UNCLASSIFIED

Supporting Data FY 2009 Budget Estimate – February 2008

DESCRIPTIVE SUMMARIES OF THE

RESEARCH, DEVELOPMENT, TEST AND EVALUATION
Army Appropriation, Budget Activities 4 and 5

Department of the Army
Office of the Secretary of the Army (Financial Management and Comptroller)

Persuasive in Peace, Invincible in War

VOLUME II

UNCLASSIFIED

DESCRIPTIVE SUMMARIES FOR PROGRAM ELEMENTS
OF THE
RESEARCH, DEVELOPMENT, TEST AND
EVALUATION, ARMY
FY 2009
BUDGET ESTIMATE
FEBRUARY 2008

VOLUME II
Budget Activities 4 and 5

Department of the Army
Office of the Assistant Secretary of the Army (Financial Management and Comptroller)

FY 2009 RDT&E, ARMY
PROGRAM ELEMENT DESCRIPTIVE SUMMARIES

INTRODUCTION AND EXPLANATION OF CONTENTS

1. General. The purpose of this document is to provide summary information concerning the Research, Development, Test and Evaluation, Army program. The Descriptive Summaries are comprised of R-2 (Army RDT&E Budget Item Justification – program element level), R-2A (Army RDT&E Budget Item Justification – project level), R-3 (Army RDT&E Cost Analysis), R-4 (Schedule Profile), R-4A (Schedule Profile Detail) and R-5 (Termination Liability Funding for MDAPs) Exhibits, which provide narrative information on all RDT&E program elements and projects for FY 2007 through FY 2009.

2. Relationship of the FY 2009 Budget Submission to the FY 2008 Budget Submitted to Congress. This paragraph provides a list of program elements restructured, transitioned, or established to provide specific program identification.

A. Program Element Restructures. Explanations for these changes can be found in the narrative sections of the Program Element R-2/R-3 Exhibits.

OLD PE/PROJECT	NEW PROJECT TITLE	NEW PE/PROJECT
0603460A/JA2	Joint Air-to-Ground Missile (JAGM)	0605450A/JA6
0603782A/355	Warfighter Information Network – Tactical (WIN-T) – Increment 2 – Initial Networking on the Move	0603782A/367
0603782A/355	WIN-T Increment 3 – Full Networking on the Move	0603782A/372
0603827A/S51	ACIS Engineering Development	0604601A/S61
0604642A/E40	Joint Light Tactical vehicle (JLTV) – Advanced Development	0603804A/L04
0605326A/312	Current Force Capability Gaps	0605326A/317

B. Developmental Transitions. Explanations for these changes can be found in the narrative sections of the Program Element R-2/R-3 Exhibits.

C. Establishment of New FY 2009 Program Elements/Projects. There are no major system new starts. Minor new initiatives for FY 2009 are shown below.

TITLE	PE/PROJECT
Robotics Autonomy, Manipulation, and Portability Research	0601102A/T63
Network Science And Technology Research Center	0601104A/J22
Warfighter Information Network – Tactical (WIN-T) – Increment 2 – Initial Networking on the Move	0603782A/367
Joint Light Tactical Vehicle (JLTV) – Advanced Development	0603804A/L04
Current Force Capability Gaps	0605326A/317
Joint Air-to-Ground Missile (JAGM)	0605450A/JA6

D. FY 2009 programs for which funding existed in the FY 2008 President's Budget Submit (February 2007), but which are no longer funded in the FY 2009 President's Budget Submit.

PE/PROJECT	TITLE	BRIEF EXPLANATION
0603327A/S32	Joint Single Integrated Air Picture (SIAP)	Program Terminated
0603460A/JA2	Joint Air-to-Ground Missile (JAGM)	Program Restructured
0603782A/355	Warfighter Information Network – Tactical (WIN-T)	Program Restructured
0604642A/E40	Light Tactical Vehicle (LTV)	Program Restructured

3. Classification. This document contains no classified data. Classified/Special Access Programs that are submitted offline are listed below.

0203801A/DF8/DF9	0603009A
0203808A	0603020A
0301359A	0603322A
0602122A	0603710A/C65
0603005A/C66	0604328A

4. The Consolidated Appropriations Act, 2008 (P.L. 110-161). The Research, Development, Test and Evaluation, Army appropriation did not receive any FY 2008 Consolidated Appropriations Act funding.

5. Performance Metrics. Performance metrics used in the preparation of this justification book may be found in the FY 2009 Army Performance Budget Justification Book, dated March 2008.

6. Program Assessment Rating Tool (PART). In accordance with the President's Management Agenda, Budget and Performance Integration initiative, this program has been assessed using PART. Remarks regarding program performance and plans for performance improvement can be located at the Expectmore.gov website.

Department of the Army
FY 2009 RDT&E Program
President's Budget 2009

Exhibit R-1

08-Jan-2008

	Thousands of Dollars		
	FY 2007	FY 2008	FY 2009
Summary Recap of Budget Activities			
Basic Research	353,401	379,064	379,393
Applied Research	1,188,678	1,175,294	723,502
Advanced Technology Development	1,253,792	1,336,998	738,858
Advanced Component Development And Prototypes	522,833	1,140,451	951,822
System Development And Demonstration	5,179,195	5,181,817	4,981,024
Management Support	1,462,511	1,186,345	1,113,197
Operational System Development	1,390,182	1,640,365	1,632,454
Total RDT&E, Army	11,350,592	12,040,334	10,520,250

				Thousands of Dollars		
				FY 2007	FY 2008	FY 2009
Basic Research						
1	0601101A	01	In-House Laboratory Independent Research	18,404	21,528	19,832
2	0601102A	01	Defense Research Sciences	166,403	165,020	176,959
3	0601103A	01	University Research Initiatives	76,331	82,416	76,980
4	0601104A	01	University And Industry Research Centers	92,263	110,100	105,622
	TOTAL: Basic Research			353,401	379,064	379,393
	Applied Research					
5	0602105A	02	Materials Technology	62,254	64,517	26,985
6	0602120A	02	Sensors And Electronic Survivability	48,396	62,910	46,147
7	0602122A	02	Tractor Hip	8,261	4,338	18,192
8	0602211A	02	Aviation Technology	39,383	43,280	42,013
9	0602270A	02	Electronic Warfare Technology	30,458	30,013	16,611
10	0602303A	02	Missile Technology	66,141	60,935	48,174
11	0602307A	02	Advanced Weapons Technology	25,996	32,705	19,664
12	0602308A	02	Advanced Concepts And Simulation	23,921	22,903	17,048
13	0602601A	02	Combat Vehicle And Automotive Technology	88,749	93,622	55,234
14	0602618A	02	Ballistics Technology	62,516	68,899	71,550
15	0602622A	02	Chemical, Smoke And Equipment Defeating Technology	12,665	8,976	2,295
16	0602623A	02	Joint Service Small Arms Program	6,012	6,962	7,531
17	0602624A	02	Weapons And Munitions Technology	120,794	102,681	30,576
18	0602705A	02	Electronics And Electronic Devices	80,621	105,492	45,278
19	0602709A	02	Night Vision Technology	35,324	34,924	25,647
20	0602712A	02	Countermine Systems	26,332	30,294	21,815
21	0602716A	02	Human Factors Engineering Technology	40,705	39,763	17,348
22	0602720A	02	Environmental Quality Technology	19,203	20,076	16,064
23	0602782A	02	Command, Control, Communications Technology	46,332	36,955	24,014
24	0602783A	02	Computer And Software Technology	6,602	9,803	5,495
25	0602784A	02	Military Engineering Technology	50,817	58,693	52,066
26	0602785A	02	Manpower/Personnel/Training Technology	15,705	16,102	16,412
27	0602786A	02	Warfighter Technology	43,200	36,237	21,948
28	0602787A	02	Medical Technology	228,291	184,214	75,395
	Total: Applied Research			1,188,678	1,175,294	723,502

				Thousands of Dollars		
				FY 2007	FY 2008	FY 2009
	Advanced Technology Development					
29	0603001A	03	Warfighter Advanced Technology	63,981	86,103	46,793
30	0603002A	03	Medical Advanced Technology	291,716	299,676	59,043
31	0603003A	03	Aviation Advanced Technology	93,880	98,899	57,277
32	0603004A	03	Weapons And Munitions Advanced Technology	95,165	85,981	73,697
33	0603005A	03	Combat Vehicle And Automotive Advanced Technology	200,974	245,629	107,992
34	0603006A	03	Command, Control, Communications Advanced Technolog	11,626	14,082	9,183
35	0603007A	03	Manpower, Personnel And Training Advanced Technology	9,022	6,740	6,853
36	0603008A	03	Electronic Warfare Advanced Technology	49,542	56,591	50,961
37	0603009A	03	Tractor Hike	9,217	12,553	14,562
38	0603015A	03	Next Generation Training & Simulation Systems	21,561	22,365	18,881
39	0603020A	03	Tractor Rose	5,018	6,485	11,575
40	0603100A	03	IED Defeat Technology Development		2,385	
41	0603103A	03	Explosives Demilitarization Technology	25,004	21,511	10,564
42	0603105A	03	Military HIV Research	12,559	14,903	7,116
43	0603125A	03	Combating Terrorism - Technology Development	12,953	12,978	13,064
44	0603238A	03	Global Surveillance/Air Defense/Precision Strike Techn	12,469		
45	0603270A	03	Electronic Warfare Technology	24,674	41,951	23,996
46	0603313A	03	Missile And Rocket Advanced Technology	69,885	77,259	63,998
47	0603322A	03	Tractor Cage	18,467	18,330	12,372
48	0603606A	03	Landmine Warfare And Barrier Advanced Technology	29,406	30,700	30,797
49	0603607A	03	Joint Service Small Arms Program	11,788	10,629	8,809
50	0603710A	03	Night Vision Advanced Technology	73,826	53,910	39,916
51	0603728A	03	Environmental Quality Technology Demonstrations	16,651	14,887	15,519
52	0603734A	03	Military Engineering Advanced Technology	27,100	28,355	7,654
53	0603772A	03	Advanced Tactical Computer Science And Sensor Technology	67,308	74,096	48,236
	Total: Advanced Technology Development			1,253,792	1,336,998	738,858
	Advanced Component Development And Prototypes					
54	0603024A	04	Unique Item Identification (UID)	1,498	665	649
55	0603305A	04	Army Missle Defense Systems Integration	85,637	127,408	14,005
56	0603308A	04	Army Space Systems Integration	29,109	49,285	19,986
57	0603327A	04	Air And Missile Defense Systems Engineering	134,355	170,383	116,410
58	0603460A	04	Joint Air-To-Ground Missile (JAGM)		53,160	
59	0603619A	04	Landmine Warfare And Barrier - Adv Dev	1,022	24,580	29,234
60	0603627A	04	Smoke, Obscurant And Target Defeating Sys-Adv Dev	5,314	9,363	3,840

				Thousands of Dollars		
				FY 2007	FY 2008	FY 2009
61	0603639A	04	Tank And Medium Caliber Ammunition	3,476	47,474	45,866
62	0603653A	04	Advanced Tank Armament System (ATAS)	8,391	143,568	108,012
63	0603747A	04	Soldier Support And Survivability[1]	20,865	5,751	30,716
64	0603766A	04	Tactical Electronic Surveillance System - Adv Dev	20,001	14,423	12,275
65	0603774A	04	Night Vision Systems Advanced Development	5,168	3,432	2,588
66	0603779A	04	Environmental Quality Technology - Dem/Val	23,693	18,580	5,355
67	0603782A	04	Warfighter Information Network-Tactical - Dem/Val	119,288	320,068	414,357
68	0603790A	04	NATO Research And Development	4,189	4,927	5,041
69	0603801A	04	Aviation - Adv Dev	8,848	6,440	7,455
70	0603804A	04	Logistics And Engineer Equipment - Adv Dev	9,799	37,993	44,141
71	0603805A	04	Combat Service Support Control System Evaluation	8,403	14,959	17,788
72	0603807A	04	Medical Systems - Adv Dev	22,511	29,689	26,308
73	0603827A	04	Soldier Systems - Advanced Development	10,135	20,090	36,558
74	0603850A	04	Integrated Broadcast Service	1,131	38,213	11,238
	Total: Advanced Component Development And Prototypes			522,833	1,140,451	951,822
	System Development And Demonstration					
75	0604201A	05	Aircraft Avionics	43,662	57,420	71,562
76	0604220A	05	Armed, Deployable OH-58D	217,203	181,145	135,652
77	0604270A	05	Electronic Warfare Development	41,540	57,169	32,325
78	0604321A	05	All Source Analysis System[2]	10,338	5,384	16,465
79	0604328A	05	Tractor Cage	15,574	17,707	16,807
80	0604329A	05	Common Missile	24,210		
81	0604601A	05	Infantry Support Weapons[3]	44,550	63,026	42,414
82	0604604A	05	Medium Tactical Vehicles	12,469	6,354	1,949
83	0604609A	05	Smoke, Obscurant And Target Defeating Sys - Eng Dev	5,129	1,339	5,603
84	0604622A	05	Family Of Heavy Tactical Vehicles	13,034	12,666	2,901
85	0604633A	05	Air Traffic Control	7,877	8,899	14,214
86	0604642A	05	Light Tactical Wheeled Vehicles[4]	24,358	38,256	

[1] FY 2007 funding total includes $7,625 received in GWOT Supplemental. FY 2008 funding total does not include $31,621 previously requested for current FY 2008 GWOT requirements.
[2] FY 2007 funding total includes $3,400 received in GWOT Supplemental.
[3] FY 2007 funding total includes $8,158 received in GWOT Supplemental. FY 2008 funding total does not include $8,158 previously requested for current FY 2008 GWOT requirements.
[4] FY 2008 funding total does not include $20,000 previously requested for current FY 2008 GWOT requirements.

				Thousands of Dollars		
				FY 2007	FY 2008	FY 2009
87	0604645A	05	Armored Systems Modernization (ASM) - Eng Dev	2,927,532		
88	0604646A	05	Non-Line Of Sight Launch System	313,981	253,075	200,099
89	0604647A	05	Non-Line Of Sight Cannon	108,689	136,929	89,841
90	0604660A	05	FCS Manned Grd Vehicles & Common Grd Vehicle		592,254	774,257
91	0604661A	05	FCS Systems Of Systems Engr & Program Mgmt		1,497,321	1,413,945
92	0604662A	05	FCS Reconnaissance (UAV) Platforms		43,388	34,379
93	0604663A	05	FCS Unmanned Ground Vehicles		90,091	96,918
94	0604664A	05	FCS Unattended Ground Sensors		10,929	12,967
95	0604665A	05	FCS Sustainment & Training R&D		647,649	539,145
96	0604666A	05	Modular Brigade Enhancement	27,900	64,385	64,900
97	0604710A	05	Night Vision Systems - Eng Dev	40,325	47,317	44,508
98	0604713A	05	Combat Feeding, Clothing, And Equipment	2,922	2,485	2,499
99	0604715A	05	Non-System Training Devices - Eng Dev	122,258	35,731	35,424
100	0604741A	05	Air Defense Command, Control And Intelligence - Eng Dev[1]	58,492	21,375	22,415
101	0604742A	05	Constructive Simulation Systems Development	38,849	31,645	26,244
102	0604746A	05	Automatic Test Equipment Development[2]	7,896	9,961	23,582
103	0604760A	05	Distributive Interactive Simulations (Dis) - Eng Dev	20,052	18,180	16,095
104	0604780A	05	Combined Arms Tactical Trainer (CATT) Core	37,683	36,800	29,468
105	0604783A	05	Joint Network Management System	5,026	2,759	676
106	0604802A	05	Weapons And Munitions - Eng Dev	96,673	65,236	52,140
107	0604804A	05	Logistics And Engineer Equipment - Eng Dev	33,205	47,108	37,718
108	0604805A	05	Command, Control, Communications Systems - Eng Dev	10,766	9,942	9,795
109	0604807A	05	Medical Materiel/Medical Biological Defense Equipment	22,226	27,745	34,971
110	0604808A	05	Landmine Warfare/Barrier - Eng Dev	97,555	160,079	126,475
111	0604814A	05	Artillery Munitions - EMD	99,344	64,214	78,197
112	0604817A	05	Combat Identification	38	11,290	10,909
113	0604818A	05	Army Tactical Command & Control Hardware & Software	67,619	100,132	67,535
114	0604820A	05	Radar Development	2,446	7,022	
115	0604822A	05	General Fund Enterprise Business System (GFEBS)	59,998	111,873	60,308
116	0604823A	05	Firefinder	53,408	76,767	47,845
117	0604827A	05	Soldier Systems - Warrior Dem/Val	28,227	1,589	15,790
118	0604854A	05	Artillery Systems - EMD	1,598	24,067	42,300
119	0604869A	05	Patriot/Meads Combined Aggregate Program (CAP)	322,915	369,786	431,270

[1] FY 2007 funding total includes $31,100 received in GWOT Supplemental. FY 2008 funding total does not include $38,900 previously requested for current FY 2008 GWOT requirements.

[2] FY 2008 funding total does not include $6,500 previously requested for current FY 2008 GWOT requirements.

				Thousands of Dollars		
				FY 2007	FY 2008	FY 2009
120	0604870A	05	Nuclear Arms Control Monitoring Sensor Network	7,193	7,253	6,260
121	0605013A	05	Information Technology Development[1]	104,435	106,075	73,740
122	0605450A	05	Joint Air-To-Ground Missile (JAGM)			118,517
	Total: System Development And Demonstration			5,179,195	5,181,817	4,981,024
	Management Support					
123	0604256A	06	Threat Simulator Development	23,258	23,339	21,416
124	0604258A	06	Target Systems Development	10,113	17,787	13,498
125	0604759A	06	Major T&E Investment	64,067	66,276	64,618
126	0605103A	06	Rand Arroyo Center	20,792	19,149	16,339
127	0605301A	06	Army Kwajalein Atoll	173,455	180,052	174,601
128	0605326A	06	Concepts Experimentation Program	24,787	29,652	28,271
129	0605502A	06	Small Business Innovative Research	272,163	2,385	
130	0605601A	06	Army Test Ranges And Facilities	381,740	355,715	342,079
131	0605602A	06	Army Technical Test Instrumentation And Targets	82,525	85,862	74,624
132	0605604A	06	Survivability/Lethality Analysis	42,769	41,681	41,066
133	0605605A	06	Dod High Energy Laser Test Facility	16,135	8,746	2,835
134	0605606A	06	Aircraft Certification	4,524	4,658	5,054
135	0605702A	06	Meteorological Support To RDT&E Activities	8,302	8,294	8,289
136	0605706A	06	Materiel Systems Analysis	16,464	16,423	17,028
137	0605709A	06	Exploitation Of Foreign Items	4,974	3,291	3,530
138	0605712A	06	Support Of Operational Testing	79,212	78,797	72,942
139	0605716A	06	Army Evaluation Center	55,554	61,295	63,382
140	0605718A	06	Simulation & Modeling For Acq, Rqts, & Tng (SMART)	5,270	6,302	5,325
141	0605801A	06	Programwide Activities[2]	70,598	73,256	73,748
142	0605803A	06	Technical Information Activities	51,266	42,715	42,905
143	0605805A	06	Munitions Standardization, Effectiveness And Safety	36,145	40,947	20,857
144	0605857A	06	Environmental Quality Technology Mgmt Support	4,279	4,926	5,125
145	0605898A	06	Management HQ - R&D	13,893	14,797	15,665
146	0909999A	06	Financing For Cancelled Account Adjustments	226		
	Total: Management Support			1,462,511	1,186,345	1,113,197
	Operational System Development					
147	0603778A	07	MLRS Product Improvement Program	63,189	53,712	59,749
148	0603820A	07	Weapons Capability Modifications UAV	1,549	3,875	

[1] FY 2008 funding total does not include $5,000 previously requested for current FY 2008 GWOT requirements.
[2] FY 2008 funding total does not include $20 previously requested for current FY 2008 GWOT requirements.

				Thousands of Dollars		
				FY 2007	FY 2008	FY 2009
149	0102419A	07	Aerostat Joint Project Office	237,795	478,204	356,434
150	0203726A	07	Adv Field Artillery Tactical Data System	18,848	16,730	15,860
151	0203735A	07	Combat Vehicle Improvement Programs	13,873	41,192	141,114
152	0203740A	07	Maneuver Control System	33,947	45,191	37,151
153	0203744A	07	Aircraft Modifications/Product Improvement Programs	299,405	328,514	452,787
154	0203752A	07	Aircraft Engine Component Improvement Program	836	1,467	332
155	0203758A	07	Digitization	14,490	9,675	9,534
156	0203759A	07	Force XXI Battle Command, Brigade And Below (FBCB2)	26,068	32,194	38,418
157	0203764A	07	Tactical Wheeled Vehicle Improvement Program	11,742		
158	0203801A	07	Missile/Air Defense Product Improvement Program	16,529	30,026	37,871
159	0203802A	07	Other Missile Product Improvement Programs	19,086	1,885	1,527
160	0203808A	07	Tractor Card	7,013	16,467	19,601
161	0208010A	07	Joint Tactical Communications Program (TRI-TAC)	5,621	1,527	920
162	0208053A	07	Joint Tactical Ground System	14,987	23,215	1,957
163	0208058A	07	Joint High Speed Vessel (JHSV)	19,752	5,116	2,936
164	0301359A	07	Special Army Program			
165	0301555A	07	Classified Programs			
166	0301556A	07	Special Program			
167	0303028A	07	Security And Intelligence Activities	11,788	4,571	
168	0303140A	07	Information Systems Security Program[1]	56,583	31,403	38,090
169	0303141A	07	Global Combat Support System	47,092	94,089	104,934
170	0303142A	07	SATCOM Ground Environment (Space)	31,790	107,092	106,327
171	0303150A	07	WWMCCS/Global Command And Control System[2]	16,392	24,620	12,922
172	0303158A	07	Joint Command And Control Program (JC2)[3]	3,929	10,330	15,203
173	0305204A	07	Tactical Unmanned Aerial Vehicles	171,257	100,854	50,976
174	0305206A	07	Airborne Reconnaissance Systems	22		
175	0305208A	07	Distributed Common Ground/Surface Systems[4]	135,298	90,088	57,704
176	0702239A	07	Avionics Component Improvement Program	1,281	1,017	1,023
177	0708045A	07	End Item Industrial Preparedness Activities	109,335	87,311	69,084
178	1001018A	07	NATO Joint Stars	685		

[1] FY 2007 funding total includes $31,600 received in GWOT Supplemental. FY 2008 funding total does not include $23,300 previously requested for current FY 2008 GWOT requirements.
[2] FY 2008 funding total does not include $3,800 previously requested for current FY 2008 GWOT requirements.
[3] FY 2008 funding total does not include $6,200 previously requested for current FY 2008 GWOT requirements.
[4] FY 2008 funding total does not include $12,300 previously requested for current FY 2008 GWOT requirements.

	Thousands of Dollars		
	FY 2007	FY 2008	FY 2009
Total: Operational System Development	1,390,182	1,640,365	1,632,454
Total: RDT&E, Army	11,350,592	12,040,334	10,520,250

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	85637	127408	14005	14551	13927	41378	166000	Continuing	Continuing
TR3	MOBILE TACTICAL HIGH ENERGY LASER (MTHEL)									43620
TR4	MISSILE DEFENSE INTEGRATION	68260	114899	1372	1687					186218
TR5	MISSILE DEFENSE BATTLELAB	17377	12509	12633	12864	13927	16547	16946	Continuing	Continuing
TR6	ARMY AIR AND MISSILE DEFENSE									959
TR7	MOBILE DIRECTED ENERGY WEAPON SYSTEM (MDEWS)						24831	149054		173885

A. Mission Description and Budget Item Justification: This Program Element funds missile defense systems integration efforts for both the US Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT) and the Program Executive Office for Missiles and Space (PEO-MS).

USASMDC/ARSTRAT: Headquarters, Department of the Army General Order 37, dated 16 October 2006, designated USASMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GMD), the Army integrator for global missile defense, and the Army Service Component Command (ASCC) of the U.S. Strategic Command (USSTRATCOM). As the Army proponent, USASMDC/ARSTRAT is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organizations, Training, Material, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize GMD capabilities. As the Army integrator for global missile defense, USASMDC/ARSTRAT is responsible to review programs managed by the Army, other Services, Defense agencies and National agencies to ensure that they are correctly synchronized and will ultimately provide the capabilities required by USSTRATCOM to execute its global missile defense responsibilities.

Project TR4 funds the USASMDC/ARSTRAT to execute its proponency role for Ground-Based Missile Defense, and its role as the integrator for global missile defense.

Project TR5 funds USASMDC/ARSTRAT efforts to develop, analyze and mature warfighting concepts, focus military science and technology research, and conduct warfighting experiments associated with USASMDC/ARSTRAT's ASCC mission. Additionally, this project funds the delivery of innovations to the warfighter through prototyping, operational analysis, and experimentation in support of current and future Forces.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	88001	14389	14034
Current BES/President's Budget (FY 2009)	85637	127408	14005
Total Adjustments	-2364	113019	-29
Congressional Program Reductions		-821	
Congressional Rescissions			
Congressional Increases		113840	
Reprogrammings	-82		
SBIR/STTR Transfer	-2282		
Adjustments to Budget Years			-29

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR4**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
TR4 MISSILE DEFENSE INTEGRATION	68260	114899	1372	1687					186218

A. Mission Description and Budget Item Justification: Headquarters, Department of the Army General Order Number 37, dated 16 October 2006, designated SMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GMD), and the Army integrator for global missile defense. This project funds efforts associated with those roles. As the Army proponent for GMD, SMDC/ARSTRAT is responsible to develop and validate warfighting concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize GMD capabilities. As the Army integrator for global missile defense, SMDC/ARSTRAT is responsible to review programs managed by the Army, other Services, Defense agencies and National agencies to ensure that they are correctly synchronized and will ultimately provide the capabilities required by USSTRATCOM to execute its global missile defense responsibilities.

After FY2010, this project is rolled into PE 0603308A, project 990 in recognition of the increasing interrelationship between space operations, exo-atmospheric ballistic missile defense and global missile defense.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue combat development efforts to define DOTMLPF solutions for capabilities required to execute ground-based midcourse defense operations across the four domains of missile defense (passive defense, active defense, attack operations and battle management). Ensure that the various components of a global missile defense capability remain synchronized with USSTRATCOM's concept of operations.	1645	1766	1372
Includes FY07 Congressional Adds for various efforts. Includes FY08 Congressional Adds for Adaptive Lightweight Materials for Missile Defense, Advanced Battery Technology, Advanced Cavitation Power Technology, Advanced Electronics Rosebud Integration, Advanced Environmental Control System, Advanced Fuel Cell Research (Advanced Laser Electric Power), Advanced Hypersonic Weapon Mission Planning, Advanced Hypersonic Weapon Technology Demonstration, Advanced Standoff Technologies for National Security, AHW BMC2 HWIL Technology Demonstration, Alternative Power Technology (APT) for Missile Defense, Biologicial Air Filtration System Technology, Compact Pulsed Power for Defense Applications, Dielectrically Enhance Sensor System (DESS), Future TOC Hardware/Software Integration, Heat Dissipation for Electronic Systems & Enclosures, Integrated Composite Mounting Hardware, Micro Seeker System for Small Steerable Projectiles, Micro-Systems and Nano-technology for Advanced Technology Development, Model-Based Enterprise, Neutralization of IEDs, Next Generation Interceptors Materials Research, Next Generation Passive Sensors (NGPS), Orion High Altitude Long Endurance UAV, Radiation Hardening Initiative (RHI), Remote Explosive Analysis and Detection System (READS), Standoff Hazardous Agent Detection & Evaluation System, Thermal and Electrical Nanoscale Transport (TENT), Transfer Missile Power System, and Vertical Integration for Missile Defense Surveillance Data.	66615	109957	
Small Business Innovative Research/Small Business Technology Transfer Programs		3176	
Total	68260	114899	1372

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

C. Acquisition Strategy This project employs a mix of government employees, soldiers and various contractors for different aspects of the combat development process to ensure a degree of independent thought, and to encourage the use of various analytic approaches.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR4**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Execute Congressional Adds	Various	163457	66615	1-4Q	109957	1-4Q				340029	
Subtotal:			163457	66615		109957					340029	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Govt support & support contracts	Various	Various in Colorado Springs CO and Huntsville AL	8416	1645	1-4Q	1766		1372			13199	
SBIR/STTR						3176					3176	
Subtotal:			8416	1645		4942		1372			16375	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:	**171873**	**68260**		**114899**		**1372**			**356404**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR4**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Continue integration of Army missile defense capabilities & DOTMLPF solutions																												
Execute FY07 and FY08 Congressional Adds																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR4**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Continue integration of Army missile defense capabilities & DOTMLPF solutions	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Execute FY07 and FY08 Congressional Adds	1Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR5**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
TR5	MISSILE DEFENSE BATTLELAB	17377	12509	12633	12864	13927	16547	16946	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project TR5 funds USASMDC/ARSTRAT efforts to develop, analyze and mature warfighting concepts, focus military science and technology research, and conduct warfighting experiments. Additionally, this project funds the delivery of innovations to the warfighter through prototyping, operational analysis, and experimentation in support of current and future Forces. The concepts, experiments, analyses, and prototypes apply to all of the mission areas assigned to SMDC/ARSTRAT in its role as an ASCC to USSTRATCOM: Missile Defense, Space, Information Operations (IO), Global Strike (GS), Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Experimented with advanced prototype components of future operational- and tactical-level command and control (C2) systems to assess their impact on Doctrine, Organization, Training, Material, Leadership and Education, Personnel and Facilities (DOTMLPF) issues. Participated in major Army and Joint Experiments integrating space, missile defense, IO, GS and C4ISR integrating, functional and operational concepts into the Army Campaign Plan (ACP). For example, during FY07, SMDC/ARSTRAT participated in OmniFusion, Global Observer, Schriever IV, Unified Quest, Unified Engagement, Futures Game 2007, Combat System Brigade Combat Team Counterinsurgency; Digital Warfighter Experiment; Joint Forces Command Urban Resolve (three limited objective experiments); and the Intelligence, Surveillance, Reconnaissance Experiment. Participation in several experiments is scheduled during FY08 including Omni Fusion 08, Joint Expeditionary Force Experiment 08, and Communications Air-Borne Layer Expansion (CABLE) plus several TRADOC micro experiments. The Future Operation Capability (FOC) test bed has integrated commercial state-of-the-art technologies into C4ISR experiments, and continues to support National Capital Region operational missions, integrated emerging commercial technologies into the Future Operation Capability (FOC). Prototype derivatives of the FOC are supporting Operation Iraqi Freedom and various Homeland Defense missions.	13802	7268	7593
Operational Analysis/Tools, Modeling and Simulation (M&S) - Studies and Analysis included operational assessments of concepts, doctrine, organizations, technologies and tactics. Also examined Future Combat system/Transformation issues for space and missile defense including new national policy for Space Control, Space Superiority, and Operational Analysis of High Altitude Long Endurance capabilities at the Tactical Level, and Space Radar. Tools and M&S accomplishments included M&S for experimentation and operational assessments, and the maintenance of M&S tools including developing an operational representation of space based capabilities into ONESaf. Evolving concepts will require analysis that addresses emerging needs in FY08. Space control and operationally responsive space will require analysis to support the military utility analysis and requirements definition in FY08. Additionally, M&S integration will be required to support the fielding of Army simulations and experiments for Information Operations and Global Strike. Plans include continued maintenance of M&S tools and support for experimentation and analysis.	3575	5040	5040
Small Business Innovative Research/Small Business Technology Transfer Programs		201	
Total	17377	12509	12633

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

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603305A - Army Missle Defense Systems Integration

PROJECT
TR5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Experiments & technology enhancements of prototypes/tools and analysis.	CPAFF/CPFF	Various Colorado Springs CO and Huntsville AL	21710	3575	1-4Q	5040	1-4Q	5040	1-4Q	Cont.	Cont.	
Govt Support and Support Contracts	MIPR/Allot	Various Colorado Springs CO and Huntsville AL	27216	13802	1-4Q	7268	1-4Q	7593	1-4Q	Cont.	Cont.	
SBIR/STTR						201					201	
Subtotal:			48926	17377		12509		12633		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR5**

Project Total Cost:	**48926**	**17377**		**12509**		**12633**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR5**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Experiments & technology enhancements of prototypes/tools and analysis.																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603305A - Army Missle Defense Systems Integration**	**TR5**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Experiments & technology enhancements of prototypes/tools and analysis.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	29109	49285	19986	27225	28564	34539	32171	Continuing	Continuing
978	SPACE CONTROL	2689	6203	6995	12878	12726	17878	14905	Continuing	Continuing
990	Space and Missile Defense Integration	26256	43082	12991	14347	15838	16661	17266	Continuing	Continuing
997	Space and Missile Defense BattleLab	164								1127

A. Mission Description and Budget Item Justification: This program element funds space systems integration efforts performed by the US Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT).

USASMDC/ARSTRAT: Headquarters, Department of the Army General Order Number 37, dated 16 October 2006, designated SMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GMD), the Army integrator for global missile defense, and the Army Service Component Command of U.S. Strategic Command (USSTRATCOM). As such, SMDC is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those space related capabilities.

Project #990 funds the Future Warfare Center (FWC) to mature warfighting concepts, and validate concepts, identify capabilities needed to implement the validated concepts, and develop DOTMLPF solutions to realize those space related capabilities. Also sustains Joint Blue Force Situational Awareness (JBFSA) Mission Management Center and its associated testbed for both operations and spiral development for 24/7 Blue Force Tracking integration into a real-time common operating picture for Combatant Commanders, Joint Task Force Commanders and Coalition partners.

Project #978 funds the Army Space Superiority (SS) Family of Systems (FoS) that provides ground based tactically centric space information superiority capabilities to meet current Joint Requirements and validated Training and Doctrine Command (TRADOC) capability gaps. Space information superiority has gained importance with proliferation of satellite technologies and availability of space data products. Adversaries now have near equal access to a full array of space data products which reduces our information superiority. The Army Space Superiority (SS) Family of Systems (FoS) concept consists of ground based sensors for space situational awareness and advanced ground based tactical capabilities to establish and maintain assured space data access and information superiority for support of tactical operations.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	38740	17421	20065
Current BES/President's Budget (FY 2009)	29109	49285	19986
Total Adjustments	-9631	31864	-79
Congressional Program Reductions		-316	
Congressional Rescissions			
Congressional Increases		32180	
Reprogrammings	-8673		
SBIR/STTR Transfer	-958		
Adjustments to Budget Years			-79

Change Summary Explanation: Funding - FY 2007: Congressional Add for the Allen Army Airfield was moved to Operations and Maintenance, Army Appropriation for proper execution.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**978**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
978 SPACE CONTROL	2689	6203	6995	12878	12726	17878	14905	Continuing	Continuing

A. Mission Description and Budget Item Justification: The mission of the Army Space Superiority (SS) Family of Systems (FoS) funds the development of ground based tactically centric space information superiority capabilities to meet current Joint Requirements and validated Training and Doctrine Command (TRADOC) capability gaps. Space information superiority has gained importance with proliferation of satellite technologies and availability of space data products. Adversaries now have near equal access to a full array of space data products which reduces our information superiority. The Army Space Superiority (SS) Family of Systems (FoS) concept consists of ground based sensors for space situational awareness and advanced ground based tactical capabilities to establish and maintain assured space data access and information superiority for support of tactical operations. The Joint Requirements Oversight Council approved the first Initial Capability Document (ICD) for these capabilities in 2007, allowing an initial capability to advance towards Technology Development and Acquisition.

This project supports classified activities. Additional information may be obtained by contacting the Army Technology Management Office (TMO)

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Develop and maintain Space Control program plans and strategies. Program management for Space Superiority (SS) Family of System (FoS) materiel development and acquisition planning, security program establishment and associated facility security upgrades/expansion. Prepare and coordinate appropriate memorandum of agreements with associated programs and technology transition plan with designated program executive office.	969	2246	1689
Define SS FoS System Architectural requirements and coordinate with combat developer on system requirements, concept of operations and analysis of alternates. Conduct market survey and coordinate with other services on technology development that can be leveraged by the Army. Analyze alternative materiel concepts; determine measures of performance and measures of effectiveness for system attributes. Conduct system engineering and trade studies on viable concepts. Identify risk areas in technical performance, sustainability, cost and schedule. Develop materiel acquisition documentation to support a milestone decisions.	1720	1567	1266
Conduct risk reduction efforts that include prototyping system representative command and control sub-elements to validate critical Command and Control connectivity and battle management functional processes early in development to demonstrate that operational security and positive system control can be achieved and accredited by appropriate authorities. Engineering testing includes characterization and demonstration of sub-system interfaces, demonstrations/validations of sub-subsystem functional interactions, validation of technology integration and performance objectives for sub-system processors, and collection of supportability related data required for development of the integrated logistic support package. Testing will be conducted in relevant operational environments to validate technology maturity.		2216	4040
Small Business Innovative Research/Small Business Technology Transfer Program		174	
Total	2689	6203	6995

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

C. Acquisition Strategy Acquisition plans for the ground based Space Superiority Family of Systems will be developed in accordance with Department of Defense Directive 5000.1, The Defense Acquisition System and will utilize evolutionary acquisition approaches with incremental or spiral developments to meet the evolving threat. In accordance with current Army policies, acquisition activities will be transitioned to the appropriate program executive office as determined by the Army Acquisition Executive. These system designs will leverage any Science and Technology Objectives (STO) or Advanced Concept Technology Demonstrations (ACTDs) from various technology developers that are ready to transition into an acquisition program. Once systems are fielded, they will be retrofitted with upgraded hardware and software.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603308A - Army Space Systems Integration

PROJECT
978

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Systems and technical architectures	Various	Various	78	150	1-4Q	150	1-4Q				378	
Concept Development and Engineering Trade Studies	Various	Various	1050	1625	1-4Q	1093	1-4Q	808	1-4Q		4576	
Sub-system risk reduction, testing, and validation	Various	Various				1126	3-4Q	150	1-4Q		1276	
Design, Development and sub-system integration	Various	Various				1238	3Q	3399	1-4Q		4637	
Subtotal:			1128	1775		3607		4357			10867	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government support and support contracts	Various	Various	100	125	1-4Q	200	1-4Q	200	1-4Q		625	
Subtotal:			100	125		200		200			625	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
T&E Support	Various	Various		150	1-4Q	150	1-4Q	750	1-4Q		1050	
Subtotal:				150		150		750			1050	

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603308A - Army Space Systems Integration

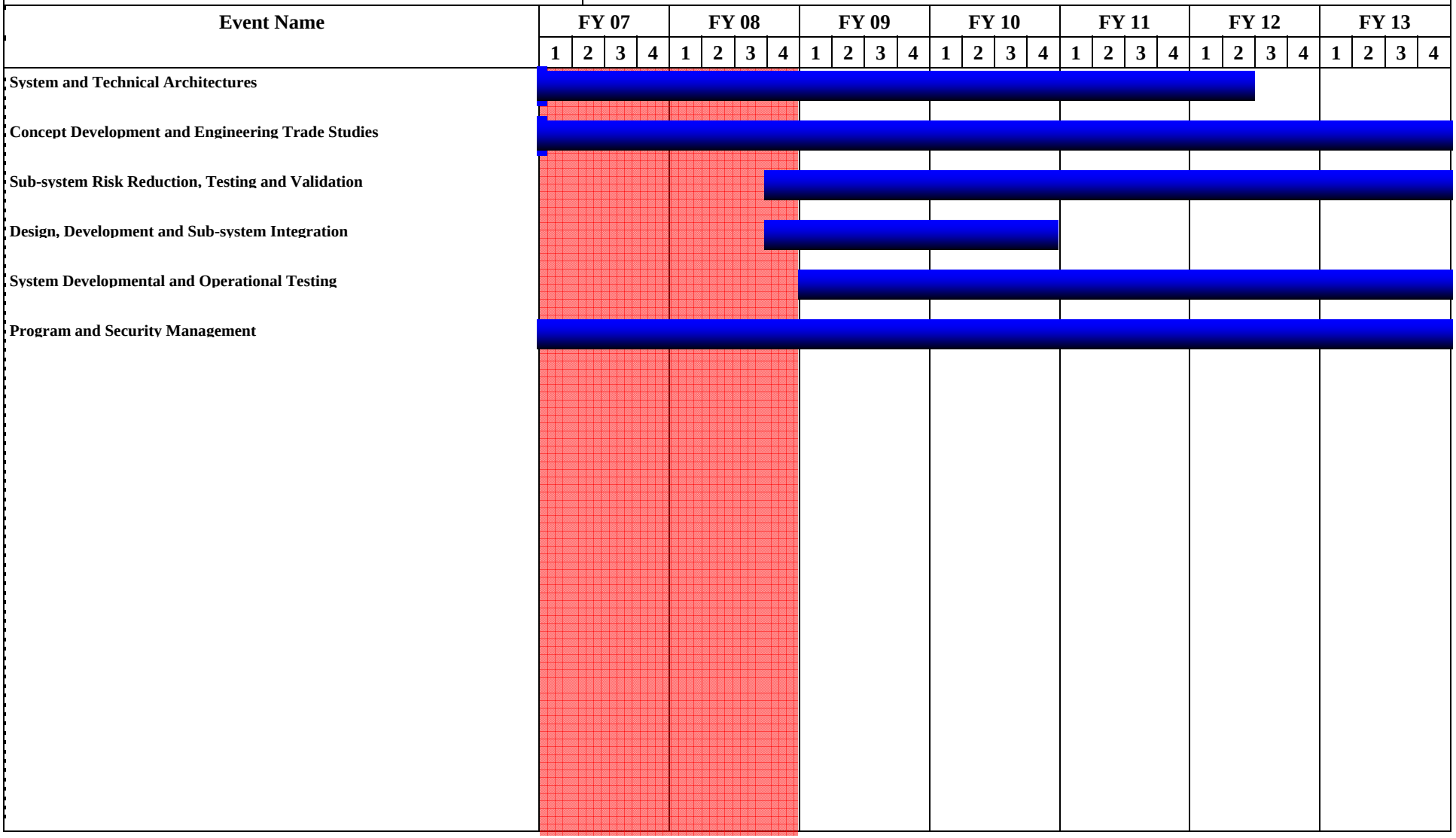
PROJECT
978

	Type				Date		Date		Date			Contract
Program and Security Management	Various	Various	622	639	1-4Q	1496	1-4Q	1688	1-4Q		4445	
Security Facilities Upgrade						750	3Q				750	
Subtotal:			622	639		2246		1688			5195	
Project Total Cost:			**1850**	**2689**		**6203**		**6995**			**17737**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**978**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**978**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
System and Technical Architectures	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q	
Concept Development and Engineering Trade Studies	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Sub-system Risk Reduction, Testing and Validation		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Design, Development and Sub-system Integration		3Q - 4Q	1Q - 4Q	1Q - 4Q			
System Developmental and Operational Testing			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Program and Security Management	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**990**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
990	Space and Missile Defense Integration	26256	43082	12991	14347	15838	16661	17266	Continuing	Continuing

A. Mission Description and Budget Item Justification: Headquarters Department of the Army (HQDA) General Order Number 37, dated 16 October 2006, designated SMDC/ARSTRAT as the Army proponent for space and ground-based midcourse defense (GMD), the Army integrator for global missile defense, and the Army Service Component Command of the U.S. Strategic Command (USSTRATCOM). As such, USASMDC is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those space related capabilities.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Plan, develop, and execute concepts and DOTMLPF solutions for Army exploitation of space systems, including Space-Based Infrared System (SBIRS), Multi-Mission Mobile Processor (M3P), and various space control capabilities. Represent Army positions and defend Army equities relative in Joint/DoD and inter-Service activities; e.g., National Security Space Architect (NSSA) Program Assessments, etc. Develop space modernization strategies and sponsor exploration of future space, near space, and missile defense warfighting concepts in support of Army Transformation. Sustain Joint Blue Force Situational Awareness (JBFSA) Mission Management Center and its associated testbed for both operations and spiral development for 24/7 Blue Force Tracking integration into a real-time common operating picture for Combatant Commanders, Joint Task Force Commanders and Coalition partners.	8771	11108	12991
Includes FY07 Congressional adds for various efforts. Includes FY08 Congressional Adds for Applied Counterspace Technology Testbed, Geospatial Airship Research Platform (GARP), High Altitude Airship, High Energy Matter Space Propulsion HiSentinel, Integrated Modeling of Air and Ground Environments (IMAGE), Integrated Nanosat Delivery System, Low Cost Interceptor, Simulation and Design of Large Electromagntic Systems, Spatial Acquisition and Measurement of Power Sources, Tactical Overwatch High Altitude System and Ultralight UAV Sensor Platform.	17485	30922	
Small Business Innovative Research/Small Technology Transfer Programs		1052	
Total	26256	43082	12991

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

C. Acquisition Strategy Program is continuous. Various performers will conduct planned accomplishments.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603308A - Army Space Systems Integration

PROJECT
990

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various	104521								104521	
Execute Congressional adds	Various	Various	22610	17485	2-4Q	30922	2-4Q				71017	
SBIR/STTR					2Q	1052					1052	
Subtotal:			127131	17485		31974					176590	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
GOVT SUPPORT & SUPPORT CONTRACTS	Various	Various in Colorado Springs CO and Huntsville AL	37327	8771	1-4Q	11108	1-4Q	12991		Cont.	Cont.	
Subtotal:			37327	8771		11108		12991		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: Not Applicable

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: Not Applicable

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**990**

Project Total Cost:	**164458**	**26256**		**43082**		**12991**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**990**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development/synchronization of Army space and BMD DOTMLPF solutions.																												
Execute FY07 and FY08 Congressional Adds																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603308A - Army Space Systems Integration**	**990**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development/synchronization of Army space and BMD DOTMLPF solutions.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Execute FY07 and FY08 Congressional Adds	2Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	134355	170383	116410	81057	37608	5203			704039
E88	INTEGRATED FIRE CONTROL AIR MISSILE DEFENSE	36342								79988
S24	ARMY SIAP SYSTEMS ENGINEERING	10001								28681
S25	ARMY SIAP OPERATIONAL INTEGRATION	8906	7872	2557						19335
S26	ARMY SIAP IMPLEMENTATION	40256								66533
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	1271								7664
S32	JOINT SIAP SYSTEM ENGINEERING	35709	24994							124730
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	1870	137517	113853	81057	37608	5203			377108

A. Mission Description and Budget Item Justification: This program element provides funding for the integration of Army and Joint Integrated Air and Missile Defense (IAMD). On 9 February 2006 the Army Systems Acquisition Review Council (ASARC) designated the IAMD program a Pre-Major Defense Acquisition Program (MDAP) and approved the stand-up of the IAMD Project Office (PO). Program Executive Office Missiles and Space (PEO MS) formally stood up the IAMD PO on 9 May 2006.

The mission of the IAMD PO is to: Define, develop, acquire, field and sustain the Army's portion of the Joint IAMD system of systems capability to be deployed as integrated components in Army, Joint, interagency, and multi-national net-centric architectures. Develop, acquire, field and sustain the IAMD common battle command component of the architecture and integrate externally developed sensors and shooters to provide an effective IAMD capability. The IAMD mission is derived from analysis of the Joint Air and Missile Defense (AMD) imperatives and the four mission sets that Army AMD performs. These mission sets are: Provide Air and Missile Defense, Contribute to AMD Situational Awareness/Situational Understanding, Contribute to Airspace Management, and Integrate/contribute to operational protection. The IAMD PO is responsible for the development of an IAMD Architecture comprised of components developed within the Project Office as well as by other PEO MS Project Offices (Lower Tier Project Office (LTPO) and Cruise Missile Defense Systems (CMDS), PEO Command, Control and Communications - Tactical (C3T) Project Offices (Air and Missile Defense Command and Control Systems (AMDCCS), and Joint organizations (e.g. Single Integrated Air Picture (SIAP) Joint Program Office (JPO)). As part of this responsibility, the IAMD PO has responsibility for performing the overarching IAMD System of Systems Architecture Systems Engineering. While the IAMD Architecture is complex, it is itself part of a larger Joint System of Systems architecture. The IAMD program provides the Army's part of this larger Joint IAMD Architecture.

In FY 2009, Project S32 Joint SIAP System Engineering efforts were transferred to US Air Force PE 0207451F Single Integrated Air Picture (SIAP), Project 5275 Joint SIAP System Engineering and Development in accordance with the DoD designation of the Air Force as the SIAP Acquisition Executive (AE).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	136890	176142	135260
Current BES/President's Budget (FY 2009)	134355	170383	116410
Total Adjustments	-2535	-5759	-18850
Congressional Program Reductions		-11159	
Congressional Rescissions			
Congressional Increases		5400	
Reprogrammings	-2535		
SBIR/STTR Transfer			
Adjustments to Budget Years			-18850

FY 2008(-$5,759)- Congressional Reduction (-$10,000) to Project S32 for unjustified growth; Congressional Increase to Project S25 ($5,400) for Advanced Extended Range Attack Missile (AERAM); Undistributed Congressional Reductions (-$1,159).
FY 2009 (-$18,850) - Project S32 Joint SIAP System Engineering efforts (-$18,137)were transferred to US Air Force PE 0207451F, Project 5275; Funds realigned(-$713)to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S25	ARMY SIAP OPERATIONAL INTEGRATION	8906	7872	2557						19335

A. Mission Description and Budget Item Justification: This project funds the coordination of the Single Integrated Air Picture (SIAP) requirements with the operational community: verification that operational requirements exist to support technical specifications and any subsequent changes; integration and coordination of Army SIAP operational requirements with the user community and multi-service sponsor(s); provide support to development and revision of SIAP acquisition strategy with respect to Army operational requirements. These products/tasks are required to ensure a specific, focused effort that integrates SIAP with weapons, sensors, Battle Management/Command, Control, Communications, and Computers (BMC4) and concepts of operations.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue efforts to coordinate Integrated Air and Missile Defense (IAMD) analyses, planning, tools, and requirements for Single Integrated Air Picture (SIAP) development. Evaluate IAMD/SIAP-related acquisition strategy, operational requirements, engineering tools, and current and evolving doctrine. Assess airspace awareness, combat identification, integrated fire control technologies, and risk mitigation approaches.	2912	2436	2557
Includes FY 2007 Congressional Adds for Area Security and Defense Systems Research, Command Responder, Joint Awareness Warfighter - Space (JAWS), and Multi View Integrated Engineering Environment Pilot. Includes FY08 Congressional adds for Army Extended Range Attack Missile (AERAM) Turbine Engine Development, Advance Extended Range Attack Missile, and Border Security and Defense System Research.	5994	5215	
Small Business Innovative Research/Small Business Technology Transfer Program		221	
Total	8906	7872	2557

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 643327, Project S24, Army SIAP Systems Engineering	10001							Continuing	Continuing
PE 643327, Project S26, Army SIAP Implementation	40256							Continuing	Continuing
PE 643327, Project S32, Joint SIAP Systems Engineering	35709	24994						Continuing	Continuing

Comment:

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY: **4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE: **0603327A - Air and Missile Defense Systems Engineering**

PROJECT: **S25**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Execute Congressional adds	Various	Various	15334	5994	2-4Q	5215					26543	
Subtotal:			15334	5994		5215					26543	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government support & support contracts	MIPRs, 1095s, CPFF	OGAs, Inhouse, Contact spt.	8142	2912	1-4Q	2436	1-4Q	2557	1-4Q	Cont.	Cont.	
SIBR/STTR Costs					2-4Q	221					221	
Subtotal:			8142	2912		2657		2557		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**23476**	**8906**		**7872**		**2557**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Coordinate & integrate SIAP rqmts into doctrine, demos, experiments, & exercise.																												
Execute Congressional Adds																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S25**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Coordinate & integrate SIAP rqmts into doctrine, demos, experiments, & exercise.	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Execute Congressional Adds	2Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S34**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	1870	137517	113853	81057	37608	5203			377108

A. Mission Description and Budget Item Justification: Funding in this project provides the overarching Integrated Air and Missile Defense (IAMD) Architecture and IAMD Battle Command System (IBCS) components necessary to produce an IAMD capability. The IAMD Program represents a shift from a traditional system-centric weapon systems acquisition to a component-based acquisition. This component-based acquisition will provide the most efficient way to acquire and integrate the components of the incremental IAMD architectures. Unlike traditional acquisition programs that focus primarily on the development of a single system or platform, the IAMD Program is structured to enable the development of an overarching system-of-systems capability with all participating Air and Missile Defense (AMD) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The IAMD Program achieves this objective by establishing the incremental IAMD architecture and developing the following products: the IBCS, the Integrated Fire Control (IFC) Network, and the Common Plug & Fight (P&F) Interface. The IBCS provides the common IAMD Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) capability. The IFC Network provides fire control connectivity and enabling distributed operations. The Common P&F Interface integrates the multiple sensor and weapon components. Development of the component-unique part of the P&F Interface remains within the purview of the affected components project/product office.

FY 09 and out funding represents the Integrated Air & Missile Defense capability. Full funding for the IAMD program will be established at MS B in February 2009.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Product Development	1870	108302	83873
Support Cost		12578	13020
Test and Evaluation		12790	16960
Small Business Innovative Research/Small Business Technology Transfer Program		3847	
Total	1870	137517	113853

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0604869A, Project M06, PATRIOT/MEADS Combined Aggregate Program (CAP)	322915	369786	431270	585597	424948	433464	76911	Continuing	Continuing
SSN C50001, PATRIOT/MEADS CAP			31049	400215	668463	1032860	1305623	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	237795	478204	356434	335071	318513	181294		Continuing	Continuing
SSN BZ0525, JLENS Production					442084	440585	391876	Continuing	Continuing

PE 0604802A, Project S23, SLAMRAAM	28549	34526	31774					Continuing	Continuing
SSN C81001, SLAMRAAM Production			40468	117094	76073	61307	61307	Continuing	Continuing
PE 0604820A, Proj E10, Sentinel	2446	7022						Continuing	Continuing
PE 0603327A, E88, Integrated Fire Control AMD	36342							Continuing	Continuing

Comment: This project and program is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy The IAMD Program will employ an evolutionary acquisition strategy consisting of multiple capability increments leading to an objective capability in FY17. The IAMD Program will carry two development contractors through Preliminary Design Review (PDR) with a downselect at MS B.

Each IAMD capability increment follows the IAMD Capability Development Document (CDD) and is defined as:
- Increment 1 is a User-executed capability increment focused on realignment of current force systems into an AMD Composite Battalion (BN) organizational construct. (not part of the materiel development program)
- Increment 2 provides the first increment of an integrated materiel solution, and is the initial acquisition program to develop the objective IAMD capability.
- Increment 3 provides the objective IAMD capability.

The IAMD incremental development approach provides the opportunity for technology insertions into the program throughout each increment as high-payoff technologies mature and are ready for integration. This enables an orderly and cost-effective migration from the current system-centric architecture to the IAMD architecture.

Key principles of the IAMD acquisition approach are the following:
- Migrate from system-based acquisition to component-based acquisition
- Use system-of-systems acquisition approach with collaboration among IAMD, PEO MS, PEO C3T, and PM Future Combat System Brigade Combat Team (BCT) Component Project Offices, and other Service Project Offices to network enable weapons and sensor components
- Develop and procure common IBCS Command Post (CP) that replaces multiple weapon system unique BMC4I components
- Establish product lines used to evaluate and select, modify and integrate modular open systems Hardware (HW) and Software (SW) common configuration items
- Conduct architecture-based System Engineering, Integration and Test (SEI&T) activities for an incremental fielded configuration of the IAMD IFC Network-compatible IBCS CP, weapons and sensor system components
- Integration of the Integrated Architecture Behavior Model (IABM) to develop a SIAP for AIAMD.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603327A - Air and Missile Defense Systems Engineering

PROJECT
S34

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ASMD SOS Hardware-in-the- Loop Testbed	CPFF	Multiple OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	5358	1870						Cont.	Cont.	Cont.
Concept Development	CPIF	Contractors, Huntsville, AL				64213	1-4Q	16053	1-2Q	Cont.	Cont.	Cont.
IAMD System Engineering & Integration	CPFF	Contractor, Huntsville, AL				43725	1-4Q	19305	1-4Q	Cont.	Cont.	Cont.
IBCS System Development and Demonstration	CPIF	Contractor, Huntsville, AL/other locations						43673	2-4Q	Cont.	Cont.	Cont.
GFE	N/A	Multiple				2246	1-4Q	2643	1-4Q	Cont.	Cont.	Cont.
RDEC	N/A	MRDEC, AL				1965	1-4Q	2199	1-4Q	Cont.	Cont.	Cont.
Subtotal:			5358	1870		112149		83873		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
White Sands Missile Range	MIPR	WSMR, NM						3905	3-4Q	Cont.	Cont.	Cont.
DTC/OTC/AEC	MIPR					750	1-4Q	1000	1-4Q	Cont.	Cont.	Cont.
Modeling & Sim/Joint Interoperability Test Spt	MIPR	Huntsville, AL				12040	1-4Q	12055	1-4Q	Cont.	Cont.	Cont.

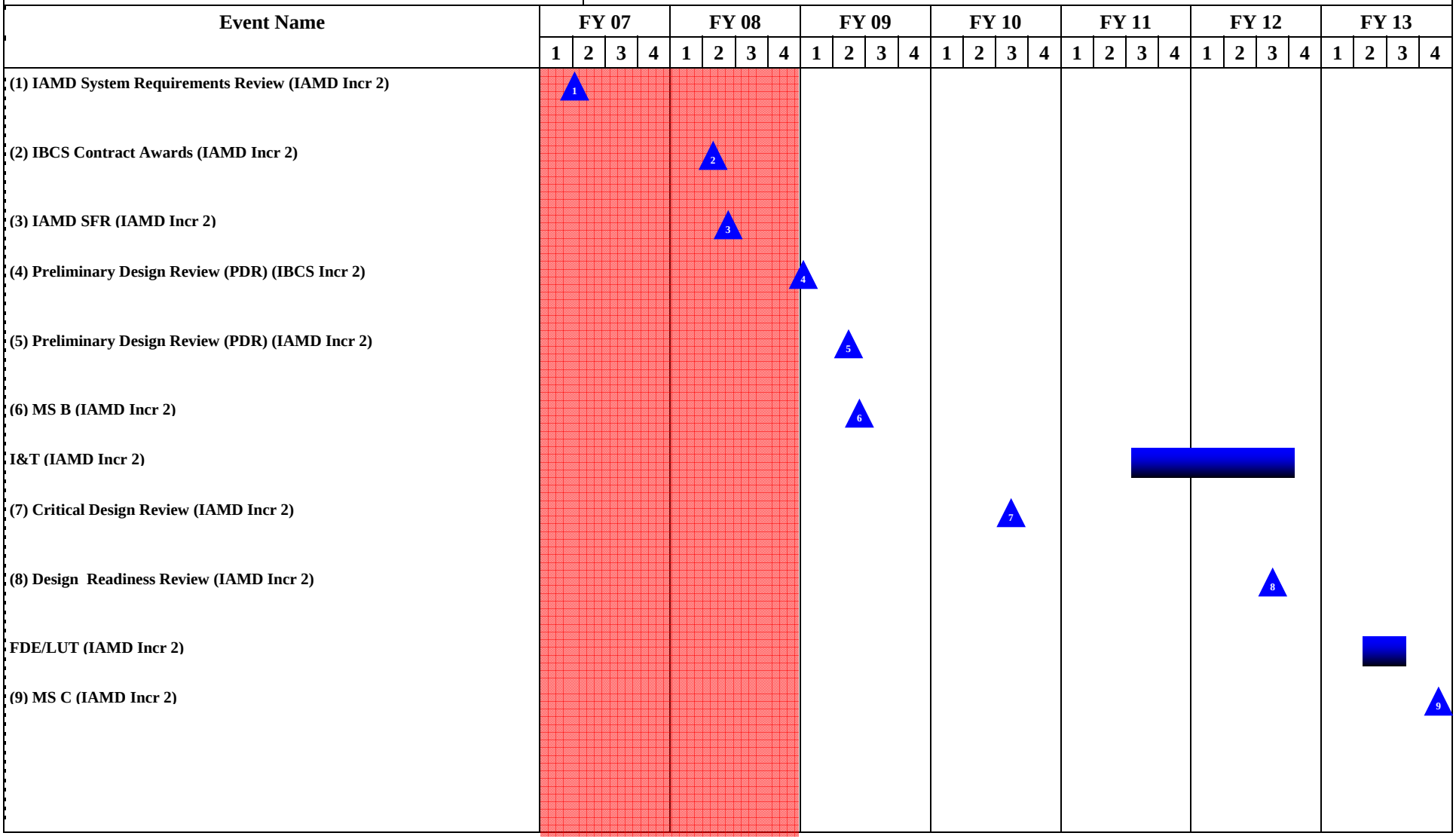
Subtotal:						12790		16960		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government System Engineering & Program Managment (SEPM)	N/A	Multiple OGAs, Inhouse and Contractor, Huntsville, AL				12578	1-4Q	13020	1-4Q	Cont.	Cont.	Cont.
Subtotal:						12578		13020		Cont.	Cont.	Cont.
Project Total Cost:			**5358**	**1870**		**137517**		**113853**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S34**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S34**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
IAMD System Requirements Review (IAMD Incr 2)	2Q						
IBCS Contract Awards (IAMD Incr 2)		2Q					
IAMD SFR (IAMD Incr 2)		2Q					
Preliminary Design Review (PDR) (IBCS Incr 2)			1Q				
Preliminary Design Review (PDR) (IAMD Incr 2)			2Q				
MS B (IAMD Incr 2)			2Q				
I&T (IAMD Incr 2)					3Q - 4Q	1Q - 4Q	
Critical Design Review (IAMD Incr 2)				3Q			
Design Readiness Review (IAMD Incr 2)						3Q	
FDE/LUT (IAMD Incr 2)							2Q - 3Q
MS C (IAMD Incr 2)							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
JA2	JOINT AIR-TO-GROUND MISSILE (JAGM)		53160							53160

A. Mission Description and Budget Item Justification: The Joint Air-to-Ground Missile (JAGM) is a fixed wing, rotary wing, and Unmanned Aircraft System (UAS) launched missile system that provides advanced line-of-sight (LOS) and beyond-line-of-sight (BLOS) capabilities, including precision point targeting (both active and passive) and fire-and-forget seeker technologies; increased range; and increased lethality against soft and hardened moving and stationary targets.

The JAGM System will replace aviation-launched TOW, the HELLFIRE family of missiles, and the Navy's Maverick family of missiles. JAGM will be a joint program with the Army, Navy and USMC that addresses rotary/fixed wing and UAS requirements. The Navy is funding the integration of the missile system on the Navy platforms. The Super Hornet (F/A 18E/F), the Apache (AH-64D), and the Super Cobra (AH-1Z) are Milestone C threshold platforms with integration occurring no later than (NLT) the end of FY13 and Initial Operating Capability (IOC) beginning NLT the end of FY16. Other threshold platforms are the Army Reconnaissance Helicopter (ARH)-70, the Seahawk (MH-60R) and Extended Range Multi Purpose (ERMP) UAS. MH-60R integration will occur NLT FY14. Integration timelines for ERMP and ARH are notional and will be updated prior to Milestone B as those programs mature. The JAGM will increase the warfighters' operational flexibility by effectively engaging a variety of stationary and mobile targets on the battlefield, including advanced heavy/light armored vehicles, bunkers, buildings, patrol craft, command and control vehicles, transporter/erector (e.g., SCUD) launchers, artillery systems, and radar/air defense systems. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/countermeasure environment, against both stationary and moving targets. JAGM supports more efficient logistics for expeditionary force tailoring by replacing several missile variants with a single, interoperable weapon. The warhead is designed for high performance against both armored and non-armored targets. It also allows flexibility in the location of resupply on the battlefield, thereby minimizing the logistic burden of the combat force. The JAGM System includes missile, trainers, containers, support equipment, and launcher MODS.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Source Selection Evaluation Board (SSEB)		3500	
Contractor Establishment of Teams and Ramp-Up		31041	
Controls Establishment (Schedule and Cost Center)		4647	
Finalize Integrated Flight Simulation and Hardware in the Loop (HWIL)		6971	
Government Preparation for Integrated Baseline Review (IBR)		2324	
Software Simulation Algorithm Maturity		3190	
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		1487	
Total		53160	

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		53500	
Current BES/President's Budget (FY 2009)		53160	
Total Adjustments		-340	
Congressional Program Reductions		-340	
Congressional Recissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Joint Common Missile (JCM) PE: 654329	24210								24210
Joint-Air-To-Ground Missile (JAGM)			118517	129401	133050	131107	94398	Continuing	Continuing
Navy (RDTE) Joint Air-to-Ground Missile (JAGM)		15400	62300	80100	113200	134400	118900	Continuing	Continuing

Comment:

D. Acquisition Strategy The JAGM System is an ACAT 1D Joint Army/Navy program with the Army designated as lead service. The JAGM system will be a common air-to-ground precision guided missile for use by Joint Service manned and unmanned aircraft to destroy high-value stationary, moving, and relocateable land and naval targets. JAGM will be required to provide a common, multi-mode weapon capable of providing both current and future aviation platforms with reactive targeting capabilities satisfying the sum of needs across the joint platforms, and eliminates the requirement for separate upgrades to multiple existing missile systems. The government will utilize full and open competition to acquire the JAGM System. The government will issue one solicitation that includes three JAGM program phases: Phase I Competitive Preliminary Design and Fly-Off (27 months); Phase II System Development and Demonstration (48 months); Phase III Low Rate Initial Production 1 & 2. The government plans to award two Fixed Price Incentive (FPI) contracts (with full cost performance reporting) and each contract will include Phase I as the basic effort with options for phases II and III. The phase II CPIF/AF option will consist of a 48 month SDD and Demonstration Phase and will include provision for procurement of long lead-time items to support the follow-on-Phase III effort. Phase III will consist of two FPI LRIP options for the JAGM program. The opportunity to assess the viability of continuation of multiple contractors into/through SDD and LRIP will be provided through a series of three decision points aligned with MS B, DRR, and MS C. The decision criteria for carrying one of more contractors into the subsequent

phase will be established in the acquisition strategy update for Milestone B prior to issuing the request for updated proposals at the conclusion of Phase I.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603460A - Joint Air-to-Ground Missile (JAGM)

PROJECT
JA2

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prime Contract	FPIF/AW	To Be Determined				41260	3-4Q				41260	
Support Contracts	Various	Various				1842	2-4Q				1842	
Development Engineering	Various	Various				4111	2-4Q				4111	
Subtotal:						47213					47213	

Remarks: Fixed Price Incentive Fee/Award Fee (FPIF/AW)

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support	Various	Various				408	2-4Q				408	
Subtotal:						408					408	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Gov Agencies	Various	Various				414	3-4Q				414	
Subtotal:						414					414	

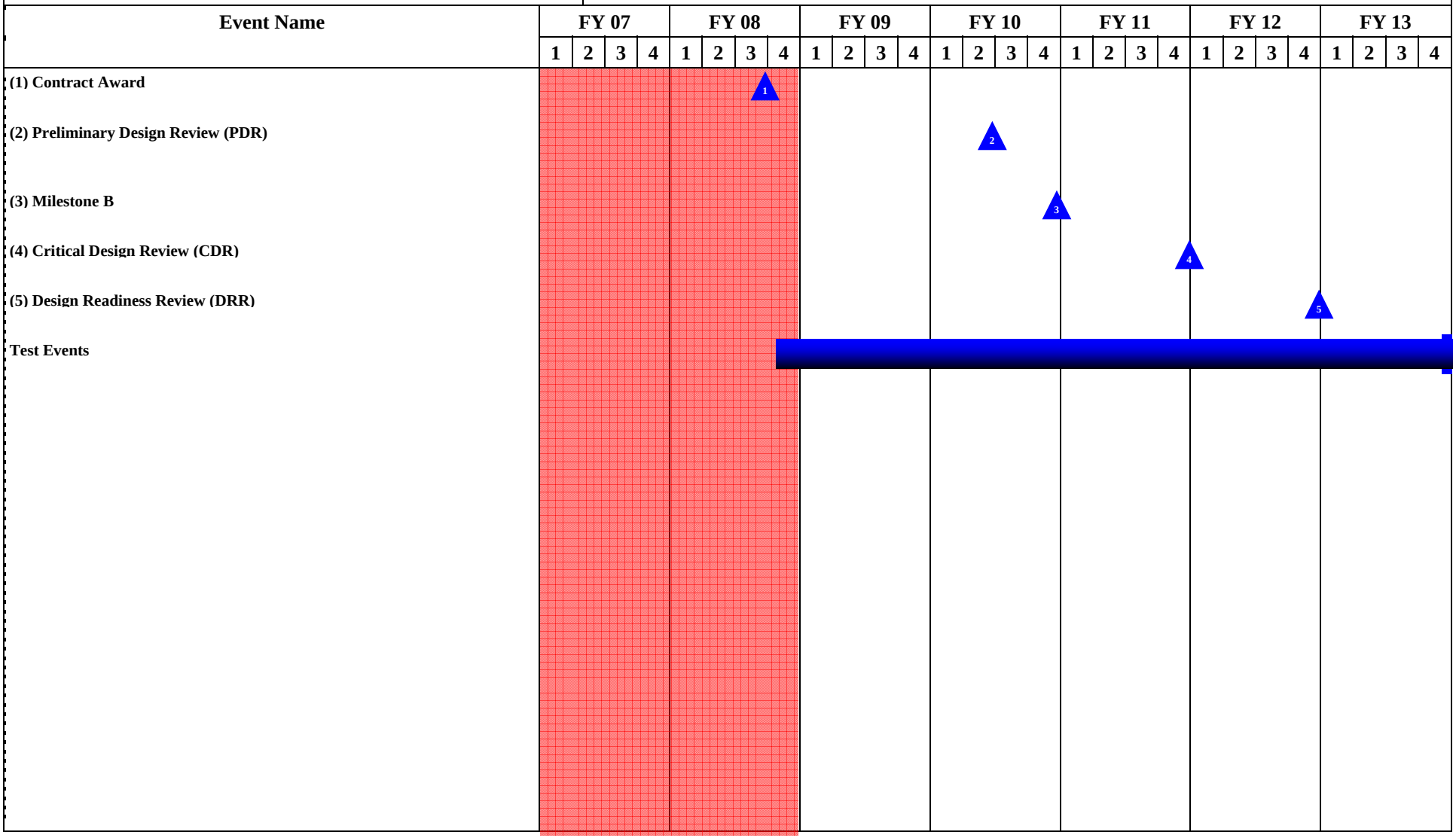
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Eng/ Project Management	Various	Various				5125	2-4Q				5125	
Subtotal:						5125					5125	

Project Total Cost:				**53160**					**53160**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603460A - Joint Air-to-Ground Missile (JAGM)**	**JA2**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Contract Award		3Q					
Preliminary Design Review (PDR)				2Q			
Milestone B				4Q			
Critical Design Review (CDR)					4Q		
Design Readiness Review (DRR)						4Q	
Test Events		4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)							February 2008
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603460A - Joint Air-to-Ground Missile (JAGM)**						PROJECT **JA2**

Funding in $000

Program	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Joint Air-To-Ground Missile (JAGM)							
Total Termination Liability Funding:							

Remarks:

For the FPIF Phase I, the JAGM Prime Contract will incorporate the "Limitation of Government_s Obligation" clause (DFARS 252.232-7007) to limit the Government's liability.

For the CPIF/AF Phase II, the JAGM Prime Contract will incorporate the "Limitation of Funds" clause (FAR 52.232-22) to limit the Government's liability.

For the JAGM Program, these two clauses limit the Government's financial liability per the contract to those funds placed on contract plus any outstanding commitments plus costs associated with the orderly termination of contractual actions.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
606 CNTRMN/BARRIER ADV DEV	1022	24580	29234	18873	19077	19666	20172	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides for component development of new countermine systems for neutralizing, clearing, breaching and detection concepts that will enhance the effectiveness of the Future Force to maintain freedom of maneuver. The program includes the Ground Standoff Mine Detection System (GSTAMIDS) and the Autonomous Mine Detector (AMD). The GSTAMIDS forward looking effort will transition advanced technologies from the Army's S&T program into development to further enhance vehicle mounted mine detection capabilities for FCS. Autonomous Mine Detection System (AMDS) consist of three payloads for a robotic platform. The payloads are for remote mine detection and marking, Unexploded Ordanance (UXO) detection and marking, and neutralization. AMDS provides stand off detection for the dismounted soldier. Next Generation Mine Detection and Neutralization (FY11-13) will lever technologies currently in the Tech Base. The Next Generation Standoff Detection Systems (NGSOS) is a suite of advanced forward looking sensors designed to detect and confirm mines and Improvised Explosive Devices (IED) at far greater stand off distances than are achieved today. NGSOS will be designed as a payload on several vehicle platforms and robotic systems.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Initiate GSTAMIDS GPR sensor block upgrade to Husky mine detection vehicle		9720	
Complete prototype and test of new GPR for route clearance vehicles	1022		
Initiate Autonomous Mine Detection Sensors (AMDS) program		14172	
Build and test AMDS Brassboards (2)			29234
Small Business Innovative Research/Small Business Technology Transfer Program		688	
Total	1022	24580	29234

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	8346	24737	29423
Current BES/President's Budget (FY 2009)	1022	24580	29234
Total Adjustments	-7324	-157	-189
Congressional Program Reductions		-157	
Congressional Recissions			
Congressional Increases			
Reprogrammings	-7089		
SBIR/STTR Transfer	-235		
Adjustments to Budget Years			-189

Change Summary Explanation: Funding - FY 2007: $7.089 million reprogrammed out of this PE in support of higher priority Army programs.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604808A D415 - Landmine Warfare and Barrier - Engineering Development	42185	46807	52475	43427	21405	20129	18534	Continuing	Continuing

Comment:

D. Acquisition Strategy Autonomous Mine Detection Sensors(AMDS) - The acquisition strategy for Component Advanced Developmemt supports a competitive effort with one or more contractors/technology approaches. MS B is scheduled for 3rd QTR FY10. Risk Reduction and Broad Agency Announcement contract award(s) will begin in 2QFY08. If applicable, AMDS will downselect to one contractor when it transitions from Concept Development (6.4) to System Development (6.5) in FY 2011.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603619A - Landmine Warfare and Barrier - Adv Dev

PROJECT
606

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Ground Penetrating Radar Sensor blk upgrade	C-CPFF	BAE Systems - Austin TX			2Q	10000			2Q		10000	
Adv Mine Detection Sensors	C/CPFF	To Be Selected (1)				7320	2Q	15076	2Q	8627	31023	
Other Component Development	C/FP, T&M	Various				2830	2Q	2940	2Q	3015	8785	
Subtotal:						20150		18016		11642	49808	

Remarks: Acquisition Strategy is to award one or more Broad Agency Announcements and to downselct to one System Development contract, if applicable, in FY2011.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Adv Mine Detection Sensors	MIPR	Various OGAs				2264	1Q	2761		3313	8338	
Subtotal:						2264		2761		3313	8338	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMDS	MIPR	Various OGA				59	2Q	6500	2Q	2300	8859	
Subtotal:						59		6500		2300	8859	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	IN-House	PM Close Combat Systems Picatinny NJ/ Ft Belvoir VA		900		925	1Q	1414		1154	4393	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

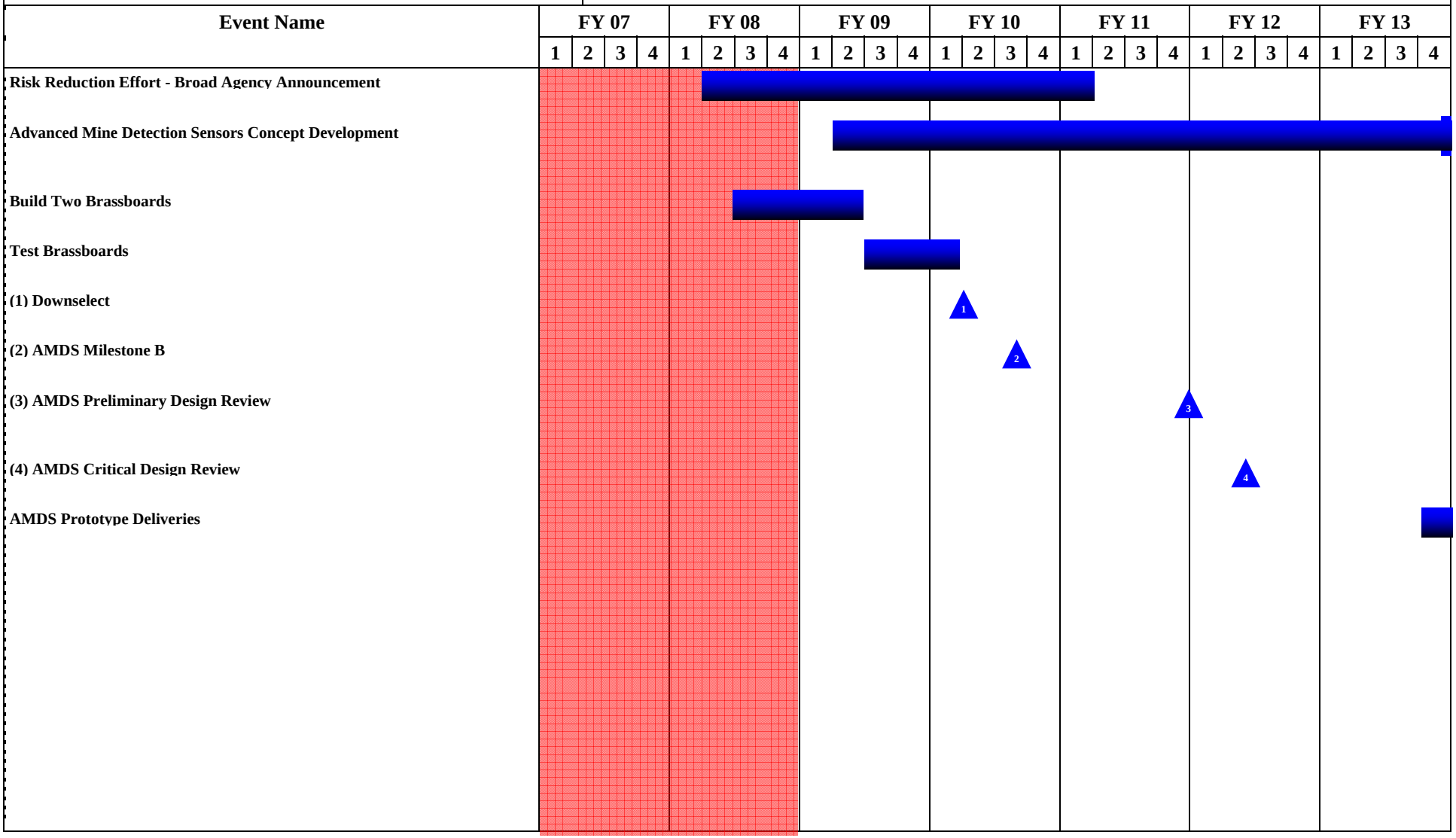
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

Program Management Contractor Support	C/FP	BRTRC Fairfax VA		122		494	2Q	543		598	1757	
SBIR/STTR						688					688	
Subtotal:				1022		2107		1957		1752	6838	
Project Total Cost:				**1022**		**24580**		**29234**		**19007**	**73843**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603619A - Landmine Warfare and Barrier - Adv Dev**	**606**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Risk Reduction Effort - Broad Agency Announcement		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
Advanced Mine Detection Sensors Concept Development			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Build Two Brassboards		2Q - 4Q	1Q - 2Q				
Test Brassboards			3Q - 4Q	1Q			
Downselect				2Q			
AMDS Milestone B				3Q			
AMDS Preliminary Design Review					4Q		
AMDS Critical Design Review						2Q	
AMDS Prototype Deliveries							4Q
AMDS DT/OT							
AMDS DT/OTMilestone C							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
E79 SMOKE/OBSCURANT SYSTEM	5314	9363	3840	18544	6457	6601	6749	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project supports the Component Advanced Development and System Integration developmental phases of high performance obscuration materials and systems to increase the survivability of the combined armed forces and to complement weapon systems. U.S. Forces must be able to defeat target acquisition, weapon guidance systems, and surveillance sensors across the electro-optical spectrum. These programs develop systems to provide large area and projected obscuration across the spectrum from visual through infrared and millimeter wavelength radar. The technologies supported by this program enhance obscuration systems as combat multipliers.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Conducted test and evaluation of Screening Obscuration Devices (SOD) alternatives.	2230	1752	
Initiate and continue environmental studies.	200	250	475
Initiate and continue SOD and SOM visible items development.	2584	6714	905
Conduct and complete SOD Milestone B.	300		
Initiate test and evaluation of SOM alternatives.		285	2010
Initiate and complete SOD visible Milestone C.		100	300
Initiate SOD infrared alternatives Milestone B.			150
Small Business Innovative Research/Small Business Technology Transfer Program		262	
Total	5314	9363	3840

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	5426	19449	3865
Current BES/President's Budget (FY 2009)	5314	9363	3840
Total Adjustments	-112	-10086	-25
Congressional Program Reductions		-10086	
Congressional Recissions			
Congressional Increases			
Reprogrammings	40		
SBIR/STTR Transfer	-152		
Adjustments to Budget Years			-25

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
New OFS item									

Comment:

D. Acquisition Strategy Acquisition Strategy: The Advanced Component Development effort acquisition strategy uses full and open competition and cost plus fixed fee (CPFF) contracting to test and build multispectral grenades and smart dischargers.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

PROJECT
E79

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development		JPM NBCCA, APG, MD	3831	2432	1Q	3988	1-2Q				10251	
Hardware Development	C/CPFF TBD					3016	3Q	905	1Q		3921	
Subtotal:			3831	2432		7004		905			14172	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Environmental Tox Studies			300	200	2Q	200	2Q	475	2Q		1175	
SIBR Tax				152	1Q	234	1-2Q				386	
Subtotal:			300	352		434		475			1561	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SOD Eng Design Test		OGA Various	100								100	
SOD Test & Evaluation		OGA Various		2230	2Q	1540	2Q				3770	
SOM Test & Evaluation		OGA Various				285	2Q	2010	2Q		2295	
Subtotal:			100	2230		1825		2010			6165	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

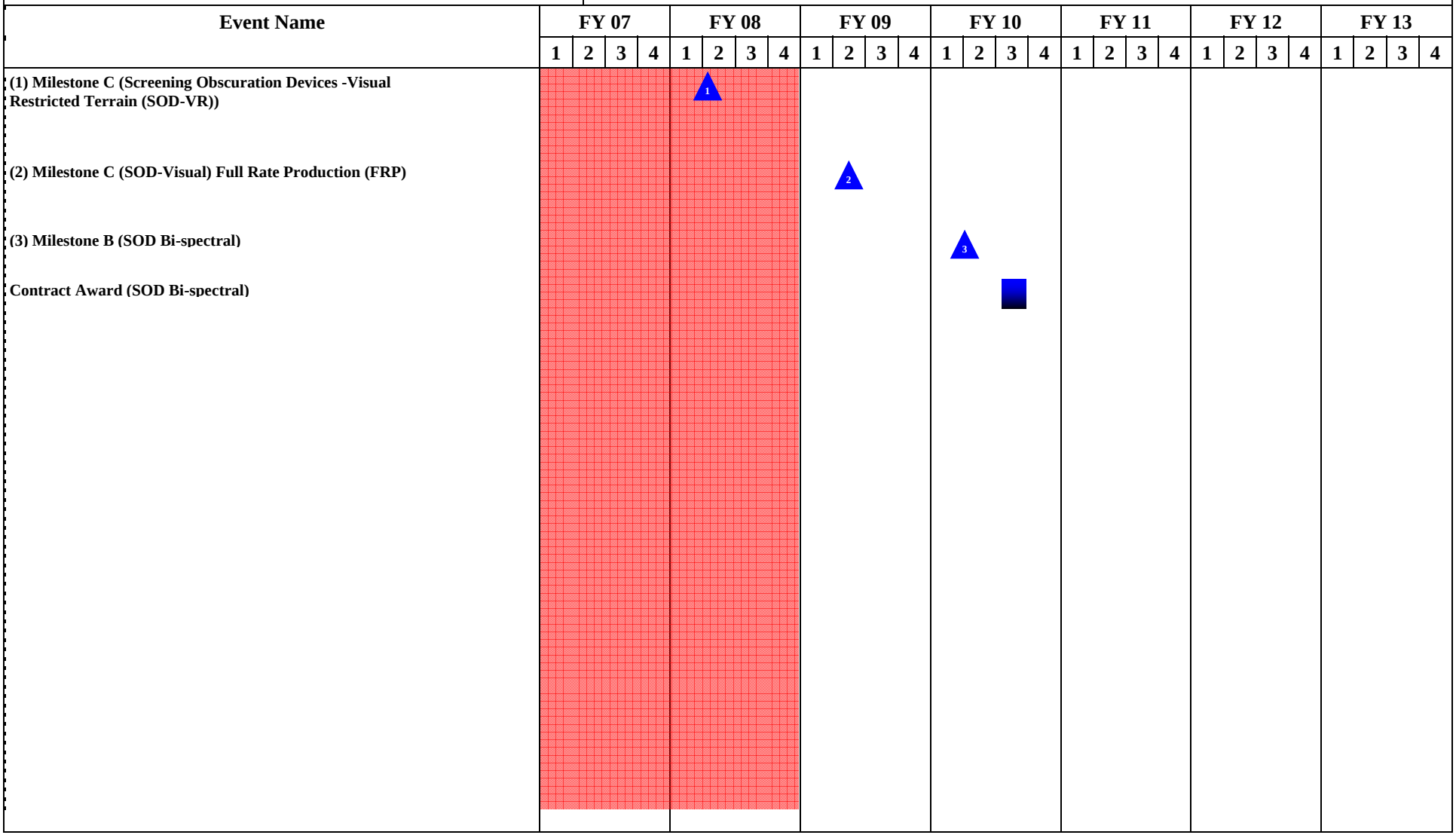
PROJECT
E79

Conduct/complete FOTOD Milestone A		JPMNBCCA, APG, MD	150								150	
Conduct/complete SOD, V1,2 Milestone B		JPMNBCCA, APG, MD		300	3Q						300	
Initiate/complete Milestone C, SOD Incr 1/2		JPMNBCCA, APG, MD				100	1-2Q	300	1-2Q		400	
Inititate Milestone B/ SOD/SOM IR		JPMNBCCA, APG, MD						150	1-2Q		150	
Subtotal:			150	300		100		450			1000	
Project Total Cost:			**4381**	**5314**		**9363**		**3840**			**22898**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev**	**E79**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone C (Screening Obscuration Devices - Visual Restricted Terrain (SOD-VR))		2Q					
Milestone C (SOD-Visual) Full Rate Production (FRP)			2Q				
Milestone B (SOD Bi-spectral)				2Q			
Contract Award (SOD Bi-spectral)				3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	3476	47474	45866	71451	56296	106353	50757	Continuing	Continuing
656	Mounted Combat System (MCS) Ammunition	1259	44294	45866	71451	56296	106353	50757	Continuing	Continuing
694	MEDIUM CALIBER AMMUNITION	2217	3180							5497

A. Mission Description and Budget Item Justification: The Tank and Medium-caliber Ammunition (TMA) Program Element (PE) encompasses a comprehensive program to develop, rapidly transition to production, and field advanced tank, medium caliber, and other munitions. These programs will ensure continued battlefield overmatch and lethality of U.S. maneuver forces despite worldwide development and proliferation of enhanced armored vehicle protection technologies. To achieve this, TMA will identify and develop promising technologies through competitive development and streamlined acquisition procedures. All ammunition development funds within this PE are managed to facilitate transitions between phases, avoid administrative delays, and focus resources on the most promising areas.

FY 2009 supports the continuation of System Development and Demonstration (SDD) for the Mid Range Munition (MRM) for the FCS MCS. The MRM program has matured its technology and capability during Science and Technology phase, and has successfully completed the autonomous (April 2004) and designate (August 2006) guide-to-hit demonstrations in preparation for SDD. MRM is a significant contributor to the lethality and survivability of the MCS and Future Force. MRM will provide lethality capability at Beyond Line of Sight (BLOS) ranges (2-12km), which will expand the Maneuver Task Force Commander's battle space. MRM is the only Gun-Launched, Beyond Line of Sight (BLOS) solution that supports the FCS Brigade Combat Team (BCT). Initiation of MRM SDD in FY 2008 is critical to force effectiveness reinforcing the BLOS capability by increasing FCS Lethality and Survivability. MRM supports and allows the FCS to meet KPP#3, Networked Lethality.

Starting in FY 2012, funding supports MRM and SDD initiation of the Advanced Kinetic Energy (AKE) cartridge. The AKE will provide the MCS with a unguided direct fire Line of Sight (LOS), fast response lethality to rapidly destroy threat targets in the close in fight from 0km to 2km. AKE will allow the MCS to defeat current and future threat Main Battle Tanks (MBT) with Explosive Reactive Armor (ERA) and meet the FCS LOS requirement as specified in the FCS ORD.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	2572	44578	45733
Current BES/President's Budget (FY 2009)	3476	47474	45866
Total Adjustments	904	2896	133
Congressional Program Reductions		-304	
Congressional Rescissions			
Congressional Increases		3200	
Reprogrammings	976		
SBIR/STTR Transfer	-72		
Adjustments to Budget Years			133

FY 2008: Congressional increase of $3.2M for High Explosive Airburst (HEAB) 25mm, Project 694.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**	**656**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
656	Mounted Combat System (MCS) Ammunition	1259	44294	45866	71451	56296	106353	50757	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System Brigade Combat Team (FCS BCT) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project supports the development of ammunition for the Future Combat System (FCS) Mounted Combat System. The Mid Range Munition (MRM) is critical to FCS force effectiveness, reinforcing the Beyond Line of Sight (BLOS) capability, and allows FCS to meet Key Performance Parameter #3, Networked Lethality.

The MRM round is a precision-guided munition that provides the capability for the FCS BCT commander to both shape and set conditions in his battlespace to conduct decisive operations and destroy enemy forces by engaging moving and stationary targets throughout his area of operations. The MRM round will incorporate a seeker(s) that enables the munition to attack targets designated by the Mounted Combat System or another remote (manned/unmanned) sensor, or autonomously attack targets if designation is lost or not available.

MRM is a first generation fire and forget gun-launched munition that is being developed to provide the Mounted Combat System with a BLOS capability. MRM is a precision-guided munition that provides a moving or stationary Mounted Combat System the capability to engage and destroy moving and stationary enemy targets throughout his area of operations (2-12km (T) or 2-16km (O)) in a BLOS mode. MRM will have a seeker to enable it to engage designated targets or autonomously guide itself to and attack targets if designation is lost or not present.

There are three modes of operation when employing the MRM round: autonomous, designate, and designate only. The sensor/observer must decide which mode to use based on the factors of mission, enemy, troops, terrain, time, and civil considerations (METT-TC) and the commander's intent, in the Attack Guidance (AG) matrix. Autonomous shall be utilized when a sensor/observer does not want to give away his position, if a designator is not available or inoperative, or if intervisibility terrain lines prevent illumination of the target.

Prior to firing, integration of battlefield command and control information (range to target, laser designation code, etc) will be transmitted to the munition through a data link connecting the MRM to the Mounted Combat System fire control system. Once fired, no further command and control from the MCS is required. The round will guide itself to the target using on board sensors or possibly a laser reflection with a properly encoded pulse rate. The munition will employ state-of-the-art kill mechanisms to achieve the highest probability of kill possible against a variety of armored targets. The technologies that provide both guidance and lethality shall be all weather and countermeasure resistant.

Sensors for the Autonomous mode will also be enabled at a range that will reduce the probability of collateral damage.

