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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605450A / Joint Air-to-Ground Missile (JAGM)							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	15.684	83.799	88.866	-	88.866	41.286	16.900	-	-	-	246.535
JA6: Joint Air-To-Ground Missile (JAGM)	-	15.684	83.799	88.866	-	88.866	41.286	16.900	-	-	-	246.535

Note

Fiscal Year 2016 increase (+21109) to the JAGM program funds and supports the Engineering and Manufacturing Development (EMD) Aircraft Qualification and Missile Developmental Testing.

A. Mission Description and Budget Item Justification

The Joint Air-to-Ground Missile (JAGM) program is an Army led pre-Major Defense Acquisition Program (MDAP) with joint interest with the U.S. Marine Corps (USMC) and U.S. Navy. The JAGM mission is to develop the next generation of aviation launched missiles to replace the HELLFIRE laser and Longbow radar missiles. JAGM will be used by joint service aircraft for destruction of high value stationary, moving and relocatable land and maritime targets from standoff range in day, night, adverse weather and obscured battlefield conditions.

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	15.119	83.838	67.757	-	67.757
Current President's Budget	15.684	83.799	88.866	-	88.866
Total Adjustments	0.565	-0.039	21.109	-	21.109
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.063	-			
• SBIR/STTR Transfer	-0.498	-			
• Adjustments to Budget Years	-	-0.039	21.109	-	21.109

UNCLASSIFIED

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COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
JA6: Joint Air-To-Ground Missile (JAGM)	-	15.684	83.799	88.866	-	88.866	41.286	16.900	-	-	-	246.535
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note Not applicable for this item.												
A. Mission Description and Budget Item Justification The Joint Air-to-Ground Missile (JAGM) program is an Army led pre-Major Defense Acquisition Program (MDAP) with joint interest with the U.S. Marine Corps (USMC) and U.S. Navy. The JAGM mission is to develop the next generation of aviation launched missiles to replace the HELLFIRE laser and Longbow radar missiles. JAGM will be used by joint service aircraft for destruction of high value stationary, moving and relocatable land and maritime targets from standoff range in day, night, adverse weather and obscured battlefield conditions.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2014	FY 2015	FY 2016	
Title: Milestone (MS) B Preparation Description: The JAGM Product Office will prepare documentation for MS B decision. FY 2014 Accomplishments: The JAGM Product Office continued to prepare documentation for a MS B. FY 2015 Plans: The JAGM Product Office completed documentation for MS B and an Engineering and Manufacturing Development (EMD) Request for Proposal (RFP). Additionally the office will conduct a Source Selection Evaluation Board (SSEB) in response to the RFP. MS B decision expected mid-Fiscal Year (FY) 2015.									5.484	11.238	-	
									10.200	16.400	-	
									Title: Guidance Section (GS) Critical Design Review (CDR), Component Qualification Testing (CQT) and System Qualification Testing Description: The JAGM Product Office will integrate the JAGM GS to the HELLFIRE missile backend and perform System Qualification Testing. FY 2014 Accomplishments: The GS CDR and CQT completed in FY 2014. The JAGM Product Office integrated the JAGM GS to the HELLFIRE missile backend and performed System Qualification Testing. The required testing included Temperature and Vibration, Electromagnetic			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
Environmental Effects (E3), Tower/Captive Flight Testing, Lethality Testing and use of hardware-in-the-loop facilities to evaluate missile performance. FY 2015 Plans: The JAGM Product Office and prime contractor will continue System Qualification Testing that includes E3 and Tower/Captive Flight Testing. The Government will conduct ground launched flight tests of the missile as a risk reduction effort prior to EMD.				
Title: Engineering and Manufacturing Development (EMD) Contract Description: The JAGM prime contractor will conduct qualification of the production line and deliver missiles to support both Developmental and Operational Testing. The prime contractor will support government led activities to qualify the JAGM on the AH-64 Longbow Apache. FY 2015 Plans: Procure EMD long lead items (HELLFIRE Backend) from backend contractor. The JAGM prime contractor will establish subcontracts, procure hardware and initiate production of the JAGM missile. The prime contractor will support airworthiness qualification of the JAGM missile on the AH-64 Longbow Apache. FY 2016 Plans: The JAGM prime contractor continues to establish subcontracts, procure hardware and start production of the JAGM missile on a pilot production line. Contractor supports government led All Up Round (AUR) CDR, System Test Readiness Review (TRR) and Production Qualification Test (PQT).		-	42.630	34.872
Title: System Critical Design Review (CDR) Description: System CDR occurs in the EMD phase. Assess the JAGM system final design as captured in product specifications. Ensures that each item in the product baseline has been captured in the detailed design documentation. FY 2015 Plans: The JAGM Product Office and the prime contractor will prepare for JAGM System CDR. FY 2016 Plans: JAGM Product Office will complete System CDR by verifying prime contractor design compliance to all performance requirements including environmental conditions, missile and platform interfaces, reliability and cyber security.		-	3.516	5.522
Title: Engineering and Manufacturing Development (EMD) Aircraft Qualification and Missile Developmental Testing Description: The Government will conduct system developmental testing and aircraft qualification testing. FY 2015 Plans:		-	10.015	32.475

