ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE
2 - Applied Research	**0602623A - JOINT SERVICE SMALL ARMS PROGRAM**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
Total Program Element (PE) Cost		11271	6607	6247	6362	6435	6490	6539
H21	JT SVC SA PROG (JSSAP)	5519	5621	6247	6362	6435	6490	6539
S50	SMALL ARMS APPLIED RESEARCH (CA)	5752	986	0	0	0	0	0

A. Mission Description and Budget Item Justification: This Program Element (PE) researches and designs individual and crew-served weapon technologies that will enhance the fighting capabilities and survivability of dismounted battlefield personnel in support of all Services. The technology enhancement efforts of this PE will assure that the next generation of small arms weapons systems will overmatch the evolving threat and address the needs of the Future Combat Systems (FCS) and the Future Force, and, where practical enhance Current Force. Project H21 designs and evaluates component technologies for the Lightweight Machine Gun and Ammunition (LMGA) effort. LMGA, complementing both the Objective Individual Combat Weapon (OICW) and the Objective Crew Served Weapon (OCSW), offers significantly reduced weight over the currently fielded M249 Machine Gun and its associated ammunition. LMGA will lighten the Soldier's load, provide improved battlefield mobility and reduced logistics burden to maximize operational utility and survivability, while maintaining or improving current levels of performance. Project S50 funds Congressional special interest items. All Joint Service Small Arms Program (JSSAP) efforts are based upon the Joint Service Small Arms Master Plan (JSSAMP), the Joint Capabilities Integration Development System's Small Arms Analyses, and the resulting Capabilities Development Documents of the Services. The cited work is consistent with the Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP) and the Defense Technology Area Plan (DTAP). This program is managed by the U.S. Army Armament Research, Development and Engineering Center (ARDEC), Picatinny, NJ. Work in this PE is related to, and fully coordinated with, efforts in PE 0602624A (Weapons and Munitions Technology), and PE 0603607A (Joint Service Small Arms Program). Transition paths have been established in coordination with Program Executive Officer (PEO) Soldier, Project Manager Soldier Weapons, Product Manager (PM) Crew Served Weapons, PM Individual Weapons, USMC PM Infantry Weapons and PEO Special Programs, U.S. Special Operations Command (SOCOM). Project S50 contains Congressional Adds only.

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2 - Applied Research	**0602623A - JOINT SERVICE SMALL ARMS PROGRAM**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	11273	5703	6024
Current BES/President's Budget (FY 2007)	11271	6607	6247
Total Adjustments	-2	904	223
Congressional program reductions		-29	
Congressional rescissions		-67	
Congressional increases		1000	
Reprogrammings	-2		
SBIR/STTR Transfer			
Adjustments to Budget Years			223

One FY06 Congressional add totaling $1000 was added to this PE.

FY06 Congressional adds with no R-2A (appropriated amount shown):
($1000) Joint Service Small Arms Program Advanced Recoil Reduction

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
2 - Applied Research	**0602623A - JOINT SERVICE SMALL ARMS PROGRAM**	**H21**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
H21	JT SVC SA PROG (JSSAP)	5519	5621	6247	6362	6435	6490	6539

A. Mission Description and Budget Item Justification: This project researches and designs individual and crew-served weapon technologies that will enhance the fighting capabilities and survivability of dismounted battlefield personnel in support of all the Services. The technology enhancement efforts of this PE will assure that the next generation of small arms weapon systems will continue to overmatch the evolving threat and address the needs of the Future Combat Systems (FCS) and the Future Force, and where practical, enhance Current Force capabilities. The main effort in Project H21 is the Lightweight Small Arms Technologies (LSAT). LSAT will lighten the Soldier's load, and provide improved battlefield mobility and reduced logistics burden to maximize operational utility and survivability, while maintaining or improving current levels of performance. All Joint Service Small Arms Program (JSSAP) efforts are based upon the Joint Service Small Arms Master Plan (JSSAMP), the Joint Capabilities Integration Development System's Small Arms Analyses, and the resulting Capabilities Development Documents of the Services. The cited work is consistent with the Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP) and the Defense Technology Area Plan (DTAP). This program is managed by the U.S. Army Armament Research, Development and Engineering Center (ARDEC), Picatinny, NJ. Work in this PE is related to, and fully coordinated with, efforts in PE 0602624A (Weapons and Munitions Technology), and PE 0603607A (Joint Service Small Arms Program). Transition paths have been established in coordination with Program Executive Officer (PEO) Soldier, Project Manager Soldier Weapons, Product Manager (PM) Crew Served Weapons, PM Individual Weapons, United States Marine Corps (USMC) PM Infantry Weapons and PEO Special Programs, U.S. Special Operations Command (SOCOM).

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Lightweight Small Arms Technologies (LSAT): In FY05, used 3-D models developed previously to continue refining designs for weapon and ammunition components; fabricated limited quantities of the components and evaluated merit on an individual basis for weight and feasibility in a machine gun application. In FY06, conduct component testing to validate models and populate database with actual values for chamber pressure, muzzle velocity, material strength, and functionality; and update models as necessary. In FY07, will complete all necessary subcomponent and lab scale testing; integrate weapon and ammunition component designs into weapon system; integrate subsystem 3-D models into a fully functioning system level model; maximize modularity of components to facilitate future improvements or upgrades; document program processes, models, and simulations to reflect current design status.	5519	5621	6247
Total	5519	5621	6247