FY 2009 supports the continuation of System Development and Demonstration (SDD) for the MRM. The MRM will provide FCS Mounted Combat System with a precision munition capable of hitting and killing all battlefield targets at BLOS ranges between 2-12km, increasing platform survivability and lethality, and expanding the Maneuver Task Force Commander's battle space. MRM supports FCS objectives of expanded battle space and multi-mission direct and indirect fire capability. MRM leverages state of the art sensor technologies to provide immediate, responsive fires to support Family of Vehicles or other scouts. MRM is the only demonstrated Gun-Launched precision, smart munition capable of meeting the BLOS requirements specified in the FCS Operational Requirements Document. MRM will allow the Mounted Combat System to fire and kill with precision on the move, at high value moving or stationary armor targets.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Dual mode seeker integration (ARDEC, PM, Test Sites Contractor) MRM Chemical Energy	1259		
MRM SDD Engineering Activities. Down-select to 1 Contractor scheduled for 4QTR-FY07. SDD startup in October 2007 (FY2008).		16229	17155
Software-Seeker Integration		9347	10091
Prototype Manufacture (various components, subsystems, systems and assemblies, inspections		7559	7597
Producibility		2019	3099
Initial Cartridge Integration Test		7812	
Follow-on Cartridge Integration Test			7924
Small Business Innovative Research/Small Business Technology Transfer Programs		1328	
Total	1259	44294	45866

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SSN: E88103 - Cartridge, MCS, Mid Range Munition (MRM)					24634	47624	61762	2013223	2147243
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1034307	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing

0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing
AMMO E88103					24634	47624	61762		134020
0604645 F52 UAV Recon & Sensors	41813							Continuing	Continuing
0604645 F53 UGV	104301							Continuing	Continuing
0604645 F54 UGS	10391							Continuing	Continuing
0604645 F55 SUSTAINMENT	104302							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	516217							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2150508							Continuing	Continuing

Comment:

C. Acquisition Strategy The Mid Range Munition (MRM) Program completed the Technology Development phase. MRM achieved Design Requirements in both autonomous and designated firing modes, and transitioned (Milestone B) to Systems Development and Demonstration (SDD) at the end of FY 2007. There were two competing technical concepts by Raytheon Inc. and Alliant Tech Systems. A single contractor Raytheon with one design was selected based on a full and open competition in the first quarter of FY 2008. The MRM schedule coincides with the Mounted Combat System's development schedule, supporting the Future Combat System (FCS) Initial Operational Capability (IOC) milestone. The SDD effort will integrate MRM into the Mounted Combat System.

This strategy will deliver a proven, fully capable multi-mode munition that will meet the FCS MCS requirements and support the FCS IOC milestone.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603639A - Tank and Medium Caliber Ammunition

PROJECT
656

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Raytheon	CPIF/AF	Tucson, AZ				35830	1Q	37483	2Q	171830	245143	245530
Raytheon	SS-CPFF	Tucson, AZ	8709	700	2Q						9409	9409
Electro-Radiation, Inc	SS-CPFF	Fairfield, NJ	4833								4833	4833
PM-MAS	MIPR	Picatinny Arsenal, NJ		30	2-4Q	1200	1-4Q	1293	1Q	2929	5452	5688
Miscellaneous	MIPR	Multiple	1120	307	1-4Q	1000	1Q	123	3Q		2550	1381
Alliant Tech Systems	SSCPFF	Clearwater, FL	3708								3708	3708
Subtotal:			18370	1037		38030		38899		174759	271095	270549

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
TACOM-ARDEC/Benet Labs	MIPR	Picatinny Arsenal, NJ	3795	132	1Q	4107	1Q	4495	1Q	10068	22597	22760
Subtotal:			3795	132		4107		4495		10068	22597	22760

Remarks: Not Applicable

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
YPG, ATC	MIPR	Yuma AZ/APG, MD	1430			200	3Q	1124	1Q	9226	11980	12881
Army Research Lab	MIPR	Aberdeen PG, MD	1780	50	1Q	120	3Q	848	1Q	2400	5198	5908
Army Research Lab	MIPR	White Sands, NM				50	3Q	250	1Q	750	1050	1250
Redstone Arsenal	MIPR	Huntsville, AL	3400	15		50	3Q	250	1Q	750	4465	4650
Miscellaneous	MIPR	Multiple	1042								1042	1042
Subtotal:			7652	65		420		2472		13126	23735	25731

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603639A - Tank and Medium Caliber Ammunition

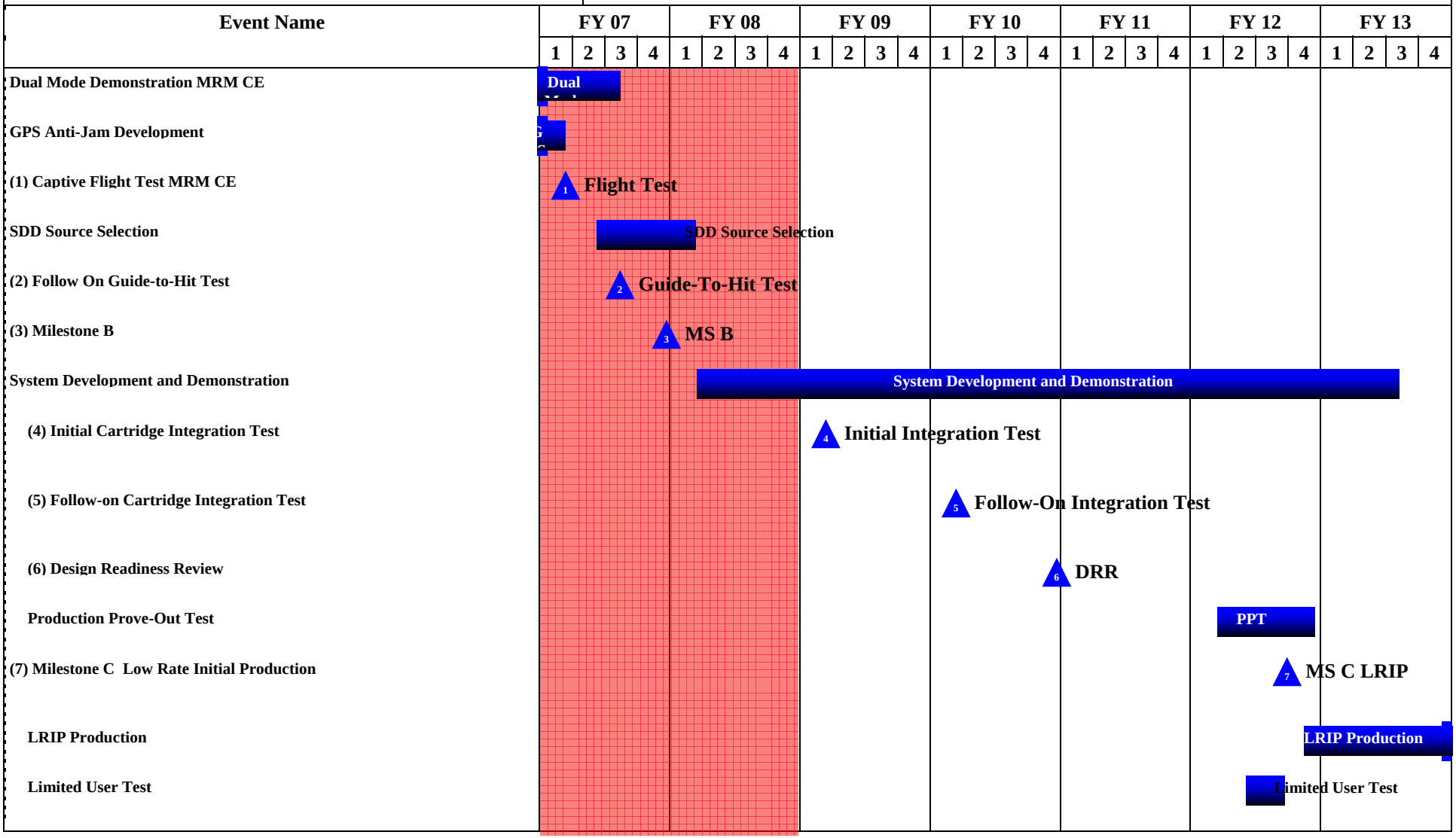
PROJECT
656

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MISCELLANEOUS	MIPR	Multiple	665	25	3Q	497	2Q				1187	956
SBIR/STTR						1240					1240	36
Subtotal:			665	25		1737					2427	992
Project Total Cost:			**30482**	**1259**		**44294**		**45866**		**197953**	**319854**	**320032**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**	**656**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603639A - Tank and Medium Caliber Ammunition**	**656**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Dual Mode Demonstration MRM CE	1Q - 3Q						
GPS Anti-Jam Development	1Q						
Semi-Active Laser (SAL) Testing MRM CE							
Captive Flight Test MRM CE	1Q						
SDD Source Selection	2Q - 4Q	1Q					
Release Request for Proposal	2Q						
Follow On Guide-to-Hit Test	3Q						
Milestone B	4Q						
System Development and Demonstration		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
Initial Cartridge Integration Test			1Q				
Follow-on Cartridge Integration Test				1Q			
Design Readiness Review				4Q			
Production Prove-Out Test						1Q - 4Q	
Milestone C Low Rate Initial Production						3Q	
LRIP Production						4Q	1Q - 4Q
Limited User Test						2Q - 3Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C03	INTERIM ARMORED VEHICLE (IAV) FAMILY	8391	143568	108012						259971

A. Mission Description and Budget Item Justification: This project supports the development of the Family of Stryker vehicles. A critical need exists to improve the deployability and operational effectiveness of rapid response/early entry forces. The Stryker equipped Brigade Combat Team (BCT) is capable of deployment to anywhere on the globe in a combat ready configuration. Immediate response by a lethal, versatile, tactically agile joint force capable of operational maneuver once in the Area of Operations has been essential in fulfilling the warfighting needs of the U. S. Army. The Stryker family includes: Infantry Carrier Vehicle (ICV), Reconnaissance Vehicle (RV), Mobile Gun System (MGS), Mortar Carrier (MC), Commander's Vehicle (CV), Fire Support Vehicle (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-Tank Guided Missile Vehicle (ATGM), and Nuclear/Biological/Chemical Reconnaissance (NBC RV). The use of the common platform/common chassis design reduces requirements for repair parts and logistics support in the area of operations. RDTE funding is for integration of the mission equipment packages that make each platform unique and effective, and for vehicle testing to include developmental, production qualification, live fire and initial operational test and evaluation.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Completed Live Fire Test & Evaluation on the two remaining Stryker developmental vehicles, NBCRV and MGS, which included Coupon Testing, Ballistic Armor Characterization Testing (BAC), Control Damage Experiment (CDE) testing, Automatic Fire Extinguishing System (AFES) testing and Full Up System Level (FUSL) testing. Initial Operational Testing and Evaluation (IOT&E) is aslo complete for the NBCRV along with a 1QFY08 scheduled completion date set for the MGS as well as a 2QFY08 scheduled date for the upcoming MGS MS III full production rate decision.	4300	1000	
Sustained contractor support efforts for remaining government testing, i.e., Live Fire Test and Evalaution (LFT&E) and Initial Operational Test and Evaluation (IOTE) on the NBCRV and MGS.	526	350	
Undergo development and engineering for OIF (Operation Iraqi Freedom), Survivablity and ONS (Operational Needs Statements) issues on the Stryker Base vehicles, e.g., Hull Protection Kits, Tire Fire Kits, Improved Common Ballistic Shields, 360 Situational Awareness and Belly Armor efforts.		9600	5800
Begin activities to support MS B for the Stryker Product Improvement Program (SPIP). Target date is 2QFY09. Will develop system performance specifications, conduct trade studies, develop concept designs, undergo modeling and simulation activities and conduct technical demonstrations. Establishing a separate project code to capture and track those improved capabilities and activities associated with Stryker PIP.		124101	95962
Government Systems Engineering and Program Management.	315	2500	6250
Integration of M151E2 Protector on a Light Tactical Vehicle.	1450		
New technologies to include Open Architecture Electronic Enhancements in the area of Power and Data Management Architecture to increase the Strykers' capabilities on the battlefield.	1800		

Weapons and Munitions Advanced Technology.		2000	
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR		4017	
Total	8391	143568	108012

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	8569	142486	108709
Current BES/President's Budget (FY 2009)	8391	143568	108012
Total Adjustments	-178	1082	-697
Congressional program reductions		-918	
Congressional rescissions			
Congressional increases		2000	
Reprogrammings	63		
SBIR/STTR Transfer	-241		
Adjustments to Budget Years			-697

Change Summary Explanation: Funding - FY 2008: A $2 million Congressional plus-up for the Northern Ohio Integrated Command Operations Program was inadvertently placed in this PE. A revision to the DD 1414, Base for Reprogramming has been made to move this add to 0603004A, Weapons and munitions Advanced Technology for proper execution.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PA, WTCV, G85100 Stryker	1430583	959730	1174947	1070308	1371519	840419	248976	938700	8035182

Comment: Expecting MS III decision for the MGS 2QFY08. Contract award for Full-Rate Production of that vehicle system will follow thereafer.

D. Acquisition Strategy FY07 funding supported remaining test efforts prior to MS III/full-rate production decisions for the NBCRV & MGS. Both vehicle systems will have completed all phases of the Live Fire program and IOTE testing through 1QFY08. FY08 and FY09 funding begins future enhancements and product improvements to the various configurations within the Stryker Family of vehicles as well as engineering and development efforts related to OIF, Survivablity, and ONS issues. As the Stryker Family of vehicles continue to be deployed, we will explore, enhance and increase the survivability of the Stryker. This includes the vehicle's Hull Protection and Tire Fire Kits, Improved Common Ballistic Shields, 360 Situation Awareness and Belly Armor initiatives.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY: **4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE: **0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**

PROJECT: **C03**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Stryker Development/Engineering	CPAF	GDLS Sterling Heights, MI	334546	3250	2-4Q	9600	2-3Q	5800	1-3Q		353196	353196
Stryker PIP Development/Engineering/Pre-MS-B Activities						124101	2-3Q	95962	1-3Q		220063	220063
GFE	Requisitions	Various	851								851	851
Prototype Development (8)	Firm Fixed Price	GM GDLS DG L.L.C. Shelby, MI	29215								29215	29215
Training Devices	MIPR	PEO-STRI, Orlando, FL	11420								11420	11420
Miscellaneous Contractor Support			1246								1246	1246
Small Business Innovative Research/Small Business Technology Transfer Program			9687			4017					13704	13704
Subtotal:			386965	3250		137718		101762			629695	629695

Remarks: Stryker development/engineering supports the Stryker Family of Vehicles future enhancements efforts.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Gov't Agencies	MIPR	TACOM, Warren, MI / Various	18346			2000	1-3Q	4875	1-3Q		25221	25221
Source Selection Board		MIPR	2300								2300	2300
Subtotal:			20646			2000		4875			27521	27521

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

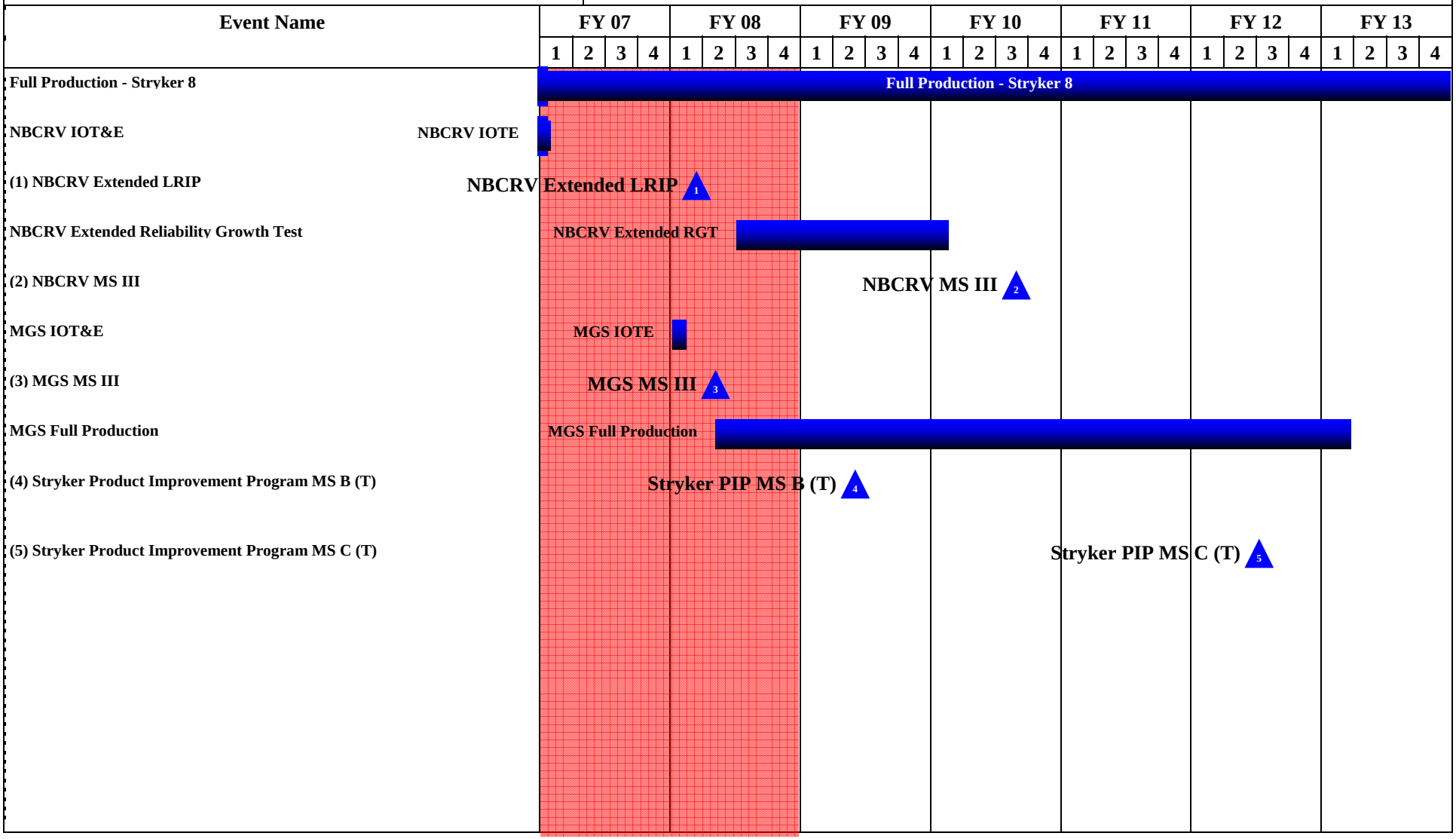
Developmental System Testing	MIPR	ATEC, APG, MD/Various	104659	1754							106413	106413
Fort Lewis Concept Prove Out	MIPR	BCT Materiel Dev Cell, Ft Lewis, WA	1118								1118	1118
Procure Test/Evaluation Vehicles	Competitive / CPAF	General Motors/General Dynamics Land Systems Defense Group L.L.C. Shelby, MI	3735								3735	3735
Live Fire Test & Evaluation	MIPR	Army Test Center, Army Research Lab, Army Evaluation Center	26706	2078							28784	28784
Initial Operational Test & Evaluation	MIPR	OTC, Ft. Knox, KY	83837	468	2-3Q	1000	1Q				85305	85305
Contractor Support to Test	CPFF	GM GDLS DG L.L.C. Shelby, MI	20998	253	2Q	350	2Q				21601	21601
Weapons and Munitions Advanced Technology		Northern Ohio, Toledo Integrated Command Ops				2000					2000	2000
Subtotal:			241053	4553		3350					248956	248956

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PMO	N/A	TACOM, Warren, MI	9795	315	1-2Q	319	1Q	875	1Q		11304	11304
PM Support (Contractor)	Competitive / Various	Warren, MI	2147	273		181	1-2Q	500	1-2Q		3101	3101
Subtotal:			11942	588		500		1375			14405	14405
Project Total Cost:			**660606**	**8391**		**143568**		**108012**			**920577**	**920577**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603653A - ADVANCED TANK ARMAMENT SYSTEM (ATAS)**	**C03**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MS II							
Stryker Initial Production							
IOC							
IOT&E							
MS III							
Full Production - Stryker 8	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
NBCRV							
NBCRV IPR							
NBCRV Initial Production							
NBCRV IOT&E	1Q						
NBCRV Extended LRIP		1Q					
NBCRV Extended Reliability Growth Test		3Q - 4Q	1Q - 4Q	1Q			
NBCRV MS III				3Q			
MGS Development							
MGS IPR (14)							
MGS Initial Production							
MGS IPR (58)							
MGS IOT&E		1Q					
MGS MS III		2Q					
MGS Full Production		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Stryker Product Improvement Program MS B (T)			2Q				
Stryker Product Improvement Program MS C (T)						3Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	20865	5751	30716	5277	5367	4330	4434	Continuing	Continuing
610	FOOD ADV DEVELOPMENT	2683	4766	3889	4284	4374	4330	4434	Continuing	Continuing
669	CLOTHING AND EQUIPMENT	8								7954
C08	RAPID EQUIPPING FORCE	16641	985	26827	993	993				46439
C09	SOLDIER SUPPORT EQUIPMENT - AD	1533								1723

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.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	4330	4787	4912
Current BES/President's Budget (FY 2009)	20865	5751	30716
Total Adjustments	16535	964	25804
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases	7625		
Reprogrammings	9016		
SBIR/STTR Transfer	-106		
Adjustments to Budget Years		964	25804

Change Summary Explanation: Funding - FY 2007: Received $7.625 million in FY 07 Supplemental and $9 million reprogrammed in support of the Rapid Equipping Force Program. FY 2009: Funding increase in support of the Rapid Equipment Fielding program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
610 FOOD ADV DEVELOPMENT	2683	4766	3889	4284	4374	4330	4434	Continuing	Continuing

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.

This PE/Project supports Field Feeding Programs for all the services.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY08: Complete advanced development of an efficient Self-Powered Tray Ration Heater that produces its own electricity from the heat of combustion. A self-powered capability will improve overall operational flexibility and superior Reliability, Availability and Maintainability (RAM) characteristics as compared to battery/generator driven systems with added benefit of reduced weight, lower fuel consumption, and quiet operation while offering the same legacy performance characteristics including capacity, heat time, operational environment, size, weight, and cube. System will utilize standard commercial DC powered burner. Modify system prototype as required and verify capabilities of system to prepare Unitized Group Rations. Test and evaluate; and complete operational testing of system and refine as appropriate. Prepare joint service performance specification for transition to services for procurement.		402	
FY09: Review and validate Ice usage/consumption requirements for Battlefield Ice Supply System (BISS) with Combined Arms Support Command (CASCOM) and the Joint Service Community. Perform market research to evaluate existing Commercial Off the Shelf / Non-Developmental (COTS/NDI) bulk Ice Making and bagging Systems. Develop a Draft Performance Specification or a Commercial Item Description (CID). Prepare a Request for Proposal/Statement of Work (SOW) to award a subsequent developmental contract to design and fabricate BISS prototype(s)			88
FY08: Transition technology and prototype Self Powered Tray Ration (STRH) from Science and Technology (S&T) activity to PM FSS for possible inclusion into the Assault Kitchen. Perform independent Production Qualification Test (PQT) on prototype items and draft a Performance Specification. Transition to 6.5.		145	
FY08: Evaluate COTS Medical Feeding Cart to transport food to patients in field hospitals and transition to the Integrated Logistics Support Center. The Medical Feeding Cart will be a Common Table of Allowance (CTA) item and replace the current gurney in the Medical Field Kitchen Kit.		176	

FY09: Transition Solar Refrigeration Technology to system development phase, prepare solicitation for prototype, and award contract.			353
FY07: Based on war fighter recommendations, obtained Commercial-Off-The-Shelf/Non-developmental Item (COTS/NDI) and completed development of Meals, Ready-To-Eat (MRE) components and packaging innovations (for 2010 Date of Pack (DOP)) to improve acceptability, expand variety and improve consumption. Down selected components via in-house short term, high temperature storage and technical panels, and completed development of prototype menus; completed draft procurement documents, secured test site and transitioned new items and packaging to 6.5 for 4Q07 field testing. FY08: Develop nanocomposite MRE packaging material (menu bag, primary ration component) to eliminate foil laminate, reduce weight and volume of packaging waste on the battlefield while maintaining barrier properties. Based on war fighter preferences incorporate COTS, NDI and developmental components (for 2011 DOP) into prototype MRE menus. Integrate packaging/food processing Science and Technology (S&T) transitions to improve operational and functional performance. Select field test site and complete draft procurements documents and transition to 6.5 for field testing (4Q08). FY09: Continue to identify suitable COTS/NDI candidate items and conduct in-house product development of food components for fielded individual operational rations (MRE 2012 DOP) to enhance acceptability, increase consumption and improve nutritional intake. Select field test site, complete draft procurement documents and transition to 6.5 for filed testing 4Q09. Conduct pilot scale in-house production to support engineering design, technology insertion, and producibility. Work with vendors and assemblers as needed to ensure feasibility and accommodate technology transition. Develop, integrate, and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness, functionality and improve logistics.	874	1059	965
FY07: Completed development of Bakery Enhancement Kit to augment Unitized Group Ration - Heat and Serve (UGR-H&S) with high quality, easy to prepare baked goods. Transitioned to 6.5 for field testing and completion of procurement documents.	186		
FY07: Completed development of directional tear packaging for individual ration components to provide significantly easier opening of ration components. Procured production lot (5000 units) of retort films/pouches with preformed, directional tear notches; conducted in-house evaluation of overall package performance, durability, and rough handling; transitioned to 6.5 ration field testing in 4Q07.	120		
FY07: Based on Marine Corps request, selected new components to expand First Strike Ration (FSR) menu availability and improve overall acceptability and consumption. Evaluated new components for product improvement of Long Range Patrol (LRP) and Meal, Cold Weather (MCW). Developed prototype menus for FSR/LRP/MCW and procured components. Developed prototype for Food Packet, Abandon Ship and conducted rough handling test. Supported development and production testing of new items and components from new suppliers/vendors. FY08: Complete FSR/MCW/LRP component down select (COTS/NDI, developmental items and Science and Technology (S&T) transitions), complete draft procurement documents and prototype menu development to improve quality, acceptability, eat on the move capability and consumption rate. Secure test site, coordinate field test questionnaires and protocols, and transition to 6.5 for field testing. Evaluate Food Packet, Abandon Ship with Navy, complete transition of documentation to Defense Supply Center, Philadelphia (DSCP). Initiate integration of modular enhancements to increase caloric availability and improve Warfighter cognitive and physical performance in environmental extremes developed to augment Assault/Special Purpose Rations. Compile draft technical data compiled and finalize acquisition strategy. Transition to 6.5 with assault rations or as stand alone modules.	337	269	
FY09: Analyze field test results of new components. Recommend components and menu profiles to Services. Optimize development of S&T components from Nutritionally Optimized FSR project. Design expanded FSR menus with developmental and non-developmental performance enhancing components. Evaluate range of developmental, non-developmental, and COTS components for modification and expansion of FSR menus based on war fighter feedback, R&D progress, and product development. Complete prototype development and assembly, conduct test planning; transition to 6.5 for field test. Draft procurement technical data for new items and transition to 6.5 for			298

incorporation into assembly documents for FSR and MCW/LRP. Conduct production testing of new components.			
FY08: Initiate work on Modular Operational Ration Enhancements (MORE) program intended to design and provide specific tailored supplement packs to enhance war fighter performance and nutritional status in environmental/altitude extremes. Initial supplement is focused on high altitude use. Identify or develop, in conjunction with United States Army Research Institute of Environmental Medicine (USARIEM), candidate items that combat deleterious effects of altitude exposure including acute mountain sickness (AMS), hypoxia, malabsorption, dehydration, and gastrointestinal disorders. Conduct critical examination of products to decrease recovery time and improve performance. Conduct in-house evaluation studies with USARIEM of prototype products. Revise prototype product as needed and refine technical requirements. FY09: Conduct initial field evaluation/test of prototypes. Refine modular enhancement components and design configuration based on user feedback and scientific/operational test results. Establish baseline for essential nutrients to maintain the proper energy levels, nutritional balance, body weight, and mental and physical alertness within intended scenario. Select test site for FY10 final user evaluation. Transition products and draft technical data to 6.5 projects as stand alone modules or assault ration improvements.		243	216
FY07: Obtained Army approval of Unitized Group Ration-Express (UGR-E), a complete, self-contained non-powered group-serving meal for remote units. Based on Warfighter recommendations obtained Commercial-Off-The-Shelf/Non-Developmental Item (COTS/NDI) and/or completed in-house development of UGR-H&S (2010 Date of Pack (DOP)), UGR-A (2009 DOP) and UGR-E (2010 DOP) components to improve the acceptability of the family of UGRs. Downselected components via in-house technical panels and completed development of prototype UGR-H&S, A, and E menus. Completed draft procurement documents. Secured test site and transitioned to 6.5 for field testing during 4Q07. FY08: Complete UGR-H&S (2011 DOP), UGR-A (2010 DOP) and UGR-E (2011 DOP) component development to improve family of UGRs. Based on Warfighter recommendations, incorporate COTS, NDI, and developmental components into prototype menus. Complete draft procurement documents. Secure test site and transition to 6.5 for field testing. Integrate state of the art packaging and combat ration processing technologies for improved operational and functional performance. FY09: Improve family of UGRs (H&S (2012), A (2011), B and E(2012)) to increase overall Warfighter acceptability, and consumption. Based on Warfighter recommendations incorporate COTS, NDI, and developmental components into prototype menus. Select field test site and transition to 6.5 for field testing. Complete draft procurement documents. Integrate state of the art packaging and combat ration processing technologies for improved operational and functional performance.	988	1173	1015
FY09: Transitioning from 6.3, conduct advanced development of a low-cost, disposable self-heating package for dispensing hot water in the field. Optimize performance of package via material, fitment, and self-heating technology changes. Draft performance-based procurement documents and transition to 6.5 for field testing.			129
FY09: Update and improve the Medical Nutrition Supplement (MNS) to support the military requirement of meeting the unique nutritional needs of all hospitalized patients in a combat environment. Develop/test MNS prototypes consisting of essential food items (broth, gelatin, high protein / high calorie liquid supplements) and supplies for a patient diets, and unitized into a supplemental module.			98
FY08: Conduct producibility testing of MRE non-retort pouches fabricated from polymer nanocomposites. Complete package performance testing of non-retort nanocomposite pouches to include rough handling, permeability and storage stability. Incorporate novel state-of-the-art packaging materials into future combat ration packaging systems that offer low cost, enhanced performance capability, durability, reliability and barrier properties for product shelf life and survivability while achieving strategic military requirements (e.g., reduce weight and cube). Optimize multi-layer nanocomposite structures/films and novel polymer matrices to provide improvement in key properties of morphological, mechanical, barrier, and thermal stability critical to combat rations and increased packaging performance capability. Quantify cost advantage over current from package down-gauging and elimination of specific materials. Obtain Joint Services		298	

Operational Forum (JSORF) approval and complete performance based requirements document and transition to Defense Supply Center Philadelphia (DSCP).			
FY09: Transition from 6.3 and optimize treated fiberboard based on characterization studies to reduce cost, weight, and improve environmental properties. Fabricate prototype shipping containers using coated alternative fiberboard materials. Evaluate prototype shipping containers for rough handling. Initiate producibility study and secure test site for FY10 user evaluation.			265
FY08: Integrate new technology/ automation concepts and new food service equipment to maintain high standards of food preparation while accommodating a reduction in Culinary Specialists by reducing labor/ preparation time of food items for future Navy CVN-78 ship platform. Identify specific self-serve equipment for galley applications to accommodate reduction in food service attendants. Incorporate/integrate scullery equipment to reduce sanitation labor/time. Recommend galley design based on reconfiguration of crew_s mess, wardroom, scullery, and serving lines to properly support automated self-service feeding equipment and transition to 6.5.		260	
FY07: Completed a provisions storage configuration study for the second Littoral Class Ship, USS Independence (LCS-2). Recommendations were provided to the Naval Supply System Command for chill/freeze and dry provision storage optimization to meet the ship's operational requirements. Recommended foodservice space consolidations and autonomous galley systems to the Navy in support of optimized crew sizes for various ship platforms. Designed prototype models utilizing modular concepts based on service feeding requirements, equipment configurations, manpower usage, production flow, and maintenance requirements to ensure future galley designs meet future Navy. FY08: Transition from 6.3, integrate technology advances in smart process control systems to provide automation and operational monitoring of Navy food service equipment. Demonstrate bi-directional communication network which provides real time equipment status monitoring that utilizes industry accepted North American Association of Food Equipment Manufacturers (NAFEM) protocols. Quantify functionality of future galley process control system as an enabler to accommodate shipboard labor reductions to minimize equipment maintenance requirements through automated internal diagnostics. Food service equipment prototypes will be developed and operational testing will be conducted to validate the concept for shipboard transition into the future Smart Galley. Transition to 6.5	178	404	
FY09: Review and validate shipboard refrigeration and ice consumption requirements with Navy. Perform market research and develop a Request for Proposal/Statement of Work (SOW). The SOW will detail requirements for the contractor to complete design of the system and develop a system prototype as required and verify capabilities of system to prove modular, dual refrigeration and ice making capabilities.			230
FY08: Complete upgrade to replace obsolete Communication Zone (COMMZ) kitchen with commercial food equipment to increase reliability, maintainability, and significantly enhance operational performance capability/ efficiency. Establish design system layout meeting established user requirements and install new COTS equipment. Simplify overall logistics footprint and reduce life cycle costs and training requirements by incorporating modular systems concept. Conduct test and evaluation; perform initial field testing to verify upgraded capabilities and transition to 6.5		204	
FY09: Develop foodservice equipment/systems that support the requirements for the Virginia Class Submarines, and support the legacy submarines platforms. Standardize and optimize the food service equipment, reducing manpower requirements, and supporting NAVSUP's Standard Core Menu for submarines.			232
Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)		133	
Total	2683	4766	3889

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0604713.548, Military Subsistence System	2922	2485	2499	2139	2183	2159	2206	Continuing	Continuing
OPA 3, M65801, Refrigerated Containers	2986	16826	34270	32549	11393	5656	4483	Continuing	Continuing

Comment:

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

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603747A - Soldier Support and Survivability

PROJECT
610

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	In-House	RDECOM, Natick, MA	24589	961	1-4Q	1892	1-4Q	1480	1-4Q	Cont.	Cont.	Cont.
Joint Service Food/Combat Feeding Equipment	Contracts	Various	12870	948	1-4Q	1912	1-4Q	1499	1-4Q	Cont.	Cont.	Cont.
Subtotal:			37459	1909		3804		2979		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Joint Service Food/Combat Feeding Equipment	MIPR	DTC, Maryland & AEC, Virginia	5563	406	1-4Q	602	1-4Q	538	1-4Q	Cont.	Cont.	Cont.
Subtotal:			5563	406		602		538		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Combat Feeding Program Management	In-House	RDECOM, Natick, MA	2195	291	1-4Q	360	1-4Q	372	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR Tax				77	1-4Q						77	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

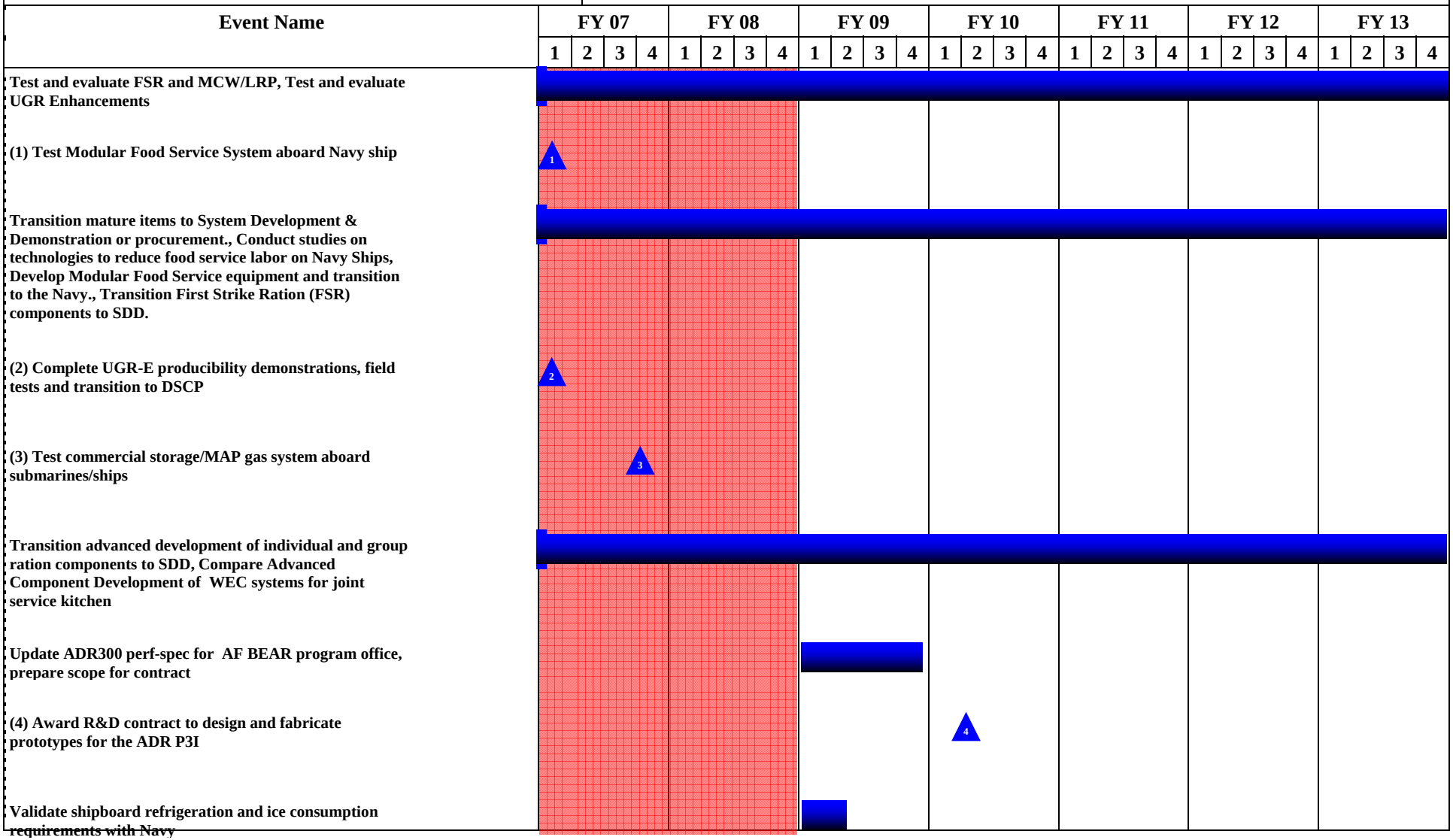
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

Subtotal:	2195	368		360		372		Cont.	Cont.	Cont.
Project Total Cost:	**45217**	**2683**		**4766**		**3889**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603747A - Soldier Support and Survivability

PROJECT
610

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(5) Award R&D contract to design and fabricate NavRP prototypes.															5													
Evaluate the SBIR automated scullery prototype onboard a Navy aircraft carrier, Quantify manning reductions for the scullery process based on testing results, Integrate control systems for diagnostics/prognostics of the automated scullery, Identify, evaluate, and consolidate service requirements for TriCon Kitchen																												
(6) Award a contract to design and develop a prototype modular TriCon kitchen										6																		
Review Marine Corp Field Feeding Doctrine identify capability of current systems, Test prototype Battlefield Ice Supply, Test prototype Solar Powered Refrigeration System, Test Vapor Compression Improvement prototype, Test prototype Battlefield Kitchen, Test Self Powered Tray Ration Heater, Transition Bakery Enhancement Kit/ Components to SDD, Test/ Evaluate Multi-Serving Instant Hot Water Package (HOT PAC), Transition HOT PAC procurement documents to DSCP, Test/ Evaluate the improved medical nutrition supplement (MNS), Transition MNS procurement documents to DSCP																												
(7) Transition medical cart to procurement, (8) Transition self powered Tray Ration Heater to System Development Phase, (9) Transition Solar Power Refrigeration Technology to System Development phase						8	7	9																				

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**610**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Test and evaluate FSR and MCW/LRP	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test and evaluate UGR Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test Modular Food Service System aboard Navy ship	1Q						
Transition mature items to System Development & Demonstration or procurement.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Conduct studies on technologies to reduce food service labor on Navy Ships	2Q - 4Q						
Develop Modular Food Service equipment and transition to the Navy.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
Transition First Strike Ration (FSR) components to SDD.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Complete UGR-E producibility demonstrations, field tests and transition to DSCP	1Q						
Test commercial storage/MAP gas system aboard submarines/ships	4Q						
Transition advanced development of individual and group ration components to SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Compare Advanced Component Development of WEC systems for joint service kitchen		4Q	1Q - 4Q				
Update ADR300 perf-spec for AF BEAR program office, prepare scope for contract			1Q - 4Q				
Award R&D contract to design and fabricate prototypes for the ADR P3I				2Q			
Validate shipboard refrigeration and ice consumption requirements with Navy			1Q - 2Q				
Award R&D contract to design and fabricate NavRP prototypes.				3Q			

Evaluate the SBIR automated scullery prototype onboard a Navy aircraft carrier					2Q - 4Q		
Quantify manning reductions for the scullery process based on testing results						4Q	
Integrate control systems for diagnostics/prognostics of the automated scullery							2Q - 4Q
Identify, evaluate, and consolidate service requirements for TriCon Kitchen		2Q - 3Q					
Award a contract to design and develop a prototype modular TriCon kitchen			2Q				
Review Marine Corp Field Feeding Doctrine identify capability of current systems						2Q - 4Q	
Test prototype Battlefield Ice Supply			3Q - 4Q				
Test prototype Solar Powered Refrigeration System				3Q - 4Q			
Test Vapor Compression Improvement prototype					3Q - 4Q		
Test prototype Battlefield Kitchen					3Q - 4Q		
Test Self Powered Tray Ration Heater		2Q - 3Q					
Transition Bakery Enhancement Kit/ Components to SDD		1Q					
Test/ Evaluate Multi-Serving Instant Hot Water Package (HOT PAC)			1Q - 4Q				
Transition HOT PAC procurement documents to DSCP				4Q			
Test/ Evaluate the improved medical nutrition supplement (MNS)			1Q - 4Q	1Q - 4Q			
Transition MNS procurement documents to DSCP				4Q			
Transition medical cart to procurement		4Q					
Transition self powered Tray Ration Heater to System Development Phase		2Q					
Transition Solar Power Refrigeration Technology to System Development phase			1Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**C08**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C08 RAPID EQUIPPING FORCE	16641	985	26827	993	993				46439

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 threats, in any operational environment. 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 Operational Combatant Commander's needs. For the REF, necessary materiel solutions can only be determined as "real time" threat modes are identified. Countermeasures to these evolving threats must be developed/purchased/modified, often within weeks, for the first cycle of spiral type responses. Specifically the REF is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near term developmental items that can be researched, developed and acquired quickly - ideally within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly.

The REF works directly with operational commanders to find solutions to identified equipping requirements. These solutions may result in procurement of new or existing military/commercial materiel equipment, or accelerated development of a Future Force materiel solution for insertion into the current force now. The REF adaptive practices are at the forefront of Army modernization and serve as a catalyst and change agent for Army transformation. The REF accomplishes its mission by working in partnership with industry, academia, Army senior leaders, the Army Training and Doctrine Command (TRADOC), the Army acquisition community, and the Army Test and Evaluation Command (ATEC) to meet immediate warfighter needs.

The REF ensures safety testing of all equipment prior to release to the soldier. All equipment must pass Safety Confirmation and have a Capabilities and Limitations Report completed prior to being issued to operational units/soldiers.

Note that: (a) Equipment mix and configuration may change based on changes in operational environment and circumstances. (b) REF- Resource Management Capabilities Needs equipment and funding execution details will be provided in the Secretary of Army report to the Congressional Defense Committee in March and October of each year(per HAC Report #108-553, DoD APPNs Bill 2005, June 18, 2004, page 134.)

NOTE:
FY 2007 funding total includes $7.625 million received in GWOT supplemental.
FY 2008 funding total does not include $31.621 million previously requested for current FY 2008 GWOT requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Congressional add for Biodegradable Soil Penetrant Dust Palliative for Land Surfaces. The REF provided operational commanders with	16641		

off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly; ideally, within 90 days. During FY07 the REF provided solutions to engaged and deploying forces to detect, identify and defeat enemy equipment and actions designed to injure or kill and devices to help protect the warfighter. There is $4M to be used on projects yet not determined.			
FY08: The REF was designed to bridge the gap between the lengthy acquisition process and warfighter equipping needs that should not be delayed. Specifically the Rapid Equipping Force is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly - ideally, within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly. The REF ensures safety testing of all equipment prior to release to the soldier. REF focuses on the development and testing of systems and mechanisms designed to detect, identify and defeat enemy equipment and actions designed to injure or kill and devices to help protect the warfighter.		957	
FY09: The REF was designed to bridge the gap between the lengthy acquisition process and warfighter equipping needs that should not be delayed. Specifically the Rapid Equipping Force is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly - ideally, within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly. The REF ensures safety testing of all equipment prior to release to the soldier. REF focuses on the development and testing of systems and mechanisms designed to detect, identify and defeat enemy equipment and actions designed to injure or kill and devices to help protect the warfighter. The REF continues to maintain our support to commanders to ensure that we provide a solution in the areas of Protecting the Force and Intelligence, Surveillance and Reconnaissance(ISR). Based on historical analsysis (we started in our support to commanders located in Afghanistan and Iraq in FY05, then added Kuwait in FY06 and in FY 07 and by end of FY08 we will have increased our support to the NTC, Ft Polk (JRTC) and Germany (training areas)). The REF anticipates in FY09 that the level of support will not decrease but will increase based on historical increases to various different AORs. Due to the level of complexity of support required and multiple locations, program will require funding to continue support in bridging the gaps in the areas of Protecting the Force and Intelligence, Surveillance and Reconnaissance (ISR).			26827
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR		28	
Total	16641	985	26827

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Other Procurement, Army	90160	451851	20190	51067	58352			Continuing	Continuing
Operations and Maintenance, Army	116800	13049	12986	14164	11700	12000	12400	Continuing	Continuing

Comment: The REF process is designed to rapidly provide capabilities to solve immediate warfighter needs and supports efforts to mitigate asymmetric and traditional threats. A key element of this process is the provision for execution flexibility; strict adherence to obligation goals may hinder REF compliance with Senior Leadership guidance. The REF process ensures the flexibility to rapidly respond to an adaptive enemy who changes in months, not years. The REF focus is on finding effective capabilities to counter emerging

threats as well as proactively anticipate the enemy's next step.

To date, the REF has equipped deployed units and the Combat Training Centers with different types of equipment resulting in saved lives and fewer injuries to the warfighter while increasing the combat effectiveness of both Soldiers and units.

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 Operational Combatant Commander's needs. The REF solution is a rapid response to evolving, adaptable and changing asymmetric threats in any operational environment. The REF was designed to bridge the gap between the lengthy acquisition process and warfighter equipping needs that should not be delayed. Specifically the Rapid Equipping Force is charged to: EQUIP operational commanders with off-the-shelf (government or commercial) solutions or near-term developmental items that can be researched, developed and acquired quickly - ideally, within 90 days. INSERT future force technology solutions that engaged and deploying forces require by developing, testing and evaluating key technologies and systems under operational conditions. ASSESS capabilities and advise Army stakeholders of findings that will enable forces to confront an adaptive enemy rapidly.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

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 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Blaze - Fire Resistant Fabric (Protect Force) R3 Line	MIPR	US Army RDECOM Acquisition Center (Natick), Natick, MA		240							240	
Atlas - Classified (Network Enhanced Battle Command	MIPR	Naval Warfare Center, Paxtuent River, MD		995							995	
CABO 360 Degree (Gunshot Detector) - Counter Sniper - Protect Force in Counter-Insurgenc Line	MIPR	White Sands Missile Range, White Sands NM		650							650	
CABO: Anti Optics (Vehicle Weapon System) - Protect Force in Counter-Insurgency Operatio R3 Line	MIPR	US Army RDECOM, Picatinny Arsenal, NJ		263							263	
Crosshairs - Projects- Protect force in counterinsurgency Operations	MIPR			2000							2000	
Dragon Fly - Classified - Protect Network Enable Battle Command	MIPR	Precision Fires Rocket & Missile Systems _ PMO		150							150	
Jefferson (MIPs) R&D Moleculary Imprinted Polymers for Explosive Detection - Protect Force in Coun	MIPR	REDCOM, Aberdeen Proving Ground, MD		914							914	
Memphis - generator engine Engine Efficiency technology	MIPR	PM Mobile Electric Power, Fort Belvoir, VA		15							15	
Oxnard - Light weight ballistic face shields (Enhanced ISR Capabilities)	MIPR	US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen, MD		244							244	
Prince - Concept Vehicle Prototypes (Protect force in counter-insurgency Operations)	MIPR	REDCOM, Aberdeen Proving Ground, MD		500							500	
Quercetin - Fund study 5 testing of Quercetin (Logistics and Medical in COIN)	MIPR	US Army RDECOM Acquisition Center (Natick), Natick, MA		200							200	

Transportation Hybrid Electric Power Station (THEP) - Modification to Sky-built contract to purchase	MIPR	Marine Corps System Command, Quantico, VA; US Dept of Energy, Golden, CO and White Sands Missile Ran		458							458	
Wax Dog _ IED sniffing off-leash dogs (Enhanced ISR Capabilities)	MIPR	Defense Advanced Research Project Agency (DARPA), Arlington, VA		600							600	
BLAZE-2 - Protect Force	MIPR	US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen, MD		461		81					542	
OBELISK - Mast mounted camera with laser range finder and grid (Enhanced ISR Capabilities)	MIPR	US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen, MD		390		79					469	
Saigon01-Brackets and test system	MIPR	NVD		46							46	
Pepper - Protect Force	MIPR	US Army Aberdeen Test Center, Aberdeen Proving Ground, Aberdeen, MD		494							494	
Razorback - Integration (Protect Force)	MIPR	TARDEC		229							229	
ISO Balance	MIPR					205					205	
Various Projects - Protect The Force, Enhance ISR, Logistic and Med COIN	MIPR	Various Locations TBD				420		21427			21847	
Various Projects - TBD		Various Locations TBD		4000							4000	
Subtotal:				12849		785		21427			35061	

II. Support Costs	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

	Type				Date		Date		Date			Contract
Stealth Reconnaissance/Assault Transport System (STRATS) -	Supply Purchase	NVSED		13							13	
Various Projects	MIPR	Various Locations						27			27	
Subtotal:				13				27			40	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ATEC - Projects - Protect Force in Counterinsurgency Operations	MIPR	Various locations		3377							3377	
CABO - Kelvar Additional Protection _ Protect Force in Counter-Insurgency Operations	MIPR	US Army RDECOM Acquisition Center, Aberdeen Proving Ground, MD		114							114	
Cobra Feasibility Study - Protect Force in Counter-Insurgency Operations	MIPR	White Sands Missile Range, NM		25							25	
ELSORV _ Air Conditioning Testing (Protect Force in Counterinsurgency Operations	MIPR	US Army RDECOM Acquisition Center, Aberdeen Proving Ground, MD		38							38	
Hardwire _ Quantico (Classified) - Testing of Hardwire Armor Developmental testing	MIPR	US Army RDECOM Acquisition Center, Aberdeen Proving Ground, MD		54							54	
P-900: Advanced Armor development and testing -	MIPR	White Sands Missile Range, NM		106							106	
Sentry System Phase 1 - AWG Sentry (Projects - Enhanced ISR Capabilities)	MIPR	US Army RDECOM Acquisition Center, Aberdeen Proving Ground, MD		50							50	
Cobra - Vehicle Test (Protect Force)	MIPR	ARL		15							15	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**C08**

ATEC - Projects - Protect Force in Counterinsurgency Operations	MIPR	US Army RDECOM Acquisition Center, Aberdeen Proving Ground, MD				200					200	
Various Projects (Protect Force in Counterinsurgency Operations, and Intell, Survel, and Recon	MIPR	Various Locations						5373			5373	
Subtotal:				3779		200		5373			9352	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:				**16641**		**985**		**26827**			**44453**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Electronic Surveillance System - Adv Dev**	**907**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
907	Tactical Surveillance Systems - MIP	20001	14423	12275	4385	2339	2945	4950	Continuing	Continuing

A. Mission Description and Budget Item Justification: Per direction by the CSA/SECARMY memorandum (signed 23 Oct 2007), the Army Space Program Office (ASPO) will integrate National and Theater capabilities into the tactical Army architecture and force structure to support intelligence targeting and situational awareness. This involves an extensive amount of studies, technology integration, simulations and experiments with National Agencies, Joint Services and Army commands. In the short term, the mission is to evaluate promising National developmental technology and potential Concepts of Operations (CONOPS), and then integrate these capabilities into Tactical Exploitation of National Capabilities (TENCAP) systems/architectures/CONOPS. In the long term, the mission is to influence the type/direction of National technological/CONOPS development to meet Future Force requirements.

Capabilities will be incorporated into any Service system requiring space and theater ISR capabilities such as Future Combat System, Tactical Exploitation System (TES), Distributed Common Ground System-Army (DCGS-A) and Urgent Material Releases (UMRs) as directed by DA G2/G3. TENCAP programs address National and theater-asset integration into a common TENCAP architecture, key activities and ongoing/planned initiatives having potential application to future National, theater and tactical intelligence, surveillance and reconnaissance capabilities.

FY09 Funding provides technical expertise, training and CONOPS development support, and engineering programs necessary to research, exploit and integrate advancing joint and national space/airborne sensor capabilites, (IMINT and SIGINT), SARA, CAMEL, TACSAT, programs evolving from MERIT projects and UMRs (i.e.; Handheld Interagency Identity Detection Equipment (HIIDE), Imagery Workstations (IWS), Tactical Handheld Digital Devices (THDD)), into systems that are providing direct support to tactical commanders in the Army's technology transition efforts.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Support Army Space Program Office (ASPO) program management for administrative activities.	4515	4650	4650
Pursue technology to refine the TENCAP common baseline, fully exploiting National and theater capabilities to meet emerging worldwide contingency scenarios. Effort includes experimentation, Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), communications, and Measurement and Signature Intelligence (MASINT) processing initiatives.	15486	9773	7625
Total	20001	14423	12275

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Electronic Surveillance System - Adv Dev**	**907**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	19855	14423	9879
Current BES/President's Budget (FY 2009)	20001	14423	12275
Total Adjustments	146		2396
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings	146		
SBIR/STTR Transfer			
Adjustments to Budget Years			2396

Change Summary Explanation: Funding - FY 09 increase to support the Tactical Surveillance Systems program.

C. Other Program Funding Summary Not applicable for this item.

D. Acquisition Strategy As pioneers in streamlined acquisition, ASPO's success in delivering National and theater asset capabilities to war fighters is directly attributed to an environment emphasizing stable funding, maintaining personnel with specialized core competencies, and keeping abreast of technology development activities with potential applications to improve intelligence, surveillance and reconnaissance. By influencing new technology direction, tailoring existing technology, leveraging the best commercial practices, and using commercial and Government off-the-shelf software, ASPO minimizes risk while maximizing efficiency. Consistent with its history, ASPO Government and contract personnel and facilities accomplish dedicated Integrated Logistics Support (ILS) for all Urgent Material Releases until transition to Program of Records.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603766A - Tactical Electronic Surveillance System - Adv Dev

PROJECT
907

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technology Insertion	SS/CPAF	Multiple	64870	15486	1-4Q	9773	1-4Q	7625	1-4Q	Cont.	Cont.	Cont.
Subtotal:			64870	15486		9773		7625		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ASPO Program Management	In House	ASPO, Alexandria, VA	16729	4515	1-4Q	4650	1-4Q	4650	1-4Q	Cont.	Cont.	Cont.
Subtotal:			16729	4515		4650		4650		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**81599**	**20001**		**14423**		**12275**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Electronic Surveillance System - Adv Dev**	**907**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Technology Insertion, ASPO Program Management																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603766A - Tactical Electronic Surveillance System - Adv Dev**	**907**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Technology Insertion	1Q - 4Q	1Q - 4Q	1Q - 4Q				
ASPO Program Management	1Q - 4Q	1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
131 NIGHT VISION SYS A/DEV	5168	3432	2588	5644	5767	5959	6062	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program addresses initiatives to develop and transition technologies from the laboratories and industry in order to improve fielded equipment in the current force as well as initiation, development, and engineering/program management support of systems for fielding to the Current, Modular, and Future Forces (FF). 3rd Generation Forward Looking Infrared (3rd Gen FLIR) high performance thermal imaging technology will allow significantly improved ranges for acquisition of enemy forces. A major thrust will be to transition technologies to acquisition programs that meet required, advanced sensor capabilities of the Modular Force, FF, and FCS requirements documents. This will include the ability for sensors to accomplish Advanced Unmanned Aerial Vehicle (UAV) Payload missions, and Close Surveillance Support System (CS3) for 360 degree situational awareness for vehicles. CS3 will allow vehicle occupants to see outside the vehicle in day or night with improved vision. This will allow much improved maneuvering in urban/complex terrain, tracking of friendly soldiers and vehicles, and detection and engagement of dismounted and vehicular threats. Overwatch and other technologies provide for detecting, classifying, and locating weapons based on firing signatures (snipers/hostile fires). Other emerging concepts resulting from ongoing operations will be supported by this program, to include route reconnaissance for road hazards, battle damage assessment including decoy and camouflage detection, detection of threat soldiers carrying Rocket Propelled Grenades (RPGs), and identification of Improvised Explosive Devices (IED) and suicide bombers.

FY 2009 funding supports continuing UAV Advanced Payloads and Advanced Sensor Fusion efforts as well as emerging concepts for laser imaging, route reconnaissance, battle damage assessment, information on the firing of weapons (counter sniper/fires location and targeting), and detection of personnel with RPGs, IEDs, and suicide bombers.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Emerging Concepts - Explore a range of potential technologies for FCS and the Future Force that will enable route reconnaissance, battle damage assessment, and detection of threats.	930	480	480
UAV Advanced Payloads - Technology to sense the presence of personnel and man-made objects to include under natural foliage. Determine feasibility of integrating current processing technology development into Persistent Surveillance capabilities in-theatre and the Extended Range/Multi-Purpose (ER/MP) Program. This includes hyperspectral and laser imaging (Buckeye) for three dimensional display. FY07 Completed phase 1 of 2 phase Hyperspectral Study. FY08/FY09 investigates integration of Buckeye on ER/MP.	394	756	575
Close Surveillance Support System (CS3) - Perform concept development and demonstrations for an unimpeded 360 degree view of the immediate area around the vehicle from any crew position for situational awareness and threat detection. Completed efforts in FY07 included system design, vehicle integration assessment, and user demonstration at Fort Benning to support requirement definition for multiple platforms.	1252		
3rd Gen FLIR - Completed Concept and Technology Development for 3rd Gen FLIR, the next generation of advanced primary reconnaissance imaging systems for the Modular and Future Force, to include Future Combat System (FCS). FY07 procured four (4) brassboard prototype B kits for 2QFY07 demonstration and field collections in FCS Common EO Sensor; transitioning to System Development and Demonstration (SDD) in PE 0604710A Project DL70.	2119		
Overwatch - Transition OVERWATCH Advanced Concepts Technology Demonstration (ACTD) technology into current and future	473		

systems applications. FY07 evaluated ACTD completion for potential SDD and completed certification and accreditation of Overwatch software, provided recommendation and working with RDECOM to characterize counter sniper current capabilities and with TRADOC to support future requirements.			
Advanced Sensor Fusion - develop and demonstrate a fused/blended sensor including but not limited to image intensification, day camera, infrared, and multi function laser. These applications are intended for Common Sensor Payload improvements for the ARH-70A, ER/MP, and FCS Class 4, among other platforms. FY08 investigates these capabilities with demonstrations in FY09.		2100	1533
Small Business Innovative Research / Small Business Technology Transfer Program		96	
Total	5168	3432	2588

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	5278	3454	2605
Current BES/President's Budget (FY 2009)	5168	3432	2588
Total Adjustments	-110	-22	-17
Congressional Program Reductions		-22	
Congressional Recissions			
Congressional Increases			
Reprogrammings	39		
SBIR/STTR Transfer	-149		
Adjustments to Budget Years			-17

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0602709A/Night Vision and Electro-Optical Technology	35324	34924	25647	26381	26905	26929	26974	Continuing	Continuing
PE 0603710A/Night Vision Advanced Development	73826	53910	39916	40595	43985	45653	46756	Continuing	Continuing
PE 0604710A/Night Vision Devices Engineering Development	40325	47317	44508	37892	36692	33969	34481	Continuing	Continuing
K38300 LRAS3	187558	158411	210766	178255	188042	64923			987955
G86100 Future Combat System		80932	154583	148028	677820				1061363
BA0330 TUAV	35985	72666	3	258307	58901			Continuing	Continuing
B00302 Advanced TUAV Payloads	27265	42135	141988	162602	149436	123076	116698	Continuing	Continuing
W61900 IAV	523472	248444	231651	197154	124513	100987	71299	Continuing	Continuing
PE 654645 FCS (UGS)	777024							Continuing	Continuing
K31300 DVE	67284	21993						Continuing	Continuing
D15402 Truck Utility Heavy Variant 10000 LB	591983	1397117	946734				288472	Continuing	Continuing
D15900 Truck, Tractor, Line Haul M915A2	288639	84059	9913	45685	46809	11731	13058	Continuing	Continuing
G85100 Stryker Vehicle	1430583	959730				840419	248976	Continuing	Continuing

GA0700 M1 Abrams Tank (MOD)	828501	784997	341569	253231	334989	261041	25673	Continuing	Continuing
GA0730 System Enhancement Pgm Sep M1A2	128637							Continuing	Continuing
G80716 Bradley Base Sustainment (M2A2)		92924						Continuing	Continuing
G80717 Bradley Base Sustainment (M2A3)	156747	746542	171989	144813	162470	7426	8120	Continuing	Continuing

Comment:

D. Acquisition Strategy The advances and technology improvements to UAV payloads, and advanced sensor fusion for Common Sensor Payload that will utilize various cost reimbursement development type contracts that were, and will continue to be, competitively awarded using best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603774A - Night Vision Systems Advanced Development

PROJECT
131

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
UAV Advanced Payloads	T&M, MIPR	Various	740	214	2Q	641	2Q	475	2Q	Cont.	Cont.	
3rd Gen FLIR	T&M, MIPR	NVESD, Various	2004	1981	2Q						3985	
Close Surveillance Support System efforts	T&M	Various	2866	897	2Q						3763	
Emerging Concepts efforts	T&M	Various	1612	560	2Q	360	2Q	360	2Q	Cont.	Cont.	
ATR/ATC Activities	MIPR	Various	714								714	
Uncooled B-Kit Evolution/Development	C/CP, MIPR	ADC, Newington, VA; Various others	4045								4045	
UGS/CLENS	C/CP	TBD	183								183	
Mini SAR Demo	CPFF	Various	673		1Q						673	
Data Comms Package on RAID	T&M	Raytheon	404								404	
Overwatch efforts	MIPR and C/CP	Various	342	369	2Q						711	
Prior dem val efforts	Various	Various	38265								38265	
Advanced Sensor Fusion efforts	Various	TBD				1872	2-3Q	1266	2-3Q	Cont.	Cont.	
SBIR/STTR						96					96	
Subtotal:			51848	4021		2969		2101		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	Various	2019	327	2Q	261	2Q	306	2Q	Cont.	Cont.	
Engineering Support	T&M	Various	524	378	2Q						902	
Engineering Support	FFP, T&M	CSC, Falls Church, VA, CACI. MITRE	4093								4093	
Matrix Support	MIPR	CECOM, Fort	2000								2000	

		Monmouth											
Subtotal:			8636	705		261		306		Cont.	Cont.		

Remarks: Historical Engineering Support and Matrix Support at Fort Monmouth was for TSP program, executed by PM SW in this project.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Demos and evals, various programs	MIPR	Various	2676								2676	
TSP Flight demos and assessments	MIPR	APG, MD and EPG, Ft. Huachuca, AZ	1515								1515	
CS3 Demo	MIPR	Various	175								175	
ATR	MIPR	APG	10								10	
UGS/CLENS	MIPR	APG	30								30	
Data Comms Package on RAID Demo	MIPR	Huntsville, AL	65								65	
Uncooled B Kit Eval	MIPR	TBD									90	
3rd Gen FLIR	MIPR	APG	40								40	
UAV Advanced Payloads Eval	MIPR	YPG, AZ		180	3Q						180	
Transition Overwatch	MIPR	NVESD		20	3Q						20	
Subtotal:			4511	200							4801	

Remarks: Prior demos and evals were for various programs, including systems transitioned to PEO Soldier management.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management		PM-NV/RSTA, Ft. Belvoir, VA	1099	242	1-4Q	202	1-4Q	181	1-4Q	Cont.	Cont.	
Subtotal:			1099	242		202		181		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

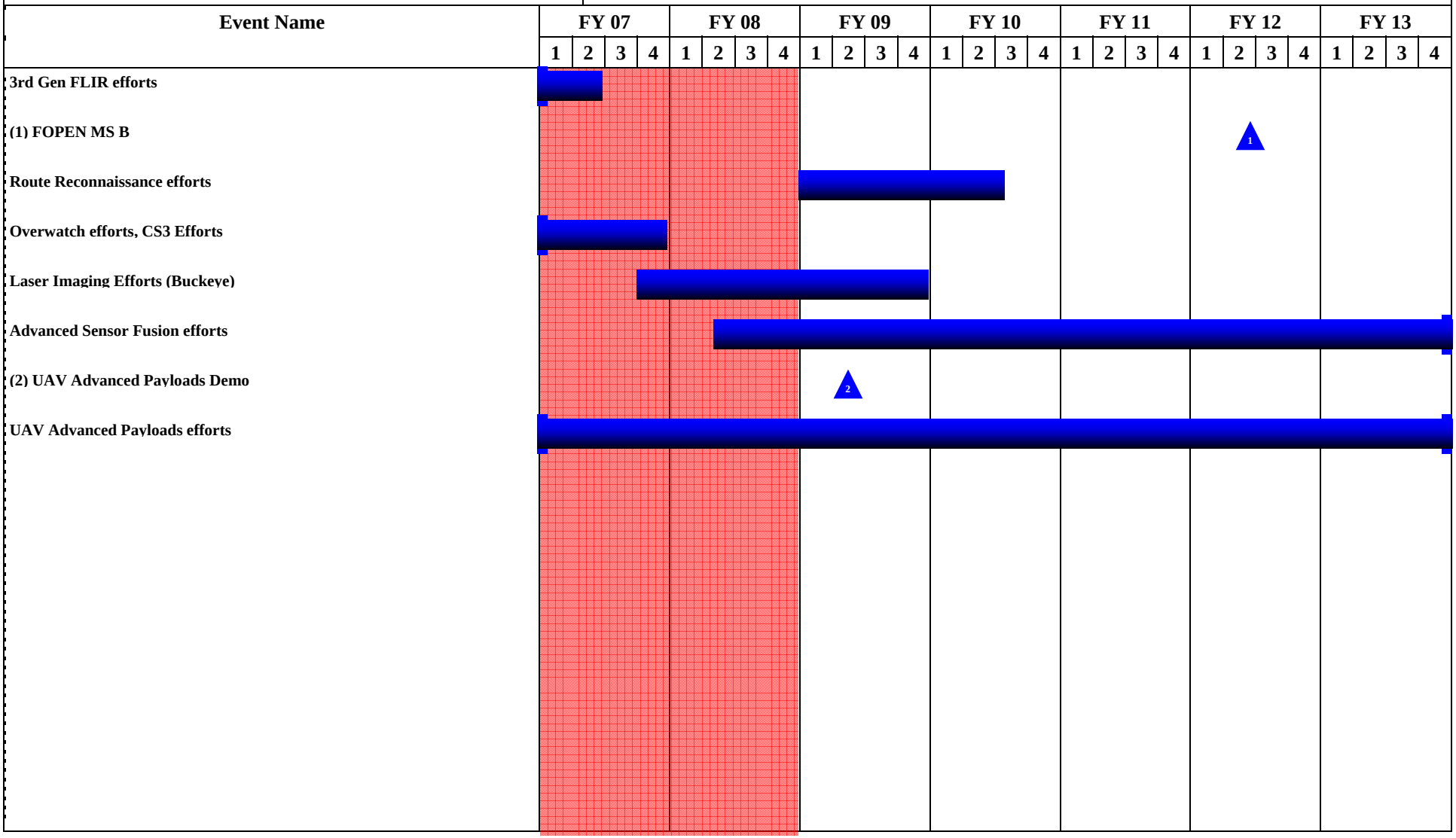
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

Project Total Cost:	**66094**	**5168**		**3432**		**2588**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603774A - Night Vision Systems Advanced Development**	**131**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3rd Gen FLIR efforts	1Q - 2Q						
FOPEN MS B						2Q	
Route Reconnaissance efforts			1Q - 4Q	1Q - 3Q			
Overwatch efforts	1Q - 3Q						
CS3 Efforts	1Q - 4Q						
Laser Imaging Efforts (Buckeye)	4Q	1Q - 4Q	1Q - 4Q				
Advanced Sensor Fusion efforts		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
UAV Advanced Payloads Demo			2Q				
UAV Advanced Payloads efforts	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology - Dem/Val**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	23693	18580	5355	4814	4807	4914	5024	Continuing	Continuing
035	NATIONAL DEFENSE CNTR FOR ENVIRO EXCELLENCE-NDCEE	5003	4763	4828	4814	4807	4914	5024	Continuing	Continuing
04I	TECHNOLOGIES TO REDUCE NON-HAZARDOUS WASTE									4600
04J	ENVIRONMENTAL COMPLIANCE TECHNOLOGY VALIDATION									1433
E12	TRANSPORTABLE DETONATION CHAMBER VALIDATION									7859
E14	ENVIRONMENTAL SECURITY INITIATIVE (CA)									959
E15	ARSENIC REMOVAL (CA)	1549								3465
E16	ABERDEEN PG ASBESTOS CONVERSION FACILITY (CA)									2491
E17	ARMY ENVIRONMENTAL SOLUTIONS PROGRAM (CA)	968	2396							5760
E19	SUSTAINABLE INSTALLATIONS INITIATIVE (CA)	2083								5725
E21	POLLUTION PREVENTION TECHNOLOGY DEM/VAL		1287	527						1814
E23	ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) PILOT IN DOD		2396							5749
EN1	CASTING EMISSION REDUCTION PROGRAM (CERP)									7571
EN4	PLASMA ENERGY PYROLYSIS SYSTEM (PEPS)	968								2310
EN7	VANADIUM TECHNOLOGY PROGRAM	1307								5620
EP1	ENVIRONMENTAL QUALITY TECH DEM/VAL (CA)	11815	7738							29329

A. Mission Description and Budget Item Justification: There is a broad application potential for environmental quality technology (EQT) to be applied to multiple Army weapon systems and installations. However, technology must be validated (total ownership cost and performance data identified) before potential users will consider exploiting it. Therefore, this program element includes projects focused on validating the general military utility or cost reduction potential of technology when applied to different types of infrastructure, military equipment or techniques. It may include validations and proof-of-principle demonstrations in field exercises to evaluate upgrades or provide new operational capabilities. The validation of technologies will be in as realistic an operating environment as possible to assess performance or cost reduction potential. EQT demonstration/validation is systemic; i.e., applies to a class of systems (e.g., tanks or aircraft) or to a Department of Army-wide, multiple site/installation problem (e.g., unexploded ordnance detection and discrimination). This program will address, and eventually resource, programs in each of the environmental quality technology pillars (restoration, conservation, compliance, and pollution prevention). Work must be endorsed by potential users and supported by a state-of-the-art assessment (i.e., technology is well-in-hand).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology - Dem/Val**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	24194	6149	5389
Current BES/President's Budget (FY 2009)	23693	18580	5355
Total Adjustments	-501	12431	-34
Congressional Program Reductions		-119	
Congressional Rescissions			
Congressional Increases		12550	
Reprogrammings	179		
SBIR/STTR Transfer	-680		
Adjustments to Budget Years			-34

Change Summary Explanation:

FY 2008 - There were 6 congressional interest projects added (total $12,550,000): Western Hemisphere Information Exchange Program ($2,400,000), National Defense Center for Environmental Excellence($1,200,000), Integrated Mission Critical Environment, Safety and Occupational Health (ESOH) Technology and Regional Sustainability Solutions Program ($2,400,000), Battlefield Plastic Biodiesel ($1,650,000), Modifications to Modified Vaporous Hydrogen Peroxide (mVHP) for use against Toxic Industrial Chemicals/Materials (TICs/TIMs) ($2,500,000) and Web-based Environmental Compliance Management System ($2,400,000).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology - Dem/Val**	**035**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
035	NATIONAL DEFENSE CNTR FOR ENVIRO EXCELLENCE-NDCEE	5003	4763	4828	4814	4807	4914	5024	Continuing	Continuing

A. Mission Description and Budget Item Justification: The National Defense Center for Environmental Excellence (NDCEE) was established by Congress in 1990 with a directive to "serve as a national leadership organization to address high priority environmental problems for the Department of Defense (DoD), other government organizations, and the industrial community." The NDCEE Program is a national resource for developing and disseminating advanced environmental technologies. The NDCEE is used to demonstrate environmentally acceptable technology to industry; validate new technology prior to transferring that technology; and assist in the training of potential users as part of that technology transfer process. The NDCEE is a DoD resource for environmental quality management and technology validation. This program is managed by the Army on behalf of the Office of the Assistant Deputy Under Secretary of Defense for Environment (ADUSD-E).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Management and operations of the NDCEE by the prime contractor.	2300	2300	2269
Industrial base integration, operation of the NDCEE environmental technology facility, and environmental information analysis.	500	500	500
Conduct demonstration/validation of environmentally acceptable technologies that enhance military readiness and reduce production, operating, and/or disposal costs.	1975	1580	1784
NDCEE Government program management during contract negotiations and execution and during project formulation, execution, and technology transfer.	228	250	275
Small Business Innovative Research/Small Business Technology Transfer Programs		133	
Total	5003	4763	4828

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

C. Acquisition Strategy The NDCEE is a national asset focused on DoD applications that include technology transfer to appropriate DoD organizations. The NDCEE fosters an outreach program to describe its products and capabilities that include publication of results and participation in professional meetings, symposia, conferences, and appropriate coordination with industry. The management strategy for the NDCEE centers on a DoD Executive Advisory Board (EAB) chaired by the DoD NDCEE Executive Agent on behalf of the ADUSD (ESOH) and composed of senior DoD leadership to oversee NDCEE operations. The EAB is supported by an EAB Working Group (EABWG) that includes staff members from each of the offices represented on the EAB. The EABWG coordinates all NDCEE activities and reports back to the EAB Principals. The EABWG is, in turn, supported by a Technical Working Group (TWG) that addresses the details of NDCEE program execution. The contracting strategy of the NDCEE is based on using an NDCEE Contracting Officer's Representative to validate all the contractual portions of the NDCEE and by technical monitors (TM) to oversee the technical aspects of each

contracted task. A prime contractor operates NDCEE test facility(s) to validate environmentally compatible technologies on a representative "shop floor". The NDCEE accounts for and conducts work for: (1) direct funded Army tasks; (2) reimbursable tasks from within DoD and from other Government agencies; and (3) Congressionally directed and funded tasks.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology - Dem/Val**	**035**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Not applicable.												
Subtotal:												

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Data	C; CPFF	Concurrent Technologies Corporation (CTC), Johnstown, PA	7400	2800	2Q	2800	2Q	2769	2Q	Cont.	Cont.	Cont.
Subtotal:			7400	2800		2800		2769		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Testing	C; CPFF	Concurrent Technologies Corp.	2466								2466	2466
Development Testing	C; CPFF	Concurrent Technologies Corp.	10471	1975	2Q	1713	2Q	1784	2Q	Cont.	Cont.	Cont.
Subtotal:			12937	1975		1713		1784		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603779A - Environmental Quality Technology - Dem/Val**	**035**

Program Management Support	Allotment	Office of the Assistant Sec Army (Installations and Environment)	2995	228	4Q	250	4Q	275	4Q	Cont.	Cont.	Cont.
Subtotal:			2995	228		250		275		Cont.	Cont.	Cont.
Project Total Cost:			**23332**	**5003**		**4763**		**4828**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	119288	320068	414357	373347	347534	294013	68279	Continuing	Continuing
355	WIN-TACTICAL - DEM/VAL	119288	320068							439356
367	WIN-T INCREMENT 2 -INITIAL NETWORKING-ON-THE-MOVE			83919	19362	10773				114054
372	WIN-T INCREMENT 3 - FULL NETWORKING ON THE MOVE			330438	353985	336761	294013	68279	Continuing	Continuing

A. Mission Description and Budget Item Justification: The WIN-T program focus is to design, develop, produce and field the Future Modular Force transport network, while leveraging mature technologies that can enhance the Current Modular Force to operate in an emerging noncontiguous environment.

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments:

Increment 1: Networking at-the-Halt

Increment 1a: Extended Networking at-the-Halt; The former JNN program with Ka military satellite communications capability

Increment 1b: Enhanced Networking at-the-Halt; The former JNN Program with Net Centric Waveform and Colorless Core Capability

Increment 2: Initial Networking on-the-Move

Research, Development, Test & Engineering (RDT&E) for Soldier Network Extensions (SNEs) and High-capacity Network Radios (HNRs), Tactical Communications Nodes (TCNs), Points of Presence (PoPs) and other associated Configuration Items (CI); Procurement of limited numbers of SNEs, HNRs, TCNs, PoPs and other associated CIs

Increment 3: Full Networking on-the-Move; Full mobility to include Future Combat Systems (FCS) support

Increment 4: Protected Satellite Communications (SATCOM) on-the-Move Enhanced capability for protected SATCOM through tech insertions from High Capacity Communication Capability (HC3)

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	121798	222296	278893
Current BES/President's Budget (FY 2009)	119288	320068	414357
Total Adjustments	-2510	97772	135464
Congressional Program Reductions		-2228	
Congressional Rescissions			
Congressional Increases		100000	
Reprogrammings	894		
SBIR/STTR Transfer	-3404		
Adjustments to Budget Years			135464

Change Summary Explanation: Funding - FY2009 budget increase of $135.464 million is to continue development of WIN-T Increment 2 and Increment 3.
Increment 2 funds in FY 2009 support continued System Development and Demonstration, Development Test, New Equipment Test, Limited User Test, Milestone C preparation/documentation, Request for Proposal process and Low Rate Initial Production Contract Award.
Increment 3 funds in FY2009 continue System Development and Demonstration effort to include conduct of Critical Design Review, hardware/software development engineering builds and manufacture of prototypes.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
355 WIN-TACTICAL - DEM/VAL	119288	320068							439356

A. Mission Description and Budget Item Justification: The WIN-T program focus is to design, develop, produce and field the Future Modular Force transport network, while leveraging mature technologies that can enhance the Current Modular Force to operate in an emerging noncontiguous environment. WIN-T will be developed and fielded in Increments that will successively build upon one another.

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments. This Program Element (PE) addresses two of the Increments:

Increment 2 capability supports limited collaboration, mission planning and on-the-move. It enables distribution of information via voice, data, and real-time video from ground-to-ground and ground-to-satellite communications.

Increment 3 will provide the Commander/user within the tactical area of responsibility a mobile infrastructure that passes relevant information effectively and efficiently for combined arms capabilities in all required terrain and environmental conditions. Increment 3 implements the Global Information Grid (GIG) NetCentric vision to include Information Assurance and Network Centric Enterprise Services, provides dynamic bandwidth, enables On-the-Move (OTM) capability and is a key enabler for Future Combat Systems (FCS).

All future funding for Increments 2 and 3 RDT&E efforts have been transferred to PE # 0603782A, Project 367 for Increment 2 and PE # 0603782A, Project 372 for Increment 3.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Prepare technical assessment and research studies.	865	884	
Prepare/coordinate contractual and milestone documentation, perform program support and management efforts, and conduct Preliminary Design Review (PDR) and Critical Design Review (CDR) and test support for Engineering Development Test and Limited User Test.	5570	7753	
Continues System Development and Demonstration (SDD). The Prime Contractor and major subcontractors provide final architecture, Modeling and Simulation (M&S), preliminary design and critical design, and prototypes to support tests and milestone efforts.	98355	268675	
Conducted Inc 2 Field Test. Provide Test Support to include M&S and preparation for Inc 2 DT/LUT and Inc 3 DT.	4046	13636	
Provide STT+ as Government Furnished Equipment to Prime Contractor for Inc 2 LUT.		2849	
Provide system engineering, technical support and platform integration support for Inc 2 and Inc 3 programs.	10452	17404	

Small Business Innovative Research/Small Business Technology Transfer Programs		8867	
Total	119288	320068	

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

C. Acquisition Strategy The Milestone Decision Authority (MDA) approved entrance as a Milestone (MS) B Program and the initial WIN-T Acquisition Strategy on July 28, 2003. Since MS B, the structure of the Army changed requiring the WIN-T architecture to change as well. Consequently, the FY07 President's Budget resulted in near term Procurement funding being removed from FY06 thru FY09 and Research Development Test & Evaluation (RDT&E) funding was increased to levels that exceeded the Acquisition Program Baseline (APB) threshold. Concurrently, the Army Training and Doctrine Command (TRADOC) received direction to initiate a Capability Development Document (CDD) versus a Capability Production Document (CPD). These factors combined led PM WIN-T to initiate and submit a Program Deviation Report (PDR) on October 7, 2005. The PDR identified a breach to two key milestones, the Critical Design Review (CDR) and the Milestone C Decision Review, as well as a potential RDT&E cost threshold breach due to a schedule extension and additional form, fit, and function requirements directed from FCS requirements allocation.

A change in the law, Title 10 United States Code 2433, required the program to refer back to the original APB to determine the cost growth for Program Acquisition Unit Cost (PAUC) and the Average Procurement Unit Cost (APUC). A Defense Acquisition Board in Process Review (DAB IPR) was held on September 21, 2006. On January 23, 2007 a second Program Deviation Report (PDR) was submitted to announce the breaches to PAUC and APUC.

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments.

The Government attained approval on a Class Justification & Approval (J&A) based on one responsible source and issued a Sole Source Request for Proposal (RFP) for five years continuation of the RDT&E portion of the Phase 3 SDD contract on March 19, 2007. The Phase 3 SDD contract was awarded on June 29, 2007 to a combined contract team with General Dynamics as the prime contractor and Lockheed Martin the major subcontractor. Increment 2 SDD was implemented as a within scope change to the Phase 3 contract and incorporated by modification on 14 August 2007.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL

PROJECT
355

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Phase 1 Pre Milestone B	CPFF/T&M	Lockheed Martin Integrated Systems & Solutions, Gaithersburg, MD	21185								21185	
Phase 1 Pre Milestone B	CPFF/T&M	General Dynamics C4 Systems, Taunton, MA	13306								13306	
Phase 2 SDD	CPFF/T&M	Lockheed Martin Integrated Systems & Solutions, Gaithersburg, MD	40770								40770	
Phase 2 SDD	CPFF/CPAF/T&M	General Dynamics C4 Systems Inc, Taunton, MA	192613	74171	1-4Q						266784	
Phase 3 SDD	CPAF/T&M	General Dynamics C4 Systems Inc, Taunton, MA		24184	4Q	268675	1-4Q				292859	
Subtotal:			267874	98355		268675					634904	

Remarks: All future funding transferred to PE # 0603782A, Project 367 for Increment 2 and PE # 0603782A, Project 372 for Increment 3

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
WIN-T Technical Assessment and Research Studies	Various		2359	865	1-4Q	884	1-4Q				4108	
Systems Engineering and Technical Support	Various		31133	10452	1-4Q	17404	1-4Q				58989	
Subtotal:			33492	11317		18288					63097	

Remarks: All future funding transferred to PE # 0603782A, Project 367 for Increment 2 and PE # 0603782A, Project 372 for Increment 3

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL

PROJECT
355

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Conducted Inc 2 Field Test. Provide Test Support to include M&S prep for Inc 2 DT/LUT & Inc 3 DT.	Various		17129	4046	1-4Q	13636	1-4Q				34811	
Government Furnished Equipment for Inc 2 LUT	PWD					2849	2Q				2849	
Subtotal:			17129	4046		16485					37660	

Remarks: All future funding transferred to PE # 0603782A, Project 367 for Increment 2 and PE # 0603782A, Project 372 for Increment 3

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Documentation Preparation & PM Support	Various		9239	3417	1-4Q	4853	1-4Q				17509	
Conducted Source Selection Evaluation Board and Conduct Should Cost Effort	Various		326								326	
Travel, licenses, facilities, etc.	Various		2060	1002	1-4Q	1500	1-4Q				4562	
MITRE Support	PWD		5543	1151	1-4Q	1400	1-4Q				8094	
SBIR/STTR						8867					8867	
Subtotal:			17168	5570		16620					39358	

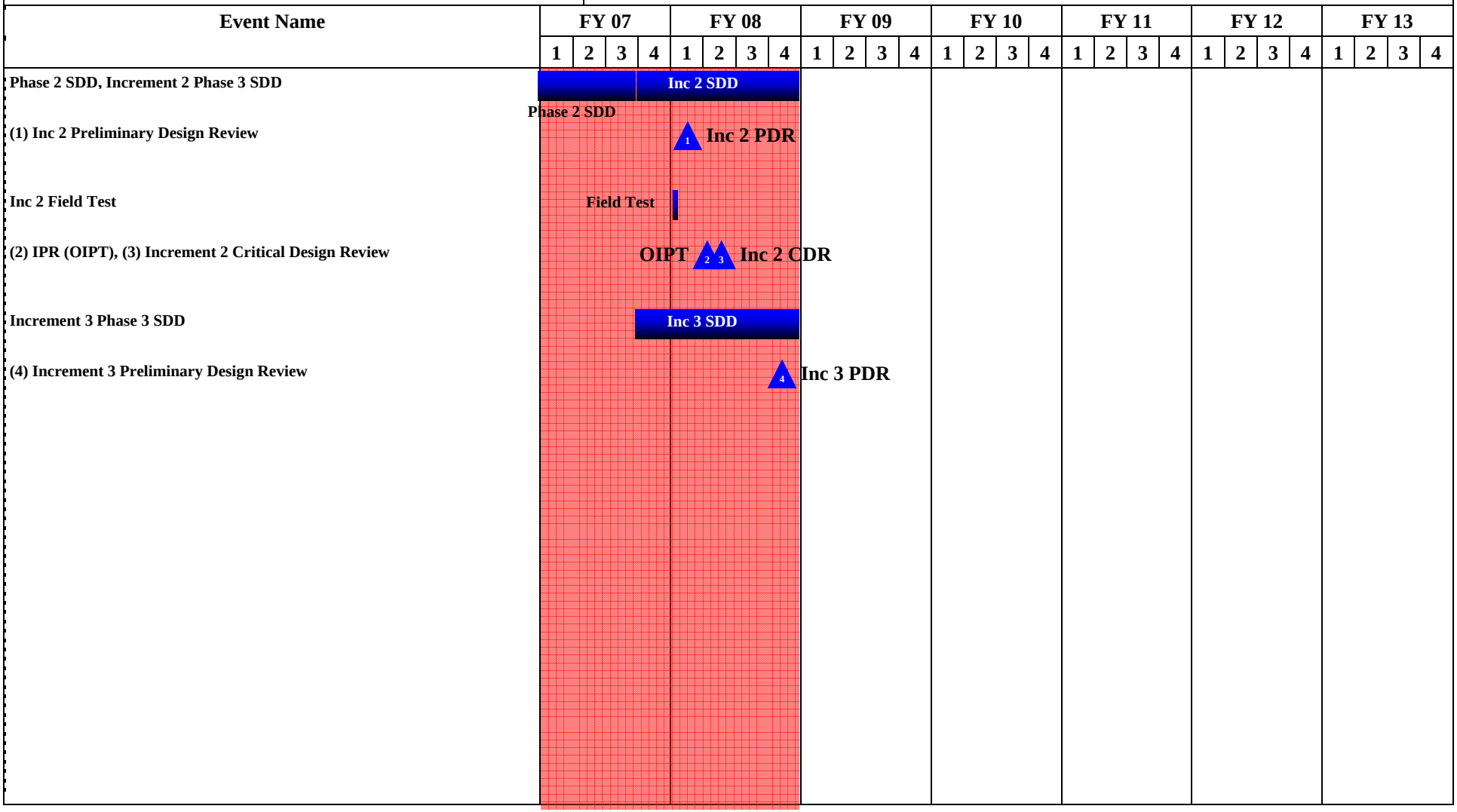
Remarks: All future funding transferred to PE # 0603782A, Project 367 for Increment 2 and PE # 0603782A, Project 372 for Increment 3

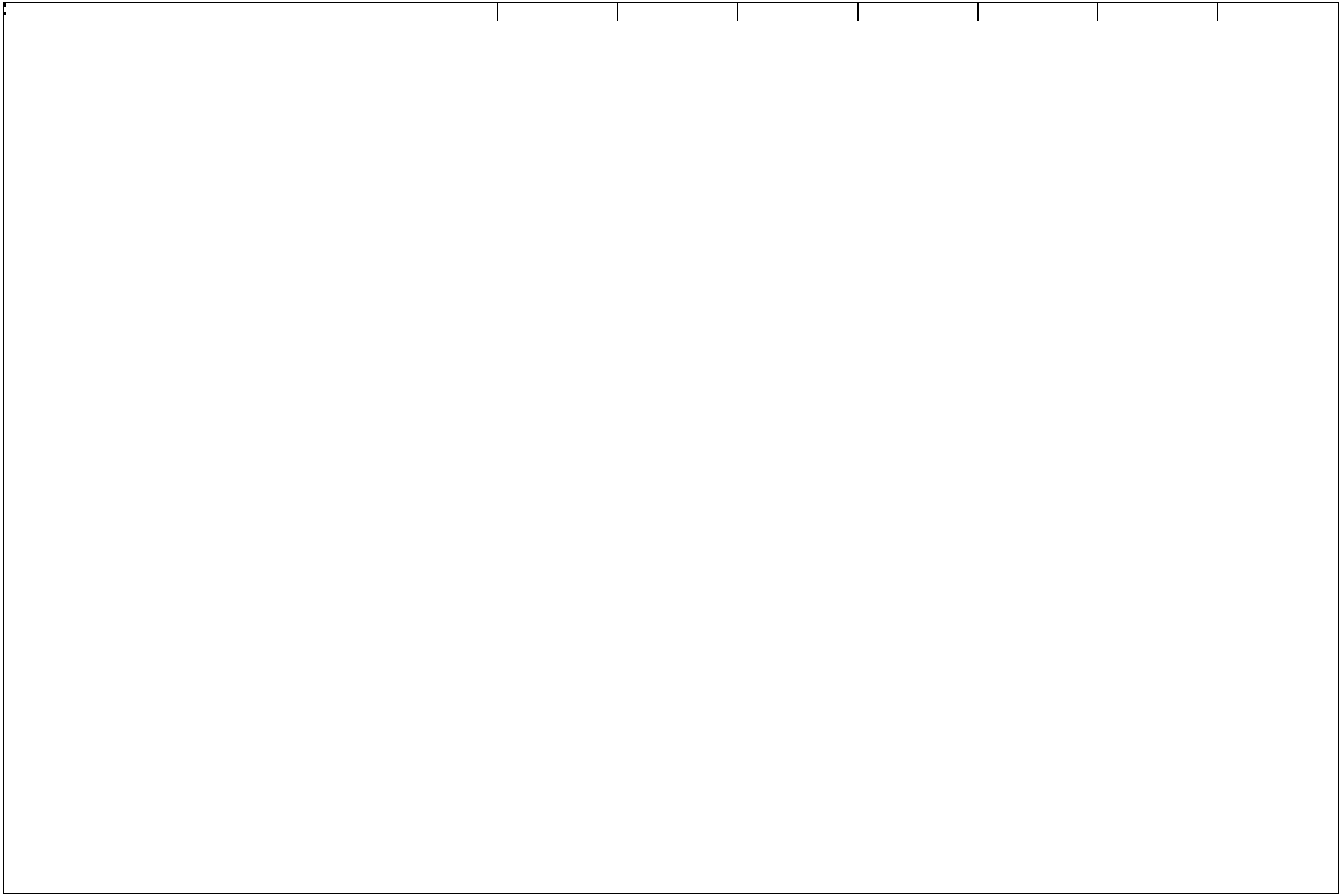
Project Total Cost:	**335663**	**119288**		**320068**					**775019**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**





Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**355**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Phase 2 SDD	1Q - 3Q						
Increment 2 Phase 3 SDD	4Q	1Q - 4Q					
Inc 2 Preliminary Design Review		1Q					
Inc 2 Field Test		1Q					
IPR (OIPT)		2Q					
Increment 2 Critical Design Review		2Q					
Increment 3 Phase 3 SDD	3Q - 4Q	1Q - 4Q					
Increment 3 Preliminary Design Review		4Q					

Scheduled events for FY2009 and out will be reflected on the reports for PE # 0603782A, Project 367 for Increment 2 and PE # 0603782A, Project 372 for Increment 3

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**367**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
367	WIN-T INCREMENT 2 -INITIAL NETWORKING-ON-THE-MOVE			83919	19362	10773				114054

A. Mission Description and Budget Item Justification: Increment 2 capability supports limited collaboration, mission planning and on-the-move. It enables distribution of information via voice, data, and real-time video from ground-to-ground and ground-to satellite communications. Increment 2 capitalizes on COTS/GOTS, mature technologies and adds mobility to the Brigade Combat Team (BCT) including Battalions and Companies. Increment 2 initially enables planning, monitoring, controlling and prioritizing (PMCP) the Div Headquarters (HQs) and/or the Bde network. It will disseminate critical information in less than five seconds and time sensitive information in less than eight seconds. Mobile communications for select users are enabled at 256 kbps for speeds up to 20 mph. It provides vehicular personnel force protection. It extends wide area/GIG network connectivity to the lower tactical subnets at the company level. Network survivability is enhanced by automatically reconfiguring the network due to node(s) or link loss (es). Spectrum reuse is accomplished with the Highband Network Waveform (HNW) and Net Centric Waveform (NCW). The Quality of Service (QOS) capability enables message trafficking prioritization by level of importance to the warfighter. This Increment provides commercial and military band satellite communications to Div, Bde, Bn and Company (Co).

