

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	17698	17146	41758	88837	61744	38304	6499	Continuing	Continuing
613 MORTAR SYSTEMS	11144	9938	5065	33408	39495	33881	4076	Continuing	Continuing
705 ADVANCED PRECISION KILL WEAPON SYSTEM (APKWS)	0	0	22746	35702	11608	0	0	0	70056
AS1 SMALL ARMS IMPROVEMENT	6554	5719	8958	14754	10641	4423	2423	Continuing	Continuing
AS5 LOW COST COMPETENT MUNITIONS (LCCM)	0	1489	4989	4973	0	0	0	0	11451

A. Mission Description and Budget Item Justification: Provides for engineering development of weapons and munitions systems. The mortar systems (D613) effort supports development of the Mortar Fire Control System (MFCS). The MFCS is a revolutionary improvement in mortar capability, seamlessly linking mortar fires in the future digital battlefield. Additionally, it funds development of the Precision Guided Mortar Munition. Project D705, the Advanced Precision Kill Weapon System (APKWS), is a highly accurate weapon that will complement the HELLFIRE missile in precision strikes against soft point targets and provide improved accuracy over the current 2.75-inch munition used on the AH-64 Apache, OH-58 Kiowa Warrior, and the future RAH-66 Comanche helicopters. Under the APKWS program, a laser guidance section for the 2.75 inch munition will be developed, tested, and qualified at the system level. The APKWS is expected to provide at least four times the number of kills, thereby substantially reducing collateral damage, and significantly reducing cost because fewer rockets are required. The APKWS supports the Legacy to Objective Force transition path of the Transformation Campaign Plan. The Small Arms Improvement program develops technology to enhance lethality, target acquisition, fire control, training effectiveness, and/or reliability for small arms weapon systems. The current effort develops a universal mounting bracket for the MK19-3 Grenade Machine Gun. This program supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

Project DAS5 funds the design, development, assembly and test of a Low Cost Competent Munition (LCCM) fuze. The final concept for the LCCM will most probably encompass a standard fuze equipped with a Global Positioning System (GPS) receiver, an air-drag device compensating for gun and meteorological ballistics effects, a Fuze, Safe and Arm (FSA) mechanism, a U.S. required Selective Availability, Anti-Spoof GPS Module (SAASM), a smaller high power battery, an inductive fuze data link, and improved trajectory correcting software algorithms.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

<u>B. Program Change Summary</u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	32703	7046	11760
Appropriated Value	33005	17246	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-100	0
b. SBIR / STTR	-957	0	0
c. Omnibus or Other Above Threshold Reductions	-11100	0	0
d. Below Threshold Reprogramming	-2948	0	0
e. Rescissions	-302	0	0
Adjustments to Budget Years Since FY2002 PB		0	29998
Current Budget Submit (FY 2003 PB)	17698	17146	41758

FY 2001 funds used for higher priority Army requirements to include Multi Purpose Individual Munitions contract termination and re-definition of Countermine Capability Stock Program submitted on the Army's FY 2001 Omnibus Reprogramming.

FY 2002 funds increased for shoulder launched multi purpose assault weapon, common remotely operated weapon station (CROWS), M795E1 155mm extended range high explosive base burner projectile, and small arms fire control system II.

FY 2003 adjustment provides increases for APKWS (to take advantage of successful ATD), LCCM (continue support of Congressional requirements), and Small Arms Improvement (test and evaluate aviation variant).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT 613	
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
613 MORTAR SYSTEMS	11144	9938	5065	33408	39495	33881	4076	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program provides funds to complete development and type classify items that will enhance the effectiveness, lethality, versatility, mobility, and accuracy of mortar systems. Current mortar systems include conventional ammunition with a variety of fuzing, weapons that range from man-portable 60mm to vehicle-mounted 120mm mortars, and related equipment such as fire control, mortar ballistic computers, training devices, and ammunition. Current funding for this project completes development of the digital Mortar Fire Control System (MFCS). MFCS is a revolutionary improvement in mortar capability, seamlessly linking mortar fires in the future digital battlefield. MFCS provides an on-board fire control system that includes a fire control computer, position navigation system, and gun pointing system. MFCS allows mortar crews to set-up in one minute, down from the current eight minutes. Accuracy is increased by a factor of four. Shorter exposure times increase crew survivability. The MFCS is fully compatible with the Advanced Field Artillery Tactical Data System (AFATDS), making mortars an integral part of the Army's Transformation Campaign plan. This will increase situational awareness and reduce the probability of fratricide. This project supports the Legacy transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- 2179 MFCS Software Development/Software Test
- 861 MFCS Heavy Development Test Initiated
- 1023 MFCS Developmental Engineering Support
- 1035 MFCS Heavy Hardware System Integration
- 337 MFCS Project Management
- 2641 MAPAM test hardware for Production Qualification Test (PQT) Procured
- 85 MAPAM PQT
- 1350 MAPAM Developmental Engineering
- 133 MAPAM Program Management
- 182 Engineering Test for 120mm SRTR

