ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**

	COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
		Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
	Total Program Element (PE) Cost	27344	33712	34627	31265	47908	32714	40827	32586	0	280983
033	ADV CREW SVC WPN	27344	33712	0	0	0	0	0	0	0	61056
S58	SOLDIER ENHANCEMENT PROGRAM	0	0	12800	15411	19139	15742	16849	12221	0	92162
S59	SOLDIER SUPPORT EQUIPMENT - ED	0	0	296	303	303	302	631	631	0	2466
S60	CLOTHING & EQUIPMENT	0	0	7918	9082	9323	9239	5901	5999	0	47462
S61	ACIS ENGINEERING DEVELOPMENT	0	0	2248	2291	2523	2620	2706	2805	0	15193
S62	OBJECTIVE INDIVIDUAL COMBAT WEAPON	0	0	5126	1786	2716	0	0	0	0	9628
S63	SMALL ARMS IMPROVEMENT	0	0	6239	2392	13904	4811	14740	10930	0	53016

A. Mission Description and Budget Item Justification: This program element for System Development and Demonstration (SDD) manages the Soldier as a system, with the goal of increasing Soldiers' combat effectiveness, increasing survivability, and improving the Soldiers' quality of life. It develops and tests prototypes of weapons, clothing, equipment, and other items useful to support the Soldier. This program element restructures/consolidates the following program elements and associated projects: 0604713 (Project D668 Soldier Enhancement Program, Project DC40 Soldier Support Equipment, and Project DL40 Clothing and Equipment); 0604801 (Project DC45 Aircrew Integrated Systems Engineering Development); and, 0604802 (Project D134 Objective Individual Combat Weapon, Project DAS1 Small Arms Improvement, and Project DAS6 Common Remotely Operated Weapon System (CROWS)). Consolidating common program elements and projects into one program element streamlines the management and efficiency of developing and testing infantry support weapons and associated equipment.

Project 033 (Advanced Crew Served Weapon) develops the 25mm XM-307 Advanced Crew Served Weapon machine gun, which enables the Soldier to effectively suppress and incapacitate exposed and defilade personnel targets out to 2000 meters using airbursting, fragmenting, or thermobaric ammunition. Starting in FY06 and continuing in FY07 and FY08, this program will be funded directly from PE 0604645 to support the Future Combat Systems (FCS) Unit of Action requirement for a mounted version of the XM-307 machine gun.

Project S58 (Soldier Enhancement Program) supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, comminications equipment, and navigational aids.

Project S59 (Soldier Support Equipment) supports engineering development and prototyping of critical Soldier support systems and other combat

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604601A - Infantry Support Weapons

service support equipment that will improve unit sustainability and combat effectiveness.

Project S60 (Clothing and Equipment) supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier.

Project S61 (Aircrew Integrated Systems) provides Engineering Development programs with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance Helicopter.

Project S62 (Objective Individual Combat Weapon) funds System Development and Demonstration (SDD) of the XM-25 Air Burst Assault Weapon. The XM25 Air Burst Weapon is the air burst portion of the XM-29 Integrated Air Burst Weapon. The XM-25 dramatically increases Soldier lethality, survivability, and standoff capability when engaged in combat operations.

Project S63 (Small Arms Improvements) demonstrates engineering development models or integrated commercial items designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability for small arms weapon systems and ammunition.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit) BUDGET ACTIVITY PE NUMBER AND TITLE February 2005

5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	28187	42662	43609
Current Budget (FY 2006/2007 PB)	33712	34627	31265
Total Adjustments	5525	-8035	-12344
Net of Program/Database Changes			
Congressional program reductions	-506		
Congressional rescissions			
Congressional increases	7000		
Reprogrammings			
SBIR/STTR Transfer	-969		
Adjustments to Budget Years		-8035	-12344

Adjustments to Budget years: Funds realigned to higher priority requirements (FY06: \$-8035; FY07: \$-12344)

Item No. 86 Page 3 of 40

Sexhibit R-2

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Exhibit R-2

Budget Item Justification

ARMY RDT&E BUDGET IT	EM JUS	STIFIC	ATION	(R2a	Exhibi	February 2005					
BUDGET ACTIVITY 5 - System Development and Demonstration	n		PE NUMBER AND TITLE 0604601A - Infantry Support Weapons						PROJECT 033		
COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost	
033 ADV CREW SVC WPN	27344	33712	. 0	0	0	0	0	0	0	61056	

A. Mission Description and Budget Item Justification: Not applicable for this item.

Accomplishments/Planned Program Not applicable for this item.

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: Not applicable for this item.

ARMY RDT&E BUDGET ITE	M JUS	STIFIC	ATION	(R2a l	Exhibi	February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration	n		PE NUMBER AND TITLE 0604601A - Infantry Support Weapons							
COST (In Thousands)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
S58 SOLDIER ENHANCEMENT PROGRAM	0	(12800	15411	19139	15742	16849	12221	0	92162

A. Mission Description and Budget Item Justification: This program supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids. Soldiers are managed in three categories: dismounted Soldiers, combat crews (air and ground), and other Soldiers. Projects are generally completed in three years or less.

Funds for prior year efforts were funded under PE 0604713A (Project 668 - Soldier Enhancement Program).

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
FY06-FY07: Continue evaluation/procure prototypes and/or test for several efforts such as Semi-automatic Sniper System, Close Quarters Battle Kit, Fuel Handlers Coveralls.	0	0	872	0
FY06-FY07: Continue evaluation for such items as: Modular Accessory Shotgun System (MASS), Family of Small Arms Suppressors, 12 GA Extended Range Non-Lethal Cartridge, Future Handgun System.	0	0	4491	5898
FY06-FY07: Continue in-house engineering support services, conduct technical evaluation and program reviews.	0	0	3500	3770
FY06-FY07: Initiate market surveys and/or evaluations on new items to commence development and demonstration. New items started will continue evaluation/procurement of new protypes.	0	0	3937	5743
Totals	0	0	12800	15411

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit) February 2005 **BUDGET ACTIVITY** PE NUMBER AND TITLE PROJECT 5 - System Development and Demonstration 0604601A - Infantry Support Weapons S5 **B. Other Program Funding Summary** FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 To Compl Total Cost 5451 Continuing Continuing OPA3, MA68000, Soldier Enhancement OPA2, BA5300, Soldier Enhancement 7670 Continuing Continuing 1269 Continuing Continuing WTCV, GC0076, Small Arms (SEP) WTCV, GZ1290, Squad Automatic Wpn (Mods) 3190 Continuing Continuing WTCV, GZ2800, M16 Rifle Mods 3602 Continuing Continuing WTCV. GB3007. M4 Carbine Mods 9799 Continuing Continuing WTCV, GO1500, Sniper Rifle O

<u>C. Acquisition Strategy:</u> The Soldier Enhancement Program (SEP) focuses on developmental initiatives and integration efforts that lend themselves to accelerated acquisiton and fielding in the near term (within three years). New SEP candidates are reviewed and approved annually. SEP items are procured from multiple appropriations, i.e., OMA, OPA, WTCV, and PAA.

