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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604814A / Artillery Munitions - EMD
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	3.576	8.205	-	-	-	-	-	-	-	-	11.781
708: XM982 Projectile	-	3.576	8.205	-	-	-	-	-	-	-	-	11.781

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2013: \$.657 million budget adjustment.

A. Mission Description and Budget Item Justification

Excalibur is a Precision Guided Extended Range 155mm Artillery projectile providing Brigade Combat Teams an organic precision fires capability. Additionally it provides improved fire support capability due to its increased range of 40.5 kilometers and demonstrated accuracy of < 4 meters radial miss distances, which enables a first round effect on target reducing the number of rounds required while reducing collateral damage. Excalibur is compatible with the M777A2 Lightweight 155mm Howitzer (LW155) and the M109A6 Paladin Howitzer and Sweden's Archer Howitzer. Excalibur provides a 35% range increase over current Rocket Assisted Projectiles, with a < 10 meter accuracy circular error probable at all ranges. Excalibur is also highly resistant to Global Positioning System (GPS) jamming. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributed resources towards the development and have procured rounds in accordance with an established Project Agreement for use in their Archer Howitzer.

Increment Ib completed a successful Milestone C Decision Review on December 12, 2012. The first Low Rate Initial Production contract was awarded on December 21, 2012.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	4.346	8.209	-	-	-
Current President's Budget	3.576	8.205	-	-	-
Total Adjustments	-0.770	-0.004	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.113	-			
• Adjustments to Budget Years	-0.657	-0.004	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604814A / Artillery Munitions - EMD				Project (Number/Name) 708 / XM982 Projectile			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
708: XM982 Projectile	-	3.576	8.205	-	-	-	-	-	-	-	-	11.781
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
Excalibur is a Precision Guided Extended Range 155mm Artillery projectile providing Brigade Combat Teams an organic precision fires capability. Additionally it provides improved fire support capability due to its increased range of 40.5 kilometers and demonstrated accuracy of < 4 meters radial miss distances, which enables a first round effect on target reducing the number of rounds required while reducing collateral damage. Excalibur is compatible with the M777A2 Lightweight 155mm Howitzer (LW155) and the M109A6 Paladin Howitzer and Sweden's Archer Howitzer. Excalibur provides a 35% range increase over current Rocket Assisted Projectiles, with a < 10 meter accuracy circular error probable at all ranges. Excalibur is also highly resistant to Global Positioning System (GPS) jamming. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributed resources towards the development and have procured rounds in accordance with an established Project Agreement for use in their Archer Howitzer.												
Increment Ib completed a successful Milestone C Decision Review on December 12, 2012. The first Low Rate Initial Production contract was awarded on December 21, 2012.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Increment Ib development support. Articles: Description: Increment Ib development support. FY 2013 Accomplishments: Continuation of Increment Ib follow-on Artillery development support, completion of qualification testing, and prepare for IOT&E testing. FY 2014 Plans: Implementation of reliability growth effort and completion of the IOT&E.									1.479	2.920	-	
									-	-	-	
Title: Integrated Developmental Testing/Operational Testing (DT/OT), Safety/Reliability testing, and operational assessment for Increment Ib. Articles: Description: Conduct Integrated Developmental Testing/Operational Testing (DT/OT) , Safety/Reliability testing, and operational assessment.									2.097 -	5.285 -	- -	