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

613

FY 2001 Accomplishments: (Continued)

- 836 120mm SRTR Prototype Development
- 350 120mm SRTR Developmental Engineering
- 132 SRTR Program Management

Total 11144

FY 2002 Planned Program

- 1508 MFCS Light Hardware Development
 - 1355 MFCS Version 2 Software Development
 - 709 MFCS Light Development Engineering
 - 513 MFCS Heavy Development Test and Evaluation
 - 600 MFCS Heavy Information Assurance
 - 700 MFCS Heavy Development Engineering
 - 300 MFCS Program Management
- SHOULDER LAUNCHED MULTIPURPOSE ASSAULT WEAPON-CONFINED SPACE (SMAW-CS)
- 2500 SMAW-CS: Procure hardware for system level qualification
 - 600 SMAW-CS: Complete engineering design of baseline system developed under FY00 and FY01 programs
 - 700 SMAW-CS: Continue to provide engineering support and analysis
 - 453 SMAW-CS: Perform engineering design tests on components, integrated subsystems, and systems

Total 9938

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
613

FY 2003 Planned Program

- 2100 MFCS Light Hardware Development
- 800 MFCS Light Development Engineering
- 1865 MFCS Software Version 2 Development/Test
- 300 MFCS Program Management

Total 5065

<u>B. Other Program Funding Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
Other Procurement, Army -2-: K99300 (MFCS)	7274	11694	29794	40926	15409	19489	38681	0	163267
0603802 AS4 Weapons and Munitions Advanced Development, Mortar Systems	0	2800	0	0	0	0	0	0	2800

C. Acquisition Strategy: Mortar Fire Control System (MFCS) - The prime contractor (L3 Communications-formerly AlliedSignal Corp. of Teterboro, NJ) teamed with a number of subcontractors, and the Government, started development of the MFCS. Because of impending cost growth on the contract with L3 Communications, the contract was not further funded. Development is being completed as a government in-house program. Due to an urgent need to replace the M23 Mortar Ballistic Computer, the Commander's Interface, a component of MFCS that performs the ballistic computer function is being procured and fielded. Initial production of the full system is scheduled for FY 2003 and is planned as a fixed price competitive system contract.

The Mortar Anti-Personnel - Anti-Materiel (MAPAM) round is a program to evaluate and type classify a foreign round. Rounds have been procured for comparative testing via sole source contract to SM Swiss Ammunition Enterprise Corp. No follow on production is currently planned.

The 120mm Short Range Training Round (SRTR), XM932 will be a low cost training round for the 120mm Mortar System. No follow on production is currently planned.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
613

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Operational Test (MFCS Heavy)			1Q				
Type Classification (MFCS Heavy) (MS III)			2Q				
First Unit Equipped (MFCS Heavy)			3Q				
Procure NDI Hardware for Evaluation (MAPAM)	4Q						
Conduct Comparative / Safety Tests (MAPAM)	2-3Q						
Prototype Qualification Tests (MAPAM)		1-2Q					
120mm SRTR - XM932							
Prototype Tests (XM932)		2Q					

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

613

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MFCS System Development	Cost Share	L3 Com Teterboro, NJ/TACOM-ARDEC	20221	0		0		0		0	20221	0
b . MFCS Heavy Software Development	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	1261	2179	1Q	0		0		0	3440	0
c . MFCS Hardware Integration	Project Order	TACOM- ARDEC Picatinny Arsenal NJ	0	396	1Q	0		0		0	396	0
d . MFCS Hardware Integration	C/T&M Contract	Applied Ordnance Technology, Waldorf MD	0	521	1Q	0		0		0	521	0
e . MFCS Heavy Integration	Project Order	TACOM-RI Rock Island Ill	333	118	1Q	0		0		0	451	0
f . MFCS Version 2 Software Development	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	0	0		1355	2Q	1865	2Q	0	3220	0
g . MFCS Light Hardware Development	Contract	TBD	0	0		1508	3Q	2100	3Q	0	3608	0
h . MAPAM Hardware	SS/FP	SM Swiss AEC Zurich, Switzerland	3661	2641	4Q	0		0		0	6302	0
i . 120mm SRTR Development	SS/CR	Pocal Industries Scranton, PA	0	836	4Q	0		0		0	836	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