88778 141770 136115

WTCV,GC0925, Mods

PAA, F47500, 7.62mm AP

PAA, F47600, 5.65mm AP

PAA, F0900, 40mm Canister

OMA, 121017, Central Funding & Fielding

2139 Continuing Continuing

0 Continuing Continuing

ARMY RDT&E COST ANALYSIS(R3) February 2005 PE NUMBER AND TITLE PROJECT **BUDGET ACTIVITY** 5 - System Development and Demonstration 0604601A - Infantry Support Weapons **S5**□ I. Product Development Contract Performing Activity & Total FY 2005 FY 2005 FY 2006 FY 2006 FY 2007 FY 2007 Cost To Total Target Method & PYs Cost Value of Location Cost Award Cost Award Cost Award Complete Cost Type Date Date Date Contract a . Various Various TBD 0 0 4713 1Q 5898 1Q 0 10611 0 0 4713 5898 10611 0 Subtotal: Remarks: Candidates for the Soldier Enhancement Program are received, reviewed, and approved annually. Contractual efforts are focused on procuring prototypes for testing. Funding for PE 0604713A, Project 668 transitions to PE 0604601A Project S58 beginning in FY06. II. Support Cost Contract Performing Activity & Total FY 2005 FY 2005 FY 2006 FY 2006 FY 2007 FY 2007 Cost To Total Target Method & Location PYs Cost Cost Award Cost Award Complete Cost Value of Award Cost Type Date Date Date Contract

Remarks: Support costs vary annually depending on the type of items that are being evaluated. Research, Development, and Engineering Centers support to evaluate these items also varies annually depending on the number and types of items.

0

0

2173

2173

0

0

2751

2751

1-4Q

1-4Q

0

4924

4924

0

0

Funding for PE 0604713A, Project 668 transitions to PE 0604601A Project S58 in FY06.

TBD

Various

Subtotal:

a . Various

	ARIVI	Y RDT&E CO	SIAN	ALYS	15(R3)				Feb	ruary 20	05	
BUDGET ACTIVITY 5 - System Develo	pment and	d Demonstration			UMBER AN)4601A -	D TITLE Infantry	Support	Weapo	ns		PROJEC S5	
II. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a . Various	Various		0	0		2414	1-3Q	2992	1-3Q	0	5406	
Subtotal:			0	0		2414		2992		0	5406	ı
Remarks: Testing costs va				-								_
V. Management Services	Contract	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award	FY 2006 Cost	FY 2006 Award	FY 2007 Cost	FY 2007 Award	Cost To Complete	Total Cost	Targe Value o
	Method & Type	Location	F 15 COSt	0031	Date	3331	Date		Date			Contra
a . In-House	Method & Type MIPR	PEO Soldier, Ft Belvoir, Va	0	0		3500	Date 1-3Q	3770		0	7270	Contrac
a . In-House	Туре	PEO Soldier, Ft						3770 3770	Date	0	7270 7270	Contra
_	Type MIPR	PEO Soldier, Ft Belvoir, Va	0	0		3500			Date			

ARMY RDT&E BUDGET ITE	EM JUS	STIFIC	ATION	(R2a	Exhibi	February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstratio	n	-	PE NUMBER AND TITLE PROJI 0604601A - Infantry Support Weapons S5							
COST (In Thousands)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
S59 SOLDIER SUPPORT EQUIPMENT - ED	Actual	Estimate	Estimate 296	Estimate 303	Estimate 303	Estimate 302	Estimate 631	Estimate 631	Complete 0	2466
339 SOLDIER SUPPORT EQUIPMENT - ED	U	,	290	303	303	302	031	031	U	2400

A. Mission Description and Budget Item Justification: Not applicable for this item.

<u>Accomplishments/Planned Program</u> Not applicable for this item.

B. Other Program Funding Summary: Not applicable for this item.

<u>C. Acquisition Strategy:</u> Not applicable for this item.

ARMY RDT&E BUDGET ITE	M JUS	STIFIC	ATION	(R2 a l	Exhibit	February 2005				
BUDGET ACTIVITY 5 - System Development and Demonstration	n		PE NUMBER 0604601			PROJECT S60				
COST (In Thousands)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
Cost (in inousands)	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
S60 CLOTHING & EQUIPMENT	0	(7918	9082	9323	9239	5901	5999	0	47462

A. Mission Description and Budget Item Justification: The funding in this project supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier. Funds for prior year efforts were funded in PE 0604713A (Project L40 - Soldier Support Systems).

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	
Army Combat Uniform (ACU) II: Build refined test items and initiate final evaluations prior to Block upgrades.	U	U	U	283
Fully Integrated Combat Helmet (FICH): Initiate effort to combine the functionality of the dismounted soldier helmet and combat vehicle crewman helmet into one platform incorporating radio/intercom communications, face and eye protection.	0	0	0	382
Modular Lightweight Load Carrying Equipment (MOLLE) Generation IV: Complete prototype development for a hydration system to eliminate freezing, water carrying frame and load carrier/body armor integration. Complete Developmental and Operational Testing.	0	0	0	883
Modular Boot System: Initiate Low Rate Initial Production in FY06, to build test articles, with full rate production decision in 3rd Qtr FY07.	0	0	470	775
Soldier Body Armor (SBA)Enhancements: Continue Product Improvement of Interceptor Body Armor (IBA) in support of fielding and execute incremental capability improvements related to technology maturity and operational feedback.	0	0	475	190
Organizational Clothing and Individual Equipment (OCIE) Modernization: Modernize fabric and design of OCIE items in order to incorporate comfort and durability and improve functionality and fit (Maternity Uniform, Coveralls, Wool Winter Socks, Moisture wicking undergarments). Evaluate samples, conduct technical tests and user evaluations.	0	0	580	782
Combat Eye Protection (CEP): Evaluate and guide industry to Product Improve commercial ballistic eyewear and select the most viable for incorporation of standard prescription carriers and protection against lasers. Apply/test advanced photochromic technology and dielectric stack technology to ballistic protective lenses and examine various lens enhancements.	0	0	573	476

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604601A - Infantry Support Weapons