This program is not a new start, effort previously funded under PE# 0603782A, Project 355
Funds in FY2009 support continued System Development and Demonstration, Development Test, New Equipment Training, Limited User Test, Milestone C preparation/documentation, Request for Proposal process and Low Rate Initial Production Contract Award.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Increment 2 System Development and Demonstration and test support/prototypes for Development Test, New Equipment Training, and Limited User Test. The contractor provides final architecture, Modeling & Simulation (M&S), and milestone efforts			22326
Platform Integration of WIN-T Configuration Items			34763
Technical Engineering Services and Research Studies			3837
Conduct of Developmental Test and Limited User Test; includes Modeling and Simulation			20802
Program Management Support			2191
Total			83919

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
BW7115 - Increment 2 - Initial Networking OTM			179815	586611	771429	709612	616766		2864233

Comment:

C. Acquisition Strategy Warfighter Information Network-Tactical (WIN-T) is the cornerstone tactical communications system supporting the implementation of the LandWarNet strategy during the 2007 to 2025 timeframe. The WIN-T program is establishing a single integrating framework creating a network of networks for the Army, subject to commander's intent and security policy.

The Increment 2 (Inc 2) capability will be provided for urgent communications needs and addresses the network technology to meet those needs within the FY2009 to FY2014 timeframe. WIN-T Increment 2 is focused on Brigade Combat Teams (BCT). This increment will provide BCT and maneuver battalion commanders and their command posts, as well as maneuver companies the ability to access and receive relevant, near-real, tactically-relevant needed information, unfettered by range, terrain, or vegetation limitations, without tethering them to traditional static locations. Additionally, this increment provides the Division G6 and BCT S6 the ability to allocate communications capacity consistent with the commander's priorities, as well as controlling, monitoring, and maintaining the network.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**367**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Phase 3, Increment 2 System Development and Demonstration	CPAF	General Dynamics C4 Systems Inc, Taunton, MA						22326	1-4Q	Cont.	Cont.	
Platform Integration	Various	Various						34763	1-4Q	Cont.	Cont.	
Subtotal:								57089		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services and Research Studies	T&M	General Dynamics C4 Systems Inc, Taunton, MA						3837	1-4Q	Cont.	Cont.	
Subtotal:								3837		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test and Modeling & Simulation	Various	Various						20802	1-4Q	Cont.	Cont.	
Subtotal:								20802		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

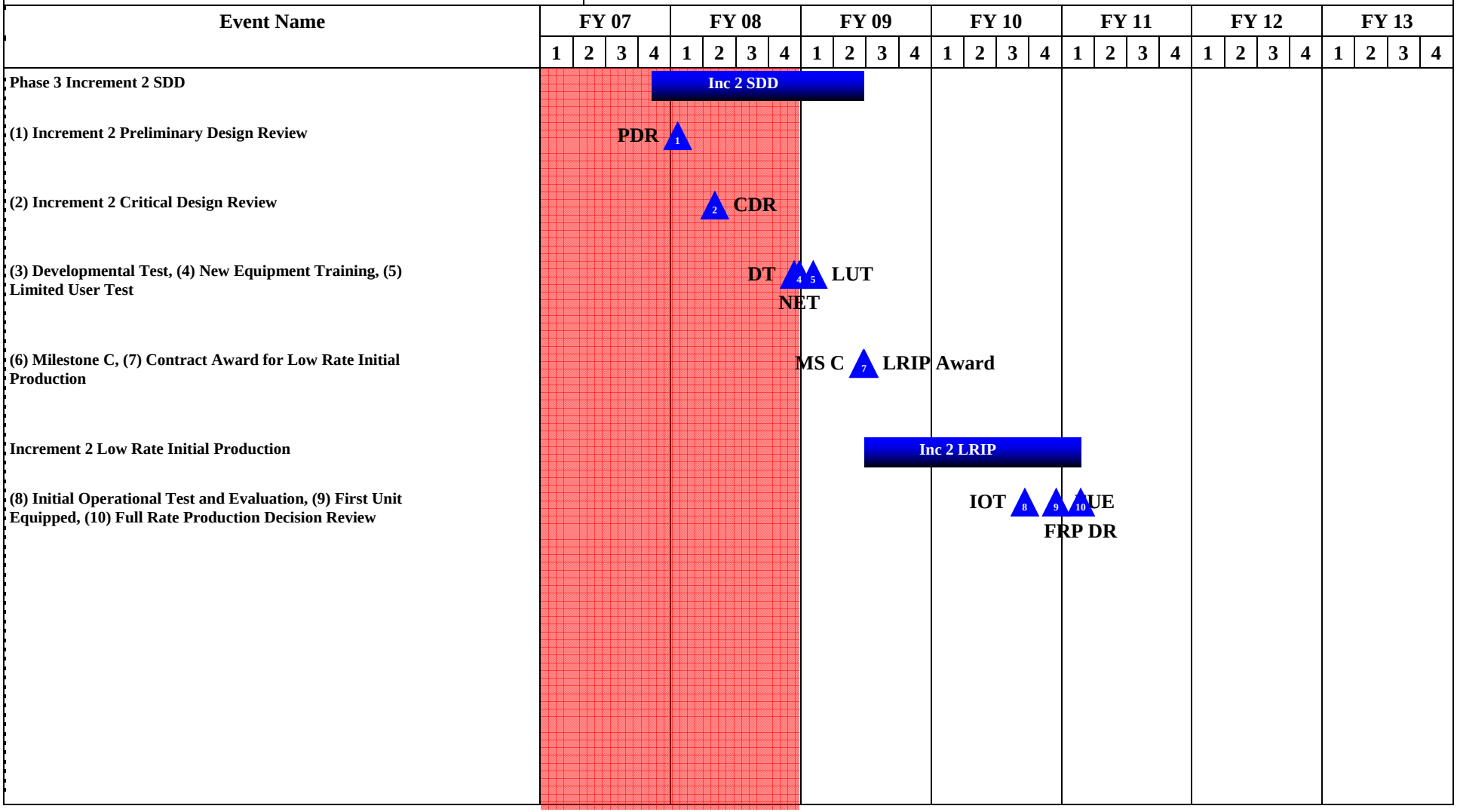
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**367**

Program Management Support	MIPR	Various						2191	1-4Q	Cont.	Cont.	
Subtotal:								2191		Cont.	Cont.	
Project Total Cost:								**83919**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**367**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**367**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Phase 3 Increment 2 SDD	4Q	1Q - 4Q	1Q - 2Q				
Increment 2 Preliminary Design Review		1Q					
Increment 2 Critical Design Review		2Q					
Developmental Test		4Q					
New Equipment Training			1Q				
Limited User Test			1Q				
Milestone C			2Q				
Contract Award for Low Rate Initial Production			2Q				
Increment 2 Low Rate Initial Production			2Q - 4Q	1Q - 4Q	1Q		
Initial Operational Test and Evaluation				3Q - 4Q			
First Unit Equipped				4Q			
Full Rate Production Decision Review					1Q		

Prior years for scheduling and funding can be derived from the PE# 0603782A, Project 355

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**372**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
372	WIN-T INCREMENT 3 - FULL NETWORKING ON THE MOVE			330438	353985	336761	294013	68279	Continuing	Continuing

A. Mission Description and Budget Item Justification: Warfighter Information Network - Tactical (WIN-T) is the Army's communications system for reliable, secure, and seamless video, data, imagery, and voice services that enables decisive combat actions. It will be focused on moving information in a manner that supports commanders, staffs, functional units, and capabilities-based formations - all mobile, agile, lethal, sustainable, and deployable. It will be optimized for offensive and Joint operations so that the theater combatant commander will have the capability to perform multiple missions simultaneously. WIN-T Increment 3 will provide the Commander/user within the tactical area of responsibility a mobile infrastructure that passes relevant information effectively and efficiently for combined arms capabilities in all required terrain and environmental conditions. WIN-T is implementing the Global Information Grid (GIG) NetCentric Vision including Information Assurance and Network Centric Enterprise Services. In addition, WIN-T is a key component of the tactical GIG and enabler for Future Combat Systems (FCS). WIN-T provides dynamic bandwidth and enabling formations On-The-Move (OTM).

This program is not a new start, previously funded under PE # 0603782A, Project 355.
Funds in FY2009 continue System Development and Demonstration effort to include conduct of Critical Design Review, hardware/software development engineering builds and manufacture of prototypes.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Increment 3 System Development and Demonstration. The contractor provides final architecture, critical design, and prototypes to support tests and milestone efforts; and Modeling and Simulation (M&S)			295670
Platform Integration of WIN-T Configuration Items			2944
Technical Engineering Services and Research Studies			4500
Support for Engineering Development Test and Limited User Test; includes M&S			5630
Program Management Support			21694
Total			330438

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

C. Acquisition Strategy The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007.

The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments:
Increment 1: Networking at-the-Halt
Increment 1a: Extended Networking at-the-Halt; the former JNN program with Ka military satellite communications capability
Increment 1b: Enhanced Networking at-the-Halt; the former JNN Program with Net Centric Waveform and Colorless Core Capability
Increment 2: Initial Networking on-the-Move
Research, Development, Test & Engineering (RDT&E) for Soldier Network Extensions (SNEs) and High-capacity Network Radios (HNRs), Tactical Communications Nodes (TCNs), Points of Presence (PoPs) and other associated Configuration Items (CI)
Procurement of limited numbers of SNEs, HNRs, TCNs, PoPs and other associated CIs
Increment 3: Full Networking on-the-Move
Full mobility to include Future Combat Systems (FCS) support
Increment 4: Protected Satellite Communications (SATCOM) on-the-Move
Enhanced capability for protected SATCOM through tech insertions from High Capacity Communication Capability (HC3)

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**372**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Phase 3, Increment 3 System Development and Demonstration	CPAF	General Dynamics C4 Systems Inc, Taunton, MA						295670	1-4Q	Cont.	Cont.	
Platform Integration	Various	Various						2944	1-4Q	Cont.	Cont.	
Subtotal:								298614		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services and Research Studies	T&M	General Dynamics C4 Systems Inc, Taunton, MA						4500	1-4Q	Cont.	Cont.	
Subtotal:								4500		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Testing and Modeling & Simulation	Various	Various						5630		Cont.	Cont.	
Subtotal:								5630		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

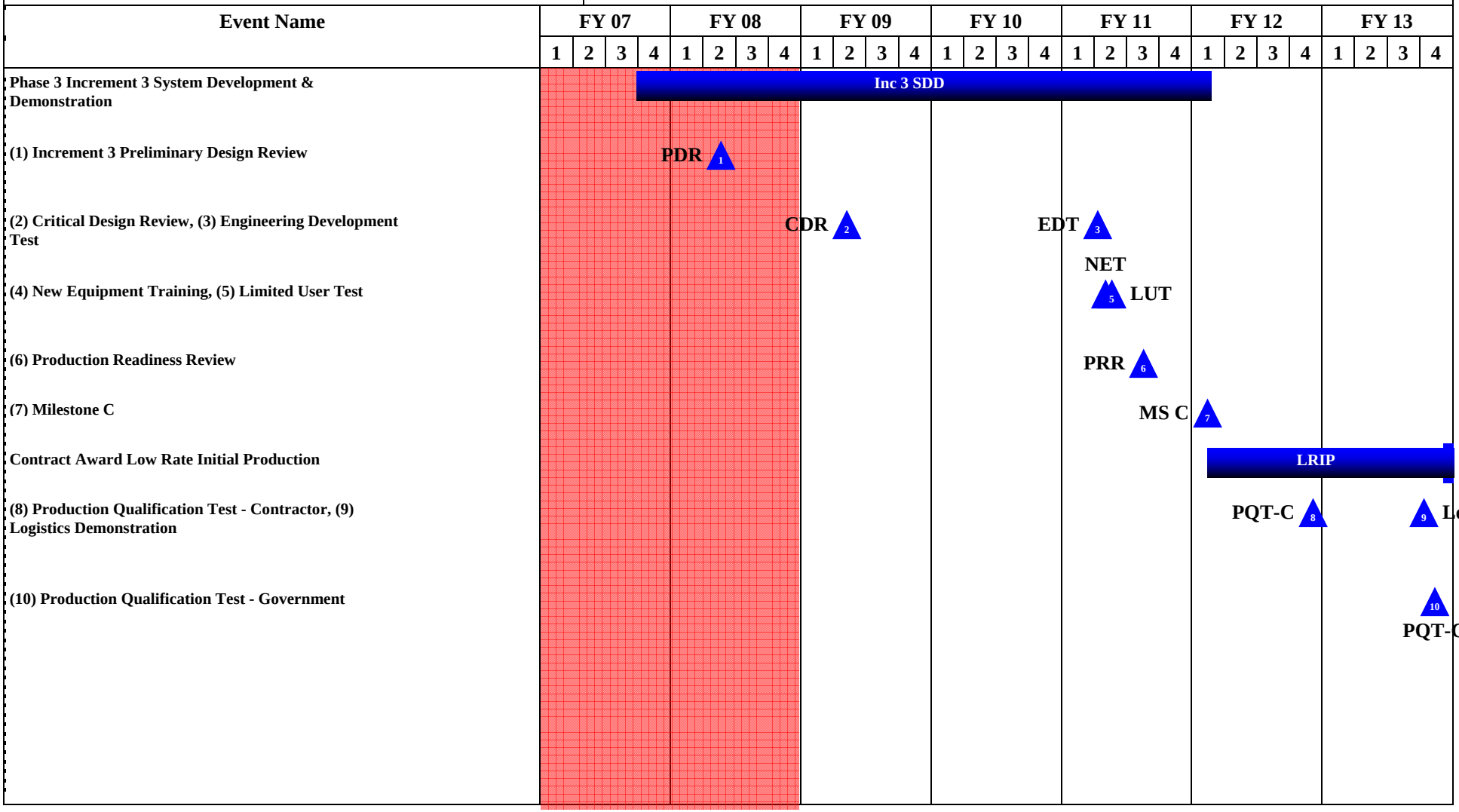
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**372**

Program Management Support	MIPR	Various						21694		Cont.	Cont.	
Subtotal:								21694		Cont.	Cont.	
Project Total Cost:								**330438**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**372**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603782A - WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL**	**372**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Phase 3 Increment 3 System Development & Demonstration	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Increment 3 Preliminary Design Review		2Q					
Critical Design Review			2Q				
Engineering Development Test					2Q		
New Equipment Training					2Q		
Limited User Test					2Q		
Production Readiness Review					3Q		
Milestone C						1Q	
Contract Award Low Rate Initial Production						1Q - 4Q	1Q - 4Q
Production Qualification Test - Contractor						4Q	1Q - 3Q
Logistics Demonstration							4Q
Production Qualification Test - Government							4Q

Prior years for scheduling and funding can be derived from the PE # 0603782A, Project 355

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
691 NATO RSCH & DEVEL	4189	4927	5041	5131	5217	5319	5418	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program implements the provisions of Title 10 U.S. Code, Section 2350a, Cooperative Research and Development (R&D) Projects: Allied Countries. The objective is to improve, through the application of emerging technologies, the conventional defense capabilities of the United States and our cooperative partners, including the North Atlantic Treaty Organization (NATO), U.S. major non-NATO allies and Friendly Foreign countries. Through technology sharing and joint equipment development these projects help reduce U.S. acquisition costs and leverage important technologies for the Army Transformation and the development of the Future Combat system. Cooperative efforts also improve multinational force compatibility with potential coalition partners through the development and use of similar equipment and improved interfaces. The program focuses specifically on international cooperative technology demonstration, validation, and interoperability of Army weapon and command, control, communications and information (C3I) systems, including the NATO Defense Against Terrorism initiatives. Projects are implemented through international agreements with foreign partners that define scope, cost and work sharing arrangements, management, contracting, security, data protection and third party transfers. Funds are used to pay for only the U.S. work share that occurs in the United States at U.S. Government and U.S. contractors facilities.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
International Agreement Tracking System (IATS)/International Online (IOL) Development and Implementation (including IOL conversion into STEM), NATO/International Cooperative R&D Policy Development, and Report to Congress Pursuant to 10 USC 2350a, prepare and provide to used (A&T) the Army section of the Report to Congress on the International Cooperative Research and Development Program.	755	810	815
Multilateral Interoperability Program (MIP) (Partners: Germany, France, United Kingdom, Canada, Italy): Continued integration work from the Command and Control Systems Interoperability Program (C2SIP) into an Advanced Concept Technology Demonstration (ACTD) to achieve NATO levels four (messaging) and five (database) interoperability and also extend the effort into a sustainable program to incorporate lessons learned into national systems.	500	650	665
Low Level Air Defense Interoperability (LLAPI) (Partners: Major NATO Allies): The objective of this program is to successfully demonstrate Command and Control (C2) interoperability among the participant nations' Short Range Air Defense (shared) assets for automated air picture exchange.	200	205	212
Multi-National Network Enabled Capabilities (MNNEC) related Command, Control, Communications, Computers, Intelligence Surveillnace and Reconnaissance (C4ISR)(Potential Partners: United Kingdom, France, Italy, Germany and major NATO Allies) MNNEC would foucs on developing a single solutions standard avoiding development of multiple unique solutions and leverage existing interoperability standards developed by NATO as well as other international forums such as the Five Power Net Centrick PA. A single solution standard will include common doctrine, technical and procedural specifications to make better use of exising information, shared data, leverage national operating picture capabilities and enable the development of interoperability of data, databases, applications, security domains and national networks architectures. The MNNEC is more than interoperability of information systems; it is the complete networking of information systems with sensors and shooters focusing on building Net-Centric interoperability among coalition tactical land components operating in a Joint Environment, focused at the Brigade and Below level, but not excluding using the services	400	512	520

provided at higher echelons. The MNNEC has a future force focus, endeavoring to define migration strategies for Net-Centric capabilities in the 2010-2025 timeframe with part of the work to determine the time-phased implementations of a Multi-National Network Enabled Capability. The end results would be an integration of national C2/C4ISR systems into an NCES environment to include the NATO Network Enabled Capabilities (NNEC) and the 5 Powers Net Centric Project Agreement.			
Combat Identification (Partners: UK, Germany, France and Italy): Combat ID will pursue the extension of tasks required for implementing the associated NATO Standardization Agreement (STANAG 4579), allied participation in Coalition Combat ID Advanced Concept Technology Demonstrator (ACTD), will pursue the NATO Staff Requirement and a STANAG for the Dismounted Soldier ID.	60	100	100
Senior National Representatives (Army) (SNR-(A)) Projects (Partners: France, Germany, United Kingdom and Italy): Supports harmonization of programs at various levels: exchanging information, identifying knowledge gaps and conducting feasibility studies to further promote cooperative development; standardizing, fielding and roadmapping various processes; distributing the workload among the different nations. The Structured Technology Demo (STD) hosted by the U.S. reps to Land Group 6, NATO Army Armaments Group (NAAG), will provide and opportunity to observe and demonstrate the current and future capability of participating NATO nations with a view to assisting future operational and materiel interoperability. Army support of NAAG studies, analysis and technology demonstrations.	900	1000	1000
Technology Research and Development Projects (TRDP) (Partners: United Kingdom, Germany, France, Canada, Australia, Netherlands, Korea, Norway): The scope of this MOU encompasses R&D collaboration on basic, exploratory and advanced Land Warfare Concepts and Technologies that are focused on Future Combat System enabling technologies, the maturation of which may lead to the development of technologically superior conventional weapon systems.	790	907	950
Joint Tactical Radio System (JTRS) (Partners: Japan, Sweden, UK): The participants in these programs will develop and implement Software-enabled radios as replacements to current radio systems. The projects shall be focused on maintaining interoperability as the countries pursue their own separate software radio programs. The project agreements (PAs) will include a joint development of software radio specifications, separate development and testing of software waveforms, and joint interoperability testing using the system assets developed as part of the agreements.	284	287	300
Artillery Command and Control Interoperability (ASCA) (Partners: France, Germany, Italy, UK): The Participants in this program will develop an automated software interface between their national field artillery command and control systems. The nations will be able to receive and provide mutual fire support (i.e. cannon and rocket fire) in combined operations more rapidly and with minimal errors.	300	318	344
Force Protection Projects (FPP) (Partners: United Kingdom, France, Germany, Italy, Sweden, Canada): Force Protection Projects will include R&D collaborationon technologies such as COunter ROcker and Mortar (C-RAM) and Counter Improvised Explosive Devices (C-IED). Programs include Military Operations in Urban Terrain (MOUT) and a variety of Defense Against Terrorism (DAT) initiatives such as Defense Against Mortar Attacks (DAMA) and Joint Precision Air Drop System (JPADS).			135
Small Business Innovative Research/Small Business Technology Transfer Program		138	
Total	4189	4927	5041

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603790A - NATO Research and Development**	**691**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	4891	4959	5074
Current BES/President's Budget (FY 2009)	4189	4927	5041
Total Adjustments	-702	-32	-33
Congressional Program Reductions		-32	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-564		
SBIR/STTR Transfer	-138		
Adjustments to Budget Years			-33

C. Other Program Funding Summary Not applicable for this item.

D. Acquisition Strategy All projects are test or technical demonstrations to feed into potential new requirements in support of Army Transformation to the Future Force or as product improvements to the Current Force.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603790A - NATO Research and Development

PROJECT
691

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Multilateral Interoperability Program (MIP)	CPFF	C3S, CSC Fort Washington, PA	1111	115	2Q	165	1-2Q	165	1Q	Cont.	Cont.	
International Agreement Tracking System (IATS) - Software Development	CPFF	JIL Information Systems Vienna, VA	2383	505	2Q	550	2Q	545	2Q	Cont.	Cont.	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	667	43	1Q	120	2Q	117	2-3Q	Cont.	Cont.	
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	761							Cont.	Cont.	
Combat Identification	MIPR	CECOM, Ft. Monmouth, VA	837	5	1Q	25	2Q	50	2Q	Cont.	Cont.	
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	MIPR	CECOM, Ft. Monmouth, VA	1557	240	1-2Q	345	1-2Q	452		Cont.	Cont.	
Senior National Representatives (Army) (SNR[A])	TBD	TBD	4448	585	2Q	770	2Q	632	2-3Q	Cont.	Cont.	
TRDP	TBD	TBD	612	251	2Q	310	1Q	305	1Q	Cont.	Cont.	
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	760	188	1Q	215	2Q	217	1Q	Cont.	Cont.	
Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	270	113	1Q	121	1Q	118	1Q	Cont.	Cont.	
Force Protection Projects (FPP)	MIPR	RDECOM, Ft. Belvoir, VA						100	1-2Q		100	
Subtotal:			13406	2045		2621		2701		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

MIP	MIPR	CECOM Ft. Monmouth, NJ	408	155	2Q	190	1Q	195	1Q	Cont.	Cont.	
IATS	MIPR	RDECOM, Ft. Belvoir, VA	542	125	2Q	125	1Q	125	2Q	Cont.	Cont.	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	326	65	2Q	45	1Q	48	1Q	Cont.	Cont.	
Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	169							Cont.	Cont.	
Combat Identification	MIPR	CECOM Ft. Monmouth, NJ	489	25	2Q	25	1Q	25	1Q	Cont.	Cont.	
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	MIPR	CECOM Ft. Monmouth, NJ	484	83	1-2Q	87	1-3Q	68		Cont.	Cont.	
SNR(A)	MIPR	TBD	965	169	2Q	155	1Q	190	1Q	Cont.	Cont.	
TRDP	MIPR	TBD	613	250	2Q	310	1Q	315		Cont.	Cont.	
Joint Tactical Radio System (JTRS)	MIPR	PM JTRS, Rosslyn, VA	75	95	2Q	100	1Q	115	1Q	Cont.	Cont.	
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM Ft. Monmouth, NJ	165	66	2Q	58	1Q	75	1Q	Cont.	Cont.	
Force Protection Projects (FPP)	MIPR	RDECOM, Ft. Belvoir, VA						10	2Q		10	
Subtotal:			4236	1033		1095		1166		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MIP	MIPR	CECOM Ft Monmouth, NJ	397	115	2Q	150	1Q	155	1Q	Cont.	Cont.	
IATS	MIPR	RDECOM, Ft. Belvoir, VA	362	84	2-3Q	85	1Q	90	1Q	Cont.	Cont.	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone Ars, AL	125	38	2Q	15	2Q	17	1Q	Cont.	Cont.	

Shared Tactical Ground Picture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	AMSAA, Aberdeen Proving Ground, NJ	82							Cont.	Cont.	
Combat Identification	MIPR	CECOM Ft Monmouth, NJ	469	15	2Q	25	2Q		1Q	Cont.	Cont.	
Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	MIPR	CECOM Ft Monmouth, NJ	391	52	1-2Q	55	2Q			Cont.	Cont.	
SNR(A)	MIPR	TBD	621	90	1-2Q	115	1-2Q	125	1Q	Cont.	Cont.	
TRDP	MIPR	TBD										
ASCA	MIPR	CECOM Ft Monmouth, NJ	112	31	1Q	35	2Q	40	1Q	Cont.	Cont.	
Joint Tactical Radio System (JTRS)	MIPR	CECOM Ft Monmouth, NJ	22	38	2Q	33	2Q	67	1Q	Cont.	Cont.	
Force Protection Projects (FPP)	MIPR	RDECOM, Ft. Belvoir, VA						12	2-3Q		12	
Subtotal:			2581	463		513		506		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MIP	MIPR	PEO C3S, Ft. Monmouth, NJ	286	115	2Q	145	1Q	150	1Q	Cont.	Cont.	
IATS	MIPR	RDECOM, Ft. Belvoir, VA	176	41	2Q	50	1Q	55	1Q	Cont.	Cont.	
Low Level Air Defense Interoperability (LLAPI)	MIPR	AMCOM, Redstone, Ars, AL	205	54	2Q	25	1Q	30	1Q	Cont.	Cont.	
Shared Tactical GroundPicture (STGP)/Single Integrated Ground Picture (SIGP)	MIPR	CECOM, Ft. Monmouth, VA	47							Cont.	Cont.	
Combat Identification	MIPR	CECOM, Ft. Monmouth, NJ	407	15	2Q	25	1Q	25	1Q	Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

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BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603790A - NATO Research and Development

PROJECT
691

Multi-National Network Enabled Capabilities (MNNEC) related to C4ISR	MIPR	CECOM, Ft. Monmouth, NJ	292	25	1Q	25	1Q			Cont.	Cont.	
SNR(A)	MIPR	TBD	319	56	2Q	60	1Q	53	1Q	Cont.	Cont.	
TRDP	MIPR	TBD	481	289	2Q	325	1Q	330	1Q	Cont.	Cont.	
Artillery Command and Control Interoperability (ASCA)	MIPR	CECOM, Ft. Monmouth, NJ	54	15	2Q	10	1Q	12	1Q	Cont.	Cont.	
JTRS	MIPR	PM JTRS, Rosslyn, VA	27	38	2Q	33	1Q			Cont.	Cont.	
Force Protection Projects (FPP)	MIPR	RDECOM, Ft. Belvoir, VA						13	2-3Q		13	
Subtotal:			2294	648		698		668		Cont.	Cont.	
Project Total Cost:			**22517**	**4189**		**4927**		**5041**		**Cont.**	**Cont.**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	8848	6440	7455	8676	8613	7990	9477	Continuing	Continuing
B32	ADV MAINT CONCEPTS/EQ	8848	6440	7455	8676	8613	7990	9477	Continuing	Continuing
B45	AIRCREW INTEGRATED SYS-AD									7135

A. Mission Description and Budget Item Justification: This PE provides advanced development aviation support of tactical programs associated with air mobility, advanced maintenance concepts and equipment, and Aircrew Integrated Systems (ACIS). This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets enhance the functionality of current and future aircraft by improving the effectiveness of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, improve aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	9536	6481	7503
Current BES/President's Budget (FY 2009)	8848	6440	7455
Total Adjustments	-688	-41	-48
Congressional Program Reductions		-41	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-419		
SBIR/STTR Transfer	-269		
Adjustments to Budget Years			-48

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
B32	ADV MAINT CONCEPTS/EQ	8848	6440	7455	8676	8613	7990	9477	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets enhance the functionality of current and future aircraft by improving the effectiveness of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, improve aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment. This program provides for development of rapid battle repair procedures, tools development to speed the return of aircraft to a full mission status and development of new equipment for aerial recovery of damaged aircraft. Included in this program are projects such as: diagnostics/prognostic monitoring systems, Battle Damage Assessment and Repair (BDAR) procedures and tools, support to modernized aircraft, Flexible Engine Diagnostic System (FEDS), Unit Maintenance Aerial Recovery Kit (UMARK), Standard Towing System (SATS), Shop Equipment Contact Maintenance (SECM), Aviation - Sets, Kits, Outfits and Tools (A-SKOT) redesign, Digital Aircraft Weighing Scales (DAWS), development of the modular Aviation Ground Power Unit (AGPU) II, Generic Aircraft Nitrogen Generator (GANG), Hand Held Fire Extinguisher (HHFE), and development support for tools needed to provide maintenance support to modernized/future force aircraft.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of B32.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Hand Held Fire Extinguisher (HHFE)	345	220	
Digital Aircraft Weighing Scales (DAWS)	35	165	
Battle Damage Assessment and Repair System (BDAR)		200	250
Standard Aircraft Towing System (SATS)	385	681	500
Generic Aircraft Nitrogen Generator (GANG)	397		
Flexible Engine Diagnostics (FEDS) Next Generation	64	500	1025
FEDS T-701 Engine	118		
Shop Equipment Contact Maintenance (SECM) Modernization	1556	971	914
Aviation Ground Power Unit (AGPU) II	3112		1100
Unit Maintenance Aerial Recovery Kit (UMARK)	873	1520	1265

Aviation - Sets, Kits, Outfits and Tools (A-SKOT)	1040	1116	1448
Management Support Services	197	180	225
Technical Engineering Services	601	532	528
RDT&E Project Test Support	125	175	200
Small Business Innovative Research (SBIR)/Small Business Technology Transfer Programs (STTR)		180	
Total	8848	6440	7455

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Aircraft Procurement, Army(APA) SSN AZ3100	61363	84713	103882	86419	65024	71543	98656	Continuing	Continuing

Comment:

C. Acquisition Strategy This project is an aggregate of advanced maintenance concepts-related projects. While the detailed acquisition strategy varies from project to project, the general strategy for each individual project is to complete the development effort through Government test (developmental and operational). Program documentation for milestone decision is prepared, as appropriate, concurrently with the development effort.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603801A - Aviation - Adv Dev

PROJECT
B32

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
BDAR System	MIPR	Logistics Support Facility (LSF)/ AMRDEC, Redstone Arsenal, AL				200	3Q	250	2-3Q		450	450
HHFE	MIPR	AATD, Ft. Eustis, VA		345	4Q	220	3Q				565	565
SATS	MIPR	Navy, Lakehurst, NJ/ AMCOM, Redstone Arsenal, AL/ AEC, Aberdeen Proving Ground, MD	894	385	2Q	681	2-3Q	500	3Q		2460	2460
GANG	MIPR	AEC, Aberdeen Proving Ground, MD		397	2Q						397	397
FEDS T-701 Engine	MIPR	AMRDEC, Redstone Arsenal, AL		118	3Q						118	118
FEDS Next Generation	MIPR	AMRDEC, Redstone Arsenal, AL		64	4Q	500	3Q	1025	2-3Q	Cont.	Cont.	Cont.
SECM	Various	PM UAS/ PIF, Redstone Arsenal, AL/JVYS, Huntsville, AL/TACOM, Detroit, MI	1679	1556	2-4Q	971	3Q	914	2-3Q	Cont.	Cont.	Cont.
AGPU II	Various	UAH, Huntsville, AL/Applied Geo Tech, Choctaw, MS/TBD	7124	3112	3-4Q			1100	2-3Q	Cont.	Cont.	Cont.
DAWS	MIPR	AMRDEC, Redstone Arsenal, AL/ AEC, Aberdeen Proving Ground, MD		35	3Q	165	2-3Q				200	200
UMARK	MIPR	AMRDEC, Redstone Arsenal, AL/AEC, Aberdeen Proving Ground, MD		873	2-4Q	1520	3Q	1265	2-3Q	Cont.	Cont.	Cont.

A-SKOT	Various	LSF/AMRDEC, Redstone Arsenal, AL/TACOM, Warren, MI/RDECOM/Natick, MA/AATD, Ft. Eustis, VA		1040	1-4Q	1116	3Q	1448	2-3Q	Cont.	Cont.	Cont.
Subtotal:			9697	7925		5373		6502		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services	MIPR	AATD, Ft. Eustis, VA	5007	601	1-4Q	532	1-3Q	528	1-3Q	Cont.	Cont.	Cont.
Subtotal:			5007	601		532		528		Cont.	Cont.	Cont.

Remarks: None

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
RDT&E Project Test Support	MIPR	AEC, Aberdeen Proving Ground, MD	210	125	1-3Q	175	1-3Q	200	1-3Q	Cont.	Cont.	Cont.
Subtotal:			210	125		175		200		Cont.	Cont.	Cont.

Remarks: None

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Management Support Services	C/FP/ Level of Effort and InHouse	AGSE, Redstone Arsenal, AL & Science Applications Intl Corp, San Diego, CA	1997	197	1-4Q	180	1Q	225	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						180	1Q				180	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**

Subtotal:	1997	197		360		225		Cont.	Cont.	Cont.

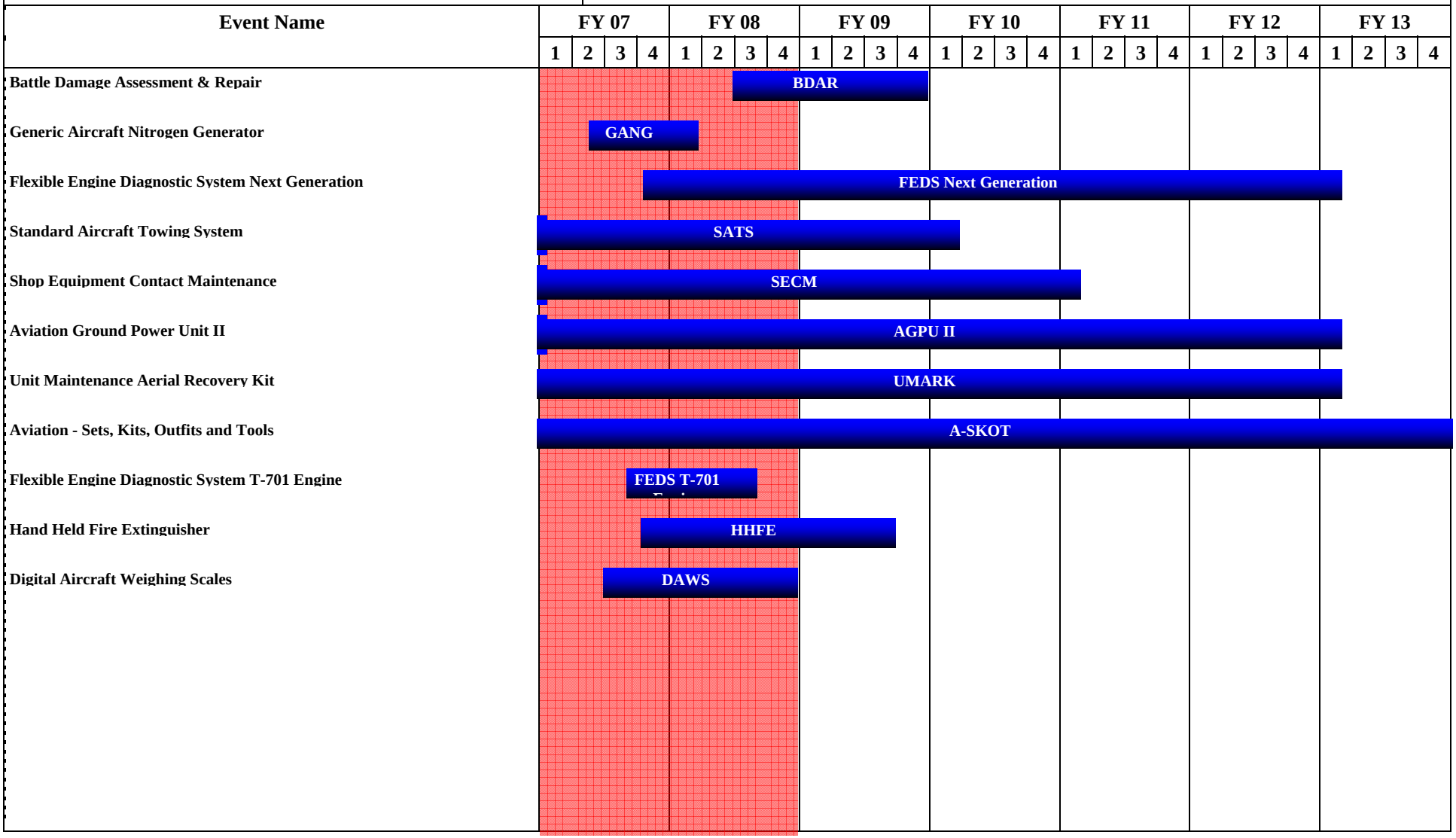
Remarks: None

Project Total Cost:	**16911**	**8848**		**6440**		**7455**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603801A - Aviation - Adv Dev**	**B32**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Battle Damage Assessment & Repair		2Q - 4Q	1Q - 4Q				
Generic Aircraft Nitrogen Generator	2Q - 4Q	1Q					
Flexible Engine Diagnostic System Next Generation	4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Standard Aircraft Towing System	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q			
Shop Equipment Contact Maintenance	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
Aviation Ground Power Unit II	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Unit Maintenance Aerial Recovery Kit	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Aviation - Sets, Kits, Outfits and Tools	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Flexible Engine Diagnostic System T-701 Engine	3Q - 4Q	1Q - 3Q					
Hand Held Fire Extinguisher	4Q	1Q - 4Q	1Q - 3Q				
Digital Aircraft Weighing Scales	3Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	9799	37993	44141	52426	86439	15082	12332	Continuing	Continuing
526	MARINE ORIEN LOG EQ AD	97	13728	3079	3082	3082	3050	3124	Continuing	Continuing
G11	ADV ELEC ENERGY CON AD	1889	3151	3357	2898	2915	1624	729	Continuing	Continuing
G14	MATERIALS HANDLING EQUIPMENT - AD	198	267	211						866
K39	Field Sustainment Support AD	3164	12262	9790	17509	22570	5615	5498	Continuing	Continuing
K41	WATER AND PETROLEUM DISTRIBUTION - AD	4451	2442	439	3280	2834	4793	2981	Continuing	Continuing
K42	MATERIEL SUSTAINMENT SUPPORT AD		6143	5207	2999	477				14826
L04	JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD			22058	22658	54561				99277

A. Mission Description and Budget Item Justification: This program element supports advanced component development and prototypes of new and improved technologies for combat support and combat service support equipment essential to sustaining combat operations. Advancements in watercraft, bridging, electric power generators and batteries, potable water, material-handling, environmental control, shelter systems, cargo aerial delivery, field service systems, mortuary affairs equipment and petroleum equipment are necessary to improve safety and increase the tactical mobility, operational capability, lethality and survivability on the digital battlefield and to provide for greater sustainment while reducing the logistics support burden.

Increase from FY08 to FY09 reflect USD(AT&L) direction to move Joint Light Tactical Vehicle form MS B to MS A. This reflects adjustments in the 6.5 and 6.4 funding.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	10103	27499	22237
Current BES/President's Budget (FY 2009)	9799	37993	44141
Total Adjustments	-304	10494	21904
Congressional Program Reductions		-243	
Congressional Rescissions			
Congressional Increases		10737	
Reprogrammings	-27		
SBIR/STTR Transfer	-277		
Adjustments to Budget Years			21904

Change Summary Explanation: Funding - FY 2009: Increase reflects USD(AT&L) direction to move Joint Light Tactical Vehicle form Milestone B to Milestone A.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**526**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
526 MARINE ORIEN LOG EQ AD	97	13728	3079	3082	3082	3050	3124	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports advanced component development and prototype equipment for the Army's Logistics-Over-The-Shore (LOTS) missions. The primary mission of Army Watercraft Systems is inherently tied to the required capability to move tonnage/cargo from major sea going vessels to the shore in support of LOTS/Joint Logistic over the Shore (JLOTS) and various watercraft missions. The Army utilizes a combination of Modular Causeway Systems (MCS), Barge Derricks (BD), Barges, Landing Crafts (Landing Crafts Utility (LCUs), Logistic Support Vessels (LSVs), Landing Crafts Mechanized (LCM-8s) and Tug Boats to offload deep draft vessels. The time phased mix of numbers and types of vessels outlined are essential in maintaining a given level of capability to support JLOTS operations. This capability is only as strong as the weakest link and takes the full combination of all assets to accomplish.

Funding for the Joint Enable Theater Access-Sea Ports of Debarkation (JETA-SPOD) Advanced Concept Technology Demonstration (ACTD) will be used to support the Vessel-to-Shore Bridging (VSB) component of the program. This includes funding for VSB core developmental requirements and Operational Testing/Military Utility Assessment (MUA) in FY08, and follow-on research and development funding to support the transition of VSB to an acquisition program. This funding will provide R&D of the full scale operational prototype in addition to a broader and more robust MUA designed to adequately test and assess the VSB for military utility under the lead of the USPACOM ACTD Operational Manager (OM). Performance risk will be mitigated by ensuring the technology receives optimum test and evaluation to meet the warfighting operational requirements to include an extended user evaluation. Funding will also allow the development of an additional 50-60 foot section that will result in expanded technical development, testing, and utility assessment for the multiple operational uses and employment methods (eg. Army/Service Watercraft, Joint High Speed Vessel (JHSV), dry/wet gap crossings, and aerial delivery). Funding provided for the Habor Master Command & Control Center production representative systems development.

VSB will optimize the throughput capabilities of the JHSV, current Army/USMC watercraft, and bridging requirements across extended mudflats/tidal estuaries by providing a more rapid and increased flow of combat power and sustainment through multiple austere theater access points. VSB is transported on and rapidly employed by these vessels to provide the Joint and Combined force commanders a means to mitigate threat anti-access activities and increases flexibility to conduct operational maneuver from strategic distances. The ACTD complements the JHSV program by optimizing throughput and warfighting operational capabilities not currently available in support of Lines of Communication (LOC) in the theater of operations.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: JETA-SPOD		2879	500
FY07-FY09: Program Support.	97	200	275
FY08: HCCC Production Representative Systems Development.		10265	
FY09 Watercraft market surveys and business analysis			304
FY09 Watercraft SLEP			2000
Small Business Innovative Research/Small Business Technology Transfer Program		384	

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3, R09900, Causeway Systems	8938								8938

Comment:

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
526

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Watercraft SLEP	PWD	Naval Underwater Warfare Center, Newport, R.I.	3286					2000		Cont.	Cont.	
TSV - composite prototype hull design	MIPR	Naval Underwater Warfare Center, Newport, R.I.	4211								4211	
Watercraft market surveys/business analysis	MIPR	TBS	50					304			354	
HCCC Design	MIPR	PEOC3T			2Q	10649					10649	
JETA-SPOD-Vessel to Shore Bridging (VSB)	MIPR	USAPACOM J14-12, Camp Smith, Hawaii	1800			2879		500		Cont.	Cont.	
Subtotal:			9347			13528		2804		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
TSV/Matrix Support	MIPR	TACOM CBU, Warren, MI	4366							Cont.	4366	
TSV - composite prototype hull design	MIPR	CASCOM, Ft. Lee, VA	5240							Cont.	5240	
TSV/Matrix Support	MIPR	TARDEC, Warren, MI/ICI	170								170	
TSV/In-house	MIPR	PM Force Projection, Warren, MI	2190							Cont.	2190	
TSV-Demil	MIPR	TACOM, PSID, Warren, MI	212							Cont.	Cont.	
JETA-SPOD-VSB	MIPR	TACOM, PSID, Warren, MI			1-2Q					Cont.	Cont.	

Subtotal:			12178							Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
TSV	MIPR	DTC/ATEC, MD	1071							Cont.	1071	
TSV	MIPR	PM WIN-T	1500								1500	
HCCC	MIPR	USAFTCFE, Ft. Eustis, VA								Cont.	Cont.	
Subtotal:			2571							Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Support	MIPR	PM Force Projection, TACOM, Warren, MI	960	95		200		275			1530	
HCCC	MIPR	PM Force Projection, TACOM, Warren, MI								Cont.	Cont.	
JETA-SPOD-VSB	MIPR	PM Force Projection, TACOM, Warren, MI								Cont.	Cont.	
SBIR/STTR				2							2	
Subtotal:			960	97		200		275		Cont.	Cont.	

Project Total Cost:			**25056**	**97**		**13728**		**3079**		**Cont.**	**Cont.**	

Schedule Detail (R4a Exhibit)		February 2008
BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603804A - Logistics and Engineer Equipment - Adv Dev**	PROJECT **526**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**G11**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
G11 ADV ELEC ENERGY CON AD	1889	3151	3357	2898	2915	1624	729	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Mobile Electric Power (MEP) program was established by the Department of Defense to develop modernized, standard families of mobile electric power sources for all Services throughout the Department of Defense. This Project Office derives concept and technology developments that will improve the performance, mobility, readiness and survivability of the next generation power sources in support of all Services. It supports initiatives that are essential to the development and fielding of modernized Mobile Electric Power (MEP) sources from 0.5 KW to 750 KW that comply with environmental statutes and provide noise and signature-suppressed, energy efficiency, lightweight, deployable and reliable equipment. FY08 and FY09 will fund test and evaluation technologies for Small Tactical Electric Power (STEP) and initiate market survey and begin evaluation of components for Large Advanced Mobile Power Sources (LAMPS).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Evaluated and conducted limited testing of specific commercial technologies for possible consideration as materiel solutions to STEP component and/or system level requirements.	1889		
FY08: Evaluation and testing of various technologies related to Tactical Electric Power across the Army power spectrum aimed at technology gaps to meet Army User requirements. These efforts support the Small Tactical Power (STEP) program, the Advanced Medium Mobile Power Sources (AMMPS) program and the Large Advanced Mobile Power Sources (LAMPS) program.		3066	
FY09: Evaluation and testing of various technologies related to Tactical Electric Power across the Army power spectrum aimed at technology gaps to meet Army User requirements. These efforts support the Small Tactical Electric Power (STEP) program, the Advanced Medium Mobile Power Sources (AMMPS) program and the Large Advanced Mobile Power Sources (LAMPS) program.			3357
Small Business Innovative Research/Small Business Technology Transfer Programs		85	
Total	1889	3151	3357

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDT&E:PE0604804A, Logistics and Engineer Equipment - Eng Dev 194	11036	11026	6368	1396	1397	2366	1549	Continuing	Continuing
OPA 3, Generators and Associated Eq. MA9800	141581	110723	217749	162861	130790	133008	9854	Continuing	Continuing

Comment:

C. Acquisition Strategy Complete advanced development and transition to system development and demostration phase (Milestone B) and subsequent transition to production (Milestone C).

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
G11

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	MIPR	CECOM - Belvoir	971	750	1Q	193	2Q	315	1Q	Cont.	Cont.	
AMMPS Components	MIPR	CECOM - Belvoir	2072			279	2Q	484		Cont.	Cont.	
LAMPS Components	MIPR	CECOM - Belvoir				122	2Q	180	1Q	Cont.	Cont.	
Subtotal:			3043	750		594		979		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	MIPR	CECOM-Belvoir	670	981	1Q	347	2Q	495	1Q	Cont.	Cont.	
AMMPS Components	MIPR	CECOM-Belvoir	671			504	2Q	682	1Q	Cont.	Cont.	
LAMPS Components	MIPR	CECOM-Belvoir				220	2Q	295	1Q	Cont.	Cont.	
Subtotal:			1341	981		1071		1472		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
STEP Components	MIPR	CECOM-Belvoir	789			421	2Q	243	2Q	Cont.	Cont.	
AMMPS Components	MIPR	CECOM-Belvoir	150			628	2Q	334		Cont.	Cont.	
LAMPS Components	MIPR	CECOM-Belvoir				257	2Q	143	2Q	Cont.	Cont.	
Subtotal:			939			1306		720		Cont.	Cont.	

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

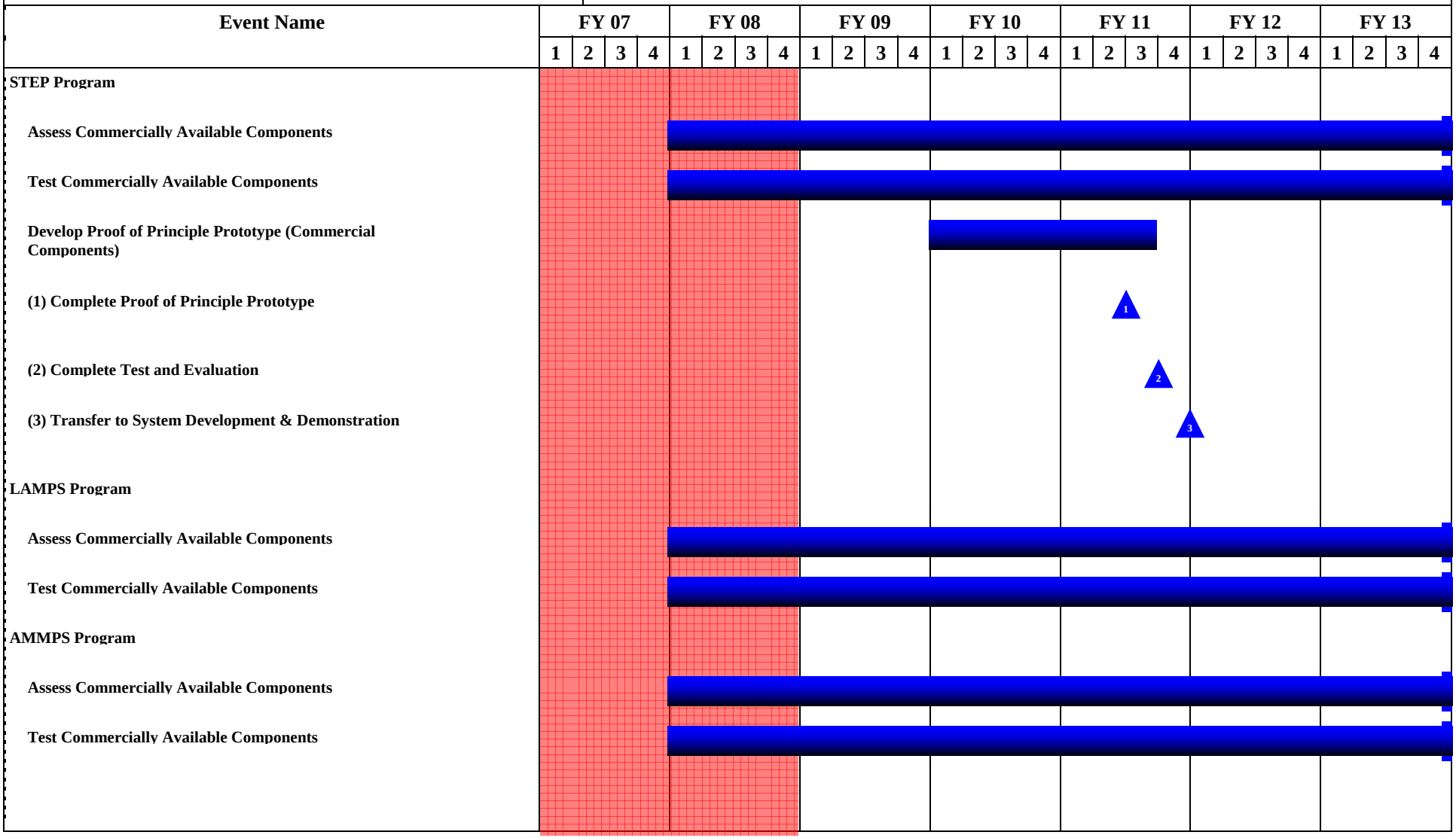
PROJECT
G11

	Type				Date		Date		Date			Contract
STEP Components	In-house	In-house	301	158	1-4Q	60	1-4Q	62	1-4Q	Cont.	Cont.	
AMMPS Components	In-House	In-house	277			60	1-4Q	62	1-4Q	Cont.	Cont.	
LAMP Components						60	1-4Q	62	1-4Q	Cont.	Cont.	
Subtotal:			578	158		180		186		Cont.	Cont.	
Project Total Cost:			**5901**	**1889**		**3151**		**3357**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**G11**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**G11**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
STEP Program	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Assess Commercially Available Components		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test Commercially Available Components		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Develop Proof of Principle Prototype (Commercial Components)				1Q - 4Q	1Q - 3Q		
Complete Proof of Principle Prototype					3Q		
Complete Test and Evaluation					4Q		
Transfer to System Development & Demonstration						1Q	
LAMPS Program		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Assess Commercially Available Components		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test Commercially Available Components		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMMPS Program		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Assess Commercially Available Components		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test Commercially Available Components		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
K39 Field Sustainment Support AD	3164	12262	9790	17509	22570	5615	5498	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development of critical soldier support and sustainment systems including shelter systems (rigid and soft wall), cargo aerial delivery, field service systems, mortuary affairs equipment, heaters and other combat service support equipment. These systems will fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. This project also supports Advanced Component Development and Prototyping of Critical Distribution Capabilities to include cargo aerial delivery systems; which provide improved safety and accuracy while increasing survivability of aircraft, personnel, and equipment. The project supports the development of tactical heater systems that support mobile Joint Service command and control, medical, and maintenance platforms. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment through aerial delivery initiatives and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY 07: Obtained Milestone C for Low Cost Aerial Delivery Low Velocity Parachute (LCADS Low-V). FY 08/09 Execute LCADS P3I effort to include evaluation of LCADS capability as a total replacement for current reusable cargo chutes and increases to existing weight capacity.	20	666	278
FY 07: Continued engineering and logistics data deliverables. Completed Production Qualification Testing (PQT), logistics demonstration and user evaluation for the 60K IECU. Obtained Milestone C Full Rate Production Decision for the 60K IECU.	1020		
FY07: Obtained Milestone B for JPADS 2K and executed Source Selection process. Started design validation for JPADS 2K. Transitioned JPADS 2K to SDD phase. Obtained Milestone B, prepared RFP and Source Selection process for JPADS 10K. FY08: Procure JPADS 10K prototypes and complete JPADS 10K design validation. Obtain Milestone A for JPADS 30K. FY09: Transition JPADS 30K from ATO; and develop and procure JPADS 30K prototypes. Continue JPADS 10K guidance and navigation, system hardware and software, integration and testing.	2124	6367	5634
FY08: Award Advanced Component development contract for the Space Heater Convective, 120,000 British Thermal Unit Heating (BTUH) (SHC 120K).FY09: Complete Advanced Development of the SHC 120K and prepare for transition to Developmental Testing (DT) and Operational Testing (OT)		888	944
FY 08: Obtain Milestone A for ALVADS Advanced Cargo Parachute Release System (ACPRS). Procure test prototypes from multiple vendors and conduct advanced component flight tests. FY 09: Obtain Milestone B for ACPRS and award competitive development contract. Restart Milestone B for Advanced Low Velocity Airdrop System-Light (ALVADS-L).		2333	2101
FY 08/09: Evalutate utility of Multi-Mode Platform with Mobile Integrated Remains Collection System (MIRCS). Evaluate compatability / integration on MIRCS trays with transfer case, based on feedback from the AOR regarding transfer case problems with current systems. FY 09: Compete testing and update documentation.		555	333

FY 08/09: Execute Enhanced Containerized Delivery System (ECDS) P3I efforts focused on expanding recovery parachute options to include G-11 recovery parachutes and a standard rigging configuration for C-130 and C-17 aircraft, while also increasing inter-modal capabilities. Execute Low Cost Aerial Delivery System (LCADS) P3I efforts to include evaluating LCADS Hi-V and Low-V parachutes as cost effective recovery system options for the Air Force and Joint Improvise Explosive Device Defeat Organization (JEIDDO) sponsored effort for an expanded 5-10K pound, high altitude Improved Container Delivery System (CDS) capability. Additionally, LCADS P3I efforts will include Type Classification of the Low Cost Low Altitude (LCLA) Capability and transition to sustainment.		1110	500
Small Business Innovative Research/Small Business Technology Transfer Program		343	
Total	3164	12262	9790

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MF9303 Control Unit, Environmental		11549	11201	12032	11668	110		Continuing	Continuing
OPA 3,M77700 Mobile Integrated Remains Collection System		9874	17803	18335	5282			Continuing	Continuing
OPA 3, MA7806 Precision Airdrop		199	17953	21826	22850	15355	14970	Continuing	Continuing

Comment:

C. Acquisition Strategy Accelerate Joint Precision Aerial Delivery System (JPADS) product development and testing to transition to System Development & Demonstration and/or Production. Improved Environmental Control Unit (IECU) complete Milestone B System Development and Demonstration phase and transition to production phase (MSC).

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K39

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	In-House	PM Force Sustainment Sys (FSS), Natick	3943	175	1-4Q	956	1-4Q	4206	1-4Q	Cont.	Cont.	
Soldier Support Equipment	In-House	NSC, Natick	957	75	1-4Q	1036	1-4Q	835	1-4Q	Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	4475	471	1-4Q	5161	1-4Q	771	1-4Q	Cont.	Cont.	
Improved Environmental Control Unit (IECU)	In-House	CECOM, Ft Belvoir	278	108	3-4Q					Cont.	Cont.	
Subtotal:			9653	829		7153		5812		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Improved Environmental Control Unit (IECU)	In-house	CECOM, Ft Belvoir		500	2Q						500	
Subtotal:				500							500	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	557	114	1-4Q	457	1-4Q	371	1-4Q	Cont.	Cont.	
Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ, AEC	5068	1018	1-4Q	4082	1-4Q	3314	1-4Q	Cont.	Cont.	
IECU	MIPR	Various	228	187	3-4Q					Cont.	Cont.	
Subtotal:			5853	1319		4539		3685		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

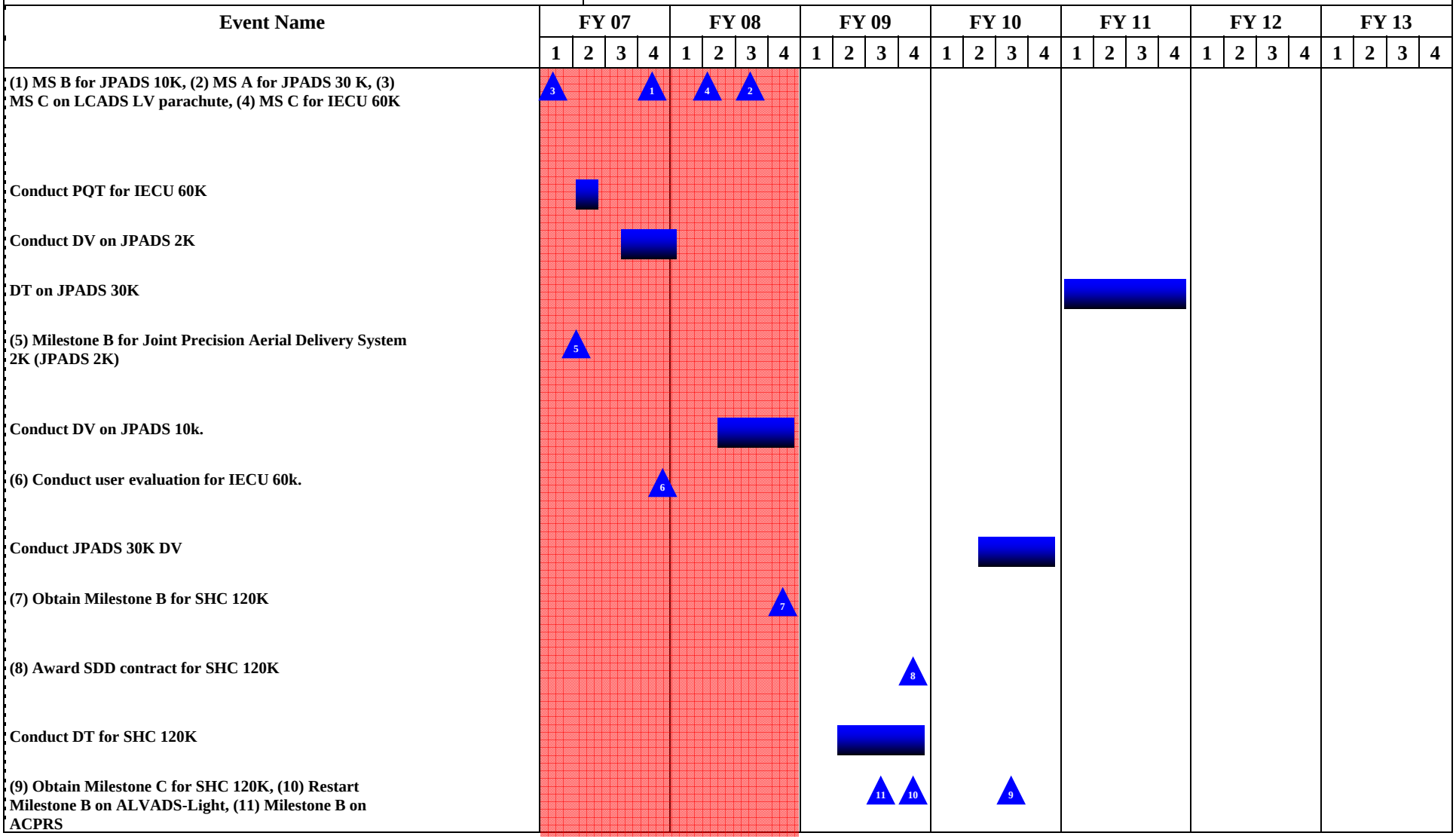
PROJECT
K39

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	In-House	PM Force Sustainment Sys (FSS), Natick	423	63	1-4Q	227	1-4Q	293	1-4Q	Cont.	Cont.	
Project Management Support	In-House	PM MEP Ft Belvoir	52	362	1-4Q					Cont.	Cont.	
SBIR/STTR				91		343					434	
Subtotal:			475	516		570		293		Cont.	Cont.	
Project Total Cost:			**15981**	**3164**		**12262**		**9790**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

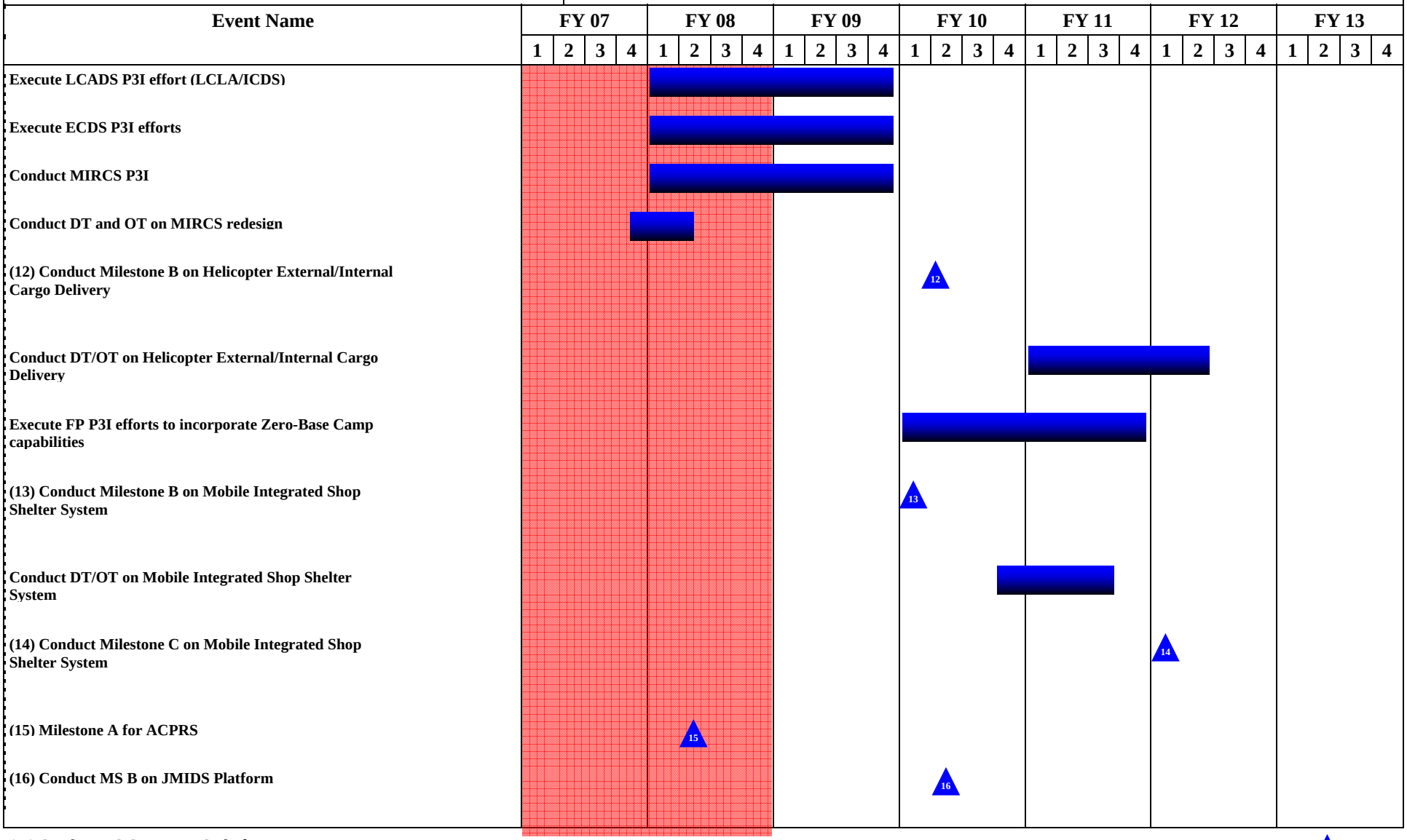
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K39**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MS B for JPADS 10K	4Q						
MS A for JPADS 30 K		3Q					
MS C on LCADS LV parachute	1Q						
MS C for IECU 60K		2Q					
Conduct PQT for IECU 60K	2Q						
Conduct DV on JPADS 2K	3Q - 4Q	1Q					
DT on JPADS 30K					1Q - 4Q		
Milestone B for Joint Precision Aerial Delivery System 2K (JPADS 2K)	2Q						
Conduct DV on JPADS 10k.		2Q - 4Q					
Conduct user evaluation for IECU 60k.	4Q						
Conduct JPADS 30K DV				2Q - 4Q			
Obtain Milestone B for SHC 120K		4Q					
Award SDD contract for SHC 120K			4Q				
Conduct DT for SHC 120K			2Q - 4Q				
Obtain Milestone C for SHC 120K				3Q			
Restart Milestone B on ALVADS-Light			4Q				
Milestone B on ACPRS			3Q				
Execute LCADS P3I effort (LCLA/ICDS)		1Q - 4Q	1Q - 4Q				
Execute ECDS P3I efforts		1Q - 4Q	1Q - 4Q				
Conduct MIRCS P3I		1Q - 4Q	1Q - 4Q				
Conduct DT and OT on MIRCS redesign	4Q	1Q - 2Q					
Conduct Milestone B on Helicopter External/Internal Cargo Delivery				2Q			
Conduct DT/OT on Helicopter External/Internal Cargo Delivery					1Q - 4Q	1Q - 2Q	

Execute FP P3I efforts to incorporate Zero-Base Camp capabilities				1Q - 4Q	1Q - 4Q		
Conduct Milestone B on Mobile Integrated Shop Shelter System				1Q			
Conduct DT/OT on Mobile Integrated Shop Shelter System				4Q	1Q - 3Q		
Conduct Milestone C on Mobile Integrated Shop Shelter System						1Q	
Milestone A for ACPRS		2Q					
Conduct MS B on JMIDS Platform				2Q			
Conduct MS C on JMIDS Platform							2Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K41**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
K41	WATER AND PETROLEUM DISTRIBUTION - AD	4451	2442	439	3280	2834	4793	2981	Continuing	Continuing

A. Mission Description and Budget Item Justification: Description: This project develops and demonstrates the potential of prototype equipment and technologies to satisfy petroleum storage, distribution, and quality surveillance system requirements. The Concept and Technology Development program supports the development and enhancement of rapidly deployable Petroleum and Water equipment. The mission includes developing onboard fuels and lubrication quality analysis systems; achieving greater capabilities in the removal of Nuclear, Biological, Chemical (NBC) and other contaminates from water sources; reducing the logistics foot print; developing water reutilization systems to reduce the requirement for transport of water into the theatre; and material and systems to decrease the logistics foot print and employment time for the transfer of liquid logistics in the theatre. The Army fights with clean fuel and drinking water. This vital equipment enables the Army to achieve its transformation vision by providing the Army with the means to be highly mobile and self-sustaining in very hostile theaters of operations. Future Force operations demand that combat systems be rapidly deployable to the theater, rapidly emplaced upon arrival, and rapidly relocated to support a fast moving non-linear battlefield.

Justification: FY 2009 funding will focus on Petroleum and Water Systems capabilities that were not met during the development phase for systems that are being fielded or soon will be fielded. To do this, commercially available technologies/components will be identified and evaluated to determine if they perform the required functions at the desired performance level. If fully proven, components will be integrated into the system and perform a system-level evaluation. Improvement opportunities for the family of Fuel Supply System Points (FSSP) will include conducting failure analysis, market investigation and analysis of alternatives of long life, rapid mobile fuel storage tanks, conducting investigation of commercial/non-developmental item (NDI)/emerging automatic gauging and accounting technologies. Improvements to water distribution and purification systems will include performing evaluation of real-time in-line water quality sensors to allow by-pass of reverse osmosis membranes on military water purifiers when operating on fresh water sources, performing market investigation and testing of potential commercial devices to dose and control chlorine levels in water tankers such as the Load Handling System Water Tank Rack (Hippo) and Unit Water Pod System (Camel). FSSP improvements will continue to include technical evaluation of long life, rapid mobile fuel storage tanks, evaluation of automated tank gauging systems and select best technical approach.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY08: Continues improvements for the Lightweight Water Purifier (LWP) and Tactical Water Purification System (TWPS). Investigate potential or organic and metal leaching in water storage systems and health effects, identify life cycle cost savings in consumables and higher reliable components, improve methods to measure service life of filtration membranes, determine upper performance limits of TWPS and LWP. In FY08, evaluate real-time-in-line water quality sensors, conduct a market investigation for devices to automatically dose and control chlorine levels in water tankers and evaluate potential candidates for performance and suitability for military environment.	935	1380	
FY07: Continues development and testing of Advanced Petroleum Test Kit (PTK) components, identify best technologies for system development, establish key technical and performance parameters and prepare development specifications.	409		
FY07: RIFTS Block II development of components which includes automated pumping station (APS), command and control module	1325		

(C2M) with leak detection capabilities, and computer based planning aid.			
FY07: Design and fabricate prototype Petroleum Quality Analysis System Enhanced components; test interfaces and prepare technical data.	1032		
FY07-FY09: Continues Fuel Systems improvements for Family of Fuel System Supply Points (FSSPs). Conduct market investigations and identify design standardization requirements for common pump for both fuel and water distribution systems, conduct market research for automatic tank gauging (ATG) systems and flow volume metering devices, conduct evaluation of methods to extend operational life of collapsible fuel storage tanks and investigate technical and military suitability of portable berms to contain fuel spills. In FY08, procure and test candidate common pumps for downselection and continue market research of ATG and metering devices. In FY09, evaluate performance and military usefulness of commercial ATG and metering systems and environmental testing.	750	994	439
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		68	
Total	4451	2442	439

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0604804.L41, Logistics and Engineer Equipment - Engineering Development	7030	8955	5058	3335	3359	2035	3940	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	19931	43719	51164	44915	18976	20960	4845	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	111423	34173	61545	105999	91800	12440	9984	Continuing	Continuing

Comment:

C. Acquisition Strategy Develop engineering prototypes or select Non-Developmental Item based on market surveys and proposals from industry. Competitive; sole source contraction. Modernization through spares.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
K41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	MIPR	NFESC, Port Hueneme, CA	101	200	1Q	200	1Q			Cont.	Cont.	Cont.
Water Purification Components Improvements	Purchase Orders	TBD	182	226	1-4Q	216	1-4Q			Cont.	Cont.	Cont.
Water Purification Components Improvements	In-House	TARDEC, Warren, MI	408	50	1Q	57	1Q			Cont.	Cont.	Cont.
Water Purification Components Improvements	C-CPFF	MTC, Dayton, OH		150	2Q					Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	In-House	TARDEC, Warren, MI	566	200	1Q					Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	Purchase Order	Micron Optical Incorporated, Portsmouth, VA		25	2Q					Cont.	Cont.	Cont.
Advanced Petroleum Test Kit	MIPR	NAV AIR, Patuxent River, MD		84	3Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) Block I	C-CPFF	Southwest Research Institute, San Antonio, TX	3208							Cont.	Cont.	Cont.
RIFTS Block II	In-House	TARDEC, Warren, MI		300	1Q					Cont.	Cont.	Cont.
RIFTS Block II	C-CPFF	Southwest Research Institute, San Antonio, TX		726	2Q					Cont.	Cont.	Cont.
Petroleum Quality Analysis System Enhanced	In-House	TARDEC, Warren, MI		155	1Q					Cont.	Cont.	Cont.
Petroleum Quality Analysis System Enhanced	MIPR	Rock Island Arsenal, Rock Island, IL		877	1Q					Cont.	Cont.	Cont.
Fuel Systems Components Improvements	In-House	TARDEC, Warren, MI	151	150	1Q	150	1Q	200	1Q	Cont.	Cont.	Cont.
Fuel Systems Components Improvements	TBD	TBD		150	2Q	674	2Q	147	2Q	Cont.	Cont.	Cont.
Subtotal:			4616	3293		1297		347		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	In-House	TARDEC, Warren, MI	703	50	1Q	100	1Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI	65	45	1Q					Cont.	Cont.	Cont.
RIFTS Block II	In-House	TARDEC, Warren, MI		60	1Q					Cont.	Cont.	Cont.
Fuel Systems Components Improvements	In-House	TARDEC, Warren, MI		50	1Q	50	1Q			Cont.	Cont.	Cont.
Subtotal:			768	205		150				Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Water Purification Components Improvements	In-House	TARDEC, Warren, MI	479	160	1-4Q	250	1Q			Cont.	Cont.	Cont.
Water Purification Components Improvements	MIPR	NFESC, Port Hueneme, CA		305	1Q	257	1Q			Cont.	Cont.	Cont.
Water Purification Components Improvements	MIPR	Aberdeen Proving Ground, Aberdeen, MD				300	2Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI	507	55	1Q					Cont.	Cont.	Cont.
Fuel Systems Components Improvements	In-House	TARDEC, Warren, MI		100	2Q	120	1Q			Cont.	Cont.	Cont.
Fuel Systems Components Improvements	MIPR	Yuma Proving Ground, Yuma, AZ		209	1Q			92	2Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel)	MIPR	Yuma Proving Ground, Yuma, AZ	1939							Cont.	Cont.	Cont.
Subtotal:			2925	829		927		92		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

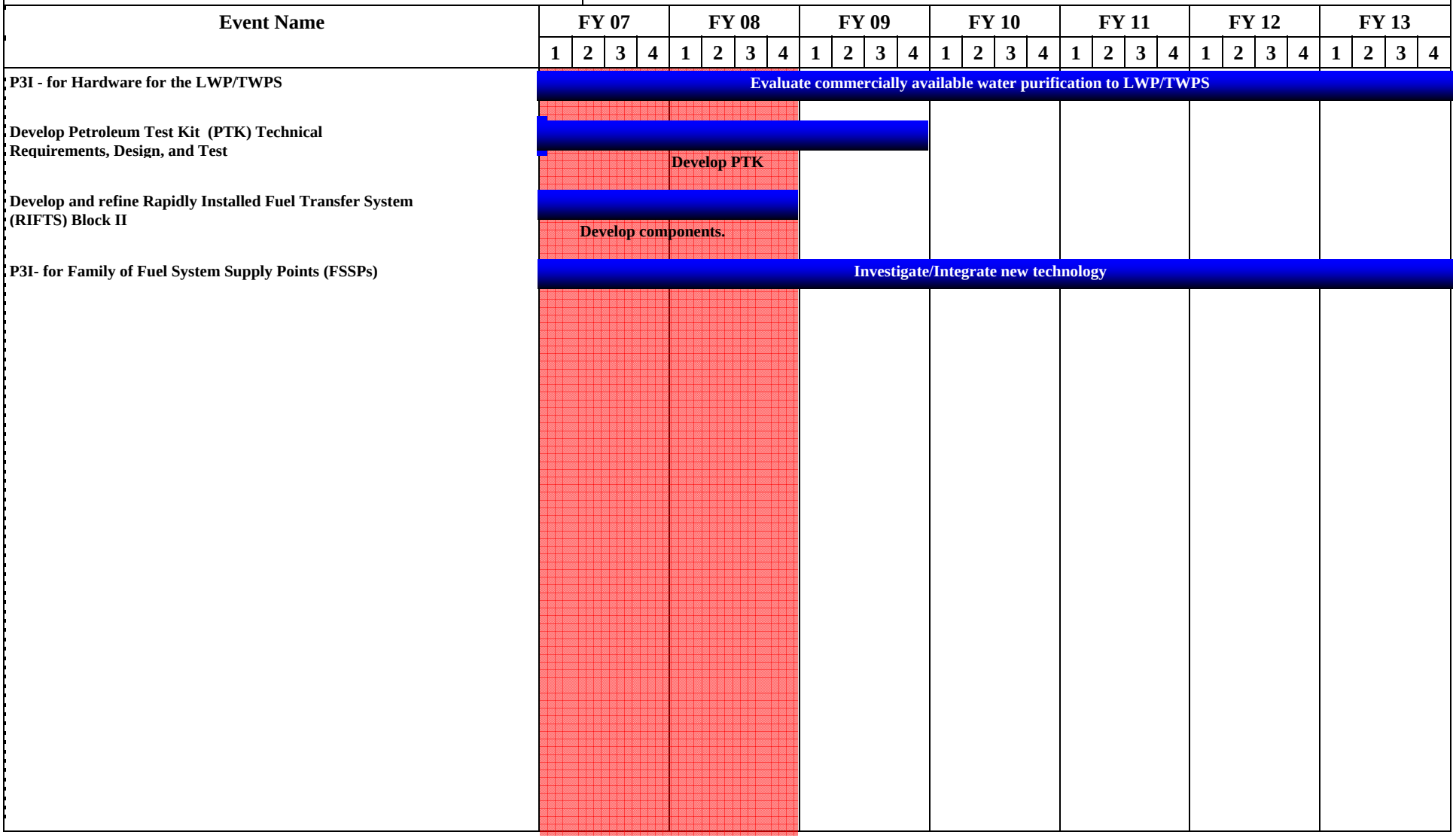
PROJECT
K41

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)				124	1Q	68					192	124
Subtotal:				124		68					192	124
Project Total Cost:			**8309**	**4451**		**2442**		**439**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K41**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K41**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
P3I - for Hardware for the LWP/TWPS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
PQT&E - Camel							
Develop Petroleum Test Kit (PTK) Technical Requirements, Design, and Test	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Develop and refine Rapidly Installed Fuel Transfer System (RIFTS) Block I							
Develop and refine Rapidly Installed Fuel Transfer System (RIFTS) Block II	1Q - 4Q	1Q - 4Q					
P3I- for Family of Fuel System Supply Points (FSSPs)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**K42**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
K42 MATERIEL SUSTAINMENT SUPPORT AD		6143	5207	2999	477				14826

A. Mission Description and Budget Item Justification: This project supports Advanced Component Development and Prototypes of reformulated paints, paint removers, cleaners and other surface coating materials for weapon systems production and maintenance operations. The project increases operational sustainment and warfighter training capabilities by reducing soldier health risks, environmental impacts and compliance enforcement actions against installations while increasing coatings performance and standardization across the Army. Materials demonstrated under this project are inherently compliant with all applicable National Emissions Standards for Hazardous Air Pollutants that regulate surface coating activities, thereby eliminating the need for Army installations to incur hundreds of millions of dollars in expenses to purchase, install and operate air pollution control devices. Together with project 0603779A, Environmental Quality Technology Dem/Val (E21), this project transitions advanced technologies developed under 0603728A, Environmental Quality Technology Demonstrations (025). The project tests and evaluates Sustainable Painting Operations for the Total Army (SPOTA) at facilities that produce and maintain Combat Support/Combat Service Support systems, Ground Combat Vehicles and other Army equipment. The project expedites technology transition from the laboratory to operational use by demonstrating the capabilities of reformulated materials to fulfill the performance requirements outlined in Material Specifications, Depot Maintenance Work Requirements, Technical Manuals and other technical data. Test and evaluation activities are executed by Research, Development and Engineering Command (RDECOM) centers and laboratories in cooperation with the affected Life Cycle Management Commands. Materials are being demonstrated at ten different Army facilities in order to minimize the disruption of materiel maintenance operations at any one facility.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Qualify, validate and approve reformulated Chemical Agent Resistant Coating (CARC) systems and other non-CARC paints		2213	3403
Qualify, validate and approve hazardous air pollutant (HAP) free solvents, thinners and cleaners		1474	470
Qualify, validate and approve chemical paint strippers containing no methylene chloride or other HAPs		624	705
Qualify, validate and approve reformulated sealants and adhesives for high-use applications		227	588
Qualify, validate and approve alternative rubber-to-metal bonding materials for tracked vehicles		1434	41
Small Business Innovation Research/Small Business Technology Transfer		171	
Total		6143	5207

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603728A, Environmental Quality Technology Demonstrations (025)	3458	3559	3652	3725	3799	3883	3968		29023
0603779A, Environmental Quality Technology Dem/Val (E21)		1299	531						1830

0605857A, Environmental Quality Technology Mgmt Support (06I)		354	275	280	68				977

Comment:

C. Acquisition Strategy The SPOTA program is managed by the Director of the Environmental Acquisition and Logistics Sustainment Program at the Headquarters, U.S. Army Research, Development and Engineering Command (RDECOM). The SPOTA program is executed by RDECOM centers and laboratories in cooperation with the affected Life Cycle Management Commands.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**L04**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L04	JOINT LIGHT TACTICAL VEHICLE (JLTV) - AD			22058	22658	54561				99277

A. Mission Description and Budget Item Justification: Joint Light Tactical Vehicle (JLTV): FY08 and future funding supports the development and testing of the JLTV, being developed as a joint system between the Army and the Marine Corps. The Honorable John Young, Defense Acquisition Executive, in a 10 September 2007 memorandum directed the Army and Navy Acquisition Executives to continue the JLTV acquisition program by successfully achieving a Milestone (MS) A decision which would be followed by a robust technology demonstration phase. As stated in Mr. Young's memorandum, this approach could reduce System Development & Demonstration (SDD) phase activities, costs and technology risks. MS A occurred on 05 December 2007. In order to support the memorandum the Department has requested that the FY08 dollars, previously found in PE 0604642A, project E40 be moved to PE 0603804A, project L04.

The JLTV concept is based on a Family of Vehicles (FOV) focused on integrated scalable personnel protection, payload, performance and regaining vehicle agility and mobility required of the light tactical vehicles fleet while addressing passenger protection. JLTV will also reduce system life cycle cost through commonality of replacement spare and repair parts at the sub-assembly and component level. As a light tactical system, the JLTV will provide defensive measures covering troops while in transport, increase payload capability, maintain configuration management to reduce or improve the logistics footprint, and reduce onerous soldier and Marine workload associated with system operation and field maintenance activities.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
JLTV Program Management			3000
JLTV Variant Prototype Design, Development and Fabrication			12558
JLTV Developmental Test and Evaluation			6500
Total			22058

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Force Service Support Group 0206315M, Joint Light Tactical Vehicle			624			25000	106276		131900

Comment:

C. Acquisition Strategy The JLTV Acquisition Strategy for the Technology Demonstration (TD) phase, FY08-11, is to competitively award multiple contracts. During this phase, the Contractors will be required to design, fabricate, and test complete demonstrators (vehicles and trailers) for JLTV payload Categories A (Battlespace Awareness), B (Force Application), and C (Focused Logistics). All of the demonstrators will undergo developmental testing, as well as limited user assessments, in a relevant environment at Government test facilities. The goal is to ensure the best family of demonstrators is mature in terms of supporting technology readiness and full system integration. This will ensure minimum Technology Readiness Levels (TRL) of 6 across all areas, allowing a key MS B prerequisite to be met.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603804A - Logistics and Engineer Equipment - Adv Dev

PROJECT
L04

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JLTV Variant Prototype Design, Development and Fabrication		TBD						12558	1-4Q		12558	
JLTV Program Management		TACOM, Warren, MI						3000	1-4Q		3000	
Subtotal:								15558			15558	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JLTV Developmental Test and Evaluation		TBD						6500	2-4Q		6500	
Subtotal:								6500			6500	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

ARMY RDT&E COST ANALYSIS (R3)

February 2008

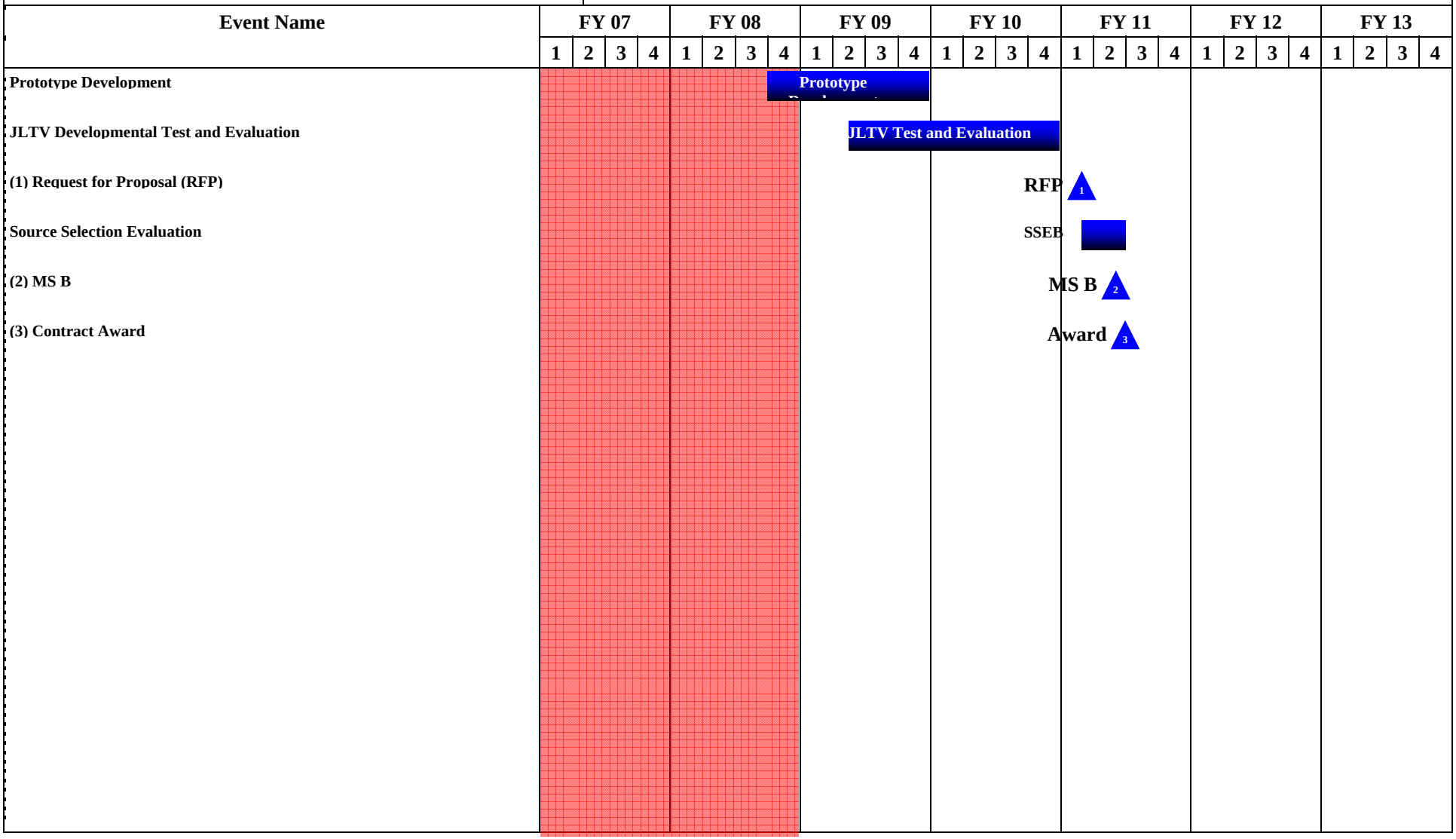
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**L04**

Project Total Cost:						**22058**			**22058**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**L04**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603804A - Logistics and Engineer Equipment - Adv Dev**	**L04**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Prototype Development		4Q	1Q - 4Q				
JLTV Developmental Test and Evaluation			2Q - 4Q	1Q - 4Q			
Request for Proposal (RFP)					1Q		
Source Selection Evaluation					1Q - 2Q		
MS B					2Q		
Contract Award					2Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation and Analysis**	**091**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
091 CBT SVC SPT CONTRL SYS	8403	14959	17788	10028	496				51674

A. Mission Description and Budget Item Justification: The Battle Command Sustainment Support System (BCS3) is the logistics Command and Control (C2) solution for U.S. land forces. BCS3 provides commanders the capability to execute end-to-end distribution and deployment management and brings better situational awareness resulting in better decision-making capability to warfighters. It enables warfighters to target, access, scale and tailor critical logistics information in near-real time. BCS3 provides more effective means to gather and integrate asset and in-transit information to manage distribution and deployment missions. BCS3 combines distribution management to include commodity and convoy tracking, and deployment management into a logistics Common Operating Picture (COP) for one mission-focused visual display.

BCS3 has been adopted and integrated into Joint and strategic logistics command and control processes. BCS3 is the only near-term end-to-end logistics COP solution for the Joint commander. BCS3 will maintain its core capabilities and continue to advance in development while integrating into the Joint command and control architecture. This continued development will enable decision superiority via advanced collaborative information sharing achieved through interoperability.

