

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

February 2003

## BUDGET ACTIVITY

### 5 - System Development and Demonstration

## PE NUMBER AND TITLE

0604814A - Sense and Destroy Armament Missile - Eng Dev

COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	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	59329	102188	133994	153389	161909	173445	223058	264958	0	1300866
708 XM982 PROJECTILE	59329	102188	133994	143359	142300	144051	183807	191407	0	1129031
709 ADVANCED FIELD ARTILLERY MUNITION	0	0	0	10030	19609	29394	39251	73551	0	171835

**A. Mission Description and Budget Item Justification:** This program funds multiple efforts; the Excalibur XM982 Projectile Blocks I, II and III, and the Spin Stabilized-Sensor Fuzed Munition (SS-SFM).

XM982 Projectile funds the development of the Excalibur 155mm projectile and integration of the Unitary warhead (Block I) and Smart Munition (Block II). Excalibur provides improved fire support through a Precision Guided Extended Range family of munitions with greatly increased accuracy and reduced collateral damage in support of the Objective Force. The Excalibur will be compatible with the Future Combat System-Cannon (FCS-C). The Excalibur will allow greater standoff and faster defeat of potential threats, increasing soldier survivability while reducing the ammunition workload. The Product Management Office (PMO) recently completed a merger with the Trajectory Correctable Munitions (TCM) program to reduce program risk. Excalibur Unitary is an international program, teamed with the Kingdom of Sweden (KoS), who will contribute resources towards the development in accordance with an established Project Agreement. This system supports the Transformation Campaign Plan (TCP).

Funding also conducts an assessment of SS-SFM systems. SS-SFM's are advanced "fire and forget" smart artillery projectiles that can be used in all 155mm artillery systems. SS-SFM's use one or more sensors to defeat self-propelled artillery and lightly armored targets in all weather and environmental conditions. This system supports the Transformation Campaign Plan (TCP).

Advanced Field Artillery Munition (AFAM) funds the development of a Discriminating Munition that will seek, detect, discriminate and engage specified target(s) located in complex and urban terrain and is part of the Excalibur family of munitions (Block III). It will be compatible with the Future Combat System-Cannon (FCS-C). This system supports the Transformation Campaign Plan (TCP).

Funding also provides for technology updates (technology refresh) of electronics in Excalibur Blocks I and II. Planned technology updates include interoperability with the next generation GPS system, insertion of future planned lower unit cost components (such as the DoD Common Guidance / Common Sensor Inertial Measurement Unit), avoidance of parts obsolescence, and maintaining technology relevance against future threats.

**ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)****February 2003****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604814A - Sense and Destroy Armament Missile - Eng Dev**

<b><u>B. Program Change Summary</u></b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>
Previous President's Budget (FY 2003)	61300	70888	53067	29833
Current Budget (FY 2004/2005 PB)	59329	102188	133994	153389
Total Adjustments	-1971	31300	80927	123556
Congressional program reductions				
Congressional rescissions		-1451		
Congressional increases		36225		
Reprogrammings	-312	-587		
SBIR/STTR Transfer	-1659	-2887		
Adjustments to Budget Years			80927	123556

FY03: Congressional increase for program (+\$36.2M). This was as a result of Amended FY03 Budget Request due to termination of Crusader program.

FY04: Transfer from procurement to fund integration/merger of Trajectory Correctable Munition (TCM) with Excalibur projectile (+\$38.1M), addition of Spin Stabilized-Sensor Fuze Munition Program (+\$9.8M) and increase of funds for reliability growth and cost reduction activities (+\$33.0M).

FY05: Transfer from procurement to fund integration/merger of TCM with Excalibur projectile (+\$33.5M), addition of Spin Stabilized-Sensor Fuze Munition Program (+\$23.2M) and increase of funds for reliability growth and cost reduction activities (+\$66.9M).

