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

February 2006

BUDGET ACTIVITY

PE NUMBER AND TITLE

### 4 - Advanced Component Development and Prototypes | 0603747A - Soldier Support and Survivability

	COST (In Thousands)	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
	Total Program Element (PE) Cost	19482	3344	2778	3833	3929	4324	4414	0	74901
610	FOOD ADV DEVELOPMENT	3846	3344	2770	3825	3921	4315	4405	0	33475
669	CLOTHING AND EQUIPMENT	7946	0	8	8	8	9	9	0	20878
C08	RAPID EQUIPPING FORCE	7500	0	0	0	0	0	0	0	7500
C09	SOLDIER SUPPORT EQUIPMENT - AD	190	0	0	0	0	0	0	0	13048

A. Mission Description and Budget Item Justification: This program element supports component development and prototyping for organizational equipment, improved individual clothing and equipment that enhance Soldier battlefield effectiveness, survivability, and sustainment. This program element also supports the component development and prototyping of joint service food and combat feeding equipment designed to reduce logistics burden. In FY06, Projects 669 and C09 transition to a new Program Element, 0603827A, Soldier Systems - Advanced Development.

### February 2006 **ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)** BUDGET ACTIVITY PE NUMBER AND TITLE 4 - Advanced Component Development and Prototypes | 0603747A - Soldier Support and Survivability FY 2006 FY 2007 FY 2005 **B. Program Change Summary** Previous President's Budget (FY 2006) 13234 3393 2728 Current BES/President's Budget (FY 2007) 19482 3344 2778 50 Total Adjustments 6248 -49 Congressional Program Reductions -15 Congressional Rescissions -34 Congressional Increases Reprogrammings 7500 SBIR/STTR Transfer

50

-1252

Change Summary Explanation: Funding - FY 2005: -\$1.252M realigned to other higher Army priority requirements. FY 2005: +\$4.000M Funding provided by IFF to support REF GWOT requirement. requirement.

Adjustments to Budget Years

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)  February 2006											
	T ACTIVITY  vanced Component Development and P		PE NUMBER A 0603747A -		ipport and	Survivabi	ility		PRO <b>610</b>	JECT )	
	COST (In Thousands)	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	
610	FOOD ADV DEVELOPMENT	3846	3344	2770	3825	3921	4315	4405	0	33475	

A. Mission Description and Budget Item Justification: This project provides for the advanced component development and prototyping of joint service food and combat feeding equipment designed to reduce the logistics burden and Operation and Support (O&S) costs of subsistence support to service personnel. Project supports development of rations and rapidly deployable field food service equipment. Project conducts demonstration and validation of improved subsistence and subsistence support items used to enhance soldier effectiveness and quality of life in all four Services, as part of an integrated Department of Defense (DoD) Food Research, Development, Test, Evaluation and Engineering Program. The Program is reviewed and validated twice annually by the DoD Combat Feeding Research and Engineering Board (CFREB) as part of the Joint Service Food Program. This project develops critical enablers that support the Joint Future Force Capabilities and the Joint expeditionary mindset by maintaining readiness through fielding and integrating new equipment. This equipment enhances the field soldier's well-being and provides the soldier with usable equipment, in addition to reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, combat zone footprint, and costs for logistical support.