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Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604814A / Artillery Munitions - EMD				Project (Number/Name) 708 / XM982 Projectile				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: To conduct operational testing, safety and reliability testing, initial operational test and evaluation.												
FY 2014 Plans: To complete initial operational test and evaluation to support full rate production for Increment Ib.												
Accomplishments/Planned Programs Subtotals										3.576	8.205	-
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
• Procurement Ammo: Procurement Ammunition Army: Proj 155mm Extended Range: XM982-U Excalibur: E80103	68.528	77.326	35.672	-	35.672	45.518	-	-	-	-	227.044	
Remarks												
D. Acquisition Strategy												
Excalibur is a family of Precision Guided Extended Range Munitions. In 1997, a competitive Engineering and Manufacturing Development (EMD) contract was awarded for the initial increment, with options for Low Rate Initial Production (LRIP) quantities. In coordination with the Army Acquisition Executive, the Army implemented an incremental development approach that provided for an early fielding capability in FY 2007 in response to an Urgent Needs Statement in support of Operation Iraqi Freedom (as of September 2010 re-named to Operation New Dawn) and Operation Enduring Freedom. Increment Ib was solicited as a full and open competition and awarded to two contractors in September 2008. Following the Increment Ib strategy, the Army conducted a demonstration phase followed by a shoot off between the two competing contractors and down selected to a single contractor for qualification and production. The shoot off was completed in July 2010 followed by the downselect decision on 25 August 2010 to support Phase II development and qualification. Increment Ib completed successful Milestone C Decision Review on December 12, 2012. The first Low Rate Initial Production contract was awarded on December 21, 2012. The contractor is currently testing/implementing reliability growth initiatives to further improve the overall reliability of the Increment Ib rounds. The Army will conduct an Initial Operational Test and Evaluation in fiscal year 2014 followed by a Full Materiel Release and Full Rate Production Decision.												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604814A / Artillery Munitions - EMD				Project (Number/Name) 708 / XM982 Projectile					
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Misc Support Contracts	Various	Various : Various	3.645	-		-		-		-		-	-	3.645	3.645
Platform Integration/Fire Control - AFATDS	SS/CPIF	Raytheon AFATDS : Fort Wayne, IN	5.907	-		-		-		-		-	-	5.907	5.907
Govt Support for Paladin, LW155 Integration SW Development	MIPR	ARDEC, Software Engineering : Picatinny, NJ	7.588	-		-		-		-		-	-	7.588	7.588
Increment 1b Development Phase 2	C/CPIF	Raytheon Missile System : Tucson, AZ	77.428	-		-		-		-		-	-	77.428	77.428
Increment 1b Development Phase 1	C/FFP	Alliant Techsystems : Plymouth, MN	30.773	-		-		-		-		-	-	30.773	30.773
Increment 1b Development Phase 1	C/FFP	Raytheon Missile System : Tucson, AZ	30.413	-		-		-		-		-	-	30.413	30.413
Platform Integration & EPIAFS Software Development	MIPR	Navy, Surface Warfare Center : MD	0.230	-		-		-		-		-	-	0.230	0.230
Follow on Precision Artillery risk reduction	C/CPFF	ARDEC : Picatinny, NJ	5.049	-		-		-		-		-	-	5.049	5.049
Platform Integration-Systems Contractor	MIPR	ARES : Annapolis, MD	0.840	-		-		-		-		-	-	0.840	0.840
TCM Merger Assessment	SS/FP	Bofors Defence, Karlskoga : Sweden	14.430	-		-		-		-		-	-	14.430	14.430
Fee on Excalibur Development Contract	C/CPIF	Raytheon Missile System : Tucson, AZ	35.377	-		-		-		-		-	-	35.377	35.377
Platform Integration LW155 M777A2	C/CPIF	BAE : Burlington, VT	11.989	-		-		-		-		-	-	11.989	11.989
ARDEC fuze technology maturation (DOTC)	SS/FP	ARDEC : Picatinny, NJ	3.872	-		-		-		-		-	-	3.872	3.872
SS-SFM Test Projectiles	C/FFP	Various : Varoius	10.815	-		-		-		-		-	-	10.815	10.815
Advanced Cargo Projectile Technology	MIPR	DMEA, McClellan : CA	2.390	-		-		-		-		-	-	2.390	2.390
Platform Integration Firing Tables Development	MIPR	ARDEC, Firing Tables Branch Picatinny, NJ and : Aberdeen, MD	2.399	-		-		-		-		-	-	2.399	2.399

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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Excalibur Increment Ia Development	C/CPIF	Raytheon Missile System : Tucson, AZ	428.187	-		-		-		-		-	-	428.187	428.187
Subtotal			671.332	-		-		-		-		-	-	671.332	671.332
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Program Management	PO	PM Excalibur : Picatinny, NJ	27.771	0.300	Nov 2012	0.400	Oct 2013	-		-		-	-	28.471	28.471
Government Support-Excalibur XM982	MIPR	ARDEC : Picatinny, NJ	67.482	1.179	Nov 2012	2.500	Jan 2014	-		-		-	-	71.161	71.161
Government Support- Ft Sill	MIPR	Ft. Sill : OK	3.534	-		0.020	Nov 2013	-		-		-	-	3.554	3.554
Milestone Support	C/FP	Camber : Alexandria, VA	1.792	-		-		-		-		-	-	1.792	1.792
Miscellaneous Support	Various	Various : Various	4.175	-		-		-		-		-	-	4.175	4.175
Engineering Services Contract for Increment 1a-2	SS/CPFF	Raytheon Missile Systems : Tucson, AZ	0.085	-		-		-		-		-	-	0.085	0.085
Paladin Platform Integration	MIPR	PM Paladin : Picatinny, NJ	0.930	-		-		-		-		-	-	0.930	0.930
Government Support - SS-SFM	MIPR	ARDEC : Picatinny, NJ	1.625	-		-		-		-		-	-	1.625	1.625
Technical Spt Contract for Platform Integration	C/FP	Camber : Dallas, TX	0.821	-		-		-		-		-	-	0.821	0.821
Fire Control development support	MIPR	Fort Monmouth, NJ and : Fort Sill, OK	1.008	-		-		-		-		-	-	1.008	1.008
Platform Integration Software Support	MIPR	Navy Surface Warfare Center : MD	0.390	-		-		-		-		-	-	0.390	0.390
Government TCM Support	MIPR	ARDEC : Picatinny, NJ	0.910	-		-		-		-		-	-	0.910	0.910