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604814A - Sense and Destroy Armament Missile - Eng Dev				PROJECT 708			
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
708	XM982 PROJECTILE	59329	102188	133994	143359	142300	144051	183807	191407	0	1129031
<p><b><u>A. Mission Description and Budget Item Justification:</u></b> This project funds two programs, the Excalibur XM982 Projectile and the Spin Stabilized-Sensor Fuzed Munition (SS-SFM).</p> <p>XM982 Projectile funds the development of the Excalibur 155mm projectile and integration of the Unitary warhead (Block I) and Smart Munition (Block II). Excalibur provides improved fire support through a Precision Guided Extended Range family of munitions with greatly increased accuracy and reduced collateral damage in support of the Objective Force. The Excalibur will be compatible with the Future Combat System-Cannon (FCS-C). The Excalibur will allow greater standoff and faster defeat of potential threats, increasing soldier survivability while reducing the ammunition workload. The Product Management Office (PMO) recently completed a merger with the Trajectory Correctable Munitions (TCM) program to reduce program risk. Excalibur Unitary is an international program, teamed with the Kingdom of Sweden (KoS), who will contribute resources towards the development in accordance with an established Project Agreement. This system supports the Transformation Campaign Plan (TCP).</p> <p>Funding also conducts an assessment of SS-SFM systems. SS-SFM's are advanced "fire and forget" smart artillery projectiles that can be used in all 155mm artillery systems. SS-SFM's use one or more sensors to defeat self-propelled artillery and lightly armored targets in all weather and environmental conditions. This system supports the Transformation Campaign Plan (TCP).</p>											
<b><u>Accomplishments/Planned Program</u></b>							<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	
Continue airframe tactical structure and conduct contractor development testing with merged Excalibur-TCM design.							9235	22507	24428	23041	
Continue guidance unit integration, gun hardening, tactical telemetry, systems software development, and programmed maneuver flight demonstration.							21339	27467	38376	38542	
Continue to execute Systems and Specialty Engineering activities, to include specification development, Cost As Independent Variable (CAIV), program metric tracking, and conduct modeling of lethality, effectiveness, and aeroballistics, and requirements analysis to incorporate a tactical telemetry system.							7694	17273	19996	20720	
Continue Unitary warhead development, to include structure penetration, and fragmentation testing							10177	9329	13071	8482	
Continue Platform Integration effort including design and build of prototype hardware for Platform Integration Kit and Portable Inductive Artillery Fuze Setter (EPIAFS) and development of Advanced Field Artillery Tactical Direction System (AFATDS) integration.							4553	5925	13206	11854	

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Eng Dev**

## PROJECT

**708**

### Accomplishments/Planned Program (continued)

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Continue maturing technology of TCM program to integrate into the Excalibur program.	3500	7500	0	0
Procured 30 test projectiles and 18 guidance test projectiles for FY02 Contractor Development Testing.	2831	0	0	0
Procure and test 16 structure test projectiles, 8 soft recovery Guidance system evaluation test projectiles, 27 ballistic environment measurement rounds, and 36 warhead test projectiles for FY03 Contractor Development Testing.	0	12187	0	0
Procure and test 16 structure test projectiles, 27 soft recovery Guidance system evaluation test projectiles, 7 full up system rounds, and 36 warhead test projectiles for FY04 Contractor Development Testing.	0	0	15117	0
Procure and test 16 structure test projectiles, 15 soft recovery Guidance system evaluation test projectiles, 40 full up system rounds, and 162 warhead test projectiles for FY05 Contractor Development Testing.	0	0	0	17520
SS-SFM Comparative Testing to include Winter, Summer and Desert Testing	0	0	9800	15200
Initiate SS-SFM Preliminary Qualification testing, to include firing tables, safety tests and Lethal Mechanism Characterization	0	0	0	8000
Totals	59329	102188	133994	143359

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February 2003

## BUDGET ACTIVITY

**5 - System Development and Demonstration**

## PE NUMBER AND TITLE

**0604814A - Sense and Destroy Armament Missile -  
Eng Dev**

## PROJECT

**708**

<b>B. Other Program Funding Summary</b>	<b>FY 2002</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>To Compl</b>	<b>Total Cost</b>
Procurement Ammunition Army: E80103	0	0	0	0	21544	28172	61909	129720	3894600	4135945
OPA2: Enhanced Portable Inductive Fuze Setter (E-PIAFS): AD3260	0	0	0	0	0	0	5898	11726	0	17624
RDTE: 0604814A D709 Advanced Field Artillery Munition	0	0	0	10030	19609	29394	39251	73551	Continuing	Continuing

**C. Acquisition Strategy:** Excalibur is a family of 155mm Precision Guided Extended Range Munitions. A competitive source selection awarded an Engineering and Manufacturing Development (E&MD) contract for the initial variant, with options for the other variant's development and all Low Rate Initial Production quantities (LRIPs). The Product Management Office (PMO) merged the Trajectory Correctable Munitions (TCM) and Excalibur programs to satisfy the common guided extended range requirement. This merger will reduce program risk through incorporation of TCM technology. The PMO awarded a single, merged contract for the balance of System Development and Demonstration (SDD) with options for LRIP.