BCS3 has immediate, high pay-off benefit to warfighters and additional future growth in its capabilities. BCS3 is a force multiplier, a precision tool for logistics planning and execution that provides warfighters with the necessary tools to succeed.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continued Development of Joint, Logistics Info Systems (LIS) Interfaces and maintain interoperability requirements as well as COE upgrades and Security	3210		
LCOP Integration	1413		
LCOP/JDLM Simulation	1039		
CAPES Integration	854		
Operational Testing	119		
Training Development	322		
Program Management	1446	1500	1500
ABCS 6.4 Functionality and Integration		7537	10495
Migrate to Joint System "Common Viewer"		712	900
Standardize Collaboration		316	401
Shift to Net-Centric Enterprise Services (NCES) (Common Operating Environment (COE) Upgrades)		792	801

Automate Initialization and Data Load		2688	2798
BCS3 Tasks (Safety/Security)		1028	893
Small Business Innovative Research/Small Business Technology Transfer Programs.		386	
Total	8403	14959	17788

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation and Analysis**	**091**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	8549	19054	17893
Current BES/President's Budget (FY 2009)	8403	14959	17788
Total Adjustments	-146	-4095	-105
Congressional Program Deductions		-4095	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	63		
SBIR/STTR Transfer	-209		
Adjustments to Budget Years			-105

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Procurement, OPA 2 (W34600)	31828	33535	36829	26968	10935	297		Continuing	Continuing

Comment:

D. Acquisition Strategy The BCS3 acquisition strategy uses a spiral development process that is structured for capabilities to mature and evolve over successive software versions. Versions 1 and 2 served as proof of principle. They provided initial division-level CSS functional capability on common hardware. Version 3 was built on the capabilities of the two previous versions and provided an Initial Operational Capability at Division and Corps level to include initial horizontal interoperability with other Battlefield Functional Area (BFA) systems. Version 4 development included expansion to echelons above Corps (EAC) but has recently undergone additional modification to include BCS3 functionality. BCS3 leverages key identified CSS functionality from the original capability and integrates it with ABCS systems and with numerous national level databases to provide multi-echelon CSS planning and enhanced combat power analysis capabilities. The objective software will provide functionality from tactical (down to maneuver brigade) to strategic level and extend capabilities to Joint, allied and coalition forces.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603805A - Combat Service Support Control System Evaluation and Analysis

PROJECT
091

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software Development	SS/TM	Tapestry Solutions, San Diego, CA	4479	4304	1-2Q		1-2Q		1-2Q	Cont.	Cont.	29935
Software Development	SS/TM	Northrop Grumman, Carson, CA	131624	2212	1-2Q	10367	1-2Q	13322	1-2Q	Cont.	Cont.	141684
Training Development	C/TM	Lockheed Martin, Tinton Falls, NJ	12624	322	1-2Q					Cont.	Cont.	12946
ABCS SE&I Effort	MIPR	PEO C3T, Ft Monmouth, NJ	7686								7686	7686
GFE	MIPR	Various	3601								3601	3601
Subtotal:			160014	6838		10367		13322		Cont.	Cont.	195852

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CECOM, Matrix	MIPR	FT. Monmouth , NJ & Ft. Belvoir, VA	5154								5154	5154
Technical Support	TM	L3, Fort Lee, VA	8321			1036	1-4Q	1180	1-4Q	Cont.	Cont.	10811
Acquisition Support	TM	LMI, McLean, VA	1075								1075	1075
Technical Support	TM	BAE, Herndon, VA				1028	1-4Q	893	1-4Q	Cont.	Cont.	2248
Subtotal:			14550			2064		2073		Cont.	Cont.	19288

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation and Analysis**	**091**

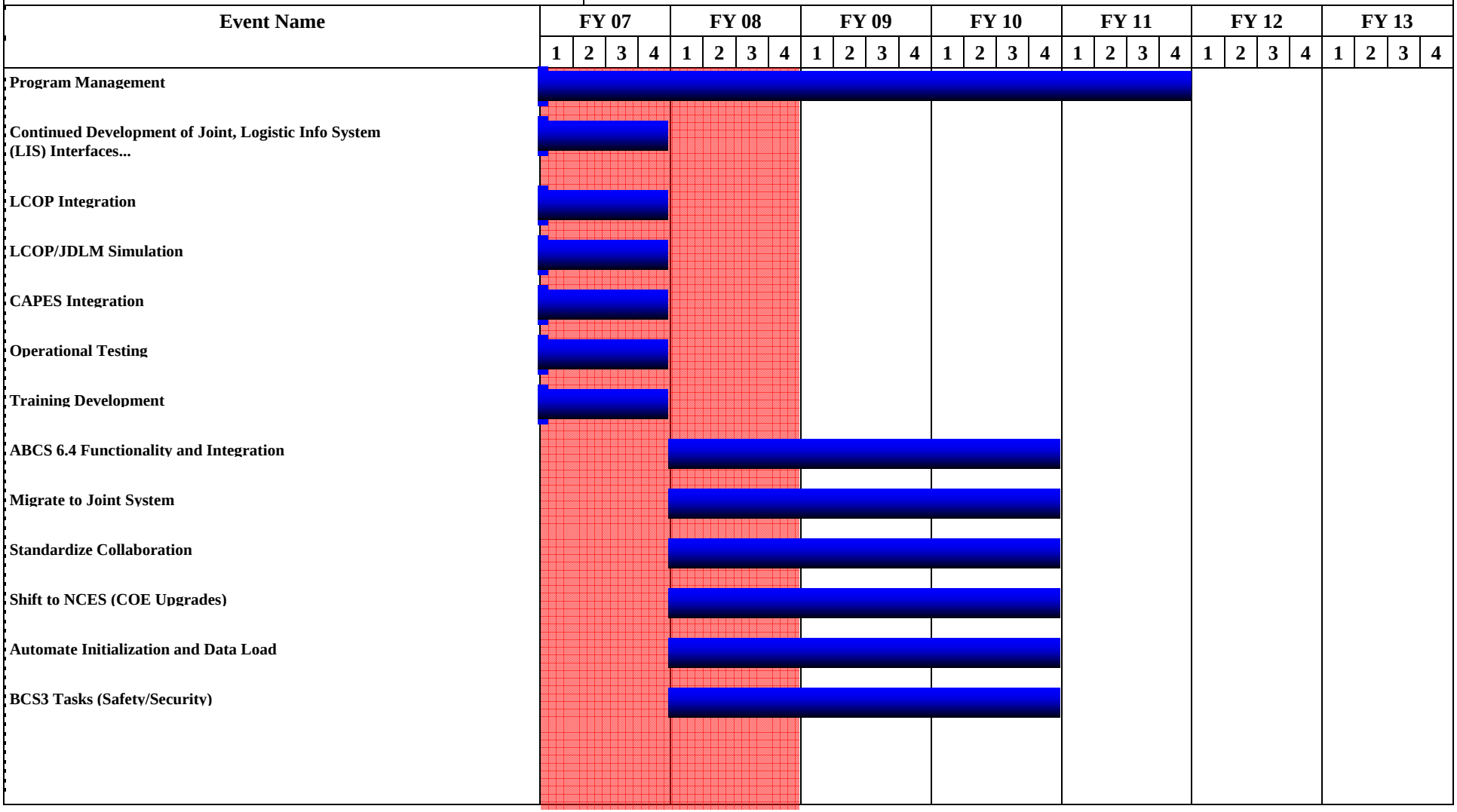
GOVT	MIPR	VARIOUS	5575								5575	5575
Dev. Testing & Eval.	MIPR	EPG, VARIOUS	1028								1028	1028
Oper. Testing	MIPR	ATEC, VARIOUS	2191	119	1-4Q	1028	1-4Q	893	1-4Q	Cont.	Cont.	2310
Subtotal:			8794	119		1028		893		Cont.	Cont.	8913

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	In House	FT. BELVOIR, VA	24501	1446	1-4Q	1500	1-4Q	1500	1-4Q	Cont.	Cont.	29302
Subtotal:			24501	1446		1500		1500		Cont.	Cont.	29302
Project Total Cost:			**207859**	**8403**		**14959**		**17788**		**Cont.**	**Cont.**	**253355**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation and Analysis**	**091**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603805A - Combat Service Support Control System Evaluation and Analysis**	**091**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Program Management	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Continued Development of Joint, Logistic Info System (LIS) Interfaces...	1Q - 4Q						
LCOP Integration	1Q - 4Q						
LCOP/JDLM Simulation	1Q - 4Q						
CAPES Integration	1Q - 4Q						
Operational Testing	1Q - 4Q						
Training Development	1Q - 4Q						
ABCS 6.4 Functionality and Integration		1Q - 4Q	1Q - 4Q	1Q - 4Q			
Migrate to Joint System		1Q - 4Q	1Q - 4Q	1Q - 4Q			
Standardize Collaboration		1Q - 4Q	1Q - 4Q	1Q - 4Q			
Shift to NCES (COE Upgrades)		1Q - 4Q	1Q - 4Q	1Q - 4Q			
Automate Initialization and Data Load		1Q - 4Q	1Q - 4Q	1Q - 4Q			
BCS3 Tasks (Safety/Security)		1Q - 4Q	1Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	22511	29689	26308	24537	10213	13916	13918	Continuing	Continuing
808	DOD DRUG & VACC AD	5914	6014	5668	5477	5384	6223	6033	Continuing	Continuing
811	MIL HIV VAC&DRUG DEV	144	149	149	141	140	148	152		1156
836	COMBAT MEDICAL MATL AD	3459	4347	13718	13261	3010	5768	5913	Continuing	Continuing
837	SOLDIER SYS PROT-AD	2439	1889	6773	5658	1679	1777	1820	Continuing	Continuing
A01	COMBAT SUPPORT HOSPITAL - MOBILE SURGICAL UNIT	3293	5961							13183
CS4	MEDICAL SYSTEMS ADV DEV INITIATIVES (CA)		7750							7750
MD4	FUTURE MEDICAL SHELTER	6294	1987							18391
MD8	ELECTROSOMOTIC PAIN THERAPY SYSTEM (CA)	968	1592							4476

A. Mission Description and Budget Item Justification: This program element (PE) funds advanced development of medical materiel within the early system integration portion of the System Development and Demonstration phase of the acquisition life cycle. The PE supports transition of Science and Technology initiatives, prototypes, or candidate technologies into the first scale-up, integrated models for initial technical and operational test and evaluation, when applicable. These programs are aligned to meet Future Force (F2) requirements stressed within concept documents and organizational structures. The PE provides funding for early Phase 1 and 2, U.S. Food and Drug Administration (FDA) regulated, human clinical trials. The major enablers supported by this PE are:

Infectious disease vaccines and preventive drugs that will reduce the risk of service members contracting debilitating or fatal diseases. Disease and non-battle injuries (DNBI) are the largest contributors to the level 3 medical footprint, and significant reductions of the medical footprint in theater is achieved by reducing the number of DNBI affected soldiers.

Combat Casualty Care devices and biologics, with two major focuses: enhance forward care at the first responder level and reduce the footprint of medical organizations for greater mobility and easier sustainment. The F2 concept places soldiers into a more austere environment with lengthened evacuation times (both arrival and transit). Supporting medics and first responders require greater lifesaving and extended stabilization capability to save lives. Reduction in weight, volume, and sustainment requirements, allows medical units to increase mobility.

Soldier Performance Enhancers in the form of drugs or diagnostics will allow commanders to assess the status of and increase soldier's cognitive awareness and stamina. Performance enhancers will increase soldier capabilities and reduce casualties resulting from suboptimal situational awareness.

Military Human Immunodeficiency Virus (HIV) Vaccine and Drug Development funds militarily relevant HIV medical countermeasures. These include advanced component development of multiple candidate vaccines and drugs for large-scale field testing.

This program is managed by the U.S. Army Medical Research and Materiel Command.

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	23608	12479	21452
Current BES/President's Budget (FY 2009)	22511	29689	26308
Total Adjustments	-1097	17210	4856
Congressional Program Reductions		-190	
Congressional Rescissions			
Congressional Increases		17400	
Reprogrammings	-522		
SBIR/STTR Transfer	-575		
Adjustments to Budget Years			4856

Increase of $17.4 Million in FY 08 due to Congressional adds:
Project A01, Combat Support Hospital - Mobile Surgical Unit $6 Million;
Project MD4, Future Medical Shelter $2 Million;
Project MD8, Electrosomotic Pain Therapy System $1.6 Million;
Project CS4, Medical Systems Advanced Development Initiatives $7.8 Million.

The $4.856 Million budget adjustment to FY 09 refers to Project 837, Advanced Component Development and Prototypes. In Fy 09, based on a down-select process of leading hemorrhage treatment candidates, conduct initial clinical trials with selected candidate chosen from the following: freeze dried plasma, frozen platelets, complement inhibitors or novel resuscitation fluid.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
808 DOD DRUG & VACC AD	5914	6014	5668	5477	5384	6223	6033	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical countermeasures for infectious diseases that occur within militarily relevant areas of the world. Current products fall within three major areas: vaccines, drugs, and diagnostic kits/devices. The funds support human clinical trials in a small (20-80) group of healthy volunteers to assess the drug/vaccine for safety, tolerability, how the drug is distributed, metabolized, and excreted from the body and to investigate the appropriate dose for therapeutic use, These funds support small-scale human clinical efficacy trials of the drug/vaccine in larger groups (20-300) and are designed to assess how well the drug works, as well as to continue safety assessments in a larger group of volunteers. Funding supports both technical evaluations and human clinical testing to assure the safety and effectiveness of medical diagnostic kits/devices. This work, which is performed in military laboratories or civilian pharmaceutical firms, is directed toward the prevention of disease, early diagnosis if contracted, and speeding recovery once diagnosed. These trials are required to meet U.S. Food and Drug Administration (FDA) regulatory approval guidance, a mandatory obligation for all military products placed into the hands of medical providers or service members. Priority is based upon four major factors: (1) the extent of the disease within the Combatant Commands theater of operations, (2) the clinical severity of the disease, (3) the technical maturity of the proposed solution, and (4) the affordability of the solution (development and production).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Reviews, evaluations, and human clinical trials of malarial/anti-malarial vaccines, drugs, diagnostics and insect repellents: In FY07, for the anti-malarial drug, Tafenoquine (for treatment and post-exposure prophylaxis of Plasmodium vivax malaria) began development of the Integrated Safety Output document that is required for the investigational new drug file and completed the follow-up portion of the FDA-mandated expanded safety trial; monitored the anti-malarial drug, Artesunate as efficacy trials were started and the program prepared for a Critical Design Review (CDR); conducted a CDR for the Recombinant Plasmodium falciparum Malaria Vaccine plus Adjuvant (RTS,S) Vaccine which re-baselined the program in technology development to be administered with another Malaria vaccine candidate to enhance efficacy; and for Combined Camouflage Face Paint/Insect Repellent (CCFP) conducted two human clinical efficacy trials (laboratory and field) of the new stick formulations, began data analysis and prepared to evaluate the CCFP with insect repellent formulation against textile materials & equipment items. In FY08, complete the Integrated Safety Output document for Tafenoquine, prepare a report on the expanded safety trial, and begin planning for a human clinical efficacy trial in Asia; continue Artesunate's human efficacy trials and conduct a CDR; and complete the analysis for CCFP's field efficacy trials and report on compatibility of materials.. In FY09, continue clinical trials for Artesunate; for Tafenoquine continue preparing for an human clinical efficacy trial in Asia; and for CCFP finalize technical reports and conduct a Milestone C to transition to Full-Rate Production and Deployment, resulting in fielding of state-of-the-art camouflage face paint with insect repellent in stick packaging; and conduct a Milestone B for a new standard military topical insect repellent to transition into System Development and Demonstration phase.	2244	2732	2778
Trials, evaluations, and reviews for grouped infectious disease vaccines and drugs (Dengue and Leishmania): In FY07, conducted a Critical Design Review (CDR) to re-baseline product development plan, continued the Phase 1/2 lot bridging study in the United States, initiated a Phase 2 trial in Puerto Rico, and continued Thailand Phase 2 safety trial of the Dengue Tetravalent Vaccine (DTV); conducted a CDR to re-baseline product development plan, completed the Tunisian Phase 2 trial, manufactured additional drug, and prepared for the	3670	3151	2890

Phase 3 pivotal field trial of the Paromomycin/Gentamicin Topicial Antileishmanial Cream; for Pentostam (sodium stibogluconate intravenous drug treatment of cutaneous leishmaniasis) completed clinical database verification for transfer to industry partner who will incorporate in their FDA licensure submission package; and for the Congressional-interest Leishmania Skin Test(LST) completed a Phase 2 trial in Tunisia and initiated data analysis. In FY08, for DTV complete the Phase 1/2 lot bridging study, continue the Phase 2 trials in Puerto Rico and Thailand, and initiate pre-trial activities for an expanded Thailand Phase 2 safety and efficacy trial; for Topical Antileishmanial initiate the Phase 3 pivotal trial in Tunisia and continue stability testing; for Pentostam monitor industry partner's progress with FDA licensure submission; and for the LST finalize the Phase 2 trial clinical report, initiate a Phase 2 safety trial in the United States, and continue stability studies. In FY09, for DTV complete the Thailand Phase 2 safety trial and initiate data analysis, continue Puerto Rico Phase 2 trial, and initiate expanded Thailand Phase 2 safety and efficacy trial; continue Tunisia Phase 3 pivotal trial for Topical Antileishmanial Cream; for Pentostam continue to monitor industry partner's FDA licensure submission; and for LST complete the Phase 2 safety trial and perform data anaylsis.			
Small Business Innovative Research/Small Business Technology Transfer Programs.		131	
Total	5914	6014	5668

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

C. Acquisition Strategy Test and evaluate in-house and commercially developed products in extensive government-managed clinical trials to gather data required for FDA licensure and Environmental Protection Agency registration.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			4848	577		545		512		Cont.	Cont.	Cont.
Subtotal:			4848	577		545		512		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			1032	193		182		171		Cont.	Cont.	Cont.
Subtotal:			1032	193		182		171		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			25116	4369		4358		4099		Cont.	Cont.	Cont.
Subtotal:			25116	4369		4358		4099		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			5486	775		929		886		Cont.	Cont.	
Subtotal:			5486	775		929		886		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

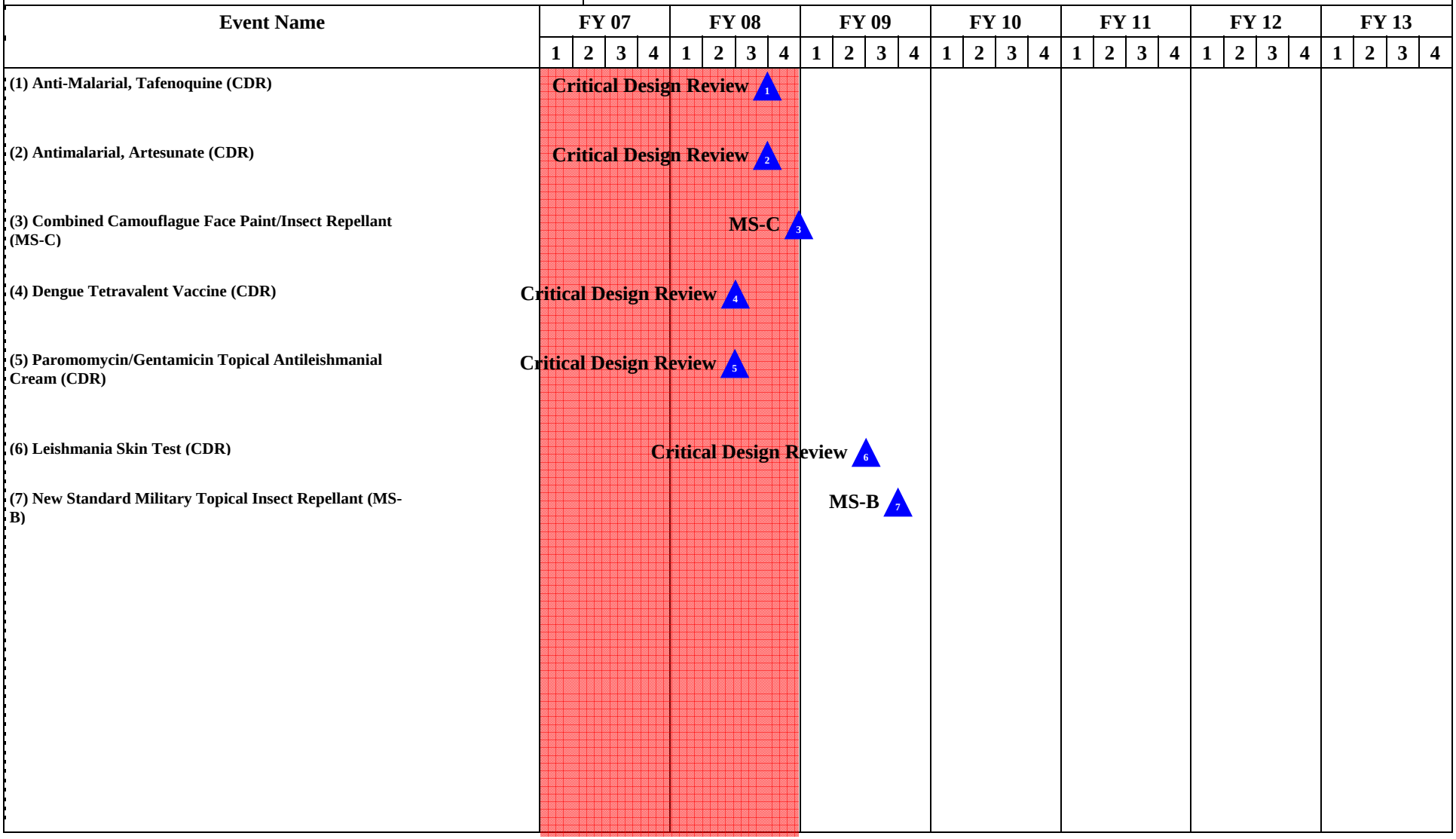
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**

Project Total Cost:	**36482**	**5914**		**6014**		**5668**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**808**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Anti-Malarial, Tafenoquine (CDR)		4Q					
Antimalarial, Artesunate (CDR)		4Q					
Combined Camouflague Face Paint/Insect Repellant (MS-C)			1Q				
Dengue Tetravalent Vaccine (CDR)		3Q					
Paromomycin/Gentamicin Topical Antileishmanial Cream (CDR)		3Q					
Leishmania Skin Test (CDR)			3Q				
New Standard Military Topical Insect Repellant (MS-B)			4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**836**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
836 COMBAT MEDICAL MATL AD	3459	4347	13718	13261	3010	5768	5913	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical products for the advancement of combat casualty care; especially far forward on the battlefield for first responders, combat life savers, and field medics. The primary objective is to fund initial human clinical trials for safety and efficacy of devices unique to military operational requirements. These products will provide the necessary materiel and devices to support combat casualty care and reduce mortality rates. Additionally, these products may reduce the medical logistics footprint through smaller weight, volume, and equipment independence from supporting materials. The products that provide the greatest clinical benefit balanced with the technical and financial risks determine the priority of development.

Major contractors/intra-governmental agencies include: IGR Enterprises, Army Medical Department Board Test Center, SeQual Technologies, Inc., and Enginivity, Inc.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Conduct/Perform development, testing and Milestone reviews for field medical treatment and treatment aid devices: (1)Ceramic Oxygen Generator (COG): In FY07, conducted technical environmental testing to determine ruggedness of oxygen cells. (2) Rotary Valve Pressure Swing Adsorption Oxygen Generator (RVPSAOG): FY07, conducted evaluation of new air compressor concept for Onmi II system. Began construction of new prototype. In FY08, conduct technical testing of Omni II. (3) Battery Powered IV Fluid Warmer: In FY07, found COTS battery acceptable for battery-powered model. Conducted user evaluation of battery-powered unit. (4) Future Medical Shelter System (FMSS): FY07, conducted user evaluation. FY08, develop engineering development models. In FY09, conduct down-select to one system. (5) Future Combat System (FCS): In FY07, continued to provide consulting to PM-UA. In FY08, continue to provide consulting to PM-UA. (6) Ultrasonic Brain Imager (UBI): FY07, began contracting efforts to begin testing and evaluation of prototype system. In FY08, begin technical testing and evaluation of scope of prototype resolution and capabilities. In FY09, begin clinical user assessments. In FY09 for a hemorrhage treatment candidate, based on a down-select, conduct a Milestone B (transition into System Development and Demonstration phase) and begin a safety and efficacy human clinical trial with the leading hemorrhage treatment candidate chosen from the following: Freeze Dried Plasma, Frozen Platelets, complement inhibitors or novel resuscitation fluid.	3459	4269	13718
Small Business Innovative Research/Small Business Technology Transfer Programs		78	
Total	3459	4347	13718

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

C. Acquisition Strategy Develop in-house or industrial prototypes in government-managed programs to meet military and regulatory requirements for production and fielding.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**836**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No other contract exceeds $1M			13459	75		87		276			13897	
Subtotal:			13459	75		87		276			13897	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: No product/contract costs greater than $1M individually.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: No product/contract costs greater than $1M individually.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $M individually.			21676	3384		4260		13442			42762	
Subtotal:			21676	3384		4260		13442			42762	

Project Total Cost:	**35135**	**3459**		**4347**		**13718**			**56659**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**836**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Ceramic Oxygen Gen, (2) Rotary Valve Pressure Oxygen Generator (MS-B), (3) Electro-osmotic Pain Therapy system (EPTS) (MS B)				MS B 1				MS B 2				MS B 3																

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**836**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Ceramic Oxygen Gen	4Q						
Rotary Valve Pressure Oxygen Generator (MS-B)		3Q					
Electro-osmotic Pain Therapy system (EPTS) (MS B)			3Q				
Hemorrhage Treatment Candidate							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
837 SOLDIER SYS PROT-AD	2439	1889	6773	5658	1679	1777	1820	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the conceptual and technical development of preventive medicine materiel including devices and medicines in order to provide protection, sustainment, and enhancement of the physical and psychological capabilities of soldiers across the Army's full spectrum operations. Focus is on the reduction of personnel losses due to preventable disease and non-battle injuries through the development of environmental and physiological performance monitors and other preventive medicine countermeasures.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Coliform Analyzer: In FY07, conducted technical tests for certification. In FY08, conduct user tests and evaluations. Conduct DRR. In FY09, conduct technical testing and user evaluations. Resuscitation Fluids: Environmental Sentinel Biomonitor: In FY09, conduct Milestone B.	2439	1836	6773
Small Business Innovative Research/Small Business Technology Transfer Programs		53	
Total	2439	1889	6773

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

C. Acquisition Strategy Test and evaluate materiel in-house and commercially developed preventative medicine materiel to meet FDA and EPA regulatory requirements.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			2178	1094		863		3228		Cont.	Cont.	
Subtotal:			2178	1094		863		3228		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			137	75		57		205		Cont.	Cont.	
Subtotal:			137	75		57		205		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually		Research and development; stability and potency testing	643	473		361		1227		Cont.	Cont.	
Subtotal:			643	473		361		1227		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			1390	797		608		2113		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

Subtotal:	1390	797		608		2113		Cont.	Cont.	
Project Total Cost:	**4348**	**2439**		**1889**		**6773**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Coliform Analyzer (MS-B)					MS B 1																							

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603807A - Medical Systems - Adv Dev**	**837**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Coliform Analyzer (MS-B)		3Q					
Environmental Sentinel Biomonitor (2nd QTR FY 09)							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	10135	20090	36558	32798	32697	11902	12115	Continuing	Continuing
S49	GROUND SOLDIER SYSTEM (GSS)			25505	20514	20203				66222
S51	AIRCREW INTEGRATED SYS AD	2285	3159	1	2	2	2	2		5453
S52	SOLDIER SUPPORT EQUIPMENT - AD	198								386
S53	CLOTHING AND EQUIPMENT	6684	11814	9571	7145	7355	6834	6946	Continuing	Continuing
S54	SMALL ARMS IMPROVEMENT	968	5117	1481	5137	5137	5066	5167		28073

A. Mission Description and Budget Item Justification: This Program Element (PE) for Advanced Component Development and Prototypes manages the soldier as a system in order to increase combat effectiveness, test and deliver tangible products that save soldier's lives, and improve soldier's quality of life. It evaluates, develops, and tests emerging technologies and critical soldier support systems to reduce technology risk.

Project S49 funding (Ground Soldier System) integrates multiple components and leverages emerging technologies to provide overmatching operational capabilities to ground combat Soldiers.

Project S51 funding (Aircrew Integrated Systems) supports component development and prototyping of critical soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.

Project S52 funding (Soldier Support Equipment) supports component development and prototyping of critical soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.

Project S53 funding (Clothing and Equipment) supports development of state-of-the-art technology to improve tactical and non-tactical clothing and individual equipment to enhance the lethality, survivability, and mobility of the individual Soldier.

Project S54 funding (Small Arms Improvement) provides funds to develop, demonstrate and evaluate emerging technology for integration of systems, subcomponents and prototypes designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability for current and future small arms weapon systems and ammunition.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	11478	18178	14119
Current BES/President's Budget (FY 2009)	10135	20090	36558
Total Adjustments	-1343	1912	22439
Congressional Program Reductions		-1528	
Congressional Rescissions			
Congressional Increases		3440	
Reprogrammings	-1019		
SBIR/STTR Transfer	-324		
Adjustments to Budget Years			22439

Change Summary Explanation:
Funding
FY 2009 Adjustments- +22,439
+25,670 New Ground Soldier System Project S49
- 2,997 Reflects realignment of Project S51, Aircrew Integrated Sys funding to 0604601A S61, ACIS Engineering Dev
FY 2008 Adjustments-
Increases +3,440
+ 1,840 Congressional Add for Warrior SIGINT Capability
+ 1,600 Congressional Add for Protector Enhancements and Integration on New Vehicle Platforms Program
Decreases -1,582
- 1,400 Congressional Reduction in Project S54 for 40mm Reconnaissance Cartridge
- 128 General Congressional Reductions
FY 2007 Adjustments-
- 1,343 reprogramming from Project S51 to higher priority Army efforts

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S49**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S49 GROUND SOLDIER SYSTEM (GSS)			25505	20514	20203				66222

A. Mission Description and Budget Item Justification: The Ground Soldier System (GSS) integrates multiple components and leverages emerging technologies to provide overmatching operational capabilities to ground combat Soldiers. The GSS provides Soldiers additional capability above the Core Soldier System by connecting the individual Soldier to the Network and by providing protection, mobility, sustainability, reliability and embedded training. GSS capabilities meet the needs of Soldiers who conduct ground combat, and provide interoperability with Future Combat System (FCS) and the current force. GSS provides individual Soldiers at echelons of battalion and below increased capabilities to conduct offensive and defensive operations by incorporating the following:

-- Network-centric operations at the small unit level
-- User defined operating picture (UDOP)
-- Improved force protection against threats
-- Access to weapons, sensors and external assets formerly available only to higher level units
-- Enable the Soldier to maintain skills and proficiency levels

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S49.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY09: Developmental engineering, prototyping, manufacturing, and systems engineering, assessment, limited test and evaluation, and program management support for Ground Soldier System (GSS)			25505
Total			25505

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

C. Acquisition Strategy The GSS acquisition roadmap approach builds upon the Land Warrior Program and the Lessons Learned. The GSS acquisition approach uses the Small Form Factor (SFF) radio communication development from the Joint Tactical Radio System (JTRS) and other hand held communications. The specific contracting strategy will be determined at Milestone B in FY08.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY: **4 - Advanced Component Development and Prototypes**

PE NUMBER AND TITLE: **0603827A - Soldier Systems - Advanced Development**

PROJECT: **S49**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop and Engineer GSS	CPFF	TBD						16905	1-4Q		16905	
Subtotal:								16905			16905	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Ground Soldier System support	OGA, MIPR	Various						2400	1-4Q		2400	
Subtotal:								2400			2400	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	OGA, MIPR	ATEC, TTC/YPG/DTC/EPT/ARL-SLAD, etc.						1900	1-4Q		1900	
Subtotal:								1900			1900	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Soldier Warrior oversight of GSS program	In-House/Task Order	PM Soldier Warrior, Ft. Belvoir, VA						4300	1-4Q		4300	
Subtotal:								4300			4300	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

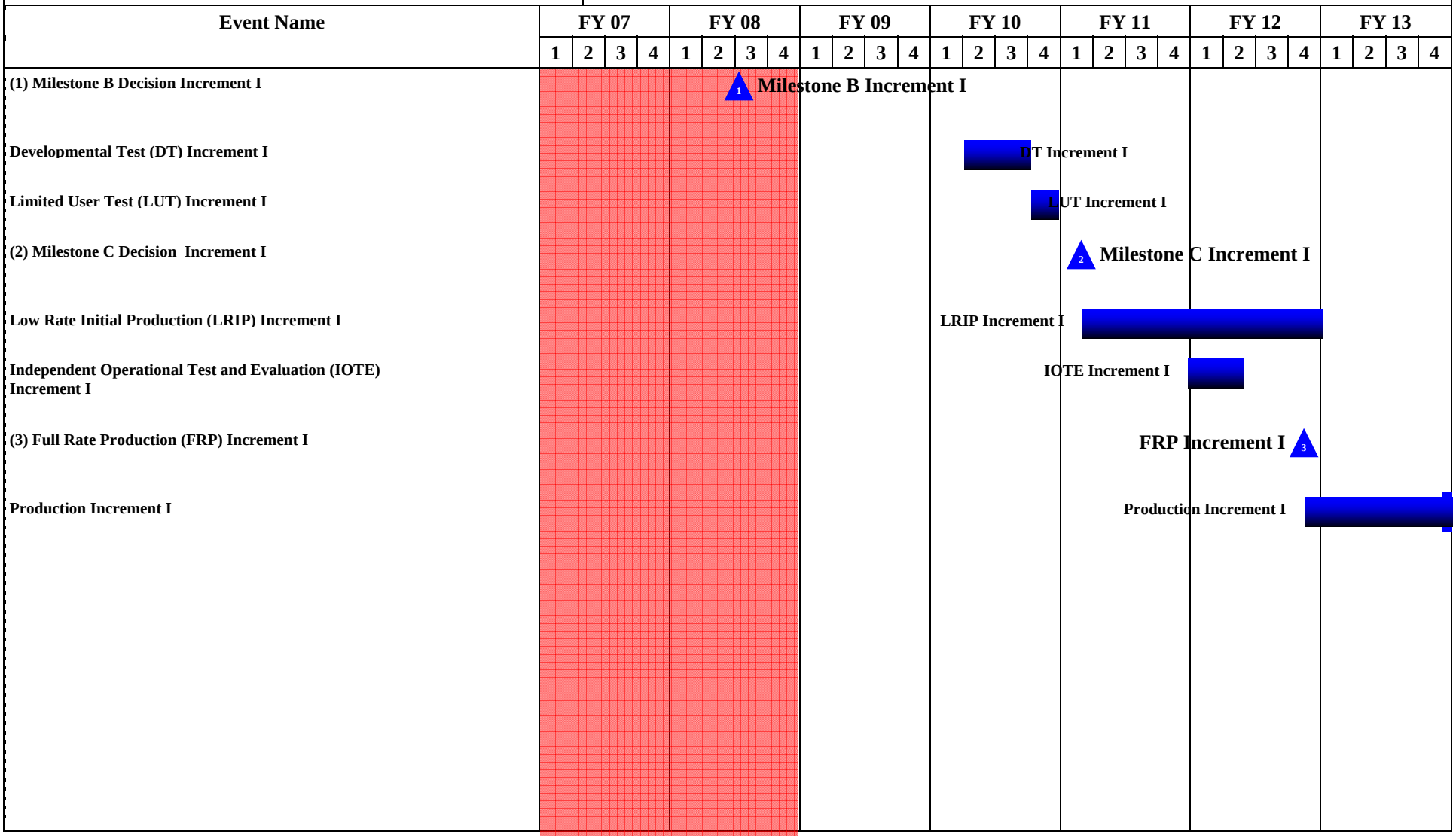
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S49**

Project Total Cost:						**25505**			**25505**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S49**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S49**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone B Decision Increment I		3Q					
Developmental Test (DT) Increment I				2Q - 4Q			
Limited User Test (LUT) Increment I				4Q			
Milestone C Decision Increment I					1Q		
Low Rate Initial Production (LRIP) Increment I					1Q - 4Q	1Q - 4Q	1Q
Independent Operational Test and Evaluation (IOTE) Increment I					4Q	1Q - 2Q	
Full Rate Production (FRP) Increment I						4Q	
Production Increment I						4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S51**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S51	AIRCREW INTEGRATED SYS AD	2285	3159	1	2	2	2	2		5453

A. Mission Description and Budget Item Justification: This project supports advanced component development and prototyping of critical soldier support systems with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness, and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance helicopter. These programs include Air Soldier System and equipment which are unique and necessary for the sustainment, survivability, and performance of Army aircrews and troops on the future integrated battlefield. The Air Warrior program will provide the aircrew with a system approach to noise protection, three-dimensional audio and external audio capability, crash and post-crash survivability, concealment and environmental protection, ballistic protection, night vision and heads-up display, directed energy eye protection and flame/heat protection. Preplanned block improvements integrating new technologies into the Air Warrior system will continue to enhance and maximize aircrew mission performance, comfort, aircrew station interface, safety, and survivability. These funds also resource improved laser protection against emerging new threat systems and product improvement of existing helmets to improve performance and increased commonality. Maximum advantage will be taken of simulation to reduce program technical risk through early user evaluation and to reduce program design and test cost and schedules. Air Warrior and Air Soldier System Advanced Development are planned to be completed with FY 2008 RDTE Project S51 funding, except for a small amount of PM Adminstration costs resourced in RDTE Project S51 Advanced Development funding during FY 2009 through FY 2013 to enhance the transition of these programs from Advanced Development to Engineering Development.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S51.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Concept exploration of pilot situational awareness and cognitive decision aiding tools to be completed during FY 2008.	798	1084	1
Explore technology to upgrade environmental control and waste management systems to be completed during FY 2008.	302	494	
Concept exploration of helmet technologies and helmet mounted devices to be completed during FY 2008.	984	1293	
Continue advanced component development of Air Warrior preplanned technology improvements and complete advanced development effort during FY 2008.	201	203	
Small Business Innovative Reserach/Small Business Technology Transfer Programs		85	
Total	2285	3159	1

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost

RDTE, A PE 0604601A PROJ S61-EMD	11087	4115	12687	5847	5722	14400	14709	Continuing	Continuing
Aircraft Procurement, Army SSN AZ3110 - ACIS	61332	44822	40697	56921	42487	137424	124474	Continuing	Continuing

Comment:

C. Acquisition Strategy Technologies developed under the Air Soldier System program will integrate capabilities including a fully compliant Modular Integrated Helmet and Display System (MIHDS), Chemical, Biological (CB) waste disposal system and upgrades to AW block 2 components as emerging technologies become available. The MIHDS helmet will provide a day heads up display, nuclear flash protection, external audio, don in flight CB protection and Agile laser eye protection. This development effort will be accomplished through a combination of contractor and governmental agencies managed within the Air Warrior Product Manager's Office and this Advanced Development effort is planned to be completed during FY 2008. These programs are planned to transition into Engineering Development as the Advanced Development effort is completed.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S51

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior Block Improvements Concept Development	C - CPFF	Various	639	523	1-2Q	1323	1-2Q				1846	
Subtotal:			639	523		1323					1846	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	Various Government	1409	1253	1-4Q	1364	1-4Q				4026	
Subtotal:			1409	1253		1364					4026	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allotment	Various Government	524	509	1-4Q	472	1-4Q	1			1506	
Subtotal:			524	509		472		1			1506	

Project Total Cost:			**2572**	**2285**		**3159**		**1**			**7378**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S51**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Air Warrior and Air Soldier Sys Component Advanced Development and Demonstration	Air Warrior & Air Soldier Sys AD																											

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S51**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Air Warrior and Air Soldier Sys Component Advanced Development and Demonstration	1Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S53**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S53 CLOTHING AND EQUIPMENT	6684	11814	9571	7145	7355	6834	6946	Continuing	Continuing

A. Mission Description and Budget Item Justification: Funding supports the project development and state-of-the-art technology to improve tactical and non-tactical clothing and individual equipment to enhance the survivability, mobility, comfort, and sustainment of the individual Soldier.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S53.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Soldier Uniforms and Clothing: (FY07) Completed improved Combat Vehicle Crewman Coverall user assessment. Completed Phase II User Evaluation of Modular Boot System. (FY08-09) Conduct system integration and formal DT/OT of preproduction and production representative systems leveraging advancements in materials, nanotechnology, fabrication techniques, moisture management, flame resistance, antimicrobial treatments, insect protection, extreme environmental protection and advancements in chemical/biological protection to increase the capabilities and durability of tactical and non-tactical clothing such as the Fire Resistant Environmental Ensemble (FREE) and Army Combat Shirt (ACS). Prove out commonality across as broad a spectrum of users as possible to provide a modular integrated uniform/clothing system from skin out and head-to-toe.	2246	1160	2730
Individual Soldier Ballistic Protection: (FY07) Continued product improvement of Advanced Combat helmet in support of fielding and developmental efforts. Researched technologies to mitigate the effects of high speed ballistic blunt trama and low rate impact (crash) protection. Initiated efforts to leverage and incorporate laser eye protection technology advancements into ballistic goggles and spectacles and assessed capability improvements. Continued product improvement of Interceptor Body Armor (IBA) in support of fielding and executed incremental capability improvements related to technology maturity and operational feedback. (FY08-09) Leverage advanced ballistic materials to increase Soldier survivability while decreasing weight, cube and cost. Integrate and enhance the capabilities of Soldier Body Armor, Combat Eyewear, Bomb Suit, Face Shield and Protective Helmet capabilities providing head-to-toe protection from current and emerging ballistic/blast threats. Conduct test and evaluation of prototype ballistic ensembles. Develop commonality at the component and subsystem levels to provide a modular layered/integrated ballistic protection system and conduct formal DT/OT of preproduction and production representative system.	3095	4400	2350
Individual Equipment: (FY07) Initiated effort to incorporate evolving filtration/purification technologies into On-the-Move Hydration systems and conducted user test. (FY08-09) Conduct system integration and formal DT/OT of preproduction and production representative systems utilizing advancements in technology for load bearing equipment, hydration technologies including water filtration and NBC hydration, and other mission essential and/or mission specific equipment for Soldiers. Prove out as much commonality as feasible across a broad spectrum of user and mission scenarios. Purchase equipment and conduct pilot testing for Radio Frequency	1343	3415	3591

Identification (RFID).			
Soldier Cooling: (FY08-09) Develop, test and evaluate advanced lightweight, low power cooling systems for use with NBC and ballistic protection ensembles. Conduct trade-off analyses and system integration providing Soldiers enhanced abilitity to conduct missions for longer periods of time in extreme environments.		675	900
Misaligned Congressional Add for Warrior SIGINT Capability		1840	
Small Business Innovative Research/Small Business Technology Transfer Programs		324	
Total	6684	11814	9571

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603747.669, Clothing and Equipment	8							Continuing	Continuing
RDTE, 0604601A.S60, Clothing and Equipment	10964	12817	9615	9973	10011	10727	10036	Continuing	Continuing
OMA, 121017, Central Funding and Fielding	137028	101284	92606	89100	39137	79642	113198	Continuing	Continuing

Comment:

C. Acquisition Strategy Programs will pursue normal transition to System Development and Demonstration (SDD) and production. This Project will continue to exercise competitively awarded contracts using best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S53

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPRS	Natick Soldier Center, Natick, MA	2000	1173	1-2Q	2703	1-2Q	2330	1-2Q	Cont.	Cont.	
Various	Contracts	Various	2491	2460	1-2Q	4840	1-3Q	3041	1-3Q	Cont.	Cont.	
Subtotal:			4491	3633		7543		5371		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various	1000	957	1-2Q	1341	1-2Q	1450	1-2Q	Cont.	Cont.	
Subtotal:			1000	957		1341		1450		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPRS	Various	400	1290	1-4Q	1750	1-4Q	1550	1-4Q	Cont.	Cont.	
Subtotal:			400	1290		1750		1550		Cont.	Cont.	

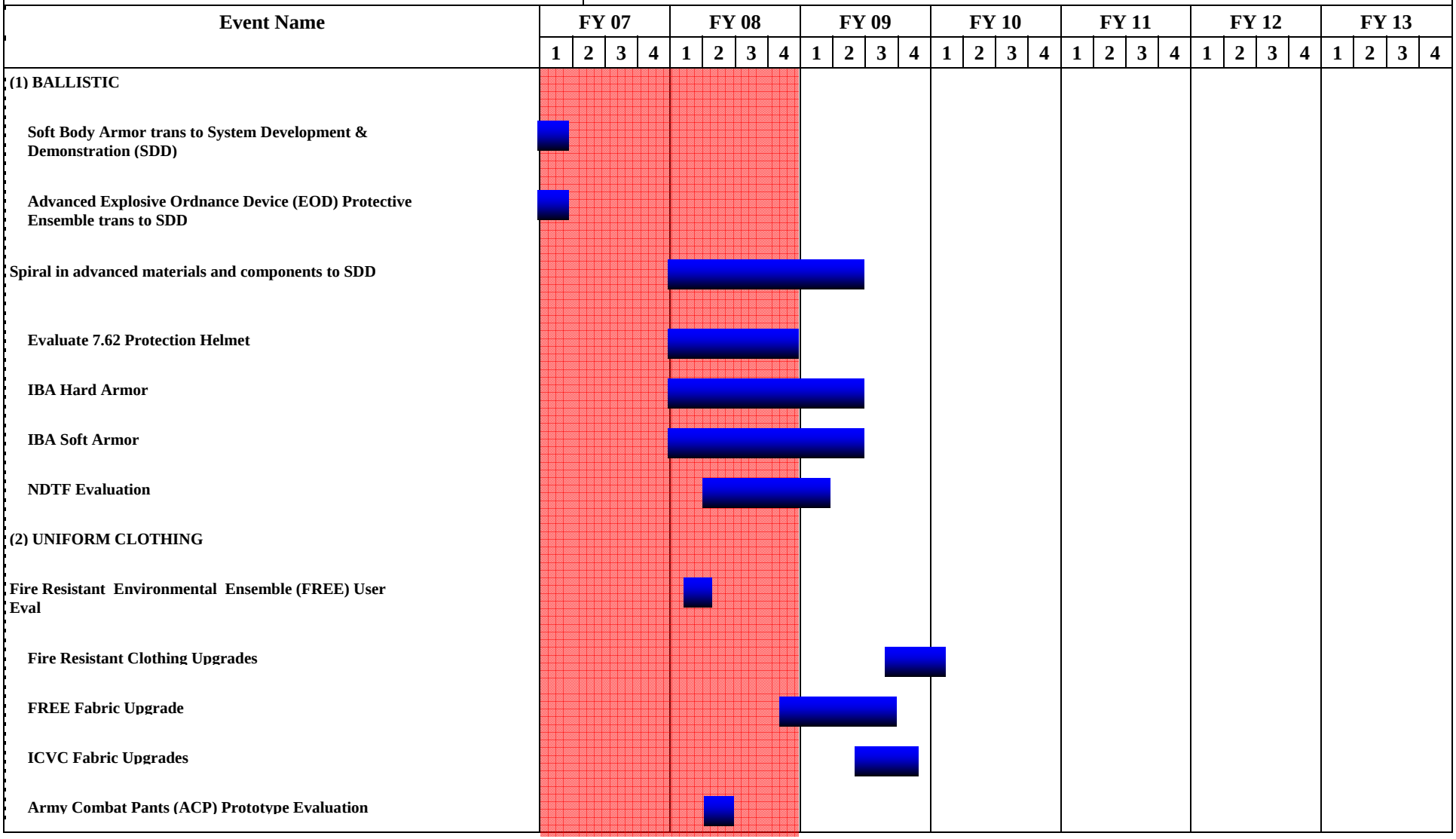
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
In-House Support		PM CIE Ft Belvoir, VA	803	804	1-4Q	1180		1200		Cont.	Cont.	
Subtotal:			803	804		1180		1200		Cont.	Cont.	

Project Total Cost:	**6694**	**6684**		**11814**		**9571**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

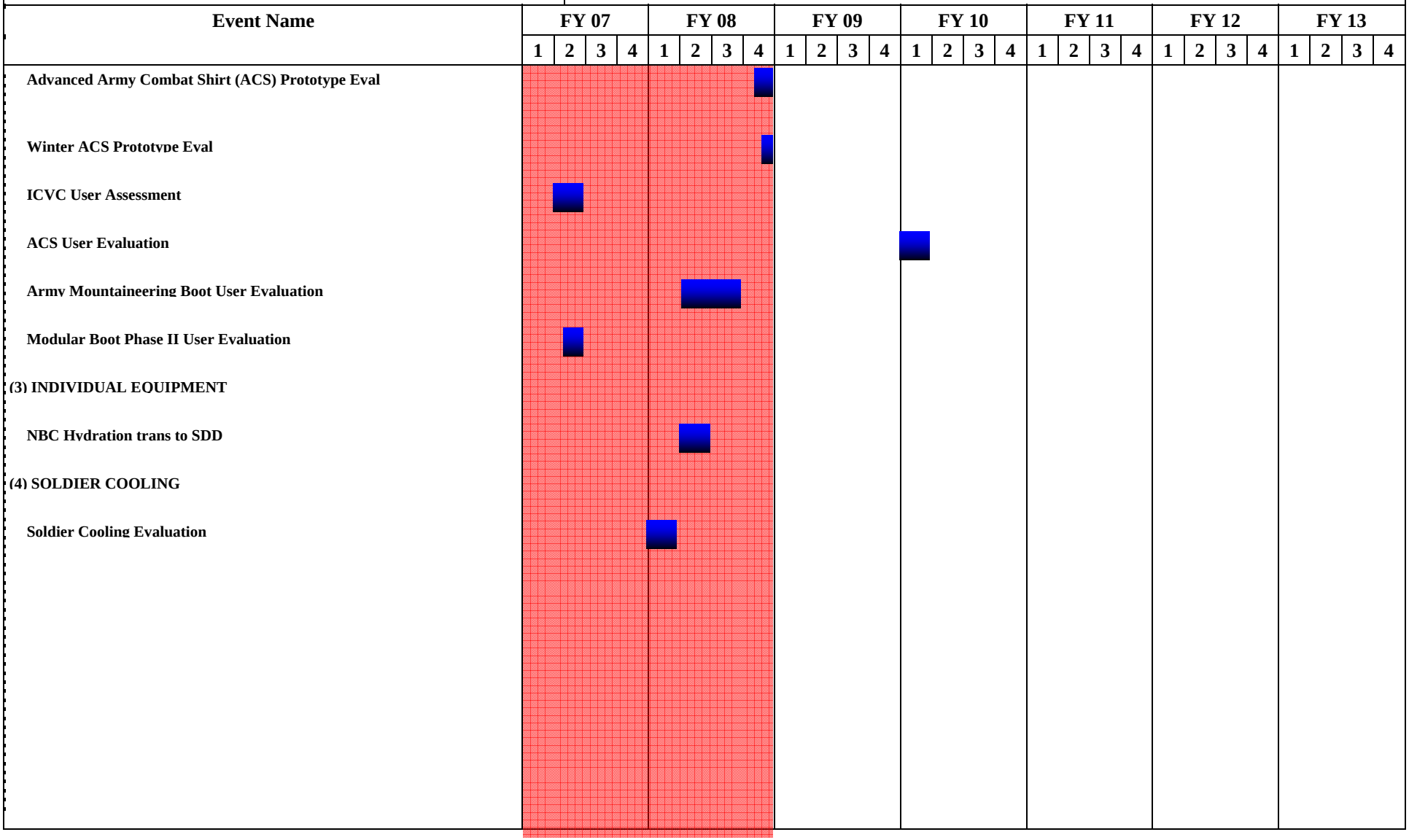
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S53**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S53**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S53**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BALLISTIC							
Soft Body Armor trans to System Development & Demonstration (SDD)	1Q						
Advanced Explosive Ordnance Device (EOD) Protective Ensemble trans to SDD	1Q						
Spiral in advanced materials and components to SDD		1Q - 4Q	1Q - 2Q				
Evaluate 7.62 Protection Helmet		1Q - 4Q					
IBA Hard Armor		1Q - 4Q	1Q - 2Q				
IBA Soft Armor		1Q - 4Q	1Q - 2Q				
NDTF Evaluation		2Q - 4Q	1Q				
UNIFORM CLOTHING		1Q - 4Q	1Q - 4Q				
Fire Resistant Environmental Ensemble (FREE) User Eval		1Q - 2Q					
Fire Resistant Clothing Upgrades			1Q - 3Q	4Q			
FREE Fabric Upgrade		4Q	1Q - 3Q				
ICVC Fabric Upgrades			2Q - 4Q				
Army Combat Pants (ACP) Prototype Evaluation		2Q					
Advanced Army Combat Shirt (ACS) Prototype Eval		4Q					
Winter ACS Prototype Eval		4Q					
ICVC User Assessment	2Q						
ACS User Evaluation				1Q			
Army Mountaineering Boot User Evaluation		2Q - 3Q					
Modular Boot Phase II User Evaluation	2Q						
INDIVIDUAL EQUIPMENT							

NBC Hydration trans to SDD		2Q					
SOLDIER COOLING							
Soldier Cooling Evaluation		1Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S54**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S54 SMALL ARMS IMPROVEMENT	968	5117	1481	5137	5137	5066	5167		28073

A. Mission Description and Budget Item Justification: The Small Arms Improvement program provides funds to study, develop, demonstrate and evaluate emerging technology for integration of systems, subcomponents and prototypes with weapons/ammunition. Small arms include weapons/ammunition ranging up to .40 millimeter. Current and future efforts focus on improvements designed to enhance lethality, target acquisition, fire control, training effectiveness and reliability of weapons/ammunition. Focus areas include studying, developing, demonstrating and evaluating light weight materials, obscurants, reconnaissance, observation, lethal and non-lethal ammunition, and electronics. Benefits include improvements to fire control equipment, optics, training devices, component mounts, weapon mounts, and ammunition.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S54.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Small Arms Weapons Enhancements			
- Design, Development and Engineering	200		
- Prototype Fabrication	544		
- Testing and evaluation	196		
- Demonstration			
Ammunition			
- Design, Development and Engineering		737	527
- Prototype Fabrication		1271	
Testing and Evaluation		570	530
Demonstration			404
Combat Optics			
Fire Control			
Market Research			20
- Design, Development		260	

- Prototype Fabrication		210	
- Testing and Evaluation		195	
- Demonstration		175	
Misalighed Cogressional Add, Protector Enhancements and Integration on New Vehicle Platforms Program		1600	
Small Business Innovative Research/Small Business Technology Transfer Programs.	28	99	
Total	968	5117	1481

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE S63, Program Element 0604601A - Infantry Support Weapons	1185	14710	4843	14872	15998	14894	14900	Continuing	Continuing

Comment: FY 2007 Congressional increase of $1.0M for Nickel Boron Coating Technology.

C. Acquisition Strategy Primary strategy is to study, develop, demonstrate and evaluate emerging technologies that will ultimately lead to enhancing/improving the small arms inventory.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603827A - Soldier Systems - Advanced Development

PROJECT
S54

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development			900	579		1650		220			3349	
Subtotal:			900	579		1650		220			3349	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development			150	125		1715		661			2651	
Subtotal:			150	125		1715		661			2651	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT			455	189		1327		500			2471	
Subtotal:			455	189		1327		500			2471	

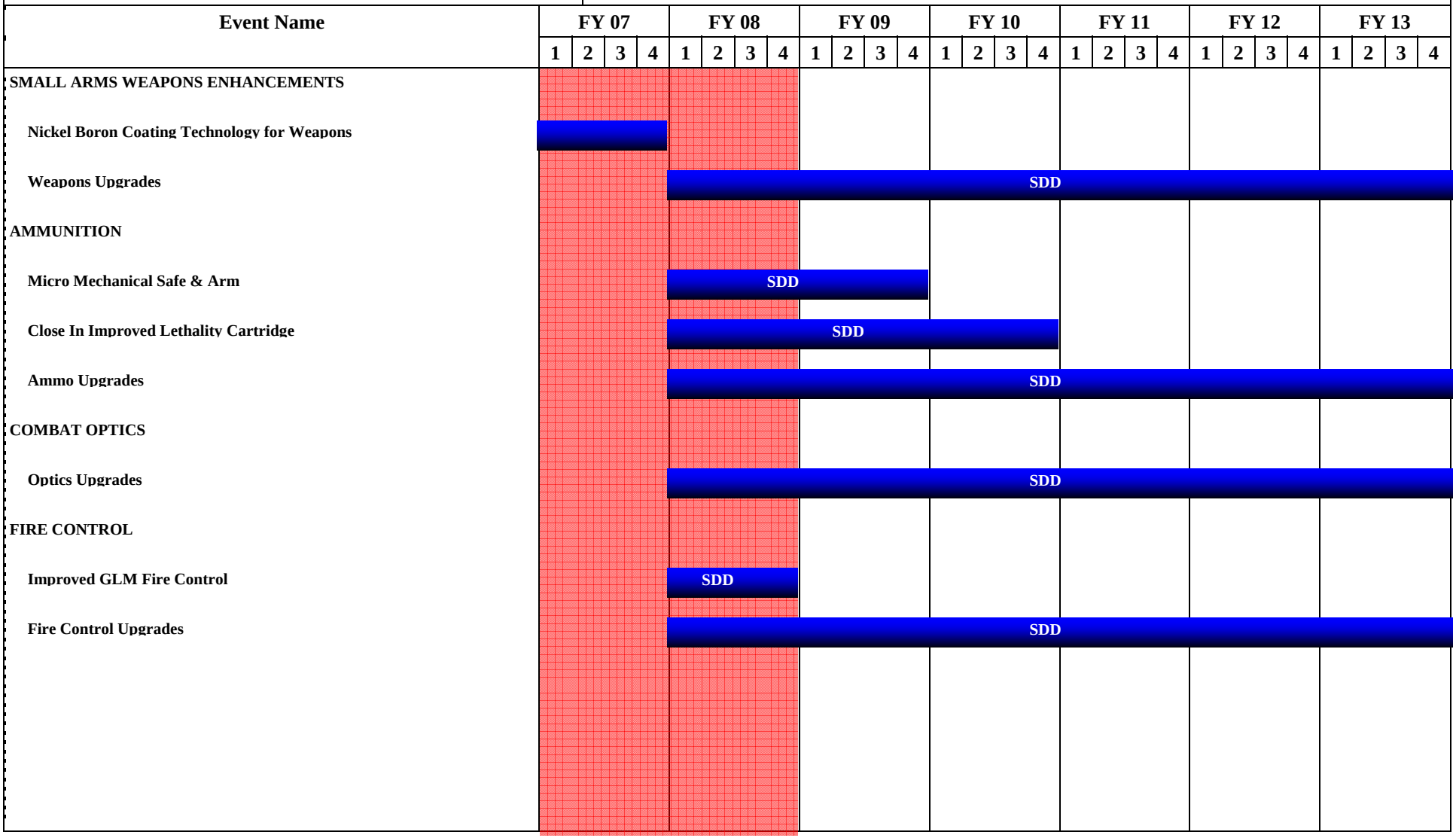
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management			125	75		425		100			725	
Subtotal:			125	75		425		100			725	

Project Total Cost:			**1630**	**968**		**5117**		**1481**			**9196**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S54**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603827A - Soldier Systems - Advanced Development**	**S54**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SMALL ARMS WEAPONS ENHANCEMENTS							
Nickel Boron Coating Technology for Weapons	1Q - 4Q						
Weapons Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMMUNITION							
Micro Mechanical Safe & Arm		1Q - 4Q	1Q - 4Q				
Close In Improved Lethality Cartridge		1Q - 4Q	1Q - 4Q	1Q - 4Q			
Ammo Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
COMBAT OPTICS							
Optics Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FIRE CONTROL							
Improved GLM Fire Control		1Q - 4Q					
Fire Control Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service**	**472**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
472	INTEGRATED BROADCAST SERVICE (MIP)	1131	38213	11238	1500	1000				53082

A. Mission Description and Budget Item Justification: The Joint Tactical Terminal (JTT) Product Management Office (PMO) supports all Joint services and Special Operations Command (SOCOM). The Integrated Broadcast Service (IBS) is the worldwide Department of Defense (DoD) standard network for transmitting tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The JTT PMO's role is to consolidate and replace existing IBS terminal functionality and capability with a "common family" of Integrated Broadcast Service-Modules (CIBS-M) - both hardware and software - and to expedite execution of the IBS Technical Transition Plan (TTP). The JTT family of systems currently consists of the JTT-Senior, JTT-Briefcase, JTT-IBS and Embedded National Tactical Receiver (ENTR) CIBS-M IBS broadcast receiver/transceiver devices. The TTP is a comprehensive refresh effort of the entire IBS network focused on rearchitecting the broadcast from its current multi-broadcast, multi-data format structure, to a single broadcast (Common Interactive Broadcast - CIB) and single data format (Common Message Format - CMF). The JTT/CIBS-M family of systems is a critical component of the TTP as these systems are the only IBS receiver/transceiver devices in the DoD being modernized to support both the new consolidated broadcast architecture and the National Security Agencies (NSA) crypto modernization mandate. The JTT family of system upgrades is imperative/essential to execute the over-the-air broadcast portion of the TTP in the near term, and ultimately lead to a complete cessation of IBS data flow via the existing over-the-air IBS broadcast networks. The JTT program leverages early tech-based efforts initiated by organizations such as the National Reconnaissance Office (NRO) for the ENTR CIBS-M. Management control for JTT/CIBS-M efforts that contribute to increased value in performance or sustainment will transition to the JTT PMO. These capabilities will be integrated into the JTT/CIBS-M family of hardware and software modules. The JTT/CIBS-M family of modules will be the official IBS producer, ensuring continued IBS interoperability to a variety of tactical receivers across DoD and the services throughout the TTP implementation period and beyond. This program funds the design, development, test and evaluation of JTT/CIBS-M hardware and software modules, as well as implementing performance enhancements to the family of JTT equipment. This is necessary to ensure crypto modernization compliance and to facilitate migration to a rearchitected CIB and CMF-based IBS broadcast structure. Funds also support JTT/CIBS-M training, equipping and supporting the Warfighter with improved Joint Readiness and Interoperability.

FY09 Funds support the development of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network. Development for JTT Sr upgrade kit (COMSEC and SBC). Development of objective ENTR.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Develop Integrated Broadcast Service (IBS) Common Message Format (CMF) to support migration to the IBS Worldwide standard DOD Network.	1131		
Sierra Chip COMSEC Algorithms Integration (NRE)		5213	738
COMSEC Refresh JTT Sr (NRE-CDR)		7000	1500
Objective ENTR Development		10000	2000
JTT Sr CIB Network Refresh Devel & Integration		2500	2500

JTT IBS CIB Network Refresh Devel & Integration		2500	2500
SBC NRE Redesign (JTT Sr)		11000	2000
Total	1131	38213	11238

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service**	**472**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	1123	38213	11238
Current BES/President's Budget (FY 2009)	1131	38213	11238
Total Adjustments	8		
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings	8		
SBIR/STTR Transfer			
Adjustments to Budget Years			

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
V29600 Other Procurement, Army - JTT/CIBS-M (Tiara),	1821	3560	8632	2900	1430			Continuing	Continuing

Comment:

D. Acquisition Strategy Modifications for the design, development and delivery to JTRS JPO of JTRS SCA compliant legacy IBS waveforms has been awarded to Boeing under an existing Air Force contract, to complete ongoing work funded by USAF Airborne Intelligence System Program Office. The CMF development has been awarded to the JTT Original Equipment Manufacturer (OEM). As the broadcast networks continue to evolve and modify their formats and protocols, the JTT program will support IBS and various existing and future radios and host systems. Funds support the development of the Common Interactive Broadcast (CIB) waveform for migration to the IBS Worldwide standard DoD Network. Development for JTT Sr upgrade kit (COMSEC and SBC). Development of objective ENTR.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
0603850A - Integrated Broadcast Service

PROJECT
472

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JTRS SCA/IBS Modules	MIPR	Air Force/Boeing	4181								4181	4181
Common Message Format	T&M	Raytheon, St. Petersburg, FL	4346								4346	4346
Common Interactive Broadcast Sr	CP/FF	Raytheon, St. Petersburg, FL				2500	1-2Q	2500	1-2Q		5000	5000
Common Interactive Broadcast IBS	CP/FF	DRS, Dayton, OH				2500	1-2Q	2500	1-2Q		5000	5000
COMSEC Refresh JTT Sr	CP/FF	Raytheon, St. Petersburg, FL				7000	1-2Q	1500	1-2Q		8500	8500
Sierra Chip COMSEC Algorithms Integration	MIPR	NRO/L3 West, San Diego, CA				5213	1-2Q	738	1-2Q		5951	5836
SBC NRE Redesign JTT Sr	CP/FF	Raytheon, St. Petersburg, FL				11000	1-2Q	2000	1-2Q		13000	13000
Objective ENTR Development	MIPR	NRO/L3 West, San Diego, CA				10000	1-2Q	2000	1-2Q		12000	12000
Subtotal:			8527			38213		11238			57978	57863

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	CECOM/RDCOM, Ft. Monmouth, NJ	960	213	1Q						1173	
Subtotal:			960	213							1173	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service**	**472**

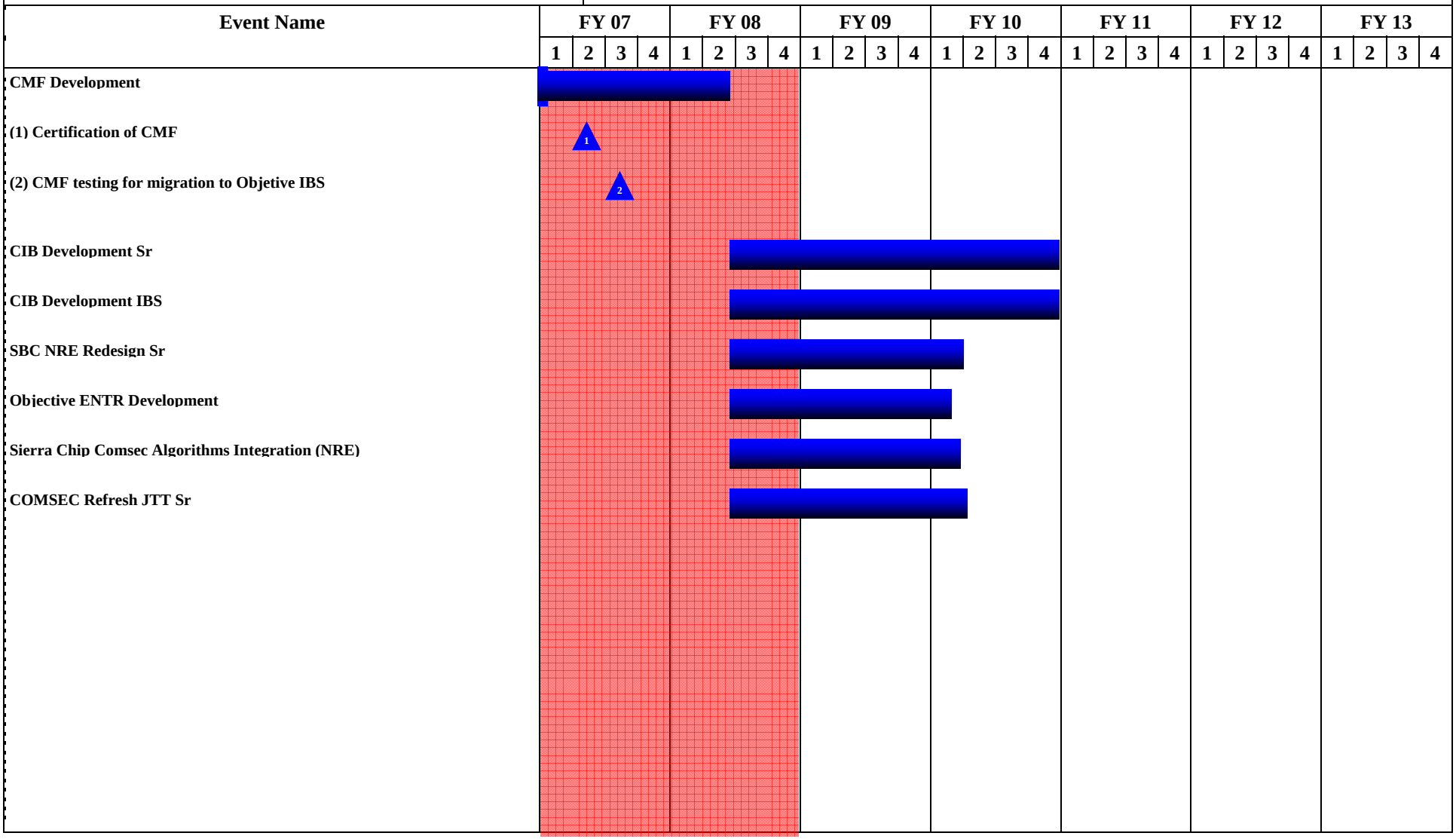
IOT&E support	MIPR	Various	1402	242	1Q							1644	
JITC DAMA Certification of JTT	MIPR	JITC	400	231	1Q							631	
Certification of CMF	MIPR	Various	200	250	1Q							450	
JTEL Certification of SCA	MIPR	SPAWAR, CA	200									200	
Subtotal:			2202	723								2925	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In House	PM JTT, Ft. Monmouth, NJ	1182	195	1Q							
Subtotal:			1182	195								
Project Total Cost:			**12871**	**1131**		**38213**		**11238**			**62076**	**57863**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service**	**472**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603850A - Integrated Broadcast Service**	**472**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
JTRS SCA Compliant Legacy Waveforms							
Delivery for JTEL Certification of SCA Modules							
CMF Development	1Q - 4Q	1Q - 2Q					
Certification of CMF	2Q						
CMF testing for migration to Objetive IBS	3Q						
CIB Development Sr		2Q - 4Q	1Q - 4Q	1Q - 4Q			
CIB Development IBS		2Q - 4Q	1Q - 4Q	1Q - 4Q			
SBC NRE Redesign Sr		2Q - 4Q	1Q - 4Q	1Q - 2Q			
Objective ENTR Development		2Q - 4Q	1Q - 4Q	1Q			
Sierra Chip Comsec Algorithms Integration (NRE)		2Q - 4Q	1Q - 4Q	1Q			
COMSEC Refresh JTT Sr		2Q - 4Q	1Q - 4Q	1Q - 2Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604201A - AIRCRAFT AVIONICS**	**C97**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C97 ACFT AVIONICS	43662	57420	71562	77630	52889	68424	12361	Continuing	Continuing

A. Mission Description and Budget Item Justification: This Program Element (PE) funds the development of avionics systems required to horizontally and vertically integrate the battlefield and the integration of those systems into Army Aviation aircraft. Tasks in this PE support research, development and test efforts in the System Development and Demonstration (SDD) phases of these systems.

Aviation Tactical Communication Systems (ATCS) is an Army Aviation Program that requires RDT&E funds for the A-Kit (hardware and software) development, integration, test and certification of Alternative Communications (ARC-231 and ARC-201D) and the Joint Tactical Radio System (JTRS) radio hardware onto the Apache (AH-64D), Blackhawk (UH-60M), and Chinook (CH-47F) modernized aircraft. JTRS is the transformational system that will provide Army Aviation the required interoperability capability for Future Force and Joint Force operations.

Army Aviation originally planned to integrate the JTRS Cluster 1 radio onto all modernized platforms in this timeframe to meet a FY10 fielding. However, due to the JTRS program restructure, Army Aviation is now aligned with the Airborne Maritime Fixed (AMF) JTRS Program and plans to field JTRS AMF radios in FY14. This delay in the JTRS Cluster 1 program resulted in a lack of critical communications equipment to support modernized Army Aviation aircraft production line requirements and Alternative Communications (Alt Comms) was initiated to mitigate this issue. Alt Comms provides two ARC-231 and two ARC-201D radios with power amplifiers to meet the minimum interim JTRS requirements for Military Satellite Communications (MILSATCOM), Single Channel Ground and Airborne Radio System (SINCGARS), HAVEQUICK, Very High Frequency (VHF), Air Traffic Control (ATC), and Land Mobile Radio requirements and funds the integration and test of the radios onto each platform to meet production line schedules. FY09 funds are required to continue A-Kit development, integration, and system testing for AH-64, CH-47, and UH-60.

Alt Comms will be Army aviation's communication solution until FY14 when it will be supplemented by the JTRS AMF Small Airborne (SA) radio set. Increment 1 of the AMF SA will provide the Wideband Networking Waveform, Soldier Radio Waveform, and Link-16 required for interoperation with the Future Force. Increment 2 of the AMF SA, planned for FY20, will provide all legacy waveforms allowing aircraft to install a single hardware solution to meet all waveform requirements. FY09 funds are required to continue JTRS integration onto aviation platforms. JTRS integration efforts planned for FY09 include defining standardized control and data interfaces and continuing development of reusable control software to be provided to JTRS integrators.

The Improved Data Modem (IDM) is the common solution for digitizing Army Aviation. It performs as an internet controller and gateway to Tactical Internet (TI) and Fire Support (FS) internet for Army aircraft. With interfaces supporting a six channel transmit/receive terminal, the IDM provides radio connectivity to the ARC-201D/210/220/231, ARC-186, ARC-164, and the Blue Force Tracker's (BFT) MT-2011 Transceiver. The IDM also provides 1553 and Ethernet portals for rapid data transfer. This hardware/software solution provides a flexible, software driven digital messaging system that is interoperable with existing Army and Joint forces battlefield operating systems. The IDM provides Situational Awareness and Variable Message Format messages capability to the cockpit. FY09 funds are required to continue development and integration effort for an Open Systems Architecture (OSA) IDM solution compatible with the AH-64D, CH-47F, HH/UH-60M, and ARH-70A helicopters. This effort provides the foundation to develop and qualify a new hardware architecture to host IDM and Future Combat System (FCS) Battle Command (BC) and System Of Systems Common Operating Environment (SOSCOE) applications to ensure interoperability on the future digital battlefield.

The Joint Precision Approach and Landing System (JPALS) is a precision approach and landing system providing joint operational capability for U.S. forces assigned to conventional and special operations missions including those operating from fixed base, ship, tactical, and special mission environments under a wide range of meteorological and jamming conditions. This effort evaluates technical approaches for incorporating JPALS into Army aircraft while considering aircraft environment, electrical power, system space, weight, antenna placement, and electromagnetic compatibility without nullifying low observable capability requirements. This effort also develops fixed base and man pack ground stations for the Army. The Army's involvement in the JPALS Sea Based (Increment 1) program following the Milestone B (Joint Program Office) is to: ensure Army requirements are addressed in the joint program; participate in program management and provide systems engineering for the joint program; provide test and evaluation support, integrated logistics support and cost planning for the Army; and perform architecture tradeoffs, trade studies, and analyses, prototyping, and demonstrations of the JPALS capability in the Army's rotary wing platform avionics suites.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of C97.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue A-Kit Development, Integration and System Testing of Alt Comms for AH-64D, CH-47F, and UH-60M and integration of JTRS AMF-SA onto aviation platforms (ATCS)	35472	41062	41636
Continue System Engineering, Antenna Support and Logistics Effort (ATCS)	100	3747	4980
Program Management Support for A-Kit Development (ATCS)		2390	2689
Continue Test and Evaluation Support (ATCS)		607	4483
Continue development and qualification of an Open Systems Architecture IDM solution that supports FCS SOSCOE and FCS BC (IDM).	6069	2485	3406
Program Management Support (IDM)	151	43	178
Continue to provide: system engineering; product support; and programmatic, cost, test, and technical documentation for JPALS land and sea based development efforts. (JPALS)	416	1670	1260
JPALS Avionics Risk Reduction (JARR). (JPALS)	1326	3308	5500
Begin JPALS Avionics Development. (JPALS)			6610
Begin JPALS Test and Evaluation planning. (JPALS)			300
Program Management Support (JPALS)	128	530	520
Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) Reduction		1578	
Total	43662	57420	71562

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604201A - AIRCRAFT AVIONICS**	**C97**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	48554	57786	71880
Current BES/President's Budget (FY 2009)	43662	57420	71562
Total Adjustments	-4892	-366	-318
Congressional Program Reductions		-366	
Congressional Recissions			
Congressional Increases			
Reprogrammings	-3911		
SBIR/STTR Transfer	-981		
Adjustments to Budget Years			-318

FY07: $3,911 thousand was reprogrammed to support higher priority Army programs. $981 thousand was applied to SBIR/STTR.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Airborne Avionics SSN AA0700	105298	123475	118032	191809	231661	306183	268975	Continuing	Continuing

Comment: Other Program Funding Summary amounts represent only the amounts for ATCS, IDM, and JPALS included in SSN AA0700.

D. Acquisition Strategy This project is comprised of multiple systems:

1) ATCS - Alt Comms is required to meet minimum acceptable near-term communications requirements as defined by the U.S. Army Aviation Warfighting Center (USAAWC) to mitigate production line communications equipment gaps for modernized Army aircraft (UH-60M, CH-47F, and AH-64D). The Alt Comms acquisition strategy is to use currently available communications equipment to fill these gaps. However, this equipment must be incorporated onto the modernized aviation platforms through A-Kit development, platform hardware and software development/integration, and platform testing of the Alt Comms suite.

JTRS is a software programmable radio system that enables net-centric communications capabilities. Army aviation is now aligned with the Airborne Maritime Fixed (AMF) JTRS program and is planning to initiate JTRS Increment I fielding in FY14. Increment I of the AMF JTRS program will provide the Wideband Networking Waveform, Soldier Radio Waveform, and LINK-16 required for interoperation with the Future Force. Increment 2 is planned for FY20 and will provide all legacy waveforms, replacing Alt Comms. These efforts will be accomplished using host platform development contracts, integration labs, and Airworthiness testing and certification.

2) IDM - Develop and qualify a new hardware architecture and integrate IDM OSA applications onto the new hardware. This development effort will be accomplished by a competitive cost-plus-fixed fee contract.

3) JPALS - The Navy is the lead service for Increment 1 of this joint program. The overall JPALS program acquisition strategy is to complete the current risk reduction effort and Technology Development (TD) phase and enter into the SDD phase, currently scheduled for Milestone B in the second quarter of FY08. The TD phase led to the development of combined specifications for land, sea, and avionics. Using this specification, the JPALS prototype ground-based increment was tested in both benign and jamming environments in November 2006, with positive results for operating successfully in a jamming environment. Army Aviation Avionics development will include a series of JPALS Avionics Risk Reduction sole source/cost-plus fixed fee contracts to determine the best technical approach. Based on an evaluation of potential technical approaches, cost-plus contracts will be awarded for development, integration, and test of JPALS avionics.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604201A - AIRCRAFT AVIONICS

PROJECT
C97

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop A-kits, integrate, & test Alt Comms. Integrate JTRS AMF-SA onto aviation platforms (ATCS)	Various	Boeing, AZ, PA, & CA; Rockwell Collins, Cedar Rapids, IA; Sikorsky, Stratford, CT; Raytheon, IN	106966	35472	1-4Q	41062	1-3Q	41636	1-3Q	Cont.	Cont.	Cont.
Develop and qualify OSA hardware to host IDM and FCS SOSCOE and FCS BC (IDM)	SS/CPFF	ICI, McLean, VA	5814	6069	2Q						11883	
Develop and qualify OSA hardware to host IDM and FCS SOSCOE and FCS BC (IDM)	C/CPFF	TBD				2485	3Q	3406	2Q		5891	
JPALS Development (JPALS)	Various	Various						6610	1-2Q	Cont.	Cont.	Cont.
JPALS Avionics Risk Reduction JARR (JPALS)	SS/CPFF	Rockwell Collins, Cedar Rapids, IA; Honeywell; BAE, Wayne, NJ	1012	1326	4Q	3308	2Q	5500	1-2Q		11146	
Subtotal:			113792	42867		46855		57152		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Engineering, Antenna Integration Support and Logistics Efforts (ATCS)	Various	Westar, Quantum, Tecolote, AL; ARINC, CSC, NJ	4870	100	1-3Q	3747	1-3Q	4980	1-3Q	Cont.	Cont.	Cont.
System Engineering, Logistics, and Technical Support (JPALS)	Various	Various	3173	416	1-3Q	1670	1-3Q	1260	1-3Q	Cont.	Cont.	Cont.
Subtotal:			8043	516		5417		6240		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604201A - AIRCRAFT AVIONICS

PROJECT
C97

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation (ATCS)	MIPR	Various	2878			607	1-3Q	4483	1-3Q	Cont.	Cont.	Cont.
Test and Evaluation (JPALS)	MIPR	Various						300	1-3Q	Cont.	Cont.	Cont.
Subtotal:			2878			607		4783		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Spt (ATCS)	In-House	AMCOM, Redstone Arsenal, AL/PM AME	6170			2390	1-4Q	2689	1-4Q	Cont.	Cont.	Cont.
PM Spt (IDM)	In-House	AMCOM, Redstone Arsenal, AL/PM AME	1329	151	1-4Q	43	1-4Q	178	1-4Q		1701	
PM Spt (JPALS)	In-House	AMCOM, Redstone Arsenal, AL/PM AME	118	128	1-4Q	530	1-4Q	520	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						1578					1578	
Subtotal:			7617	279		4541		3387		Cont.	Cont.	Cont.
Project Total Cost:			**132330**	**43662**		**57420**		**71562**		**Cont.**	**Cont.**	**Cont.**

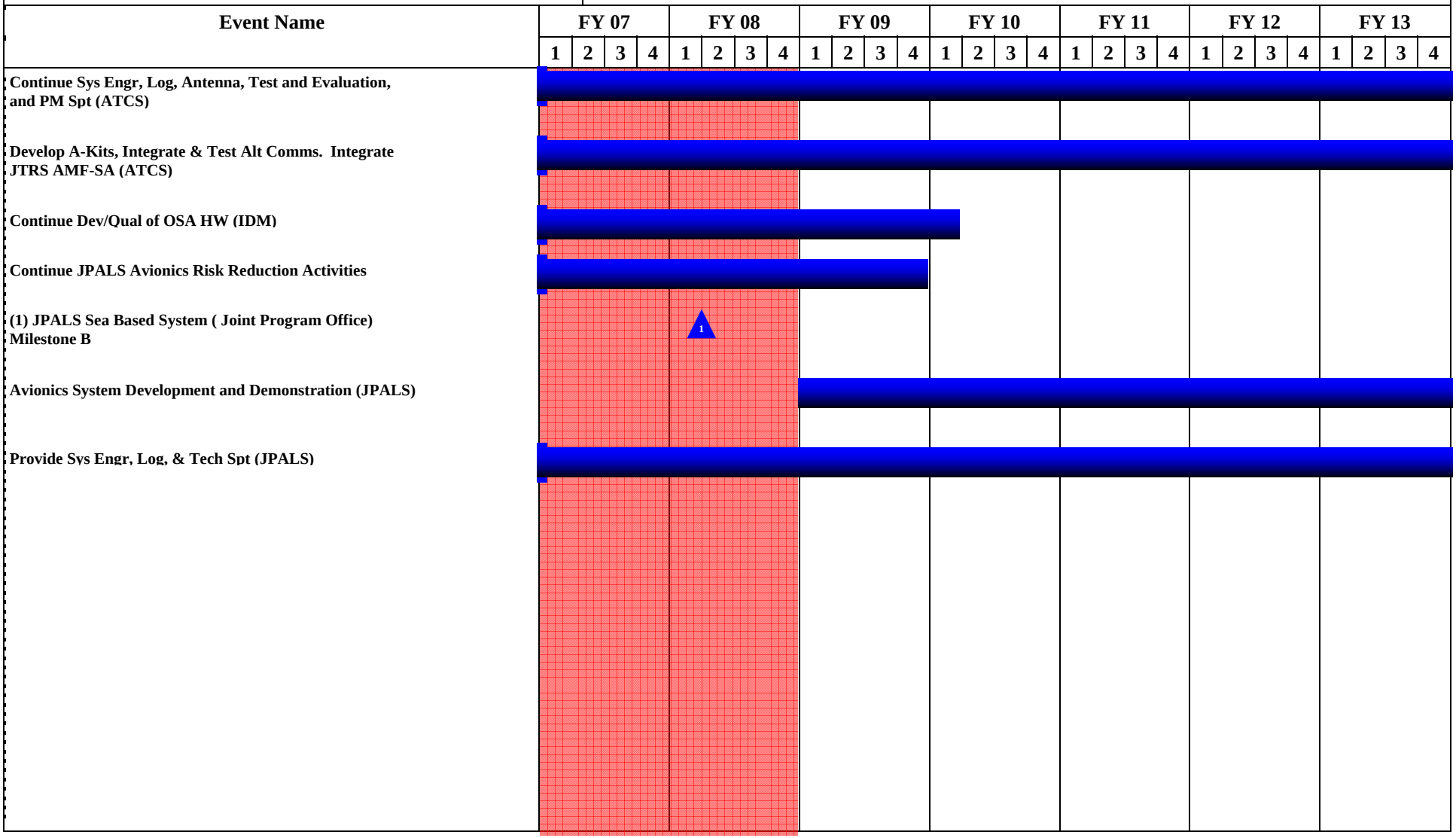
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604201A - AIRCRAFT AVIONICS

PROJECT
C97



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604201A - AIRCRAFT AVIONICS**	**C97**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Continue Sys Engr, Log, Antenna, Test and Evaluation, and PM Spt (ATCS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Develop A-Kits, Integrate & Test Alt Comms. Integrate JTRS AMF-SA (ATCS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Continue Dev/Qual of OSA HW (IDM)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q			
Continue JPALS Avionics Risk Reduction Activities	1Q - 4Q	1Q - 4Q	1Q - 4Q				
JPALS Sea Based System (Joint Program Office) Milestone B		2Q					
Avionics System Development and Demonstration (JPALS)			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Provide Sys Engr, Log, & Tech Spt (JPALS)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	217203	181145	135652	99390					633390
538	KIOWA WARRIOR	29000								29000
53H	ARMED RECONNAISSANCE HELICOPTER (ARH)	188203	181145	135652	99390					604390

A. Mission Description and Budget Item Justification: The mission of the ARH is to provide a robust reconnaissance and security capability for the Joint Combined arms air-ground maneuver team. The ARH is a combination of a modified off-the-shelf (OTS) airframe integrated with a non-development item (NDI) mission equipment package (MEP). The ARH will be fielded to support current forces in the Global War on Terror (GWOT) and will possess the growth potential to bridge the capability gaps to Future Combat Force. The ARH will be a direct replacement for the aging OH58D Kiowa Warrior fleet.

The rapidly reconfigurable ARH provides the space, weight, and power to incorporate the MEP, as Mission, Enemy, Terrain, Troops available, Time and Civilian considerations (METT_TC) dictates, for use in High/hot (4K/95°F with growth potential to 6K/95°F) conditions, complex terrain, and urban environments. The MEP provides a robust communications and navigation suite, advanced state-of-the-art sensor assembly, and self-defense armament capability to fight for, collect, and distribute critical information to all members of the Joint air-ground maneuver team. Specifically, the ARH's robust communication suite when combined with the sensors assembly provides real time delivery of actionable combat information to the joint force while enabling precision employment of Joint sensors and fires.

The ARH will provide a highly deployable, reconnaissance and security capability that will employ immediately upon arrival into theater. The platform will address the capability gaps of interoperability, survivability, versatility, agility, lethality, and sustainability to ensure interoperability over extended ranges, enhance mission effectiveness throughout the operational environment, and focus on system survivability against threats operating in the contemporary operational environment, while reducing the logistical burden on the tactical unit. The fundamental purpose of ARH is to perform reconnaissance and to provide security in combat operations. In doing so, it improves the commander's ability to maneuver and concentrate superior combat power against the enemy at the decisive time and place.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	131315	82310	13027
Current BES/President's Budget (FY 2009)	217203	181145	135652
Total Adjustments	85888	98835	122625
Congressional Program Reductions		-1165	
Congressional Rescissions			
Congressional Increases		100000	
Reprogrammings	89584		
SBIR/STTR Transfer	-3696		
Adjustments to Budget Years			122625

Change Summary Explanation: Funding - FY 07, FY 08 & FY 09 Increases made in support of the Armed Reconnaissance Helicopter (FY 07 +85888; FY 08 +98835; FY 09 +122625).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
53H	ARMED RECONNAISSANCE HELICOPTER (ARH)	188203	181145	135652	99390					604390

A. Mission Description and Budget Item Justification: The mission of the Armed Reconnaissance Helicopter (ARH) is to provide a robust reconnaissance and security capability for the Joint Combined arms air-ground maneuver team. The ARH is a combination of a modified off-the-shelf (OTS) airframe integrated with a non-development item (NDI) mission equipment package (MEP). The ARH will be fielded to support current forces in the Global War on Terror (GWOT) and will possess the growth potential to bridge the capability gaps to Future Combat Force. The ARH will be a direct replacement for the aging OH58D Kiowa Warrior fleet.

The rapidly reconfigurable ARH provides the space, weight, and power to incorporate the MEP, as Mission, Enemy, Terrain, Troops available, Time and Civilian considerations (METT_TC) dictates, for use in High/hot (4K/95°F with growth potential to 6K/95°F) conditions, complex terrain, and urban environments. The MEP provides a robust communications and navigation suite, advanced state-of-the-art sensor assembly, and self-defense armament capability to fight for, collect, and distribute critical information to all members of the Joint air-ground maneuver team. Specifically, the ARH's robust communication suite when combined with the sensors assembly provides real time delivery of actionable combat information to the joint force while enabling precision employment of Joint sensors and fires.

The ARH will provide a highly deployable, reconnaissance and security capability that will employ immediately upon arrival into theater. The platform will address the capability gaps of interoperability, survivability, versatility, agility, lethality, and sustainability to ensure interoperability over extended ranges, enhance mission effectiveness throughout the operational environment, and focus on system survivability against threats operating in the contemporary operational environment, while reducing the logistical burden on the tactical unit. The fundamental purpose of ARH is to perform reconnaissance and to provide security in combat operations. In doing so, it improves the commander's ability to maneuver and concentrate superior combat power against the enemy at the decisive time and place.

The System Development and Demonstration (SDD) Phase has experienced schedule delays and cost overruns. Initially, the SDD program was delayed due to difficulties with design completion, build of the prototype aircraft, and execution of the Limited Users Test (LUT). A program restructure is currently under review by the Army and OSD. Key risk mitigating components of the restructure include a 2 year program extension, a well defined aircraft / component qualification process, and the addition of a second LUT (1st LUT is complete).