PROJECT **S60**

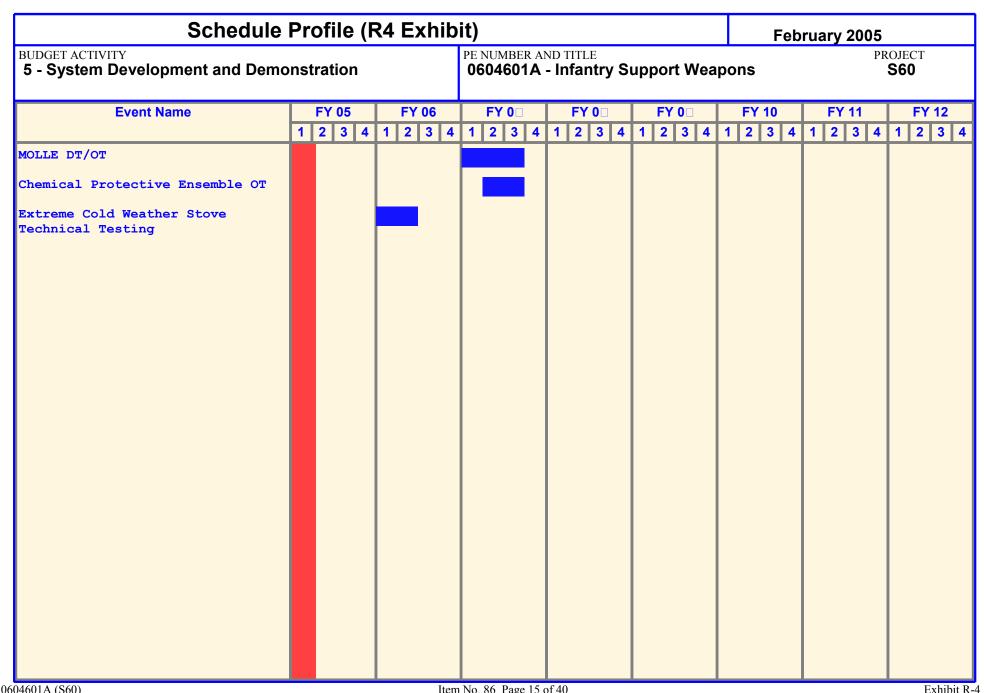
Accomplishments/Planned Program (continued)	FY 2004	FY 2005	FY 2006	
Chemical Protective Ensemble: Continue effort to reduce bulk/weight of current level A/B suit and extend cooling period of performance. Complete Operational testing.	0	0	0	484
Self Regulating Thermal Systems: Non-layered ensemble that is capable of providing comfort in a wide temperate range. Initiate effort to develop an adaptive material that would tune itself to the environment for protection.	0	0	0	678
Army Combat Environmental Clothing System(ACECS): Initiate testing of items for field and user evaluation to approve material changes and/or type classification.	0	0	275	0
Simultaneous Delivery of Jumper/Door Bundle/Packages: Acquire test assets and initiate testing.	0	0	0	523
Air Drop Development: Build Operational Test assets for Advanced Tactical Parachute System and conduct operational	0	0	1375	290
esting. Free Pall Ensemble: Transition military free fall S&T endeavors to development. (Navigation Aid/Parachutist Oxygen System)	0	0	0	775
Glove Enhancement Initiative: Continuously upgrade existing multitude of gloves to be more in line with State of the Art materials and technology/design.	0	0	425	532
Service Uniform Modernization: Continue efforts to incorporate new fabrics, fabric finishes and design features. (Class A Uniform, Womens' Mess, Dress Uniform, Blouse, Sweater Cardigan black, Sweater Cardigan White)	0	0	740	537
Clothing Bag Modernization: Continue to modernize fabric and design of items contained in the clothing bag in order to mprove functionality, comfort, fit and durability. Conduct Market Surveys, process evaluation samples, conduct technical and user evaluations (IPFU, Duffle Bag, Towel Bath Coat cold weather, Dress & Boot Socks, Undershirt Clothing Bag)	0	0	735	572
Army Combat Uniform Ancillary Items: Continue to update previously identified items/specifications to include new shade requirement, design changes and component changes to conform to the new universal camouflage pattern.	0	0	220	0
mproved Water Purification: Initiate effort to incorporate evolving filtration/purification technologies into on-the-move hydration systems.	0	0	320	0
Advanced Bomb Suit(ABS): Continue efforts to provide capabilities enhancement to the fielded ABS consisting of NBC protection (level C) and communications components.	0	0	370	237
Gross Liquid Chemical Protective Ensemble: Initiate effort to replace Suit Contamination Avoidance Liquid Protective (SCALP) garment with a garment to go over Joint Services Lightweight Integrated Suit Tech (JSLIST) for splash protection. Purchase test items, test physical properties and chemical agent resistance, user preference and conduct operational testing.	0	0	820	683
Extreme Cold Weather Stove: Complete Technical testing to evaluate durability and fuel consumption.	0	0	540	0
Totals	0	0	7918	9082

ARMY RDT&E BUDGET		50 1111)	.a LXII	161t <i>)</i>		Febru	ary 2005	
BUDGET ACTIVITY 5 - System Development and Demonstra	ation		_	BER AND T 01A - Inf	itle antry Su	ipport W	/eapons	;	ECT	
B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cos
	2960	5116	0	0	0	0	0	0	0	8076
RDTE, 0604713.L40, Clothing and Equipment			0	0	0	n	0	0	0	17519
	8323	9196	U	U	U	U	U	•		
RDTE, 0604713.L40, Clothing and Equipment RDTE, 0603747.669, Clothing and Equipment RDTE, 0603827.S53, Clothing and Equipment	8323 0	9196 0	7024	6798	9522	9039	6406	6605	Continuing	Continuing

C. Acquisition Strategy: Soldier modernization will be accomplished by various methods. Acquisition strategies will vary from: 1) quick fixes in 12-24 months or less from concept to Type Classification (TC), 2) Moderization improvements which require limited RD&E and will be completed in more than 24-48 months from inception to Type Classification, 3) Fully integrated development that will require substantial RDTE&E funding and will be completed in 4 years or more.

