Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 2: *Applied Research*				R-1 ITEM NOMENCLATURE PE 0602623A: *JOINT SERVICE SMALL ARMS PROGRAM*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	7.630	8.231	7.169	-	7.169	7.818	8.969	9.114	9.267	Continuing	Continuing
H21: *JT SVC SA PROG (JSSAP)*	7.630	8.231	7.169	-	7.169	7.818	8.969	9.114	9.267	Continuing	Continuing

Note

FY13 funding decrease 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 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.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	7.893	8.244	8.604	-	8.604
Current President's Budget	7.630	8.231	7.169	-	7.169
Total Adjustments	-0.263	-0.013	-1.435	-	-1.435
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.202	-			
• Adjustments to Budget Years	-	-	-1.435	-	-1.435
• Other Adjustments 1	-0.061	-0.013	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 2: *Applied Research*	R-1 ITEM NOMENCLATURE PE 0602623A: *JOINT SERVICE SMALL ARMS PROGRAM*	PROJECT H21: *JT SVC SA PROG (JSSAP)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
H21: *JT SVC SA PROG (JSSAP)*	7.630	8.231	7.169	-	7.169	7.818	8.969	9.114	9.267	Continuing	Continuing

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 2011	FY 2012	FY 2013
Title: Advanced Lethal Armament Technology for Small Arms ***Description:*** This effort addresses terminal effects and launch aspects of small arms weapon systems. ***FY 2011 Accomplishments:*** Asses optimum small caliber payloads, fire control and advanced fuzing through component demonstrations confirming critical characteristics, (such as flight dynamics) in a wind tunnel and confirm results with modeling and simulation; develop target-orientation sensors for small caliber payloads designs.	3.134	-	-
Title: Advanced Fire Control Technology for Small Arms ***Description:*** This effort addresses advanced fire control technologies to reduce miss distance of small arms weapon systems. ***FY 2011 Accomplishments:*** Evaluated capability of critical components to engage defilade and covered targets; designed weapon-aiming components improving timeline and target centroid location to increase effectiveness; performed critical lab advanced-aiming assessments; conducted evaluation of tradeoffs resulting from the incorporation of enhancements to small arms critical components.	4.496	-	-
Title: Advanced Small Unit (Squad) Small Arms Technology Concepts	-	3.655	3.801

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 2: *Applied Research*	R-1 ITEM NOMENCLATURE PE 0602623A: *JOINT SERVICE SMALL ARMS PROGRAM*	PROJECT H21: *JT SVC SA PROG (JSSAP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
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 2012 Plans:*** Investigate, design and develop the next generation (2016 and beyond) small arms weapons platforms; investigate critical technologies and concepts that can be integrated into weapons system platforms to provide the Warfighter the next generation new small arms capabilities; conduct experiments to mature small arms component technologies in target engagement, target effectiveness, and power and energy requirements. ***FY 2013 Plans:*** Will 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.			
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 2012 Plans:*** Perform a detailed investigation of these new materials and techniques as applied to current and new weapon systems; mature past investments in lubricous weapon coatings, shot counters and other indicators to increase weapon life, improve durability and reduce weight. ***FY 2013 Plans:*** Will investigate available state-of-the-art coatings materials and processes and the potential synergistic effects to weapon applications; design and conduct experiments at component level to determine validity of technology to small arms applications; use modeling and simulation to validate analytical predictions; formulate concept and application studies.	-	4.576	3.368
Accomplishments/Planned Programs Subtotals	7.630	8.231	7.169

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2013 Army		DATE: February 2012
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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.