

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

## BUDGET ACTIVITY

### 4 - Advanced Component Development and Prototypes

## PE NUMBER AND TITLE

0603802A - Weapons and Munitions - Adv Dev

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	35634	31500	2382	0	0	4821	1444	Continuing	Continuing
AS2 SMALL ARMS IMPROVEMENT	996	0	2382	0	0	4821	1444	Continuing	Continuing
AS3 OBJECTIVE INDIVIDUAL COMBAT WEAPON (OICW) PD/RR	26898	31500	0	0	0	0	0	0	113531
AS4 MORTAR SYSTEMS	7740	0	0	0	0	0	0	0	10425

**A. Mission Description and Budget Item Justification:** This program element addresses the modernization of Small Arms Weapons. This program develops existing and emerging technology to enhance lethality, target acquisition, fire control, training effectiveness and reliability for small arms weapons, munitions and mortar systems. It also supports the spiral development of XM29, Integrated Air Burst Weapon which represents the next generation individual soldier's weapon and provides the soldier with significant increases in individual weapon performance. The first spiral will be the XM 8 Assault Weapon. It also provides for the Precision Guided Mortar Munition (PGMM). This is a precision strike round, using advanced sensors and guidance systems. It will be fired from the 120mm mortar weapon currently in the Army inventory. These systems support the current to future transition path of the Transformation Campaign Plan (TCP).

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<b><u>B. Program Change Summary</u></b>	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	34257	31856	4868
Current Budget (FY 2005 PB)	35634	31500	2382
Total Adjustments	1377	-356	-2486
Congressional program reductions		-578	
Congressional rescissions			
Congressional increases			
Reprogrammings	1377	222	
SBIR/STTR Transfer			
Adjustments to Budget Years			-2486

Change Summary Explanation:

FY 05 - Adjustment to accelerate XM-8 Carbine (5.56mm).

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## PROJECT

**AS2**

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
AS2 SMALL ARMS IMPROVEMENT	996	0	2382	0	0	4821	1444	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** This project addresses the modernization of existing Small Arms Weapons. It provides funds to develop system integration of subsystems and components and emerging technology designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability for small arms weapon systems and munitions. Current small arms include a variety of personal defense weapons (9mm), individual weapons (5.56mm), crew-served weapons (5.56mm-40mm) and related equipment such as fire control, training devices, hand grenades and ammunition. This program focuses on improvements to the M249 Squad Automatic Weapon, Sniper Weapons, M16/M4 Rifle, Grenade Launchers, Ammo, such as Airburst Ammo and Thermobaric Ammo, and Medium Machine Guns. Future efforts include the Payload Rifle (transition from Tech Base), Airburst Munition (FY 05 New Start), Course Correcting Ammo, Improved Grenade Launcher System and Improved Shaped Charge. These small arms weapon systems support the Current to Future transition path of the Transformation Campaign Plan (TCP).

## Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
Thermobaric Cartridges Complete - Transitioned to 604802A	0	0	0
- Develop Modeling and Simulation	103	0	0
- Prototype Fabrication	762	0	0
- Thermobaric Munition Testing	81	0	0
- Prepare Final Report and Documentation	50	0	0
Airburst Munition - FY 05 New Start	0	0	0
- Acquisition Strategy	0	0	90
- In Process Review	0	0	55
- Prepare Request for Proposal	0	0	112
- Contract Award	0	0	805
- Conduct Testing	0	0	495
Payload Rifle - Transition from Tech Base	0	0	0
- Conduct Market Survey	0	0	125
- Prepare Request for Proposal	0	0	200
- Conduct User and Technical Assessments	0	0	500
Totals	996	0	2382

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PROJECT

**AS2**

## B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE 0604802A, Project AS1	8389	8384	11373	6258	2353	13652	4726	0	60662

C. Acquisition Strategy: Primary strategy is to solicit industry, make technical assessments, trade-off analysis, formulate and refine designs, test and evaluate items, and make determinations as to whether the item should be transitioned into Systems Development and Demonstration.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY <b>4 - Advanced Component Development and Prototypes</b>					PE NUMBER AND TITLE <b>0603802A - Weapons and Munitions - Adv Dev</b>					PROJECT <b>AS2</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Hardware Development	TBD	Various	3366	762	2Q	0		780	2Q	0	4908	0
Subtotal:			3366	762		0		780		0	4908	0
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development Support	MIPR	ARDEC, Picatinny, NJ	1336	136	2Q	0		342	2Q	0	1814	0
b . ILS Support	MIPR	TACOM, Rock Island, IL	105	0		0		105	2Q	0	210	0
Subtotal:			1441	136		0		447		0	2024	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603802A - Weapons and Munitions - Adv Dev					AS2		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Testing	MIPR	ATEC, APG, MD	340	0		0		700	3-4Q	0	1040	0
b . Human Engineering		Human Engineering Lab, APG, MD	0	0		0		5	2-3Q	0	5	0
c . Test Support		DBBL, Ft. Benning, Columbus, GA	0	0		0		150	2-3Q	0	150	0
Subtotal:			340	0		0		855		0	1195	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Mgt	In House	PM Soldier Weapons, Picatinny Arsenal, NJ	452	98	1-4Q	0		250	2-4Q	0	800	0
b . TDY	In House	PM Soldier Weapons, Picatinny Arsenal, NJ	34	0		0		50	2-4Q	0	84	0
Subtotal:			486	98		0		300		0	884	0
Project Total Cost:			5633	996		0		2382		0	9011	0

Schedule Profile (R4 Exhibit)																				February 2004													
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes										PE NUMBER AND TITLE 0603802A - Weapons and Munitions - Adv Dev										PROJECT AS2													
Event Name		FY 02				FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09			
		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				
XM1060 THERMOBARIC ROUND						1 SDD								2 3 4																			
(1) MSB																																	
SDD																																	
AIRBURST AMMO																																	
(2) MSB														2																			
(3) Contract Award														3																			
(4) Test														4																			
PAYLOAD RIFLE																																	
SDD														SDD																			
(5) MSB																		5															

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY <b>4 - Advanced Component Development and Prototypes</b>			PE NUMBER AND TITLE <b>0603802A - Weapons and Munitions - Adv Dev</b>			PROJECT <b>AS2</b>	
<u><b>Schedule Detail</b></u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Thermobaric Cartridges							
- Develop Modeling and Simulation	1Q						
- Prototype Fabrication	2Q						
- Thermobaric Munition Testing	3Q						
- Prepare Final Report and Documentation	3Q						
Airburst Munition							
- Develop Acquisition Strategy			1Q				
- In Process Review			1Q				
- Prepare Request for Proposal			1Q				
- Contract Award			2Q				
- Conduct Testing			4Q				
Payload Rifle							
- Conduct Market Survey			2Q				
- Prepare Request for Proposal			3-4Q				
- Conduct User and Technical Assessments			2-3Q				