documents to procurement to ensure maximum acceptability/consumption. Eighteen new items were approved by Joint Services Operational Ration Forum (JSORF) and included in the UGR-H&S, 06 menus. Twenty-two new UGR-A items were approved and transitioned to Defense Supply Center Philadelphia (DSCP) for procurement. Assembled prototypes of revised Medical Diet Supplement (MDS) and provided them to AMEDD in support of OEF/OIF. Optimized quantity and variety within UGR-H&S, 06 breakfast menus based on OEF/OIF feedback. Initiated development of Boil-in-Bag (BIB) Dehydrated Eggs for UGR-H&S based on OEF/OIF feedback. Obtained Service approval of the Institutional-Sized Pouch (ISP) for use in the UGR-B and initiated transition of ISP technology to procurement. Continued field-testing of ISPs to ensure compatibility with the UGR-H&S. FY 06: Completes document preparation and transitions BIB Egg package and ISP (for UGR-H&S) technologies to procurement. Complete UGR, 07 component/menu development to include candidate components from transitioned 6.3 items. FY07: Improve fielded group operational rations to increase variety, enhance acceptability, increase consumption and improve nutritional intake to maintain peak performance on the battlefield. Integrates state-of- the-art packaging technologies and other Science & Technology (S&T) transitions into fielded group rations.	Accomplishments/Planned Program	FY 2005	<u>FY 2006</u>	<u>FY 2007</u>
evaluations of LRP components, planned field test and obtained prototypes. Completed field test with Long Range Surveillance troops from E Company, 51st Infantry. Completed evaluations of a new drink pouch and eighteen other components being considered for inclusion in the ration. Performed data analysis from field test results. Completed OIF evaluation of First Strike Ration (FSR). FY 06:  Complete data analysis from field test and plan for a limited FY07 field test of new LRP components and improved FSR components. FY  07: Identify and select new candidate LRP MCW and FSR transitioning from 6.3. Acquire prototypes and initiate accelerated storage and rough handling evaluations. Complete prototype menu design, obtain OTSG approvals and finalize field test results. Transition First Strike Ration components to Systems Development and Demonstration (SDD).  FY 06: Complete management plan for FSR. Complete Operational Testing (OT) for FSR. Finalize component structure, packaging and	documents to procurement to ensure maximum acceptability/consumption. Eighteen new items were approved by Joint Services Operational Ration Forum (JSORF) and included in the UGR-H&S, 06 menus. Twenty-two new UGR-A items were approved and transitioned to Defense Supply Center Philadelphia (DSCP) for procurement. Assembled prototypes of revised Medical Diet Supplement (MDS) and provided them to AMEDD in support of OEF/OIF. Optimized quantity and variety within UGR-H&S, 06 breakfast menus based on OEF/OIF feedback. Initiated development of Boil-in-Bag (BIB) Dehydrated Eggs for UGR-H&S based on OEF/OIF feedback. Obtained Service approval of the Institutional-Sized Pouch (ISP) for use in the UGR-B and initiated transition of ISP technology to procurement. Continued field-testing of ISPs to ensure compatibility with the UGR-H&S. FY 06: Completes document preparation and transitions BIB Egg package and ISP (for UGR-H&S) technologies to procurement. Complete UGR, 07 component/menu development to include candidate components from transitioned 6.3 items. FY07: Improve fielded group operational rations to increase variety, enhance acceptability, increase consumption and improve nutritional intake to maintain peak performance on the battlefield. Integrates state-of-	964	715	441
	evaluations of LRP components, planned field test and obtained prototypes. Completed field test with Long Range Surveillance troops from E Company, 51st Infantry. Completed evaluations of a new drink pouch and eighteen other components being considered for inclusion in the ration. Performed data analysis from field test results. Completed OIF evaluation of First Strike Ration (FSR). FY 06: Complete data analysis from field test and plan for a limited FY07 field test of new LRP components and improved FSR components. FY 07: Identify and select new candidate LRP MCW and FSR transitioning from 6.3. Acquire prototypes and initiate accelerated storage and rough handling evaluations. Complete prototype menu design, obtain OTSG approvals and finalize field test results. Transition First	295	99	200
		0	641	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)		February	y <b>2006</b>