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B. Accomplishments/Planned Programs (\$ in Millions)										FY 2014	FY 2015	FY 2016
<p>The JAGM Product Office will conduct warhead lethality testing, integrated flight simulations, captive carry testing and missile flight testing. The JAGM Product Office, platform product office and platform prime contractor will conduct aircraft qualification testing. Test data and interface requirements will support initial airworthiness qualification required for testing on the AH-64 Longbow Apache.</p> <p>FY 2016 Plans: The JAGM Product Office and Other Government Agencies will conduct warhead tests for lethality characterization and Live Fire Test and Evaluation (T&E) requirements; seeker performance through captive flight tests including countermeasures and hardware in the loop; Production Qualification Tests for environmental and Electromagnetic Environmental Effects (E3); ground launched missile flight tests; safety of flight tests and platform integration laboratory testing for airworthiness and interface verification; System Test Readiness Review; Apache flight tests with missile launches against threat targets including Live Fire T&E. The data will support the Full Material Release process.</p>												
<p>Title: Milestone (MS) C Preparation</p> <p>Description: The JAGM Product Office will complete all documentation, conduct evaluations, reviews and analyses to support a FY 2017 MS C decision, Production Contract Award and contract options.</p> <p>FY 2016 Plans: JAGM Product Office will complete all documentation, conduct evaluations, reviews and analyses to support a FY 2017 MS C decision, Production Contract Award and contract options.</p>										-	-	15.997
Accomplishments/Planned Programs Subtotals										15.684	83.799	88.866
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost	
• C7030200: JAGM Missile Procurement; SSN C7030200	-	-	27.738	-	27.738	57.466	151.619	109.932	128.584	Continuing	Continuing	
• 0605450N: Navy JAGM Missile RDT&E	4.800	6.300	25.900	-	25.900	19.800	9.000	4.400	-	Continuing	Continuing	
• 0206138M: Navy JAGM Missile Procurement	-	-	-	-	-	26.200	26.200	24.300	24.300	Continuing	Continuing	
Remarks												