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of 53H.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Aircraft System Development and Demonstration	160326	141365	101582

Engineering Support Activities	9743	20636	13705
Test and Evaluation	6884	10802	12795
Program Management	6182	8342	7570
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR)	5068		
Total	188203	181145	135652

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
A04203 ARMED RECONNAISSANCE HELICOPTER	75	174571	438851	507052	593466	582407	589214	2240939	5126575

Comment:

C. Acquisition Strategy The Milestone B Acquisition Decision Memorandum (ADM) was signed on 27 July 2005. The Armed Reconnaissance Helicopter (ARH) program is currently in the Systems Development and Demonstration (SDD) phase. A Limited User Test (LUT) was completed in 1st Quarter FY 2008.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604220A - Armed, Deployable OH-58D

PROJECT
53H

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Subsystem Integration	CPIF	Various	137965	165394	1-3Q	141365	1-3Q	101582	1-3Q	64993	611299	
Subtotal:			137965	165394		141365		101582		64993	611299	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support Activities	Various	Various	10978	9743	1-3Q	20636	1-3Q	13705	1-3Q	14397	69459	
Subtotal:			10978	9743		20636		13705		14397	69459	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	Various Activities	8688	6884	1-3Q	10802	1-3Q	12795	1-3Q	11960	51129	
Subtotal:			8688	6884		10802		12795		11960	51129	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	ARH Internal Operating Budget, Matrix Support and Support Contracts	9753	6182	1-4Q	8342	1-4Q	7570	1-4Q	8040	39887	
Subtotal:			9753	6182		8342		7570		8040	39887	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

Project Total Cost:	**167384**	**188203**		**181145**		**135652**		**99390**	**771774**	

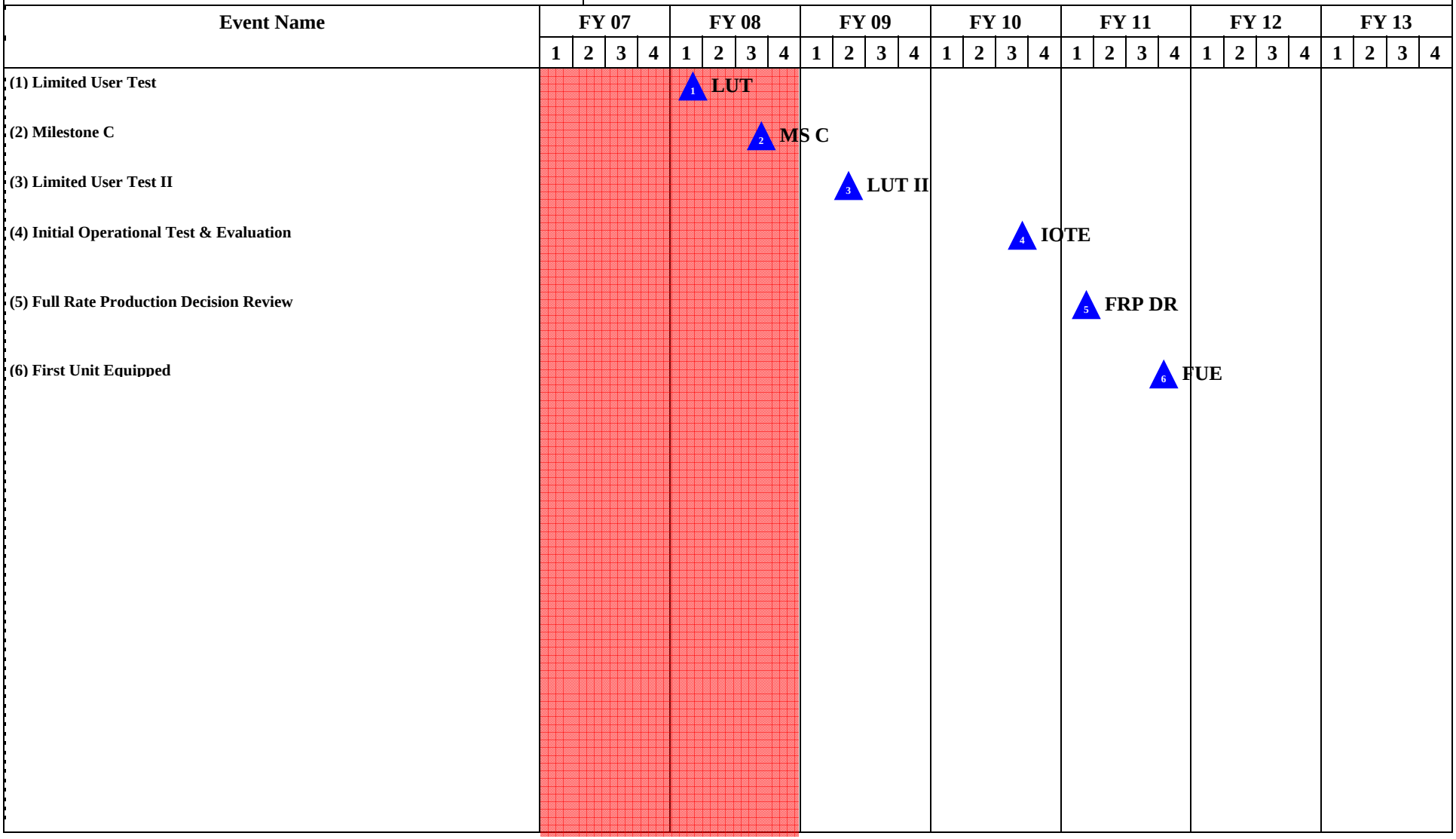
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604220A - Armed, Deployable OH-58D

PROJECT
53H



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604220A - Armed, Deployable OH-58D**	**53H**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone B							
Contract Award							
Limited User Test		1Q					
Milestone C		3Q					
Limited User Test II			2Q				
Initial Operational Test & Evaluation				3Q			
Full Rate Production Decision Review					1Q		
First Unit Equipped					4Q		

Milestone B occurred 4th Quarter FY 2005 (07 Jul 2005) as well as Contract Award for System Development and Demonstration (SDD) (29 Jul 2005).

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)							February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604220A - Armed, Deployable OH-58D**						PROJECT **53H**
Funding in $000							
Program	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Armed Reconnaissance Helicopter (ARH)	165394	132310	95631	60700			
Total Termination Liability Funding:	165394	132310	95631	60700			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	41540	57169	32325	39720	37796	69057	50723	Continuing	Continuing
665	A/C SURV EQUIP DEV	10274	4040	4065	5137	5651	7449	8446	Continuing	Continuing
L12	Signals Warfare Development (MIP)	15085	10512	3616	5137	5137	25841	10931	Continuing	Continuing
L15	ARAT-TSS	1256	2135	2257	2365	2342	2521	2521	Continuing	Continuing
L16	TROJAN DEVELOPMENT (MIP)	1602	1447	1485	1523	1562	1596	1633	Continuing	Continuing
L20	ATIRCM/CMWS	13323	39035	20902	25558	23104	31650	27192	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element encompasses engineering and manufacturing development for tactical electronic warfare (EW), signals warfare (SW), aircraft survivability equipment (ASE), battlefield deception, rapid software reprogramming and protection of personnel and equipment from hostile artillery. EW encompasses the development of tactical EW equipment and systems mounted in both ground and air vehicles. The systems under this program provides the Army with the capability to degrade or deny hostile forces the effective use of their communications, countermortar/counterbattery radars, surveillance radars, infrared/optical battlefield surveillance systems and electronically fused munitions. Existing Army EW systems must be replaced or upgraded to maintain their capability in the face of threats. This program element satisfies requirements for brigade, division, corps and higher commanders to conduct electronic warfare to meet tactical and Special Electronic Mission Aircraft (SEMA), attack/scout, and assault/cargo mission requirements. The Prophet program provides for the development of multifunction ground based and airborne intelligence and electronic warfare systems. Trojan will complete Proof-of-Principle R&D for specific applications in advanced threat signals processing, prototype software upgrades, high frequency (HF) algorithms for compact antenna array technology (CAAT), search and acquisition capabilities for unattended signal collectors, and new digital intelligence collection, processing and dissemination technology. The Army Reprogramming Analysis Team (ARAT) Project will develop, test and equip an Army-wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	45053	55716	39974
Current BES/President's Budget (FY 2009)	41540	57169	32325
Total Adjustments	-3513	1453	-7649
Congressional Program Reductions	-2767		
Congressional Rescissions			
Congressional Increases		1453	
Reprogrammings			
SBIR/STTR Transfer	-746		
Adjustments to Budget Years			-7649

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**665**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
665 A/C SURV EQUIP DEV	10274	4040	4065	5137	5651	7449	8446	Continuing	Continuing

A. Mission Description and Budget Item Justification: The objective of the Aircraft Survivability Equipment (ASE) Development project is to improve radio frequency (RF) ASE for Army aviation. Milestone Decision Authority (MDA) approved phase 1 of a phased/incremental path forward, supported by the user and HQDA.

Phase I upgrades the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V)1 Radar Signal Detecting Set through modernization and reduced parts count. Along with improved maintainability and reliability, performance will be enhanced via increased processing speed and expanded memory. These improvements will result in faster response time, better dense environment capability and improved parameter measurement. Phase 1 serves to make the currently fielded system viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3. Phase 2 initiates development of an improved digital Radar Warning Receiver (RWR) and Phase 3 adds active Electronic Countermeasures (ECM) for selected aircraft.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of 665.

FY 09 funding begins the prototyping of the digital Radar Warning Receiver (RWR).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
In-house and program management administration	1524	1065	2491
Phase I Product Development (AN/APR-39A(V)1 Upgrade)	150	2975	
Phase II Product Development (Digital RWR)			1574
Testing (Qualification, Chamber, etc.)	850		
Redirected PEO IRCM Laser	7454		
Small Business Innovative Research/Small Business Technology Transfer Program	296		
Total	10274	4040	4065

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
AZ3511 RFCM	21040	36564	37203	57252	54437	4600	4300	Continuing	Continuing

Comment:

C. Acquisition Strategy The Army Radio Frequency (RF) Aircraft Survivability Equipment (ASE) is managed by Program Director ASE (PD ASE) for integration and installation on Army Aviation platforms. PD ASE proposed a three phased path forward commensurate with user priorities and life cycle management philosophy. Phase 1, approved by MDA, upgrades the currently fielded AN/APR-39A(V)1 Radar Signal Detecting Set which is employed by approximately 3,000 aircraft; awarded sole source via ECP to the existing contractor of the APR-39A. Phase 2 develops an improved digital Radar Warning Receiver for modernized Army platforms by capitalizing on emerging technologies to provide enhanced aircrew situational awareness. Phase 3 will develop and integrate active Electronic Countermeasures jamming capability for select aircraft. Competition will be considered for the future phases.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
665

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AN/APR-39(V)1 Upgrade	FFP	Northrop Grumman Rolling Meadows, IL	11238	150	1Q	2975	2Q				14363	
Digital Radar Warning Receiver (RWR)	Comp	TBD						1574	1Q	103408	104982	
Subtotal:			11238	150		2975		1574		103408	119345	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	Multiple	1329	1068	1-2Q	1015	2Q	2141	2Q	12843	18396	
Contractor Support	C/FFP	Multiple	224	161	1Q			300	2Q	2334	3019	
Subtotal:			1553	1229		1015		2441		15177	21415	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Phase II DT/OT/FOTE										23000	23000	
Flight Test/Range Support (Phase I)	MIPR	ATTC, Ft. Rucker, AL		450	1-2Q						450	
Phase I Test and Evaluation	MIPR	TSSQ, Eglin AFB, FL		400	1-2Q						400	
Processor Upgrade Evaluation	MIPR	Evaluation Center APG, MD		25	1Q						25	
Subtotal:				875						23000	23875	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

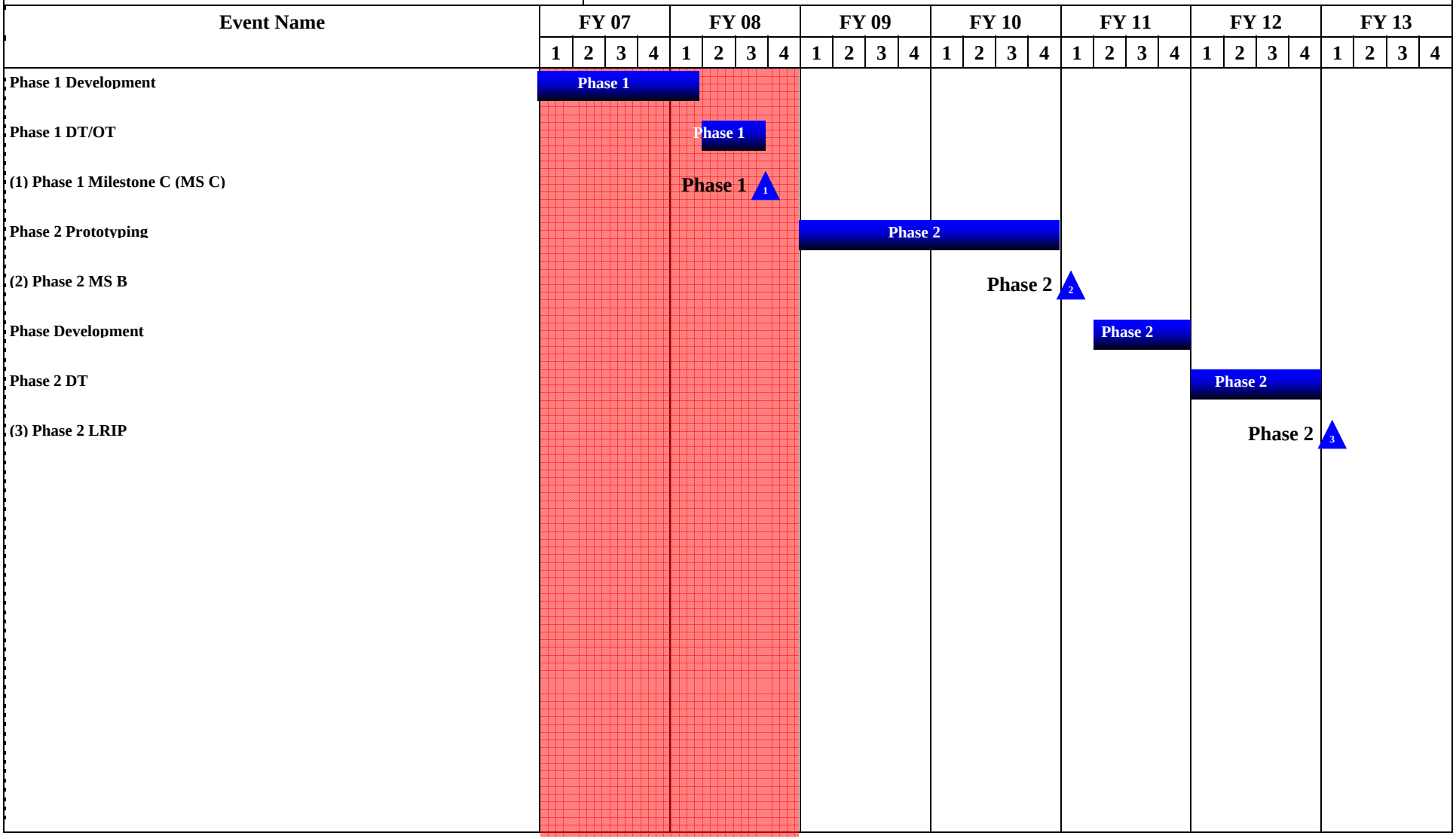
PROJECT
665

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management	In-House	PD ASE	59	35	1-4Q	50	1-4Q	50	1-4Q	259	453	
Other Development	In-House	PD ASE		7985							7985	
Subtotal:			59	8020		50		50		259	8438	
Project Total Cost:			**12850**	**10274**		**4040**		**4065**		**141844**	**173073**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**665**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**665**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Phase 1 Development	1Q - 4Q	1Q					
Phase 1 DT/OT		2Q - 3Q					
Phase 1 Milestone C (MS C)		3Q					
Phase 2 Prototyping			1Q - 4Q	1Q - 4Q			
Phase 2 MS B					1Q		
Phase Development					2Q - 4Q		
Phase 2 DT						1Q - 4Q	
Phase 2 LRIP							1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L12**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L12	Signals Warfare Development (MIP)	15085	10512	3616	5137	5137	25841	10931	Continuing	Continuing

A. Mission Description and Budget Item Justification: Prophet's primary mission is providing 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. Prophet is an integral part of the Army Transformation, providing Near Real Time (NRT) information to the Brigade Commander within his combat decision cycle. It is the tactical commander's sole organic ground-based Signals Intelligence/Electronic Warfare (SIGINT/EW) system for the Division, Brigade Combat Team (BCT), Stryker Brigade Combat Team (SBCT) and Armored Calvary Regiments (ACR). Prophet provides the tactical commander with the next generation SIGINT/EW - radio detection/direction finding and electronic attack capabilities. Prophet stationary and on-the-move direction finding information develops battlespace visualization, Intelligence Preparation of the Battlefield (IPB) and target development for enemy and gray emitters within radio line-of-sight across the brigade area of responsibility. This NRT information when processed provides a key component of the fused intelligence Common Operating Picture (COP). Initially Prophet will interface with the maneuver brigade Analysis Control Team - Enclave (ACT-E) and All Source Analysis System (ASAS) Intelligence Fusion System (IFS) via Prophet Control. Prophet Control is a surrogate for the Distributed Common Ground System-Army (DCGS-A). The ACT forwards the gathered information to the division and armored cavalry Analysis and Control Element (ACE) ASAS. Prophet enables the Brigade Commander to detect signals while the vehicle is moving, a first for a Tactical SIGINT system. Prophet functionality will be resident within the Future Combat System (FCS) and Prophet developed technology as well as Tactics, Techniques and Procedures (TTPs) will be leveraged for the FCS program. Prophet is utilizing a block and spiral acquisition strategy. These are Block I - Electronic Support (ES) (SIGINT), Spiral 1 EA - Electronic Attack (EA) (Formerly known as Block II), and Spiral 1 ES - Modern Signals (Formerly known as Interim Block III). The Spiral 2 ES/EA (Formerly known as Block III) adds the ability to address modern signals.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of L12.

FY2009 funds continue development of Spiral 2 ES/EA, with a LUT in 3QFY10 to support a MS C and LRIP Decision in 4QFY10, and IOT&E testing starting in 4QFY11 to support a FRP Decision in the 1QFY12.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Prophet Spiral 2 ES/EA System Development and Demonstration (SDD)	11696	8012	3616
Prepare for and conduct Prophet Spiral 2 ES/EA Testing	1939	2500	
Blue Marauder	1450		
Total	15085	10512	3616

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
BZ7326 Prophet Ground (TIARA)	103621	121058	114085	101684	112310	42397	21903	Continuing	Continuing
PE 030885G Defense Cryptological Program for PROPHET	2921	6431	6463	6713	6994	7164	7232	Continuing	Continuing
BZ9751 Special Purpose Systems (TIARA) (Prophet Only)	3801	2335	2423	2586	3111	3469	3570	Continuing	Continuing

Comment:

C. Acquisition Strategy The Prophet Acquisition Strategy is structured to optimize system capability while reducing risk and streamlining business and engineering processes. Block I ES (SIGINT) Engineering and Manufacturing Development (EMD) was a sole source effort which leveraged off existing COTS equipment. Follow-on Block II (EA) and Block III (Modern Signals) RDT&E efforts were combined into a single SDD phase following an evolutionary acquisition process. Block II/III SDD was competitively awarded in 2QFY03. The Block II/III was split into spirals following the 3QFY05 LUT resulting in the Spiral 1 ES, Spiral 1 EA and future Spiral 2 ES/EA. Following a June 2005 MS C review, Spiral 1 EA (formerly Block II) entered LRIP under Cost Plus Incentive Fee contract. The Spiral 1 ES entered production under a Fixed Price Incentive Fee contract. Spiral 2 ES/EA (formerly the Block II/III) continued in the SDD phase (using the existing SDD contract) to address the total Prophet ES/EA requirements.

Prophet Pre-Planned Product Improvements (P3I) and Technology Insertions (TI) efforts will utilize competitive contracting to the maximum extent possible.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
L12

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prophet Spiral 2 ES/EA SDD Contract	C-CPIF	General Dynamics Decision Systems, Scottsdale, AZ	8317	7915	2Q	4273	2Q	1863	3Q		22368	
Spiral 1 ES Development Platforms	FPI			2586	4Q	2586	1Q				5172	
Modeling and Simulation	C/T&M	CACI, Alexandria, VA	1000						3Q		1000	
Subtotal:			9317	10501		6859		1863			28540	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	CECOM, Fort Monmouth NJ	7704		1-3Q	200	1-3Q	200	1-3Q		8104	
Contractor Engineering Support	C/T&M	CACI, Eatontown, NJ	2925	600	2Q	630	2Q	662	2Q		4817	
Contractor Engineering Support	C/T&M	Mitre, Eatontown, NJ	259	438	2-4Q	663	2Q	721	2Q		2081	
Subtotal:			10888	1038		1493		1583			15002	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prepare for and Conduct Spiral 2 ES/EA DT, LUT/IOT&E	MIPR	EPG/AEC	7455	1939	2Q	2000	2Q		2Q		11394	
Geo-Location Testing	C/T&M	BAH, Eatontown, NJ	357	8	2Q						365	
Subtotal:			7812	1947		2000					11759	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

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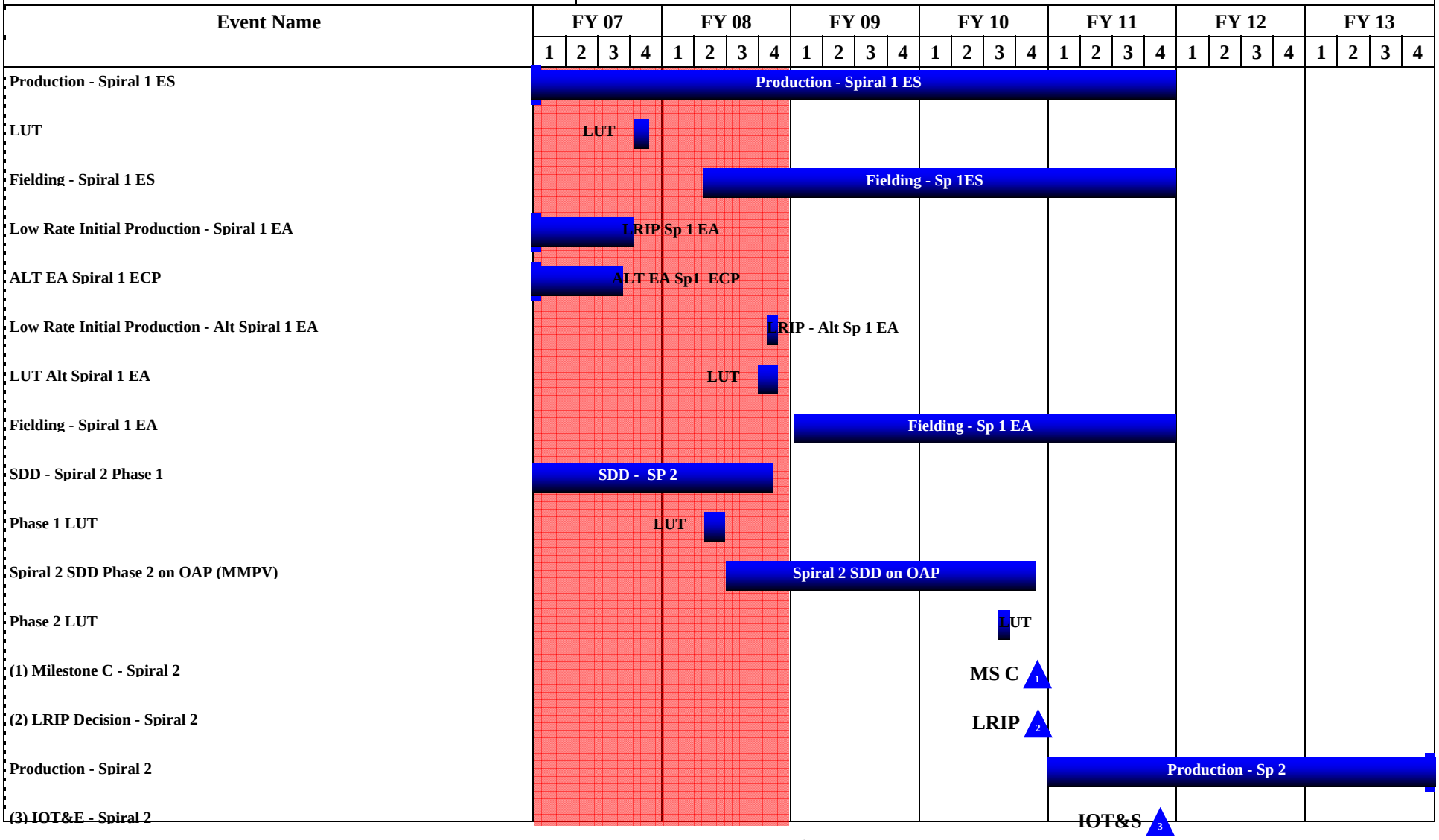
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In-House	PM Signals Warfare, Fort Monmouth, NJ	5858	149	1-4Q	160	1-4Q	170	1-4Q		6337	
Blue Marauder (Congressional Add)	Funds passed thru - not related to Prophet	PM CSIS, Fort Belvoir, VA	1700	1450							3150	
Subtotal:			7558	1599		160		170			9487	
Project Total Cost:			**35575**	**15085**		**10512**		**3616**			**64788**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L12**



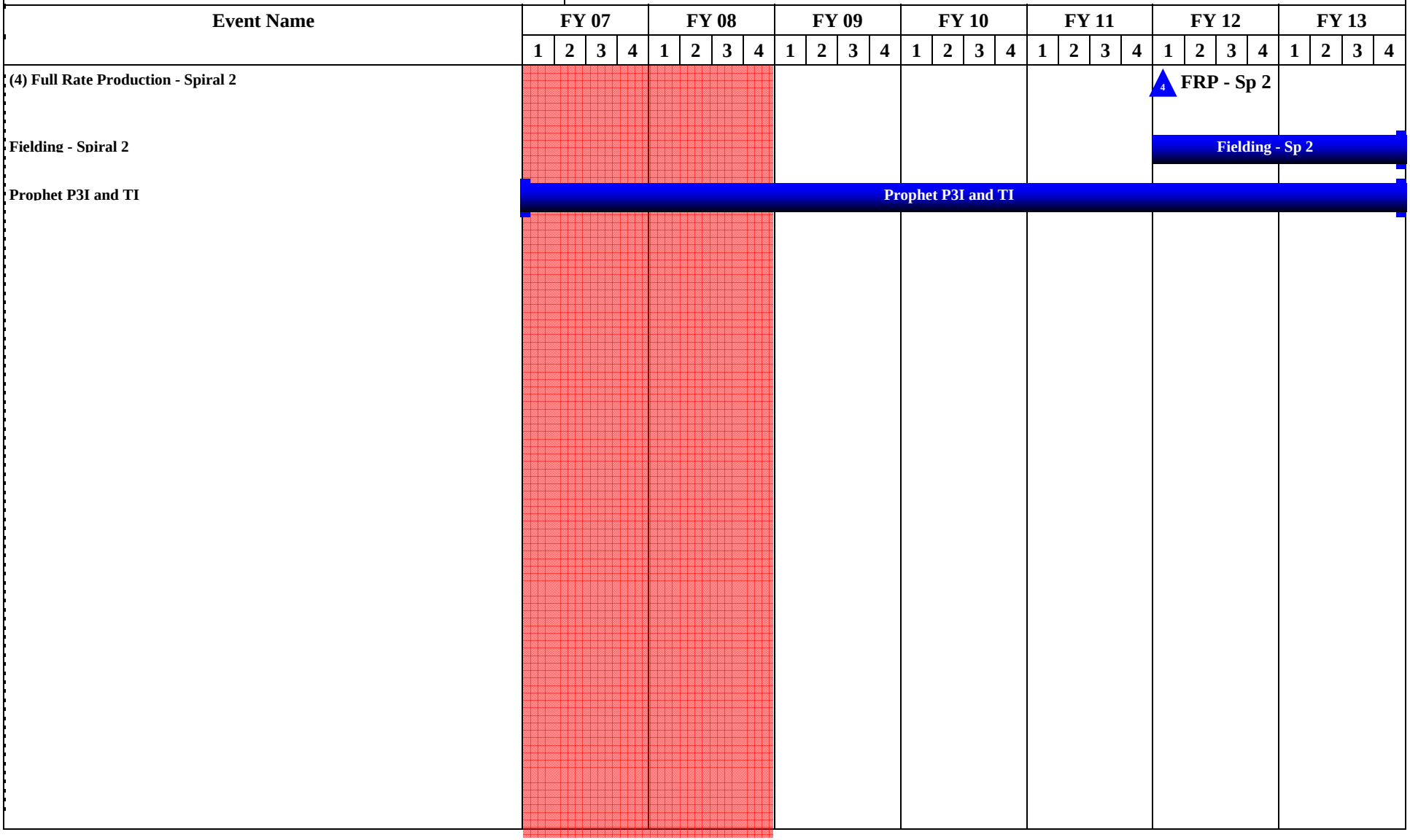
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
L12



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L12**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PROPHET							
Production - Spiral 1 ES	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
LUT	4Q						
Fielding - Spiral 1 ES		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Low Rate Initial Production - Spiral 1 EA	1Q - 4Q						
ALT EA Spiral 1 ECP	1Q - 3Q						
Low Rate Initial Production - Alt Spiral 1 EA		4Q					
LUT Alt Spiral 1 EA		4Q					
Fielding - Spiral 1 EA			1Q - 4Q	1Q - 4Q	1Q - 4Q		
SDD - Spiral 2 Phase 1	1Q - 4Q	1Q - 4Q					
Phase 1 LUT		2Q					
Spiral 2 SDD Phase 2 on OAP (MMPV)		3Q - 4Q	1Q - 4Q	1Q - 4Q			
Phase 2 LUT				3Q			
Milestone C - Spiral 2				4Q			
LRIP Decision - Spiral 2				4Q			
Production - Spiral 2					1Q - 4Q	1Q - 4Q	1Q - 4Q
IOT&E - Spiral 2					4Q		
Full Rate Production - Spiral 2						1Q	
Fielding - Spiral 2						1Q - 4Q	1Q - 4Q
Prophet P3I and TI	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L15**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L15 ARAT-TSS	1256	2135	2257	2365	2342	2521	2521	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army Reprogramming Analysis Team (ARAT) Target Sensing System (TSS) supports the tactical Commander by providing timely/rapid reprogramming of any Army supported, joint, allied service, Army Electronic Warfare (EW) Integrated Reprogramming (EWIR) or Measurement Intelligence (MASINT) based target acquisition, target engagement, or vehicle/aircraft survivability equipment (ASE). ARAT provides software changes not readily possible by operator input, to respond to rapid deployments or changes in the threat environment. The ARAT Software Engineering (SE) Project Office coordinates the development of ARAT infrastructure to support the needs of all TSS developers and users; develops the capability to conduct real-time hardware and software technical enhancements of validated threat changes; examines and identifies the best technical approaches for development of field reprogramming capabilities of ATSS with commonality at a desired end-state; supports the developments of flagging models; participates in the operational and developmental test design of ATSS; and supports Service and JCS Reprogramming Exercises.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of L15.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Engineering Development (TSS Survey): Complete the Survey initiated in FY02 to identify TSS requiring support in Army Battlefield Functional Area (BFAs) with a focus on operational, technical, and intelligence aspects. This would include technical information about the actual TSS and their near and far term support requirements for intelligence collection, flagging, and threat analysis, Mission Data Set (MDS), communications, and filed support.	172	288	305
Intelligence Support (Platform Intelligence Integration): Analyze capability of using data from US Army Aviation Platform systems to increase tactical situational awareness as well as providing additional intelligence collection data. This would include evaluation of system modifications.	250	419	443
Intelligence Support (Platform Intelligence Integration): Building on the work completed in FY02 determine individual platform benefits vs. potential costs to upgrade systems on each Aviation platform. Initiate lab testing of potential system updates to verify the additional benefit and identify intelligence collection methodology to integrate the collected intelligence data onto an intelligence network.	255	355	437
Database Support (Flagging Model): Work jointly with the USAF at Kelly AFB, TX to complete the conversion of the current flagging database structure shared by the US Army and USAF flagging models to a more modern database structure. In addition, initiate converting the US Army flagging models over to the new database structure.	130	218	230
Engineering Development, Intelligence Support, Database Support, & Dissemination (Common Intel Database): Define requirements for a common intelligence database analysis and MDS tool for use by ARAT-TA (Kelly and Eglin AFBs) and ARAT-SE. The functionality	209	335	354

must include common user interface, intelligence inputs, modular threat analysis and MDS generator tools, and output formats to support intelligence reporting, RF scenarios inputs and MDS inputs for EWOSS/MLV to leverage the use of existing tools such as the Major Radar Database (MRDB) as much as practical.			
Engineering Development, Intelligence Support, Database Support, & Dissemination (Common Intel Database): Using the requirements definition completed in FY02, initiate the development of the common intelligence database analysis and MDS tool. Complete the user interface, database structure, output formats, and placeholders for the internal threat analysis and MDS generator tools.	240	461	488
Small Business Innovative Research/Small Business Technology Transfer Programs		59	
Total	1256	2135	2257

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

C. Acquisition Strategy The efforts to be funded in this project will require a combination of systems specific and high-tech knowledge. The contractual services portion for the project will be obtained from both the CECOM SEC competitive omnibus and the RDEC High Tech contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
L15

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Labor (internal Gov't)	Labor (internal Gov't)	CECOM, Fort Monmouth, NJ	2628	481	1-4Q	837	1-4Q	885	1-4Q	Cont.	Cont.	Cont.
Travel	Travel	TBD/Various sites	274	60	1-4Q	100	1-4Q	106	1-4Q	Cont.	Cont.	Cont.
Subtotal:			2902	541		937		991		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Support (INSCOM Full Spectrum)	Development Support (INSCOM)	TBD/Various sites	1668	325	1-4Q	544	1-4Q	576	1-4Q	Cont.	Cont.	Cont.
Development Support (CECOM RDEC T&E CECOM SEC Omnibus)	Development Support (CECOM)	TBD/Various sites	2110	390	1-4Q	654	1-4Q	690	1-4Q	Cont.	Cont.	Cont.
Subtotal:			3778	715		1198		1266		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Labor and ranges	TBD	TBD	500								500	
Subtotal:			500								500	

IV. Management Services	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
L15

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Labor (Int and Contact)	TBD	CECOM and INSCOM	1544							Cont.	Cont.	Cont.
Subtotal:			1544							Cont.	Cont.	Cont.
Project Total Cost:			**8724**	**1256**		**2135**		**2257**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L16**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L16	TROJAN DEVELOPMENT (MIP)	1602	1447	1485	1523	1562	1596	1633	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project is a Tactical Intelligence and Related Activities (TIARA) program. TROJAN RDT&E supports TROJAN Classic XXI (TCXXI) future capabilities to fulfill the Army's need for a worldwide, deployable, remotable, intelligence, surveillance and reconnaissance (ISR) support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of the Objective Force and Future Combat System (FCS), TCXXI will provide soldiers with a real-world, hands-on, live and near-real time SIGINT training environment sustaining, maintaining and enhancing their military occupational specialty (MOS) proficiencies and specific target expertise. This operational readiness training will fulfill the Army's larger intelligence training requirement via a secure collaborative architecture.

A key factor for success the Objective Force and FCS will be the ability to collect, process and use information about an adversary while preventing similar information from being disclosed. TROJAN is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. TROJAN operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded TROJAN systems, prior to the acquisition of those technologies. As part of the Objective C4ISR Architecture, these capabilities will enable processing and dissemination of real-time intelligence data from various sources to form the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative that TROJAN keeps pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of L16.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Integrate and test specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms.	302	241	250
Acquire and apply multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput.	100	111	115
Develop prototype QRC Receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using DSP and FPGA technologies.	527	300	310
Integrate Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups (RRGs).	392	320	325
Develop hardware/software interface for TCXXI system to ONEROOF storage system		275	280

Develop specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy & throughput capacity and system management capabilities; Investigate compression/processing technologies to reduce communications bandwidth requirements for remoted TROJAN systems, including streaming audio technologies.	281	200	205
Total	1602	1447	1485

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA BA0331 Trojan	7557	7627	7757	7878	8000				38399

Comment:

C. Acquisition Strategy This Acquisition Strategy for the TROJAN Classic XXI System supported by TROJAN RDT&E is to adapt and leverage from Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) products. Additionally leverage off of development by DoD and other Government agencies to the greatest extend possible. TROJAN RDT&E is used to fund the development of enhancing these technologies to meet specific user requirements. The funding for production and fielding of these capabilities are funded under TROJAN BA0331.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
L16

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop Prototype QRC Receiver packages	MIPR	CERDEC I2WD Ft Monmouth	2165	539		291		300		Cont.	Cont.	Cont.
Develop DF Capabilities for TROJAN RRG	MIPR	CERDEC I2WD Ft Monmouth	250	392		320		325		Cont.	Cont.	Cont.
Investigate Compression /processing technologies	MIPR	CERDEC I2WD Ft Monmouth	1038							Cont.	Cont.	Cont.
Develop specialized software enhancements to TROJAN audio streaming	MIPR	CERDEC I2WD Ft Monmouth	578	281		200		205			1264	
Develop hardware/software interface to ONEROOF	MIPR	CERDEC I2WD Ft Monmouth	350			275		280			905	
Subtotal:			4381	1212		1086		1110		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Aquire & Apply muliti bandwidth compr Algorithm	MIPR	CECOM I2WD FT Monmouth	650	100		111		115		Cont.	Cont.	Cont.
Subtotal:			650	100		111		115		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Integrate/test hardware/software	MIPR	CECOM I2WD FT Monmouth	1650	290		250		260		Cont.	Cont.	Cont.
Operational test/eval of enhanced	MIPR	CECOM I2WD Ft	429							Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L16**

SIG Processing		Monmouth										
Subtotal:			2079	290		250		260		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			**7110**	**1602**		**1447**		**1485**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L20**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L20	ATIRCM/CMWS	13323	39035	20902	25558	23104	31650	27192	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Advanced Threat Infrared Countermeasure (ATIRCM) is a US Army program to develop, test, and integrate defensive infrared (IR) countermeasures capabilities into existing, current generation host platforms for more effective protection against a greater number of IR- guided missile threats than afforded by currently fielded IR countermeasures. The US Army operational requirements concept for IR countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). It is an integrated warning and countermeasure system to enhance aircraft survivability against IR guided threat missile systems. The core element of the SIIRCM concept is the Advanced Threat Infrared Countermeasure (ATIRCM), Common Missile Warning System (CMWS) Program. The ATIRCM/CMWS, a subsystem to a host aircraft, is an integrated ultraviolet (UV) missile warning system and an IR Laser Jamming and Improved Countermeasure Dispenser (ICMD).

The CMWS also functions as a stand-alone system with the capability to detect missiles and provide audible and visual warnings to the pilot(s); and, when installed with the ICMD, activates expendables to provide a degree of protection. ATIRCM/CMWS is the key IR survivability system for Future Force Army aircraft.

The A-Kit is the modification hardware, wiring harness, cable, etc., necessary to install and interface the ATIRCM/CMWS Mission Kit to each platform. The A-Kit ensures the Mission Kit is functionally and physically operational with the host platform.

The Mission Kit consists of the ATIRCM/CMWS which performs the missile detection, false alarm rejection, and missile declaration functions of the system. The Electronic Control Unit (ECU) of the CMWS sends a missile alert signal to on-board avionics and other Aircraft Survivability Equipment (ASE) such as expendable flare dispensers. Threat missiles detected by the CMWS are handed over to the ATIRCM.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of L20.

FY09 funding supports improvements to CMWS Electronic Control Unit (ECU) and continuation of ATIRCM modernization.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Product Development	1777	26498	13000
Management Services	300	300	300
Test and Evaluation	11246	11145	7602
Small Business Innovative Research/Small Business Technology Transfer Programs		1092	

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
APA, BA 4 AZ3507 ASE Infrared CM	540028	442461	433941	331055	251875	225700	221042	2315544	4761646

Comment: Insert technology from a development program called Cost Effective Light Aircraft Missile Protection (CELAMP).

Insert technology from a development program called Distributed Aperture into ATIRCM. Distributed Aperture is a Joint Program led by the Navy to transmit laser energy out to the same CMWS detectors that are used to detect hostile IR Missiles in the ATIRCM System. It does away with the IR Laser Jam Head Turret in the current ATIRCM design. Lowers cost, less weight.

Investigate using the Fiber Optic technology above on the CELAMP system.

Research enhancement of CMWS EOMS to include multi spectral capability.

C. Acquisition Strategy Funding supports an acquisition strategy of buying CMWS separately from ATIRCM, while installing A-kits on all modernized aircraft. The current production contract is a fixed-priced, five year, Indefinite Delivery, Indefinite Quantity (IDIQ) contract to BAE Systems. Due to acceleration of CMWS, the acquisition strategy accounts for separate IOT&E's and Full Rate Production decisions for CMWS and ATIRCM. Based on the Army OIPT's recommendation to the AAE in Nov 05, the CMWS entered the Full Rate Production and Deployment phase of the acquisition, based upon submittal of the Beyond LRIP Report to Congress on 25 Apr 2006. The AAE approved the ATIRCM path forward in December 05 with the incorporation of the Multi-band Laser into the production baseline. Schedule and costs have been updated to reflect the revised strategy.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604270A - Electronic Warfare Development

PROJECT
L20

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AIRCMM	C/CPIF	Thiokol, Brigham City, UT	1563								1563	1563
ATIRCM EMD Basic Contract	C/CPAF	BAE Systems, Nashua, NH	23574								23574	23574
ATIRCM 6 Lot/EMD/RDT	SS/CPFF	BAE Systems, Nashua, NH	199250								199250	56675
ATIRCM	C/CPFF	Cowley, Chantilly, VA	100								100	100
Test Facility	C/CPFF	Amherst, Huntsville, AL	1300								1300	1300
Modeling and Simulation	C/FFP	CAS, Huntsville, AL	2100	1200	1-2Q	1200	1-2Q	1200	1-2Q	4000	9700	7100
Modernization Efforts	Various	TBD	1262	577		23874	1-2Q	10000	1-2Q	50000	85713	6944
Tier 2/3 Threat Upgrades	Various		675			1800	1-2Q	1800	1-2Q	2000	6275	14709
Subtotal:			229824	1777		26874		13000		56000	327475	111965

Remarks: FY99 & Prior funding in Project 665

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support	C/FFP	Huntsville, AL	37911								37911	9554
Matrix Support	MIPR	CECOM, Ft Monmouth NJ; AMCOM, Huntsville AL	3055								3055	
Subtotal:			40966								40966	9554

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

Technical Support for User Tests	MIPR	Electronic Proving Ground, Ft. Huachuca, AZ	7851	1000	1Q	550	1-3Q	400	1-3Q	2750	12551	
ATIRCM E2E	MIPR	TSMO	303			595		400	1-3Q	4000	5298	
ACR			609								609	
ATIRCM ACR3	MIPR	WSMR	8			500				2350	2858	
ATIRCM IOT&E	MIPR	ATEC and others	10781			500	1-3Q	400	1-3Q	900	12581	
ATIRCM FOT&E (Follow On Operational Test)												
Test Support	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL	102030	500	1Q	500	1-3Q			2700	105730	
Test Support (Instrumentation)	C/FFP	Westar, Huntsville, AL and Neer/Thomsen, Huntsville, AL	4194					400	1-3Q		4594	3519
RSA HITL (Hardware in the Loop)								1000			1000	
Test Support With Live Missile Firing. Data Gathering and System Evaluation	MIPR	PM, Instrumentation Targets and Threat Simulators (ITTS) and 46th Test Wing, Eglin AFB, FL	3989			500	1-3Q	800	1Q	2950	8239	
Test Support	C/FFP	BAE Systems, Eglin AFB, FL	1206	1100	1Q	500	1-3Q	400	1-3Q	3150	6356	3000
SMEOS Phase 2	C/FFP		376					500	1-3Q		876	296
Simulation And Evaluation	MIPR	TSMO, Redstone Arsenal, AL	85			600				3050	3735	
Missiles and Telemetry Kits for Testing	MIPR	Various	4852	2200	1Q	900	1-3Q	702		5400	14054	
Guided Weapons Evaluation Facility (GWEF)	MIPR	46th Test Wing, Eglin AFB, FL	165	250	1Q	500	1-3Q	500	1-3Q	1965	3380	
ATIRCM Test Flights	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL				900	1-3Q	200	1-3Q	5750	6850	
Tier I Threat Verification	MIPR	Various		2500	1Q	800	1-3Q	700	1-3Q	5070	9070	

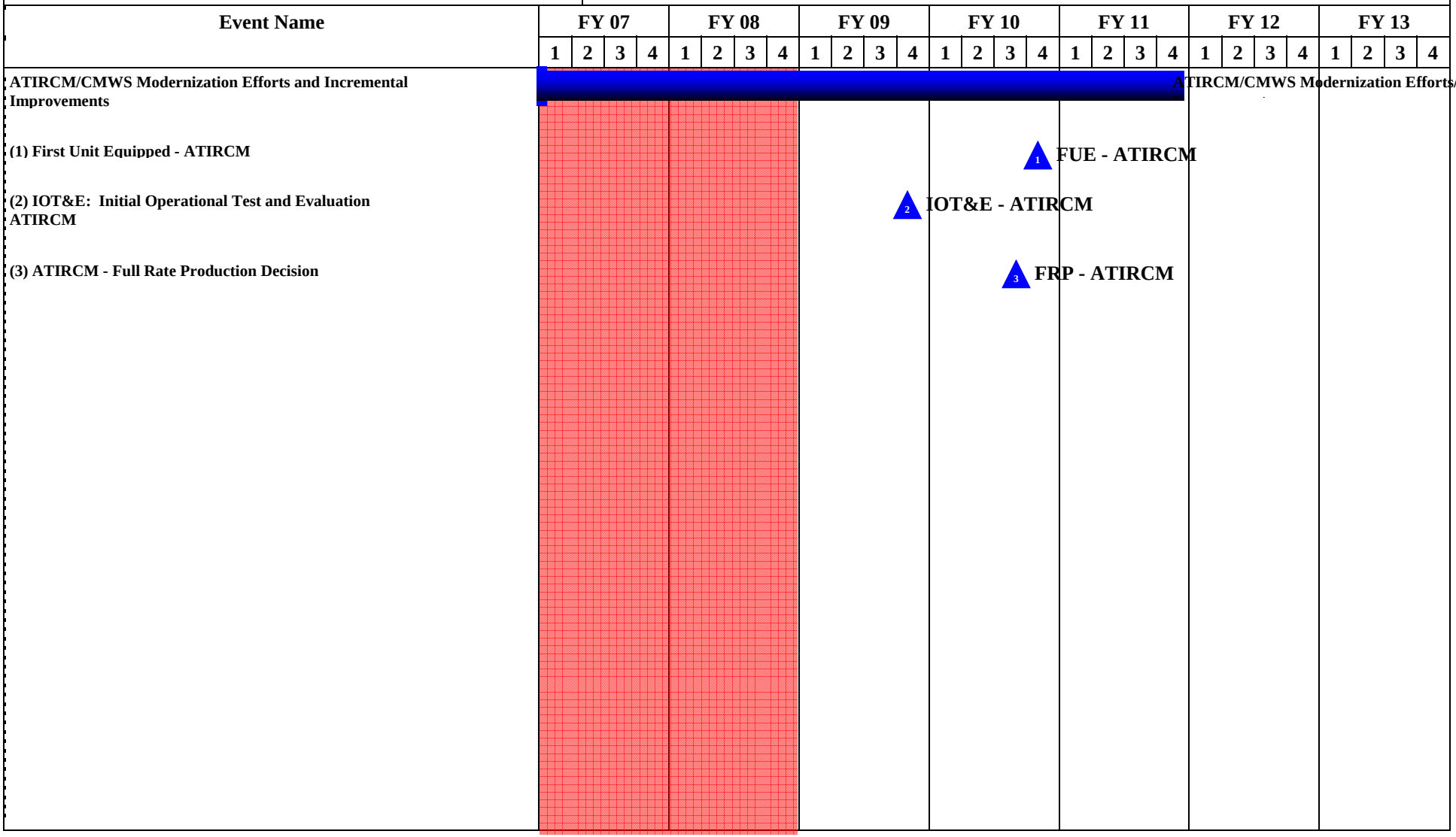
Testing/Missile Shots												
Tier I Threat Verification Testing/FAR Trolling	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL		1082	1Q	600	1-3Q	600	1-3Q	4750	7032	
AWR Testing	MIPR	ATTC, Ft. Ruckel, AL; RTTC, Redstone Ars, AL		1200	1Q	600	1Q	200	1-3Q	2300	4300	
Delta A-Kit for UH-60 Testing	MIPR	Various		1000	1Q	875				500	2375	
Captive Seeker Tests	MIPR	TBD				875	1-3Q			1500	2375	
Sled Test #2	MIPR	TBD				850	1-3Q				850	
PM Jammer Test	MIPR	TBD								1219	1219	
RDT (Government)	MIPR	RTTC						400	1-3Q		400	
Subtotal:			136449	10832		11145		7602		50304	216332	6815

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management	In house support	PD ASE, Huntsville, AL	122898	300	1-4Q	300		300	1-4Q	1200	124998	
SBIR/STIR				414	1Q	716	1Q				1130	
Subtotal:			122898	714		1016		300		1200	126128	
Project Total Cost:			**530137**	**13323**		**39035**		**20902**		**107504**	**710901**	**128334**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L20**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604270A - Electronic Warfare Development**	**L20**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
LRIP contract award							
First Unit Equipped - CMWS							
ATIRCM/CMWS Modernization Efforts and Incremental Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Integration Testing Aerial Cable Range-2							
IOT&E: Initial Operational Test and Evaluation CMWS							
CMWS Full Rate Production Decision							
First Unit Equipped - ATIRCM				4Q			
IOT&E: Initial Operational Test and Evaluation ATIRCM			4Q				
ATIRCM - Full Rate Production Decision				3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio**	**162**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
162 Network Enterprise Domain (NED)				243423	183702	142673	97833	Continuing	Continuing

A. Mission Description and Budget Item Justification: The JTRS budget justification will be found in Navy FY 2009 President's Budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

The mission of the Joint Tactical Radio System (JTRS) is to provide the Department of Defense (DoD) with software programmable, reconfigurable digital radio systems to meet Joint Vision (JV) 2010/2020 requirements for interoperability, flexibility, adaptability, and information exchange. JTRS will acquire a family of affordable, scaleable, high-capacity, interoperable Line of Sight (LoS) and Beyond LoS radios to support simultaneous networked voice/data/video transmissions with low probability of intercept. The program will provide operational forces with an upgraded, interoperable communications capability for improved battle space management and increased Warfighter effectiveness. Interoperability with allied and coalition partners is pursued through international cooperative efforts, including signed agreements with Japan, UK and Sweden.

Beginning in FY07, all JTRS RDT&E Program Elements (PE) are realigned under the Navy JTRS PE (0604280N) for the current Budget Year (BY) only. From the BY+1 through the end of the FYDP, all JTRS RDT&E projects are funded in approximately three equal shares by each Military Department (MILDEP). This transition results in the total JTRS development funding being managed out of three MILDEP PEs (0604280A, 0604280N, and 0604280F) across the FYDP, and consolidated into one Navy PE (0604280N) for the current BY.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
The JTRS budget justification will be found in Navy FY 2009 President's Budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.			
Total			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio**	**162**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)			270560
Current BES/President's Budget (FY 2009)			
Total Adjustments			-270560
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			-270560

Change Summary Explanation: Funding - FY 2009: Funds transferred to the Navy for execution.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SEE FOOTNOTE								Continuing	Continuing

Comment: **The JTRS budget justification will be found in Navy FY 2009 President's Budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

D. Acquisition Strategy The JTRS budget justification will be found in Navy FY 2009 President's Budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio**	**162**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SEE FOOTNOTE												Cont.
Subtotal:												Cont.

Remarks: **The JTRS budget justification will be found in Navy FY 2009 President's Budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

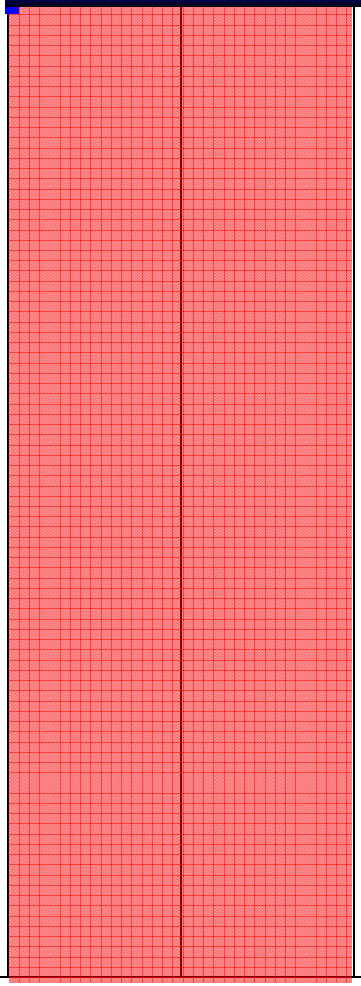
Project Total Cost:												**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio**	**162**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SEE FOOTNOTE	** SEE FOOTNOTE **																											



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604280A - Joint Tactical Radio**	**162**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SEE FOOTNOTE	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

**The JTRS budget justification will be found in Navy FY 2009 President's Budget under Joint Tactical Radio System Program (PE 0604280N, BA5) since the JTRS program is a joint program and the Navy is the lead Service for the JTRS development program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	10338	5384	16465	13017	13223	14500	14700	Continuing	Continuing
B19	ASAS EVOLUTIONARY ACQ (MIP)	6739	3409	3411						30854
B41	CI/HUMINT Software Products (MIP)	3266	1644	1721	3017	3223	3500	3700		20071
B44	ASAS TADSS (MIP)	204	203	205						1002
B49	CHIMS TADSS (MIP)	129	128	128						631
B51	SEQUOYAH - FOREIGN LANGUAGE TRANSLATION SYSTEM			11000	10000	10000	11000	11000	Continuing	Continuing

A. Mission Description and Budget Item Justification: The All Source Analysis System (ASAS) provides US Army commanders at all echelons from battalion to Army Service Component Command with automated support to the management and planning, processing and analysis, and dissemination of intelligence, counterintelligence, and electronic warfare. ASAS provides the means to enhance the commander's timely and comprehensive understanding of enemy deployments, capabilities, and potential courses of action. The system uses standard joint and Army protocols and message formats to interface with selected national, joint, theater, and tactical intelligence, surveillance, and reconnaissance systems and preprocessors and Army, joint, and coalition battle command systems. The ASAS product set currently includes: ASAS-Light (L) laptops, ASAS Intelligence Fusion Station (IFS) desktop computers, the shelterized, High Mobility Multipurpose Wheeled Vehicle (HMMWV)-mounted Analysis and Control Team-Enclave (ACT-E), and various Analysis and Control Element (ACE) configurations at Special Forces Group, Armored Cavalry Regiment, Division, Corps, and Military Intelligence Brigade. Through FY09 these ASAS systems will be configured to operate as integral components of the Army's Distributed Common Ground System-Army (DCGS-A) capability.

The Counterintelligence/Human Intelligence (CI/HUMINT) Information Management System (CHIMS) provides the Army automation support for collection and reporting of CI/HUMINT data to satisfy tactical human intelligence requirements. CHIMS functionality provides support for CI/HUMINT information collection, reporting, investigation, interrogation, biometrics, document exploitation operations. The CHIMS architecture extends from the individual Tactical HUMINT team soldier or CI agent to Theater and National intelligence organizations. CHIMS systems are used to produce intelligence products to feed and maintain HUMINT databases and the All Source Correlated Data Base (ASCDB). CHIMS provides systems to all MACOMS, Special Forces, Reserves, National Guard, Stryker Brigade Combat Teams (SBCT), and the training base. CHIMS systems produce and disseminate messages and reports through an array of communications systems including: combat Net Radio, Single Channel Ground and Airborne Radio System (SINCGARS), Portable Radio Communications (PRC)-150 Secure Telephone Equipment (STE), Secure Telephone Unit (STU), satellite, and other organic communications devices. The CHIMS suite of systems incorporates a multi-tiered architecture that reaches from handheld devices to Web servers providing multiple security level access to the battlefield commander and National interests. Future development efforts will provide CI agents and HUMINT collectors improved collection, reporting, biometrics, language, communications and mission management capabilities.

The Sequoyah-Foreign Language Translation System mission is to produce equipment that provides accurate and timely Automated Foreign Language Translations. Products include: one way speech translation, two-way speech translation, text translation, and broadcast foreign media monitoring. These products, in stand alone or integrated form, will

be used to augment the critical shortage of translators in the current and future regions of the world where English is not spoken. The systems provide a quick response capability for many languages and dialects. These systems support all phases of joint, interagency, multi-national, and homeland security operations from planning and initial entry through re-deployment. These systems enable American warfighters to communicate with the native population, which, until now, was not possible due to the lack of availability of linguists or trusted translators.

The Map-HT Toolkit is responsible for addressing the military problem of there existing a limited Joint, Service, or Interagency capability (organization, methods, tools) to effectively collect/consolidate, visualize, and understand open source socio-cultural information to assist Commanders in understanding the human terrain in which they operate. The Map-HT Toolkit will provide a joint common relevant picture of the human terrain for use by tactical elements, operational commanders, theatre planners, interagency organizations, and coalition partners. The Map-HT Toolkit will provide the capability to establish direct cultural support to BCT/MEF commander and interagency end-users, provide a means for human terrain data collection and dissemination, and provide human terrain baseline information and toolkit.

FY09 provides funding to reconfigure ASAS systems into an integral component of the Army's DCGS-A capability, resolve high priority Software Anomaly Reports (SAR); conduct interoperability development and test; and comply with DOD mandates and provide Defense Information Infrastructure (DII) Common Operating Environment (COE)/Net Centric Enterprise Services (NCES) maintenance for the ASAS family of systems.

FY09 funding, in addition, continues the development of improved counterintelligence and human intelligence collection and reporting capabilities under CHIMS.

FY09 also provides for Automated Speech Recognition (ASR), Optical Character Recognition (OCR) and Machine Language Translation - Translation Engine (MLT-TE) development efforts under the Sequoyah - Foreign Language Translation Systems program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	6888	5384	5465
Current BES/President's Budget (FY 2009)	10338	5384	16465
Total Adjustments	3450		11000
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases	3400		
Reprogrammings	50		
SBIR/STTR Transfer			
Adjustments to Budget Years			11000

Change Summary Explanation:

-The increase of $3.4 million in FY 2007 is Supplemental RDT&E funding for the Map-HT toolkit.

-The increase of $11.0 million in FY 2009 is the RDT&E funding for Sequoyah -Foreign Language Translation System.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
B19	ASAS EVOLUTIONARY ACQ (MIP)	6739	3409	3411						30854

A. Mission Description and Budget Item Justification: The All Source Analysis System (ASAS) provides US Army commanders at all echelons from battalion to Army Service Component Command with automated support to the management and planning, processing and analysis, and dissemination of intelligence, counterintelligence, and electronic warfare. ASAS provides the means to enhance the commander's timely and comprehensive understanding of enemy deployments, capabilities, and potential courses of action. The system uses standard joint and Army protocols and message formats to interface with selected national, joint, theater, and tactical intelligence, surveillance, and reconnaissance systems and preprocessors and Army, joint, and coalition battle command systems. The ASAS product set currently includes: ASAS-Light (L) laptops, ASAS Intelligence Fusion Station (IFS) desktop computers, the shelterized, High Mobility Multipurpose Wheeled Vehicle (HMMWV)-mounted Analysis and Control Team-Enclave (ACT-E), and various Analysis and Control Element (ACE) configurations at Special Forces Group, Armored Cavalry Regiment, Division, Corps, and Military Intelligence Brigade. Through FY09 these ASAS systems will be configured to operate as integral components of the Army's Distributed Common Ground System-Army (DCGS-A) capability.

The Map-HT Toolkit is responsible for addressing the military problem of there existing a limited Joint, Service, or Interagency capability (organization, methods, tools) to effectively collect/consolidate, visualize, and understand open source socio-cultural information to assist Commanders in understanding the human terrain in which they operate. The Map-HT Toolkit will provide a joint common relevant picture of the human terrain for use by tactical elements, operational commanders, theatre planners, interagency organizations, and coalition partners. The Map-HT Toolkit will provide the capability to establish direct cultural support to BCT/MEF commander and interagency end-users, provide a means for human terrain data collection and dissemination, and provide human terrain baseline information and toolkit.

FY09 provides funding to reconfigure ASAS systems into an integral component of the Army's DCGS-A capability, resolve high priority Software Anomaly Reports (SAR); conduct interoperability development and test; and comply with DOD mandates and provide Defense Information Infrastructure (DII) Common Operating Environment (COE)/Net Centric Enterprise Services (NCES) maintenance for the ASAS family of systems.

NOTE: FY 2007 funding total includes $3.4 million received in GWOT supplemental.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Resolve high priority Software Anomaly Reports (SARs); conduct interoperability development and test; and comply with DOD mandates and provide Defense Information Infrastructure (DII) Common Operating Environment (COE)/Network Centric Enterprise Services (NCES) maintenance for ASAS Light, IFS, Analysis Control Team-Enclave (ACT-E), and Analysis and Control Element (ACE).	3315	3409	3411
Continue spiral development of Map-HT tookit.	3149		
Acquire materiel in support of Map-HT spiral development.	75		

Continue Map-HT Test and Security Accreditation efforts.	200		
Total	6739	3409	3411

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA (K28801) ASAS Modules	75151	52130	58333	9901	12877	5999			214391
Spares (BS9704)	2200	1962	1188						5350

Comment:

C. Acquisition Strategy The ASAS development program builds upon and expands the capabilities and functionality developed and produced in the ASAS Block I System including conversion to the Common Hardware Systems (CHS) and the Defense Information Infrastructure Common Operating Environment/Network Centric Enterprise Services (DII COE/NCES) and Modernized Integrated Database (MIDB). ASAS is being developed using a block upgrade evolutionary acquisition strategy.

- ASAS Block I: Fielded ruggedized, tactical systems at Active Component (AC) corps, divisions, and the institutional training base.

- ASAS-Extended: Provided the rest of the AC and National Guard enhanced separate brigades with an interim ASAS capability running Block I software on commercial hardware.

- ASAS Block II: Uses common hardware and software, built on the DII COE/NCES standard. Provides open architecture, assured interoperability, and enhanced capability with room for growth. ASAS Light is the key intelligence provider for Army Battle Commmand Systems (ABCS).

- Army Software Blocking: ASAS Light synchronizes with Software Block 1 and 2 execution phases.

The program emphasizes multiple evolutionary deliveries, with incremental enhancements of ASAS products, integrated test, and continuous evaluation opportunities. ASAS builds upon experience and feedback gained from the fielded ASAS products and real-world operational deployments providing the soldier with improved reliability, supportability, and survivability.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B19

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Development	CPAF	Lockheed Martin, Denver, CO	272731								272731	
Subsystem Development	GSA D.O.	Electronic Warfare Associates, Huntington, WV	13295								13295	
Subsystem Development	GSA D.O.	Overwatch Textron Systems, Austin, TX	23114								23114	
SARs, Safety and Interop	GSA D.O.	Overwatch Textron Systems, Austin, TX	3243								3243	
SARs, Safety and Interop	Direct Allotment	PD IF, Ft. Belvoir, VA		321	1-3Q	415	1-3Q	417	1-3Q		1153	
System Development	CECOM Contract with MITRE Corp.	Mitre Corporation, Tampa, FL		1499	4Q						1499	
Subtotal:			312383	1820		415		417			315035	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Facility Support	MIPR	Ft. Belvoir, VA	1326	300	1-4Q	300	1-4Q	300	1-4Q		2226	
License Maintenance	MIPR	Ft. Monmouth, NJ	2576	1708	1-3Q	1708	1-3Q	1708	1-3Q		7700	
Subtotal:			3902	2008		2008		2008			9926	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

ASAS Developmental and Operational Testing	MIPR	EPG, Ft Huachuca, AZ	6708								6708	
Continuous Evaluation	MIPR	EPG, Ft. Huachuca, AZ	763								763	
Subtotal:			7471								7471	

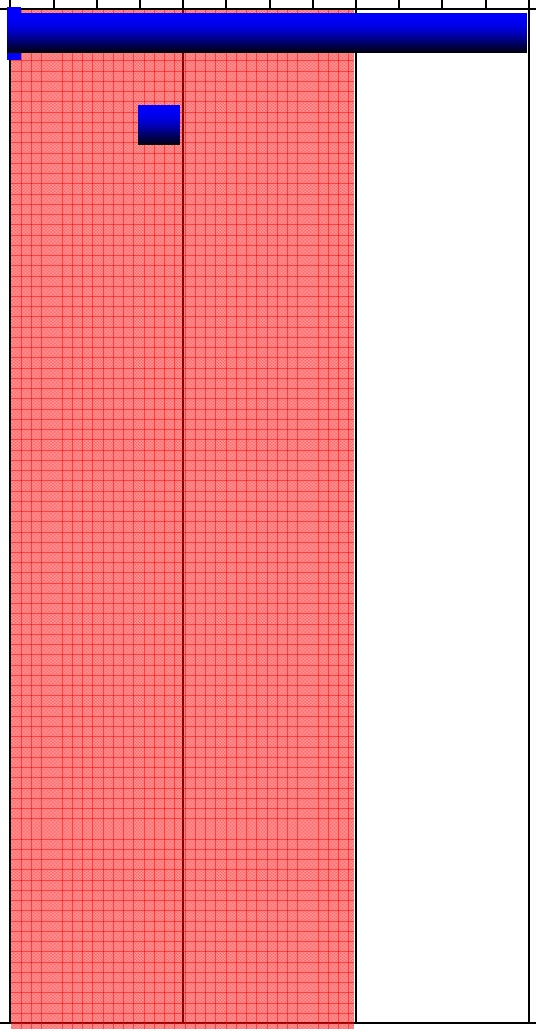
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
FFRDC	MIPR	MITRE/Washington, DC	9922								9922	
Contractor Support	BPA	SYTEX, Inc. Vienna, VA	28914	486	1-4Q	486	1-4Q	486	1-4Q		30372	
Government In House	Direct Allotment	PD IF, Ft. Belvoir, VA	18802	500	1-4Q	500	1-4Q	500	1-4Q		20302	
Program Management	MIPR	ERDC-TEC, Alexandria, VA., PEO-IEW&S, Fort Monmouth, NJ., CENTCOM, Tampa, FL.		1925	4Q						1925	
Subtotal:			57638	2911		986		986			62521	
Project Total Cost:			**381394**	**6739**		**3409**		**3411**			**394953**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
High priority SARs, Safety, Interop Dev. and Test, and Maint. for ASAS systems																												
Map-IT toolkit development, materiel acquisition, test & security accreditation																												



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
High priority SARs, Safety, Interop Dev. and Test, and Maint. for ASAS systems	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Map-IT toolkit development, materiel acquisition, test & security accreditation	4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B41**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
B41	CI/HUMINT Software Products (MIP)	3266	1644	1721	3017	3223	3500	3700		20071

A. Mission Description and Budget Item Justification: The Counterintelligence and Human Intelligence Automated Reporting and Collection Systems (CHARCS), formally known as Counterintelligence and Human Intelligence (CI/HUMINT) Information Management System (CHIMS), provides the Army automation support for collection and reporting of CI/HUMINT data to satisfy tactical human intelligence requirements. CHARCS functionality provides support for CI/HUMINT information collection, reporting, investigation, interrogation, biometrics, document exploitation operations. The CHARCS architecture extends from the individual Tactical HUMINT team soldier or CI agent to Theater and National intelligence organizations. CHARCS provides systems to all Army Commands (ARCOM), Special Forces, Reserves, National Guard, Stryker Brigade Combat Teams (SBCT), and the training base. CHARCS systems produce and disseminate messages and reports through an array of communications systems including: combat Net Radio, Single Channel Ground and Airborne Radio System (SINCGARS), Portable Radio Communications(PRC)-150 Secure Telephone Equipment (STE), Secure Telephone Unit (STU), satellite, and other organic communications devices. The CHARCS systems reports collected intelligence directly to Operational Management Teams (OMT) of U.S. Army intelligence units. Future development efforts will provide CI agents and HUMINT collectors improved collection, reporting, biometrics, language, communications and mission management capabilities.

FY 2009 funding continues the development of improved counterintelligence and human intelligence collection and reporting capabilities.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue development of CHARCS SW functionality and SW Problem Reporting implementation.	2594	1519	1591
Transition of CHAMS SW Baseline V4.3 to CECOM for Life-Cycle Support	537		
Continue Test and Security Accreditation efforts.	135	125	130
Total	3266	1644	1721

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA (BK5275) CHIMS (MIP)	19625	28806	37632	10686	13221	10848	10500	Continuing	Continuing
RDTE (PE 64321, Project B49) CHIMS TADSS	128	128	128						507

Comment:

C. Acquisition Strategy The Counterintelligence and Human Intelligence Automated Reporting and Collection Systems (CHARCS) software is being developed under a

competitively awarded Indefinite Delivery/Indefinite Quantity (ID/IQ) type contract. CHARCS software is the common software on two collection and reporting products CI/HUMINT Automated Tool Set (CHATS) and Individual Tactical Reporting Tool (ITRT). CHARCS software will be continuously improved to keep pace with evolving capability requirements. The hardware for both product lines is an integration of commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) hardware. As COTS technology evolves, new hardware will be introduced to keep CHARCS users at the forefront of intelligence automation.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CI/HUMINT Utilities SW Development	IDIQ Competitive	Northrop Grumman, Sierra Vista, AZ	224								224	
CHARCS Software Development	IDIQ Competitive	Northrop Grumman, Sierra Vista, AZ	6497	2220	2Q	1301	1Q	1306	1Q	Cont.	Cont.	
CHATS Development	Competitive T&M	TAMSCO, Eatontown, NJ	1808								1808	
CI/HUMINT SS SW Development	IDIQ Competitive	Northrop Grumman, Sierra Vista, AZ	50								50	
CI & I OPS WS Development	Competitive T&M	TAMSCO, Eatontown, NJ	1566								1566	
ITRT Development	Competitive T&M	TAMSCO, Eatontown, NJ	444								444	
Refugee Management System	CPFF	EWA, Fairmont, WV	3000								3000	
CECOM Transition Support	MIPR	CECOM, SW Engineering Center, Ft. Huachuca AZ	357	501	1Q						858	
Subtotal:			13946	2721		1301		1306		Cont.	Cont.	

Remarks: SW Engineering Support for transition of CHIMS SW baseline V4.3 to CECOM SEC.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support	BPA	The Sytex Group Inc./Eatontown, NJ	1866	410	1Q	208	1Q	230	1Q	Cont.	Cont.	
Matrix Support	MIPR	I2WD, CECOM Fort Monmouth, NJ	368								368	
Subtotal:			2234	410		208		230		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B41

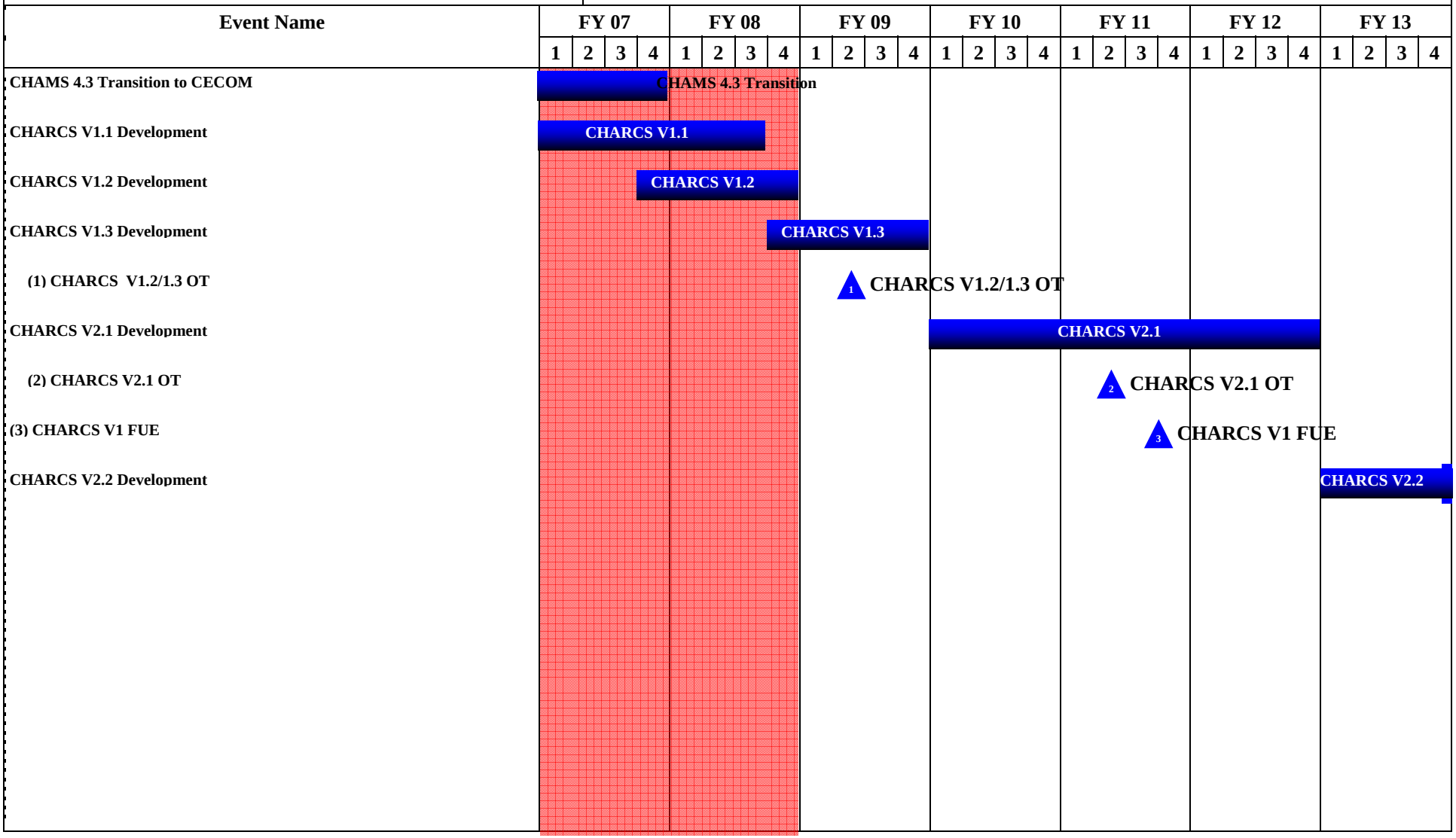
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test	MIPR	PRC, McLean, VA	401								401	
Developmental Test	MIPR	JITC, Ft. Huachuca, AZ	329	20	1Q	20	1Q	20	1Q	Cont.	Cont.	
Test Support and Interoperability	MIPR	CTSF, Ft. Hood Tx.	75	35	1Q	35	1Q	35	1Q	Cont.	Cont.	
Operational Test	MIPR	PD CHARCS, Ft. Hood, TX	79					50	2Q		129	
Test Articles	MIPR	ESS, Frederick, MD	120								120	
Security Accreditation Collateral	MIPR	CECOM, Ft. Monmouth, NJ	235	45	2Q	45	2Q	45	2Q	Cont.	Cont.	
SCI PL2	MIPR	NGMS, Sierra Vista, AZ	80								80	
SCI PL2 Certification	MIPR	Air Force Research Lab (AFRL), Rome, NY	160								160	
Safety Release	MIPR	CECOM, Ft. Monmouth, NJ	15	10	1Q	10	1Q	10	1Q	Cont.	Cont.	
Subtotal:			1494	110		110		160		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management		ASPO/PD CHARCS, Ft Belvoir, VA	659	5	2Q	5	2Q	5	2Q	Cont.	Cont.	
Facility Support		PD IE, Ft Belvoir, VA	595	20	1Q	20	1Q	20	2Q	Cont.	Cont.	
Subtotal:			1254	25		25		25		Cont.	Cont.	
Project Total Cost:			**18928**	**3266**		**1644**		**1721**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B41**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B41**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
CHAMS 4.3 Transition to CECOM	1Q - 4Q						
CHARCS V1.1 Development	1Q - 4Q	1Q - 3Q					
CHARCS V1.2 Development	4Q	1Q - 4Q					
CHARCS V1.3 Development		4Q	1Q - 4Q				
CHARCS V1.2/1.3 OT			2Q				
CHARCS V2.1 Development				1Q - 4Q	1Q - 4Q	1Q - 4Q	
CHARCS V2.1 OT					2Q		
CHARCS V1 FUE					4Q		
CHARCS V2.2 Development							1Q - 4Q
CHARCS V2.3 Devlopment							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B51**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
B51	SEQUOYAH - FOREIGN LANGUAGE TRANSLATION SYSTEM			11000	10000	10000	11000	11000	Continuing	Continuing

A. Mission Description and Budget Item Justification: Foreign Language Translation System is the Department of Defense focal point for all matters related to automated language translation. As a Joint Interest program, Foreign Language Translation System develops translation technologies for the U.S. Army and the other DoD organizations. This is reflected in the Language Priority List and the Defense Language Transformation Roadmap published by the Deputy Secretary of Defense establishing the Defense Foreign Language Steering Committee (DFLSC). Foreign Language Translation System has established a plan to focus resources on the critical technology areas necessary to comply with our National Defense Strategy and Policy. Foreign Language Translation System will address speech translation capabilities including one-on-one conversations, transmitted voice and audio recordings, text translation, including document translation and streaming chat dialogue, handwriting transcription and translation, foreign media monitoring, including electronic media, newspapers, audio broadcasts, television, video recordings, etc. Capabilities are being addressed in the designated foreign languages with attention to dialect, accent, font, culture, and domain (the words common to a particular activity that are used in expressing the details of that activity).

FY2009 funds development Foreign Language Translation Systems.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Automated Speech Recognition (ASR): Develop language concentrations for dialogue gathering and speech model development, database design, dialect and accent detection, algorithm development, data translation and verification			4000
Optical Character Recognition (OCR): Includes multiple font recognition development, development of automatic analysis of text and image data, to include handwriting; filtering of noise and image correction, i.e., dirt, creases, handwriting, discoloration, text alignment, removal of extraneous markings, etc.			3000
Machine Language Translation - Translation Engine (MLT TE): Develop language concentrations for translation algorithm and dictionary development, translation verification, validation of hybrid TE approaches, coupling of ASR with text TE.			4000
Total			11000

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
BZ7326 Prophet Ground (MIP). Funds pass through under Congressional Plus-Up.	1100								1100
B88605 Sequoyah Foreign Language Translation Systems			6358	6936	6941	7929	7933		36097

Comment: Funds from the other DoD Services may accompany emerging requirements and are not identified by Foreign Language Translation System at this time.

C. Acquisition Strategy The current precept for the Foreign Language Translation System Acquisition Strategy is to develop language translation capabilities to include the Automated Speech Recogition (ASR) and associated interfaces with the Machine Language Translation (MLT) Translton Engine (TE). Additional investments will be made to advance MLT technology to reach Program Key Performance Parameter Goals of an Interagency Language Roundtable (ILR) Level of 2 for Speech Translation devices and an ILR Level of 3 for Text Translation devices. Funds will also be invested to assure network readiness and develop embedded training. Candidate technologies for enhancements include hardware platforms, directional microphones, noise filtering, etc. Further, improvements will be made in associated technologies that support TE, ASR, and Optical Character Recognition (OCR).

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B51

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development of MLT Standards, Metrics, Language Data Repository	MIPR	Army Research Lab, Adelphi, MD						3960	2Q		3960	
Development of Maritime Domains for MT TE dictionaries	MIPR	Navy Research Lab, Washington, DC						800	2Q		800	
Automated Testing of Speech Translation Technology	MIPR	Air Force Research Lab, Rome, NY						800	1-2Q		800	
Subtotal:								5560			5560	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SETA Support	T&M	CACI International, Inc., Eatontown, NJ						3800	2Q		3800	
Subtotal:								3800			3800	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test and Evaluation	MIPR	USA Test and Eval Command, Alexandria, VA						420	2Q		420	
Translation Validation	MIPR	Defense Language Institute, Monterey, CA						180	1-2Q		180	
Developmental Test and Evaluation	EAO	Natl Inst for Standards and Tech, Gaitherburg, MD						400	2Q		400	

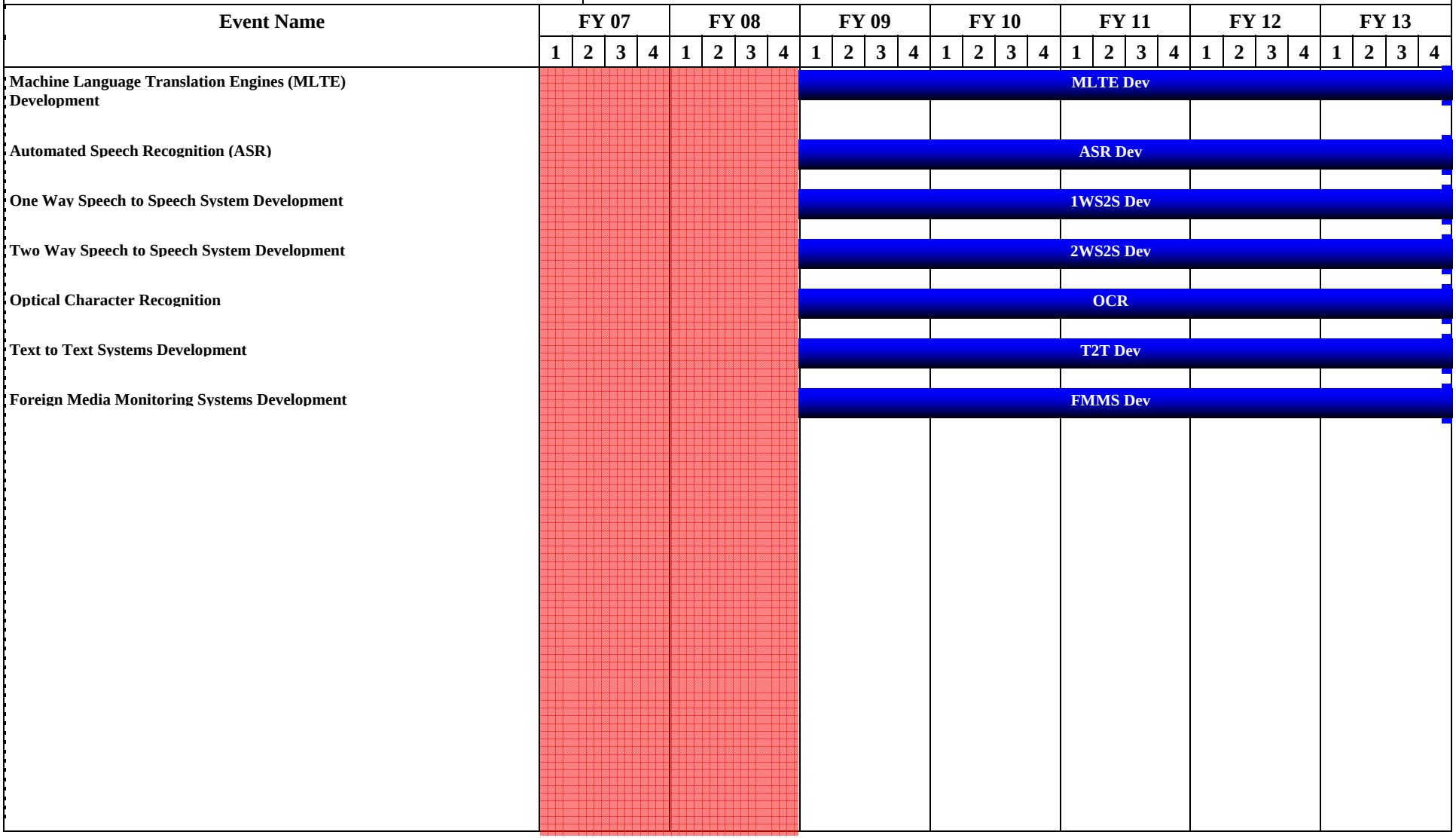
Subtotal:								1000			1000	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	CERDEC, Fort Monmouth, NJ						640	2Q		640	
Subtotal:								640			640	
Project Total Cost:								**11000**			**11000**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B51**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM

PROJECT
B51

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Machine Language Translation Engines (MLTE) Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Automated Speech Recognition (ASR)			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
One Way Speech to Speech System Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Two Way Speech to Speech System Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Optical Character Recognition			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Text to Text Systems Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Foreign Media Monitoring Systems Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	44550	63026	42414	46805	42881	56558	56289	Continuing	Continuing
033	ADV CREW SVC WPN	3147	9937							46781
S58	SOLDIER ENHANCEMENT PROGRAM	14704	21447	15269	16113	11150	16537	16644		111864
S59	SOLDIER SUPPORT EQUIPMENT - ED	298								580
S60	CLOTHING & EQUIPMENT	10964	12817	9615	9973	10011	10727	10036		74143
S61	ACIS ENGINEERING DEVELOPMENT	11087	4115	12687	5847	5722	14400	14709	Continuing	Continuing
S62	OBJECTIVE INDIVIDUAL COMBAT WEAPON	18								10011
S63	SMALL ARMS IMPROVEMENT	1185	14710	4843	14872	15998	14894	14900	Continuing	Continuing
S64	COMMON REMOTELY OPERATED WPN SYS (CROWS)	3147								5448

A. Mission Description and Budget Item Justification: This program element for System Development and Demonstration (SDD) manages the Soldier as a system, with the goal of increasing Soldiers' combat effectiveness, increasing survivability, and improving the Soldiers' quality of life. It develops and tests prototypes of weapons, clothing, equipment, and other items useful to support the Soldier.

Project 033 (Advanced Crew Served Weapon) develops the 25mm XM-307 light weight, low recoil grenade machine gun, which enables the Soldier to effectively suppress and incapacitate exposed and defilade personnel targets out to 2000 meters using airbursting, fragmenting, or armor piercing ammunition.

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

Project S59 (Soldier Support Equipment) supports system development and prototyping of critical Soldier support systems and other combat service support equipment that will improve unit sustainability and combat effectiveness.

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

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

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

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

Project S64 (CROWS Lightning) funds will be applied to continue integrating a lightweight weapon station including fire control, sensors and control grip onto light and/or medium tactical vehicles. This capability will enhance the Soldiers survivability, lethality and situational awareness.

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	43165	45229	32585
Current BES/President's Budget (FY 2009)	44550	63026	42414
Total Adjustments	1385	17797	9829
Congressional program reductions	-169	-403	
Congressional rescissions			
Congressional increases		18200	
Reprogrammings	2770		
SBIR/STTR Transfer	-1216		
Adjustments to Budget Years			9829

Change Summary Explanation:
Funding
FY 2009 Adjustments +10,101
+2,997 realigned from 643827 S51, Aircrew Integrated Sys
+7,104 for Personnel Recovery Support Equipment (PRSE)
FY 2008 Adjustments +18,200
+10,000 Congressional Add in Project 033 for XM312
+ 1,600 Congressional Add in Project S60 for Enhanced Self-Sintered Silicon Carbide Body Armor
+ 1,600 Congressional Add in Project S60 for Enhanced Flame Retardant Body Protection
+ 1,600 Congressional Add in Project S64 for Protector Enhancements and integration on New Vehicle
+ 800 Congressional Add in Project S64 for CROWS with Acoustic Target Recognition and Cueing Control
+ 1,000 Congressional Add in Project S64 for Integration of MK47, 40mm Air Burst Capability onto US Army CROWS
+ 1,600 Congressional Add in Project S64 for Integration of the Javelin Antitank Missile onto the US Army CROWS

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S58**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S58	SOLDIER ENHANCEMENT PROGRAM	14704	21447	15269	16113	11150	16537	16644		111864

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

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S58.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Accomplishments and Current Plan include evaluation and procurement of prototypes and/or test for the following Soldier Equipment Items: Enhanced Hearing Protection, Family of Flashlights, Parachute Electronic Activation Device, Parachute Oxygen Mask, and On-The-Move Hydration System, Aircrew Laser Pointer, Ghillie Suit, Family of Body Armor, Clip on Sniper Night Sight, and Mounted Soldier Body Armor Demonstration.	4102	9280	6561
FY07-FY09: Accomplishments and Current Plan include evaluation and procurement of prototypes and/or test for the following Soldier Weapons Items: Close Combat Mission Capability Kit, 12 Ga Non-lethal Extended Range Round, 40 MM Extended Range Non-lethal Round, Close Quarters Battle Kit Re-compete, Modular Accessory Shotgun System, Family of Suppressors, XM320 Genade Launcher Module, Advanced Sniper Accessory Kit, and the M2 Quick Change Barrel Kit.	2338	2601	2280
FY07-FY09: Continue in-house engineering support services, conduct technical evaluations and program reviews.	2693	2537	2527
FY07-FY09: Initiate market surveys and/or evaluations on new items to commence development and demonstration. New items initiated will continue evaluation/procurement of new prototypes.	2828	1971	1792
FY07-FY09: Current Plan includes evaluation and procurement of prototypes and/or test for Soldier equipment and Lethality programs that will be reviewed in a semi-annual review scheduled for Sep 2007 which could include: The Tag Along Towel Cap, Leader/ Recon Communications earpieces, low/no light video viewer , Individual Force Protection System, Night Optic Video Integrated System, Enhanced Vehicle and Personnel Screening For IED Interdiction, IED Detection Using Robotic Sniffer Systems, SmartCard Explosives Detection Reader, Engineer Equipment Set: Urban Operations, Platoon, Range Finders with Angle Range Compensation (ARC), Zerust Corrosion Inhibiting Film and Bags, Skyclock, Combat Cushion, ACCU-SHOT MONOPOD, LB2 Tactical Light for chem light reduction, Ricoh 500SE-M GPS Tactical Digital Camera, NightMarker Covert IR Marking and ID Products, 12 gauge Stand-Off Breaching Round, Duty Vest for MP's, Personnel Recovery System.	2307	2458	2109
Small Business Innovative Research/Small Business Technology Transfer Programs	436		

MISALIGNED CONGRESSIONAL ADDS: Remotely Operation Weapon Station; Integration of MK47, 40mm Air Burst Fuse Capability onto US Army - 1600 Common Remotely Operated Weapon Station; Common Remotely Operated Weapon Station (CROWS) with Accoustic - 1000		2600	
Total	14704	21447	15269

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MA68000, Soldier Enhancement	35598	20662	9898	8101	5772	12386	12934	Continuing	Continuing
OPA2, BA5300, Soldier Enhancement	9893	10123	7545	8403	5469	14668	15370	Continuing	Continuing
WTCV, GC0076, Small Arms (SEP)	2739	5424	1261	5177	4197	5200	5200	Continuing	Continuing
WTCV, GZ1290,Squad Automatic Wpn (Mods)	28815	44275	22134	7196				Continuing	Continuing
WTCV, GZ2800, M16 Rifle Mods	2955	5905	1181	4285	3965	3618	3469	Continuing	Continuing
WTCV, GB3007, M4 Carbine Mods	160561	17594	16796	17885	16613	13672	13414	Continuing	Continuing
WTCV, GO1500, Sniper Rifle	3243	414	223	229	242			Continuing	Continuing
WTCV,GC0925, Mods	1693	2772	3763	6310	6263	3096	3230	Continuing	Continuing
PAA, F47500, 7.62mm AP	5172	10000	10000	10000	10000	6000	2000	Continuing	Continuing
PAA, F47600, 5.65mm AP	6255							Continuing	Continuing
OMA, 121017, Central Funding & Fielding	134328	110684	92606	89100	39137	79642	113198	Continuing	Continuing

Comment:

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

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S58

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	TBD	8871	7533	1-2Q	14087	1-3Q	8434	1-3Q		38925	
Subtotal:			8871	7533		14087		8434			38925	

Remarks: Candidates for the Soldier Enhancement Program are received, reviewed, and approved semi-annually. Contractual efforts are focused on procuring prototypes for testing.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	TBD	750	1551	1-4Q	1672	1-4Q	1896	1-4Q		5869	
Subtotal:			750	1551		1672		1896			5869	

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

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various		1107	2628	1-4Q	2653	1-3Q	2543	1-3Q		8931	
Subtotal:			1107	2628		2653		2543			8931	

Remarks: Testing costs vary annually depending on number and type of items being evaluated.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
In-House	MIPR	PEO Soldier, Ft Belvoir, Va	1472	2992	1-4Q	3035	1-4Q	2396	1-4Q		9895	
Subtotal:			1472	2992		3035		2396			9895	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S58**

Remarks: Costs vary annually depending on number and type of items being evaluated.