The SS-SFM strategy is to utilize full and open competition to assure that the "best value" system is selected and produced. The performance specification will be for a non-developmental SS-SFM. Competitors will provide twelve bid sample units, additional performance data, and fixed price costing data. The bid samples will be tested at Yuma Proving Grounds (YPG) in a "side-by-side" test against the extreme environmental and countermeasure target requirements of the SADARM Operational Requirements Document (ORD). The "best-value" munition based on cost, schedule, performance, production capability and risk will be selected for further testing. Additionally, proposal evaluation will determine the extent of additional required qualification testing leading up to and during operational testing.

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604814A - Sense and Destroy Armament Missile - Eng Dev</b>					PROJECT <b>708</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 . Excalibur Development	C/CPAF	Raytheon Missile System,Tucson, AZ	81873	72630	1Q	90571	1Q	81330	1Q	86484	412888	418737
b . Award Fee on Excalibur Development Contract	N/A	Raytheon Missile System,Tucson, AZ	0	4604	2-4Q	5462	2-4Q	13973	2-4Q	9809	33848	33848
c . TCM Technology Integration	FP	Bofors Defence	3430	7500	1Q	0		0		0	10930	10930
d . Platform Integration-Systems Contractor	CPAF	TBD	0	100	2Q	400	1Q	1200	1Q	1200	2900	2900
e . EPIAFs and Platform Integration Kit Development	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	2951	500	2Q	1860	1Q	1860	1Q	2790	9961	0
f . Misc Contracts	Various	Various	367	200	1-2Q	200	1-2Q	200	1-2Q	400	1367	1367
g . Platform Integration/Fire Control	SS/CPIF	Raytheon AFATDS, Ft Wayne, IN	0	0		990	1Q	400	1Q	440	1830	1830
h . Platform Integration Firing Tables Development	MIPR	TACOM-ARDEC, Firing Tables Branch	0	400	2Q	420	1Q	441	1Q	579	1840	0
i . SS-SFM Test Projectiles	C/FFP	TBD	0	0		8640	2Q	0		0	8640	0
j . SS-SFM Qualification	SS/FFP	TBD	0	0		0		11400		15900	27300	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>					PE NUMBER AND TITLE <b>0604814A - Sense and Destroy Armament Missile - Eng Dev</b>					PROJECT <b>708</b>		
I. Product Development (continued)	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
Subtotal:			88621	85934		108543		110804		117602	511504	469612
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 . Program Management	In House	Excalibur PM, Picatinny Arsenal, NJ	4369	3337	1-4Q	3470	1-4Q	3609	1-4Q	6466	21251	0
b . Government IPT Support - Excalibur XM982	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	11013	3729	1-4Q	3878	1-4Q	4034	1-4Q	6921	29575	0
c . Government TCM Support	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	560	350	2Q	0		0		0	910	0
d . Government Support - Ft Sill	MIPR	Ft. Sill, OK	554	650	2Q	650	1Q	700	1Q	793	3347	0
e . Paladin Platform Integration	MIPR	PM Paladin/TACOM - ARDEC, Picatinny Arsenal, NJ	450	0		0		0		0	450	0
f . Modeling and Structural Development	MIPR	Army Research Labs, Adelphi, MD	1401	850	2-3Q	851	1-2Q	852	1-2Q	1103	5057	0

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II. Support Cost (continued)	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
g . Milestone Support	SS/FP	Camber, Alexandria, VA	299	300	2Q	425	2Q	425	2Q	567	2016	0
h . Technical Spt Contract for Platform Integration	SS/FP	Camber, Dallas, TX	179	120	2Q	121	1-2Q	122	1-2Q	247	789	0
i . Fire Control development support	PM EFCS / TSM AFATDS	Ft Monmouth, NJ/Ft Sill, OK	0	320	2-3Q	336	1-2Q	353	1-2Q	359	1368	0
j . Miscellaneous Support	MIPR	VAR	252	250	1-4Q	320	1-4Q	320	1-4Q	370	1512	0
k . Platform Integration Software Support	MIPR	Navy Surface Warfare Center, MD	80	160	2-4Q	160	1-4Q	180	1-4Q	180	760	0
l . PM CAS SS-SFM	In-House	PM CAS, Picatinny Arsenal, NJ	0	0		500	1Q	500	1Q	500	1500	0
m . Government IPT Support SS-SFM	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	0	0		660	1Q	2300	1Q	1000	3960	0
Subtotal:			19157	10066		11371		13395		18506	72495	0



ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
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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 . ATEC Test Range	MIPR	YPG, Yuma, AZ	4400	2460	2-4Q	6754	1-4Q	5200	1-4Q	14513	33327	0
b . Test Instrumentation and Analysis	MIPR	Army Research Labs, Adelphi, MD	540	950	2-4Q	905	1-4Q	485	1-4Q	900	3780	0
c . Telemetry Support	SS/FF	Physical Science Laboratories (PSL), Las Cruces, NM	676	640	2Q	950	1Q	640	1Q	900	3806	0
d . Telemetry Support	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	1386	1140	2Q	4003	1Q	2367	1Q	2643	11539	0
e . Telemetry Cryptographic Support	MIPR	Ft. Huachuca, AZ	78	0		0		0		0	78	0
f . Tri-Service Software Assessment	MIPR	OSD, Wash, DC	61	0		0		0		0	61	0
g . Operational Test Support	MIPR	ATEC, Alexandria, VA	0	68	2Q	68	2Q	68	2Q	950	1154	0
h . Target Replacement Definition, Maintenance and Repair and Threat Assessment	MIPR	Various	100	100	2-4Q	100	1-2Q	100	1-2Q	300	700	0
i . ARDEC Testing	MIPR	ARDEC, Picatinny Arsenal, NJ	475	180	2-4Q	300	1-4Q	300	1-4Q	600	1855	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
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III. Test and Evaluation (continued)	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
j . Test Gun Equipment	MIPR	Watervliet Arsenal, MA	2050	650	2-4Q	1000	1-2Q	1000	1-2Q	1150	5850	0
k . Target Replacement Definition, Maintenance and Repair-SS-SFM	MIPR	TBD	0	0		0		2300	1Q	2300	4600	0
l . Test Ranges and Support- SS-SFM	MIPR	TBD	0	0		0		4000	1-4Q	4000	8000	0
m . Live Fire and Lethal Mechanism Test Support-SS- SFM	MIPR	TBD	0	0		0		2700	2Q	0	2700	0
Subtotal:			9766	6188		14080		19160		28256	77450	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
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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
Subtotal:			0	0		0		0		0	0	0
Remarks: Not Applicable												
Project Total Cost:			117544	102188		133994		143359		164364	661449	469612

Schedule Profile Detail (R-4a Exhibit)							February 2003	
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<u>Schedule Detail</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>FY 2008</u>	<u>FY 2009</u>
TCM Merger Decision	1Q							
Warhead Contractor Development Test Firing	1-4Q	1-4Q	1-4Q	1-3Q				
Guidance Soft Recovery Testing/Sys. Reliability Growth	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-3Q		
Program Review with AAE	4Q							
Contract Definitization for Merger of TCM and Excalibur		1Q						
Tactical Guidance System Testing - Open Loop			2Q					
Extended Range Demonstration				2Q				
Initial Full System Test Firing				2Q				
Pre- Qualification Testing (PQT)					1Q			
System Critical Design Review (CDR) -1			4Q					
System Final CDR -2					1Q			
Inductive Fuze Setter Preliminary Design Review (PDR)			1Q					
Inductive Fuze Setter CDR				2Q				
Start Developmental Technical (DT) Test, Evaluation & Qualification					1Q			
Milestone C					2-3Q			
Award LRIP I Contract					3Q			
Complete Developmental Technical Test and Evaluation						3Q		
Award LRIP II Contract						2Q		
First Article Test						4Q		
System IOT&E							1Q	
Award LRIP III Contract							2Q	
Full Rate Production Interim Progress Review (IPR)							4Q	
System IOC							4Q	
Initiate Study for Block 2 - Smart Munition						1Q		
Conduct IPR for Block 2 - Smart Munition							1Q	
Award SDD Contract for Block 2 - Smart Munition							2Q	
Conduct Systems Rqmts Review Block 2 - Smart Munition								2Q