613

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . SMAW-CS Engineering Design of Baseline System	TBD	TBD	0	0		1428	1Q	0		0	1428	0
k . Mortar System Upgrades	Various	TBD	0	0		0		0		Continue	Continue	Continue
Subtotal:			25476	6691		4291		3965		Continue	Continue	Continue

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MFCS Heavy Dev Support	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	3335	627	2Q	709	2Q	0		0	4671	0
b . MFCS Logistics Support	Project Order	TACOM-RI Rock Island Ill	0	396	2Q	0		0		0	396	0
c . MAPAM Dev Support	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	1750	1350	2Q	0		0		0	3100	0
d . 120mm Short Range Training Rd Dev Support	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	0	350	2Q	0		0		0	350	0
e . MFCS Light Dev Support	Project Order	TACOM-ARDEC Picatinny Arsenal NJ	0	0		700	2Q	800	2Q	0	1500	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

613

II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
f . SMAW-CS Engineering Support	TBD	TBD	0	0		400	2Q	0		0	400	0
Subtotal:			5085	2723		1809		800		0	10417	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . MFCS Heavy Component Testing	MIPR	ATEC, Alexandria, VA	1038	0		0		0		0	1038	0
b . MFCS Heavy Developmental Test	MIPR	ATEC, Alexandria, VA	62	861	2Q	513	2Q	0		0	1436	0
c . MFCS Information Assurance	MIPR	CECOM Ft Monmouth NJ	0	0		600	3Q	0		0	600	0
d . MAPAM Foreign Comparative Test	MIPR	TACOM-ARDEC Picatinny Arsenal, NJ	1119	0		0		0		0	1119	0
e . MAPAM PCA/Production Qualification Test	MIPR	ATEC, Alexandria, VA	0	85	3Q	0		0		0	85	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
613

III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
f . 120mm SRTR Production Qualification Test	MIPR	ATEC, Alexandria, VA	0	182	3Q	0		0		0	182	0
g . SMAW-CS Engineering Design Test	TBD	TBD	0	0		225	3Q	0		0	225	0
h . SMAW-CS System Test Hardware			0	0		2200	3Q	0		0	2200	0
Subtotal:			2219	1128		3538		0		0	6885	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Mortar Fire Control System	In-house	PM Mortars, Picatinny Arsenal NJ	1002	300	2Q	300	1Q	300	1Q	0	1902	0
b . Mortar Fire Control System	T&M Contract	Robbins-Gioia Inc Alexandria VA	600	37	2Q	0		0		0	637	0
c . MAPAM	In-house	PM Mortars, Picatinny Arsenal NJ	100	133	2Q	0		0		0	233	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

613

IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
d . 120mm SRTR XM932	In-house	PM Mortars, Picatinny Arsenal NJ	0	78	2Q	0		0		0	78	0
e . SRTR Management Support	C/T&M Contract	Applied Ordnance Technology, Waldorf MD	0	54	2Q	0		0		0	54	0
Subtotal:			1702	602		300		300		0	2904	0

Project Total Cost:			34482	11144		9938		5065		Continue	Continue	Continue

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
705

COST (In Thousands)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to	Total Cost
	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
705 ADVANCED PRECISION KILL WEAPON SYSTEM (APKWS)	0	0	22746	35702	11608	0	0	0	70056

A. Mission Description and Budget Item Justification: The Advanced Precision Kill Weapon System (APKWS) is a family of precision guided rockets with a newly designed guidance section that integrates with existing 2.75-inch munition components and launch equipment. The APKWS is a highly accurate weapon that will complement the HELLFIRE missile in a precision strike against soft point targets. The APKWS will provide improved accuracy over the current 2.75-inch munition used on the AH-64 Apache, OH-58 Kiowa Warrior and the future RAH-66 Comanche helicopters. The APKWS program will develop, test and qualify a laser guided 2.75-inch munition. The funding includes system level qualification for APKWS. The APKWS is expected to provide a substantial increase in the number of kills and a reduction in collateral damage to minimize fratricide. The Advanced Concept Technology Demonstration (ACTD), Low Cost Precision Kill, was funded in PE 0603313.567. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:
 Project not funded in FY 01.