Product Development Contract Method & Location Prs Cost Montroot Date Cost Method & Type Cost Type Cost Natick Soldier Center, Natick, MA Natick Soldier Center, Natick, MA Date Cost Naward Natick, MA Description of the Natick Na		Y RDT&E CO	J. 7 (1)	PE N	UMBER ANI		Support	Weapoi		ruary 20	PROJEC	
Method & Type	mient and			000	J-001A -	iiiiaiiti y	oupport	weapoi	13		300	'
a . Various MIPRs Natick Soldier Center, Natick, MA	Method &	Performing Activity & Location			Award		Award		Award			Value o
Subtotal: Date Subtotal:			0	0		2000	1-3Q	2175		0	4175	
Subtotal: Support Cost Contract Performing Activity & Total FY 2005 FY 2005 FY 2006 FY 2007 FY 2007 Cost To Total Target Cost Type Cost Cost Date Date Date Cost	Contracts	Various	0	0		2200	1-3Q	2457	1-3Q	0	4657	(
II. Support Cost Contract Method & Location PYs Cost Type A . Misc Support Costs MIPR Various Date Cost Date Cost Date			0	0		4200		4632		0	8832	(
0 0 1802 2025 0 3827	Method &				Award		Award		Award			Value o
		Various	0	0	Date	1802		2025		0	3827	Contrac
			0	0		1802		2025		0	3827	
ouz.c.a		Contract Method & Type MIPRs Contracts Contract Method & Type	Method & Type MIPRs Natick Soldier Center, Natick, MA Contracts Various Contract Method & Type Performing Activity & Location Performing Activity & Location	Contract Method & Location Pys Cost Type MIPRs Natick Soldier Center, Natick, MA Contracts Various 0 Contract Method & Location Pys Cost Type MIPR Various 0	Contract Method & Location Performing Activity & Total Pys Cost Type MIPRs Natick Soldier Center, Natick, MA Contracts Various 0 0 Contract Method & Location Performing Activity & Total Natick, MA Contract Various 0 0 MIPR Performing Activity & Total Pys Cost Cost Cost Nation Pys Cost Cost Cost Ost Nation Pys Cost Cost Ost Ost Ost Ost Ost Ost Ost Ost Ost O	Contract Method & Location Performing Activity & Total Pys Cost Cost Award Date MIPRs Natick Soldier Center, Natick, MA Contracts Various 0 0 Contract Various 5 Total Pys Cost Cost Award Date Contract Various 0 0 MIPR Performing Activity & Total Pys Cost Cost Award Date MIPR Various 0 0	Contract Method & Location Pys Cost Pys Cost Cost Award Date MIPRs Natick Soldier Center, Natick, MA Contracts Various 0 0 0 2200 Contract Method & Location Pys Cost Nation Date Contract Method & Type Performing Activity & Total Method & Type Nation	Contract Method & Location Parious Prys Cost Natick, MA Prys Cost Natick, MA Prys Cost Natick, MA Prys Cost Natick Natick, MA Prys Cost Natick Natick, MA Prys Cost Natick, MA Natick Natick Natick, MA Natick Natick Natick Natick Natick, MA Natick	Contract Performing Activity & Total FY 2005 Cost Award Date Cost Date Cost Date Cost Cost Date Date Cost Date Date Cost Date Da	Dement and Demonstration Performing Activity & Total Type Properties Propert	Per Number And Demonstration	Performing Activity & Total FY 2005 Cost Date Date

5 - System Develo	pment and	d Demonstration		060)4601A -	Infantry	Support	Weapoi	ns		S60	
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Complete	Total Cost	Targe Value o Contrac
a . Various	MIPRS	Various	0	0		1200	1-3Q	1500	1-3Q		2700	
Subtotal:			0	0		1200		1500		0	2700	
V. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Complete	Total Cost	Targe Value o Contra
a . In-House Support	1,7,2	PM CIE Ft Belvoir, VA	0	0	_ 0,0	716	1-4Q	925	1-4Q		1641	
Subtotal:			0	0		716		925		0	1641	
			0			7918		9082		0	17000	



0604601A (S60) CLOTHING & EQUIPMENT Item No. 86 Page 15 of 40 396

Budget Item Justification

Schedule Detail (R4	4a Exhib	oit)				February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBI 060460	ER AND TIT 1A - Infa	eapons		P	ROJECT S60		
Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Modular Boot System LRIP			3-4Q	1-2Q					
Glove Enhancement Initiative - User Evaluations			1-4Q	1-4Q					
				1-3Q					
MOLLE - DT/OT									
MOLLE - DT/OT Chemical Protective Ensemble OT				2-3Q					

ARMY RDT&E BUDGET ITE	M JUS	STIFIC	ATION	(R2 a l	Exhibi	t)	F€	ebruary 2	2005	
BUDGET ACTIVITY 5 - System Development and Demonstration	า		e number 0604601<i>A</i>			ort Weap	ons		PROJECT S61	
COST (In Thousands)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
Cool (in incubands)	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
S61 ACIS ENGINEERING DEVELOPMENT	0	(2248	2291	2523	2620	2706	2805	0	15193

A. Mission Description and Budget Item Justification: This project provides Engineering Development programs with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance Helicopter. These programs include soldier systems and equipment which are unique and necessary for the sustainment, survivability, and performance of Army aircrews and troops on the future integrated battlefield. The Air Warrior program will provide the aircrew with a systems approach to noise protection, three-dimensional audio and external audio capability, microclimate conditioning, crash and post-crash survivability, concealment and environmental protection, ballistic protection, night vision capability and heads-up display, directed energy eye protection and flame/heat protection. Air Warrior will enable the Army Aviation Warfighter to meet the approved Operational Requirements Document mission length of 5.3 hours with aviators in full chemical/biological protective gear. Preplanned block improvements integrating new technologies into the Air Warrior ensemble will continue to enhance and maximize aircrew mission performance, comfort, aircrew station interface, safety, and survivability. These funds also resource improved laser protection against emerging new threat systems and product improvement of existing helmets to improve performance and increased commonality. Maximum advantage will be taken of simulation to reduce program technical risk through early user evaluation and to reduce program design and test cost and schedules. This program does not duplicate any aircraft platform program efforts. Both joint and service independent efforts continue to be pursued under the scope of this program.

Funds for prior year efforts were funded in PE 0604801A (Project C45 - Aircrew Integrated Systems).

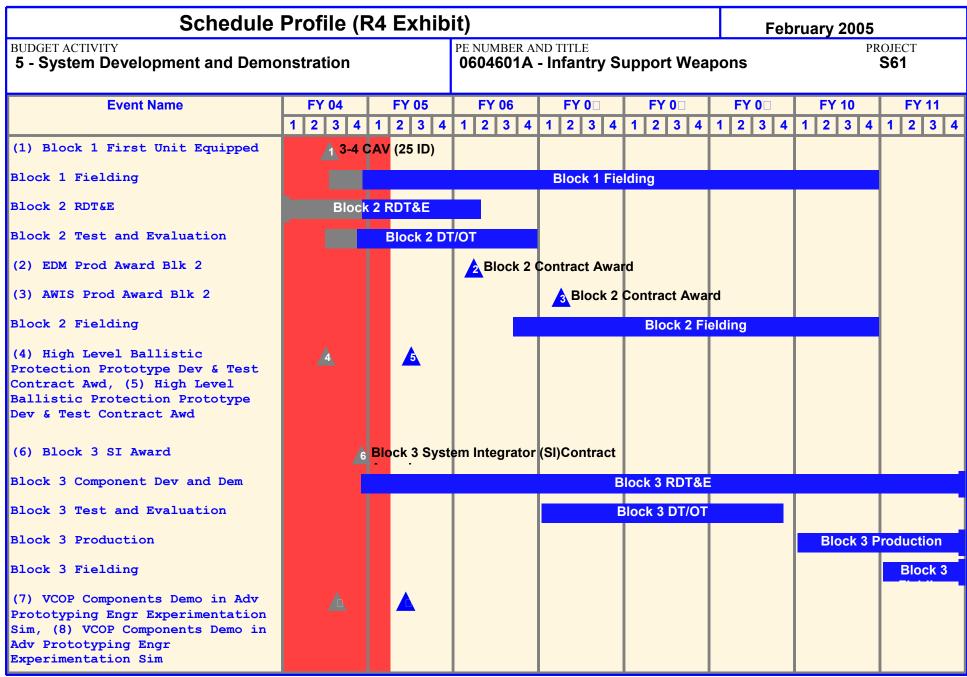
Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Continue the integration of preplanned Air Warrior Block 3 improvements.	0	0	2248	2291
Totals	0	0	2248	2291