Project Total Cost:	**12200**	**14704**		**21447**		**15269**			**63620**	

Schedule Detail (R4a Exhibit)		February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**	PROJECT **S58**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S60**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S60 CLOTHING & EQUIPMENT	10964	12817	9615	9973	10011	10727	10036		74143

A. Mission Description and Budget Item Justification: Funding supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility, comfort, and sustainment affecting the quality of life of the individual Soldier.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S60.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Individual Soldier Ballistic Protection: (FY07) Continued Product Improvement on Interceptor Body Armor (IBA) in support of fielding and executing incremental capability improvements related to technology maturity and operational feedback. Evaluated and guided industry to product improve commercial ballistic eyewear and selected the most viable for incorporation of standard prescription carriers and protection against lasers. Tested advanced photochromic technology and dielectric stack technology to ballistic protective lenses. Continue system integration and formal DT/OT of pre-production and production representative systems applying advanced ballistic materials to increase Soldier survivability while decreasing weight, cube and cost. (FY08-09) Integrate and enhance Soldier Body Armor, Combat Eyewear, Bomb Suit, Face Shield. Researched technologies to mitigate the effects of high speed ballistic blunt trama and low rate impact (crash) protection and Combat Helmet capabilities providing head-to-toe protection from current and emerging ballistic/blast threats. Prove out commonality at the component and subsystem levels to provide a modular layered/integrated ballistic protection system and spiral in new technologies as they mature. Continue to evaluate Non Destructive Test Facility Production Demonstration Models.	5807	6738	4787
Soldier Uniforms and Clothing: (FY07) Successfully obtained Milestone C/Type Classification Standard approval on the Fuel Handlers Coverall (FHC). Conducted FHC Fire Resistant Insertion technical/user test. Completed improved Combat Vehicle Crewman Coverall user assessment. Completed Army Aircrew 2 Combat Uniform limited user test (Abrams fabric). Completed Athletic size Army Combat User (ACU) test. ACU enhancements transitioned to SDD. (FY08-09) Conduct system integration and formal DT/OT of preproduction and production representative systems leveraging advancements in materials, nanotechnology, fabrication techniques, moisture management, flame resistance, antimicrobial treatments, insect protection, extreme environmental protection and advancements in chemical/biological protection to increase the capabilities and durability of tactical and non-tactical clothing such as the improved Army Combat Uniform (ACU) and the FR Fuel Handlers Coverall (FR-FHC). Prove out commonality across as broad a spectrum of users as possible to provide a modular integrated uniform/clothing system from skin out and head-to-toe.	2731	2256	2628
Individual Equipment: (FY07) Built Operational Test assets for Advanced Tactical Parachute System (ATPS) and initiated developmental testing. Completed Cold Weather Stove Technical test. (FY08-09) Conduct system integration and formal DT/OT of preproduction and production representative systems utilizing advancements in technology for load bearing equipment, hydration technologies including	2426	3465	2000

water filtration and NBC hydration, and other mission essential and/or mission specific equipment for Soldiers. Prove out as much commonality as feasible across a broad spectrum of user and mission scenarios. Purchase equipment and conduct pilot testing for Radio Frequency Identification (RFID).			
Soldier Cooling: (FY08-09) Conduct System integration and formal DT/OT of preproduction and production representative advanced lightweight, low power cooling systems for use with NBC and ballistic protection ensembles. Prove out courses of action from trade-off analyses and system integration providing Soldiers enhanced ability to conduct missions for longer periods of time in extreme environments.			200
Small Business Innovative Research/Small Business Technology Transfer Programs		358	
Total	10964	12817	9615

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603747.669, Clothing and Equipment	8							Continuing	Continuing
RDTE, 0603827.S53, Clothing and Equipment	6684	11814	9571	7145	7355	6834	6946	Continuing	Continuing
OMA, 121017, Central Funding and Fielding	137028	101284	92606	89100	39137	79642	113198	Continuing	Continuing

Comment:

C. Acquisition Strategy Acquisition strategies will vary in methods: (1) Quick fixes in 12-24 months or less from concept to Type Classification (TC), (2) moderization improvements which require limited RD&E and will be completed in more than 24-48 months from inception to Type Classification, and (3) fully integrated development that will require substantial RDT&E funding and will be completed in four years or more.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPRs	Natick Soldier Center, Natick, MA	2000	2100	1-3Q	1539	1-3Q	1070	1-3Q	Cont.	Cont.	
Various	Contracts	Various	2071	4107	1-3Q	5400	1-3Q	3750	1-3Q	Cont.	Cont.	
Subtotal:			4071	6207		6939		4820		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Costs	MIPR	Various	1702	2125	1-2Q	2450	1-2Q	2145	1-2Q	Cont.	Cont.	
Subtotal:			1702	2125		2450		2145		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPRS	Various	1057	1707	1-3Q	1860	1-3Q	1550	1-3Q	Cont.	Cont.	
Subtotal:			1057	1707		1860		1550		Cont.	Cont.	

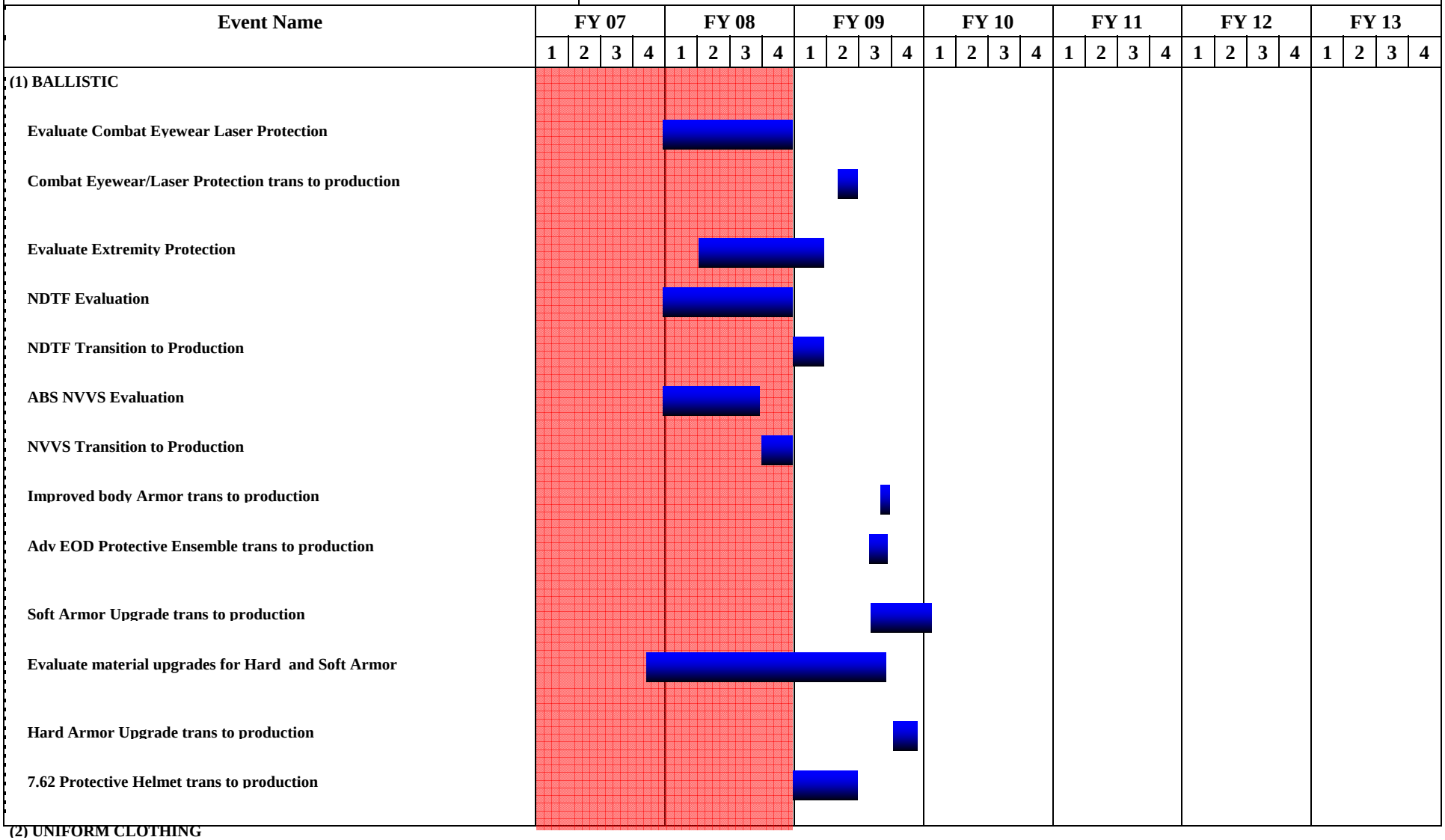
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
In-House Support		PM CIE Ft Belvoir, VA	716	925	1-4Q	1568	1-4Q	1100	1-4Q	Cont.	Cont.	
Subtotal:			716	925		1568		1100		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)										February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**									PROJECT **S60**
Project Total Cost:	**7546**	**10964**		**12817**		**9615**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S60**



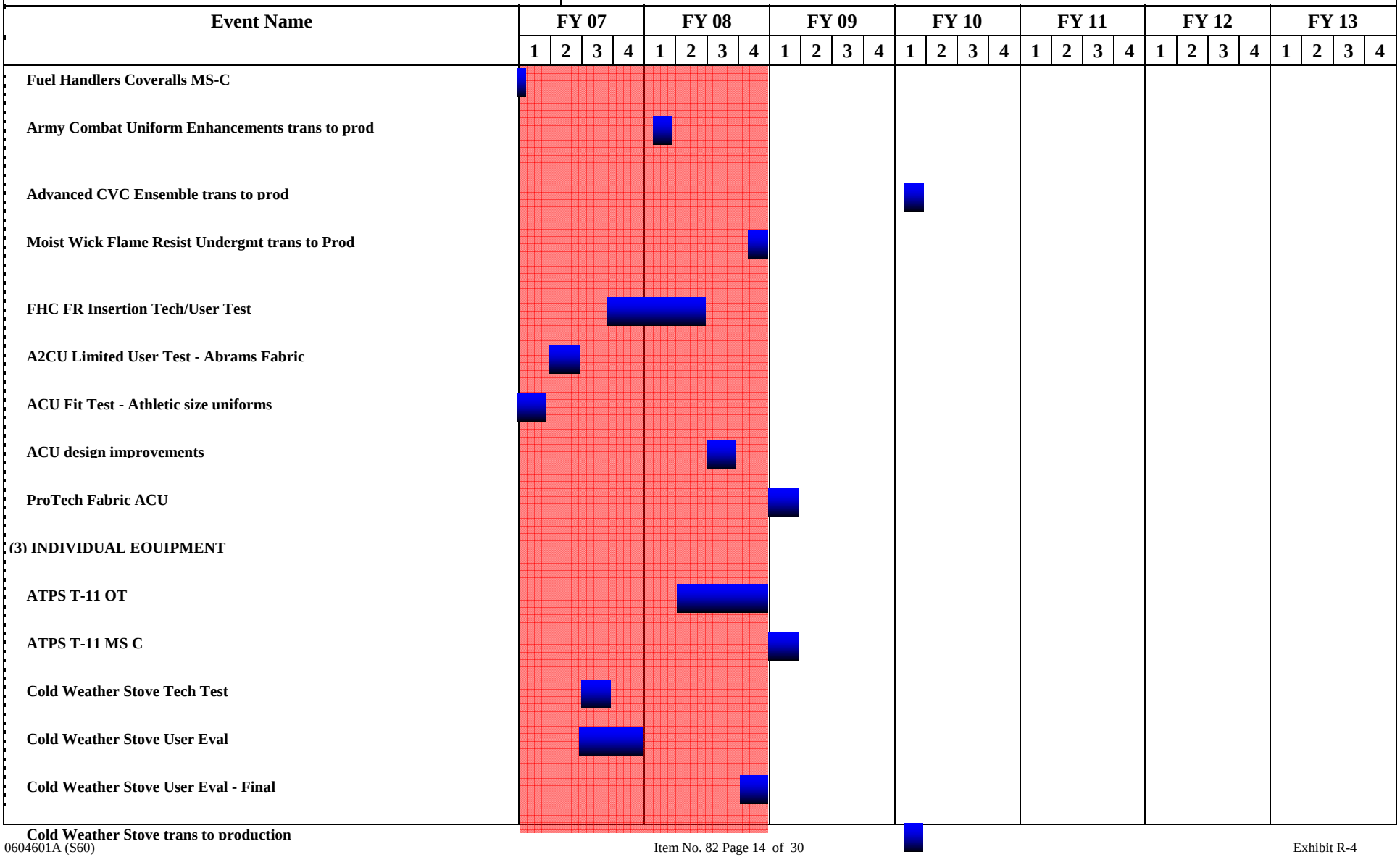
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60



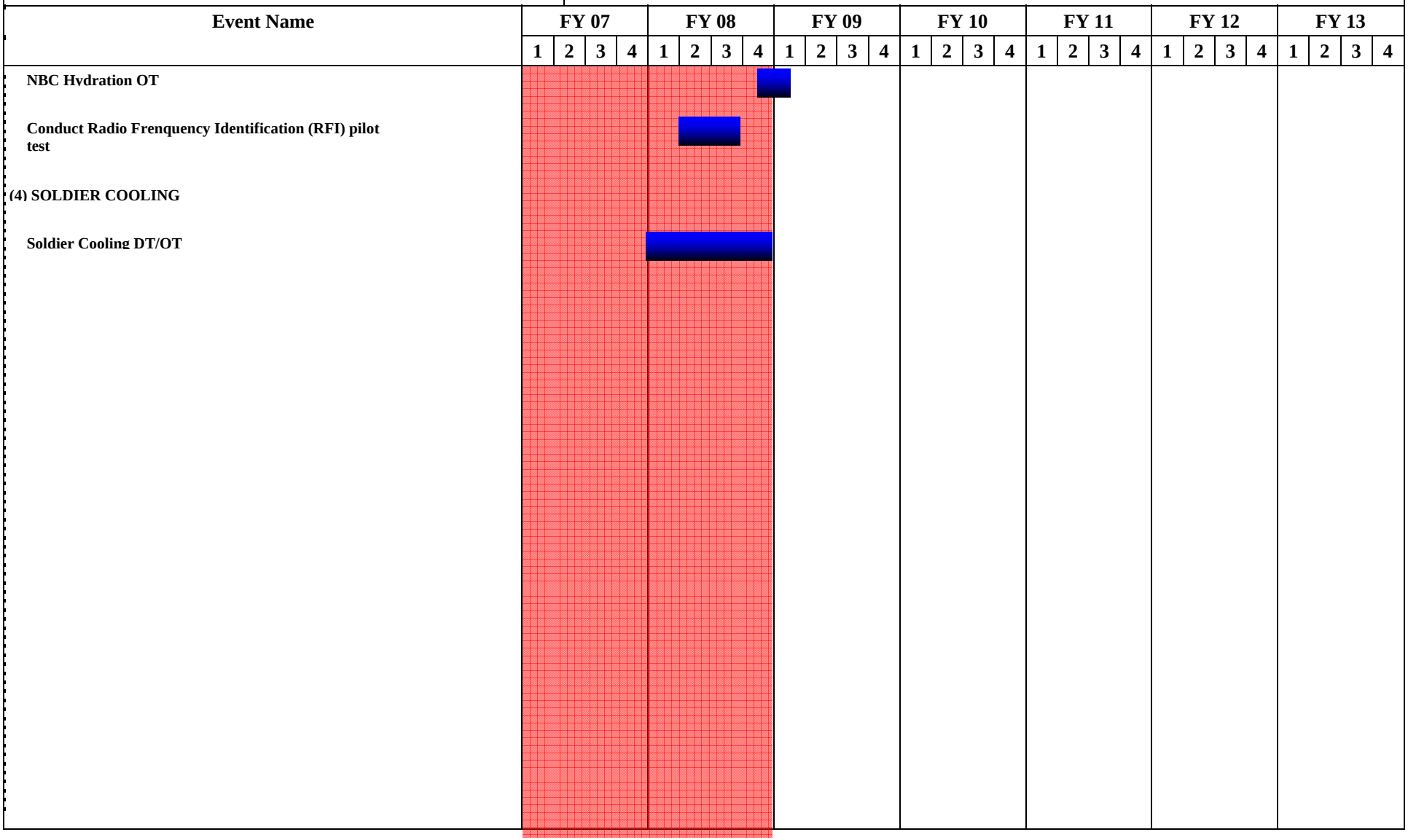
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S60

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BALLISTIC							
Evaluate Combat Eyewear Laser Protection		1Q - 4Q					
Combat Eyewear/Laser Protection trans to production			2Q				
Evaluate Extremity Protection		2Q - 4Q	1Q				
NDTF Evaluation		1Q - 4Q					
NDTF Transition to Production			1Q				
ABS NVVS Evaluation		1Q - 3Q					
NVVS Transition to Production		4Q					
Improved body Armor trans to production			3Q				
Adv EOD Protective Ensemble trans to production			3Q				
Soft Armor Upgrade trans to production			3Q - 4Q	1Q			
Evaluate material upgrades for Hard and Soft Armor	4Q	1Q - 4Q	1Q - 3Q				
Hard Armor Upgrade trans to production			4Q				
7.62 Protective Helmet trans to production			1Q - 2Q				
UNIFORM CLOTHING							
Fuel Handlers Coveralls MS-C	1Q						
Army Combat Uniform Enhancements trans to prod		1Q					
Advanced CVC Ensemble trans to prod				1Q			
Moist Wick Flame Resist Undergmt trans to Prod		4Q					
FHC FR Insertion Tech/User Test	3Q - 4Q	1Q - 2Q					
A2CU Limited User Test - Abrams Fabric	2Q						

ACU Fit Test - Athletic size uniforms	1Q						
ACU design improvements		3Q					
ProTech Fabric ACU			1Q				
INDIVIDUAL EQUIPMENT							
ATPS T-11 OT		2Q - 4Q					
ATPS T-11 MS C			1Q				
Cold Weather Stove Tech Test	3Q						
Cold Weather Stove User Eval	1Q - 2Q	4Q					
Cold Weather Stove User Eval - Final		4Q					
Cold Weather Stove trans to production				1Q			
NBC Hydration OT		4Q	1Q				
Conduct Radio Frenquency Identification (RFI) pilot test		2Q - 3Q					
SOLDIER COOLING							
Soldier Cooling DT/OT		1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S61	ACIS ENGINEERING DEVELOPMENT	11087	4115	12687	5847	5722	14400	14709	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides System Development programs with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance Helicopter. These programs include Air Soldier System and equipment which are unique and necessary for the sustainment, survivability, and performance of Army aircrews and troops on the future integrated battlefield. The Air Warrior program will provide the aircrew with a systems approach to noise protection, three-dimensional audio and external audio capability, microclimate conditioning, crash and post-crash survivability, concealment and environmental protection, ballistic protection, night vision capability and heads-up display, directed energy eye protection, flame/heat protection, on-the-go hydration, encrypted Aircrew Wireless Intercom System (AWIS), integrated survival kit, and portable oxygen system. Preplanned improvements integrating new technologies into the Air Warrior system will continue to enhance and maximize aircrew mission performance, comfort, aircrew station interface, safety, and survivability. These funds also resource improved laser protection against emerging new threat systems and product improvement of existing helmets to improve performance and increased commonality. Maximum advantage will be taken of simulation to reduce program technical risk through early user evaluation and to reduce program design and test cost and schedules. This program does not duplicate any aircraft platform program efforts. Both joint and service independent efforts continue to be pursued under the scope of this program. FY 2006 and FY 2007 funding was provided for the development of the Personnel Recovery Support Equipment (PRSE) operations support program which currently consists of classified and unclassified efforts. FY 2009 funding is included for the continuation of PRSE development.

FY 2007 funding total includes $8,158 received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals does not include $8,158 previously requested for current FY 2008 GWOT requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue the integration of preplanned Air Warrior Increment III and Air Soldier System improvements	854	300	4414
Aircrew Wireless Intercom System (AWIS) encryption certification	2075	2103	1169
Development of Personnel Recovery Support Equipment	8158		7104
Acid Akaline Direct methanol Fuel Cell Technology, FY 2008 Congressional Add		1600	
Small Business Innovative Research/Small Business Technology Transfer Programs		112	
Total	11087	4115	12687

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, A PE 0603827A, PROJ S51 - Adv Dev	2285	3159	1	2	2	2	2		5453

Aircraft Procurement, Army SSN AZ3110 - ACIS	61332	44822	40697	56921	42487	137424	124474	Continuing	Continuing

Comment:

C. Acquisition Strategy System Development and Demonstration efforts are for the Air Soldier System and Air Warrior Aircraft Wireless Intercom System (AWIS). The AWIS is a hands-free telecommunication device using radio signals for aircrew communication. Development efforts are awarded through competitive cost plus fixed fee contracts or by Military Interdepartmental Purchase Requests (MIPRs) to other government agencies. The Personnel Recovery Support Equipment program development effort provides integration and optimization of personnel recovery systems performance support equipment being executed through cost plus fixed fee contracts and Military Interdepartmental Purchase Requests to other government agencies.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S61

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior Development	C - CPFF	Various	2588	2742	1Q	2320	1-2Q	5386	1-2Q		13036	
Personnel Recovery Support Equipment Development	MIPR	Various	7942	8158	3-4Q			6487	1-2Q		22587	
Acid Akaline Direct methanol Fuel Cell Technology	TBD					1600	4Q				1600	
Subtotal:			10530	10900		3920		11873			37223	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR and Project Order	Various Government	32	32	1-4Q	38	1-4Q	376	1-4Q		446	
Subtotal:			32	32		38		376			446	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	MIPR	Various	27	23	1-2Q	28	1-2Q	79	1-2Q		130	
Subtotal:			27	23		28		79			130	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Administration	Allotment	Various Government	138	132	1-4Q	129	1-4Q	359	1-4Q		620	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

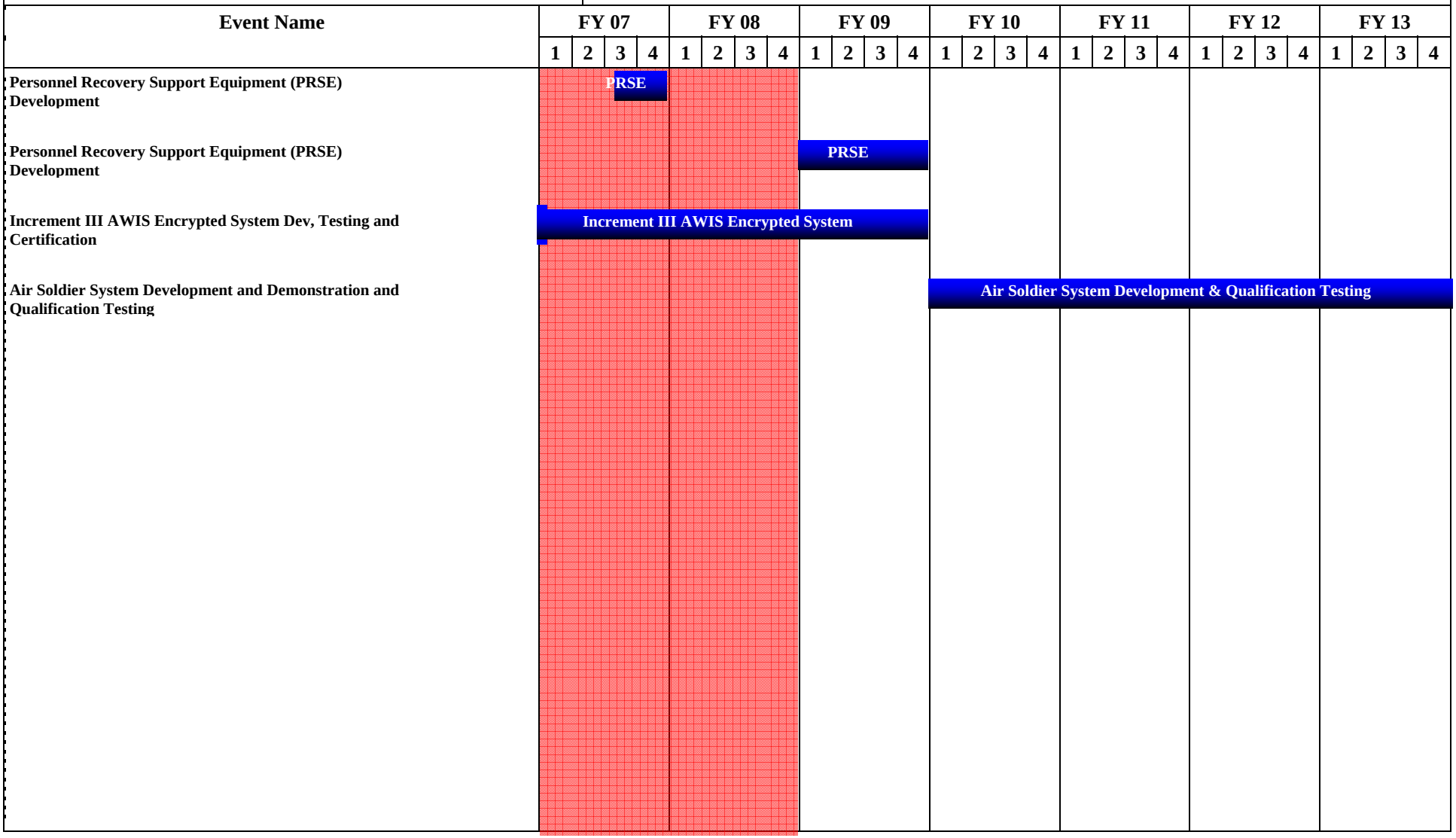
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**

Subtotal:	138	132		129		359			620	
Project Total Cost:	**10727**	**11087**		**4115**		**12687**			**38419**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personnel Recovery Support Equipment (PRSE) Development	3Q - 4Q						
Personnel Recovery Support Equipment (PRSE) Development			1Q - 4Q				
Increment III AWIS Encrypted System Dev, Testing and Certification	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Air Soldier System Development and Demonstration and Qualification Testing				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S63**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S63 SMALL ARMS IMPROVEMENT	1185	14710	4843	14872	15998	14894	14900	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Small Arms Improvement program funds system demonstration of engineering development models/studies and the integration of commercial items with weapons/ammunition. Small arms include individual and crew-served weapons/ammunition ranging up to 40 millimeter. Current and future efforts focus on improvements designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability of small arms weapons/ammunition. Focus areas include the demonstration, integration and study of light weight materials, obscurants, reconnaissance, observation, lethal and non-lethal ammunition, and electronics. Benefits include improvements to fire control equipment, optics, training devices, component mounts, weapon mounts, and ammunition.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of S63.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Small Arms Weapons Enhancements			
- Design, Development and Engineering	358	2285	300
- Prototype Fabrication	105	533	50
- Testing and Evaluation	584	1213	190
- Demonstration		930	500
Ammunition			
- Design, Development and Engineering	63	2310	768
- Prototype Fabrication		2949	1944
- Testing and Evaluation		2400	491
Demonstration		900	350
Combat Optics			
- Testing and Evaluation	75		
Fire Control			
- Design, Development and Engineering			250

Misaligned Congressional Add, Target Recognition and Cueing Control		800	
Small Business Innovative Research/Small Business Technology Transfer Programs		390	
Total	1185	14710	4843

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
WTCV, GZ1290, Squad Automatic Weapon (SAW) MODS	18788	12277	7088	8018	6097	5154	5253	Continuing	Continuing
WTCV, GZ2800, M16 Rifle MODS	2955	4060	1181	4285	3965	3618	3469	Continuing	Continuing
WTCV, GB3000, MK19 MODS	3155	6222	7654	8357	8506	10904	11170	Continuing	Continuing
WTCV, GZ1300, M240 Medium Machine Gun MODS	8863	11621	21128	17369	14927	14175	4955	Continuing	Continuing
WTCV, GB3007, M4 Carbine MODS	160561	17594	16796	17885	16613	13672	13414	Continuing	Continuing
WTCV, GB4000, M2 Machine Gun MODS	6000	17057						Continuing	Continuing

Comment:

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

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S63

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	TBD	Various	689	105		3659		1490		Cont.	Cont.	
Subtotal:			689	105		3659		1490		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development	MIPR	RDECOM - ARDEC, Picatinny Arsenal, NJ	1740	446		4636		1676			8498	
Logistics	MIPR	TACOM, Rock Island Arsenal, IL	85			170					255	
Human Research and Eng Directorate	MIPR	Aberdeen Proving Ground (APG), MD	310	10		500		50			870	
Subtotal:			2135	456		5306		1726			9623	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	MIPR	Developmental Test Command (DTC), Aberdeen Proving Ground (APG), MD	927			1404		904		Cont.	Cont.	
Operational Testing	MIPR	Army Test and Evaluation Command (ATEC), Alexandria, VA	351			1380		155			1886	
Validation Testing	MIPR	Developmental Test Command (DTC),	1038	604		1455		100			3197	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S63**

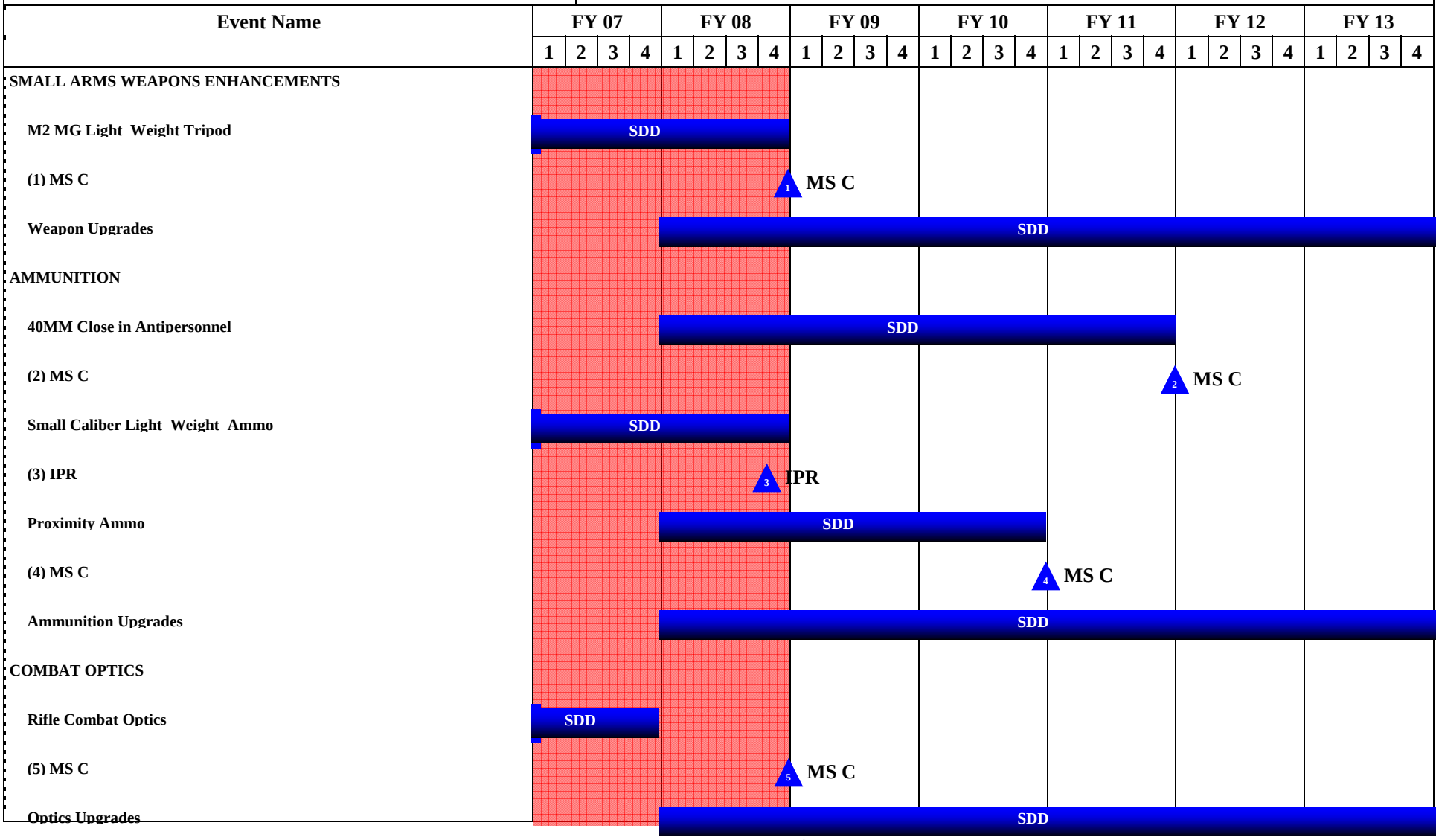
		Aberdeen Proving Ground (APG), MD										
Subtotal:			2316	604		4239		1159		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In House	PM Soldier Weapons, Picatinny Arsenal, NJ	500	20		1391		443			2354	
Travel	In House	PM Soldier Weapons, Picatinny Arsenal, NJ	65			115		25			205	
Subtotal:			565	20		1506		468			2559	
Project Total Cost:			**5705**	**1185**		**14710**		**4843**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S63**



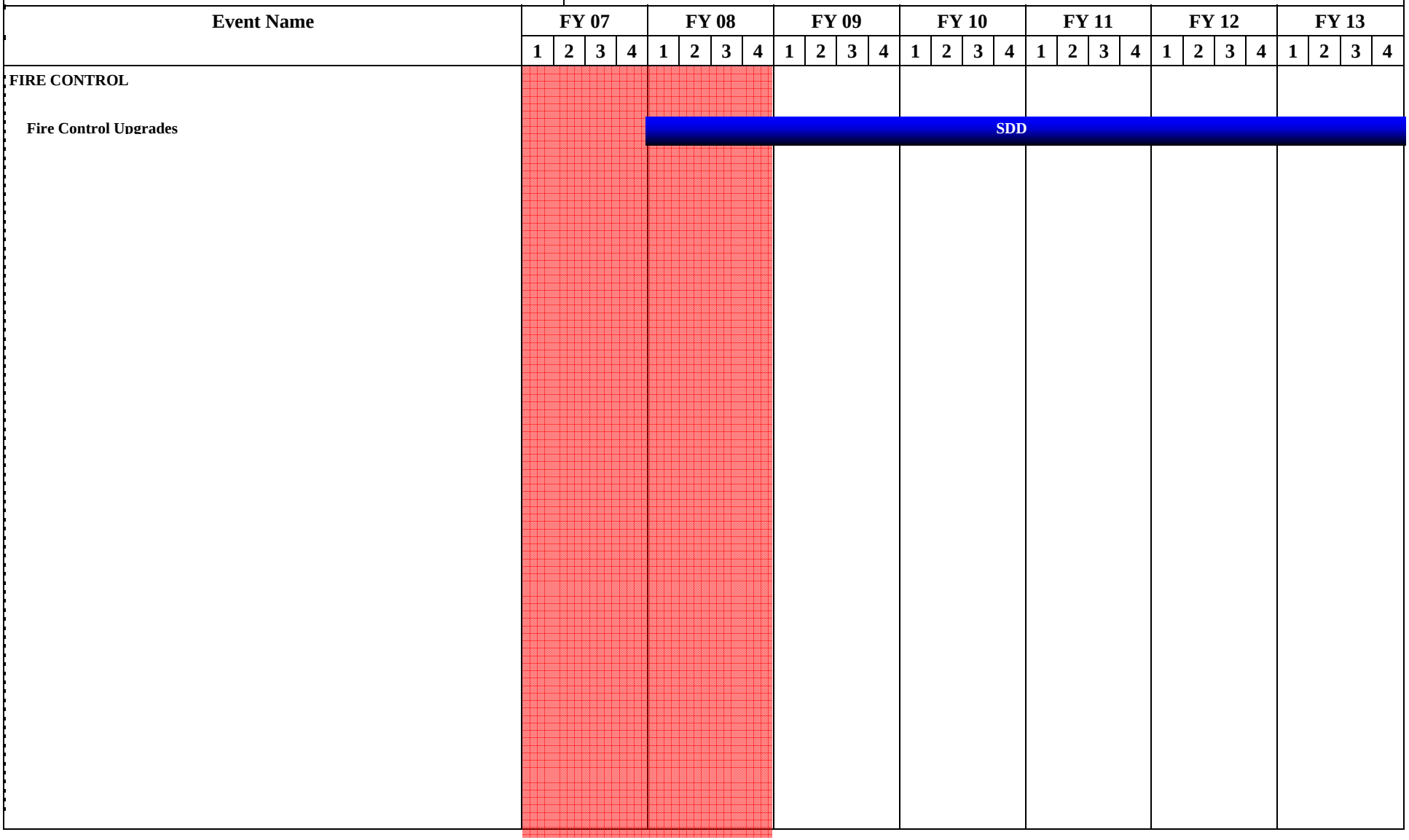
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S63



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604601A - Infantry Support Weapons

PROJECT
S63

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SMALL ARMS WEAPONS ENHANCEMENTS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
M2 MG Light Weight Tripod	1Q - 4Q	1Q - 4Q					
MS C		4Q					
Weapon Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMMUNITION	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
40MM Close in Antipersonnel		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
MS C					4Q		
Small Caliber Light Weight Ammo	1Q - 4Q	1Q - 4Q					
IPR		4Q					
Proximity Ammo		1Q - 4Q	1Q - 4Q	1Q - 4Q			
MS C				4Q			
Ammunition Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
COMBAT OPTICS							
Rifle Combat Optics	1Q - 4Q						
MS C			1Q				
Optics Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FIRE CONTROL							
Fire Control Upgrades		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
H07	FAMILY OF MED TAC VEH	12469	6354	1949	1798	1862	1842	1887	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element supports continued modernization of the Army's medium truck fleet and the Armored Security Vehicle (ASV). In the medium fleet, the Family of Medium Tactical Vehicles (FMTV) replaces aging M35 2 1/2-ton trucks, and M809 and M900 Series 5-ton trucks that are beyond their economic useful life of 20-22 years. FMTV fills 2 1/2-ton Light Medium Tactical Vehicle (LMTV) and 5-ton truck Medium Tactical Vehicle (MTV) requirements, performs over 55% of the Army's local and line haul, and unit resupply missions, and operates throughout the theater as multi-purpose transportation vehicles in combat, combat support and combat service support units. The ASV is an all-wheel drive armored vehicle that provides ballistic protection, overhead protection and protection against landmines. It is used by the Military Police to perform missions of area security, maneuver and mobility support, police intelligence, and law and order across the entire operational continuum. It is also being used as a Convoy Protection Platform for Combat Support and Combat Service Support units. This PE funds government technical insertion initiatives that will feed into implementation of the Tactical Wheeled Vehicle (TWV) Modernization Strategy and the TWV Armoring Strategy as a bridge to future tactical vehicle efforts. This PE allows the PM to leverage technology and address capability gaps in performance and reliability as identified by the user community and reported in the field. FY09 funding will be used to continue Technology Insertion and address field issues requiring RDT&E funds to do so.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Demonstrator/Prototype Development	6429		
Demonstrator/Prototype Test	524		
Embedded Diagnostics	2807	1546	
Technological Evaluation, Testing & Insertion	1786	4630	1949
Other	560		
Small Business Innovative Research/Small Business Technical Transfer Program	363	178	
Total	12469	6354	1949

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	12881	1994	1942
Current BES/President's Budget (FY 2009)	12469	6354	1949
Total Adjustments	-412	4360	7
Congressional Program Reductions			
Congressional Rescissions	-49	-40	
Congressional Increases		4400	
Reprogrammings			
SBIR/STTR Transfer	-363		
Adjustments to Budget Years			

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA1 Family of Medium Tactical Vehicles (D15500)	3090014	1986230	944687	1764673	1014807	1124769	859266	Continuing	Continuing

Comment:

D. Acquisition Strategy Contractual efforts will be on a Fixed Price or Cost Plus Fixed Fee (Level of Effort) basis. The procurement of vehicle platforms will use a new sole source contact in FY 2008 with a competitive multiyear contract being awarded in FY 2009.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604604A - MEDIUM TACTICAL VEHICLES

PROJECT
H07

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Demonstrator/Prototype Development	SS-FFP	Stewart & Stevenson, Sealy, TX	5442	2019	2Q						7461	
Demonstrator/Prototype Development	SS-CPFF	Stewart & Stevenson, Sealy, TX	15157	4410	3Q						19567	
Embedded Diagnostics	C-CPFF	Stewart & Stevenson, Sealy, TX	3744	2807	2Q	1546	2-3Q				8097	
Technological Evaluation and Insertion	SS-CPFF	Stewart & Stevenson, Sealy, TX		1786	2Q	4630	3-4Q	1949	2Q		8365	
Other	Various or MIPR/PO		2344	560	2-4Q						2904	
SBIR/STTR	N/A			363	1Q	178					541	
Subtotal:			26687	11945		6354		1949			46935	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: Not Applicable

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Demonstrator/Engine	MIPR/PO	Yuma Proving Ground, AZ	2210	524	4Q						2734	
Subtotal:			2210	524							2734	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604604A - MEDIUM TACTICAL VEHICLES

PROJECT
H07

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

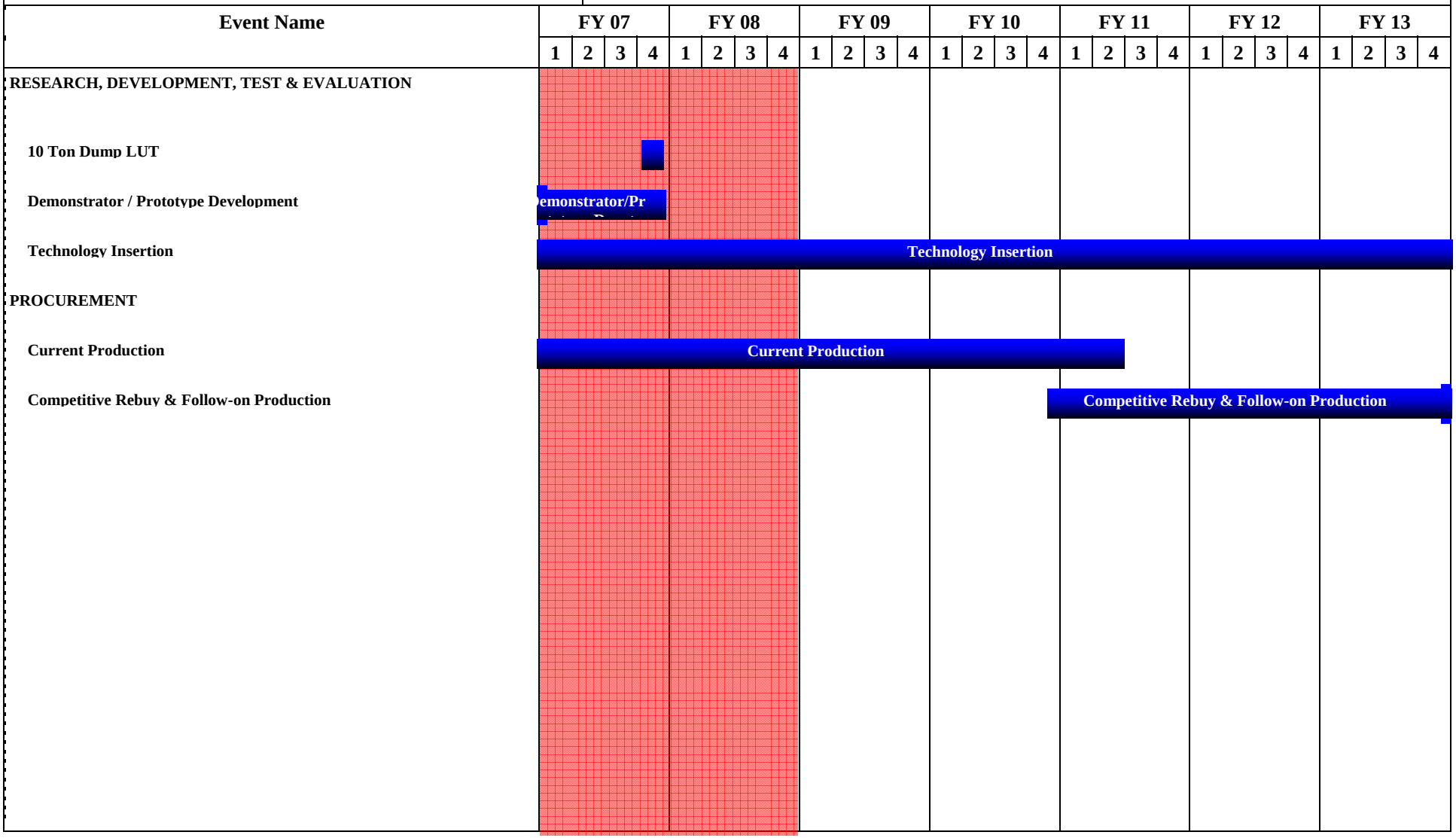
Remarks: Not Applicable

Project Total Cost:	**28897**	**12469**		**6354**		**1949**			**49669**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604604A - MEDIUM TACTICAL VEHICLES**	**H07**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
RESEARCH, DEVELOPMENT, TEST & EVALUATION							
ExVan - LUT							
Load Handling System (LHS) - LUT							
10 Ton Dump LUT	4Q						
Demonstrator / Prototype Development	1Q - 4Q						
Technology Insertion	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
PROCUREMENT							
Current Production	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
Competitive Rebuy & Follow-on Production				4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys - Eng Dev**	**198**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
198 Target Defeating System	5129	1339	5603	478	477	488	498	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project 0604609A supports the conduct of System Development and Demonstration (SDD) of logistically supportable, high performance smoke and obscurants, munitions, and devices to improve the survivability of the combined armed force and complement combined weapons systems. The program element supports critical management studies and analyses that are conducted on a continuing basis to ensure that engineering and manufacturing development efforts are targeted against the emerging threat. Program element supports the conduct of SDD in smoke and obscurant agents, munitions, and devices to improve the survivability of the combined armed forces, complement combined weapon systems, and enhance force effectiveness and combat power.

U.S. Forces must be able to effectively neutralize and degrade energy weapon systems and electro-optical systems/smart weapons that operate in the full range of the electromagnetic spectrum. Improvements are sought across the entire multi-spectral range from visual through infrared (IR) and millimeter wavelengths (MMW) radar for incorporation into self-protection large area and projected smoke systems. The smoke obscuration technologies supported by this program element enhance smoke systems as force multipliers.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Prepared and awarded Limited Objective Experiment (LOE)/LOE contract.	739		
FY07: Initiate, design and fabricate hardware.	4390	951	
FY08: Conduct LOE.		351	
FY09: Prepare, conduct and complete Milestone B.			289
FY09: Prepare and award SDD contract.			450
FY09: Design and build 3 EDT systems.			4864
Small Business Innovative Research/Small Business Technology Transfer Program		37	
Total	5129	1339	5603

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys - Eng Dev**	**198**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	5239	1347	5639
Current BES/President's Budget (FY 2009)	5129	1339	5603
Total Adjustments	-110	-8	-36
Congressional Program Reductions		-8	
Congressional Recissions			
Congressional Increases			
Reprogrammings	38		
SBIR/STTR Transfer	-148		
Adjustments to Budget Years			-36

C. Other Program Funding Summary Not applicable for this item.

D. Acquisition Strategy System Development and Demonstration will begin in FY09 with a full and open competition contract for engineering design, construction and testing of prototype systems.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604609A - Smoke, Obscurant and Target Defeating Sys - Eng Dev

PROJECT
198

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development		SAIC, Abingdon, Maryland		4242	3Q	367	1-2Q	4864	3Q		9473	
Subtotal:				4242		367		4864			9473	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support of Hardware Development.		JPM NBCCA, APG, MD		500	1Q	442	1Q	450	1Q		1392	
SIBR				148	1Q	33	1Q				181	
Subtotal:				648		475		450			1573	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Conduct hardware testing.		OGAs Multiple		239	2Q	497	1-3Q				736	
Subtotal:				239		497					736	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Conduct Management Studies.		TBD						289	3Q		289	
Subtotal:								289			289	

Project Total Cost:		**5129**		**1339**		**5603**			**12071**	

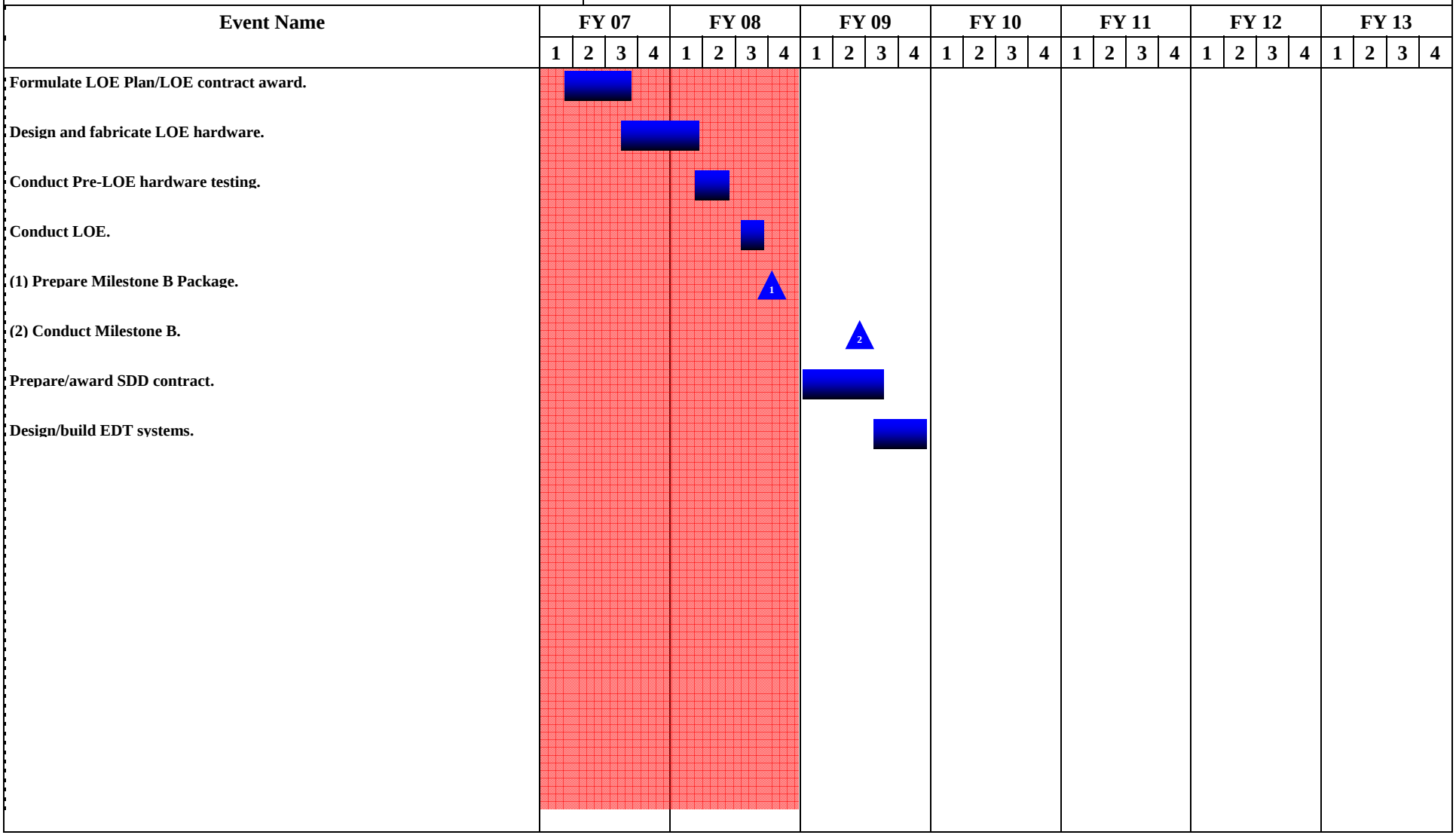
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604609A - Smoke, Obscurant and Target Defeating Sys - Eng Dev

PROJECT
198



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604609A - Smoke, Obscurant and Target Defeating Sys - Eng Dev**	**198**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Formulate LOE Plan/LOE contract award.	1Q - 3Q						
Design and fabricate LOE hardware.	3Q - 4Q	1Q					
Conduct Pre-LOE hardware testing.		1Q - 2Q					
Conduct LOE.		3Q					
Prepare Milestone B Package.		4Q	1Q - 2Q				
Conduct Milestone B.			2Q - 3Q				
Prepare/award SDD contract.			1Q - 3Q				
Design/build EDT systems.			3Q - 4Q				

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)							February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604609A - Smoke, Obscurant and Target Defeating Sys - Eng Dev**						PROJECT **198**
Funding in $000							
Program	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Target Defeating System	5239	1302	5639	481			
Total Termination Liability Funding:	5239	1302	5639	481			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	13034	12666	2901	3446	3144	2926	2997	Continuing	Continuing
659	FAMILY OF HVY TAC VEH	8								10690
65A	MOVEMENT TRACKING SYSTEM (MTS)	3803	1719	1886	1391	1090	893	914	Continuing	Continuing
E49	HEMTT	6149	9936							31035
E50	TRAILER DEVELOPMENT	3074	1011	1015	2055	2054	2033	2083	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element aligns system development and demonstration of Heavy Tactical Vehicles with Future Modular Force requirements to support combat and combat support missions. These missions include the following: line haul, local haul, and unit resupply. These trucks transport water, ammunition, and general cargo over all terrain and throughout the battle-space. Funding will also be used for developing the Army's next generation of tactical truck, as part of the Army's Tactical Wheeled Vehicle Modernization Strategy. Funding in Project 65A is for the development of the Movement Tracking System (MTS). Funding in Project E50 supports the continued modernization of the Army's trailer fleets and supports the continuous product improvements, technology insertion, and new capabilities for tactical trailers.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	13311	1947	2920
Current BES/President's Budget (FY 2009)	13034	12666	2901
Total Adjustments	-277	10719	-19
Congressional Program Reductions		-81	
Congressional Rescissions			
Congressional Increases		10800	
Reprogrammings	98		
SBIR/STTR Transfer	-375		
Adjustments to Budget Years			-19

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
65A	MOVEMENT TRACKING SYSTEM (MTS)	3803	1719	1886	1391	1090	893	914	Continuing	Continuing

A. Mission Description and Budget Item Justification: Movement Tracking System (MTS) is a satellite based, asset visibility and situational awareness enabler that assists Combat Support/Combat Service Support (CS/CSS) commanders and their staffs. MTS identifies and tracks the location of vehicles, communicates with vehicle operators, and redirects missions on a worldwide, near real-time basis during peacetime operations and war. MTS provides the capability to link ground level operators conducting missions and commanders/managers that plan, direct, and control operations and allows for continuous CS/CSS asset visibility across the tactical area of operations. FY08/09 funding supports development of block modifications on the MTS. This block modification will develop and test required interfaces to TC AIMS II (direct electronic interface) and GCSS-Army (direct electronic interface).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Development of block modifications on the Movement Tracking System	3803	1671	1886
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		48	
Total	3803	1719	1886

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA1 D16103000, Movement Tracking System (MTS)	102794	90352	142952	180411	142962	130321	45170	Continuing	Continuing

Comment:

C. Acquisition Strategy RDTE efforts to support block development approach through a continuous series of overlapping modular development and integration testing to include multiple interface developments in support of follow-on production.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604622A - Family of Heavy Tactical Vehicles

PROJECT
65A

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software development, engineering, testing, program management	FFP/IDIQ	Comtech Data, Mobile, Germantown, MD	4170	2832	3Q	1439	4Q	1412		3239	13092	
Subtotal:			4170	2832		1439		1412		3239	13092	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software Testing	MIPR	Electronic Proving Ground, Aberdeen, MD	518	861		232		474		1079	3164	
Subtotal:			518	861		232		474		1079	3164	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR				110		48					158	
Subtotal:				110		48					158	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

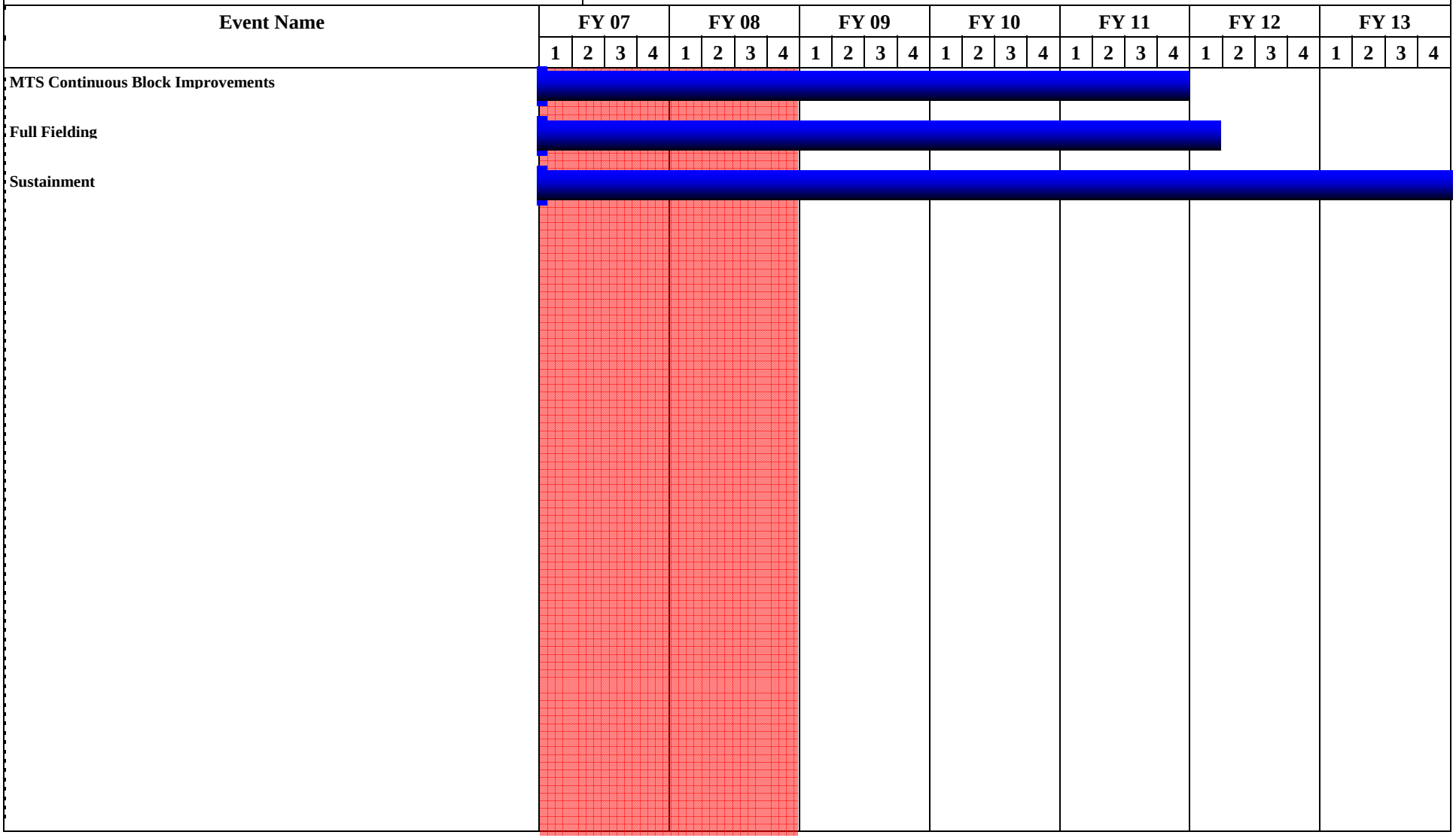
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**

Project Total Cost:	**4688**	**3803**		**1719**		**1886**		**4318**	**16414**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**65A**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MTS Continuous Block Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Full Fielding	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Sustainment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
E50 TRAILER DEVELOPMENT	3074	1011	1015	2055	2054	2033	2083	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element supports continued modernization of the Army's trailer fleet. The funds support development and integration of emerging state of the art technology improvements and new capabilities. FY08/09 funding will develop, design and build prototype trailers to meet Army operational capability gaps identified by CASCOM, and also will support continued insertion of new technology to the current trailer fleet, including the testing of hitch devices and leg modernization. Other on-going technologies being looked at are corrosion prevention and modularity and transportability enhancements such as improved suspension, electrohydraulic brakes, lift bed, and enhanced coupling/uncoupling. Modernized trailers are better able to match the capabilities of today's improved tactical wheeled vehicles and tractors.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Program Management	982	250	250
Current fleet technical insertion and testing	104	100	100
Design, develop and build System Prototype Demonstrator Trailer(s)	1988	633	665
Small Business Innovative Research/Small Business Technology Transfer Programs		28	
Total	3074	1011	1015

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 1 D01500 Semi-Trailer Flatbed 22.5T M871A3	18284	273	6520	2499	988	1561		Continuing	Continuing
OPA 1 D01600 Semi-Trailer Flatbed 34T M872A4	63380	9690	39220	11473	2414	2237		Continuing	Continuing

Comment: Initial efforts relate to flatbed trailers; however, any member of the tactical trailer fleet may be affected.

C. Acquisition Strategy Conduct feasibility testing on existing tactical semi-trailers. Identify enhanced transportability and safety concepts and other responses to field issues. Modify existing equipment or develop new equipment. The ultimate goal is to develop and test improvements, acquire necessary technical data, and place improved hardware into production.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604622A - Family of Heavy Tactical Vehicles

PROJECT
E50

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Integrator			175								175	
Program Management	In-House	TACOM-WRN	1586	1021		250		250			3107	
Enhanced M800 Series Semi-Trailer	Firm Fixed Price (FFP)	Davis Technologies, Inc. Addison, TX	120								290	
Current fleet technical insertion	Firm Fixed Price (FFP)	Williams EZ Hitch, Durham, NC	249								249	
Design, develop and build System Prototype Demonstrator Trailer(s)	Firm Fixed Price (FFP)	American Systems Technology, Inc. Troy, MI	700								700	
Design, develop and build System Prototype Demonstrator Trailers	Firm Fixed Price (FFP)	Alion Science & Technology Corp. Chicago, IL	2103								2103	
Design, develop and build System Prototype Demonstrator Trailers	TBD	TBD		1949		633		665			3247	
Subtotal:			4933	2970		883		915			9871	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
M870A3 Suspension testing	MIPR	Yuma Proving Ground, Yuma, AZ	562	104		100		100			866	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**

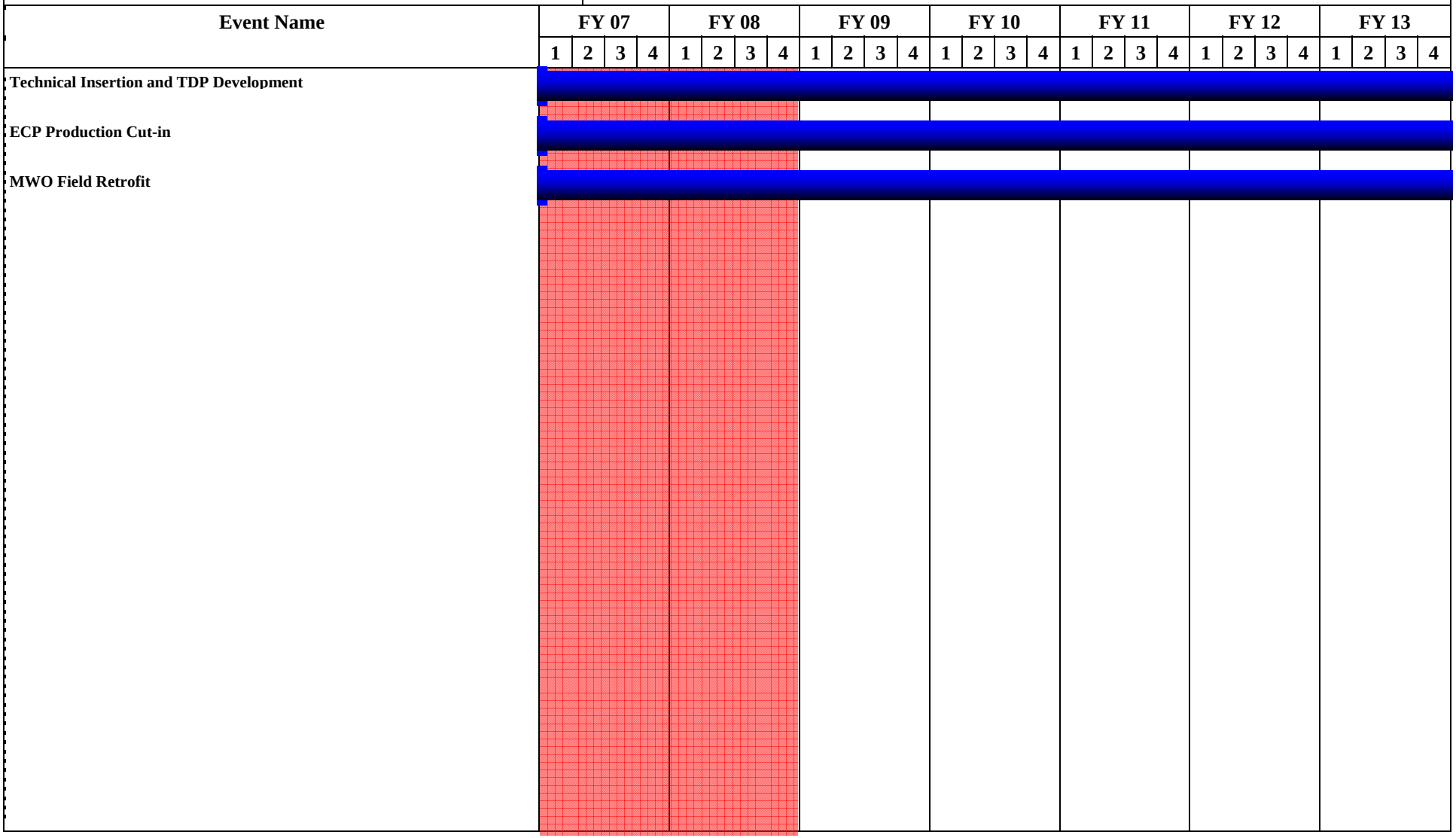
Subtotal:			562	104		100		100			866	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR						28					28	
Subtotal:						28					28	
Project Total Cost:			**5495**	**3074**		**1011**		**1015**			**10765**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604622A - Family of Heavy Tactical Vehicles**	**E50**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Publish R&D Plan							
Industry Day							
Start of Work (SOW)							
Build System Prototype Demonstrator							
Preliminary Design Review (PDR)							
Drawing Development, Level III							
Critical Design Review (CDR)							
Technical Feasibility Test							
Technical Insertion and TDP Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
ECP Production Cut-in	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
MWO Field Retrofit	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
586 AIR TRAFFIC CONTROL	7877	8899	14214	2717	4844	7102	6610	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element funds continuous efforts in the development of modernized tactical and fixed base Air Traffic Control (ATC) systems that will significantly enhance aviation safety in both the tactical and strategic ATC domains. ATC systems are required to achieve or maintain compliance with civil, military, domestic, and international air traffic control and combat identification requirements and mandates. Funding will be utilized to develop, evaluate and integrate candidate systems in each key technology area. Funded in this program element is the development of the Mobile Tower System (MOTS). The MOTS is a tactical mobile tower designed to meet the deployability and communication requirements of the current to future force. The MOTS will be equipped with modernized and secure avionics to ensure highly reliable and consistent tactical aircraft communications across all frequency bands and ranges to ensure compatibility with all Army, Joint, and Allied aircraft. MOTS will provide modern digital, secure, anti-jam communications, a digital recorder, basic weather information, a precision location capability, and full compatibility with all military and civilian airfields as well as tactical landing zones in an armored, survivable vehicle.

Funded product improvements include the Air Traffic Control (ATC) Communications and Networking efforts integration and the Tactical Airspace Integration System (TAIS). Voice radios currently integrated into ATC systems will begin migration to accommodate both voice and high bandwidth data throughput. In a networked battlefield, joint service systems and radars can provide data beneficial to ATC missions assuming a communications infrastructure and data processing capability is embedded in ATC systems. As the Federal Aviation Agency (FAA) and Department of Defense (DoD) transition to aircraft self-reporting technologies such as Automatic Dependent Surveillance-Broadcast (ADS-B)/Combat Identification (CID) and Mode 5, PM ATC will equip tactical and fixed base ATC units with ground receivers and networks to process the aircraft positional data. TAIS, as a Battlefield Automated System (BAS) of the Army Battle Command System (ABCS), requires the development and testing of web-based services for both Army Airspace Command and Control (A2C2) and Air Traffic Services (ATS), and integration of these new web-based services into a Battle Command Service Oriented Architecture (SOA) under the provisions of the Army's Battle Command Migration Plan. TAIS RDTE efforts also include Pre-Planned Product Improvements (P3I). TAIS P3I include, but are not limited to, developing and testing Combat Identification (CID) technologies, and autonomous, embedded Blue Force Tracking (BFT) solutions for third dimension BFT situational awareness with minimal latency.

FY 2007 funding total includes no funding received in GWOT supplemental.
FY 2008 funding total includes no funding received in the Bridge Supplemental.
FY 2008 funding totals do not include any previously requested funding for current FY 2008 GWOT requirements, and no FY 2008 GWOT funds have been previously requested in the RDTE Project of 586.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
MOTS System Development, Demonstration & Testing	7498	4829	4052
Communications			850
Networking			724

TAIS Battle Command Migration		3204	5500
TAIS P3I			2465
Tech and Log support	304	555	530
Program Management Support	75	84	93
Small Business Innovative Research/Small Business Technology Transfer Programs		227	
Total	7877	8899	14214

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	4477	8956	14268
Current BES/President's Budget (FY 2009)	7877	8899	14214
Total Adjustments	3400	-57	-54
Congressional Program Reductions		-57	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	3502		
SBIR/STTR Transfer	-102		
Adjustments to Budget Years			-54

FY 2007 - $3.4M reprogrammed to ATC for Uparmor to MOTS Program.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
APA AA0050 - Air Traffic Control	103769	97738	123733	79080	85895	85803	88653	Continuing	Continuing

Comment:

D. Acquisition Strategy PM ATC will continue to embrace new technology initiatives for the development of tactical and fixed base ATC equipment and the integration of new technology into existing systems. These systems are required to achieve or maintain compliance with civil, military, domestic and international air traffic control and combat identification requirements and mandates. Funding will be utilized to develop, evaluate, and integrate candidate systems in each key technology area. Technology insertion will be acquired through contract modifications, engineering services tasks, and new/follow-on contracts. MOTS System Development and Demonstration contract was awarded competitively in FY 2006. MOTS development and testing to be completed in FY 2009.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

PROJECT
586

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MOTS System Development and Demo	C/CPFF	Sierra Nevada Corp, Sparks, Nevada	5841	7011	3Q	3658	2Q	2600	1Q		19110	
MOTS Systems Development Support	Various	Various	649	180	1-3Q	366	1-3Q	411	2Q		1606	
MOTS Contracted Services	Various	Various		242	1Q	380	1Q	391	1Q		1013	
TAIS Battle Command Migration	SS/CPFF	General Dynamics C4S, Huntsville, AL				3204	1-2Q	5500	2Q	Cont.	Cont.	Cont.
TAIS P3I	SS/CPFF	General Dynamics C4S, Huntsville, AL						2465	2Q		2465	
Communications	TBD	TBD						850	2-3Q	Cont.	Cont.	Cont.
Networking	TBD	TBD						724	2-3Q	Cont.	Cont.	Cont.
Tech and Log Development Support	Inhouse	PM ATC, Redstone Arsenal, AL	836	304	1-3Q	555	1-3Q	530	1-3Q	Cont.	Cont.	Cont.
Subtotal:			7326	7737		8163		13471		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MOTS Prototype Testing	MIPR	Various	65	65	2Q	425	3Q	650	2Q		1205	
Subtotal:			65	65		425		650			1205	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604633A - AIR TRAFFIC CONTROL

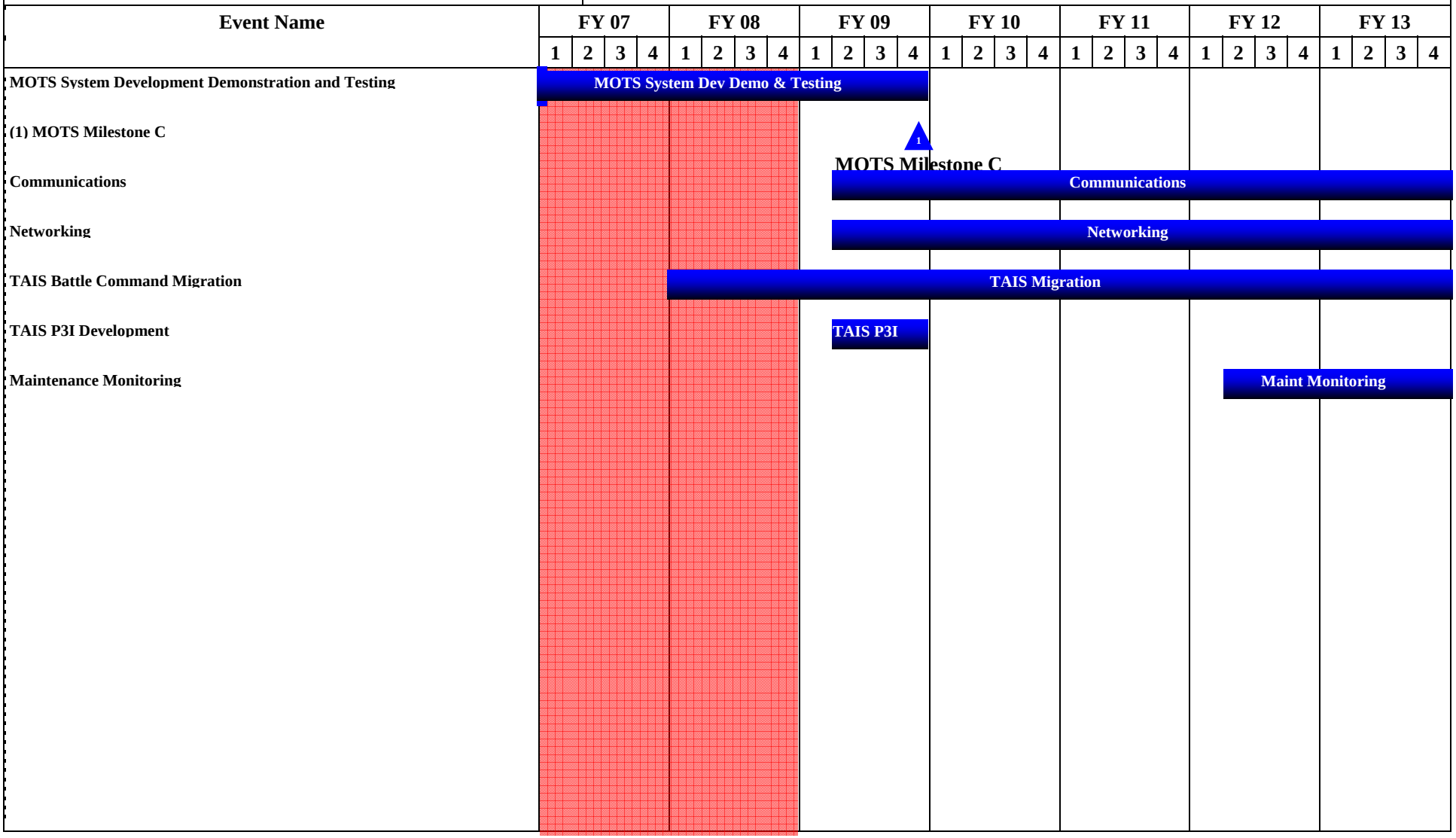
PROJECT
586

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	In-House	PM ATC, Redstone Arsenal, AL	1862	75	1-4Q	84	1-4Q	93	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						227	1Q				227	
Subtotal:			1862	75		311		93		Cont.	Cont.	Cont.
Project Total Cost:			**9253**	**7877**		**8899**		**14214**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604633A - AIR TRAFFIC CONTROL**	**586**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MOTS System Development Demonstration and Testing	1Q - 4Q	1Q - 4Q	1Q - 4Q				
MOTS Milestone C			4Q				
Communications			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Networking			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
TAIS Battle Command Migration		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
TAIS P3I Development			2Q - 4Q				
Maintenance Monitoring						2Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	2927532								2927532
F52	FCS- RECON PLATFORMS & SENSORS	41813								41813
F53	FCS- UNMANNED GROUND VEHICLES (UGV)	104301								104301
F54	UNATTENDED SENSORS	10391								10391
F55	SUSTAINMENT	104302								104302
F57	MANNED GROUND VEHICLES	516217								516217
F61	S o S Engineering and Program Management	2150508								2150508

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a combined arms unit of modular design developed as an integrated, advanced network of manned and unmanned advanced air- and ground based maneuver, maneuver support, sustainment and training systems. The FCS networked capability will enable a quantum leap forward in improved force protection, lethality, and situational awareness/ understanding for our fighting forces currently unachievable. The FCS (BCT) employs advanced Intelligence, Surveillance and Reconnaissance (ISR) systems and real-time sensor-shooter linkages, with an integrated, network of manned and unmanned platforms coupled with sophisticated Battle Command applications and services to ensure information and decision superiority. FCS is designed to enable the Army's most valuable weapon - the Soldier with capabilities to perceive, comprehend, shape and dominate the battlefield. When fully operational, the FCS (BCT) will provide the Army and the joint force with the unprecedented capability to see the enemy first, understand his intentions, act first, and finish the enemy decisively. The Army's first modernization effort in nearly four decades; the FCS (BCT) is the embodiment of the modular force, designed for full spectrum, joint and multinational operations. FCS will employ a Service Oriented Architecture (SOA) that will network existing systems, systems under development and future systems to meet the requirements of the Army's Future Force. The FCS (BCT) is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrain and can also be adapted to Stability and Support and humanitarian missions such as disaster relief. The FCS (BCT) is the centerpiece of the Army_s Modernization Program.

IAW Section 214 of the FY2006 National Defense Authorization Act, the Projects associated with this Program Element are to have their own unique Program Elements commencing with FY2008 President_s Budget request. Therefore, this Program Element and it_s associated Projects has been retired and replaced with their own Program Elements. The following table shows the crosswalk from the old structure to the new structure:

Old PE/Project	New Project Title	New PE/Project
0604645A/F52	FCS Reconnaissance Platforms	0604662A/FC3
0604645A/F53	FCS Unmanned Ground Vehicles	0604663A/FC4
0604645A/F54	FCS Unattended Ground Sensors	0604664A/FC5
0604645A/F55	FCS System of Systems Engineering &	0604661A/FC2

	Program Management	
0604645A/F57	FCS Manned Ground Vehicles & Common Ground Vehicle Components	0604660A/FC1
0604645A/F61	FCS System of Systems Engineering & Program Management	0604661A/FC2
	FCS Network Hardware & Software	0604665A/FC6
	FCS Spin Out Technology/Capability Integration	0604666A/FC7

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	2956921		
Current BES/President's Budget (FY 2009)	2927532		
Total Adjustments	-29389		
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings	53821		
SBIR/STTR Transfer	-83210		
Adjustments to Budget Years			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F52**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F52	FCS- RECON PLATFORMS & SENSORS	41813								41813

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This Future Combat System(FCS) project covers all air platforms (Class I, Class II, Class III, and Class IV) and includes contractor development, engineering, prototype procurement and integration, test, and assembly. The UAVs are the eyes, the ears and the gun sights of the BCT.

The Class I Unmanned Aerial Vehicle (UAV) provides the dismounted soldier Reconnaissance, Surveillance, and Target Acquisition (RSTA). It has the ability to hover and stare at military operations on rural and urban terrain. The Class I senses and provides imaging to recognize personnel, day and night. It provides targeting information to the FCS network during day and night operations and in adverse weather from 500 feet. Weighing less than 30 pounds, the air vehicle operates in complex urban and rural terrains with a vertical take-off and landing capability. It is carried in a standard MOLLE and is air droppable with the soldier. As part of the POM process the Army has decided to include a Laser Designator Sensor on the Class I UAV.

The Class II Unmanned Aerial Vehicle (UAV) will be a vehicle-carried system that provides Line-of-Sight (LOS), Non-Line of Sight (NLOS) and Beyond Line of Sight (BLOS) capabilities, including enhanced dedicated imagery. The distinguishing capability of this UAV is target designation in day, night, and adverse weather. The Class II weights 112 pounds dry and does not require an airfield. The Class II Unmanned Aerial Vehicle (UAV) is carried on the MGV and is capable of being lifted by two Soldiers, has a 16 km radius of action, and can remain aloft for two hours. Due to Fiscal budget constraints, the Class II effort was terminated at the beginning of FY07 and the requirement has been made objective.

The Class III Unmanned Aerial Vehicle (UAV) is a multifunction aerial system that has the range and endurance to support battalion level RSTA within the Brigade Combat Team (BCT) battle space. It provides the capabilities of the Class I and Class II, but at longer ranges and higher altitudes, in addition to communications relay, mine detection, Chemical, Biological, Radiological and Nuclear detection, and meteorological survey. The Class III vehicle has a payload of up to 215 pounds and can be lifted by two soldiers. Due to Fiscal budget constraints, the Class III effort was terminated at the beginning of FY07 and the requirement has been made objective.

The Class IV Unmanned Aerial Vehicle (UAV) has a range and endurance appropriate for the brigade mission. It supports the Brigade Combat Team (BCT) Commander with communications relay, long endurance persistent stare, and wide area surveillance over 75km radius. Unique missions include dedicated manned and unmanned teaming (MUM)

with manned aviation; Emitter Mapping; Wide Band Communications Relay across 150-175 km; and standoff Chemical Biological Radiological, Nuclear, and Energy (CBRNE) detection with on-board processing. Additionally, it has the payloads to enhance the RSTA capability by cross-cueing multiple sensors. It operates at survivable altitudes at standoff range at day and night and during adverse weather. Like the Class III, the Class IV must be able to take-off and land without a dedicated air field. The Class IV vehicle weighs about 1800 pounds and has a setup time of 30 minutes.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
UAV CLASS I - FY07. Obtained soldier feedback from lessons learned during experimentation and test with the 25th Infantry Division. Provided hardware to participate in Experiment 1.1. There were 4 prototype Class I systems used in Experiment 1.1. During Experiment 1.1, the Class I prototype successfully demonstrated transmission of reconnaissnace and surveillance data with a Joint Tactical Radio System and successfull transmission of reconnaissance and surveillance data to all of the participating elements of Experiment 1.1, to include Apache helicopters and FCS ground vehicles. Completed Class I Design Checkpoint Review/Interim Preliminary Design Review (PDR) in September 2007	19052		
UAV CLASS IV FY07. Updated Class IV Prime Item Development Specifications (PIDS) Requirements with Vehicle Integrator based on System PIDS Updates. Provided a platform simulation engineering release to the FCS SoSIL. Delivered Engineering Release of Build 1 Simulation into SoSIL. Accepted delivery of Army/Navy common airframes A1-A5. Completed Phase 1 of air vehicle assembly for the first 2 Air Vehicles at Moss Point, MS, less FCS-unique avionics/ payloads. Completed Ground Engine Run Tests for A1 and A2. Landing Gear Drop Test copleted. Cooperative E3 Testing with the US Navy began. Vendor level component and subsystem delta testing for E3 and Temperature began, will conclude in FY08. Continued with initial build software development.	22761		
Total	41813		

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754				59618
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957				813155
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775			478852
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing

WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	41813							Continuing	Continuing
0604645 F53 UGV	104301							Continuing	Continuing
0604645 F54 UGS	10391							Continuing	Continuing
0604645 F55 SUSTAINMENT	104302							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	516217							Continuing	Continuing
0604645 F61 SoS Engineering and Program management	2150508							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F52

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CLASS I	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 1	10114	19052	1Q						29166	
CLASS II	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 4, 7	5953								5953	
CLASS III	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 4, 5, 6, 7	16450								16450	
CLASS IV	OTA	THE BOEING CO., ST LOUIS, MO SEE REMARK 2	77904	22761	1Q						100665	
Subtotal:			110421	41813							152234	

Remarks: Remark 1: Subcontractor: Honeywell,- Albuquerque, New Mexico
Remark 2: Subcontractor: Northrop Grumman Systems Corp.- San Diego, CA
Remark 4: Subcontractor: Piasecki Aircraft Corporation - Essington, PA
Remark 5: Subcontractor: Teledyne Brown Engineering - Huntsville, AL
Remark 6: Subcontractor: AAI Corporation - Hunt Valley, MD
Remark 7: Class II and Class III Phase 2 contracts terminated due to POM 08-13 decisions.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government GFX ASTAIMIDS, RSTA Sensor, Firescout	Direct	PM FCS (BCT) , St. Louis, MO	23995								23995	
Subtotal:			23995								23995	

Remarks: All support costs for this project are included in F61 SoS Engineering and Program Management project.

III. Test And Evaluation	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F52**

	Type				Date		Date		Date			Contract
Subtotal:												

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			**134416**	**41813**							**176229**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F53**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F53	FCS- UNMANNED GROUND VEHICLES (UGV)	104301								104301

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. FCS is the #1 priority acquisition program for the Army.

This FCS project includes contractor developmental and engineering efforts for requirement analysis, specification development, and detail design packages for integration of common and mission equipped Unmanned Ground Vehicles. Also included are subsystem prototypes, models, and/or simulations to support development, tests, and demonstrations. Unmanned platforms include: Armed Robotic Vehicles-Reconnaissance (ARV-RSTA) and ARV-Assault (ARV-A), Small Unmanned Ground Vehicle (SUGV), Multi-function Utility/Logistics Equipment-Transport (MULE-T), MULE-Countermine (CM), and ARV-Assault Light (ARV-A-L). In addition to the UGV platforms, this project includes the development of the hardware and software for the Autonomous Navigation System (ANS) required for operation of the UGVs and leader-follower capability for the Manned Ground Vehicles (MGV).

Small Unmanned Ground Vehicle (SUGV)
The Small Unmanned Ground Vehicle (SUGV) is a small, lightweight, manportable, DC powered UGV capable of conducting military operations in urban terrain tunnels, sewers, and caves. The SUGV enables the performance of manpower intensive or high-risk functions (i.e. urban Intelligence, Surveillance, and Reconnaissance (ISR) missions, chemical/Toxic Industrial Chemicals/Toxic Industrial Materials, reconnaissance, etc.) without exposing soldiers directly to the hazard. Weighing less than 30 pounds, it is capable of carrying up to six pounds of payload weight. The SUGV will have the following capabilities: tether payload, manipulator arm, CBRN capabilities and the potential for integrating future technologies for Sense Through the Wall and Mine/UXO/IED detection ability. The SUGV can operate up to six hours on a single charge.

Multifunctional Utility/Logistics and Equipment (MULE) Vehicle is a 2.5-ton Unmanned Ground Vehicle (UGV) that will support dismounted operations. It is comprised by the integration of four major components: Common Mobility platform, Autonomous Navigation System (ANS), Centralized Controller (CC) and three mission equipment packages/variants. The MULE platform's centerpiece is the common mobility platform providing superior mobility built around an articulated suspension system to negotiate obstacles and gaps that a dismounted squad might encounter. The MULE has three variants sharing the common mobility chassis: Transport, Countermine and the Armed Robotic Vehicle (ARV)-Assault-Light (ARV-A-L). The Transport MULE (MULE-T) will carry 1,900-2,400 pounds of equipment and rucksacks for dismounted infantry squads with the mobility needed to follow squads in complex terrain. The Countermine MULE (MULE-CM) will provide the capability to detect, mark and neutralize individual anti-tank mines by integrating a mine detection mission equipment package from the Ground Standoff Mine Detection System (GSTAMIDS) program to support force mobility. The ARV-Assault-Light (ARV-A-L) is a mobility platform with an integrated weapons and target acquisition package to support the dismounted infantry's efforts to locate and destroy enemy platforms and positions. The ARV-A-L includes the M240 machine gun, JAVELIN missile and medium range EOIR sensors to engage and destroy the enemy in dismounted operations. The MULE platforms are UH-60 transportable.

Autonomous Navigation System(ANS) is the mission payload package that will be integrated on both the MULE and ARVs to provide robotic semiautonomous capability. ANS provides GPS/IPS core navigation, targeting support and timing. It also detects obstacles and provides alternate routes. The ANS primary system components are: the LADAR Imaging Perception Module (LIPM), the Imaging Perception Module (IPM), the Millimeter Wave Radar (MMWR), the Global Positioning System/Inertial Navigation System (GPS/INS) and the ANS Computer System (ACS). ANS provides for day and night capability in all weather and mobility control for on/off roads, cross country and complex terrain. MMWR provides tracking in rain, smoke or fog along with an early warning for approaching vehicles with high closing rates. ACS provides SoSCOE interface, path planning, video processing, hardware sensor processing object processing and speed and curvature commands. As part of the Army Budget Constraints contain in the FY08-13 POM decision, the leader follower MGV mission is being deferred and made an objective requirement.
Armed Robotic Vehicle (ARV)

The Armed Robotic Vehicle (ARV) has two variants: the Assault variant (ARV-A) and the Reconnaissance, Surveillance and Target Acquisition variant (ARV-RSTA). The two variants share a common chassis. The ARV-A and ARV-RSTA will have different mission payloads mounted on a common chassis capable of staying with MGVs. These two variants are being deferred and made an objective requirement as part of the Army Budget Constraints contain in the FY08-13 POM.

The ARV-A will be utilized to maneuver forward of the mounted and dismounted elements in the attack or within the defense. The Assault variant will support the mounted and dismounted forces in the assault providing Line-of-Sight (LOS) and overwatching fires with direct fire and anti-tank (AT) weapons to destroy enemy platforms and fortified positions; remotely occupies key terrain providing ISR/TA reconnaissance capability in MOUT and other battlespace; remotely deploy sensors; locate or by-pass threat obstacles; remotely assess battle damage, employ non-lethal munitions; remotely provide limited reconnaissance capability and acts as a communications relay.

The ARV-RSTA accompanies mounted and reconnaissance units and fills the role of an additional "scout", gathering information forward of the MGVs. The ARV-RSTA consists of a common chassis platform with payloads that provide video capability, digital communications/audio relay modules (plug in/out), and advanced sensors/mission modules. The ARV-RSTA variant will provide Reconnaissance, Surveillance and Target Acquisition for the FCS (BCT). The ARV-RSTA will provide reconnaissance capability in Urban Military Operations in Urban Terrain and other battlespace; deploy sensors, highlight targets, locate or by-pass threat obstacles in buildings, bunkers, tunnels, and other urban areas and act as a communications relay and perform battle damage assessment.
IAW Section 214 of the FY2006 National Defense Authorization Act, this project will be converted to a stand alone Program Element (0604663A Project FC4) commencing with the FY2008 President's Budget submission to Congress

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
SUGV FY07 - Began integration of head and neck activities, which will lead to a fully integrated head and neck assembly design prior to CDR in 1st qtr, FY10. The internal round 2 Pre-Prototypes were produced and used in the FCS Experiment 1.1 at White Sands. These experiments garnered valuable data to enhance the design. Internal Round 3 Pre-Prototype Development began and will continue through FY08 leading up to the SUGV CDR in 1st qtr FY10. Initial Temperature Testing completed June 2007 on Round 2 Pre-Prototypes. Endurance Testing completed on Round 2 Pre-Prototypes during July 2007. Drop Testing completed on Round 2 Pre-Prototypes during July 2007. Continued support of SUGV Simulation and testing at the SoSIL.	10858		
ANS FY07 - Procurement Control Document (PCD) to Configuration Item Development Specification (CIDS) transition completed June 2007. Continued Technology and Integration Risk Reduction Activities to enhance the maturation of the ANS design, and resolve	93443		

artifacts for the ANS PDR held on 15 Nov 07. Conducted Phase 1 Robotic Convoy Experiment (RCS) System Integration and Test of all hardware/software systems, Laser Image Perception Module (LIPM), Image Perception Module (IPM), ANS computer, Millimeter Wave (MMWR) RADAR, and GPS/INS on Stryker, Light Medium Tactical Vehicle (LMTV), and Family of Medium Tactical Vehicles (FMTV) at White Sands Missile range (WSMR). Initiated experiments and demonstrations of Robotic Convoy capabilities, to include: Teleoperation, Leader/Follower, Move-on-route, and Obstacle avoidance. Fabricated ANS Pre-Prototypes for the MULE EEU. Continued component fabrication and testing of the IPM for the ANS. Completing fabrication of the ANS Engineering Prototypes to support EEU, Robotic Vehicle Control Architecture (RVCA), Robotic Convoy (RCX) and General Dynamics Robotic Systems (GDRS) engineering test vehicle (Predator). ANS Simulation for Software (SW) Build 1 completed for Functional Qualification Test (FQT) and has been delivered to Software Integration Laboratory (SIL). Continued integration and test of ANS hardware on six surrogate vehicles to support ANS development. Provided Software Build 1 SIL Test support in August 2007. Supported integration of the ANS simulation on the MULE and MGV simulations. Conducted preparation, development, integration, and test for Engineering Phase (EP) 7 and 8 of Phase One ANS Software Development. Conducted preparation, development, integration, and test for EP 9 and start of 10 of Phase Two ANS Software Development. Completed ANS Build 1 software engineering release. ANS Simulation in SW Build 2 began.			
Total	104301		

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
60046661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96919	64744	43601	26855	3580	Continuing	Continuing
6064664A FCS Unattended Ground Sensors		10929	12967	18968	16754				59618
6064665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non-Line of Sight- Launch System	313981	253075	200099	40043	5957				813155
0604647A Non-Line of Sight - Cannon	108689	136929	89841	71396	43222	28775			478852
0604666A FCS Spin Out	29700	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	41813							Continuing	Continuing
0604645 F53 UGV	104301							Continuing	Continuing
0604645 F54 UGS	10391							Continuing	Continuing

0604645 F55 SUSTAINMENT	104302							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	516217							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2150508							Continuing	Continuing

Comment:

C. Acquisition Strategy Due to FCS requirements changing in the last 3 years, coupled with the challenge to meet all its reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army focus on FCS-equipped Brigade Combat Team development at reduced program risk. The adjustments to the FCS Program acquisition strategy fall into the following categories:
1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and "Spin Out" capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Const $) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sept 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

IAW Section 214 of the FY2006 National Defense Authorization Act, this project will be converted to a stand alone Program Element (0604663A Project FC4) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F53

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Armed Robotic Vehicle (ARV-A)	OTA/FAR	The Boeing Company St. Louis, MO see remark 2	4068								4068	
Small Unmanned Ground Vehicle (SUGV)	OTA/FAR	The Boeing Company St. Louis, MO see remark 1	22942	10858	1-3Q						33800	
MULE T	OTA/FAR	The Boeing Company St. Louis, MO see remark 3	17742								17742	
Autonomous Navigation System - Software	OTA/FAR	The Boeing Company St. Louis, MO see remark 4	63110	93443	1-3Q						156553	
MULE CM	OTA/FAR	The Boeing Company St. Louis, MO see remark 3	28465		1-3Q						28465	
ARV SEPM	OTA/FAR	The Boeing Company St. Louis, MO see remark 2	29790								29790	
ARV COMMON	OTA/FAR	The Boeing Company St. Louis, MO see remark 2	23508								23508	
MULE STE	OTA/FAR	The Boeing Company St. Louis, MO see remark 3										
MULE SEPM	OTA/FAR	The Boeing Company St. Louis, MO see remark 3	20245		1-3Q						20245	
Subtotal:			209870	104301							314171	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F53

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**209870**	**104301**							**314171**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F54**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F54 UNATTENDED SENSORS	10391								10391

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

U-UGS - The Urban-Unattended Ground Sensors (U-UGS), also known as Urban Military Operations in Urban Terrain Advanced Sensor system, will provide a low cost, network-enabled reporting system for SA and force protection in an urban setting, as well as residual protection for cleared areas of Urban Military Operations in Urban Terrain (MOUT) environments. The (U-UGS) system can support BCT operations by monitoring urban choke points such as rooms, halls attics, basements, sewers, culverts, tunnels, caves, and alleyways. They can be hand-employed by Soldiers or robotic vehicles either inside or outside buildings and structures. When a platoon or squad clears a building for example, U-UGS are left behind to perform surveillance that would otherwise require dedicated soldiers.
The U-UGS system provides a self-organizing wireless network that consists of three configuration items; personnel detect sensors, imaging sensors, and gateways.
1. Personnel Detect Sensors provide dual mode, passive infrared and RF microwave motion sensing for "trip-wire" detection of intruders.
2. Imaging Sensors provide electro-optical visual imaging with a near-infrared illuminator for operation in full darkness.
3. Gateways organize and manage the sensor network, and communicate sensor data to FCS C2 JTRS systems and to the local dismounts.