UNCLASSIFIED

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D. Acquisition Strategy The JAGM EMD acquisition approach outlines the plan to qualify the All Up Round (AUR), qualify the production line, qualify JAGM on the U.S. Army AH-64 Apache and complete operational testing. Advanced Procurement of long lead items (HELLFIRE Romeo backends and Millimeter Wave (MMW) subsystems) occur in FY 2016. This long lead procurement is needed to facilitate FY 2017 Low Rate Initial Production (LRIP) 1 production timeline, which is necessary to achieve Initial Operational Capability (IOC) in FY 2018 and Full Rate Production (FRP) in FY 2019. The JAGM Product Office and Army Contracting Command (ACC) - Redstone Arsenal will conduct a full and open competition for the JAGM EMD phase.		
E. Performance Metrics N/A		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0605450A / Joint Air-to-Ground Missile (JAGM)				Project (Number/Name) JA6 / Joint Air-To-Ground Missile (JAGM)					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Eng/ Project Management	C/LH	Various : Performers	34.284	6.090		11.081		11.942		-		11.942	10.970	74.367	-
Subtotal			34.284	6.090		11.081		11.942		-		11.942	10.970	74.367	-
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technology Development Prime Contract	C/FFP	TD : Prime Contract	371.319	-		-		-		-		-	-	371.319	-
Rocket Motor Insensitive Munition (IM) Qualification	C/CPFF	Defense Ordnance Technology Consortium (DOTC) : Picatinny Arsenal, NJ	30.534	-		1.900		-		-		-	-	32.434	-
Electro-Mechanical Control Actuator System (EMCAS)	C/CPFF	Defense Ordnance Technology Consortium (DOTC) : Picatinny Arsenal, NJ	4.033	-		-		-		-		-	-	4.033	-
Integrated Warhead	C/CPFF	Defense Ordnance Technology Consortium (DOTC) : Picatinny Arsenal, NJ	2.982	-		-		-		-		-	-	2.982	-
EMD Long Lead Contract (Backends)	SS/FFP	Lockheed Martin : Orlando, FL	0.000	0.430		10.164		-		-		-	-	10.594	-
Development Engineering	C/LH	Various : Performers	21.072	0.576		-		-		-		-	-	21.648	-
EMD Prime Contract	C/FPIF	TBD : TBD	0.000	-		32.466		34.872		-		34.872	20.645	87.983	-
Subtotal			429.940	1.006		44.530		34.872		-		34.872	20.645	530.993	-
Remarks (C / FFP) - Competitive / Firm Fixed Price (C / CPFF) - Competitive / Cost-Plus Fixed Fee (C / LH) - Competitive / Labor Hour (SS / FFP) - Sole Source / Firm Fixed Price															

UNCLASSIFIED

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Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
(C / FPIF) - Competitive / Fixed Price Incentive (Firm Target)															
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Gov Agencies	C/LH	Various : Performers	15.738	8.588		28.188		42.052		-		42.052	26.571	121.137	-
Subtotal			15.738	8.588		28.188		42.052		-		42.052	26.571	121.137	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			479.962	15.684		83.799		88.866		-		88.866	58.186	726.497	-
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army																Date: February 2015																	
Appropriation/Budget Activity										R-1 Program Element (Number/Name)										Project (Number/Name)													
2040 / 5										PE 0605450A / Joint Air-to-Ground Missile (JAGM)										JA6 / Joint Air-To-Ground Missile (JAGM)													
Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020								
	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					
Final Design and Design Verification Test																																	
(1) CDR Guidance Section																																	
Component Qualification Testing																																	
System Qualification Testing																																	
MS Decision Preparation																																	
(2) MS B Decision																																	
(3) CDR - All Up Round																																	
EMD																																	
Army System & Integration Testing																																	
(4) MS C Decision																																	
(5) IOC																																	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605450A / <i>Joint Air-to-Ground Missile (JAGM)</i>	Project (Number/Name) JA6 / <i>Joint Air-To-Ground Missile (JAGM)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Final Design and Design Verification Test	2	2013	1	2014
CDR Guidance Section	2	2014	2	2014
Component Qualification Testing	2	2014	4	2014
System Qualification Testing	3	2014	2	2015
MS Decision Preparation	1	2013	2	2015
MS B Decision	3	2015	3	2015
CDR - All Up Round	2	2016	2	2016
EMD	4	2015	4	2017
Army System & Integration Testing	4	2015	4	2017
MS C Decision	4	2017	4	2017
IOC	4	2018	4	2018