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit) February 2005 BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 0604601A - Infantry Support Weapons 5 - System Development and Demonstration **S61** FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 **B. Other Program Funding Summary** To Compl Total Cost RDTE, A PE 0604801A PROJ DC45 EMD 3256 3239 0 0 0 0 0 6495 6176 0 RDTE, A PE 0604801A, PROJ DB45 - Adv Dev 0 13277 7101 RDTE, A PE 0603827A, PROJ S51 - Adv Dev 3374 3443 3525 3619 4044 4040 Continuing Continuing 29694 Aircraft Procurement, Army SSN AZ3110 - ACIS 32848 29352 34821 42127 38873 56594 42268 Continuing Continuing

<u>C. Acquisition Strategy:</u>System Development and Demonstration efforts include the completion of the Air Warrior Electronic Data Manager (EDM) qualification testing to transition into Full Rate Production, the Aircraft Wireless Intercom System (AWIS), and integration of the Microclimate Cooling System onto the Army's HH-60L Medivac Helicopter.

	ARM	Y RDT&E CO	ST AN	ALYS	IS(R3)				Feb	ruary 20	05	
BUDGET ACTIVITY 5 - System Develo	pment and	d Demonstration			iumber an 04601A -		Support	Weapo	ns		PROJEC S61	
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost		FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a . Air Warrior Development	C - CPFF	Various	0	0		1698	1Q	1679	1Q	0	3377	
Subtotal:			0	0		1698		1679		0	3377	(
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost		FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Targe Value o Contra
a . Matrix Support	MIPR and Project Order	Various Government	0	0		144	1-4Q	150	1-4Q	0	294	
			0	0		144		150		0	294	

	ARM	Y RDT&E CO	ST AN	ALYS	IS(R3)				Feb	ruary 200	05	
BUDGET ACTIVITY 5 - System Develo ր	oment and	d Demonstration			umber an)4601A -	D TITLE Infantry	Support	Weapo	ns	-	PROJEC S61	
II. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Complete	Total Cost	Targe Value o Contrac
a . Developmental Testing		Various	0	0		200	1-2Q	250			450	(
Subtotal:			0	0		200		250		0	450	(
V. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Complete	Total Cost	Targe Value o Contrac
a . PM Administration	Allotment	Various Government	0	0		206	1-4Q	212			418	(
Subtotal:			0	0		206		212		0	418	(
			0	0		2248		2291		0	4539	(



Schedule Detail (Re	4a Exhib	it)					Februa	ary 2005	
BUDGET ACTIVITY 5 - System Development and Demonstration			ER AND TIT 1A - Inf a	eapons	ons				
Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Advanced Component Development of Air Warrior Block 2 and 3 Improvements.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
System Development and Demonstration of Air Warrior Block 2 and 3 Improvements.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
High Level Ballistic Protection Prototype Development and Testing.	3Q	3Q							
Block 1 Air Warrior First Unit Equipped.	3Q								
Block 3 Prime Integrator Award.	4Q								
Block 2 Production Contract Award - EDM.			1Q						
Block 2 Production Contract Award - AWIS.				2Q	_				
Block 2 Fielding.			3-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
Block 3 Production Contract.							1Q		
Block 3 Fielding.								1-4Q	

ARMY RDT&E BUDGET ITE	EM JUS	STIFIC	ATION	(R2 a l	Exhibi [.]	t)	Fe	ebruary 2	2005	
BUDGET ACTIVITY 5 - System Development and Demonstratio	n		PE NUMBER 0604601			ort Weap	ons		PROJECT S62	
COST (In Thousands)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S62 OBJECTIVE INDIVIDUAL COMBAT WEAPON	0	(5126	1786	2716	0	0	0	0	9628

A. Mission Description and Budget Item Justification: The Objective Individual Combat Weapon (OICW) is a program to develop a dual barrel weapon system allowing the Soldier to fire both kinetic energy and air bursting munitions from the same weapon system. The integrated weapon providing both capabilities is the XM29 Integrated Air Burst Weapon.

This project funds System Development and Demonstration (SDD) of the XM-25 Air Burst Assault Weapon, which is the second increment of the OICW program. The XM-25 Air Burst Assault Weapon is the air burst portion of the XM-29 Integrated Air Burst Weapon. The XM-25 dramatically increases Soldier lethality, survivability and standoff. The air burst weapon provides the Soldier with a 300-500% increase in hit probability to defeat point, area and defilade targets out to approximately 500 meters. The XM25 weapon includes revolutionary high explosive air bursting munitions and an integrated, multifunctional, all environment, full-solution target acquisition / fire control system.

This project is a spiral development program which will transition from Technology Development to SDD upon Milestone B approval in FY05.

Funds for prior year SDD efforts were funded under PE 0604802A (Project D134 - Objective Individual Combat Weapon).