FY 2002 Planned Program
 Project not funded in FY 02.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
705

FY 2003 Planned Program

- 20069 Define and develop system requirements and preliminary design for precision guided rocket including hardware and software.
- 1454 Develop test plans and test support equipment.
- 1223 Perform government engineering support.

Total 22746

<u>B. Other Program Funding Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
C70301 APKWS (Advanced Precision Kill Weapon System)	0	0	0	0	8019	74074	77188	746200	905481

C. Acquisition Strategy: Development of the APKWS will be full and open competition. The APKWS program will be an Acquisition Category II program as defined in DoD 5000.2-R guidelines. The APKWS development program is a 30- month effort followed by Low Rate Initial Production (LRIP) and Full Rate Production (FRP). The U.S. Army Aviation and Missile Command (AMCOM) will provide assistance and technical expertise during the development effort.

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Milestone B			1Q				
Award APKWS SDD Contract			2Q				
APKWS PDR			4Q				
APKWS CDR				2Q			
APKWS Testing				3Q			
Milestone C					2Q		

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

705

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Prime Contract	CPIF/AF	TBD	0	0		0		18362	2Q	32003	50365	0
b . Support Costs	Various	Various	0	0		0		420	1-4Q	1387	1807	0
c . Development Engineering	Various	Various	0	0		0		1287	1-4Q	4930	6217	0
Subtotal:			0	0		0		20069		38320	58389	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

705

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test Support	Various	Various	0	0		0		1454	1Q	4410	5864	0
Subtotal:			0	0		0		1454		4410	5864	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . In-House Support	Various	Various	0	0		0		1223	1-4Q	4580	5803	0
Subtotal:			0	0		0		1223		4580	5803	0

Project Total Cost:			0	0		0		22746		47310	70056	0
---------------------	--	--	---	---	--	---	--	-------	--	-------	-------	---

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS1	
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
AS1 SMALL ARMS IMPROVEMENT	6554	5719	8958	14754	10641	4423	2423	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program provides funds to develop existing and emerging technologies 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 (.38 caliber, .45 caliber; 9mm), individual weapons (5.56mm), crew-served weapons (5.56mm-40mm) and related items such as fire control equipment, training devices, hand grenades, and ammunition. Current efforts focus on the Rifle Launched Entry Munition, improvements to the M249 Squad Automatic Weapon, M16/M4 Rifle, M203 Grenade Launcher, MK19 Grenade Machine Gun, M240B Medium Machine Gun, ammunition, and hand grenades. These small arms weapon systems support the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- LIGHTWEIGHT TRIPOD FOR LIGHT MACHINE GUN
- 321 Hardware Design
- 300 Fabrication of Prototypes
- 85 Engineering Test
- 159 Prototype Modification & Redesign
- M249 RAILS/BIPOD/HANDGUARD
- 97 Prototype Design & Fabrication Support
- 60 Developmental Test Support
- 96 User Evaluation
- 15 Technical Data Preparation
- M249 MACHINE GUN BARREL LIFE EXTENSION PROGRAM
- 50 Preparation and release of Request For Proposal (RFP)

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2002**

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

AS1**FY 2001 Accomplishments: (Continued)**

- 30 Receipt/Evaluation of Proposals, Award of Contract
- 284 Contract Execution, Design and Fabrication
- 20 Technical Data Preparation
- 30 Engineering Support
MK19 MODERN MOUNT
- 80 Definitization of Requirements/Final Acquisition Strategy/Solicitation Preparation
- 20 Prototype Hardware Fabrication
- 30 Engineering Support
MK19 REMOTE PLATFORM
- 143 Contract Award
- 475 Design, Fabrication of Prototypes
- 100 Vehicle Integration & Testing
XM116 SIGHT, COMPUTERIZED, SAFC
- 1144 Contract Award for Primary Hardware
- 590 Design & Fabrication of Hardware
- 400 Program Documentation/Execution
- 100 Technical Test Plan
- 100 Operational Test Plan
- 75 Integrated Logistics Support (ILS) Documentation
ENHANCED CAL .50 MACHINE GUN
- 100 Contract Award (Rails)
- 95 Rail Evaluation
- 730 Safety Testing/ Certification

