In FY 2016, the program will transition to software improvement/integration and interoperability following the completion of efforts associated with Operational Testing in 2nd Qtr FY 2016.

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / <i>Joint Standoff Weapon Systems</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	4.400	0.405	0.429	-	0.429
Current President's Budget	4.389	0.405	0.412	-	0.412
Total Adjustments	-0.011	0.000	-0.017	-	-0.017
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.011	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.017	-	-0.017

**Change Summary Explanation**

Decrease in Joint Standoff Weapons Systems by \$0.017M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

Schedule:

OT-IIIIB end date moved from 4QFY15 to 1QFY16 to reflect testing schedule delays.

OT Final Report moved from 1QFY16 to 2QFY16 to reflect testing schedule delays.

FRP11 award was changed from 2QFY15 to 4QFY15.

Production shutdown activities added starting in 2QFY16.

FRP-09 deliveries end date moved from 3QFY15 to 3QFY16 to reflect updated schedule due to LAT failure.

FRP-10 deliveries moved from 4QFY15-4QFY16 to 2QFY16-4QFY16 to reflect updated schedule due to FRP09 delay.

Technical: N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604727N / Joint Standoff Weapon Systems				<b>Project (Number/Name)</b> 2068 / Joint Standoff Weapon (JSOW)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2068: Joint Standoff Weapon (JSOW)	892.691	4.389	0.405	0.412	-	0.412	0.433	0.442	0.451	0.460	3.474	903.157
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Provides funds for the development of a weapon to be employed by aircraft to attack targets during day, night, and adverse weather conditions. The JSOW design will capitalize on aircraft sensor capabilities and minimize individual weapon sophistication, reducing unit cost and provides a significant increase in strike warfare capability. Excludes civilian and military manpower and their related costs and military construction costs which are included in appropriate management and support elements in this program.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> Network Enabled Weapon (NEW)	4.389	0.218	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Develop and integrate the NEW moving maritime target capability into JSOW-C, termed AGM-154C-1.					
<b>FY 2015 Accomplishments:</b> Complete weapon qualification and follow-on OT efforts and continue support for software integration associated with future obsolescence, software improvements, and regression testing on NEW moving maritime target capability.					
<b>FY 2016 Plans:</b> Continue support for software integration associated with future obsolescence, software improvements, and regression testing on NEW moving maritime target capability.					
<b>FY 2017 Base Plans:</b> N/A					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Title:</b> JSOW Common Unique Planning Component (CUPC)	0.000	0.187	0.412	0.000	0.412
<b>Articles:</b>	-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / Joint Standoff Weapon Systems	<b>Project (Number/Name)</b> 2068 / Joint Standoff Weapon (JSOW)

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<b>Description:</b> Incorporates mission planning into the JSOW maritime CUPC and develop new software releases. Address new mission planning functionality related to the incorporation of the NEW moving target capability into the JSOW-C-1 weapons.					
<b>FY 2015 Accomplishments:</b> Continue interoperability efforts for JSOW C-1.					
<b>FY 2016 Plans:</b> Continue interoperability efforts for JSOW C-1.					
<b>FY 2017 Base Plans:</b> Continue interoperability efforts for JSOW C-1.					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	4.389	0.405	0.412	0.000	0.412

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• USN WP,N BLI 223000: JSOW	108.159	12.919	2.232	-	2.232	6.032	1.183	0.000	0.000	0.000	2,277.748

**Remarks**

PB16 terminated JSOW production following the FY15 FRP11 AUR procurement. FY16-19 funding is required for Captive Air Training Missile (CATM) software integration, production line shutdown, and Telemetry Instrumentation Kit (TIK) efforts.

**D. Acquisition Strategy**

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts are utilized for the Engineering and Manufacturing Development and follow-on modification program (i.e., Block II (AGM-154C), AGM-154C-1) efforts. Component breakout is used, when possible, to promote full and open competition.

Fixed price type contracts are utilized for production.