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes PE NUMBER AND TITLE 0603747A - Soldier Support and Survivabile	lity		ROJECT <b>10</b>
data and prepare report for Joint Services Operational Ration Forum decision brief on acceptance of FSR. Develop procurement documentation, and transition to DSCP for First Unit Equipped (FUE).			
FY 05: Completed improvements to enhance acceptability/consumption of the Meal, Ready-to-Eat. Provided decision brief to Joint Services Operational Forum and received approval to incorporate nineteen new items for procurement into MRE 25. Completed in-house evaluations of two alternative non-hydrogen flameless ration heaters being developed to eliminate hydrogen field generation. Provided recommended design changes to manufacturers and received new prototypes. Initiated field test planning. FY 06: Completes field testing of new MRE components for FY 08 Date Of Pack (DOP). Completes field test of non-hydrogen flamesless heaters. Completes evaluations to address heat stress and browning to create an improved shelf stable cheese spread for MRE. Obtain producibility data on cheese and conduct an evaluation. Completes development of new products for MRE and begin advanced storage studies. Down select most promising items for FY07 field test. Obtain prototypes from operational ration vendors. FY 07: Finalize test items and obtain test quantities for new MRE operational ration components. Complete large-scale field test design for new MRE components. Begin advanced development of an improved supplement pack.	810	401	81
FY 05: Completed scale-up production test of Compressed Meal (CM) components and assembled prototype CMs for user testing. Worked with Ft Knox to modify the Operational Requirements Document (ORD) for Future Combat Vehicle (FCV) cold and hot water requirements for optimum CM rehydration. Conducted focus groups of CM technology which yielded data on overall CM utility, compatibility with the FCV and in-vehicle feeding.	300	0	
FY 07: Completes optimization of CM components/menus and field-testing of CMs. Completes document preparation and transition to Procurement.	0	0	21
FY 05: Completed fabrication of Multi Temp Refrigerated Container System (MTRCS) prototypes. Conducted contractor testing and initiated Developmental Testing (DT) on prototypes. Transitioned program into System Development and Demonstration.	589	0	•
FY 05: Drafted Performance-based Contract Requirements (PCRs) & acquisition strategy for Unitized Group Ration Express (UGR-E). Continued design optimization of chemical heaters, heating trays, activator pouches and overall UGR-E design. Awarded multiple preproduction contracts to validate UGR-E producibility and cost, based on incremental improvements achieved and implemented. Conducted remote site/large-scale field testing, accelerated storage, rough handling, and cold weather testing. User tests included cold weather test in Alaska and evaluations by remote units in OEF. FY 06: Completes producibility demonstrations and field testing of UGR-E. Completes Safety Assessment Report (SAR), Health Hazard Assessment Report (HHAR) and Department of Transportation /Environmental Protection Agency regulatory assessments. Completes cost estimate and documentation to support fielding. Finalize procurement documentation and transitions to Defense Supply Center Philadelphia (DSCP).	400	422	
FY 05: Researched and developed storage system for the extended preservation of Rations using polymer membrane to control atmosphere and collapsible storage container to limit mechanical injury. Completed in-house testing of side chain crystallizable membrane technology used to create optimum atmospheres for Fresh Food and Vegetables (FF&V). Demonstrated that FF&V products such as iceberg lettuce, broccoli and bananas could be extended to forty-five days while maintaining post harvest condition. Awarded a contract to develop and test polymer membranes for the top ten FF&V's currently being used by the Navy. Conducted prototype testing of the storage system aboard the USS Regan. FY 06: Conducts additional prototype tests of polymer membranes to control atmosphere and down select system to be used within submarine fleet. Award 2nd phase contract to complete FF&V testing. Conduct surveys and prepare final report and recommendations to Navy Support Command (NAVSUP) and Defense Supply Center Philadelphia (DSCP).	142	114	
FY 05: Conducted market investigation into field co-generation technologies for Field Feeding Operations and prepared for FY06 award of development contract.	86	0	