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2002**

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

AS1**FY 2001 Accomplishments: (Continued)**

- 450 Analysis of Alternatives experiment
 - 70 Milestone A
RIFLE LAUNCHED ENTRY MUNITION
 - 20 Continuation of Hardware Fabrication
 - 217 Developmental Testing/Operational Testing (DT/OT)
 - 68 MS C In-Process Review (IPR)/Type Classification (TC)
- Total 6554

FY 2002 Planned Program

- 493 LIGHTWEIGHT TRIPOD FOR LIGHT MACHINE GUN
Hardware Modification and Retesting
- 175 Hardware Fabrication
- 65 Technical Test Start
- 50 OT Planning
M249 MG BARREL LIFE EXTENSION PROGRAM
- 342 Final Design, Tooling and Fabrication
- 65 Technical Testing
- 69 Tech Data Preparation
MK19 REMOTE PLATFORM
- 60 Test Planning
- 500 Engineering Assessment Test
- 900 Award Hardware Improvement Contract Mod
- 420 Prepare MS B Package

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2002**

BUDGET ACTIVITY

5 - Engineering and manufacturing development

PE NUMBER AND TITLE

0604802A - Weapons and Munitions - Eng Dev

PROJECT

AS1**FY 2002 Planned Program (Continued)**

- 1200 Award Contract - Primary Hardware
- 350 Fabricate Primary Hardware
- 30 OT Planning
- XM116 SIGHT, COMPUTERIZED, SAFC
- 650 Contract Modification Primary Hardware
- 200 Program Documentation/Execution
- 150 Tradeoff Studies

Total 5719

FY 2003 Planned Program

LIGHT WEIGHT TRIPOD FOR MACHINE GUN

- 200 Technical Testing
- 695 Operational Testing
- 80 Independent Evaluation
- 125 Type Classify/Milestone C
- M249 MACHINE GUN BARREL LIFE EXTENSION PROGRAM
- 90 Tech Eval Reports
- 333 Tech Data Support
- 116 ECP Prep & Approval
- M249 SHORT RANGE TRAINING AMMUNITION
- 180 Contract Award
- 50 Manufacture Ammunition
- 476 Conduct Developmental Tests
- 50 Obtain Safety Confirmation/Certification

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev	PROJECT AS1
---	--	-----------------------

FY 2003 Planned Program (Continued)

- M203 UPGRADE
- 130 Finalize Requirements/Systems Demonstration/IPR
- 1231 Comp Contractor Selection/Award
- 130 Tech Assessments/Risk Reduction
- XM116 SIGHT, COMPUTERIZED, SAFC
- 100 Primary Hardware Delivered
- 100 Manuals/ Training Plans Completed
- MK19 SELF DESTRUCT CARTRIDGE
- 925 Contract Award
- 270 Engineering Development
- 180 Final Development Test
- 60 Critical Design Review
- 185 Testing Integration
- M240 WEIGHT REDUCTION
- 80 Engineering Tests
- 100 Program Documentation/ MS B
- 100 Award Contract
- 622 Final Design/ Fabricate Test Hardware
- AVIATION VARIANT
- 500 Technical Testing
- 1050 Limited User Test
- 275 Evaluation Reports
- 425 Program Documentation/MS C
- 100 Production Planning
- Total 8958

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
AS1

<u>B. Other Program Funding Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
WTCV, GZ1290, Squad Auto Wpn (MODS)	2920	4419	4119	7690	0	0	0	0	29305
WTCV, GZ2800, M16 Rifle MODS	4343	2085	0	2419	2410	2097	0	0	65956
WTCV, GB3000, MK19 MODS	2796	739	2743	3868	3856	4395	0	0	20868
WTCV, GZ1300, Med MG (MODS)	491	741	0	2998	2989	3096	1397	18300	38239
PAA, E93500, Rifle Launched Entry Munition	2169	2773	2744	0	0	0	0	0	8086

C. Acquisition Strategy: Primary strategy is to mature and finalize design, award RDTE hardware contracts, and test and evaluate system. Ultimate goal is type classification and production award.