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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Government Support- Advanced Cargo Projectile Technology	MIPR	ARDEC : Picatinny, NJ	0.353	-		-		-		-		-	-	0.353	0.353
Government Support Platform Integration	MIPR	ARDEC : Picatinny, NJ	6.241	-		-		-		-		-	-	6.241	6.241
PM CAS SS-SFM	PO	PM CAS : Picatinny, NJ	0.700	-		-		-		-		-	-	0.700	0.700
Increment Ia Engineering Services	MIPR	DMEA : McClellan, CA	5.078	-		-		-		-		-	-	5.078	5.078
Increment Ia Engineering Services	C/CPFF	DRS : Eatontown, NJ	12.850	-		-		-		-		-	-	12.850	12.850
Modeling and Structural Development	MIPR	Army Research Labs : Adelphi, MD	9.034	-		-		-		-		-	-	9.034	9.034
Government Engineering Support for Precision Artillery Risk Reduction	MIPR	ARDEC : Picatinny, NJ	2.750	-		-		-		-		-	-	2.750	2.750
Subtotal			147.529	1.479		2.920		-		-		-	-	151.928	151.928
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
TECOM Test Range	MIPR	Yuma Proving Grounds : Yuma, AZ	23.768	2.000	Jan 2013	3.240	Nov 2013	-		-		-	-	29.008	29.008
Test Instrumentation and Analysis	MIPR	Army Research Labs : Adelphi, MD	3.935	-		0.196	Dec 2013	-		-		-	-	4.131	4.131
Telemetry Support	SS/FFP	Physical Science Laboratories (PSL) : Las Cruces, NM	3.146	-		-		-		-		-	-	3.146	3.146
Telemetry Support	MIPR	ARDEC : Picatinny, NJ	17.711	-		0.150	Nov 2013	-		-		-	-	17.861	17.861

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Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604814A / Artillery Munitions - EMD				Project (Number/Name) 708 / XM982 Projectile					
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Telemetry Cryptographic Support & Anti-Jam Support	MIPR	Ft. Huachuca : AZ	0.822	0.097	Jun 2013	-		-		-		-	-	0.919	0.919
Target Replacement, Definition, Maintenance and Repair and Threat Assessment	MIPR	Target Management Office : Huntsville, AL	1.558	-		0.078	Nov 2013	-		-		-	-	1.636	1.636
Operational Test Support & AEC	MIPR	ATEC : Alexandria, VA	9.457	-		0.200	Dec 2013	-		-		-	-	9.657	9.657
ARDEC Testing	MIPR	ARDEC : Picatinny, NJ	2.814	-		0.221	Jan 2014	-		-		-	-	3.035	3.035
TECOM Test Range	MIPR	White Sands Missile Range : NM	13.595	-		-		-		-		-	-	13.595	13.595
Operational Test Support	MIPR	Ft. Sill : OK	3.244	-		1.200	Nov 2013	-		-		-	-	4.444	4.444
Test Gun Equipment	MIPR	Watervliet Arsenal : NY	3.972	-		-		-		-		-	-	3.972	3.972
Test Hardware	SS/CPFF	SAVIT : Parsippany, NJ	0.450	-		-		-		-		-	-	0.450	0.450
Live Fire Test and Evaluation	MIPR	ARL : Aberdeen, MD	0.697	-		-		-		-		-	-	0.697	0.697
Tri-Service Software Assessment	MIPR	OSD : Washington, DC	0.061	-		-		-		-		-	-	0.061	0.061
SS-SFM Testing	MIPR	Yuma Proving Grounds : Yuma, AZ	2.300	-		-		-		-		-	-	2.300	2.300
Subtotal			87.530	2.097		5.285		-		-		-	-	94.912	94.912
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			906.391	3.576		8.205		-		-		-	-	918.172	918.172
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604814A / <i>Artillery Munitions - EMD</i>		
			Project (Number/Name) 708 / <i>XM982 Projectile</i>		

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Increment Ia-2 Prod. Deliveries																												
Increment Ib development																												
Increment Ib Milestone C																												
Increment Ib Production Award																												
Increment Ib Production Deliveries																												
Increment Ib First Article Testing																												
Execution of DT/OT Supporting MS-C																												
Final Safety/Reliability Tests Supporting Material Release																												
Preparation & Execution of Increment Ib IOT&E																												
Increment Ib IOC																												
Increment Ib Full Rate Production Review																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604814A / <i>Artillery Munitions - EMD</i>	Project (Number/Name) 708 / <i>XM982 Projectile</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment Ia-2 Prod. Deliveries	4	2011	2	2014
Increment Ib development	4	2008	2	2014
Increment Ib Milestone C	1	2013	1	2013
Increment Ib Production Award	1	2013	1	2013
Increment Ib Production Deliveries	2	2014	4	2016
Increment Ib First Article Testing	1	2014	1	2014
Execution of DT/OT Supporting MS-C	2	2012	1	2013
Final Safety/Reliability Tests Supporting Material Release	4	2012	4	2013
Preparation & Execution of Increment Ib IOT&E	4	2013	2	2014
Increment Ib IOC	3	2014	3	2014
Increment Ib Full Rate Production Review	3	2014	3	2014