0603747A (610) FOOD ADV DEVELOPMENT Item No. 63 Page 4 of 17 92

Exhibit R-2A Budget Item Justification

ARMY RDT&E BUDGET	TITEM J	USTIFI	CATIO	N (R2a I	Exhibit)			February	2006
BUDGET ACTIVITY 4 - Advanced Component Development ar	nd Prototype		R AND TITLE <b>A - Soldier</b>		nd Survivab	oility	l		ROJECT 10
FY 05: Conducted studies on emerging technologies to acc board Navy ships through use of prepared foods, common to no more than 300 food products in order to develop the Navidentification, sensory analysis, time motion studies and de AOM aboard the USS Nitze and provided feedback and rec requirements using the Convenience Food Logistics Model	nenus and shelf s yy 21 Day Advan yeloping speed so ommendations to	stable food items ced Operational cratch concepts for NAVSUP. Det	Menu (AOM). For food preparatermined the free	I and nutrition and Efforts included ation. Implemented the Efforts and chill and the Efforts and chill and the Efforts and chill and the Efforts and the Effo	research studies ed product ented 21-Day storage		140	0	0
FY 06: Develops Smart Ship Galley prototype for DD(X) manpower usage & labor savings, diagnose equipment & codesigns. FY 07: Completes Phase I galley design and layor requirements, equipment configuration, manpower usage, p Navy.	ollect maintenance to the new Sa	e and mean time n Antonio LPD	e to failure data Class Ships. D	to optimize fur etermines feed	ture Navy galley ing		0	371	311
FY 06: Optimize design and case hardening of surface scan and transition to Veterinary Command (VETCOM) for production		complete field te	sts, prepare Tec	chnical Data Pa	ckage (TDP)		0	375	0
FY 07: Conducts testing of labor saving automated galley procedures for testing; identifies and secures Navy field tes					plans and		0	0	110
FY 06: Conducts total systems analysis; evaluates, procures for use in the Air Force Basic Expeditionary Airfield Resou (TDPs) and Commercial Item Descriptions (CIDs) for reco	rces (BEAR) sin	gle kitchen syste	em. Developes	Technical Data	a Packages		0	206	0
FY 05: Conducted a Market Survey of options to mitigate c protoype concepts and conducted in-house testing.	ombustion by-pr	oducts for the fie	eld food sanitat	ion system, dev	veloped various		120	0	0
FY 07: Obtain Milestone B approval and initiate development Individual Water Heater.	ent of Future Co	mbat Vehicle (F	CS) Crew Susta	ainment Systen	n and Modular		0	0	684
Total							3846	3344	2770
B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Comp	ol Total Cost
RDTE, 0604713.548, Military Subsistence System	1945	3334	3017	2520	2519	2154	2199	CON	T CONT
OPA 3, M65801, Refrigerated Containers	5944	4175	5276	4220	11024	10461	9869	CON	T CONT

C. Acquisition Strategy Project development will transition to System Development & Demonstration and production.

ARMY RDT&	E COST	Γ ANALYSIS	(R3)							Februar	y 2006	
BUDGET ACTIVITY 4 - Advanced Component	Developme	ent and Prototypes	PE NUMBE <b>0603747</b> .			ort and S	urvivab	ility			PROJEC <b>610</b>	СТ
I. 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	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	In-House	RDECOM, Natick, MA	21840	1515	1-4Q	1234	1-4Q	1053	1-4Q	Continue	Continue	Continue
Joint Service Food/Combat Feeding Equipment	Contracts	Various	10148	1474	1-4Q	1248	1-4Q	983	1-4Q	Continue	Continue	Continue
Subtota	al:		31988	2989		2482		2036		Continue	Continue	Continue
II. Support Costs	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	Targer Value of Contract
Subtota	al:		0									
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	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	MIPR	DTC, Maryland & AEC, Virginia	4446	665	1-4Q	563	1-4Q	443	1-4Q	Continue	6117	Continue
Subtota	al:		4446	665		563		443		Continue	6117	Continue
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	Cost To Complete	Total Cost	Target Value of Contract
Combat Feeding Program Management	In-House	RDECOM, Natick, MA	1704	192	1-4Q	299	1-4Q	291	1-4Q	Continue	0	Continue