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
LIGHTWEIGHT TRIPOD FOR LIGHT MACHINE GUN							
Design Hardware	2Q						
Fabricate Prototypes	3Q						
Engineering Test	3-4Q						
Prototype Modification & Redesign	4Q	1-2Q					
Hardware Modification & Retesting		1-2Q					
Hardware Fabrication		3-4Q					
Technical Test Start		4Q					
OT Planning		4Q					
Technical Testing			1-2Q				
Operational Testing			2Q				
Independent Evaluation			3Q				
Type Classify/MS C			4Q				
M249 RAILS/BIPOD/HANDGUARD							
Prototype Design & Fabrication Support	1-3Q						
Developmental Test Support	4Q						
User Evaluation	4Q	1Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev	PROJECT AS1
--	---	------------------------------

<u>D. Schedule Profile (continued)</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Technical Data Prep		2Q					
M249 RAM IMPROVEMENT/WEIGHT REDUCTION							
Award contract				2Q			
Long lead procurements				3Q			
Prototype designs				3-4Q			
Prototype fabrication					1-2Q		
Engineering tests					2-3Q		
Final design					4Q		
Hardware fabrication					4Q	1Q	
TT/OT						1-3Q	
Independent Assessment						3-4Q	
ECP						4Q	
M249 MACH GUN BARREL LIFE EXT PGM							
Prepare and release RFP	1-2Q						
Receive/Evaluate Proposals, Award Contract	1-2Q						
Contract Execution, Design & Fabrication	2-4Q						
Technical Data Preparation	3Q						
Engineering Support	1-4Q						
Final Design, Tooling & Fabrication		1-4Q					
Technical Testing		3-4Q					
Technical Data Preparation		4Q	1-2Q				
Tech Eval/Reports			1-3Q				
Tech Data Support			1-3Q				
ECP Prep & Approval			3Q				
M249 SHORT RANGE TRAINING AMMUNITION							
Contract Award			2Q				
Manufacturing Ammunition			1Q				
Conduct Developmental Tests			2-3Q				
Obtain Safety Confirmation			3Q				
Independent Assessment Reports				1Q			
Prepare Package				1-2Q			
Staff Packages				3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development	PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev	PROJECT AS1
--	---	------------------------------

D. Schedule Profile (continued)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Milestone C IPR/TC				4Q			
M203 UPGRADE							
Finalize requirements			1Q				
Competitive contractor selection/award			2-3Q				
Technical assessments/risk reduction			4Q	1-4Q			
Prototype Fabrication				1-4Q			
Finalize prototype					1-3Q		
DT/OT					4Q	1-3Q	
Independent Evaluations						2-3Q	
Finalize Design						4Q	1-2Q
IPR/TC-STD							2-3Q
MK19 MODERN MOUNT							
Engineering Support	1-4Q						
Test Hardware Samples/Final Report	1-2Q						
Prototype Hardware Fabrication	1-2Q						
Final Report	3-4Q						
MK19 REMOTE PLATFORM							
Contract Award	1Q						
Design, Fabricate Prototypes	2-4Q	1Q					
Vehicle Integration & Testing (Use of FY 2001 c/o)	4Q	1-2Q					
Test Planning		1Q					
Engineering Assessment Test		2-3Q					
Award Hardware Improvement Contract Mod		3Q					
Prepare MS B Package		2-3Q					
Award Contract - Primary Hardware		3Q					
Fabricate Primary Hardware		4Q	1Q				
OT Planning		4Q					
XM116 SIGHT, COMPUTERIZED, SAFC							
MS B	4Q						
Contract Award Primary Hardware (Use of FY 2001 c/o)	4Q	1-4Q	1-4Q				
Two Year Design & Fabricate Hardware (Use of FY 2001 c/o)		1-4Q	1-4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
AS1

D. Schedule Profile (continued)	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Program Documentation/Execution (Use of FY 2001 c/o)	4Q	1-4Q					
Technical Test Plan (Use of FY 2001 c/o)	4Q	1-4Q					
Operational Test Plan (Use of FY 2001 c/o)	4Q	1-4Q					
ILS Documentation (Use of FY 2001 c/o)	4Q	1-4Q					
Contract Modification		3Q					
Program Documentation		3-4Q					
Tradeoff Studies		3Q					
Primary Hardware Delivered			4Q				
Manuals/ Training Plans Completed			4Q				
Technical Test				1-2Q			
Operational Test				2-3Q			
Systems Evaluation Report				4Q	1Q		
MS-C					1Q		
MK19 SELF-DESTRUCT CARTRIDGE							
Contract Award			2Q				
Engineering Development			1-2Q				
Final Development Test			2Q				
Critical Design Review			3Q				
Test Integration			3-4Q				
Award Qual Lot Fabrication Option			3-4Q				
Manufacture Qualification Lot			3-4Q	1Q			
DT/OT/LFT				2-4Q			
Prepare MS C IPR Package					1-2Q		
MS C IPR/TC-STD					3Q		
M240 WEIGHT REDUCTION							
Engineering Tests			1Q				
Program Documentation/ MS B			1-2Q				
Contract Award			3Q				
Final Design/ Fabricate Test Hardware			3-4Q	1Q			
Manufacturing Process Finalized				1Q			
Technical Test				2-4Q			
User Test				2-4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
AS1

