Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 2: *Applied Research*					R-1 Program Element (Number/Name) PE 0602623A *I JOINT SERVICE SMALL ARMS PROGRAM*							
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	-	6.378	7.814	6.853	-	6.853	5.527	5.581	5.644	5.600	-	-
H21: *Jt Svc Sa Prog (JSSAP)*	-	6.378	7.814	6.853	-	6.853	5.527	5.581	5.644	5.600	-	-

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

Note

FY15 funding realigned to support higher priority efforts.

A. Mission Description and Budget Item Justification

This program element (PE) investigates designs and evaluates individual and crew-served weapon technologies that enhance the fighting capabilities and survivability of the dismounted Warfighter in support of all the Services. All work is done under the Joint Service Small Arms Program (JSSAP) (Project H21) and are based upon the Joint Service Small Arms Master Plan (JSSAMP) and the Joint Capabilities Integration Development System's Small Arms Analyses.

Work in this PE is related to, and fully coordinated with, efforts in PE 0601102A (Defense Research Sciences),PE 0602624A (Weapons and Munitions Technology), PE 0603607A (Joint Service Small Arms Program), and PE 0603827A (Soldier Systems-Advanced Development).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

This program is managed by the US Army Armament Research, Development, and Engineering Center (ARDEC), Picatinny Arsenal, NJ in collaboration with the Army Research Laboratory (ARL) at Aberdeen proving Ground, MD.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	7.169	7.818	8.969	-	8.969
Current President's Budget	6.378	7.814	6.853	-	6.853
Total Adjustments	-0.791	-0.004	-2.116	-	-2.116
• Congressional General Reductions	-0.011	-0.004			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.050	-			
• SBIR/STTR Transfer	-0.169	-			
• Adjustments to Budget Years	-	-	-2.116	-	-2.116

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 2: *Applied Research*		R-1 Program Element (Number/Name) PE 0602623A *I JOINT SERVICE SMALL ARMS PROGRAM*			
• Sequestration	-0.561	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 2	R-1 Program Element (Number/Name) PE 0602623A / *JOINT SERVICE SMALL ARMS PROGRAM*	Project (Number/Name) H21 / *Jt Svc Sa Prog (JSSAP)*	

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
H21: *Jt Svc Sa Prog (JSSAP)*	-	6.378	7.814	6.853	-	6.853	5.527	5.581	5.644	5.600	-	-

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

A. Mission Description and Budget Item Justification

This project investigates designs and evaluates individual and crew-served weapon component technologies that enable increased lethality for survivability of the dismounted Warfighter in all the Services. All efforts are based upon the Joint Service Small Arms Master Plan (JSSAMP) and the Joint Capabilities Integration Development System's Small Arms Analyses.

Efforts in this program element support the Soldier Science and Technology portfolio

Work in this project is related to, and fully coordinated with, efforts in PE 0602624A (Weapons and Munitions Technology) and PE 0603607A (Joint Service Small Arms Program) and PE 0602786A (Warfighter Technology).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the US Army Armament Research, Development, and Engineering Center (ARDEC), Picatinny, NJ.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Advanced Small Unit (Squad) Small Arms Technology Concepts	3.382	3.750	2.015
Description: This effort was originally titled JSSAP Mini Grand Challenge. It addresses future small arms technology investments including new materials, high power energy sources, miniaturization techniques, and reduction of weapon moving components.			
FY 2013 Accomplishments: Investigate new small arm concepts and systems proposed to enable Small Unit operations; fund research to decrease time to complete mission objective and double the maximum effective range of current individual and crew served small arm systems as defined by the Small Arms Capabilities Based Assessment; analyze new concepts through modeling and simulation.			
FY 2014 Plans: Continue to design and conduct experiments of a universal projectile concept to validate modeling and simulation of projectile aerodynamics, launch survivability and suitability to military environments; investigate gun barrel stabilization technologies to validate effectiveness of maximum range increases.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 2	**R-1 Program Element (Number/Name)** PE 0602623A / *JOINT SERVICE SMALL ARMS PROGRAM*	**Project (Number/Name)** H21 / *Jt Svc Sa Prog (JSSAP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Will validate advanced armor piercing ammunition technology designs that achieve TRL 5 and prepare transition documentation for Project Manager Maneuver Ammunition Systems (PM MAS); will mature weapon advanced stabilization concept for 6.3 transition.			
Title: Small Arms Material and Process Technology ***Description:*** This effort addresses state of the art material substrates and surface coatings to improve reliability, reduce maintenance and improve weapon diagnostics through embedded technology. ***FY 2013 Accomplishments:*** Investigated available state-of-the-art coatings materials and processes and the potential synergistic effects to weapon applications; designed and conducted experiments at component level to determine validity of technology to small arms applications; used modeling and simulation to validate analytical predictions; formulated concept and application studies. ***FY 2014 Plans:*** Develop and analyze custom phosphors for providing day/night capable tracer material; validate phosphor characteristics (excitation and emission energies) to enhance focus light back to the shooter; mature coatings for corrosion resistant applications on ammunition and weapons; conduct experiments through suppressor development designs to decrease peak temperatures and increase reliability. ***FY 2015 Plans:*** Will experiment with selected phosphors properties that provide one-way luminescence capability for 5.56mm 7.62mm caliber ammunition; will mature suppressor designs to decrease flash and acoustic detection; will validate adaptive solid lubricants to decrease required weapon maintenance.	2.996	4.064	2.518
Title: Advanced Future Small Arms Concept Exploration ***Description:*** This effort address the investigation and maturation of enabling technologies transitioned from Basic Research (6.1) efforts in the areas of ballistics, energetics, future weapon and fire control sensors in order to extend individual soldier engagement ranges and maintain squal lethality overmatch; optimize caliber performace to match mission sets. ***FY 2015 Plans:*** Will mature advanced small arms kinetic ammunition designs; design and develop new small caliber weapons component technologies to obtain increased range and accuracy, decreased weight, improved target acquisition and engagement while reducing weapons recoil and suppressing weapon signature; investigate futuristic small arms weapon systems proposed by the West Point Futures Studies and generate technology development plans, trade-off analysis, and concept designs.	-	-	2.320
Accomplishments/Planned Programs Subtotals	6.378	7.814	6.853

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 2	**R-1 Program Element (Number/Name)** PE 0602623A / *JOINT SERVICE SMALL ARMS PROGRAM*	**Project (Number/Name)** H21 / *Jt Svc Sa Prog (JSSAP)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A