ARMY RDT&E COST AN	VALYSIS (R3)			February	2006
UDGET ACTIVITY - Advanced Component Development and	PE NUMBER AND TITLE 0603747A - Soldier Su	pport and Surviv	ability		PROJECT <b>610</b>
Project Total Cost:	38138 3846	3344	2770	Continue	6117 Contin

Schedule Profile (R4 Exhibit)																			Fel	oru	ary	<b>2</b> 0	006			
BUDGET ACTIVITY 4 - Advanced Component Development and Pr	ototypes	PE NU <b>0603</b> ′	МВЕІ <b>747</b>	R AN	D TII <b>oldi</b>	TLE er S	upj	port	an	d S	Surv	viva	abil	ity									ROJ <b>10</b>	ECT		
Event Name	-	FY 05		F	Y 06	1		FY (	07		- 1	FY	08			FY (			- 1	FY	-			FY		_
(1) Field Test MRE enhancements, (2) Field Test UGR	1	2 3	4	1 2	2   3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(3) Producibility and Field test of Compressed Meal, (4) Test Modular Food Service System aboard Navy ship, (5) Study technology to reduce food service labor on Navy ship		3			5					4	4															
DT on MTRCS																										
(6) Test & Evaluate Multi-Ration Heater/Tray Ration Heater enhancement, (7) Complete producibility demonstration and field test UGR-E, (8) Test commercial storage/MAP gas system aboad submarines		8				7							,	6												
(9) Conduct surveys on commercial storage/MAP gas						9																				
Complete pre production testing of UGR-Express																										
Test prototype design of Modular Food Service system for DDX																										
Conduct testing of commercial and approved Navy equipment to use in AF BEAR																										
Compare Component Delopment Waste to Energy Conversion for joint service kitchen																										

# Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603747A - Soldier Support and Survivability

610

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Conducted field test on Meals Ready to Eat (MRE) enhancements.	3Q						
Conduct field test on UGR enhancements.	4Q						
Transition UGR enhancements/changes to DSCP for procurement.	3Q						
Completed producibility and field test of Compressed Meal.	3Q		3Q				
Test Modular Food Service System aboard Navy ship.				1Q			
Conduct studies on emerging technologies to reduce food service labor on board Navy ships.		3Q					
Develop Modular Food Service equipment and transition to the Navy.			3Q	3Q	3Q	3Q	3Q
Prepare TDP and transition Surface Scanning Biosensor to VETCOM.		4Q					
Transition performance contract requirements for Tamper Evident Packaging to DSCP and services.				4Q			
Test and evaluate Multi-Ration Heater/Tray Ration Heater enhancements.				4Q			
Transition Multi-Ration Heater/Tray Ration Heater enhancements to SDD					4Q		
Transition the Compressed Meals to DSCP for procurement.			4Q				
Transition First Strike Ration components to Systems Development.			4Q	4Q	4Q	4Q	4Q
Complete UGR-E producibility demostrations and field tests and transition to DSCP for procurement.		4Q					
Initiated DT on the Multi Temp Refrigerated Container System (MTRCS).	4Q						
Test commercial storage/MAP gas system aboard submarines.	3Q						
Conduct surveys on commercial storage/MAP gas systems and provide recommendations to the Navy.		4Q					
Transition advanced development of individual operational ration components to systems development	4Q						
Transition Boil-in-bag Egg package to DSCP for Procurement		1Q					
Transition Institutional-Sized Pouch (UGR- H&S) packaging to DSCP for procurement		2Q					

Complete pre-production testing of UGR-Express (E)	1Q					
Test prototype design of Modular Food Service system for DDX		2Q				
Conduct testing of commercial and approved Navy equipment for use in AF BEAR system.	1-4Q					
Compare Advanced Component Development of WEC systems for joint service kitchens, transition to SDD			40	Q	4Q	