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
Program Development	0	0	339	0
Design and Development and Engineering	0	0	3187	1155
Fabrication for Testing	0	0	600	231
Pre-Production Test	0	0	1000	400
Totals	0	0	5126	1786

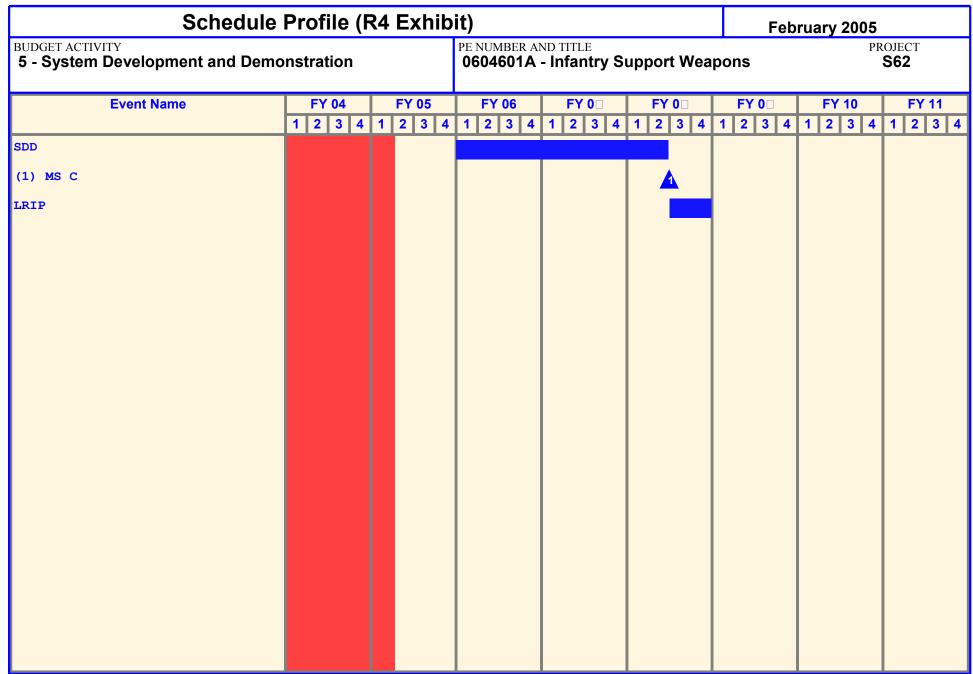
ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit) February 2005 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - System Development and Demonstration 0604601A - Infantry Support Weapons **S62** FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 **B. Other Program Funding Summary** To Compl Total Cost RDTE: PE 0603802A, Project AS3 29906 6040 0 0 0 0 0 35946 RDTE: PE 0604802A, Project D134 15762 15762 0 WTCV: SSN G16102 XM-8 Carbine (5.56mm) 32681 122568 138212 143864 498 32484 146037 0 616344

RDTE Appropriation: PE 0603802A (Projects AS3 and D134) funds increment one (XM-8) and increment two (XM25) of the OICW Program.

<u>C. Acquisition Strategy:</u> The XM-25 Air Burst Assault Weapon will reach Milestone B in FY 2005. The System Development and Demonstration (SDD) phase will complete development of the XM-25 weapon system and verify training solution for the Milestone C approval in FY 2008.

	ARM	Y RDT&E CO	ST AN	ALYS	IS(R3)				Feb	ruary 20	05	
BUDGET ACTIVITY 5 - System Develo	pment and	l Demonstration			umber an 04601A -		Support	Weapo	ns	_	PROJEC S62	
. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a . XM25 - Design and Development	Cost Plus Fixed Fee	ATK Minneapolis, MN	0	0		3087	2Q	1125	2Q	0	4212	(
Subtotal:			0	0		3087		1125		0	4212	C
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost		FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac
a . XM25 - Engineering Support	MIPR	Multiple	0	0		500	1-3Q	146	1-3Q	0	646	(
Subtotal:			0	0		500		146		0	646	C

5 - System Develop	oment and	d Demonstration		060)4601A -	Infantry	Support	Weapor	าร		S62	1
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Complete	Total Cost	Targe Value o Contrac
a . XM25 - Pre-Production Test		Various	0	0		1000	3Q	400	1-3Q		1400	
Subtotal:			0	0		1000		400		0	1400	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Complete	Total Cost	Targe Value o Contrac
a . Program Management	In-House	PM Soldier Weapons Picatinny Arsenal, NJ	0	0		539	1-3Q	115	1-3Q	0	654	
Subtotal:			0	0		539		115		0	654	ı
			0	0		5126		1786		0	6912	



Schedule Detail (R4	la Exhib	oit)				February 2005			
BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBE 060460	ER AND TIT 1A - Infa	eapons	pons				
Schedule Detail	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Design and Development and Engineering Tests			1Q						
Fabricate			2-4Q						
Test and Evaluation				1-4Q	1-2Q				
Milestone C					2Q				
LRIP					3-4Q				

ARMY RDT&E BUDGET ITE	Fe	ebruary 2	ıry 2005							
BUDGET ACTIVITY 5 - System Development and Demonstratio	n		e number 0604601			ort Weap	ons		PROJECT S63	
COST (In Thousands)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
0.62	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	=====
S63 SMALL ARMS IMPROVEMENT	0	(6239	2392	13904	4811	14740	10930	0	53016

A. Mission Description and Budget Item Justification: This program provides funds for the demonstration of engineering development models or integrated commercial items designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability for current small arms weapon systems and ammunition. Future programs will provide enhancements to weapons, fire control, ammo and optics through improved technology associated with obscurants, reconnaissance, observation, non-lethal and lethal ammo, and electronics. Current small arms include a variety of personal defense weapons (9mm), individual weapons (5.56mm), crew-served weapons (7.62mm and 40mm), and related items such as fire control equipment, training devices, and ammunition. Current efforts focus on improvements to current weapons such as the M249 Squad Automatic Weapon, the M16 Rifle, the M4 Carbine, the MK19 Grenade Machine Gun, and M240 Medium Machine Guns. Other improvements are included as well, such as enhancements to mounts and ammunition (to include thermobarics). Future programs include Light Weight Ammo, Sniper Weapons Improvements, Air Burst Ammo, Light Weight Medium Machine Gun (FY07 new start effort), M249 Short Range Training Ammo, Anti-Materiel Payload Rifle (FY06 new start effort), and rifle / carbine improvements. Platform Integration efforts include the development of a High Mobility Multi Wheeled Vehicle Auxiliary Weapon Mount (HMMWV / HAWM), an improved pedestal for machine gun mounts allowing 360 degree target engagement, a swing arm, a MK93/MK64 cradle adapter providing the Soldier with the capability of using M249 and M240 machine guns, and Advanced Crew Served Weapon Integration on a CROWS family of systems. Future efforts will also be pursued for alternate integration of M249 mounts, M240 mounts, MK19 mounts and XM307 mounts with numerous alternate platforms.

Funds for prior year efforts in this project were funded in PE 0604802 (Project DAS1 - Small Arms Improvements).