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COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
709      ADVANCED FIELD ARTILLERY MUNITION	0	0	0	10030	19609	29394	39251	73551	0	171835
<p><b><u>A. Mission Description and Budget Item Justification:</u></b> This project funds two programs, the Excalibur XM982 Discriminating Munition Projectile (Block III) and Technology Refresh for Excalibur Blocks I and II.</p> <p>Advanced Field Artillery Munition (AFAM) funds the development of a Discriminating Munition that will seek, detect, discriminate and engage specified target(s) located in complex and urban terrain and is part of the Excalibur family of munitions (Block III). It will be compatible with the Future Combat System-Cannon (FCS-C). This system supports the Transformation Campaign Plan (TCP).</p> <p>Funding also provides for technology updates (technology refresh) of electronics in Excalibur Blocks I and II. Planned technology updates include interoperability with the next generation GPS system, insertion of future planned lower unit cost components (such as the DoD Common Guidance / Common Sensor Inertial Measurement Unit), avoidance of parts obsolescence, and maintaining technology relevance against future threats.</p>										
<b><u>Accomplishments/Planned Program</u></b>						<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	
Conduct concept analysis to establish preliminary Discriminating requirements.						0	0	0	2360	
Procures 40 test articles to support modeling efforts, and to demonstrate technology gun hardening						0	0	0	3600	
Conduct development efforts to insert technology updates into the Excalibur munition.						0	0	0	4070	
Totals						0	0	0	10030	

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604814A - Sense and Destroy Armament Missile - Eng Dev					PROJECT 709	
B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
XM982 Projectile (Excaibur) 604814A D708	59329	102188	133994	143359	142300	144051	183807	191407	Continuing	Continuing
PAA: Proj 155mm Extended Range XM982-U Excalibur (E80103)	0	0	0	0	21544	28172	61909	129720	Continuing	Continuing
OPA2: Enhanced Portable Inductive Fuze Setter (E-PIAFS) (AD3260)	0	0	0	0	0	0	5898	11726	0	17624
<p>C. Acquisition Strategy: The Acquisition Strategy for the Advanced Field Artillery Munition is covered in the Excalibur Acquisition Strategy. This effort addresses the development of the Excalibur Block III - Discriminating as well as technology refresh of key components and subsystems for Excalibur Blocks I and II.</p>										

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
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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 . Technology Refresh	SS/CPAF	Raytheon Missile Systems, Tucson, AZ	0	0		0		6190	2Q	Continue	6190	0
b . Discriminating Munitions Concept Study	TBD	TBD	0	0		0		1800	2Q	Continue	Continue	0
Subtotal:			0	0		0		7990		Continue	Continue	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 . Program Management	In House	PM Excalibur, Picatinny Arsenal, NJ	0	0		0		280	1Q	Continue	Continue	0
b . Government IPT Support	MIPR	TACOM-ARDEC, Picatinny Arsenal, NJ	0	0		0		1160	1-4Q	Continue	Continue	0
c . Analysis Support	MIPR	Ft Sill, OK	0	0		0		280	1Q	Continue	Continue	0
Subtotal:			0	0		0		1720		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604814A - Sense and Destroy Armament Missile - Eng Dev					PROJECT 709		
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 . TECOM Testing	MIPR	YPG, Yuma, AZ	0	0		0		320	3Q	Continue	Continue	0
Subtotal:			0	0		0		320		Continue	Continue	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
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	0		0		10030		Continue	Continue	0



Schedule Profile Detail (R-4a Exhibit)							February 2003	
BUDGET ACTIVITY <b>5 - System Development and Demonstration</b>				PE NUMBER AND TITLE <b>0604814A - Sense and Destroy Armament Missile - Eng Dev</b>			PROJECT <b>709</b>	
<u>Schedule Detail</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>FY 2008</u>	<u>FY 2009</u>
Initiate RFP for Phase I Discriminating Concept Studies				1Q				
Award Phase I Discriminating Concept Studies Contract				2-3Q				
Phase I Discriminating Study Outbrief					2Q			
Award Phase 2 of Discriminating Concept Studies Contract						1Q		
Phase 2 Discriminating Study Outbrief							1Q	
Initiate RFP for Discriminating Munition SDD contract								1Q
Award Discriminating Munition SDD contract								3Q
Initiate Technology Refresh Study Group				1Q				
Award Technology Refresh Contract				3Q				
Conduct testing with new hardware - Technology Refresh					2-4Q	1-4Q		
Engineering Change Proposal for Excalibur LRIP contract - Technology Refresh							2Q	