A	RMY RDT&E BUDGET	ITEM JU	JSTIFIC.	ATION	(R2a Ex	xhibit)		]	February 2	006
UDGET A	CTIVITY nced Component Development and	d Prototypes	PE NUMBER A <b>0603747A</b> -		ipport and	l Survivabi	lity		PRO <b>669</b>	JECT
	COST (In Thousands)	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
59	CLOTHING AND EQUIPMENT	7946	5 0	8	8	8	9	9	0	2087

#### February 2006 **ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)** BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 4 - Advanced Component Development and Prototypes | 0603747A - Soldier Support and Survivability **C08** FY 2010 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2011 Cost to Total Cost COST (In Thousands) Estimate Estimate Estimate Estimate Estimate Estimate Estimate Complete RAPID EQUIPPING FORCE C08 7500 0 0 0 7500

A. Mission Description and Budget Item Justification: The US Army Rapid Equipping Force (REF) was established to provide urgently needed state-of-the-art technology to soldiers in the field to meet immediate warfighter needs under operational conditions in the current theaters. The REF Forward Teams in Iraq and Afghanistan work with Combatant Commanders and the soldiers to identify warfighter needs while REF Rear formulates solutions and rapidly delivers/fields new equipment to the deployed units. REF solutions are rapid responses to evolving, adaptable and changing, mostly asymmetric threats, in any operational environment. Projects will be aimed at improved mission mobility/survivability including evaluating concepts and hardware/software that accomplish this with current platforms and possible new platforms and or non-platform (satellites) solutions.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
FY 05: Developed three prototypes Fractal Antennas and delivered a low-frequency onmidirectional antenna for use on HMMWV platforms.	375	0	0
FY 05: Developed, fabricated, tested, and demonstrated an interface device between the U.S. Army Matrix System and a Portable Vehicle Arresting Barrier (PVAB) and the Vehicle Lightweight Arresting Device.	800	0	0
FY 05: Tested, evaluated, supported and wrote report on commercial of the shelf (COTS) items as part of the Heat Stress Mitigating Vest (HSMV) project.	144	0	0
FY 05: Performed test on Backscatter Portal for capabilities, safety and electromagnetic interference (EMI). Performed EMI, software safety/vulnerability test and testing support for Rapiscan Secure 1000 system.	350	0	0
FY 05: Deployed and supported the Hunter Unmanned Aerial Vehicle (UAV) Systems and Viper Strike Weapon Systems to the Counter-Rocket, Artillery and Mortar (C-RAM) Integration Demonstration at Yuma Proving Ground, AZ.	800	0	0
FY 05: Prepared and delivered miniature Transceiver Field Unit (TFU) technical data package including concurrent engineering with production agency.	470	0	0
FY 05: Completed project management for Roberta Project (SAP).	180	0	0
FY 05: Transported and tested Israeli technology and equipment for the Joint Improvised Explosive Device Defeat Task Force (JIEDDTF).	162	0	0
FY 05: Awarded contract for preparation of the Suicide/Homicide Bomber Training Kits, The Suicide Homicide Bomber Awareness Training Support Packages and The Vehicle Bomb Mitigation Guides. Integrated the Air Force IED Detection System onto a TeleOP vehicle platform and tested interoperability. Performed test of the Genesis Tanker Borne Vehicle Borne Improvised Explosive Device (VIEDB) Detection System for capability against realistic threats in an operational environment. Performed testing to determine characteristics of threat rocket propelled grenade (RPG), mortars and rocket fuse and detonator systems.	456	0	0
FY 05: Purchased 10 Night Vision Laboratories (NVL) Laser Dazzler and three PD/G90 Saber Dazzler test articles for safety testing. Produced one prototype filter, mounting bracket, and electrical connection for the WARLOCK Green, ICE and SSVJ jammers, tested each	263	0	0