T-UGS-Tactical-UGS (t-ugs) includes Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Chemical, Biological, Radiological and Nuclear (CBRN)-UGS. The UGS (T-UGS) are designed for remote tactical operations in open spaces, at road choke points, avenues of approach, etc, and are designed to be emplaced by hand or by remote deployment methods. T-UGS provoides ISR and CBRN awareness to the FCS (BCT) of areas not covered by manned/unmanned ground/air vehicles. the common form factor enables simplified scalability and upgrade paths for future technology insertion, while the distributed sensing capability enhances mission flexibility and system versatility. The T-UGS system consists of five configuration items (nodes), each containing a unique set of sensing capabilities, and sharing a common hardware form factor.
1. The T-UGS ISR sensor node provides for vehicle and personnel detection capabilities via seismic, acoustic and magnetic sensors. Seismic sensors are the primary means of personnel detection. The principal means of vehicle detection and tracking are the acoustic bearing sensors. Th ISR-UGS will be modular and composed of tailorable sensor groups using multiple ground-sensing technologies. Multiple sensors support precision location and simultaneous tracking of multiple targets.
2. When confirmed as a valid target of interest, Electro Optical/Infrared (EO/IR) sensor nodes will autonomously capture multiple images of the target.
3. The CBRN node provides for chemical, biological, radiological, and nuclear sensing and reporting capability.
4. The Hazard/Clear Lane Marker (H/CLM) nodes are deployed to mark hazardous keep-out zones, or to define cleared lanes though hazardous areas such as minefields.
5.The final component of the T-UGS system is the Long-Haul gateway node that provides radio communications and integration into the FCS network.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F54**

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
UNATTENDED GROUND SENSORS (UGS) FY07 - Spin Out 1 Critical Design Review (CDR), conducted 2Q FY07, marked the design completion and initiated the fabrication and prototype build phase. Completed SO1 UGS design LUT Configuration. Completed SO1 UGS developmental testing LUT Configuration. Delivered fully qualified UGS systems to the (SoS) SIL in FY 2007. Integrated SoSCOE v. 1.5 and 1.8 into the UGS. (IV1) Tests include HALT, HAST, and Endurance; as well as the start of system integration testing. Integration & Verification (IV) testing completed in FY07 to be followed by full system Integrated Qualification Test (IQT). Delivered pre-qualification hardware to Boeing's C4ISR System Integration Lab (SIL) for integration testing with the C4ISR network elements. The delivery augmented other UGS Modeling & Simulation (M&S) efforts to conduct the Integration & Verification (IV) phase activities. Delivered C4SIL pre-qual units: 2 T-UGS and 2 U-UGS systems. Successfully captured UGS images and sensor data during Experiment 1.1. Transmitted this information across a network displaying results for situational awarenesss.	10391		
Total	10391		

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96919	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Senesors		10929	12967	18968	16754				59618
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non-Line of Sight - Launch System	313981	253075	200099	40043	5957				813155
0604647A Non-Line of Sight - Cannon	108689	136929	89841	71396	43222	28775			478852
0604666A FCS Spin Out	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550281	766274	944999	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	41813							Continuing	Continuing
0604645 F53 UGV	104301							Continuing	Continuing
0604645 F54 UGS	10391							Continuing	Continuing

0604645 F55 SUSTAINMENT	104302							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	516207							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2150508							Continuing	Continuing

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F54

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Unattended Ground Sensors (UGS)	OTA/FAR	The Boeing Company - St. Louis, MO - See Remark 1	52257	10391	1-3Q						62648	
Subtotal:			52257	10391							62648	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**52257**	**10391**							**62648**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F55**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F55 SUSTAINMENT	104302								104302

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project contains funding for Training and Logistics Development for the Future Combat Systems (FCS) Brigade Combat Team (BCT). The logistics effort includes the development of the management, products, and services required to design, develop, assemble, integrate, and test the supportability processes and supporting automated applications within the FCS System of Systems (SoS). Validation of maneuver sustainment, Production Based Logistics (PBL), and other applicable logistics support concepts during SoS Test and SoSIL simulations. Assurance that sensor collection of data for logistics modeling verification and validation efforts, as well as operational PBL. It also funds analysis to aid in life cycle product support decision making. Commonality of hardware and software within the FCS program is a priority action needed to reduce the Lifecycle costs and logistical footprint of the FCS. Logistics Management Product Integration - Provides integration of supportability products into the SoS elements, including diagnostics and prognostics functions and conducts logistics technical reviews at the system, vehicle, and component levels.
Logistics Fielding includes development of the process for deploying vehicles to home base locations to include facilities analysis.
Networked Logistics Systems is integrated in the FCS software to achieve the logistics goals of reducing the logistics footpring, enhancing deployability, increasing operational availability, and reducing total ownership costs. These critical program goals are included in the two logistics Key Performance Parameters (KPP), KPP 4 (Transportability/Deployability) and KPP 5 (Sustainability/Reliability). Inherent to meeting these KPPs is the integration of logistics in the command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) network primarily through the Platform-Soldier Mission Readiness System (PSMRS) and the Logistics Decision Support System (LDSS). These systems provide unprecedented depth and accuracy of logistics information and decision tools to the commanders and logisticians by enabling the distribution system to deliver the right stuff to the right place at the right time, thus reducing O&S costs and improving operational availability. The supportability of the FCS (BCT) is further enabled by the reduction of demand designed into the System of Systems (SoS). Increased Reliability Availability Maintainability Test (RAM-T) goals and implementing a Performance Based Logistics (PBL) support concept through extensive up front systems engineering efforts will result in increased Operational Availability and significant decreases in both parts and maintenance personnel while generating increased combat power. The time required to execute a repair is significantly decreased through implementation of Pit-Stop Engineering designs for maintenance, easing both crew and maintainer burdens. Training includes contractor analysis to support training for the SoS. This effort includes the design and development, engineering, integration, embedded training, and testing of unique training devices, training systems engineering, training products, training support packages, and training integration. Training also provides for the management, plans, products, verification and validation, and services required to ensure design, development, fabrication, integration, and test of a FCS (BCT) training program and FCS (BCT) training system capable of meeting Operational Requirements Document (ORD) objectives. This mission assures that the training system is designed as an integral part of the overall SoS design to meet Increment 1 requirements and provides

for future increment upgrades. Identify, assess, and mitigate training risks as part of the SDD risk reduction effort and coordinate these risk reduction efforts with the SoS Engineering technical risk manager. Support the distributed network and platform development efforts required to implement embedded and stand alone training designs within (FoS) products necessary to ensure these designs meet ORD requirements. Includes training product design and interfaces as required to address U.S. Army training implementation beyond the SoS and/or FoS levels for consistency with the existing and planned U.S. Army training infrastructure. Apply a common systematic approach to identify, define, and assess training system technologies and training environments for potential application to FCS training requirements. Embedded Training assures the FCS (BCT) network facilitates the Soldier's ability to train anywhere, any time. Technology has matured to a level that supports these requirements. Embedded Training (ET) will be developed as an integral part of the FCS (BCT) manned platform and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) architectures.

The Embedded Live-Virtual-Constructive (LVC) Multi-more Training is the cornerstone of the networked Embedded Training (ET) and will satisfy the Key Performance Parameter (KPP#6) which states the FCS Family of Systems (FoS) must have an embedded individu7al and collective training capability that supports live, virtual, and constructive training environments. ET must be designed-in at the start of the program to ensure it is developed in conjunction with the other FCS (BCT) System of Systems (SoS) components. Embedding the training capabilities as an inherent part of the operational system mitigates negative training inherent with attempting to replicate operational performance, since an embedded solution stimulates and uses the operational capabilities as an organic part of the solution.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
TRAINING SYSTEMS FY07. 32 One Team Partners continue to develop Embedded Training capability, software and products, including Training (Instructional) Support Packages (TSPs), Interactive Multi-media Instruction (IMI), Training Aids and Devices, Simulations and Simulators (TADSSs) for Experiment 1.1 & Spin Out #1. Continue integration of embedded training software and products in the Training Systems Integration Lab (SIL). Deliver second increment of Training Common Components for FCS. Continue to develop Embedded Training capability and products. Continue development of Training Support Plans (1,500+ tasks). Deliver the third increment of the (SORL) and the (SITL). Develop Leader and Battle Staff tasks for the FCS equipped units (500+ tasks). Identify training requirements and develop training support products in preparation for Integrated Mission Test 1 (IMT-1). Test Training products and support for Experiment 1.1 in Training SIL and during experiment. Provide training inputs and support to FCS Systems PDRs & CDRs (14+1+1 systems). Continue Key Performance Parameter (KPP) #6 (Training) trace, development, and execution. Continue integration of Training software with Warfighter Machine Interface (WMI). Update and Deliver: Training Management Plan, Training Data Products Report, Training Support Packages, Training Facilities Survey Report.	14791		
SUSTAINMENT FY07 - Update the Material Fielding Plan, the PBL implementation plan, the Supportability Strategy, and the M&S models. Conduct Test Readiness Reviews for PS-MRS and LDSS Build 1 software. Deliver the first phase of logistics products (Logistics Planning software) that were developed during the FCS Program's engineering iteration 1, to the C4ISR System Integration Lab (SIL) in February. Log Data Management Service (LDMS) contract, awarded Dec 2006. LDMS will be integrated with the Army_s Logistics Enterprise and supports a network-enabled, performance-based logistics solution that will reduce the logistics footprint, increase operational availability and significantly lower life-cycle costs for FCS (BCT).Continue PDR quality maturation of platform Sustainment and Transportation specifications. PIDS to CSCI Interfaces Documented. Interoperability (I/O) Kits PIDS developed and SFR completed. Complete LRR IMT1 detailed test procedures. Logistics Decision Support System EI1 Development continued. IETM Specification and Requirements Development continued. SO 1 Supportability Strategy Final Draft Released. SO1 PBL Implementation Plan approved. FCS Materiel Fielding Plan updated for EI1 RAP. Platform Soldier-Mission Readiness System EI1 Development continued. Conduct ILS and KPP Assessments for platform PDRs and CDRs. Continue logistics analysis of Complementary Programs supporting the FCS (BCT).	88158		

GFX FY07 - PEO STRI SME SUPPORT - This includes the US Government Subject Matter Experts who oversee the integration of over 14.6 million lines of GFX training software code and the associated requirement into the total SoS training planned software code.	1353		
Total	104302		

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Other Program Funding for this project is the same as for projects F52, F53 and F54.									

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with

the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F55

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Training Specifications &Training Products	OTA	The Boeing Company - St. Louis, MO - see remarks 1-3	170145	74014	1-3Q						244159	
Logistics Systems Management	OTA	The Boeing Company - St. Louis, MO - see remarks 4-6	120895	28935	1-3Q						149830	
Subtotal:			291040	102949							393989	

Remarks: Remark 1: Subcontractor: Computer Science Corp. Federal Sector Defense Group, Fslls Church,VA
Remark 2: Subcontractor: Dynamics Research Corp. Systems Division, Andover, MD
Remark 3: Subcontractor: Northrop Grumman, Info Tech, Def Enterprise Solutions Div, Mclean,VA
Remark 4: Subcontractor: Northrop Grumman-Mission Systems, Carson CA
Remark 5: Subcontractor: Honeywell-Defense & Electronic Systems, Albuquerque, NM
Remark 6: Subcontractor: IBM. Bethesda, MD

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
GFX - PEO STRI SME Training Support	Direct	PM FCS (BCT), St. Louis, MO	1301	1353	1Q							
Subtotal:			1301	1353								

Remarks: All support costs for this project are included in F61 SoS Engineering and Program Management project.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F55

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			**292341**	**104302**							**393989**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F57**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F57 MANNED GROUND VEHICLES	516217								516217

A. Mission Description and Budget Item Justification: The Army's Future Combat Systems, Brigade Combat Team (FCS BCT) is a joint system of systems (SoS) consisting of an advanced network integrated within of a series of manned/unmanned systems that via electronic architecture enables unprecedented joint connectivity, situational awareness/understanding, and synchronized operations. It will enhance the Army's most formidable weapon - the Warfighter. FCS provides unprecedented capability to see first, understand first and decisively defeat the enemy on the 21st Century battlefield. This FCS BCT SoS Force will be adaptable - from traditional to irregular warfare - conducted in various complex environments (rural/urban). FCS is the Army's Modernization Strategy and as such, is the #1 acquisition program for the Army.

This project supports development for a variety of Manned Ground Vehicles (MGVs)(exclusive of Non-Line of Sight - Cannon (NLOS-C) specific mission equipment) and includes technology maturation, systems engineering, subsystem/variant unique mission equipment (i.e. armament/fire control), integration/assembly, and prototype build. Also includes following common MGV subsystem development (to include NLOS-C subsystems): armor, suspension, structures, defensive armament system, signature management, NBC, vetronics, power and energy (includes hybrid electric drive), auxiliary systems and hit avoidance system. Project specified MGVs include: Infantry Carrier Vehicle (ICV), Mounted Combat System (MCS), Non-Line of Sight Mortar (NLOS-M), Command and Control Vehicle (C2V), Recon and Surveillance Vehicle (RSV), FCS Recovery and Maintenance Vehicle (FMRV), and Medical Vehicle (MV).

The ICV provides mobility for 11 personnel (two man crew and nine-man infantry squad) on the battlefield. Located within the infantry platoons and companies within the CA battalions. Delivers the dismounted force to the close battle and supports the squad by providing self defense and supporting fires. The ICV carries the majority of equipment freeing the individual Soldier from being burdened with equipment.

The MV provides advanced trauma life support within 1 hour to critically injured Soldiers. The MV serves as the primary medical system within the BCT and will have two mission modules (Evacuation and Treatment). The time-sensitive nature of treating critically injured soldiers requires an immediately responsive force health protection system with an expedient field evacuation system. The MV-Evacuation (MV-E) vehicle allows trauma specialists, maneuvering with combat forces, to be closer to the casualty's point-of-injury and is used for casualty evacuation. The MV-Treatment (MV-T) vehicle provide Advanced Trauma Management (ATM)/Advanced Trauma Life Support (ATLS) treatments and procedures forward for more rapid casualty interventions and clearance of the battlespace. Both MVs will be using installed networked telemedicine interfaces.

The FRMV is the recovery and maintenance system for employment in the FCS BCT. The Brigade Support Battalion (BSB) maintainers will be organized into Combat Repair Teams (CRT) supported by 10 FRMVs. These CRTs will perform in-depth BDAR and unscheduled field-level maintenance requirements beyond the capabilities of the crew to include lift, welding, cutting, and heating of materials.

The NLOS-M is the short-to-mid-range indirect fire support component within the FCS BCT. It will be organic to and provide networked, responsive and sustained indirect fire support to the Combined Arms Maneuver Battalion in the FCS BCT. It fires a suite of 120mm munitions that include special purpose capabilities to provide a variety of fires on demand including precision guided munitions such as precision guided mortar munitions (PGMM). NLOS-M will provide close support and destructive fires for tactical standoff engagement during both offensive and defensive operations in concert with line-of-sight, beyond-line-of-sight, other NLOS, external and joint capabilities in combat scenarios

spanning the spectrum of ground combat and threats.

The RSV features a suite of advanced sensors to detect, locate, track, classify and automatically identify targets from increased standoff ranges under all climatic conditions, day or night. Included in this suite are a mast-mounted, long-range electro-optic infrared sensor, an emitter mapping sensor for radio frequency intercept and direction finding, remote chemical detection, and a multifunction RF sensor. The RSV carries 6 Soldiers (2 common crew and 4 scouts).

The C2V provides the tools for commanders and staffs to command and control various elements of the FCS BCT. Via mission workstations and a common warfighter-machine interface, C2Vs contain the interfaces that allow commanders and their staffs to perform tasks such as fusing friendly, enemy, civilian, weather and terrain situations and distributing this information via a common operating picture. The C2V carries 6 Soldiers (2 common crew and 4 mission crew).

The MCS provides offensive maneuver to close with and destroy enemy forces. The MCS is capable of conducting mounted operations, mounted operations supported by dismounted infantry, and supporting dismounted infantry operations in all environments. The MCS delivers precision fires at a rapid rate to destroy multiple targets at standoff ranges quickly and complements the fires of other systems in the FCS BCT. It is highly mobile and maneuvers out of contact to positions of advantage. It is capable of providing direct support to the dismounted infantry in an assault, defeating bunkers, and breeching walls during the tactical assault. The MCS can engage targets from Beyond Line of Sight (BLOS). The BLOS capability allows the FBCT the ability to stand-off from the enemy's lethality envelope, allowing the MCS to be more lethal, at greater ranges.

The MGV Common Subsystems project includes developmental and engineering effort for the detailed design and integration of common components and sub-systems into a common chassis configuration applicable to the entire fleet of MGV combat vehicles. Major subsytems included in the Common Chassis design include a Hit Avoidance System (HAS), Propulsion (Hybrid Electric Drive with a High Power Density Diesel Engine), active dampening suspension with band track, Common Crew Station (CCS), Close Combat Armament System (CCAS), hull structure and armor, chassis auxiliary, Vehicle Electronics and Power Distribution (Vetronics). The focus of this effort is on a producible, reliable, sustainable, maintainable, and affordable common chassis design.

GOVERNMENT MGV GFX
Government GFX XM307 Prototypes- A light weight portable Advanced Crew Served Weapon utilizing 25mm air burst ammunition. XM307 has a full solution fire control system that includes a laser range finder and a day/night sight. It is highly portable within small soldier units and provides overwhelming lethality compared to existing systems. General Dynamics Ordnance and Tactical Systems is developing ammo. Kaman Dayron is developing the fuze and Raytheon is developing the full solution fire control.
FY06 - Develop requirements/specifications and ICDs for the XM307 weapon to be used on UGV or MGV variants. As a result of the Army decision in support of the FY08-13 POM, XM307 is no longer funded in the FCS Program.
Government GFX mobility Shaker Table rent to test the Mounted Combat System Mobility Firing fixture on the TARDEC Shaker Table.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
CONTRACTOR INFANTRY COMBAT VEHICLE (ICV)- FY07 - A competitive subcontract was awarded to Moog for a common Multimedia Slip Ring (MMSR) that will be used on RSV, ICV, and MCS. MK44 Linkless Ammo Feed System competitive subcontract was awarded to Meggitt Defense Systems Inc. ensuring system design is developed for PDR for both ICV and RSV. Performed specialty engineering analysis (reliability, maintainability, logistics, Human Factors Engineering (HFE), and system survivability). Initiated weekly MK44 Turret engineering design coordination meetings between ICV and RSV IPTs, ensuring that BAE designs with the maximum	10503		

commonality between the ICV and RSV turrets, and ensuring accessibility for maintenance in design. Completed Requirement Baseline Review 2 (RBR2) which initiated ICV Software Build development activities.			
CONTRACTOR MOUNTED COMBAT SYSTEM (MCS) FY07 - Performed partial preliminary design and test of ammunition sympathetic detonation mitigation system. Completed preliminary design ammunition data link for Beyond Line Of Site (BLOS) ammunition. Completed preliminary design and test of 120mm light weight gun system (XM360) with 37 rounds fired in FY07. Performed preliminary design of 120mm Ammunition Handling System (AHS). Performed preliminary design of armament system and mission module (turret structure and hardware/software integration). Fabricated three cannons for testing. Completed contracts for major sub-systems for primary weapon assembly and ammuniton handling unit. Completed long lead procurement for initial assembly of the firing fixture. Began long lead procurements for the firing test rig. Delivered the lightweight 120mm Primary Weapon Assembly (XM360). Began fabrication of MCS firing fixture: Turret integration of XM360 and ammunition handling unit. Reduced Technology Risks with continued development of: Ammunition data link for use with BLOS munitions. Dynamic muzzle reference sensor. Advanced Fire Inhibit System (AFIS). High Voltage Electric Gun Turret Drive (EGTD). Continued Development of IV2 subsystem integration capability. Developed initial fire control software for the firing fixture testing.	63621		
CONTRACTOR NLOS-M - FY07 - NLOS Mortar firing platform delivered to Camp Ripley, MN. NLOS-M firing platform fired first shot down range in March 2007 with a total of 609 shots fired. Performed multi-variable testing for in-bore round retention subsystem component maturation. Procured and fabricated hardware for propellant storage and handling component maturation. Continued component maturation and integration on round retention, ammunition handling, and multi-media slip ring. Reliability investment program continued. Preliminary design efforts continued for PDR in 1st qtr FY09.	18206		
CONTRACTOR COMMAND & CONTROL VEHICLE (C2V) FY07 - Conducted communications lab integration testing in preparation for field testing. Initiated C2V installed performance component maturation testing at Electronic Proving Ground (EPG), Ft. Huachuca, AZ. Continued user jury evaluation process for mission work stations. Matured preliminary design for C2V mission work station and integrated platform. Conducted display hardware R&D to address physical packaging and environmental challenges. Continued to update subsystem critical item development specifications and interface control documents.	15788		
CONTRACTOR RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV) - FY07 - Performed Peliminary design activities for RSV mission work station and integrated platform in preparation for the RSV PDR in the 2nd qtr of FY09. Bought hardware material to build RSV test rig, aluminum to build structure and material to build the wood mock up (for prototying and evaluation in Muskegon MI), including seats and material for displays and controls. Began RSV SIL build-up. Continued performance and roof-top sensor deconfliction studies. Updated subsystem critical item specifications (CID) and interface control documents (ICD). Continued human factors engineering analysis and testing. Conducted weekly MK44 Turret engineering design coordination meetings between RSV and ICV IPTs and ensured that BAE designs with the maximum commonality between the RSV and ICV turrets, and ensured all RSV requirements for turret integration into the RSV platform were met.	16785		
CONTRACTOR FIELD RECOVERY & MAINTENANCE VEHICLE (FRMV) - FY07 - Published MGV integrated towing design team analysis and incorporated results into MGV design. Provided FRMV required functions of the centralized controller (CC) for CC CIDS. Developed the size, weight, and operating parameters for the crane system. Analyzed alternate materials for crane subsystems and alternate synthetic ropes for the hoist winch cable application. Developed an integrated systems model used to mature the FRMV design approach to tow all manned ground vehicles in operational environments. Initiated recovery winch procurement process by developing and releasing a Request for Proposal (RFP). Initiated procurement process for crane actuator and crane hoist winch be developing draft RFPs. Completed Requirement Baseline Review 2 (RBR2) which initiated FRMV Software Build development activities.	14532		

CONTRACTOR MEDICAL VEHICLE (MV-E/T) - FY07 - Initiated development of the MV-T Treatment Table & facilitating pit stop engineering improvements and MANPRINT analysis. Initiated preliminary design and integration activities. Initiated down-select plan and assessment of competing MV-T Shelter candidates ensuring that the User gets the best shelter that meets the requirements. Conducted MV-E Litter Lift System Pit-Stop Engineering and MANPRINT analysis resulting in improvements made in the brassboard ensuring the best lightweight and most reliable design. Completed Requirement Baseline Review 2 (RBR2) which initiated MV Software Build development activities.	7343		
CONTRACTOR MGV COMMON COMPONENTS FY07 - Completed MGV In Process Review (IPR). Developed the Preliminary Design Configuration (PDC) concept and supporting analysis, ensuring the concept was sufficiently mature to enter preliminary design phase. Completed APS Full-Spectrum SFR (for short and long range against RTN's base contract), SR-APS SRR , SR-APS SFR, CF-HAS SRR and CF-HAS SFR. Continued full spectrum hit avoidance suite development/integration. Began SRCM Design Verification Test phase 1. Completed 100% power output on advanced diesel engine. Performed Transportability analysis to ensure multiple vehicles (MGVs) could be transported on a C-17.Conducted MGV weight reduction initiatives, ensuring weight allocations were achieved. MGV Common Software Build 1 entered Formal Qualification Testing in 3rd qtr. Implemented MGV modeling standards. Updated variant S/W architecture products. Performed specialty engineering analysis (reliability, maintainability, logistics, human factors engineering, system survivability, etc.). Size, weight, power, cooling, reliability, and cost allocation estimates updated. Matured Interface Control Documents (ICDs). Continued development of system/subsystem design documents. Continued solid-based model design-3D. Continued models/drawing/equipment layout diagrams efforts. Specified, designed, procured and began testing of Early Prototype Configuration (EPC) and Production Prototype Configuration (PPC) threshold common subsystems. Finalized System integration labs development plans and initiated testing. Completed common system and subsystem EPC/PPC best technical approach (BTA) with appropriate trade studies.	355478		
Government GFX FY07 - Down-selected an electronic air bursting fuse approach between the assessed options of mechanical and electrical. The XM307 effort was terminated in Jan 07 due to Army funding constraints. Government Subject Matter Experts continued to design and help integrate the Active Proctection System (APS) into the MGV series platforms.	13961		
Total	516217		

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Other Program Funding for this project is the same as for projects F52, F53 and F54.									

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:
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3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
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The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F57

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
INFANTRY CARRIER VEHICLE (ICV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 2	45626	10503	1-3Q						56129	
MOUNTED COMBAT SYSTEMS (MCS)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1	165650	63621	1-3Q						229271	
NON-LINE OF SIGHT MORTAR (NLOS-M)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 3	37782	18206	1-3Q						55988	
Contractor Common Component Vehicle Subs	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1,2,3	567970	15788	1-3Q						583758	
COMMAND & CONTROL VEHICLE (C2V)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1	58920	16785	1-3Q						75705	
RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 1	58876	14532	1-3Q						73408	
Medical Vehicle (MV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 2	9864	7343	1-3Q						17207	
FCS RECOVERY & MAINT VEH (FRMV)	OTA/FAR	THE BOEING COMPANY - ST. LOUIS, MO see remark 2	14522	355478	1-3Q						370000	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F57**

GFX XM307 Prototypes	Direct	General Dynamics Arm. & Tech. Products, Charlotte, NC	30689	13961	1-3Q						44650	
Subtotal:			989899	516217							1506116	

Remarks: Remark 1: Subcontractor: General Dynamics Land Systems - Sterling Heights, MI
Remark 2: Subcontractor: BAE - Ground Systems Division - Santa Clara, CA
Remark 3: Subcontractor: BAE - Armament Systems Division - Minneapolis,MN

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: All Test and Evaluation costs for this project are included in F61 SoS Engineering and Program Management project.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**989899**	**516217**							**1506116**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F61**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F61	S o S Engineering and Program Management	2150508								2150508

A. Mission Description and Budget Item Justification: The Army's Future Combat System (Brigade Combat Team) (FCS (BCT)) is a joint system of systems consisting of a network and a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations previously unachievable. It is designed to interact with and enhance the Army's most valuable weapon - the Soldier. When fully operational, FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. It will network existing systems, systems already under development and future systems to be developed to meet the requirements of the Army's Future Force. It is adaptable to traditional warfare as well as complex, irregular warfare in various rural and urban terrains. It can also be adapted to civil support, such as disaster relief. FCS is the #1 priority acquisition program for the Army.

This project includes System Development and Demonstration (SDD) contractor efforts associated with System of Systems (SoS) engineering, analysis and integration, Network Software and Hardware, SoS Test and evaluation and program management. In addition to these contractor efforts, this PE/project also includes all Government efforts (test,program management, analysis, contracting, Financial management and support to to other DOD agencies for joint programs and collaboration efforts with FCS.

The following summarizes what is included within the SOS Engineering and Program Management Project:

SoS Engineering - Conduct SoS reviews, top level trade studies, and architectural design of the SoS including requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness.

Program management - The development of processes, tools, meetings, Earned Value Management (EVM), risk management, software management, etc used to manage the total program (to include subcontractors/Partners) to achieve the SoS program goals within the available dollars and schedules.

NETWORK SOFTWARE - Includes development (design,code, and test) of network software required to implement the network and common software for the network or nodes on the network. Includes the SoS Common Operating Environment (SOSCOE) suite of network and security services, together with distributed network applications software for; battle command, data fusion, logistics decision support and mission readiness, as well as training applications.

COMMON NETWORK HARDWARE - Includes design, development and prototype procurement of common hardware required for implementation of the data network. This includes sensors, communications hardware and computer processing capabilities.

Because of the criticality of the Network (Hardware and Software) the Army has created a new PE (concurrent with the FY08 President's budget submission to Congress) to provide Congress more visibility for all Network hardware and software development efforts.

SoS Test and Evaluation - Includes contractor and Government test and analysis to ensure SoS and FoS performance is effectively and efficiently achieved to specific criteria. The results of the SoS test is validation/verification that the resulting specifications meet the ORD and O&O requirements

Government Support Costs - Includes funding for government personnel to include labor, travel, training, supplies, and other support costs (support contractors, Automated Data Processing (ADP), communications, supplies, and equipment). It includes support efforts for other services for Joint Programs, Multinational Project Arrangements, and collaborative efforts. Includes the procurement of Government Furnished Equipment/Items/Data (GFX) for the LSI. GFX is used when procurement through the government is less expensive than through the LSI.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
GOVERNMENT - SYSTEM ENGINEERING & PROGRAM MANAGEMENT (SEPM) FY07 - Participated and ensured the government's best interest/values were considered in the following: SoS reviews, trade studies, architectural management, requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, analysis and verification of integrated force effectiveness, software management, risk management, modeling and simulation management, performance assurance management, integration & verification management, technology management, experimentation, and FCS Spin Out development. PM provided integrated program management (i.e. planning, directing, tools and controlling functions), for all development activities, program control, procurement and contracts management, operations management, Congressional title 10 oversight, cost analysis and management, budget development and justification, earned value management, integrated master schedule development and management, complementary program management, and operations management.	195511		
GOVERNMENT - SYSTEM TEST & EVALUATION (STE) FY07 - Completed planned MGV, UAS, UGS, and UGV test events. MGV testing included component nuclear survivability tests, NLOS-C firing test rig missions at YPG, and NLOS-M firing missions. Antenna placement tests were performed supporting C2V and RSV engineering efforts. These MGV tests were performed at ATEC test centers with the exception of the NLOS-M firings. Unattended Ground Sensor testing was conducted at WSMR. UAS completed rotor hub tests and E3 tests leveraging the Navy's Fire Scout program. UGV completed Phase 1 Robotic Convoy testing with the Autonomous Navigation System. Range support for Experiment 2.1 provided by ATEC included data collection, use of range instrumentation and range safety operations. AMRDEC provided SME support for Class 1 and IV airworthiness certification. Funded connectivity between 12 SIL sites and ATEC ranges (DREN). Ammunition for future NLOS-C firing tests were also procured during FY07. Munitions include 120 M829A3 Cartridges, 120mm M830A1 cartridges, M549 rounds, and APS threat munitions. Funded development of the Common Control Nodes at WSMR and APG.TEST GFX - Funded APS Short Range Interceptor testing at RTTC. Procured 500 ea 30 mm Programmable Air Burst Munitions. Fabricated/ assembled 5 inert M831A1 and 5 M865 rounds. Fabricated 126 each inert 120mm cartridges. Conducted Fire Suppression testing of NLOS-C Increment 0. YPG NLOS-C Firing Platform Testing Threats - $404K to SAAB Barracuda of Sweden for High Fidelity Decoys for the BMP2; Camouflaged netting threat vehicles; $450K;Purchased 5 additional 3 GHz SIGINT/DF systems $1.4M; Purchased 50 field ready injection Jammer devices and 4 control signal transmitters $520K; purchased 5 GPS Jammer simulators - $1M; One Safe Simulation $300K; IMASE Upgrade Threat Blue Sensor - $500K. UGV Robotic Convoy Testing at WSMR K. ATEC provided 25 MY core SME support and surge support to the LSI for Experiment 2.1.	182814		
GOVERNMENT - MODELING & SIMULATION (M&S) FY07 - Completed delivery of 14 FCS platform simulations. Funds provided enhancement of ATEC, RDECOM, and TRADOC M&S capabilities essential to implement the FCS M&S strategy. This strategy dependent on linking FCS based M&S requirements with existing Army M&S capabilities with a focus on minimum "built from scratch"	20908		

program M&S and maximum reusable integration of Army M&S capabilities. PM FCS (BCT) worked with these 3 Commands to create persistent, leave behind capabilities for the Army in the area of SoS M&S. Developed more interoperable M&S tools and processes that will increase the overall capabilities of M&S. Improved capabilities will reduce the overall costs to the LSI and Army in integration and lifecycle applicability and will reduce cycle time from requirements to integration with FCS simulation environments, particularly in Integration Phase 1 (IP1) and beyond. Application developed reference implementations that move M&S from cold war capabilities to those of Netware-centric M&S. The Cross Command Collaborative Effort (3CE) will provide a larger library of tools available for consideration, incorporation, and breakdown of the funding based on integrated 3CE planning, M&S technical program management, and integration with FCS. M&S persistent network nodes that link all 3CE commands together and to the SoSIL network. M&S requirements, architecture, and gap analysis for 3CE and integration with the same from FCS LSI. M&S capability identification and development of emerging technologies. FCS IV&V support will continue throughout the program. IV&V Strategy and Master Plan. Multi Cell & Dismounted Command and Control (M&DC2). M&DC2 is being recommended by TRADOC for use by the Army and for a replacement for the MC2 Device at UAMBL (their current BC surrogate). M&DC2 needs to convert from OTB to OOS as its principal battle environment.			
GOVERNMENT GFX - TRAINING Government GFX FY07 - Provided Government Subject Matter Experts (SMEs) to oversee development and integration of training software. Build 1 Drop 2 of Training Common Components was delivered to the LSI in May 07 and first installed at the FCS Battle Command (BC) Software Integration & Test (SWIT) facility, Mesa, AZ in Sep 07. This was the first integration of the TCCs and FCS BC software.	234701		
CONTRACTOR SEPM - CONTRACTOR PROGRAM MANAGEMENT FY07 - Developed processes, models, tools, and management structure to integrate all subcontractor partners into one team to meet cost, schedules, and technical performance requirements in the contract. This included program overview, demonstration, Earned Value Management, briefings, demos, reports, meetings to support Program, risk management, subcontract management, small and minority business integration, data management, operation management, contract management, Contractor Data Requirements List (CDRL) management, procurement, acquisition management, System Development and Demonstration (SDD), Affordability/Cost As Independent Variable (CAIV)/Life Cycle Management, development of program baseline, and integrated master schedule development. Accomplishments for FY07 SEPM plans included an upgrade to the Single Integrated Model V4.0, SoSADD release, SoS Operational Views update, ARCH Single Integrated Model V3.y, and Architectural Development Plan (ADP) update. Completed events are as follows: Engineering Iteration 1 Readiness Anchor Point (EI1RAP), Engineering Iteration 2 Definition Anchor Point (EI2DAP). Experiment 1.1 soldier exercise report released April 2007. Continue to execute Experiment 2.0/Joint Expeditionary Force Exercise (JEFX) 08, Integration Brigade Combat Team Software Spin Out 1 Build 1 (BCT SW SO 1 B1) released.	278848		
CONTRACTOR SYSTEM REQUIREMENTS & INTEGRATION FY07 - Conducted architectural design, requirements decomposition and flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness. This included completing the baseline system and software architectures, completing initial Interface Control Documents (ICDs) for internal and external interfaces, completing the baseline Prime Item Development Specifications (PIDS)-(1200 requirements). The Integrated concepts and requirements refinement for operational Systems engineering included; conducting FD/FA, developed and design the Design Reference Mission Profiles to insure FCS equipment meets Army requirements, conducted Force Trade assessment, O & O Refinement, and Operational Views for Architecture. Participated in Experiment 1.1. Systems integrator developed/planned and is executing Integration and Verification (IV) 1, including architecture development and is defining interfaces for systems entering preliminary design. Continued support of Experiment 1.1. Systems integrator modified vehicle surrogates to integrate the JTRS cluster 1/Cluster 5 and WIN-T radios, FBCB2, AFATDS, DCGS-A. Developed	638874		

experiment detailed test procedures. Assembled Test Consoles for Battle Command Suite Test and Integration and integration of MGV, UGV, UAV electronic compartment Mock-ups, Initial Test of Laboratory Test equipment software, Initiating the Network system Communication test event, Developed IV1 simulation requirements documentation, Developed IV1 simulation Test procedures, Integrating and testing of Ground and Air Sensor Simulations from "One Team Partners". Integrated SoSCOE into an integrated C4ISR software suite.			
CONTRACTOR TRAINING PRODUCTS FY07 - 32 One Team Partners continued to develop Embedded Training capability, software and products, including Training (Instructional) Support Packages (TSPs), Interactive Multi-media Instruction (IMI), Training Aids and Devices, Integration. Continued integration of embedded training software and products in the Training Systems Integration Lab (SIL). Test Training products and support for Experiment 1.1 in Training SIL and during experiment. Provided training inputs and support to FCS Systems PDRs.	542831		
Contractor FY07 Test -Completed 3 Phases of Exp 1.1 - Phase I Lab experiments completed. - Phase II Field test of the Five Major Network and Program Risks (QOS of the GMR Radios, Network Communications, Distributed (cross platforms/sensors) Fusion Management, Interoperability (FCS - ABCS and FCS - USMC), Information Assurance (PKI/CDG/IDS); - Phase III Soldier operations (Soldier Orientation and Training, Soldier Prep/Rehearsals, Live Runs). The Following vehicles/systems were exercised; HMMWV (as surrogate platforms for MGV vehicles; IMS Demonstrated the ability to join network and provide COP updates; NLOS-LS Demonstrated simulated Missile flyout and COP interactions; T-UGS Tracked soft targets, simulated acoustic targets, and multiple live threat vehicles; U-UGS Tracked soft targets in buildings at soldier command; UAV was flown on multiple missions and insured video designation of live threats; SUGV joined the federation and was able to send video to the COP; Apache demonstrated the ability to join the federation and exchange digital data with ground control; All systems interfaced with the BC, L1F, GMR, SOSCOE, DAGR, SINGARS, EPLRS, FBCB2.; Interfaced with WSMR and associated LSI and ATEC Labs; SO 1 Activities: - Planned early integration test events of Spin Out 1 capabilities in current force vehicles. Spin Out 1 Planning, Preparation and Infrastructure Setup. Developed Army Battle Command System test architecture for Spin Out 1 SoS Technical Field Test. Developed hardware and test personnel resource matrix. Completed Mid-year (MPC) and final planning conferences (FPC). Reconfigured Mobile Node from Exp 1.1 to SO 1 Configuration. Delivered Experiment 1.1 final report. IMT1 Activities: - Developed Operational Threads to exercise Net Centric test methodology. IMT1 AODD Capability - Assessment Objectives. Initiated Ft Bliss into the IMT1 test effort. Documented Procedures for IMT 1.	56021		
Total	2150508		

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Other Program Funding for this project is the same as for projects F52, F53 and F54.									

Comment:

C. Acquisition Strategy Fiscally constrained Budgets, coupled with the fiscal challenge to meet the Army_s reset and modernization requirements, have caused the Army to implement FCS program adjustments. These adjustments maintain the Army_s focus on FCS-equipped Brigade Combat Team development and minimize the efforts on

operational requirements. The adjustments to the FCS Program acquisition strategy fall into the following categories:

1. Defer the following platforms from the FCS(BCT): ARV-A, ARV-RSTA, UAV Class II, UAV Class III
2. Refine the schedules for the development of the Core and Spin Out capabilities so that the Army can benefit from the savings realized with concurrent testing.
3. Increase the rate of fielding of FCS technologies to the current force.
4. Fully fund the Spin Out technology Insertion program and development and fielding of the Mid-Range Munitions (MRM) and Advanced Kinetic Energy (AKE) munitions.
5. Revise platform configurations to decrease the production cost of a single Core FCS BCT from $6.2 billion to $5.9 billion (FY03 Constant dollars) by deferring/deleting selected sensors and other associate hardware (such as the XM307 machine gun).

The following is a history of the LSI SDD Contract.

	Contract Award	Definitization Date
Original Contract Award	30 May 2003	10 Dec 2003
Modified for POM 06-11 Changes	6 Aug 2004	2 Mar 2005
Conversion to FAR Base Contract	23 Sep 2005	28 Mar 2006
Modification for POM 8-13 Adjustments	Feb 2007	May 2007

The R forms are based on estimated effects of the Army adjustment. Upon completion of negotiation of the contract modification, caused by this adjustment, reprogramming actions may be required to realign the funding buckets to the contract.

Termination Liability associated with this contract is included in PE 0604645 Project F61.

IAW Section 214 of the FY2006 National Defense Authorization Act, this project was converted to a stand alone Program Element (0604662A Project FC3) commencing with the FY2008 President's Budget submission to Congress.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F61

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CONTRACTOR- PROG MGT	OTA/FAR	The Boeing Company - ST. LOUIS, MO see remark 8	624841	265793	1-3Q						890634	
CONTRACT FEE	OTA/FAR	The Boeing Company - ST. LOUIS, MO	600279		1-3Q						600279	
CONTRACTOR NETWORK SOFTWARE	OTA/FAR	The Boeing Company - ST. LOUIS, MO see remarks 1,4,5,6,7,11,12,13,14	730620	399545	1-3Q						1130165	
CONTRACTOR NETWORK HARDWARE	OTA/FAR	The Boeing Company - ST. LOUIS, MO see remarks 2,3,9,10	274022	438250	1-3Q						712272	
CONTRACTOR SYSTEM REQUIREMENTS AND INTEGRATION	OTA/FAR	The Boeing Company - ST. LOUIS, MO remark 8	927340	500993	1-3Q						1428333	
Subtotal:			3157102	1604581							4761683	

Remarks: 1: Subcontractor: Honeywell, Albuquerque, NM. (Platform Soldier mission readiness systems - Software)
2: Subcontractor: BAE Systems, Wayne NJ (Air Ground Communications Integration)
3: Subcontractor: General Dynamics Advanced Information Systems, Bloomington MN (Integrated Computer Systems)
4: Subcontractor: Northrop Grumman - Mission Systems, Carson, CA, (Logistics Decision support Systems - Software)
5: Subcontractor: Raytheon, Fort Wayne, IN, (Battle Command & Mission Execution - Software)
6: Subcontractor: Overwatch/Austin Info Systems, Austin, TX, (Situational Understanding - Software)
7: Subcontractor: General Dynamics C4 Systems, Scottsdale, AZ, (Sensor data arrangement & planning & preparation services - Software)
8. Subcontractor: SAIC, San Diego,CA
9. Subcontractor: Raytheon Network Centric Systems, Plano,TX (Ground Sensor Integration)
10. Subcontractor: Northrop Grumman Electronic Systems CMS - Belcamp,MD (Air Sensor Integration)
11. Subcontractor: LM Integrated Systems & Solutions - San Diego,CA (Level 1 Fusion - Software)
12. Subcontractor: Northrop Grumman Network Management Systems - Carson,CA (Network Management System- Software)
13. Subcontractor: Boeing Mesa - Mesa,AZ (Warfighter Machine Interface - Software)
14. Subcontractor: International Business Machines - Bethesda,MD (Logistics Management System- Software)

II. Support Costs	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604645A - Armored Systems Modernization (ASM) - Eng Dev

PROJECT
F61

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
GOVERNMENT SYS ENG PROGRAM MGT	DIRECT	PM FCS (BCT) - ST. Louis, MO	221289	122959	1-4Q						344248	
GOVERNMENT OTHER	DIRECT	PM FCS (BCT) - ST. Louis, MO	114492	148526	1-3Q						263018	
SPIN OUT	DIRECT	PM FCS(BCT) - ST. Louis, MO	7400	27900	1-3Q						35300	
Subtotal:			343181	299385							642566	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CONTRACTOR - SoS Test	OTA/FAR	The Boeing Company - ST. LOUIS, MO.	59924	36597	1-3Q						96521	
GOVERNMENT - STE	DIRECT	PM FCS-BCT - ST. Louis, MO , see remarks 1-6	345691	196796	1-3Q						542487	
GOVERNMENT MODELING & SIMULATION	DIRECT	PM FCS-BCT - ST. Louis, MO	32355	13149	1-3Q						45504	
Subtotal:			437970	246542							684512	

Remarks: Remark 1:Subcontractor, Whitman, Requardt & Assoc, Baltimore, MD;
2: John C. Grimberg Co., Rockville, MD
3: ADT Corp, Baltimore, MD
4. Netversant Co., Baltimore, MD
5. 3D Research, Huntsville, AL
6. Jacobs/Sverdrup, Aberdeen, MD

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604645A - Armored Systems Modernization (ASM) - Eng Dev**	**F61**

Remarks: .

Project Total Cost:	**3938253**	**2150508**							**6088761**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non-Line of Sight Launch System**	**F72**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F72	NON LINE OF SIGHT LAUNCH SYSTEM	313981	253075	200099	40043	5957				813155

A. Mission Description and Budget Item Justification: This project funds the System Development and Demonstration (SDD) for the Non-Line of Sight Launch System (NLOS-LS), which is a core system of the FCS. NLOS-LS provides enabling lethality for the FCS BCT. NLOS-LS consists of the Precision Attack Missile (PAM) and a highly deployable, platform-independent Container Launch Unit (CLU) with self-contained technical fire control, electronics, communications and software for remote, unmanned operations.

This project focuses on the development of a materiel solution to meet the NLOS-LS operational need as delineated in the FCS Operational Requirements Document (ORD). The PAM will be vertically launched directly from the CLU based on fire missions received via the FCS network and will be capable of being updated in-flight via on-board radios by the network. The vertical launch capability permits a system that is highly deployable as well as the ability to engage a wide spectrum of targets in diverse environments and terrain. The PAM will have Automatic Target Acquisition (ATA) capability which can be upgraded in future versions.

In January 2006, the NLOS-LS Project Office entered into a Memorandum of Agreement with the Navy to pursue NLOS-LS as the Navy's material solution for small boat threat on its Littoral Combat Ships.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
PAM Accomplishments FY 07 - Critical Design Review; Detailed Design; Software Engineering;PAM sub-system intermediate CDR; CFT 11; and air drop test. --FY 07 ACTIVITY-- PAM detailed system design; software engineering; radio integration; Integration and Verification (IV1) simulations; prototype manufacturing; component detailed design; component procurement; and qualification testing (engines, warheads, Electric Safe Arm Device (ESAD), etc.); CFT and wind tunnel tests. PAM IFS; support Live Fire activities with lethality analyses; and PAM Component Testing and Qualification; pilot line setup.	136300		
CLU Completed FY 07 - Critical Design Review; Detailed Design; Radio integration; perform health hazard analysis; Complete CLU pilot line set up; Interim Airdrop Certification; prototype manufacturing; and CLU support to FCS exp 1.1.--FY 07 ACTIVITY-- Planned are CLU detailed system design; software engineering; radio integration; current force interoperability; IV1 emulator; Procure components/build hardware and deliver AETF CLUs; health hazard assessment; CLU component level qualification testing; and subsystem hardware builds; pilot line setup; safety testing; establish PBL; support for the AETF hardware.	104590		
System Accomplishments FY 07 - Developed interface for Current Force integration; Supported/participated in simulation exercises; Hardware in the Loop development; Verification/validation of training support packages; System Engineering and Program Management support; participated in Experiment 1.1 Phase 3; updated Verification & Validation Plan to include countermeasures; FMTV modifications for AETF. --FY 07 ACTIVITY-- Finalize Simulation Support Plan; Planned System of System Common Operating Environment (SOSCOE) integration; develop interfaces for current force integration; support IV1 simulation exercises; common component detailed design; system level engineering and test and evaluation; CLU/Advanced Field Artillery Tactical Data System (AFATDS)/SOSCOE interoperability testing; safety/hazard assessment testing; integration of hardware/software (HW/SW) into HWIL facility; HWIL;	73091		

verification/validation of training support package (Operator, Instructor & Key Personnel, AFATDS Operator, Staff, and FMTV training); Sys Eng, Prog Mgmt, Test Support, and documentation preparation. Start Type Classification, Basis of Issue Plan (BOIP), QQPRI process and develop and secure approval for Verification, Validation & Accreditation activities; investigating use of Congressionally funded "Enforce-It" anti-tamper software and procuring and integrating AETF control cells.			
FY08 Planned Accomplishments - DESIGN and ENGINEERING: Continue common component detail design; system detailed design; system and program management support engineering; and radio integration. Perform modeling and threat analyses. Complete PAM pilot line setup. Conduct Performance Based Logistics (PBL) evaluations; NLOS-LS Certification & Accreditation on PAM build 3 for Authority to Operate (ATO). Begin component procurement. Support/maintain Container Launch Unit (CLU) prototypes fielded to AETF; continue CLU detailed system design; radio integration; and current force interoperability based on feedback from AETF. Successfully conducted and completed AETF NLOS-LS NET training at Ft. Bliss, TX. Secure approval for Verification, Validation & Accreditation activities. Support/maintain system NLOS-LS hardware fielded with the AETF and support logistic validation effort. Complete system Production Readiness Assessment (PRA). Continue developing NLOS-LS Instrumentation Data Acquisition System (NIDAS).		148153	
FY09 Planned Accomplishments - DESIGN and ENGINEERING: Continue system detailed design and radio integration. NLOS-LS Certification & Accreditation PAM Build 4 for ATO. Participate in Spin Out 1 Milestone Review. System engineering analysis of test results. Finalize Training Support Packages/Level III IETM; continue to evaluate UID/IUID marking. Continue developing NIDAS.			134180
FY08 Planned Accomplishments - PROTOTYPE: Completed delivery of 4 AETF CLUs. Build and deliver 3 remaining AETF CLUs and additional 11 CLU prototypes for developmental testing (e.g. transportation, environmental, hazard assessment, electromagnetic environment effects, electronic warfare, nuclear effects, etc). Build and deliver 55 PAM prototypes for developmental testing (e.g. Flight testing, qualification testing, hazardous assessment and insensitive munition testing).		45648	
FY09 Planned Accomplishments - PROTOTYPE: Build and deliver 7 CLU prototypes for developmental testing (e.g. transportation, environmental, hazard assessment, electromagnetic environment effects, electronic warfare, nuclear effects, flight, etc). Build and deliver 23 PAM prototypes for developmental testing (e.g. Flight testing, qualification testing, hazardous assessment and insensitive munition testing).			17822
FY08 Planned Accomplishments-TEST: Continue developmental test program; qualification testing (engines, warheads, ESAD, etc.). Support Live Fire Activities with lethality analyses. Continue supporting IV1 simulations. Validate Integrated Flight Simulation (IFS) Design. Continue developmental testing; conduct Limited User Testing and technical field test; conduct CLU First Article Testing (FAT); update NLOS-LS Certification and Accreditation CLU iteration for ATO; continue health hazard assessment and CLU component level qualifications testing. Successfully conducted and completed AETF LOG DEMO. Complete subsystem qualification; continue hardware testing; pursue NLOS-LS Certification and Accreditation of SOSCOE Real Time Edition (RTE) 1.8 for ATO; participate in FCS IMT1 and support JEFX08 (Experiment 2.1); continue CLU/AFATDS/SOSCOE interoperability testing; integrate hardware/software into HWIL facility.		17018	
FY09 Planned Accomplishments-TEST: Continue validation of the IFS in support of Army Technical Evaluation Command (ATEC) accreditation package for the Guided Test Vehicle (GTV). Continue support for developmental test. IFS and HWIL pre-test predictions and post-test analysis to support GTV flight test. Conduct 10 PAM GTV flight tests (3 of the 10 will be in Ft. Greely, AK). Flight Limited User Test (LUT) (6 total PAM GTVs), CFT (WSMR), Electronic Warfare (EW) Test; and Nuclear Test; and Electromagnetic Environmental Effects (E3) Tests. Conduct PAM FAT. Complete AETF evaluations; prepare for Operational Test (OT); update NLOS-LS Certification and Accreditation of CLU iteration 12 software for ATO. Prepare for Flight LUT and continue support for Live Fire Test			21750

and Evaluation with tests, models, and simulations; model and simulation (IFS and HWIL) support for LUT (pre-test and post-test analysis) and associated evaluations; Electronic Warfare Susceptibility tests; Nuclear Effects testing; complete system qualification; ground LUT; post LUT updates to HW/SW based on tests and prepare for initial Operational Test and Evaluation (IOT&E).			
FY08 Planned Accomplishments - SOFTWARE: Continue supporting IV1 simulations. Continue software design testing. Continue CLU/AFATDS/SOSCOE interoperability testing. Continue to investigate use of congressionally funded Enforce-It anti-tamper software.		16658	
FY09 Planned Accomplishments - SOFTWARE: NLOS-LS Certification and Accreditation SOSCOE RTE 2.0 for ATO and continue software design testing.			14017
FY08 Planned Accomplishments - PROGRAM MANAGEMENT: Continued management of NLOS-LS acquisition program to include: program management, contract management, system and subsystem level engineering analysis, budget planning and execution, cost analysis, milestone documentation preparation, test program management, PAM and CLU products management, production planning, system software management, AETF support, logistics planning, engineering and logistics subject management expert support, and management of NLOS-LS efforts performed by other government agencies.		18517	
FY09 Planned Accomplishments - PROGRAM MANAGEMENT: Continued management of NLOS-LS acquisition program to include: program management, contract management, system and subsystem level engineering analysis, budget planning and execution, cost analysis, milestone documentation preparation, test program management, PAM and CLU products management, production planning, system software management, AETF support, logistics planning, engineering and logistics subject management expert support, and management of NLOS-LS efforts performed by other government agencies			12330
Small Business Innovative Research/Small Business Technology Transfer Programs		7081	
Total	313981	253075	200099

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non-Line of Sight Launch System**	**F72**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	320650	253410	199064
Current BES/President's Budget (FY 2009)	313981	253075	200099
Total Adjustments	-6669	-335	1035
Congressional program reductions			
Congressional rescissions		-1619	
Congressional increases		1284	
Reprogrammings	2355		
SBIR/STTR Transfer	-9024		
Adjustments to Budget Years			1035

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0603581N NAVY	14012	9959	24400	15200	56300	29100	25400	Continuing	Continuing
PE 0603313 A263 MSL & ROCKET ADV TECH	14277	11900	5900					Continuing	Continuing
0604650 FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE		592254	774257	785575	358641	214207	103230		2828164
0604651 FCS SYSTEM OF SYSTEMS ENGR & PROGRAM MGMT		1497321	1413945	1874987	1916207	1290308	1027816		9020584
0604662 FCS RECONNAISANCE (UAV) PLATFORMS		43388	34379	14296	9235	4556	1336		107190
0604653 FCS UNMANNED GROUND VEHICLES		90091	96918	64744	43601	26855	3580		325789
0604654 FCS UNATTENDED GROUND SENSSORS		10929	12967	18968	16754				59618
0604665 FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526		2346482
0604647 NON LINE OF SIGHT - CANNON	108689	136929	89841	71396	43222	28775			478852
0604666A FCS Spin Out Technology/Capability Integration	27900	64385	64900	67021	51026	56287	14637		346156
0603639A FCS MRM	1259	44294	45866	71451	56296	106353	50757		376276
0604715A STRICOM/NAWCTSD SUPPORT		378	388	398	406	415	426		2411
WTCV G86100 FCS CORE PROGRAM		80932	154583	148028	677820	2175327	5744649		8981339

WTCV G86200 FCS SPIN OUT PROGRAM		19987	176667	367962	550821	766274	944999		2826710
AMMO E88103					24634	47624	61762		134020
0604645 F52 UAV RECON PLATFORM & SENSORS	41813								41813
0604645 F53 UNMANNED GROUND VEHICLES (UGV)	104301								104301
0604645 F54 UNATTENDED SENSORS	10391								10391
0604645 F55 SUSTAINMENT	104302								104302
0604645 F57 MANNED GROUND VEHICLES	516217								516217
0604645 F61 SoS Engineering and Program Management	2150508								2150508

Comment: NLOS-LS system is being developed for both Army and Navy requirements. The NLOS-LS Project Office and PMS 420 are the designated action offices for the respected services.

D. Acquisition Strategy The Army awarded the NLOS-LS SDD contract, on 19 March 2004, to Netfires Limited Liability Company (LLC), consisting of Lockheed Martin Corporation, doing business through its Missiles and Fire control and operating entity in Grand Prairie, TX; and the Raytheon Corporation, doing business through its Missile Systems Business Unit in Tuscon, AZ. The NLOS-LS SDD contract was definitized 20 August 2004. A series of Spin Out packages began in FY2008 to insert NLOS-LS capability into Current Force Modular Brigade Combat Teams (M-BCTs).

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604646A - Non-Line of Sight Launch System

PROJECT
F72

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Design	Various	See remarks		210174	1-3Q	155234	1-4Q	134180	1-4Q	17079	516667	
Prototype	Various	See remarks		46189	1-3Q	45648	1-4Q	17822	1-4Q		109659	
Software	Various	See remarks		26418	1-3Q	16658	1-4Q	14017	1-4Q	3600	60693	
Subtotal:				282781		217540		166019		20679	687019	

Remarks: Activity and Location: Prime contractors: Lockheed, Dallas, Texas; Raytheon, Tuscon, Arizona; Sub Contractors: Lockheed, Baltimore, MD; ATK, Rocket City, WV; Raytheon, Fullerton, CA; IGS, Minneapolis, MN; IEC, Anaheim, CA; KDI, Cincinatti, OH; Raytheon, Louisville, KY; Sparta, San Diego, CA; General Dynamics, Niceville, FL; BrenTronics, Commack, NY; MOOG, Salt Lake City, UT

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	MULTI		2793		2271		2492		1265	8821	
Subtotal:				2793		2271		2492		1265	8821	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	MULTI		7292		17018		21750		17740	63800	
Subtotal:				7292		17018		21750		17740	63800	

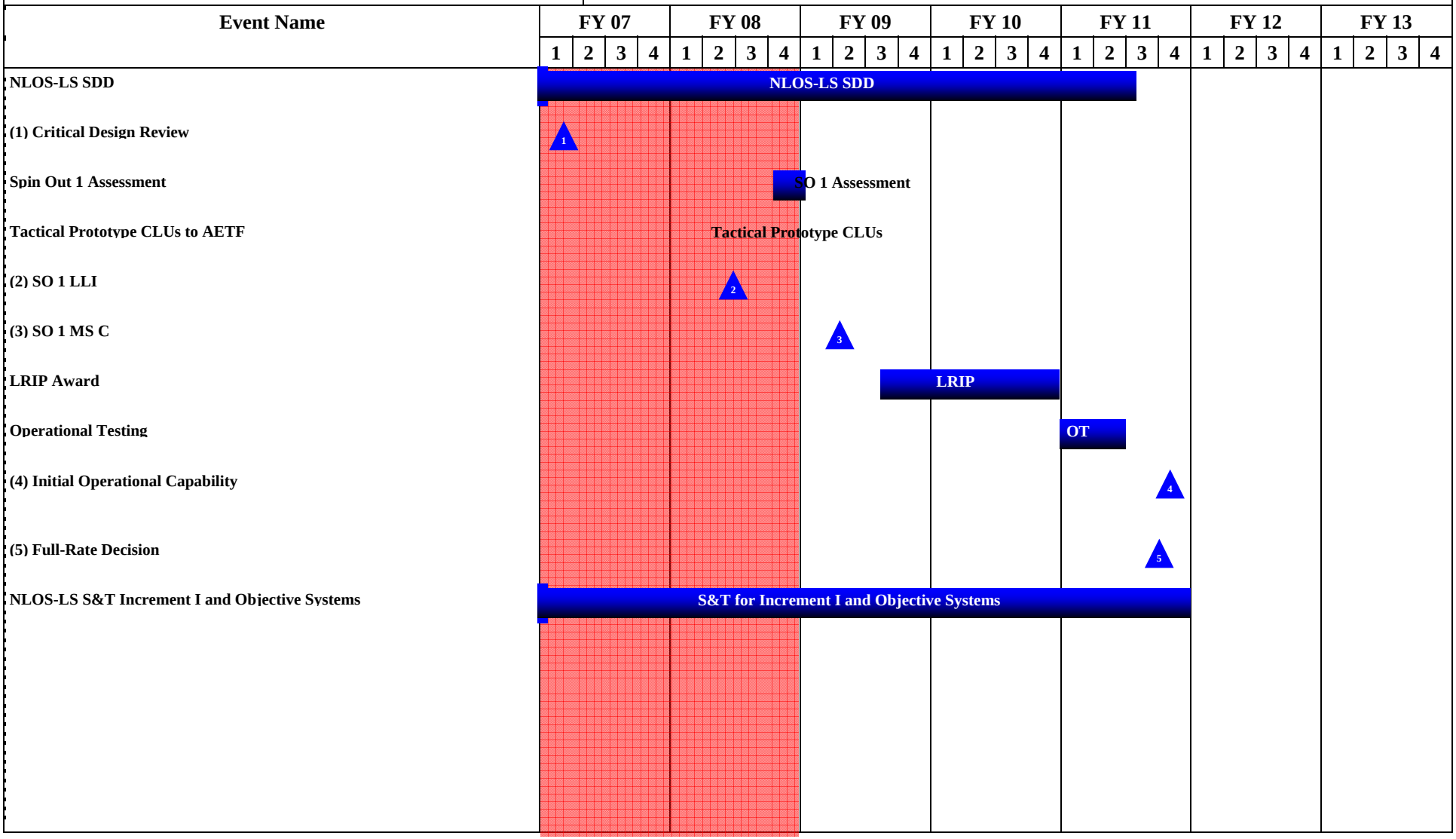
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	MULTI		21115		16246		9838		6316	53515	
Subtotal:				21115		16246		9838		6316	53515	

Project Total Cost:		**313981**		**253075**		**200099**		**46000**	**813155**		

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non-Line of Sight Launch System**	**F72**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604646A - Non-Line of Sight Launch System**	**F72**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NLOS-LS SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
Critical Design Review	1Q						
Spin Out 1 Assessment		4Q	1Q				
Tactical Prototype CLUs to AETF		2Q					
SO 1 LLI		2Q					
SO 1 MS C			2Q				
LRIP Award			3Q - 4Q	1Q - 4Q			
Operational Testing					1Q - 2Q		
Initial Operational Capability					4Q		
Full-Rate Decision					4Q		
NLOS-LS S&T Increment I and Objective Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non-Line of Sight Cannon**	**F58**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
F58	NON LINE OF SIGHT CANNON	108689	136929	89841	71396	43222	28775			478852

A. Mission Description and Budget Item Justification: This NLOS-C PE contains the development effort associated with NLOS-C unique work. The MGV common sub components for NLOS-C and MGV are included in FY07 PE0604645 Project F57, and in FY08 and out, in the new PE, 0604660 Project FC1.

The Army established NLOS-C as the lead MGV of the FCS Family of Systems (FoS). Five prototypes are being delivered in calendar year 2008 with the remaining 3 to be delivered in calendar year 2009. The initial 5 prototypes, delivered in calendar year 2008, will be the 24 ton MGV configuration as previously discussed with Congress. The 3 remaining calendar year 2009 prototypes will be updated to the 27 ton configuration allowing for more pertinent valuable test data to be obtained which, ultimately could reduce final configuration prototype testing costs.

The NLOS-C is the Army's first fully automated 155-mm howitzer, 38 caliber cannon, that provides automated, 24/7, all-weather, precision fire support to the FCS (BCT) commander. It will be organic to and provide networked, extended-range (30kms), responsive and sustained precision attack of point and area targets in support of the FCS (BCT). The NLOS-C will provide close support and destructive fires for tactical standoff engagement during both offensive and defensive operations in concert with line-of-sight, beyond line-of-sight and other NLOS, external and joint capabilities in combat scenarios spanning the spectrum of ground combat. The NLOS Cannon's fully automated ammunition handling system and real-time digital operating environment enables two soldiers to perform the tasks which require four to five soldiers on current force systems. The cannon will be able to move rapidly, stop quickly, and deliver lethal first round effects on target in record time largely due to the fully automated gun laying, ammunition handling, and fuse setting of all current and precision guided 155mm artillery rounds. The NLOS-C will have a multiple round simultaneous impact (MRSI) capability, unmatched sustained rate of fire of six-rounds per minute, and precision fires, through the XM982 Excalibur, to provide unprecedented effects on target from a smaller number of systems. The NLOS-C features transformational technologies that will be common to all FCS MGVs, including hybrid-electric drive and drive-by-wire capabilities that enable the system to move rapidly, stop quickly, and deliver lethal first round effects in record time. Integration with the FCS program allows us to provide maximum commonality between variants which impacts the maintainability and sustainability of the fleet. In fact, NLOS-C will be 70 to 80 percent in common with the MGV fleet. The cannon, like all MGV variants, can rapidly rearm and refuel, and its system weight makes it uniquely deployable. Fully automated handling, loading, and firing will be another centerpiece of the NLOS-C. The NLOS-C balances deployability and sustainability with responsiveness, lethality, survivability, agility, and versatility. The NLOS-C will be designed to minimize its logistic and maintenance footprint in the theater of operation and to employ advanced maintenance approaches to increase availability and to support sustainability.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
INTEGRATED DESIGN - FY07 - Early prototypes completed Design Review 3 to support the delivery of the first pre-production NLOS-C's to be delivered in May 2008. Based on completion of the design review, long lead procurement of the MGV common components of the NLOS-C: core vetronics, environmental control system, suspension, and propulsion cooling subsystems began. Integration of Global Positioning System (GPS)/Inertial Navigation System (INS) which enables the NLOS-C to fire accurate and precision fires was tested. FY07 prototype 1 mission equipment integration began March 07. Prototype chassis integration begins August 07. Continue development of unique configuration item development specifications. Continue development of system/subsystem design documents. Continue solid-	20497		

based model design-3D models/drawing/equipment layout diagrams. Size, weight, power, cooling, reliability, and cost allocations estimates updated. Implemented MGV modeling standards. Conducted MGV weight reduction initiatives, ensuring weight allocations were achieved while maintaining critical capabilities. Continue performing specialty engineering analysis (reliability, maintainability, logistics, human factors engineering, system survivability, etc.). Continue performing transportability analysis & ensuring three MGV vehicles can be transported on a C-17 and in emergency situations the vehicles can be flown by C-130s.			
MISSION SOFTWARE - FY07 - MGV Common Software Build 1 entered Formal Qualification Testing (FQT) in 3rd qtr FY07. This was the final test event for software at the Configuration Item (CI) level for Build 1. MGV common software Build 1 entered Package Integration Testing (PIT) in 4th qtr FY07. PIT is the final software test for the common software as a package for Build 1. The MGV Software Build Definition Checkpoint (BDC) was performed for Build 2 in 4th qtr FY07. The BDC represents the start of requirements analysis for Build 2 and defines the incremental development goal for this software build. NLOS-C Build 1 software delivered as part of the NLOS-C Firing Platform 1st qtr FY07. This version of the mission software is currently being used on the NLOS-C firing platform for safety and durability testing of the NLOS-C mission equipment at Yuma Proving Ground (YPG) through 1st qtr FY09 Updated variant Software Architectures products.	6347		
PROTOTYPE VEHICLE - FY07 - Prototype 1 mission equipment integration began in March. Prototype chassis integration began in August. Firing platform started test 1st qtr FY07, one month ahead of schedule and will continue through 1st qtr FY09. Continued development of the NLOS-C, early prototype common physical architecture, in particular, resolution of any physical issues between common platform hardware.	51092		
SYSTEM ENGINEERING & PROGRAM MANAGEMENT - FY07 - Sub-contracts continued to be awarded for the design, procurement, and integration of traction drive system, generator inverter, environmental control system, suspension, and propulsion cooling subsystems. Increment 1- NLOS-C completed its System Functional Review (SFR) in coordination with the rest of the FCS and MGV systems allocating system requirements and baselining a concept. NLOS-C early prototype Design Review 2 (DR2),completed Nov 05. Reviewed and approved preliminary design of mission equipment and four major common subsystems on the threshold path (propulsion, suspension, vetronics, and architecture environmental control system) - Received approval to begin early prototype detailed design. NLOS-C firing platform reviews 3 & 4 completed. Obtained decision to proceed with hardware procurement and fabrication for the surrogate chassis. Provided high level summary of the firing platform capabilities, and design & fabrication. Review state of mission equipment Hardware/Software development and integration. Approve FP assembly and test plans. Completed NLOS-C SFR to demonstrate convergence on and achievability of the system requirements and readiness to initiate system design. Completed baseline system and software architecture. Documented baseline software requirements. Initiated Initial Interface Control Documents (ICDs) for internal and external interfaces. Received design concept approval for NLOS-C and common systems. Started preliminary design for NLOS-C. NLOS-C Early Prototype Design Review 2 and Design Review 3 (DR3). Review and approve detailed design of mission equipment and four major common subsystems on the threshold path. Environmental control system - approval to begin early prototype material procurement and start of IAT&C. FY07 - DR3 Delta Review Completed for Incr. 0 NLOS- C.	26574		
SYSTEM TECH ENGINEERING - FY07- Continued NLOS-C Increment 1 Preliminary Design activities. Completed NLOS-C integration in PIVOT. Initiated NLOS-C firing platform demonstration of all zones and rate of fire capabilities. Completed MGV IPR. Matured Interface Control Documents (ICDs). Updated risks/associated mitigation plans. Developed the Preliminary Design Configuration (PDC) Concept and supporting analysis, ensuring that concept is sufficiently mature to enter preliminary design phase.	4179		
INTEGRATED DESIGN - FY08 - Complete NLOS-C integration in Program Integration, Validation and Test Lab (PIVOT). Complete design efforts required to deliver 27-ton chassis configuration for the last three NLOS-C pre-production vehicles in CY 2009. Continue to		19025	

design the threshold configuration for the FCS Core program to support FY09 PDR.			
INTEGRATED DESIGN -FY09 - Complete all design and integration activity required to support NLOS-C and MGV SoS PDR in 2nd quarter FY09. PDR will cover all system and subsystems required for the integration and testing of the Increment 1 (threshold configuration) NLOS-C for delivery in 2011, subsystems will include: mission equipment, vetronics, environmental control systems, propulsion, suspension, distributed sensors, and C4ISR systems.			14770
MISSION SOFTWARE - FY08 - Complete Build 1 Software Development and Integration (FQTd) in 1st qtr FY08 and will be the software running on the May 2008 delivery of the first pre-production cannon. Complete Software Build 2 Life Cycle Ojective (LCO) and Life Cycle Architecture (LCA) reviews for all vehicle/common subsystems		5751	
MISSION SOFTWARE - FY09 - Software: Build 2 initial drop for system integration, Build 3 LCO. Modeling and Simulation: Build 3 FSE available from MS&I. Software Build 2 TRR, Build 3 RBR and Build 2 ongoing, Build 3 begins. Build 2 is the current targeted software for the NLOS-Cs scheduled for delivery in 4th qtr 2010 as part of the eighteen systems required for start of fielding in 2010.			3964
PROTOTYPE VEHICLE - FY08 - Fabrication, integration, and delivery of five early prototype NLOS-C systems for limited user and developmental testing in CY 2008. Automotive Test Rig (ATR) fabrication & assembly starts. Begin Procurement of Long Lead hardware required for 27 Ton configuration. The five 24 Ton NLOS-C prototypes are scheduled for delivery in May, July, Oct., Nov., Dec. of 2008.		71208	
PROTOTYPE VEHICLE - FY09 - Fabrication, integration, and delivery of three additional 27-ton (MGV threshold) early prototype NLOS-C systems for limited user and developmental testing in FY10. Integration and delivery of ATR. The 3 - 27 ton NLOS-C prototypes are scheduled for deliveries in Oct., Nov., and Dec. of 2009.			36045
SYSTEM ENGINEERING & PROGRAM MANAGEMENT -FY08 - Continue Preliminary Design Activities leading to Preliminary Design Review of Inc 1 NLOS-C in 2QFY09. Initiate design and development of the P7 and P8 NLOS-C systems to migrate towards Inc 1 capabilities and functionality. Final design and integration of adding JTRS radios to the Inc 0 prototypes in early 2009. Continue Firing Platform testing to support an Interim Safe Service Life and Interim Safe Fatigue Life ratings for the XM324 Ultra-Light Weight Cannon and Tube in early 2009.		28493	
SYSTEM ENGINEERING & PROGRAM MANAGEMENT -FY09 - Conduct PDR of FCS Core Threshold design and CDR of MGV Initial Production platforms to achieve delivery and fielding of NLOS-C to the AETF in 2010. Begin Critical Design Activities for FCS Core threshold platforms.			28802
SYSTEM TECH ENGINEERING - FY08 - NLOS-C Increment 1/Continue Preliminary Design Review Activities. Conduct effective full charge rate of fire and Battlefield Day rate of fire testing on the Firing Platform at YPG. Conduct Excalibur compatibility testing and design refinement on the Firing Platform.		8620	
SYSTEM TECH ENGINEERING - FY09 - Prepare primary vehicle technical data packages for main FY09 NLOS-C weapon, ammunition handling, gun mount. Increment 1, mission module, structure, main weapon, peripherals, design B development complete. NLOS-C Increment 1 preliminary design continues. Firing platform available to test. NLOS-C weapon, ammunition handling, gun mount. Platform preliminary design reviews. Readiness to proceed into system level fabrication, demonstration, and IQT. Variant training product development and training task analyses. MGV early prototype testing underway. ATR automotive, mobility and reliability testing. System Integration Lab (SIL) integration and certification for IV2 integration and test.			6260
Small Business Innovative Research/Small Business Technology Transfer Programs.		3832	

Total	108689	136929	89841

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non-Line of Sight Cannon**	**F58**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	110998	137802	89189
Current BES/President's Budget (FY 2009)	108689	136929	89841
Total Adjustments	-2309	-873	652
Congressional Program Reductions		-873	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	815		
SBIR/STTR Transfer	-3124		
Adjustments to Budget Years			652

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	26360							Continuing	Continuing
0604645 F53 UGV	106516							Continuing	Continuing
0604645 F54 UGS	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The Original FCS Contract was awarded to the Lead Systems Integrator 30 May 2003 and definitized 10 Dec 2003, to Boeing. LSI contracted with its One Team Partner, BAE Systems, doing business through its Ground Systems Division of their Land Operating Group in Santa Clara, CA and Yuma, PA to execute the SDD contract to build the Non-Line of Site _ Cannon. A series of prototype cannons were developed in FY2008 and will continue into FY2009 to meet the Congressional mandate to develop eight prototypes. Additionally, fabrication and integration will occur with the Non-Line of Sight _ Cannon Block 0 initial production units.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604647A - Non-Line of Sight Cannon

PROJECT
F58

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Integration Design	FAR	THE BOEING COMPANY, ST. LOUIS, MO. - See Remarks 1, 2, 3	71743	26104	1-3Q	19025	1-3Q	14770	1-3Q	Cont.	Cont.	
Mission Software	FAR	THE BOEING COMPANY,ST. LOUIS, MO - See Remarks 1, 2, 3	38570	6978	1-3Q	5751	1-3Q	3964	1-3Q	Cont.	Cont.	
Prototype Vehicle	FAR	THE BOEING COMPANY, -ST. LOUIS, MO., See Remarks 1, 2, 3	131288	42981	1-3Q	71208	1-3Q	36045	1-3Q	Cont.	Cont.	
System Engineering & Program Management	FAR	THE BOEING COMPANY,ST. LOUIS, MO -See Remarks 1, 2, 3	49792	27769	1-3Q	28493	1-3Q	28802	1-3Q	Cont.	Cont.	
System Tech Engineering	FAR	THE BOEING COMPANY, ST. LOUIS, MO - See Remarks 1, 2, 3	2646	4373	1-3Q	8620	1-3Q	6260	1-3Q	Cont.	Cont.	
GFX		PM FCS (BCT), St, Louis, MO		484	1-3Q					Cont.	Cont.	
Subtotal:			294039	108689		133097		89841		Cont.	Cont.	

Remarks: Remark 1 - Subcontractor: BAE Armament Systems Division, Minneapolis, MN
Remark 2 - Subcontractor: BAE Ground Systems Division, Santa Clara, CA
Remark 3 - Subcontractor: General Dynamics Land Systems, Sterling Heights, MI

All MGV common hardware and software costs are accounted for in MGV project FC1.

II. Support Costs	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non-Line of Sight Cannon**	**F58**

	Type				Date		Date		Date			Contract
SBIR/STTR	Direct	OSD				3832	2-3Q			Cont.	Cont.	
Subtotal:						3832				Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

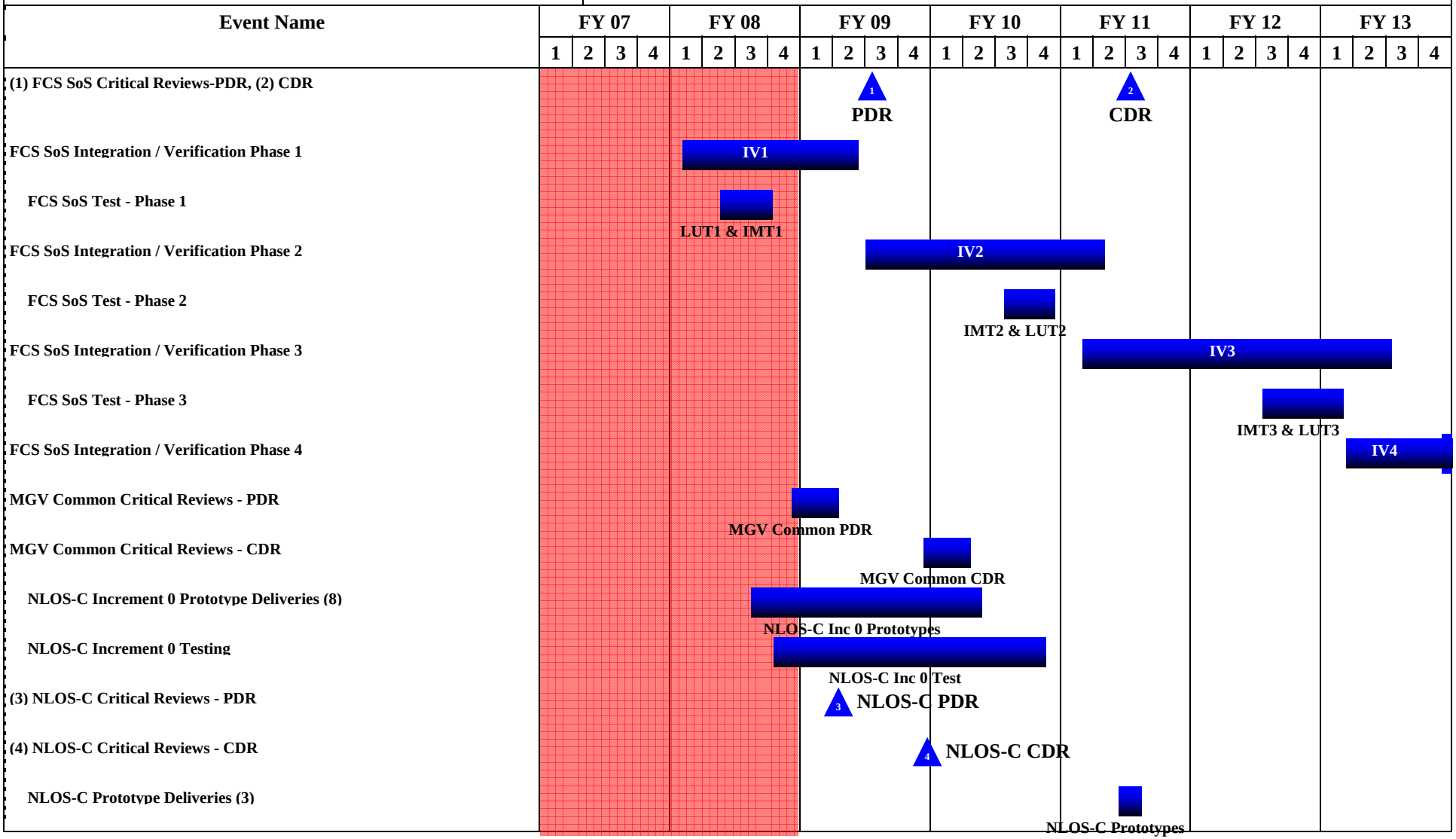
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:	**294039**	**108689**		**136929**		**89841**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non-Line of Sight Cannon**	**F58**



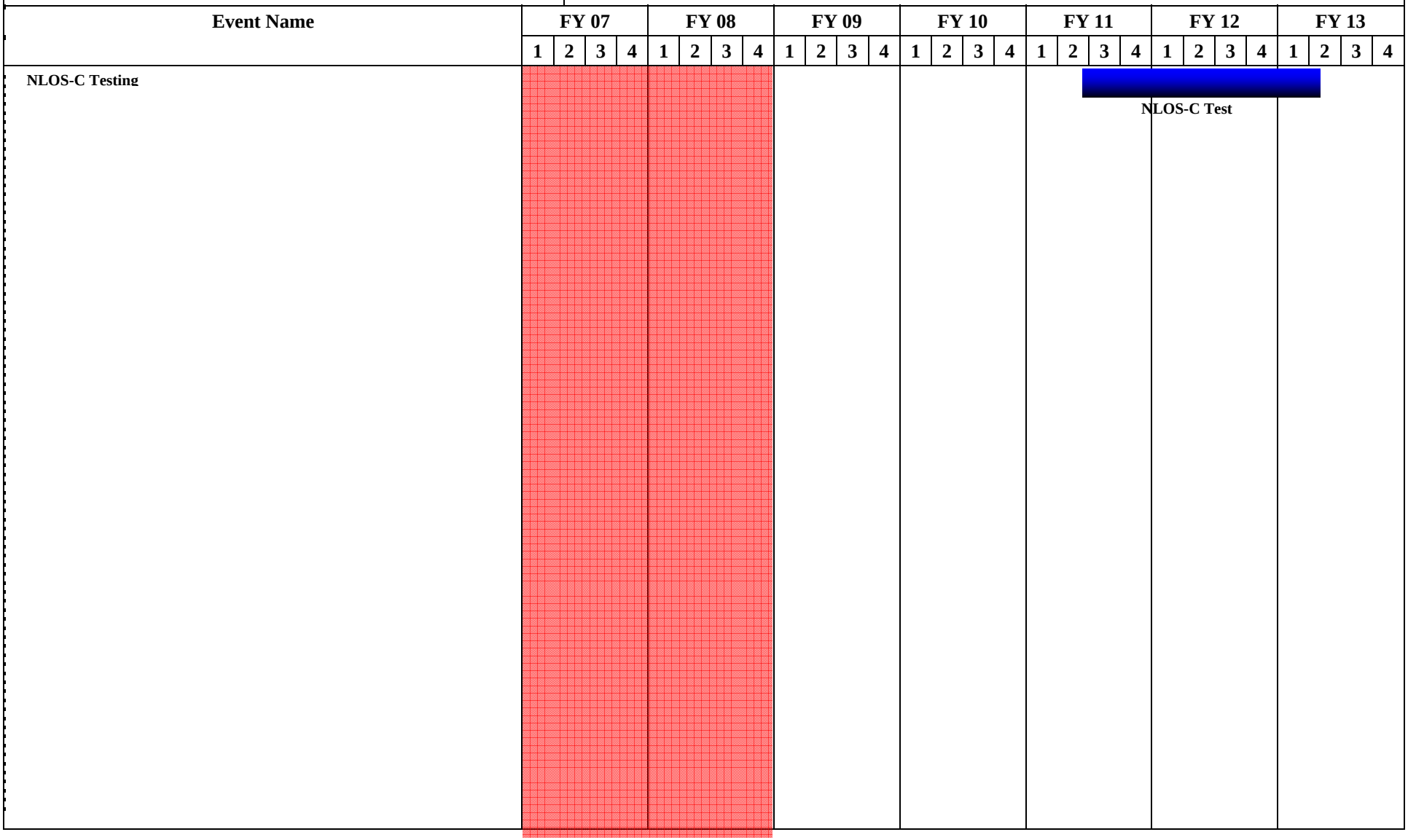
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604647A - Non-Line of Sight Cannon

PROJECT
F58



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604647A - Non-Line of Sight Cannon**	**F58**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews-PDR			3Q				
CDR					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							
MGV Common Critical Reviews - PDR		4Q	1Q - 2Q				
MGV Common Critical Reviews - CDR			4Q	1Q - 2Q			
NLOS-C Increment 0 Prototype Deliveries (8)		3Q - 4Q	1Q - 4Q	1Q - 2Q			
NLOS-C Increment 0 Testing		4Q	1Q - 4Q	1Q - 4Q			
NLOS-C Critical Reviews - PDR			2Q				
NLOS-C Critical Reviews - CDR			4Q				
NLOS-C Prototype Deliveries (3)					2Q - 3Q		
NLOS-C Testing					2Q - 4Q	1Q - 4Q	1Q - 2Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC1	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE		592254	774257	785575	358641	214207	103230	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development of Manned Ground Vehicles (MGVs) (exclusive of Non-Line of Sight-Cannon (NLOS-C) specific mission equipment) and includes technology improvements and reliability maturation, systems engineering, subsystem/variant unique mission equipment (e.g. armament/fire control), integration/assembly, and prototype build. The following common MGV subsystem developments are also included, (NLOS-C common subsystems): armor, suspension, structures, defensive armament system, signature management, NBC, vetronics, power and energy (includes hybrid electric drive), auxiliary systems and hit avoidance system. Also included in this project is mission specific equipment for the following platforms: Infantry Combat Vehicle (ICV), Mounted Combat System, Non-Line of Sight Mortar (NLOS-M), Command and Control Vehicle (C2V), Recon and Surveillance Vehicle (RSV), Field Recovery and Maintenance Vehicle (FMRV), and Medical Vehicle (MV).

The ICV provides mobility for 11 personnel (2 man crew and 9-man infantry squad) on the battlefield. ICV is located within the infantry platoons and companies within the Combined Arms (CA) battalions. The ICV delivers the dismounted force to the close battle and supports the squad by providing self defense and supporting fires. The ICV also carries the majority of the Soldiers equipment.

The MV provides advanced trauma life support within 1 hour to critically injured Soldiers. The MV serves as the primary medical system within the BCT and will have two versions (MV-Evacuation (MV-E) and MV-Treatment (MV-T)). The time-sensitive nature of treating critically injured soldiers requires an immediately responsive force health protection system with an expedient field evacuation system. The MV-E allows trauma specialists, maneuvering with combat forces, to be closer to the casualty's point-of-injury and is used for casualty evacuation. The MV-T enhances the ability to provide Advanced Trauma Management (ATM)/Advanced Trauma Life Support (ATLS) treatments and procedures forward for more rapid casualty interventions and clearance of the battlespace.

The FRMV is the recovery and maintenance system for employment in the FCS BCT. The Brigade Support Battalion (BSB) maintainers will be organized into Combat Repair Teams (CRT) supported by FRMVs. These CRTs will perform in-depth Battlefield Damage Assessment and Repair (BDAR) and unscheduled field-level maintenance requirements including lift, welding, cutting, and heating of materials.

The NLOS-M is the short-to-mid-range indirect fire support component within the FCS BCT. It will provide networked, responsive and sustained indirect fire support to the combined arms maneuver battalion in the FCS BCT. It fires 120mm munitions that include special purpose capabilities to provide a variety of fires on demand including precision guided munitions. NLOS-M will provide close support and destructive fires for tactical standoff engagement during offensive and defensive operations in concert with line-of-sight, beyond-line-of-sight, and external and joint capabilities in combat scenarios spanning the spectrum of ground combat and threats.

The RSV features a suite of advanced sensors (which are developed under PE 0604665A) to detect, locate, track, classify, and automatically identify targets from increased standoff ranges under all climatic conditions, day or night. Included in this suite are a mast-mounted, long-range electro-optic infrared sensor, an emitter mapping sensor for radio frequency intercept and direction finding, remote chemical detection, and a multifunction RF sensor. The RSV carries 6 Soldiers (2 common crew and 4 scouts).

The C2V provides the tools for commanders and staffs to command and control various elements of the FCS BCT. Via mission workstations and a common warfighter-machine interface, C2Vs contain the interfaces that allow commanders and their staffs to perform tasks such as fusing friendly, enemy, civilian, weather and terrain situations and distributing this information via a common operating picture. The C2V carries 6 Soldiers (2 common crew and 4 mission crew).

The Mounted Combat System provides offensive maneuver to close with and destroy enemy forces. The Mounted Combat System is capable of conducting mounted

operations, mounted operations supported by dismounted infantry, and supporting dismounted infantry operations in all environments. The Mounted Combat System delivers precision fires at a rapid rate to destroy multiple targets at standoff ranges quickly and complements the fires of other systems in the FCS BCT. It is highly mobile and maneuvers out of contact to positions of advantage. It is capable of providing direct support to the dismounted infantry in an assault, defeating bunkers, and breeching walls during the tactical assault. The Mounted Combat System can engage targets from Beyond Line of Sight (BLOS), which allows the FBCT the ability to stand-off from the enemy's lethality envelope, allowing the Mounted Combat System to be more lethal, at greater ranges.