D. Schedule Profile (continued)	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Independent Assessment/ Test Reports					1-2Q		
Program Documentation/ MS C					2-4Q		
M240 IMPROVED MACHINE GUN BARREL							
Define Requirements				1Q			
Develop Test Plan				2Q			
Award Contract				3Q			
Preliminary Design/Fabrication				4Q	1Q		
Fabricate Prototype Hardware					1-2Q		
Test & Evaluate					3Q		
ECP/Reports					4Q		
ENHANCED CAL .50 MACHINE GUN							
Contract Award (Rails)	4Q						
Evaluation of Rail Designs (Use of FY 2001 c/o)		1-2Q					
Safety Testing/Certification (Use of FY 2001 c/o)		2-3Q					
Analysis of Alternatives Experiment (Use of FY 2001 c/o)		3-4Q					
Milestone A (Use of FY 2001 c/o)		4Q					
NON-TOXIC AMMO							
Market Survey				1Q			
MS B				1Q			
Prepare RFP				1-2Q			
Award Contracts for all Projectiles/Cartridges Development				3Q			
Toxic Free Primer Development				3-4Q			
Projectiles/Cartridges Development				3-4Q			
Final Development Test for Toxic Free Primer					1Q		
Final Development Test for Projectiles/Cartridges					1-2Q		
Modify Cartridges Contracts for Integration of Toxic Free Primer					2Q		
Integration of toxic free primer					3-4Q		
Critical design review (CDR)					3-4Q		
Award qual lot fabrication option for 9mm					3-4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
AS1

D. Schedule Profile (continued)	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Award Qual Lot Fabrication Option for 5.56mm,7.62mm and Cal .50						2Q	
Manufacture Qualification Hardware						1-3Q	
Initiate DT/OT/LFT						3-4Q	
Complete DT/OT/LFT							1-2Q
Prepare MSC IPR Package							2-3Q
MS C IPR/TC-STD							4Q
RIFLE LAUNCHED ENTRY MUNITION							
Continue Hardware Fabrication	2Q						
DT/OT	2-4Q						
MS C IPR/TC		1Q					
AVIATION VARIANT							
Technical Testing			1Q				
Limited User Test			2-3Q				
Evaluation Reports			3Q				
Program Documentation/MS C			3-4Q				
Production Planning			3-4Q				

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

AS1

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Hardware Development	FP	Various	6133	2578	1-4Q	3681	1-4Q	3148	1-4Q	Continue	Continue	0
Subtotal:			6133	2578		3681		3148		Continue	Continue	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Development	MIPR	ARDEC, Picatinny, NJ	3574	1940	1-4Q	738	1-4Q	1929	1-4Q	16941	25122	0
b . Logistics	MIPR	TACOM, Rock Island, IL	96	192	1-4Q	182	1-4Q	275	1-4Q	2026	2771	0
c . Human Research and Eng Directorate	MIPR	APG, MD	134	217	1-4Q	133	1-4Q	250	1-4Q	1360	2094	0
Subtotal:			3804	2349		1053		2454		20327	29987	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

AS1

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . DT	MIPR	DTC, APG, MD	2522	839	1-4Q	480	1-4Q	1091	1-4Q	Continue	Continue	0
b . OT	MIPR	AEC, Alexandria, VA	0	92	1-4Q	30	1-4Q	1510	1-4Q	8182	9814	0
c . Validation testing	MIPR	DTC, APG, MD	100	96	1-4Q	50	1-4Q	185	1-4Q	460	891	0
Subtotal:			2622	1027		560		2786		Continue	Continue	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PGM Management	In House	PM Small Arms, NJ	907	580	1-4Q	400	1-4Q	490	1-4Q	7367	9744	0
b . Travel	In House	PM Small Arms, NJ	102	20	1-4Q	25	1-4Q	80	1-4Q	879	1106	0
Subtotal:			1009	600		425		570		8246	10850	0