0603747A (C08) RAPID EQUIPPING FORCE Item No. 63 Page 12 of 17

Exhibit R-2A Budget Item Justification

ARMY RDT&E BUDG		February 2006							
BUDGET ACTIVITY 4 - Advanced Component Developmen	bility	1	_	PROJECT C <b>08</b>					
prototype with documented results and field tested each	n prototype with doc	umented results	S.						
FY 05: Develop man portable modification to Small L Purchase 53 test units for modifying, testing and developerations.		2105	0	0					
FY 05: Test, Evaluation and support for man portable	SLAM-DEP jammer	s in dismounte	d operations.				1395	0	
Total		7500	0	0					
B. Other Program Funding Summary	FY 2010	FY 2011	To Con	npl Total Cost					
Other Procurement, Army	196658	54222	50679	51855	47544	52502	62012		0 515472
Operations and Maintenance, Army	54335	0	0	0	0	0	0		0 54335

C. Acquisition Strategy The REF provides urgently needed, state-of-the-art technology to soldiers in the field to meet immediate requirements. REF Rear evaluates, utilizes or adapts currently available military or civilian items (COTS/GOTS) which typically have not been type classified for Army-wide use but are available and adaptable to the current Combatant Operational Commander's needs. The REF solution is a rapid response to evolving, adaptable and changing asymmetric threats in any operational environment.

ARMY RDT&E COST ANALYSIS (R3)										February	y <b>2006</b>	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE  0603747A - Soldier Support and Survivability								PROJECT C08	
I. 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	Target Value of Contract
Suicide/Homicide Bomber Training Kits	MIPR	Navy Systems Management Activity (NSMA) Arlington, VA	0	78	1-2Q	0		0		0	0	0
Suicide Homicide Bomber Aware Trng Spt Pkgs & Vehicle Bomb Mitigation Guides	MIPR	US Gov Printing Office, Wash., DC	0	59	1-2Q	0		0		0	0	0
Developed three prototypes Fractal Antennas	MIPR	RDECOM CERDEC I2WD, Ft. Monmouth, NJ	0	175	1-2Q	0		0		0	0	0
Low-frequency onmidirectional antenna for use on HMMWV platforms	MIPR	RDECOM CERDEC I2WD, Ft. Monmouth, NJ	0	200	1-2Q	0		0		0	0	0
Developed & fabricated interface for USA Matrix Sys and PVAB and Veh Lt Wt Arresting Device	MIPR	PM Close Combat Systems (CCS), Picatinny, NJ	0	750	1-2Q	0		0		0	0	0
Prepared and delivered miniature Transceiver Field Unit (TFU) technical data package	MIPR	RDECOM CERDEC I2WD, Ft. Monmouth, NJ	0	470	1-3Q	0		0		0	0	0
Develop prototype filter, bracket, & electrical connection - WARLOCK Green, ICE & SSVJ Jammers	MIPR	PM Signals Warfare, Ft. Monmouth, NJ	0	108	1-3Q	0		0		0	0	0
Develop three man portable SLAM- DEP for use in dismounted operations.	MIPR	RDECOM CERDEC I2WD, Ft. Monmouth, NJ	0	100	1-4Q	0		0		0	0	0
Subtota	al:		0	1940		0		0		0	0	0
II. Support Costs	Contract Method &	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	Target Value of
Project management for Roberta	Type MIPR	Aviation & Missile	0	180	Date 1-3Q	0	Date	0	Date	0	0	Contract 0