**E. Performance Metrics**

The JSOW C-1 program is meeting the cost, schedule, performance, funding and life cycle sustainment in accordance with the Acquisition Program Baseline.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / Joint Standoff Weapon Systems	<b>Project (Number/Name)</b> 2068 / Joint Standoff Weapon (JSOW)
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<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering	MIPR	National Security Agency : Fort Meade, MD	1.057	0.109	Jan 2015	0.119	Jan 2016	0.000		-		0.000	0.000	1.285	-
Prior year Prod Dev no longer funded in the FYDP	Various	Various : Various	802.617	0.000		0.000		0.000		-		0.000	0.000	802.617	-
<b>Subtotal</b>			803.674	0.109		0.119		0.000		-		0.000	0.000	803.902	-

<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development - JMPS	SS/CPFF	Lockheed Martin Systems Integration : King of Prussia, PA	5.718	0.000		0.187	Apr 2016	0.412	Dec 2016	-		0.412	5.260	11.577	11.594
Prior year Support no longer funded in the FYDP	Various	Various : Various	8.007	0.000		0.000		0.000		-		0.000	0.000	8.007	-
<b>Subtotal</b>			13.725	0.000		0.187		0.412		-		0.412	5.260	19.584	-

**Remarks**  
 (1) Funding in previous years was sent to Raytheon Missile Systems. In FY13 a new contract was awarded with Lockheed Martin Systems Integration.  
 (2) FY15 funding moved to fund higher priority Operational Testing requirements.  
 (3) FY17 funding increased due to program transition to software improvement/integration and interoperability efforts following completion of OT in FY16.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Oper Test and Evaluation	WR	COMOPTEVFOR : Norfolk, VA	15.754	4.280	Oct 2014	0.099	Feb 2016	0.000		-		0.000	0.000	20.133	-
Prior year T&E no longer funded in the FYDP	WR	NAWCWD : China Lake, CA	34.034	0.000		0.000		0.000		-		0.000	0.000	34.034	-
<b>Subtotal</b>			49.788	4.280		0.099		0.000		-		0.000	0.000	54.167	-

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / Joint Standoff Weapon Systems	<b>Project (Number/Name)</b> 2068 / Joint Standoff Weapon (JSOW)
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<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**  
(1) FY15 and FY16 increased due to Operational Testing requirements.

<b>Management Services (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior year Mgmt no longer funded in the FYDP	Various	Various : Various	25.504	0.000		0.000		0.000		-		0.000	0.000	25.504	-
<b>Subtotal</b>			25.504	0.000		0.000		0.000		-		0.000	0.000	25.504	-

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	892.691	4.389	0.405	0.412	-	0.412	5.260	903.157	-

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / Joint Standoff Weapon Systems	<b>Project (Number/Name)</b> 2068 / Joint Standoff Weapon (JSOW)
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<b>Joint Standoff Weapon</b>																												
<b>Acquisition Milestones</b>																												
Milestones																												
JSOW C-1 IOC ▲																												
<b>Systems Development</b>																												
Hardware Development																												
Software Development																												
Integration & Interoperability																												
Reviews																												
OTRR ■																												
<b>Test and Evaluation</b>																												
Development Test and Evaluation																												
Integrated Test and Evaluation																												
IT-VI																												
Operational Test and Evaluation																												
OT-III B																												
OT Final Report ▼																												
<b>Production Milestones</b>																												
Contract Awards																												
FRP-11 ●																												
Production Shutdown ●																												
<b>Deliveries</b>																												
FRP-9																												
FRP-10																												
FRP-11																												
<b>Production Shutdown</b>																												
Production Shutdown																												

*2017PB - 0604727N - 2068 OT Final Report refers to AGM-154C-1 Operational Test Agency Follow On Evaluation OT-III B Final Report*

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2017 Navy</b>		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604727N / <i>Joint Standoff Weapon Systems</i>	<b>Project (Number/Name)</b> 2068 / <i>Joint Standoff Weapon (JSOW)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Joint Standoff Weapon</b>				
Acquisition Milestones: Milestones: Initial Operational Capability C-1	2	2016	2	2016
Systems Development: Software Development: Integration and Interoperability	1	2016	4	2021
Systems Development: Reviews: Operational Test Readiness Review	2	2015	2	2015
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Integrated Test (IT-VI)	1	2015	2	2015
Test and Evaluation: Operational Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Operational Test (OT-IIIB)	2	2015	1	2016
Test and Evaluation: Operational Test and Evaluation: AGM-154C-1 JSOW Operational Test Agency Follow-On Evaluation Report OT-IIIB Final Report	2	2016	2	2016
Production Milestones: Contract Awards: FRP-11 Award AGM-154C-1	4	2015	4	2015
Production Milestones: Contract Awards: Production Shutdown Awards	2	2016	2	2016
Deliveries: FRP-9 Deliveries- AGM-154C-1	1	2015	3	2016
Deliveries: FRP-10 Deliveries- AGM-154C-1	2	2016	4	2016
Deliveries: FRP-11 Deliveries- AGM-154C-1	4	2016	3	2017
Production Shutdown: Production Shutdown	2	2016	2	2018