Project Total Cost:			13568	6554		5719		8958		Continue	Continue	0
---------------------	--	--	-------	------	--	------	--	------	--	----------	----------	---

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY 5 - Engineering and manufacturing development				PE NUMBER AND TITLE 0604802A - Weapons and Munitions - Eng Dev				PROJECT AS5	
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
AS5 LOW COST COMPETENT MUNITIONS (LCCM)	0	1489	4989	4973	0	0	0	0	11451

A. Mission Description and Budget Item Justification: This program funds the design, development, assembly and test of a Low Cost Competent Munition (LCCM) fuze. The final concept for the LCCM has not been selected. However, it will probably encompass a standard fuze equipped with a Global Positioning System (GPS) receiver; an air-drag device that will compensate for gun and meteorological ballistics effects; a Fuze, Safe and Arm (FSA) mechanism; a U.S. required Selective Availability, Anti-Spoof GPS Module (SAASM); a smaller, high-power battery; an inductive fuze data link; and improved trajectory correcting software algorithms. Integration of these items to yield a low cost fuze module will effectively reduce target delivery error of conventional artillery munitions and reduce the number of projectiles required to execute a fire mission. This LCCM development is a key component of the M864 Baseburn extended range projectile recapitalization effort. Similarly, the LCCM will benefit other 155mm projectiles as well as the family of 105mm projectiles. The increase in effectiveness offered by the LCCM allows commanders the operational capability to defeat more targets with the same basic loads, while reducing the logistical burden associated with the current mission requirements. The M795E1 baseburner program maximizes range optimization. These systems support the Legacy transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:
Not applicable

FY 2002 Planned Program

- 230 M795E1 maximum range optimization
- 1259 Purchase of 220 M795E1 projectiles

Total 1489

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
AS5

FY 2003 Planned Program

- 500 Design and develop inductive data link
- 3000 Design and develop integrated GPS SAASM architectures
- 250 Design and develop miniature, high power battery
- 1239 Design, develop, and integrate gun-hardened system and components

Total 4989

<u>B. Other Program Funding Summary</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Compl</u>	<u>Total Cost</u>
Projectile 155MM DPICM Basebleed M864E1	0	0	22300	35000	40000	40000	40000	0	177300

C. Acquisition Strategy: This program will be jointly structured with the United Kingdom Tubed Artillery Conventional Artillery System (TACAS) program. The Army will benefit with lower costs through increased production quantities.

<u>D. Schedule Profile</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
M795E1 Contract Awards		3Q					
M795E1 Testing		4Q	1Q				
Component Demonstration			3Q				
Prototype Demonstration				4Q			

LCCM schedule dates are based on a joint program with the United Kingdom and a pending memorandum of agreement.

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY
5 - Engineering and manufacturing development

PE NUMBER AND TITLE
0604802A - Weapons and Munitions - Eng Dev

PROJECT
AS5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . LCCM Contract	CPAF	TBD	0	0		0		4000	2Q	4000	8000	0
b . M795E1 Metal Parts	Option	Chamberlain Mfg Co Scranton, PA	0	0		769	3Q	0		0	769	0
c . M795E1 Basebleed	SS/CPIF	Talley Industries, Mesa, AZ	0	0		490	3Q	0		0	490	0
Subtotal:			0	0		1259		4000		4000	9259	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Product Manager's Office	In House	PM ARMS, NJ	0	0		0		300	1Q	300	600	0
b . Government IPT Support	MIPR	ARDEC, Picatinny Arsenal, NJ	0	0		0		689	1Q	673	1362	0
c . Product Managers Office - M79E1	In House	PM ARMS, NJ	0	0		30	2Q	0		0	30	0
d . Government IPT Support	MIPR	ARDEC, Picatinny Arsenal, NJ	0	0		50	2Q	0		0	50	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

AS5

II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		80		989		973	2042	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . M795E1 Testing	MIPR	Yuma Proving Grounds, Yuma AZ	0	0		150	4Q	0		0	150	0
Subtotal:			0	0		150		0		0	150	0

ARMY RDT&E COST ANALYSIS(R-3)

February 2002

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - Engineering and manufacturing development

0604802A - Weapons and Munitions - Eng Dev

AS5

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			0	0		0		0		0	0	0
Subtotal:			0	0		1489		4989		4973	11451	0