0603747A (C08) RAPID EQUIPPING FORCE Item No. 63 Page 14 of 17 102

Exhibit R-3 ARMY RDT&E COST ANALYSIS

ARMY RDT&E COST ANALYSIS (R3)										Februar	y 2006	
BUDGET ACTIVITY 4 - Advanced Component	Developme	ent and Prototypes	PE NUMBE <b>0603747</b> .				ргојест <b>С08</b>					
Project (SAP)		Research, Development and Engineering Center, RDECOM, Redstone Arsenal, AL										
Subtota	al:		0	180		0		0		0	0	0
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	Cost To Complete	Total Cost	Target Value of Contract
Test and Demonstrate interface for USA Matrix Sys and PVAB and Veh Lt Wt Arresting Device	MIPR	PM Close Combat Systems (CCS), Picatinny, NJ	0	50	1-2Q	0		0		0	0	0
Integrated Air Force IED Detection Sys onto a TeleOP vehicle platform & tested interoperabiliy	MIPR	SAF/FMBMB, Wash., DC	0	175	1-2Q	0		0		0	0	0
Capability test of Genesis Tanker Borne VIEDB Detectiion System	MIPR	Yuma Proving Ground, Yuma, AZ	0	50	1-2Q	0		0		0	0	0
Tested, evaluated & documented results on COTS items for the HSMV project	MIPR	Ft. Bliss, TX	0	143	1-2Q	0		0		0	0	0
Capability, Safety and EMI test on Backscatter Portal	MIPR	White Sands Missile Range, White Sands Missile Range, NM	0	198	1-3Q	0		0		0	0	0
Deploy & Spt Hunter UAV Systems and Viper Strike Weapon System Integration Demonstration with C- RAM	MIPR	PM UAV, Redstone Arsenal, AL	0	800	1-3Q	0		0		0	0	0
Test characteristics of threat RPG, mortars & rocket fuse and detonator systems	MIPR	US Army Research Lab, Aberdeen Proving Ground, MD	0	55	1-3Q	0		0		0	0	0
EMI, software safety/vulnerability test and testing support for Rapiscan Secure 1000 system.	MIPR	White Sands Missile Range, White Sands Missile Range, NM	0	152	1-3Q	0		0		0	0	0
Safety testing for 10 Night Vision	MIPR	CERDEC NVESD, Ft.	0	95	1-3Q	0		0		0	0	0

0603747A (C08) RAPID EQUIPPING FORCE Item No. 63 Page 15 of 17 103

Exhibit R-3 ARMY RDT&E COST ANALYSIS

ARMY RDT&E COST ANALYSIS (R3)										Februar	y 2006	
BUDGET ACTIVITY 4 - Advanced Component	Developme	ent and Prototypes	PE NUMBE <b>0603747</b> .			ort and S	Survivab	ility			PROJEC	CT
Laboratories (NVL) Laser Dazzler and three PD/G90 Saber Dazzler		Belvoir										
Transport and test Israeli technology and equipment for the Joint IED Defeat Task Force	MIPR		0	162	1-3Q	0		0		0	0	0
Test prototype filter, mounting bracket, & electrical connection - WARLOCK Green, ICE & SSVJ Jammers	MIPR	PM Signals Warfare, Ft. Monmouth, NJ	0	60	1-3Q	0		0		0	0	0
Purchase, modify and test man portable SLAM-DEP in dismounted operations	MIPR	RDECOM CERDEC I2WD, Ft. Monmouth, NJ	0	2005	1-4Q	0		0		0	0	0
Test, Evaluation and support of mar portable SLAM-DEP in dismounted operations	1	RDECOM CERDEC I2WD, Ft. Monmouth, NJ	0	1395	1-4Q	0		0		0	0	0
Subtot	Subtotal:		0	5340		0		0		0	0	0
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	Cost To Complete	Total Cost	Target Value of Contract
Funds Management Support	MIPR	USA SMDC, Redstone, Arsenal, AL	0	40	1Q	0		0		0	0	0
Subtot	al:	1	0	40		0		0		0	0	0
Project Total C	Project Total Cost:			7500		0		0		0	0	0

ARMY RDT&E BUDGET I	] ]	February 2	006						
DGET ACTIVITY	PE NUMBER A			PROJECT					
<b>Advanced Component Development and </b> l	Prototypes	0603747A -	Soldier Su		C09				
COST (In Thousands)	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
SOLDIER SUPPORT EQUIPMENT - AD	190	0	0	0	0	0	0	0	130-