Accomplishments/Planned Program	FY 2004	FY 2005	FY 2006	FY 2007
M249 Short Range Training Ammunition	0	0	0	0
- DT	0	0	150	0
- Safety Confirmation	0	0	10	0
- Limited User Test	0	0	50	0
- System Evaluation Report	0	0	10	0
- Milestone C	0	0	30	0
Platform Integration of Crew Served Weapons	0	0	0	0
- HMMWV Imp Auxiliary Weapon Mount	0	0	0	0
- Market Research/Survey/Evaluation	0	0	100	0
- In House Design	0	0	250	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2005

BUDGET ACTIVITY 5 - System Development and Demonstration

PROJECT

PE NUMBER AND TITLE

0604601A - Infantry Support Weapons

S63

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Accomplishments/Planned Program (continued) Prototypes	FY 20	04 FY 2005 0 0		FY 2007
Prototypes Preliminary Testing		0 0	50	0
Design Improvement		0 0	70	0
Manufacturing		0 0	100	0
Tech Testing		0 0	250	0
Safety Cert		0 0	50	0
ACSW Integration on CROWS		0 0	0	0
CROWS/ACSW Interface Requirement Development		0 0	75	0
Hardware/Software Development		0 0	786	0
- Fabrication		0 0	150	0
Integration and Test		0 0	250	0
Demonstration		0 0	75	0
Swing Arm/MK64 Cradle/Universal Pintle Adapter		0 0	0	0
Market Research/Survey/Evaluation		0 0	0	50
In House Design		0 0	0	100
Prototypes		0 0	0	100
IPR		0 0	0	50
Preliminary Testing		0 0	0	50
Manufacturing		0 0	0	203
Tech Test		0 0	0	353
Operational Test		0 0	0	353
Safety Release		0 0	0	50
Fhermobaric Cartridges		0 0	0	0
Engineering Test Report/Assessment		0 0	250	0
Small Caliber LT WT Ammo		0 0	0	0
Contract Award, Option I		0 0	100	0
- Sample Fabrication		0 0	280	0
Lethality Test/Reliability Test		0 0	110	0
Design Review/Eng		0 0	465	0
Manufacture DTI Qty		0 0	370	0
- DTI		0 0	0	200
Design Review		0 0	0	75
- Eng Analysis		0 0	0	304

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit) February 2005 PE NUMBER AND TITLE BUDGET ACTIVITY PROJECT 5 - System Development and Demonstration 0604601A - Infantry Support Weapons **S63** Accomplishments/Planned Program (continued) LT WT Medium Machine Gun - FY07 New Start FY 2004 FY 2005 FY 2006 FY 2007 Program Transition Support Analysis of Alternatives Support Development of ICD Prepare Program Documentation/MS B Prepare Request for Proposal Proposal Evaluation Anti-Materiel Payload Rifle - FY06 New Start Engineering Development Contracts Rifle/Carbine - Optics Enhancements Evaluate/Downselect Award Contract/Produce Hardware DT/OT Independent Evaluation Prepare Program Documentation/MS C Totals

ARMY RDT&E BUDGET	RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit) February 2005									
BUDGET ACTIVITY 5 - System Development and Demonst	ration			BER AND T 01A - Inf		upport W	/eapons	i	PROJE S63	ECT
B. Other Program Funding Summary	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
WTCV, GZ1290, Squad Auto Wpn (MODS)	13058	3369	3095	5314	9421	4181	5141	3190	0	46769
WTCV, GZ2800, M16 Rifle MODS	18386	2336	1970	1024	3925	1026	3599	3602	0	35868
WTCV, GB3000, MK19 MODS	3816	4220	5444	3359	6581	7952	8771	8953	0	49096
WTCV, GZ1300, Med MG (MODS)	3922	3396	7089	5355	14168	0	4319	3602	0	41851
WTCV, GB3007, M4 Carbine MODS	48249	13724	44817	17064	13905	6332	13733	9799	0	167623
RDTE, AS1 - Small Arms Improvements	8089	10895	0	0	0	0	0	0	0	18984

C. Acquisition Strategy: Primary strategy is to mature and finalize design efforts, award RDT&E hardware contracts, and test and evaluate systems that will result in type classification and follow-on production contract awards.

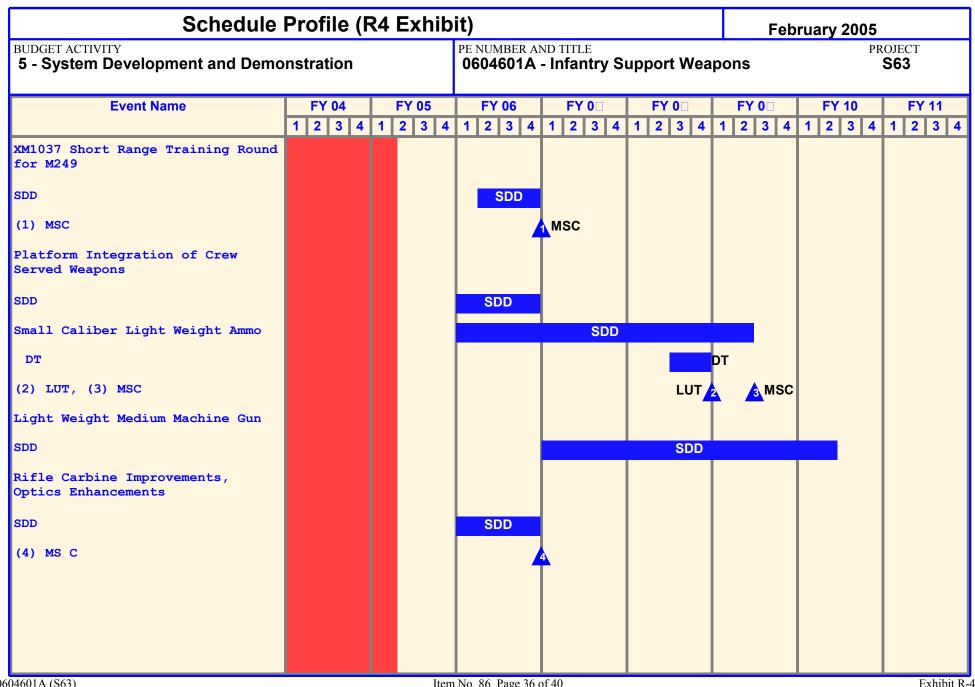
ARMY RDT&E COST ANALYSIS(R3) February 2005 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - System Development and Demonstration 0604601A - Infantry Support Weapons **S63** I. Product Development Contract Performing Activity & Total FY 2005 FY 2005 FY 2006 FY 2006 FY 2007 FY 2007 Cost To Total Target Method & Location PYs Cost Cost Cost Award Award Cost Value of Award Cost Complete Date Contract Type Date Date a . Hardware TBD Various 0 0 2660 1-3Q 590 1-3Q Continue 3250 Development 0 0 590 0 2660 Continue 3250 Subtotal: FY 2005 FY 2005 II. Support Cost Contract Performing Activity & Total FY 2006 FY 2006 FY 2007 FY 2007 Cost To Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Date Date Contract Type Date MIPR RDECOM - ARDEC, O 842 a. Development 0 967 1-3Q 1-3Q 1809 0 Picatinny Arsenal, NJ b. Logistics **MIPR** TACOM, Rock Island 0 20 1-3Q 0 0 325 1-3Q 345 0 Arsenal, IL c. Human Research and 0 60 1-3Q 0 **MIPR** Aberdeen Proving 0 98 1-3Q 158 0 Ground (APG), MD **Eng Directorate** 0 0 1390 922 2312 0 Subtotal:

ARMY RDT&E COST ANALYSIS(R3) February 2005 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT 5 - System Development and Demonstration 0604601A - Infantry Support Weapons **S63** FY 2007 III. Test and Evaluation Contract Performing Activity & Total FY 2005 FY 2005 FY 2006 FY 2006 FY 2007 Cost To Total Target Method & Location PYs Cost Cost Award Cost Award Cost Award Complete Cost Value of Date Date Date Contract Type MIPR a. DT **Developmental Test** 0 0 542 1-3Q 380 1-3Q Continue 922 Command (DTC), Aberdeen Proving Ground (APG), MD b. OT **MIPR** Army Test and 0 0 140 1-3Q 1-3Q 140 0 **Evaluation Command** (ATEC), Alexandria, ÙΑ **Developmental Test** c. Validation Testing **MIPR** 0 0 657 1-3Q 40 1-3Q 697 0 Command (DTC), Aberdeen Proving Ground (APG), MD 0 0 1339 420 Continue 1759 0 Subtotal:

0604601A (S63) SMALL ARMS IMPROVEMENT

Item No. 86 Page 34 of 40 415 Exhibit R-3 Cost Analysis

	AKM	Y RDT&E CO	SI AN		` '		February 2005								
BUDGET ACTIVITY 5 - System Development and Demonstration					NUMBER AN 604601A -		PROJECT S63								
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 200 Cos		FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Targe Value o Contrac			
a . Program Management	In House	PM Soldier Weapons, Picatinny Arsenal, NJ	0		0	775	1-3Q	400	1-3Q	0	1175	(
b . Travel	In House	PM Soldier Weapons, Picatinny Arsenal, NJ	0		0	75	1-3Q	60	1-3Q	0	135	(
Subtotal:			0		0	850		460		0	1310	(
Project Total Cost:			0		0	6239		2392		Continue	8631	(



0604601A (S63) SMALL ARMS IMPROVEMENT Item No. 86 Page 36 of 40

Budget Item Justification

BUDGET ACTIVITY 5 - System Development and Demonstration			ER AND TIT 1A - Infa	LE antry Su	eapons	February 2005 PROJEC ons S63				
Schedule Detail_	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		
M249 Short Range Training Ammunition										
- DT			2-3Q							
- Safety Confirmation			2Q							
- Limited User Test			3Q							
- System Evaluation Report			4Q							
- Milestone C			4Q							
Platform Integration of Crew Served Weapons										
- HMMWV Imp Auxiliary Weapon Mount										
- Market Research/Survey Evaluation			1Q							
- In House Design			1-2Q							
- Prototypes			2Q							
- Preliminary Testing			2-3Q							
- Design Improvement			3Q							
- Manufacturing			3-4Q							
- Tech Testing			4Q							
- Safety Cert			4Q							
- ACSW Integration on CROWS										
 CROWS/ACSW Interface Require Developmt 			1Q							
- Hardware/Software Development			1-3Q							
- Fabrication			3Q							
- Integration and Test			4Q							
- Demonstration			4Q							
- Swing Arm/MK64 Cradle/Universal Pintle Adapter										
- Market Survey/Research				1Q						
- In House Design				1-2Q						
- Prototypes				2Q						
- IPR				2Q						
- Preliminary Testing				2-3Q						
- Manufacturing				3Q						

5 - System Development and Demonstration			ER AND TIT 1A - Infa	LE antry Su	eapons	February 2005 PROJECT Ons S63			
Schedule Detail (continued)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
- Tech Test				3-4Q					
- Operational Test				4Q					
- Safety Release				4Q					
- Minigun/Javelin CROWS Mounts				-,					
- Safety Release					1Q				
· IPR					1Q				
- Survey					1Q				
- In-House Design					2Q				
- Prototypes					2Q				
- Val Test					2-3Q				
- Redesign					3Q				
- Manufacturing					3Q				
- Tech Testing					4Q				
- Improved HMMWV Ring Mount									
- Operational Test						1Q			
- Safety Release						2Q			
- IPR						2Q			
Thermobaric Cartridges									
- Engineering Test Report/Assessment			1Q						
Small Caliber LT WT Ammo									
- Contract Award, Option I			1Q						
- Sample Fabrication			2-3Q						
Lethality Test/Reliability Test			3Q						
- Design Review/Eng			4Q						
- Manufacture DTI Qty			4Q	20					
- DT I				3Q					
- Design Review				4Q					
- Eng Analysis				4Q	10				
- Contract Award, Option 2					1Q				
- Manufacture DT II Qty					1-3Q				

BUDGET ACTIVITY 5 - System Development and Demonstration			ER AND TIT 1A - Infa	TLE antry Su	eapons	ons S6			
Schedule Detail (continued)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
DT II					3-4Q				
Live Fire Test/Final Hazard Classification					3-4Q				
Prepare MS C IPR Package					4Q	1-2Q			
LUT					4Q				
MS C IPR/TC-STD						2Q			
T WT Medium Machine Gun									
Program Transition				1-2Q					
Support Analysis of Alternatives				1-2Q					
Support Development of ICD				1-2Q					
Prepare Program Documentation/MS B				2-4Q					
Prepare Request for Proposal				2-3Q					
Proposal Evaluation				4Q	1Q				
Contract Award (Phase 1)					1Q				
Fabricate Test Hardware					1-2Q				
Design Confidence Test					3-4Q				
Contract Award (Phase II)					4Q				
Design Refinements					4Q	1Q			
Critical Design Review/IPR						2Q			
Fabricate DT/OT Hardware						2-3Q			
DT/OT						3-4Q	1Q		
Test Reports/Evaluations							1-2Q		
Prepare Program Documentation/MS C							1-2Q		
Anti-Materiel Payload Rifle									
Engineering Development			1-2Q						
Contracts			4Q						
Rifle/Carbine - Optics Enhancements - Transition From 604802 DAS1									
Evaluate/Downselect			1Q						
Award Contract/Produce Hardware			1-2Q						
- DT/OT Independent Evaluation			2-4Q						

Schedule Detail (R4		February 2005							
BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBI 060460	ER AND TIT 1A - Infa	eapons	ons PROJECT S63				
Schedule Detail (continued)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
- Prepare Program Documentation/MS C			4Q						

Exhibit R-4a

Budget Item Justification