The MGV common subsystems project also includes developmental and engineering efforts for the detailed design and integration of common components and sub-systems into a common chassis configuration applicable to the entire fleet of MGV combat vehicles. Major subsystems included in the common chassis design are; Hit Avoidance System (HAS), Propulsion (Hybrid Electric Drive with a High Power Density Diesel Engine), active dampening suspension with band track, Common Crew Station (CCS), Close Combat Armament System (CCAS), hull structure and armor, chassis auxiliary, Vehicle Electronics and Power Distribution (Vetronics). The focus of these common components is to reduce design, production, testing, and support costs. In addition, the FCS BCT with common chassis components is more supportable (few spare parts), more transportable, more reliable and maintainable (less specialized Hardware).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
IAW Section 214 of the FY2006 National Defense Authorization Act, this Program Element was established commencing with FY2008 President's Budget request. This Program Element replaced the previous Project F57 under the Armored System Modernization Program Element 0604645A. The major FY2007 program accomplishments for that project are described below to show continuity of the development efforts.			
CONTRACTOR INFANTRY COMBAT VEHICLE (ICV)- FY08 - Continue preliminary design activities for 2nd qtr FY09 PDR. Continue slip ring component maturation plan. Conduct a slip ring CDR, and initiate slip ring prototype development activities. Award the M240 machine gun remote operating kit, and MK-44 gun system sub-contracts. Initiate ICV turret test stand activities. Continue ICV Software Build 2 development activities and conduct the Software Build 2 Life Cycle Objective (LCO).		14854	
CONTRACTOR INFANTRY COMBAT VEHICLE (ICV)- FY09 - Initiate the procurement of: ICV prototype component parts, slip ring, MK 44 gun system, 30/40 mm feed system, and gun turret drive system. Conduct ICV PDR in 2nd qtr FY09 in preparation for CDR in 2nd qtr FY10. Continue Software: Build 2, and initiate Software Build 3 development activities while conducting Build 3 Life Cycle Objective (LCO). Modeling and Simulation: Integrate Build 3 Fire Support Element (FSE) from modeling, simulation and integration (MS&I). Fabricate the turret firing test stand in the SIL and subsequently conduct initial turret dry fire test at contractor test site.			34340
CONTRACTOR MOUNTED COMBAT SYSTEM (MCS) FY08 - Continue preliminary design activities. Integrate Primary Weapon Assembly, Ammunition Handling Unit, and Fire Control Sub-systems to build MCS Firing Fixture. Conduct Firing Fixture testing, which will include 6-month dynamic testing on Tank-Automotive Research and Development Center's (TARDEC) Turret Motion Based Simulator (TMBS) and 3-month live-fire testing at Aberdeen Proving Ground (APG). This testing will mature the design and reduce design time and risk. Achieve design requirements and begin integration for the following: ammunition data link for use with BLOS munitions, dynamic muzzle reference sensor, Advanced Fire Inhibit System (AFIS), high voltage Electric Gun Turret Drive (EGTD), and Ammunition Handling System (AHS) as a result of Firing Fixture Testing. Software: Build 2 ongoing. Modeling and Simulation: Build 2 FSE available from MS&I. System Integration Lab: SW/HW Integration (Phase 1 Software Emulator Drop, Phase 2 - FSE Build 3 available from MS&I). Deliver Ammunition Handling System (AHS). Begin MCS P1 hull fabrication, assembly, and integration.		67979	

CONTRACTOR MOUNTED COMBAT SYSTEM (MCS) FY09 - Conduct Preliminary Design Review (PDR) in 2nd qtr FY09 and enter critical design. Integrate MCS Firing Fixture Turret with common chassis to create the MCS Firing Test Rig. Conduct 6-month Firing Test Rig test at APG test range. Achieve design requirements and begin integration for the following: ammunition data link for use with BLOS munitions, dynamic muzzle reference sensor, Advanced Fire Inhibit System (AFIS), high voltage Electric Gun Turret Drive (EGTD), and Ammunition Handling System (AHS) prior to Critical Design Review (CDR). Software: Build 3 ongoing. Modeling and Simulation: Build 3 FSE available from MS&I. Continue MCS Prototype 1 (P1) hull fabrication, assembly, and integration. Begin hull fabrication, assembly, and integration for MCS P2 and P3. Receive MCS P1: Common Hardware (Propulsion (PRP), Vetronics (VET), Suspension (SUS), Automotive Auxilliary (AUX), Nuclear, Biological, Chemical, Chemical (NBC), Signature Management (SGM), Common Crew Station (CCS), Compact Modular Sight (CMS), Structure (STR),Armor (ARM), and C4ISR Hardware (ANS-GPS/INS, ICS, ANS Navigation (NAV), Sensor and Communication suites).			94021
CONTRACTOR NLOS-M - FY08 Planned Accomplishments - Continue preliminary design activities for 1st qtr FY09 PDR. Modeling & Simulation Build 2 IV2. Mortar Tube & Breech Increment 1 configuration available for mortar firing platform tests. Firing platform tests will be completed on the test stand at Camp Ripley. Ripley testing will consist of 1200 rounds. After contractor upgrades, ship firing platform to Yuma Proving Grounds (YPG), Yuma, AZ. for more live fire firing platform tests. Yuma tests will be conducted while the unit is sitting on an actual chassis allowing the unit to be fired at maximum range and rates. Approximately 9000 rounds will be fired at Yuma to test primarily for wear and fatigue. Slip Ring Component Maturation Platform (CMP) tests complete.		21352	
CONTRACTOR NLOS-M - FY09 Planned Accomplishments - PDR Complete 2nd qtr FY09. Turret structure detail design complete. Primary vehicle ammunition handling complete. Software: Build 2 ongoing, Build 3 LCO. NLOS-M Firing Platform first shot (YPG). Prototype #1 Common hardware available.			52450
CONTRACTOR COMMAND & CONTROL VEHICLE (C2V) FY08 - Prepare for C2V Preliminary Design Review in 1st qtr FY09. Complete phase one and phase two C2V communications rooftop deconfliction testing at EPG and publish results for use in Modeling and Simulation (M&S) efforts on all MGV platforms. Develop preliminary design for the C2V mission workstation and controls. Create C2V vehicle simulation model for M&S and provide to System of Systems Integration Laboratory (SoSIL) for Integration and Verification Phase II. Establish C2V SIL for phase 1 integration and testing of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) hardware. Populate SIL with C2V subcomponents, surrogates, or emulators and other subsystems as available. Initiate work on development of C2V Software Requirements Specification, create C2V software architecture, and begin C2V software development and integration in support of MGV Software Build 2.0.		17969	
CONTRACTOR COMMAND & CONTROL VEHICLE (C2V) FY09 - Conduct C2V preliminary design review, 1st qtr FY09. Prepare for C2V Critical Design Review (CDR),2nd qtr FY10. Perform C2V rooftop deconfliction phase 3 testing at Electronic Proving Ground (EPG), Ft. Huachuca, AZ. Develop prototype mission workstation/controls hardware. Hardware includes displays, handcontrollers, seats, keyboards, mounting hardware for displays. Complete and integrate software Build 2.0. Start effort on Software Build 3.0. Continue integration of latest release of common/C4ISR software/hardware in the C2V SIL.			36109
CONTRACTOR RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV) FY08 - Continue preliminary design activities for PDR, 2nd qtr FY09. Initiate RSV detailed design. Deliver RSV simulation to SoSIL (IV2). Release RSV system/subsystem design document. Continue RSV hardware schematic models/diagrams (27 models at the subsystem level). Complete RSV requirements compliance assessment. Document RSV Human Factors Engineering/MANPRINT report. Continue RSV installed performance and roof-top sensor deconfliction studies. Provide requirements to BAE for ICV/RSV MK44 turret for subsystem development.		19496	
CONTRACTOR RECONNAISSANCE & SURVEILLANCE VEHICLE (RSV) - FY09 - Conduct RSV Preliminary Design Review,			37237

2nd qtr FY09. Continue to refine RSV mission workstation and integrated platform design in preparation for Critical Design Review, 2nd qtr FY10. Complete RSV rooftop sensor deconfliction testing and publish results of each completed phase for use in Modeling and Simulation efforts on all MGV platforms. Finalize RSV systems engineering architecture. Finalize RSV Interface Control Documents (ICDs) and Critical Item Development Specification (CIDS). There will be approximately 17 internal ICDs (dependent on final design changes). In addition to internal developed ICDs, there are approximately 100 externally provided ICDs developed by distributed systems. BAE has contract for turret design: GDLS for integration of turret into the vehicle. Material for Armor structure, chassis structure, ECS, fuels subsystem, mission structure, NBC System, SIGMAN Subsystem, M44/M240 Coax, and Turret Structure are scheduled for FY09.Order long lead subsystems and materiel in preparation for RSV prototype builds. Major subcomponents integrated into the turret include; Mast, LR EO/IR, CID, EMS, WIN-T, APS, MFRF, MFCM, JSLSCAD provided by C4ISR for receipt in FY10. Create RSV model for M&S and provide to SoSIL (Integration and Verification Phase IV). Complete RSV software architecture and continue RSV software development and integration in support of MGV Software Build 2.0. Conduct RSV Software Requirements update and begin software development in support of MGV Software Build 3 LCO.			
CONTRACTOR FIELD RECOVERY & MAINTENANCE VEHICLE (FRMV) - FY08 - Continue Preliminary Design Activities for 2nd qtr FY09 PDR. Evaluate alternate crane drive systems, and optimize the FRMV suspension system for stability during crane maintenance operations. Optimize the FRMV weight for towing conditions and the FRMV towing capacity in varying terrain and environmental conditions. Finalize the FRMV towing design for propulsion, suspension, and braking. Award crane actuator, recovery winch, and recovery winch sub-contracts. Continue FRMV Software Build 2 development activities and conduct the Build 2 Life Cycle Objective (LCO).		10615	
CONTRACTOR FIELD RECOVERY & MAINTENANCE VEHICLE (FRMV) - FY09 FRMV Planned Accomplishments - Conduct FRMV PDR in 2nd qtr FY09 in preparation for an FRMV Critical Design Review (CDR) in 2nd qtr FY10. Fabricate Crane Test Fixture and conduct Crane Testing. Software: Continue Software Build 2, and initiate Software Build 3 development activities while conducting Build 3 Life Cycle Objective (LCO). Initiate procurement of unique mission equipment raw material, to include welder, cutter & heating equipment that will be stored on the FRMV and used in recovery and maintenance operations. Modeling and Simulation: Integrate Build 3 FSE from MS&I and begin ISM update. Integration Test Stand (Component and Subsystem Testing). Conduct Crane Test at SIL.			28103
CONTRACTOR MEDICAL VEHICLE (MV-E/T) - FY08 - Continue Preliminary Design Activities for 2nd qtr FY09 PDR. Conduct subsystem evaluations using the MV-E mock-up. Fabricate a MV-treatment mock-up for the evaluation of treatment table options, refrigerator options, deployable shelter options, and medical equipment sets/patient movement items stowage design options. Perform down selection of MV-T Shelter. Continue MV Software Build 2 development activities and conduct the Build 2 Life Cycle Objective (LCO).		7046	
CONTRACTOR MEDICAL VEHICLE (MV-E/T) - FY09 - Conduct MV PDR in 2nd qtr FY09 in preparation for CDR in 2nd qtr FY10. Software: Complete Build 1 integration, continue Software Build 2, and initiate Software Build 3 development activities while conducting Build 3 Life Cycle Objective (LCO). Modeling and Simulation: Integrate Build 3 FSE from MS&I and begin ISM updat. Initiate integration activities for the MV-E & MV-T prototype fabrication of two prototypes with delivery dates scheduled for the 4th quarter FY11.			15516
CONTRACTOR MGV COMMON COMPONENTS - FY08 - Platform preliminary design activities. Complete build 1 S/W development and integration (FQTd). Complete S/W Build 2 Life Cycle Objective (LCO). Architecture (LCA) reviews for all vehicle/common subsystems. SOSIL SIM/ IV2 MV model updated. Complete SRCM Design Verification Testing Phase 1. Upgraded propulsion components, such as TDS & band track to implement the 27.4 ton configuration, will be procured in FY08 for the NLOS-C prototypes.		412626	

Also in FY08 we will be procuring Laser Warning Receiver Sensor, Multifunction Countermeasure, Crew Station Displays and controls and CCAS Remote Weapon Systems. Deliver common components for the 24 ton early March NLOS-C prototype in FY08 and the 27.4 ton prototype in FY09.			
CONTRACTOR MGV COMMON COMPONENTS - FY09 - Platform Preliminary Design Reviews. All MGV Common subsystems will be ready to go into their detailed design following subsystem PDRs leading to a Common Chassis PDR. Armor Component Maturation: Mine Blast / Add-on Armor complete. Armor Performance Objective (PO) issued. Software: Build 2 TRR , Build 3 Requirements Baseline Review (RBR) and LCO. Modeling & Simulation: Build 1 complete, Build 2 ongoing, Build 3 begins (FSE from MS&I). Integration and Verification: begin SEIT SIL integration and test. NBC SIL IV2 complete with NBC IV2 complete, begin SEIT SIL integration and test. Assemble, weld and machine hull raw materials, Procure appendages and first hull structure material available. Hit Avoidance System (HAS) detail design analysis and assessment complete. HAS Controller and Hit Avoidance Countermeasure Controller software Build 2 ongoing. MGV Active Protection System hardware/software Integration and verification begins. Current Force APS integration and verification begins and prototypes delivery to PEO GCS for integration to current force vehicles.			474323
GOVERNMENT GFX - Active Protection System (APS) FY08 - 09 - Consists of Government Support Subject Matter Experts (SMEs) to assist LSI in development of APS. MK30 development, ARDEC Shaker Table rent for MCS Firing fixture testing		3746	2158
Small Business Innovative Research/Small Business Technology Transfer Programs		16571	
Total		592254	774257

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		696333	772458
Current BES/President's Budget (FY 2009)		592254	774257
Total Adjustments		-104079	1799
Congressional Program Reductions		-100300	
Congressional Recissions		-3779	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			1799

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592244	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight _ Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	26360							Continuing	Continuing
0604645 F53 UGV	106516							Continuing	Continuing
0604645 F54 UGS	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The Army awarded the original Manned Ground Vehicle (MGV) contract 30 May 2003; and definitized the contract on 10 Dec 2003 to BAE Systems and General Dynamic Land Systems. The Manned Ground Vehicle family consists of (9) vehicle platforms which will be produced cooperatively by BAE and GD corporations. FY09 FCS will complete the Systems of Systems Platform Design Reviews (PDRs) and continue with platform Critical Design Reviews (CDRs) to finalize prototype efforts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
INFANTRY CARRIER VEHICLE (ICV)	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2				14854	1-3Q	34340	1-3Q		49194	
MOUNTED COMBAT SYSTEMS (MCS)	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1				67979	1-3Q	94021	1-3Q		162000	
NON-LINE OF SIGHT MORTAR (NLOS-M)	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 3				21352	1-3Q	52450	1-3Q		73802	
Common Vehicle Components	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1,2,3				412626	1-3Q	474323	1-3Q		886949	
COMMAND & CONTROL VEHICLE (C2V)	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1				17969	1-3Q	36109	1-3Q		54078	
RECONNAISSANCE & SURVEILLANCE VEHICLE	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 1				19496	1-3Q	37237	1-3Q		56733	
Medical Vehicle (MV)	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 3				7046	1-3Q	15516	1-3Q		22562	
FCS RECOVERY & MAINT VEH (FRMV)	FAR	THE BOEING COMPANY - ST. LOUIS, MO, see remark 2				10615	1-3Q	28103	1-3Q		38718	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle**	**FC1**

GFX and other	Direct	PM FCS(BCT), St. Louis, MO				3746	1-3Q	2158	1-3Q		5904	
Subtotal:						575683		774257			1349940	

Remarks: Remark #1 - Subcontractor: General Dynamics, Sterling Heights, MI; award date Dec 2003
Remark #2 - Subcontractor: BAE - Ground Systems Division, Santa Clara, CA; award date Dec 2003
Remark #3 - Subcontractor: BAE - Armament Systems Division, Minneapolis, MN; award date Dec 2003

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	Direct	OSD				16571	2-3Q				16571	
Subtotal:						16571					16571	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Remarks: All Test and Evaluation costs for this project are included in 0604661 FC2 SoS Engineering and Program Management project.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:						**592254**		**774257**			**1366511**	

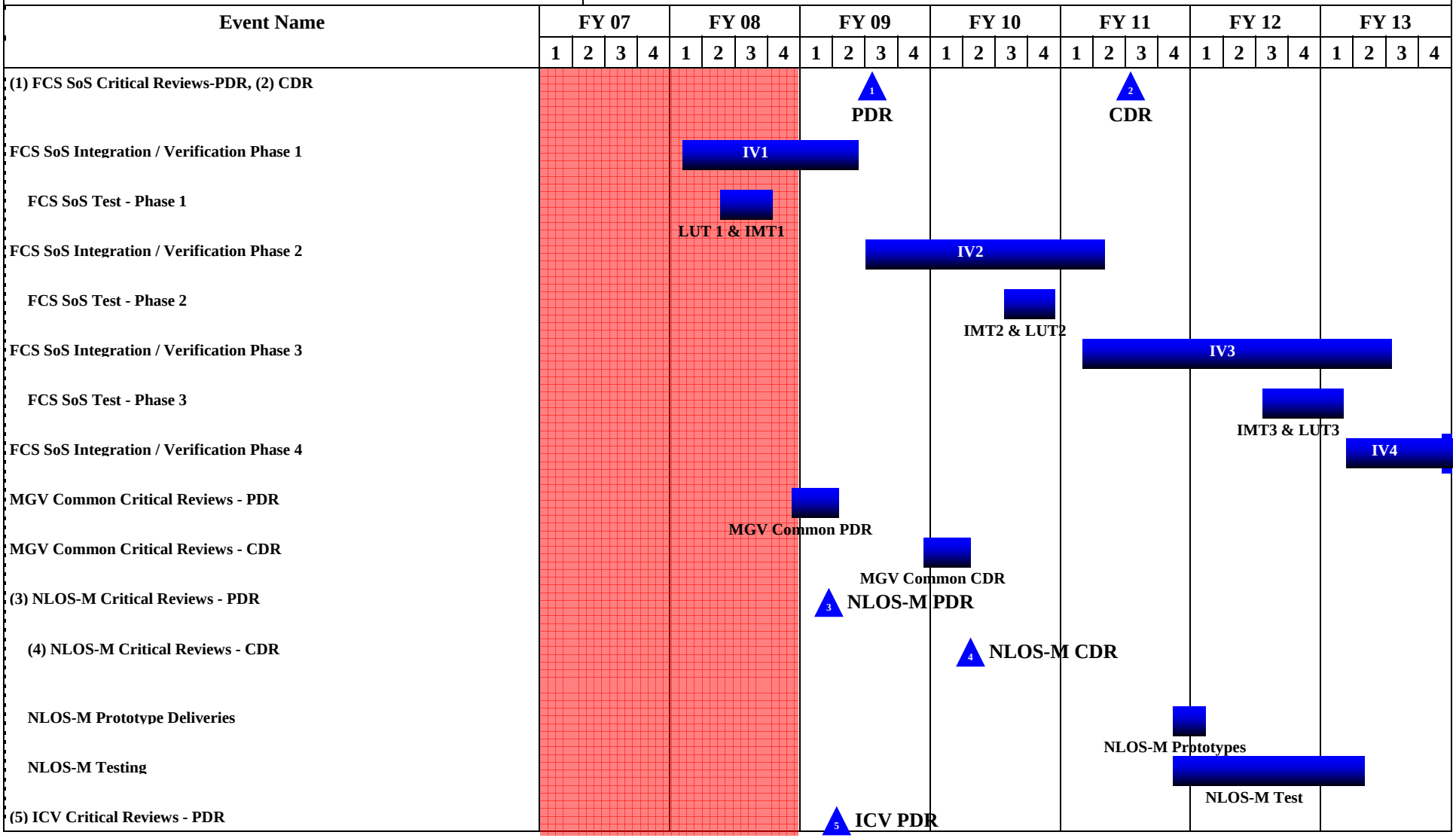
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1



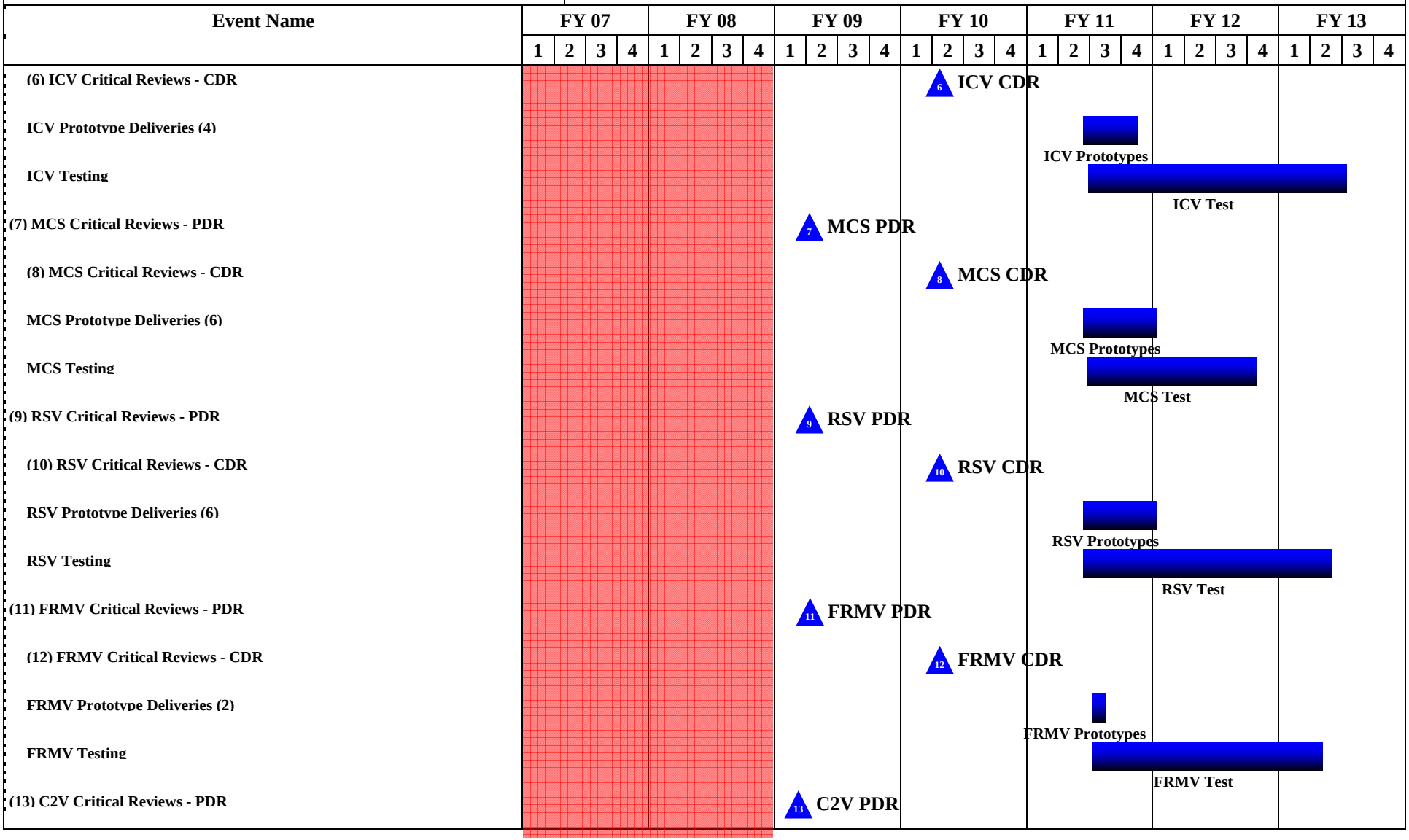
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1



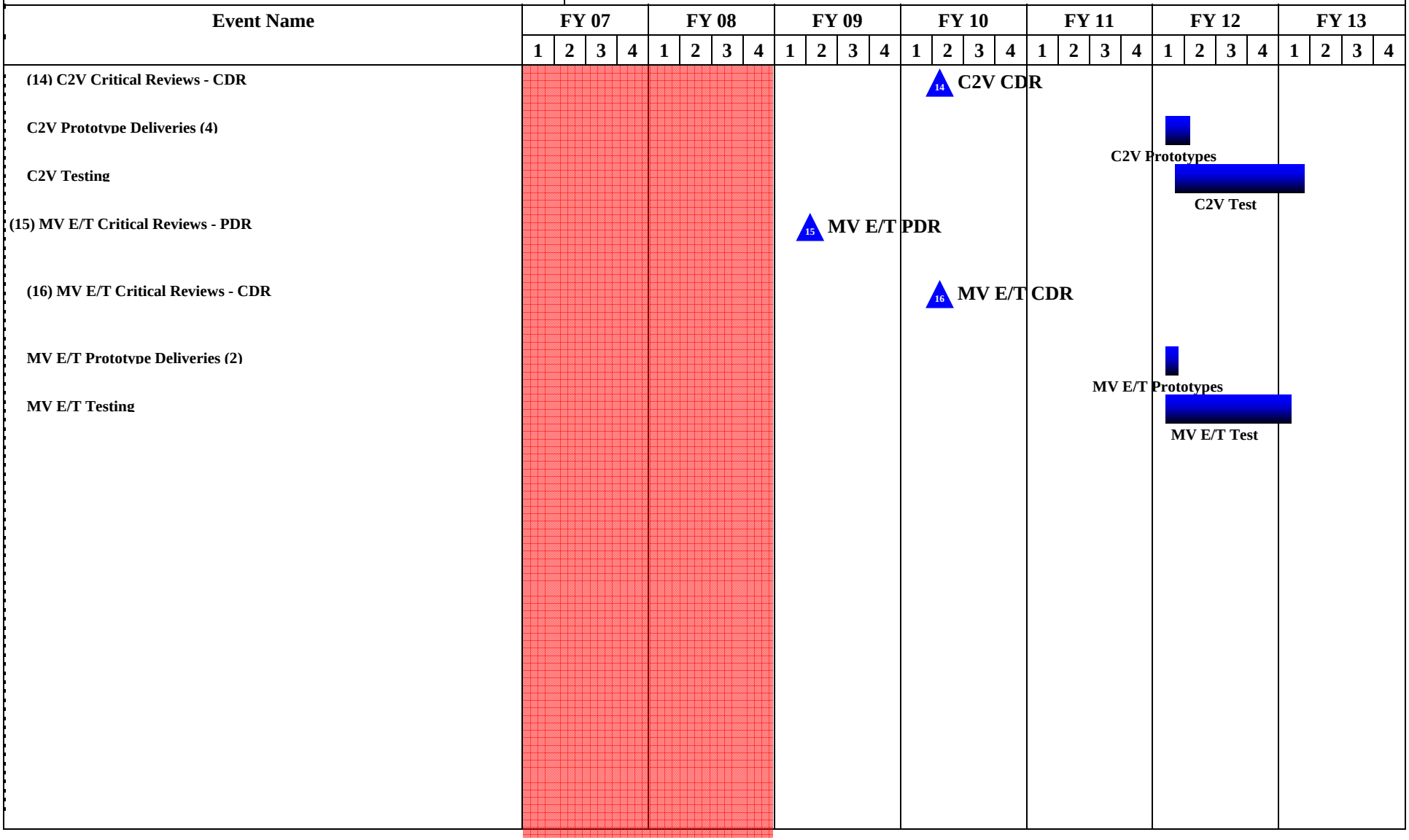
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604660A - FCS Manned Grd Vehicles & Common Grd Vehicle

PROJECT
FC1

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews-PDR			3Q				
CDR					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							
MGV Common Critical Reviews - PDR		4Q	1Q - 2Q				
MGV Common Critical Reviews - CDR			4Q	1Q - 2Q			
NLOS-M Critical Reviews - PDR			1Q				
NLOS-M Critical Reviews - CDR				2Q			
NLOS-M Prototype Deliveries					4Q	1Q	
NLOS-M Testing					4Q	1Q - 4Q	1Q - 2Q
ICV Critical Reviews - PDR			2Q				
ICV Critical Reviews - CDR				2Q			
ICV Prototype Deliveries (4)					2Q - 4Q		
ICV Testing					2Q - 4Q	1Q - 4Q	1Q - 3Q
MCS Critical Reviews - PDR			2Q				
MCS Critical Reviews - CDR				2Q			
MCS Prototype Deliveries (6)					2Q - 4Q	1Q	
MCS Testing					2Q - 4Q	1Q - 4Q	
RSV Critical Reviews - PDR			2Q				

RSV Critical Reviews - CDR				2Q			
RSV Prototype Deliveries (6)					2Q - 4Q	1Q	
RSV Testing					2Q - 4Q	1Q - 4Q	1Q - 2Q
FRMV Critical Reviews - PDR			2Q				
FRMV Critical Reviews - CDR				2Q			
FRMV Prototype Deliveries (2)					3Q		
FRMV Testing					3Q - 4Q	1Q - 4Q	1Q - 2Q
C2V Critical Reviews - PDR			1Q				
C2V Critical Reviews - CDR				2Q			
C2V Prototype Deliveries (4)						1Q - 2Q	
C2V Testing						1Q - 4Q	1Q
MV E/T Critical Reviews - PDR			2Q				
MV E/T Critical Reviews - CDR				2Q			
MV E/T Prototype Deliveries (2)						1Q	
MV E/T Testing						1Q - 4Q	1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC2	FCS SYSTEM OF SYSTEMS ENGR & PROGRAM MGMT		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Army's Future Combat System Brigade Combat Team (FCS BCT) is comprised of a combination of manned and unmanned systems that use an advanced network architecture to enable levels of joint connectivity, situational awareness and understanding, and synchronized operations. FCS will provide the Army and the joint force unprecedented capability to see the enemy, engage him on our terms, and defeat him on the 21st Century battlefield. The Army's first modernization effort in nearly four decades; FCS is the embodiment of the modular force, a modular system designed for "full spectrum" operations. FCS is not just an acquisition program. It is a new way of fighting. The FCS BCT will be composed of more infantry forces than the current Heavy Brigade Combat Team (HBCT), cover more ground, and be able to sustain itself for longer periods of time. FCS is networked via C4ISR architecture, called Battle Command Network (BCN) that includes networked communications, network operations, sensors, battle command systems, and manned and unmanned reconnaissance and surveillance capabilities to enable levels of situational understanding and synchronized operations heretofore unachievable. The FCS network consists of five layers (Standards, Transport, Services, Applications, and Sensors and Platforms) that, when combined, provide seamless delivery of data, information and knowledge. The integration of all five layers is necessary to provide revolutionary battle command (i.e. greater situational awareness, sensor fusion, battlefield analysis, networked fires); transforming our ground forces ability to remain the dominant land power. The FCS BCT is the centerpiece of the Army's Modernization Program.

This PE includes contractor efforts and analysis associated with System of System (SoS) engineering analysis and integration, logistics, training, SoS test, fee, and program business management. This project also includes the following government costs - Title 10 contract oversight, SoS engineering, SoS test, modeling and simulation, government furnished equipment, and program management. This project includes support to other DOD agencies for joint programs and collaboration efforts with FCS and associated Complementary Programs.

Major program milestones include the FCS Maturity Reviews and FCS Design Reviews. FCS Maturity Reviews provide program-level SoS synchronization through the review of each system's critical requirements. These reviews, held approximately once per year, review each system capabilities and then look at all of the systems combined into a System of Systems to ensure that all KPP's are achieved along with the modernizing the remaining requirement within the program schedule, at Life Cycle Cost. In other words, each of these reviews attempt to measure the progress of all the designs put together and if the results are achieving the desired requirements The incremental SoS level Design Reviews provide an early design assessment of the Spin Out FCS Systems and focus on the FCS design impacts associated with these systems. The incremental SoS level Design Reviews are included in the FCS Maturity review process. The following is a summarized list of these key program reviews:

The SoS level Functional Review (SoSFR) was conducted in Aug 2005. This was followed by the System level Functional Reviews (SFRs) for each platform, which reviewed the resulting SoSFR requirements to determine if all the requirements were met by the individual platforms. The roll up of these SFRs occurred at the Engineering Maturity Review (Oct 07), where the SoS requirements were reviewed for completeness. After the completion of this review, the development of the system level Preliminary Design Reviews (PDR) will begin, which will culminate in the SoSPDR scheduled for April 09. After the completion of the PDR, design work will continue with more detailed results to be exhibited in the SoS Critical Design Review (CDR), scheduled for April 2011.

Contractor SoS Engineering - Conduct SoS reviews, top level trade studies, and architectural design of the SoS including requirements decomposition, requirements flow down to platforms, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness.

Contractor Program Management - The development of processes, tools, meetings, Earned Value Management (EVM), Risk, software, etc used to manage the total program (to include over 600 subcontractors/partners) to achieve the SoS program goals within the available dollars and schedules.

SoS Test and Evaluation - Includes contractor and government test and analysis to ensure SoS performance is achieved. The result of the SoS tests is validation of the SoS specifications and verifying that the specifications meet the Operations Requirement Document (ORD) and operational and organizational requirements. FCS employs a test once and shares the data philosophy to reduce cost by not duplicating efforts between Contractor and Government agencies.

Contractor Logistics includes the development of the "factory to foxhole" products and services required to design, develop, assemble, integrate, and test the supportability processes. This includes: validating maneuver logistics; Production Based Logistics (PBL), ensuring that sensor data collection for logistics decision support system software is adequate to support logistics modeling verification and validation efforts; maximizing commonality of hardware and software within the FCS program to reduce the lifecycle costs and logistical footprint of the FCS; provides integration of supportability products into the SoS elements, including diagnostics and prognostics functions and conducts logistics technical reviews at the system, vehicle, and component levels; development of the process for deploying vehicles to home base locations; increased Reliability Availability Maintainability Test (RAM-T) goals; and Pit-Stop Engineering designs for maintenance.

Training Support- Includes contractor analysis to support SoS training. Includes the design and development, engineering, integration, embedded training, and testing of unique training devices, training systems engineering, training products, training support packages, and training integration. This mission assures that the training system is designed as an integral part of the overall SoS design to meet program requirements.

Government Support Costs - Includes funding for government personnel for labor, travel, training, supplies, and other support costs (support contractors, Automated Data Processing (ADP), communications, supplies, and equipment). Supports other services for Joint Programs, Multinational Project Arrangements, and collaborative efforts. Includes the procurement of Government Furnished Equipment/Items/Data (GFX) for the LSI. GFX is used when procurement through the Government is less expensive than through the LSI.

Beginning in FY08, this PE now includes engineering support efforts to include logistics and training to provide a complete System Engineering of the FCS program. Networks was broken out of SoS engineering into a unique PE to give greater visibility into this important effort.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
IAW Section 214 of the FY2006 National Defense Authorization Act, this Program Element was established commencing with FY2008 President's Budget request. This Program Element replaced the previous Project F57 under the Armored System Modernization Program Element 0604645A. The major FY2007 program accomplishments for that project are described below to show continuity of the development efforts.			

GOVERNMENT - SYSTEM ENGINEERING & PROGRAM MANAGEMENT (SEPM) FY08 - Objectives: SoS Engineering - Participate and ensure the government's best interest/values are considered in the following: SoS reviews, trade studies, architectural management, requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness, Software Management, Risk Management, Modeling and Simulation Management, Performance Assurance Management, Integration & Verification Management, Technology Management and Experimentation. PM Provided integrated program management (i.e. planning, directing, tools and controlling functions), for all development activities, including data and supplier management, program control, procurement and contracts management, operations management and SO salaries. Congressional Title 10 oversight, cost analysis and management, budget development, justification and tracking, Earned Value Management, Integrated Master Schedule development and management, Complementary Program management and operations management associated with the LSI overarching management of the FAR.		131941	
GOVERNMENT - SYSTEM ENGINEERING & PROGRAM MANAGEMENT (SEPM) - FY09 - Objectives: SoS Engineering - Participate and ensure the government's best interest/values are considered in the following: SoS reviews, trade studies, architectural management, requirements decomposition, requirements flow down, development of specifications, interface definitions, configuration management oversight, specialty engineering, and the analysis and verification of integrated force effectiveness, Software Management, Risk Management, Modeling and Simulation Management, Performance Assurance Management, Integration & Verification Management, Technology Management and Experimentation. PM Provided integrated program management (i.e. planning, directing, tools and controlling functions), for all development activities, including data and supplier management, program control, procurement and contracts management, operations management including SO salaries. Congressional Title 10 oversight, cost analysis and management, budget development, justification and tracking, Earned Value Management, Integrated Master Schedule development and management, Complementary Program management and operations management associated with the LSI overarching management of the FAR.			135899
GOVERNMENT - SYSTEM TEST & EVALUATION (STE) FY08 - Continue to fund and support MGV, UAS, UGV, and C4ISR testing at ATEC test centers. MGV testing will focus on the NLOS-C and NLOS-M firing test rigs and the continuation of antenna placement testing in support of C2V and RSV development. Continues funding of CBRN materials testing at Dugway Proving Ground initiated in FY08. Initiates LCAR developmental testing. Supports MCS armament proof and safety testing. Automotive testing of the MGV early prototypes will be initiated ($20M). Initiates the MGV common Ballistic Hull and Turret survivability testing. Completes developmental testing of the Full Spectrum Hit Avoidance System. Provides ATEC range support for the LSI C4IT field test events. Provides funds for ATEC range support for Class 1 UAV experiment flight test. DREN connectivity between the LSI and OTP SILs . ATEC will again provide 25 MY SME support to the LSI and surge engineering support as required. Funds the development and modifications of modeling and simulation test tools for future test events. These tools include test event design tools as well as test data collection capabilities. Additionally, these tools include stimulators and data collection and analysis tools used to test FCS systems during IP2 field events. Funds the operational and maintenance costs of the Common Control Nodes and WSMR and APG. These facilities are program test facilities used in support of system of system tests events.		111269	
GOVERNMENT - SYSTEM TEST & EVALUATION (STE) FY09 - Continue to fund and support MGV, UAS, UGV, and C4ISR testing at ATEC test centers. MGV testing will focus on the NLOS-C and NLOS-M firing test rigs and the continuation of antenna placement testing in support of C2V and RSV development. Automotive testing of the MGV early prototypes will be initiated. DREN connectivity between the LSI and OTP SILs will continue. ATEC will again provide 25 MY SME support to the LSI and surge engineering support as required. Funds the development and modifications of modeling and simulation test tools for future test events. These tools include test event design tools as well as test data collection capabilities. Additionally these tools include stimulators used to test FCS systems. Funds			157498

the operational and maintenance costs of the Common Control Nodes and WSMR and APG. These facilities are program test facilities used in support of system of system tests events.			
GOVERNMENT - MODELING & SIMULATION (M&S) FY08 - Continued development of Government models and simulations in support of the Future Combat Systems Synthetic Environment (FSE) which is integrated by the LSI. FSE is the simulation environment utilized in Integrated Mission Test 1. This development includes modifications to OOS as the core FSE simulation, the development of digital terrain databases, modifications to the RDECOM MATREX simulation federation, as well as the modifications of the OASES weather server. Funds the continued development of the 3CE Cross Command Distributed Network capabilities between FCS, ATEC, and RDECOM. This effort manages the use and reuse of individual command simulations to facilitate distributed integration and testing, thus reducing time and cost of material development and test. FY08 has funds the development of future simulations required for IP2 and IP3 Integrated Mission Tests. These simulations include the effects of communications in an urban environment as well as the inclusion of urban terrain into the FSE.		11140	
GOVERNMENT - MODELING & SIMULATION (M&S) FY09 - Continues funding of the Cross Command Collaboration Effort (3CE). Goals include the identification of requirements and design, develop, and integrate technologies and data related to user common areas of interest through FY13 that support FCS Program and user needs. Enables a multi-level secure network backbone; maintains a persistent and secure 3CE network (peering points); continues M&S systems process to develop common M&S and data architecture for IP2 and IP3. Support to IP2 laboratory events: Continues enhancements of the Communications Effects Server (CES) to support Quality of Service testing. Provides funding for FCS unique enhancements of OneSAF to support Tactical Network Gateway and FCS Battle Command. Other enhancements to OneSAF include the ability to aggregate unit command entities solely in the SAF thus allowing command and control at the Co and Bn levels. Continues the integration of representations of insurgents and the impact of urban terrain, building interiors, and competing urban radio frequencies into OneSAF and the CES.			11750
GOVERNMENT GFX - TRAINING Government GFX FY08 - PEO STRI SME Support: Continue Technical Management Integration support to the Training IPT throughout the development of the Training Common Components (TCC) effort between PEO STRI and PM FCS (BCT). FCS SME Oversight of TCC Software Architecture and Software development. Build 2 Drop 1 to FCS Training IPT and to LSI with initial embedded training functionality may be deferred due to multiple schedule pressures which would result in engineering releases vice FQT versions. TCC capabilities horizontally integrated across PEO STRI baseline program functionality. Government oversight of additional TCC construction. Government oversight of additional Live/Constructive Integration.		1564	
GOVERNMENT GFX - TRAINING Government GFX FY09 - Continue Technical Management Integration support to the Training IPT throughout the development of the Training Common components (TCC) effort between PEO STRI and PM FCS (BCT). PEO STRI SME Support. FCS TCC Software Architecture and Software. Build 2 Drop 2 to FCS Training IPT and to LSI. Fully integrated TCCs, with application running as a single SOSCOE application. Tight coupling between CTIA, OneSAF, and OneTESS subcomponents for a seamless Live/Virtual/Constructive solution. Complete Live/Virtual/Constructive interoperability between Live and Constructive training capabilities for an integrated solution. Fully SOSCOE compliant.			1463
Government GFX Contract Requirements - Provide M2,MK19 and the M240 ammunition required for LSI testing. Support Model and SIM updates to support JEFX08 and Experiment 2.		5432	
Other Government Support - This cost element includes support of other Government offices that provide technical expertise (TRADOC,UAMBL,ARL,FFID, etc) to ensure that the FCS SoS solution set is the best for the soldiers requirements. This also include other technical supports contracts like Sandia Labs,FIST, MITRE, Software Steering Committee from University South California and University of Maryland which also reviews LSI software performance. logistics products, network requirements and capabilities. In		106770	140423

addition to technical support, it also funds the development and implemetation of inherently Government Logistic,Training data products. It includes all Electronic Hardware and software required for government personnel (Computers,Blackberry,software, internet and ACE software agreements).			
CONTRACTOR SEPM - CONTRACTOR PROGRAM MANAGEMENT FY08 - Implement processes, models, tools and management structure to integrate all subcontractor partners into one team, to meet cost, schedules, and technical performance requirements in the contract. This includes program overview, demonstration, Earned Value Management, briefings, Demos, reports, meetings to support Program, risk management, subcontract management, Small and Minority Business Integration, data management, operation management, contract management, Procurement, Acquisition Management, SDD Affordability/CAIV/ Life Cycle Management, development of program baseline and Integrated Master Schedule Development. SEPM plans for FY08, include upgrade to the Single Integrated Model V4.0, SoSADD release, SoS Operational Views update, BCT Single Integrated Model V4.0 Update or Release, Architectural Single Integrated Model Version 3 update, Automatic Data Processing update. Planned Program Events are as follows: Brigade combat Team (BCT) Long Lead Item Waiver, Integration Verification 1 Initial Readiness Review (IV1 IRR), Integration of Brigade Combat Team Software Integration Verification 1 Build 1 (BCT SW IV1 B1), Integration Verification 1 After Action Assessment Review (IV1 AAAR), Engineering Integration 1 Assessment Anchor Point (EI1AAP), Engineering Iteration 2 Planning Anchor Point (EI2PAP), Engineering Iteration 3 Definition Anchor Point (EI3DAP), Start Integration Verification 1 Integrated Mission Tests 1 (IV1 IMT), Tactical Field Test _ Spin Out 1 (TFT _ SO1), Complete Experiment 2.0 and 2.1 (part of Joint Expeditionary Force Experiment _08), Start Experiment 3/JEFX _10, and release Brigade Combat Team Software Integration Verification 1 Build 1 (BCT SW IV1 B1).		180179	
CONTRACTOR SEPM - CONTRACTOR PROGRAM MANAGEMENT FY09 - Continue implementing the processes, models, tools and management structure to integrate all subcontractor partners into one team, to meet cost, schedules, and technical performance requirements in the contract. This includes program overview, demonstration, Earned Value Management, briefings, Demos, reports, meetings to support Program, risk management, subcontract management, Small and Minority Business Integration, data management, operation management, contract management, Procurement, Acquisition Management, SDD Affordability/CAIV/ Life Cycle Management, development of program baseline and Integrated Master Schedule Development. SEPM plans for FY09, include upgrade to the Single Integrated Model V4.0, SoSADD release, SoS Operational Views update, BCT Single Integrated Model V4.0 Update or Release, Architectural Single Integrated Model Version 3 update, Automatic Data Processing update. Planned Program Events are as follows: System of Systems Preliminary Design Review (SoS PDR), Spin Out 1 Milestone C (SO1 MS C), Capability Maturity 1 (CM1 ICDR (In-process Critical Design Review)), Engineering Iteration 2 Readiness Anchor Point (EI2RAP), Integration Verification 1 Assessment Complete (IV1 Assmnt Cmplt), Spin Out 1 Assessment Complete (SO1 Assmnt Cmplt), Integration Verification 2 Initial Readiness Review (IV2IRR), BCT SW Integration of Build 2 Final (B2 F), Continue to execute Experiment 3/JEFX _10, and Field Spin Out 1 to Current Force.			147828
CONTRACTOR SYSTEM REQUIREMENTS & INTEGRATION FY08 - Conducted SoS Engineering Maturity Review #1, Integration Phase 1 Assessment Anchor Point, Integrated Phase 2 Engineering Integration Planning Anchor Point as well as the SW Build 2 Planning Checkpoint and the Integration Phase 3 Definition Anchor Point. In support of these reviews, continuing development and maturation of the SoS Architecture with a release of the Single Integrated Model v4.x. Update and maintain the program technical baseline consisting of releasing the next version of the SoS Specification and Prime Item Development Specifications. Manage the execution of the System Level Preliminary Design Reviews. Planning for execution of System Level Critical Design Reviews (CDR). Integration and Verification Phase 1 (IV1) execution consisting of integrating SW build 2, SoSCOE and Prime Item models and simulations into the program SILs and executing the Integrated Mission Test. During the IV1 execution, data gathering, reduction and assessment will be conducted. Additionally, planning for IV Phase 2 begins in FY08 with the maintenance and update of the SoS Integration Plan. Experiment 2.1		448296	

execution occurs in 2008 culminating in the completion and publication of the Assessment Report. Planning and execution of Experiment 3.0 commences. Update the Integrated Analysis Plan and execute assessments in the areas of areas of KPP achievability, MANRPINT, Manpower Estimate, Human Systems Integration, Safety and force effectiveness for SoS PDR. Safety Assessment and MANPRINT analysis reports completed and released for SO1 (FDT&E, TFT, LUT), IMT1 and Experiment 2.1. Update the NEPA Assessment and complete ESOH Evaluation. Update, maintain and release the Design Concept Baseline and release the System of Systems/System Design Description (SSDD).			
CONTRACTOR SYSTEM REQUIREMENTS & INTEGRATION FY09 - Coduct the SoS Preliminary Design Review activities. Continuing development and maturation of the SoS Architecture. Update and maintain the program technical baseline consisting of releasing the next version of the SoS Specification and Prime Item Development Specifications. Manage the execution of the System of System Level Preliminary Design Review (SoS PDR). Develop requested test plan for Experiment 3.0 execution occurs in 2009 finishing in 2010. The SoS Integration Plan is updated for IP2 and IP3. Manage execution of System Level Critical Design Reviews (CDR). Update the Integrated Analysis Plan and execute assessments in the areas of areas of KPP achievability, MANRPINT, Manpower Estimate, Human Systems Integration, Safety and force effectiveness for SoS PDR. Safety Assessment and MANPRINT analysis reports Experiment 3.0. An update of the Programmatic NEPA Assessment and a Programmatic ESOH Evaluation will be completed. Update, maintain and release the Design Concept Baseline and release the System of Systems/System Design Description (SSDD).			354137
CONTRACTOR TRAINING PRODUCTS FY08 - Training Systems Planned Accomplishments: Continue integration of Embedded Training software and products in the Training Systems Integration Lab (SIL). Continue integration of Training software with Warfighter Machine Interface (WMI) leading to FCS Engineering Iteration 2. Deliver Training Common Component Build 2 Drop 1 (at minimum, engineering releases). Begin Delivery of Training Support Packages (TSPs). Continue training inputs and support to System PDRs. Continue Key Performance Parameter (KPP) #6 (Training) trace, development, and execution. Complete Training Support to SO1 Tech Field Test/Limited User Test - Apr 08. Complete Training Support to Integrated Mission Test 1 (IMT-1) - Sep 08. Complete Training Support to SoS Preliminary Design Review .		64598	
CONTRACTOR TRAINING PRODUCTS FY09 - 32 One Team Partners continue to develop Embedded Training capability and products for the FCS program, Experiment 3: Training (Instructional) Support Packages (TSPs), Interactive Multi-media Instruction (IMI), start design activities for Training Aids and Devices, Simulators and Simulations (TADSS), Embedded Training software. Deliver 4th increment of Training Common Components for FCS (ultimate reuse of 14.1 Million Govt. developed lines of code). Provide training inputs and support to FCS Systems CDRs. Continue Key Performance Parameter (KPP) #6 (Training) trace, development, and execution. Continue integration of Training software with Warfighter Machine Interface (WMI). Provide Training Support to prepare for SoS Capability Maturity Review 1/ ICDR. Continue integrating embedded training software and products in Training Systems Integration Lab (SIL). Complete Training support to SoS Capability Maturity Review 1/ICDR.			97607
CONTRACTOR SoS TEST FY08 - Complete SO1 Test Readiness Review for TFT. Conduct Technical Field Test. Support Force Development Testing/Experimentation. Support Limited User Test. Delivery TFT Final Report. Development and conduct Test Participant Training in support of IMT1. Complete IMT Test Readiness Review. Complete IMT Test Runs for Record and assess test results. Complete IP2 IPTP. IV 2 TFT - Develop Draft IV2 TFT Detailed Test Plan. Deliver Test Resources Requirements Document. IV2 IMT. Develop IV2 IMT Detailed Test Plan. Deliver Test Resources Requirements Document. Complete LSI Input to FCS TEMP in prep for PM Update for FCS SoS PDR. Complete Interim Update to ITEP. Support JEFX08 and FCS Experiment 2.		35979	
CONTRACTOR SoS TEST FY09 - Planned Accomplishments (IS&T) SoS Test. IP2. IMT2. Complete IMT2 Detailed Test Plan. Develop IMT2 Master Procedures Set. Prepare the Test Infrastructure (HW, SW, Participants, Facilities). Integrate and Initiate Execution			41899

of IMT 2 TFT2. Complete TFT2 Detailed Test Plan. Develop TFT2 Master Test Procedures Set. Prepare the TFT2 Test Infrastructure (HW, SW, Participants, Facilities , Ranges). IP3 early planning to support SSEI development of IP3 IPP. Complete Update to ITEP supports CR changes to FCS program. Support CTO & T&E WIPT issues resolution resulting from FCS TEMP update approval end of FY08. Support JEFX10 and Experiment 3.			
Contractor - Small Business Technology Insertion - Per HAC-D FY08 Earmark, the LSI will contract with one or more Small Business entities to provide transformational technologies for high risk/high rewards component and technology development. Since this is a relatively new requirement, the government and the contractor are negotiating this SOW into the contract and the contractor is developing SOW to compete with small businesses to reduce program technological risk. Also includes LSI fee.		20000	
CONTRACTOR FEE - This includes both the LSI incentive, 7.5% and fixed fee, 7.5%.		338257	325441
Small Business Innovative Research/Small Business Technology Transfer Programs		41896	
Total		1497321	1413945

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		1589466	1407410
Current BES/President's Budget (FY 2009)		1497321	1413945
Total Adjustments		-92145	6535
Congressional Program Reductions		-102059	
Congressional Recissions		-10086	
Congressional Increases		20000	
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			6535

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS MGV Manned Ground Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	26360							Continuing	Continuing
0604645 F53 UGV	106516							Continuing	Continuing
0604645 F54 UGS	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The original FCS Contract was awarded to the Lead Systems Integrator 30 May 2003 and definitized 10 Dec 2003, to Boeing. The LSI is responsible to PM FCS BCT to provide the following: Systems Engineering and Program Management, System Tests and Evaluation, Modeling and System, GFX Training, Government Support, Contractor Program Management, Contractor System Requirements and Integration, Contractor Training Products, Contractor System of Systems Test, and Distributing Contractor Fee. During FY09 the System of System Engineering and Program Management provides primary support to the Systems of Systems Platform Design Reviews (PDRs) and supplemental support to the platform Critical Design Reviews (CDRs) to finalize prototype efforts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604661A - FCS Systems of Systems Engr & Program Mgmt

PROJECT
FC2

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor SEPM	FAR	The Boeing Company-ST. LOUIS, MO, see remark 4				180179	1-3Q	147828	1-3Q		328007	
Contractor System Requirements and Integration	FAR	The Boeing Company-ST. LOUIS, MO, see remark 4				448296	1-3Q	354137	1-3Q		802433	
Contractor Training Products	FAR	The Boeing Company-ST. LOUIS, MO, see remarks 1-4				64598	1-3Q	97607	1-3Q		162205	
Contract Fee	FAR	The Boeing Company-ST. LOUIS, MO				338257	1-3Q	325441	1-3Q		663698	
Contractor- Small Business Technology Insertion	FAR	The Boeing Company-ST. LOUIS, MO				20000	1-3Q				20000	
Subtotal:						1051330		925013			1976343	

Remarks: Remark 1: Subcontractor: Computer Science Corp. Federal Sector Defense Group, Fslls Church,VA.
Remark 2: Subcontractor: Dynamics Research Corp. Systems Division, Andover, MD.
Remark 3: Subcontractor: Northrop Grumman, Info Tech, Def Enterprise Solutions Div, Mclean,VA.
Remark 4: Subcontractor: SAIC Corp., San Diego,CA

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government SEPM	Direct	PM FCS(BCT) - St Louis, MO				131941	1-3Q	135899	1-3Q		267840	
Government GFX - Training	Direct	PM FCS(BCT) - St Louis, MO				1564	1-3Q	1463	1-3Q		3027	
Government GFX Funding Support	Direct	PM FCS(BCT), St. Louis, MO				5432	2-3Q				5432	
Government - Other Support	Direct	PM FCS(BCT), St. Louis, MO				106770	2-3Q	140423	2-3Q		247193	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

SBIR/STTR		OSD				41896	2-3Q				41896	
Subtotal:						287603		277785			565388	

Remarks: remark 1 - Contractor currently being competed. In the down selection process

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor - SoS Test	FAR	The Boeing Company - St. Louis,MO				35979	1-3Q	41899	1-3Q		77878	
Government STE	Direct	PM FCS(BCT), St. Louis, MO , see remarks 1-3				111269	1-3Q	157498	1-3Q		268767	
Government - Modeling and Simulation	Direct	PM FCS(BCT), St. Louis, MO				11140	2-3Q	11750	2-3Q		22890	
Subtotal:						158388		211147			369535	

Remarks: Remark 1. Subcontractor, Netversant Co., Baltimore, MD
Remark 2. Subcontractor, 3D Research, Huntsville, AL
Remark 3. Subcontractor, Jacobs/Sverdrup, Aberdeen, MD

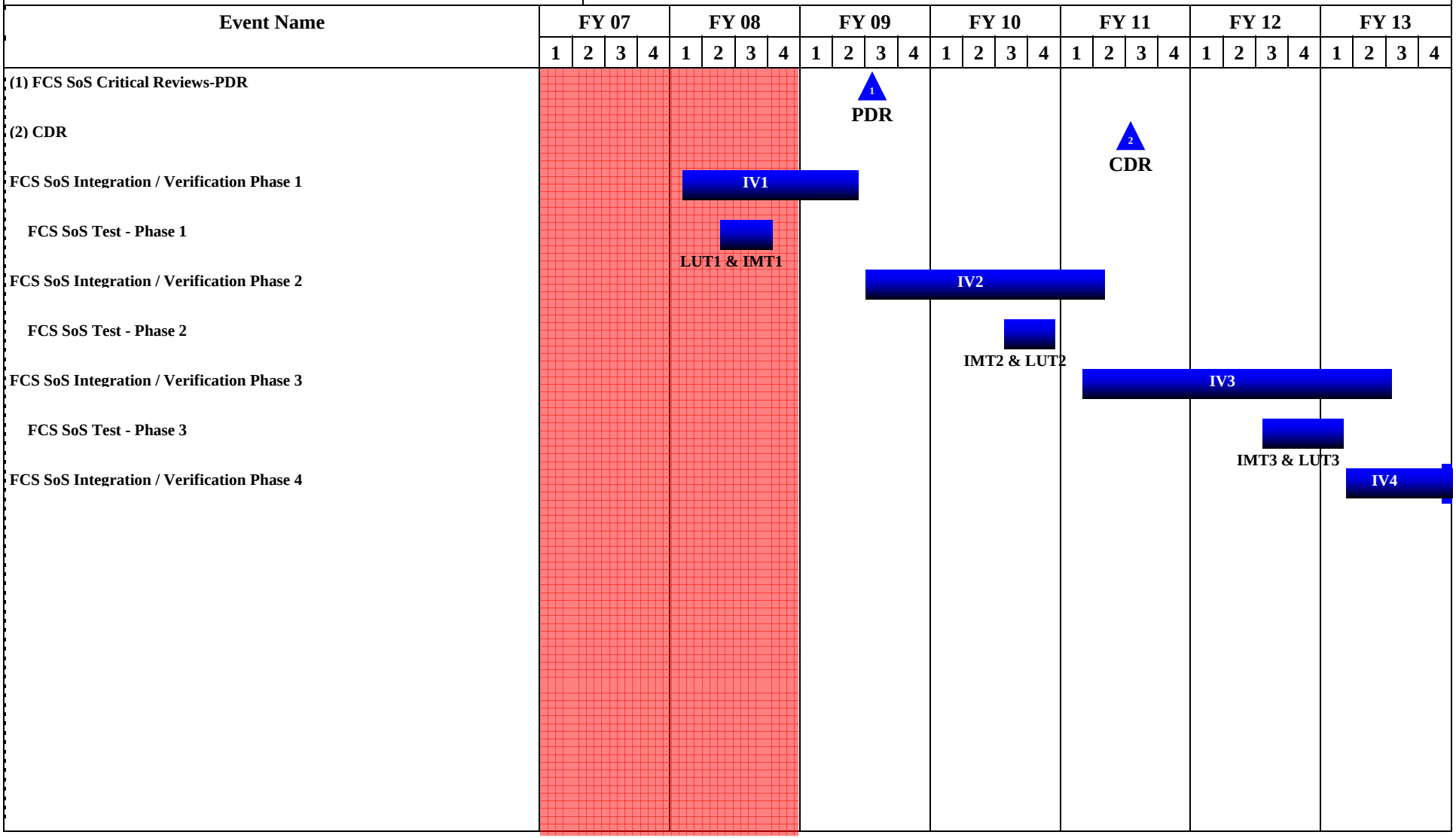
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:						**1497321**		**1413945**			**2911266**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604661A - FCS Systems of Systems Engr & Program Mgmt**	**FC2**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews-PDR			3Q				
CDR					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)							February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604661A - FCS Systems of Systems Engr & Program Mgmt**						PROJECT **FC2**
Funding in $000							
Program	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Other Termination		573100	550200	526200	464600	326700	211000
Special Termination		427600	415800	387500	352700	272200	176400
Total Termination Liability Funding:		1000700	966000	913700	817300	598900	387400

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC3	FCS RECONNAISSANCE (UAV) PLATFORMS		43388	34379	14296	9235	4556	1336	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Class I UAV provides the dismounted soldier Reconnaissance, Surveillance, and Target Acquisition (RSTA) and has the ability to hover and stare at military operations on rural and urban terrain. Class I senses and provides imaging to recognize personnel, day and night. Provides targeting information to the FCS network during day and night operations and in adverse weather from 1000 feet above ground level. Weighing less than 41 pounds, the air vehicle operates in complex urban and rural terrains with a vertical take-off and landing capability. The Class I system is carried in two custom MOLLEs and is air droppable with soldier.

The Class IV UAV has a range and endurance appropriate for the brigade mission. Class IV supports the BCT Commander with communications relay, long endurance persistent stare, and wide area surveillance over 75km radius. Unique missions include dedicated manned and unmanned teaming (MUM) with manned aviation; Emitter Mapping; Wide Band Communications Relay across 150-175 km; and standoff Chemical Biological Radiological, Nuclear, and Energy (CBRNE) detection with on-board processing. Additionally, Class IV has the payloads to enhance the RSTA capability by cross-cueing multiple sensors. It operates at survivable altitudes at standoff range day and night and during adverse weather. The Class IV Firescout is a joint effort with the Navy program and is enhanced with FCS capability in a two phase assembly process. Phase I corresponds to approximately 90% of the complete assembly, includes major components airframe, engine, and wiring harness. Phase II assembly adds the unique avionics and payloads completing the FCS Class IV UAV.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
IAW Section 214 of the FY2006 National Defense Authorization Act, this Program Element was established commencing with FY2008 President's Budget request. This Program Element replaced the previous Project F57 under the Armored System Modernization Program Element 0604645A. The major FY2007 program accomplishments for that project are described below to show continuity of the development efforts.			
UAV CLASS I FY08. Execute Experiment 2.1 and document the operation of the Class I surrogate (MAV system) utilizing a JTRS surrogate (SLICE) radio link and the SRW waveform. Participate in Joint Expeditionary Force Experiment (JEFX)/Experiment 2.1 to determine value of manned/unmanned teaming with Apache AH-64 D and UAV Class IV Surrogate, disseminating stream videos over future networks. Begin Early Air Vehicle Integration in the Class I System Integration Lab (SIL) to support software development for EO/IR/LD/LRF sensor control, air vehicle flight controls, heavy fuel engine integration, executing mission sets, and development of risk reduction testing procedures. Field the design of the larger improved Class I UAV that has the capability to carry the laser designator sensor. Continue to improve the reliability of the components that go into the Class I UAV and continue to improve research and test efforts for 25 MAV Unmanned Systems located at the 25th Infantry Division.		19073	
UAV CLASS I FY09. Conduct Class I PDR beginning 1st qtr FY09. Procure Engines and Airframes for Early Developmental Assets (EDAs). Initial Class I risk reduction testing: Tethered Flight (Airframe & Heavy Fuel Engine) during 4th qtr FY09. Begin Class I System Integration in the Class I SIL to support software development for EO/IR/LD/LRF sensor control, air vehilce flight controls,			14259

heavy fuel engine integration, executing mission sets, and to support risk reduction testing of Engineering Design Assets in order to meet threshold requirements. Begin design effort required to support the Class I Critical Design Review (CDR) scheduled for 2nd qtr FY10.			
UAV CLASS IV FY08. Continue Integration Phase 2 activities to include Engineering Iteration 2, Integration and verification -- Phase 2, and Operational Flight Software Build 2. Support System of System logistics and training. Accept delivery of Army/Navy common airframes A6-A8. Complete Phase 1 of air vehicle assembly at Moss Point, MS for Air Vehicles #A3-A5, less FCS-unique avionics/payloads. Rotor Hub Fatigue Test will be completed. Vendor level component and subsystem delta testing for Electromagnetic Environmental Effects and Temperature will conclude. Delivery of Class IV Simulation Build to SoSIL. Begin planning for FY09 PDR. There will be approximately 96 drawings completed for PDR. A total of 46 are completed to date. Continue initial build software development.		22372	
UAV CLASS IV - FY09. Conduct Class IV UAVS PDR beginning 1st qtr FY09. Complete Phase 1 of air vehicle assembly at Moss Point, MS for Air Vehicles #A6-A8, less FCS-unique avionics/payloads. Accept delivery of emulator and brass board Air Platform Communications Systems (APCS) Hardware for initial integration into several FCS SILs. Begin integration of Build 2 Final (B2F) Engineering Release SW into NGC SIL for Integrated Qualification Test (IQT). Begin planning for Class IV CDR scheduled to begin 1st qtr FY10.			20120
GFX- Develop the mission kit for the Class IV Surrogate and install in UH-1 flight test to achieve Air Worthiness approval. The Class IV Surrogate capabilities include a day camera providing Intelligence, Surveillance and Reconnaissance (ISR) to Highband Networking Waveform (HNW) and Tactical Common Data Link (TCDL) transport layers allowing the opportunity to experiment with Manned/Unmanned Teams. Also provides Airborne network thickening via comms relay for HNW, Wideband Networking Waveforms (WNW), and Soldier Radio Waveforms (SRW). Completion of the Apache participation in the Joint Expeditionary Force Experiment (JEFX) 2.1 which integrates Soldier Radio Waveform (SRW) and the H264 video card onto an AH-64D. Some additional JEFX 2.1 Capabilities: Video processing capability to translate high bandwidth video sources (i.e. raw ISR data) down to more bandwidth efficient video streams suitable for transmission over SRW and WNW. Data archival and retrieval. Receipt of Apache video on TCDL network. TCDL crossbanding into HNW allows for the Apache to join the FCS HNW network. Early demonstration of TIER 1 Aviation interoperability through WIN-T.		729	
Small Business Innovative Research/Small Business Technology Transfer Programs		1214	
Total		43388	34379

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		41164	34220
Current BES/President's Budget (FY 2009)		43388	34379
Total Adjustments		2224	159
Congressional Program Reductions		-276	
Congressional Recissions			
Congressional Increases		2500	
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			159

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108649	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19978	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	26360							Continuing	Continuing
0604645 F53 UGV	106516							Continuing	Continuing
0604645 F54 UGS	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The Original FCS Contract was awarded to the Lead Systems Integrator 30 May 2003 and definitized 10 Dec 2003, to Boeing. The LSI contracted with its One Team Partners, Honeywell (NM) and Northrop Grumman (CA). A series of prototypes were developed in FY2008 and will continue into FY2009. In FY09 the Class I UAV will be accelerated to the Army Evaluation Task Force (AETF) to conduct initial testing as well as to develop Tactics, Techniques and Procedures and concepts of the operation in the FCS BCT construct.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604662A - FCS Reconnaissance (UAV) Platforms

PROJECT
FC3

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Class I	FAR	Boeing Co., St. Louis, MO See Remark 1				19073	1-3Q	14259	1-3Q		33332	
Class IV	FAR	Boeing Co., St. Louis, MO See Remark 2				19872	1-3Q	20120	1-3Q		39992	
GFX	MIPR	PM FCS (BCT), ST Louis,MO				729	1-3Q				729	
Congressional Earmark	Direct	TBD				2500	2-3Q				2500	
Subtotal:						42174		34379			76553	

Remarks: Remark 1: Subcontractor: Honeywell International, Inc - Albuquerque, New Mexico
Remark 2: Subcontractor: Northrop Grumman Unmanned Systems - San Diego, CA

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	Direct	OSD				1214	1-2Q				1214	
Subtotal:						1214					1214	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

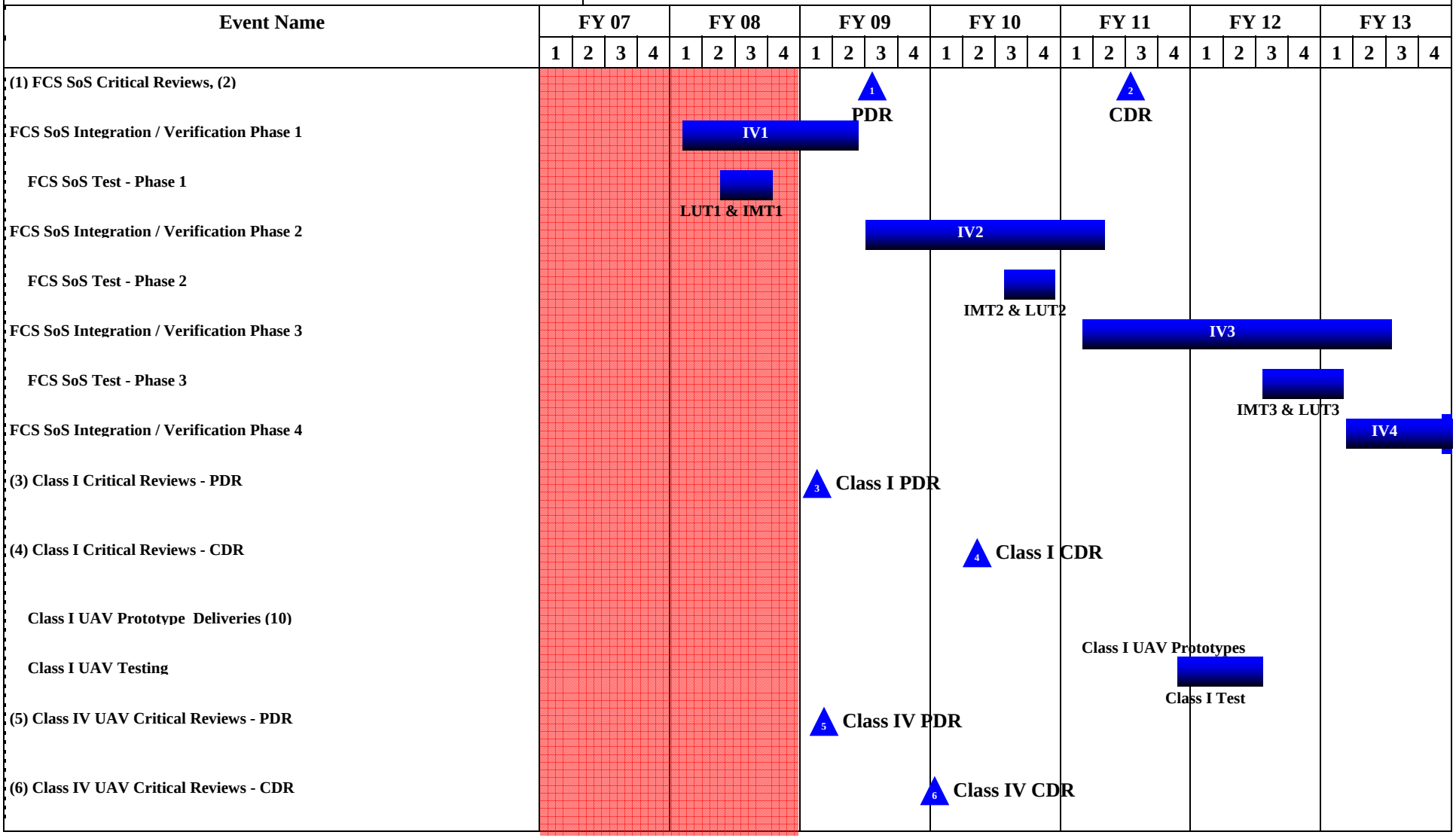
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)											February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604662A - FCS Reconnaissance (UAV) Platforms**										PROJECT **FC3**
Subtotal:											
Project Total Cost:				**43388**		**34379**			**77767**		

Schedule Profile (R4 Exhibit)

February 2008

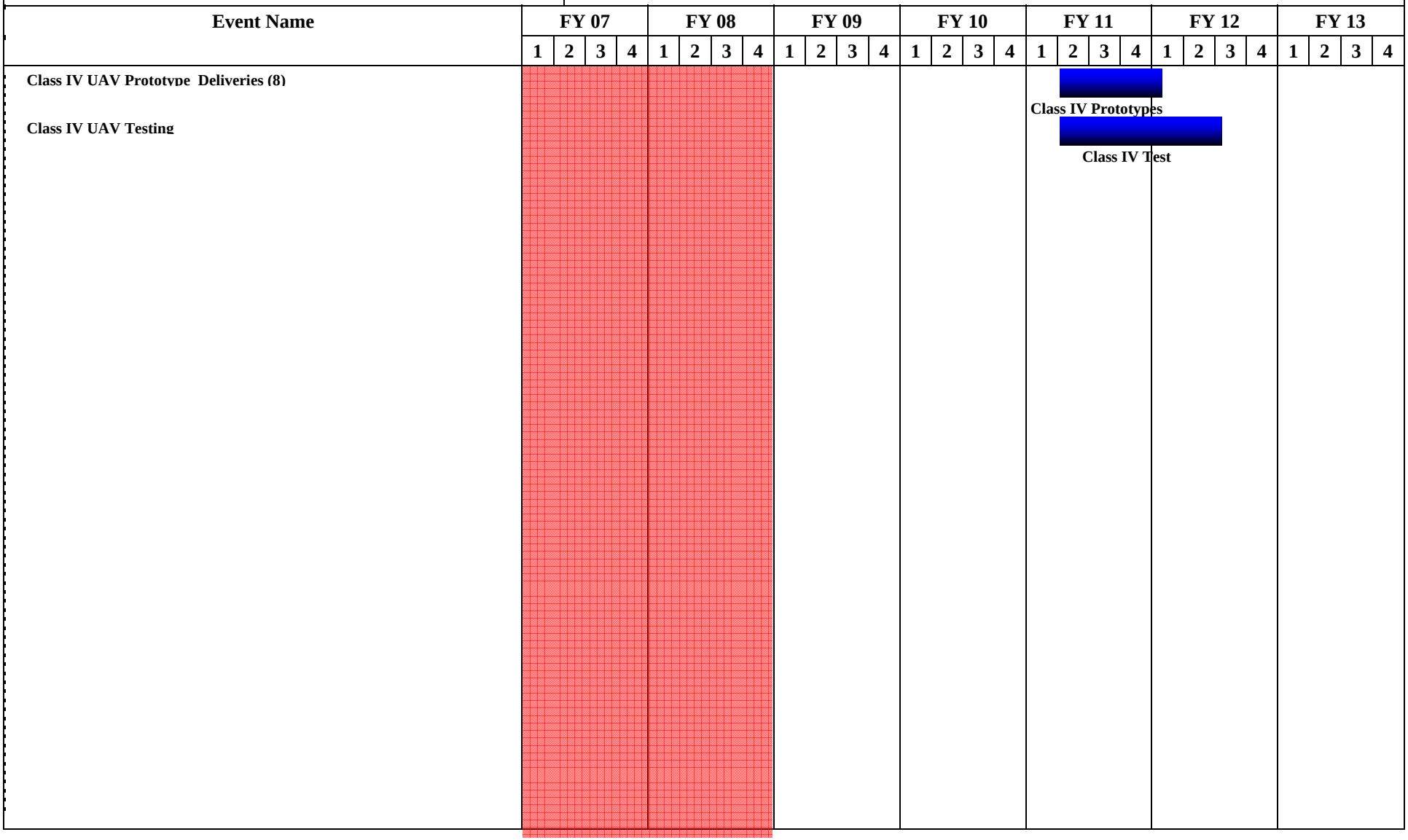
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604662A - FCS Reconnaissance (UAV) Platforms**	**FC3**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604662A - FCS Reconnaissance (UAV) Platforms

PROJECT
FC3

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews			3Q				
					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							
Class I Critical Reviews - PDR			1Q				
Class I Critical Reviews - CDR				2Q			
Class I UAV Prototype Deliveries (10)					4Q		
Class I UAV Testing					4Q	1Q - 3Q	
Class IV UAV Critical Reviews - PDR			1Q				
Class IV UAV Critical Reviews - CDR				1Q			
Class IV UAV Prototype Deliveries (8)					2Q - 4Q	1Q	
Class IV UAV Testing					2Q - 4Q	1Q - 3Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC4	FCS UNMANNED GROUND VEHICLES		90091	96918	64744	43601	26855	3580	Continuing	Continuing

A. Mission Description and Budget Item Justification: Three variants of Unmanned Ground Vehicle (UGV) include the following:

Multifunction Utility/Logistics Equipment (MULE) vehicle is a 3.5-ton UGV that will support dismounted operations. It is comprised by the integration of 4 major components: Common Mobility Platform, ANS, Centralized Controller (CC), and 3 mission equipment packages/variants. The MULE has 3 variants sharing the common mobility chassis; transport, countermine, and the ARV-A (L). The MULE-T will carry 1,900-2,400 lbs of equipment and rucksacks for dismounted infantry squads with the mobility needed to follow squads in complex terrain. The MULE-C will provide the capability to detect, mark, and neutralize individual anti-tank mines by integrating a mine detection mission equipment package from the Ground Standoff Mine Detection System (GSTAMIDS) program to support force mobility. The ARV-A (L) is a mobility platform with an integrated weapons and target acquisition package to support the dismounted infantry's efforts to locate and destroy enemy platforms and positions. The MULE platforms are CH-47 transportable.

Small Unmanned Ground Vehicle (SUGV) is a lightweight, manportable, DC powered UGV capable of conducting Military Operations in Urban Terrain (MOUT) tunnels, sewers, and caves. The SUGV enables the performance of manpower intensive or high-risk functions (i.e. urban Intelligence, Surveillance, and Reconnaissance (ISR) missions, chemical/Toxic Industrial Chemicals/Toxic Industrial Materials, reconnaissance, etc.) without exposing soldiers directly to the hazard. Weighing less than 30 lbs, it is capable of carrying up to 6 lbs of payload weight. The SUGV will have the following capabilities: tether payload, manipulator arm, Chemical, Biological, Radiological, Nuclear (CBRN) capabilities and the potential for integrating future technologies for Sense Through the Wall and Mine/Unexploded Ordance (UXO)/Improvised Explosive Devise (IED) detection ability. It can operate up to 3 hours on a single charge.

Autonomous Navigation System (ANS) is the mission payload package that will be integrated on the MULE to provide robotic semiautonomous capability. ANS provides Global Positioning System (GPS)/Inertial Navigation System (INS) core navigation, targeting support and timing. The ANS primary system components are: the LADAR Imaging Perception Module (LIPM), the Imaging Perception Module (IPM), the Millimeter Wave Radar (MMWR), the GPS/INS, and the ANS Computer System (ACS). ANS provides day and night capability in all weather and mobility control for on/off roads, cross country and complex terrain. MMWR provides tracking in rain, smoke, or fog along with an early warning for approaching vehicles with high closing rates. ACS provides SoSCOE interface, path planning, video processing, hardware sensor processing object processing and speed and curvature commands. The ANS software development baseline is a phased approach consisting of three builds. Build 1 supports simulation and early prototypes using external waypoints at limited speeds. Build 2 supports emulator and prototype hardware using internal generated waypoints at increased speeds on roads. Build 3 will meet all ANS threshold requirements for speed, terrain types and operational modes: semiautonomous and leader-follower.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
IAW Section 214 of the FY2006 National Defense Authorization Act, this Program Element was established commencing with FY2008 President's Budget request. This Program Element replaced the previous Project F57 under the Armored System Modernization Program Element 0604645A. The major FY2007 program accomplishments for that project are described below to show continuity of the			

development efforts.			
MULE - FY08 - Begin Critical Design Review (CDR) design activities in January 2008. CDR expect 600 Drawings to be complete. Begin Hardware in the Loop (HWIL) Testing to support Build 2. Continue M240 Weapons Integration Test Firing. Support Integration Mission Test (IMT1) in SoSIL. Update and deliver Simulations for MULE to SoSIL in June 2008. Continue development and integration of Build 2 Software. Conduct Life Cycle Objectives (LCO) and Life Cycle Architecture (LCA) for Build 2 Software in May 2008. Prepare Software Artifacts to support CDR in 1st qtr, FY10. Begin Build 3 Software Development in 1st qtr FY08. Six M240 Guns (Government Furnished Equipment (GFE)) were delivered to Lockheed on October 22, 2007. No other FY08 procurements or deliveries.		51017	
MULE - FY09. Complete software development for manual sensor control, mine neutralization and executing vehicle mission plans for Prototype Integration in April 2008. Complete ARV-A(L) Simulation interim Technical Readiness Review (iTRR) and interim Functional Qualification Test (iFQT) for Integrated Mission Test (IMT) 1 and delivery to SoSIL. Begin Hardware in the Loop (HWIL) Integration & Performance Testing in May 2009. Begin Integration Verification (IV) -2 VSIM integration in May 2009. Continue Final Phase of Software Development. Conduct CDRs on MULE-Transport, MULE-Countermine, and ARV-A (L) in 1st qtr FY10. Begin Long Lead items procurement of subsystems (engine and suspension) supporting FY10 Build of 16 Prototypes. Continue HWIL Testing to support Prototype Development and Build of 16 Prototypes. Continue Regression Testing to support Software and Simulation Deliveries. Continue Test Planning to support FY 11 Integrated Qualification Test (IQT). Complete Initial Javelin and 66mm Integration Testing to support final weapon system design. Software development to support HWIL Testing and delivery of 16 Prototypes beginning June 2011.			50857
SUGV FY08 - Conduct Technology and Integration Risk Reduction Activities, to include Platform Mobility (power, propulsion, & suspension) and Sensor Integration. Develop Integrated UGV Platform Simulations. Complete Pre-Prototype Development, Build and Testing. Conduct SUGV PDR in 4th qtr FY08. Begin procurement of SUGV Prototype Hardware for Integrated Qualification Test (IQT). Update and deliver Simulations for SUGV to SoSIL. The Pre-prototype SUGVs are Early Developmental Assets (EDAs).The pre-prototypes (EDAs) are developed in three rounds. Each "Round"consist of pre-prototype vehicles. Round 1 - Designed, built and tested major sub assemblies (flippers, neck, head, etc.). Round 2 - Combined major sub assemblies from Round 1 to form the complete robot and performed capability and environmental testing. Round 3 - Integrates improvements generated from Round 2 testing and requirements changes and re-test to full specification. FY08 will Complete Development, build, and test Pre-prototype Round 3.		8074	
SUGV FY09 - Take delivery of prototype C4ISR components in 4th qtr FY09. These include the ICS, JTRS and GPS components. iRobot will integrate and test the C4ISR components, as well as System of Systems Common Operating Environment (SoSCOE) , 4th qtr FY09 to 1st qtr FY10. Conduct SUGV CDR in 1st qtr FY10. Five prototypes will be delivered to the LSI to begin Integrated Qualification Testing (IQT) 2nd qtr FY11. Begin integration of Build 2 Final (B2F) software with SUGV prototypes.			8211
ANS FY08 - Conducted PDR on November 15, 2007. Five Drawing were released at PDR. Continue integration and test of ANS hardware on six surrogate vehicle Platforms in order to support ANS development. Prepare documentation and artifacts for upcoming CDR, planned for 4th qtr FY09. Conduct ANS Robotic Convoy Experiment Phase II and Phase III. Continue Technology and Integration Risk Reduction Activities such as Robotic Convoy and MULE EEU Testing which will enhance the maturation of the ANS design. Conduct Hardware Environmental Testing, February 2008 through May 2008. Begin ANS Integration & Test on Emulators & Prototypes in May 2008. Provide Software Build 1 SIL Test Support during 1st and 2nd qtr FY08. Support RVCA tests in FY08. Conduct preparation, development, integration and test for ANS Engineering Phase (EP) 10 through 12 of Build 2 ANS Software Development. Conduct preparation, development, integration and test for ANS Engineering Phase (EP) 13 and start EP 14 of Build 3 ANS Software Development. Update and deliver ANS Simulation to MULE May 2008. ANS Simulation for SW Build 2 completes FQT. Development of Engineering Release for ANS Software Build 2. Final ANS Simulation / Operational Software to deliver 2nd qtr FY08.		28479	

ANS FY09 - Conduct ANS CDR during 4th qtr FY09. Conduct ANS Production Readiness Review (PRR1) 4th qtr FY09. Produce and deliver three ANS Emulators plus 18 cameras NLT 2nd qtr FY11 for: SIL Infantry Carrier Vehicle (ICV), SIL Mounted Combat System (MCS), SIL Non-Line of Sight - Cannon (NLOS-C). Produce and deliver twelve ANS Emulators w/o cameras NLT 2nd qtr FY11 for: Automotive Test Rig SIL Mounted Combat System (MCS), MULE Armed Robotic Vehicle - Assault (Light) (ARV-A(L)) SIL, Mule Countermine (C) SIL, Mule Transport SIL, Command and Control Vehicle (C2V) SIL, FCS Recovery and Maintenance Vehicle (FRMV), SIL Medical Vehicle (MV), SIL Non-Line of Sight - Mortar (NLOS-M) and SIL Reconnaissance Scout Vehicle (RSV). Continue Platform Integration & Test on MULE (Emulators & Prototypes). Conduct preparation, development, integration & test for ANS Engineering Phase (EP) 14 through 18 of Phase Three ANS Software Development. Complete ANS Software Build 3 Life Cycle Objectives (LCO) and Life Cycle Architecture (LCA) NLT 4th qtr FY11.			37850
Small Business Innovative Research/Small Business Technology Transfer Programs		2521	
Total		90091	96918

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		90667	96666
Current BES/President's Budget (FY 2009)		90091	96918
Total Adjustments		-576	252
Congressional Program Reductions		-576	
Congressional Recissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			252

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS M060anned Grd Vehicles & Common Grd Vehicle Components		592244	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762	Continuing	Continuing
0604645 F52 UAV Recon & Sensors	26360							Continuing	Continuing
0604645 F53 UGV	106516							Continuing	Continuing
0604645 F54 UGS	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The original FCS Contract was awarded to the Lead Systems Integrator 30 May 2003 and definitized 10 Dec 2003, to Boeing. The LSI contracted with its One Team Partners, Lockheed Martin Missiles, to produce the Multifunction Utility/Logistics and Equipment Countermine and Transport MULE-T and Armed Robotic Vehicle - Assault (light) (ARV-A-L), iRobot Corportation, Burlington (MA) producing the Small Unmanned Ground Vehicle (SUGV), and General Dynamics Robotics Systems, Westminster (MD) producing the Autonomous Navigation System (ANS). In FY09 the SUGV will be accelerated to the Army Evaluation Task Force (AETF) to conduct initial testing as well as to develop Tactics, Techniques and Procedures and concepts of the operation in the FCS BCT construct.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604663A - FCS Unmanned Ground Vehicles

PROJECT
FC4

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Small Unmanned Ground Vehicle (SUGV)	FAR	The Boeing Company, St Louis, MO see remark 1				8074	1-3Q	8211	1-3Q		16285	
Autonomous Navigation System - Software	FAR	The Boeing Company, St Louis, MO see remark 3				28479	1-3Q	37850	1-3Q		66329	
MULE	FAR	The Boeing Company, St Louis, MO see remark 2				51017	1-3Q	50857	1-3Q		101874	
Subtotal:						87570		96918			184488	

Remarks: Remark 1: Subcontractor: iRobot Corp. - Burlington, MA
Remark 2: Subcontractor: Lockheed Martin Missile and Fire Control - Grand Prairie, TX
Remark 3: Subcontractor: General Dynamics Robotic Systems - Westminister, MD

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	Direct	OSD				2521	2-3Q				2521	
Subtotal:						2521					2521	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

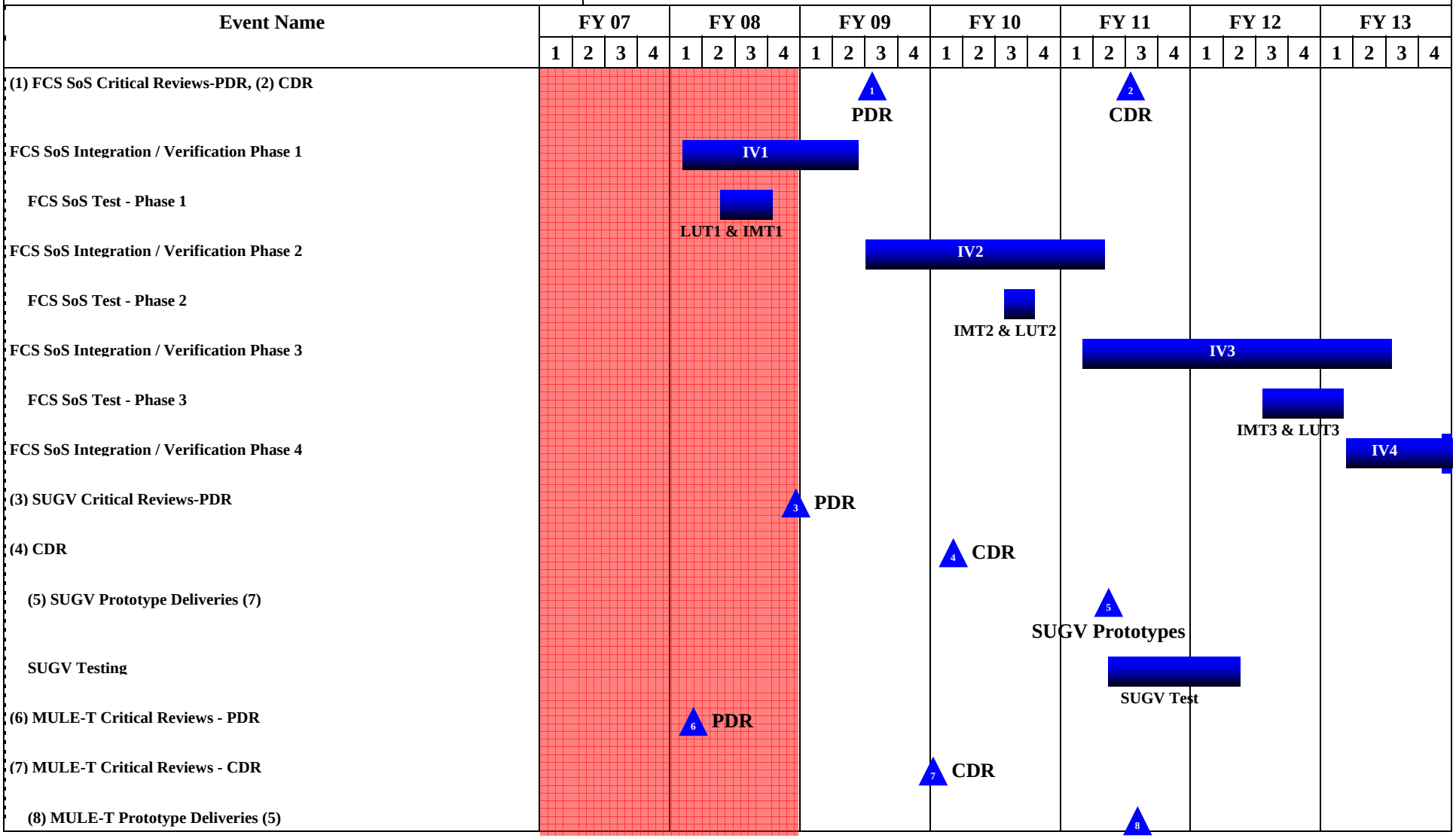
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Subtotal:												
Project Total Cost:						**90091**		**96918**			**187009**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**



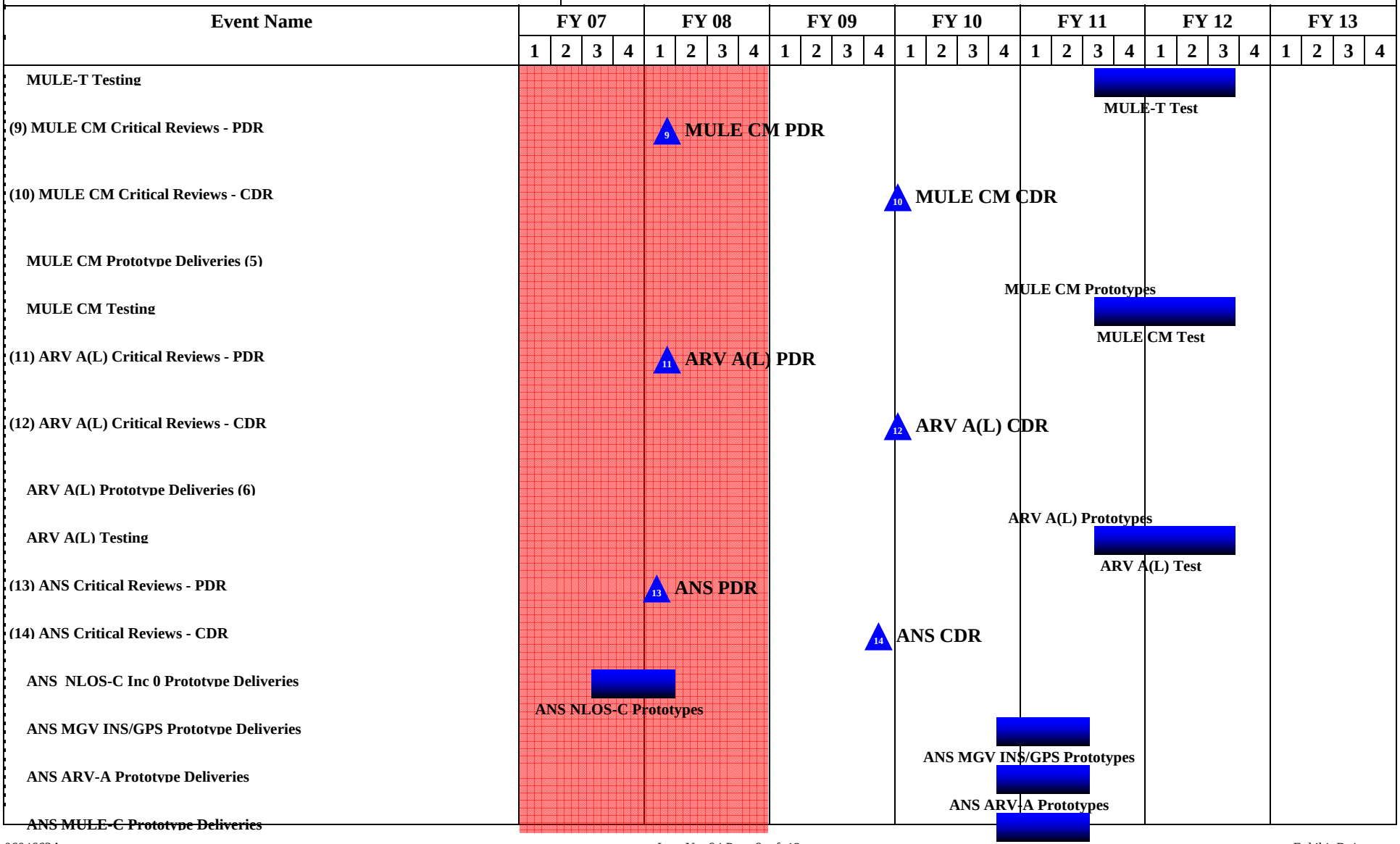
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604663A - FCS Unmanned Ground Vehicles

PROJECT
FC4



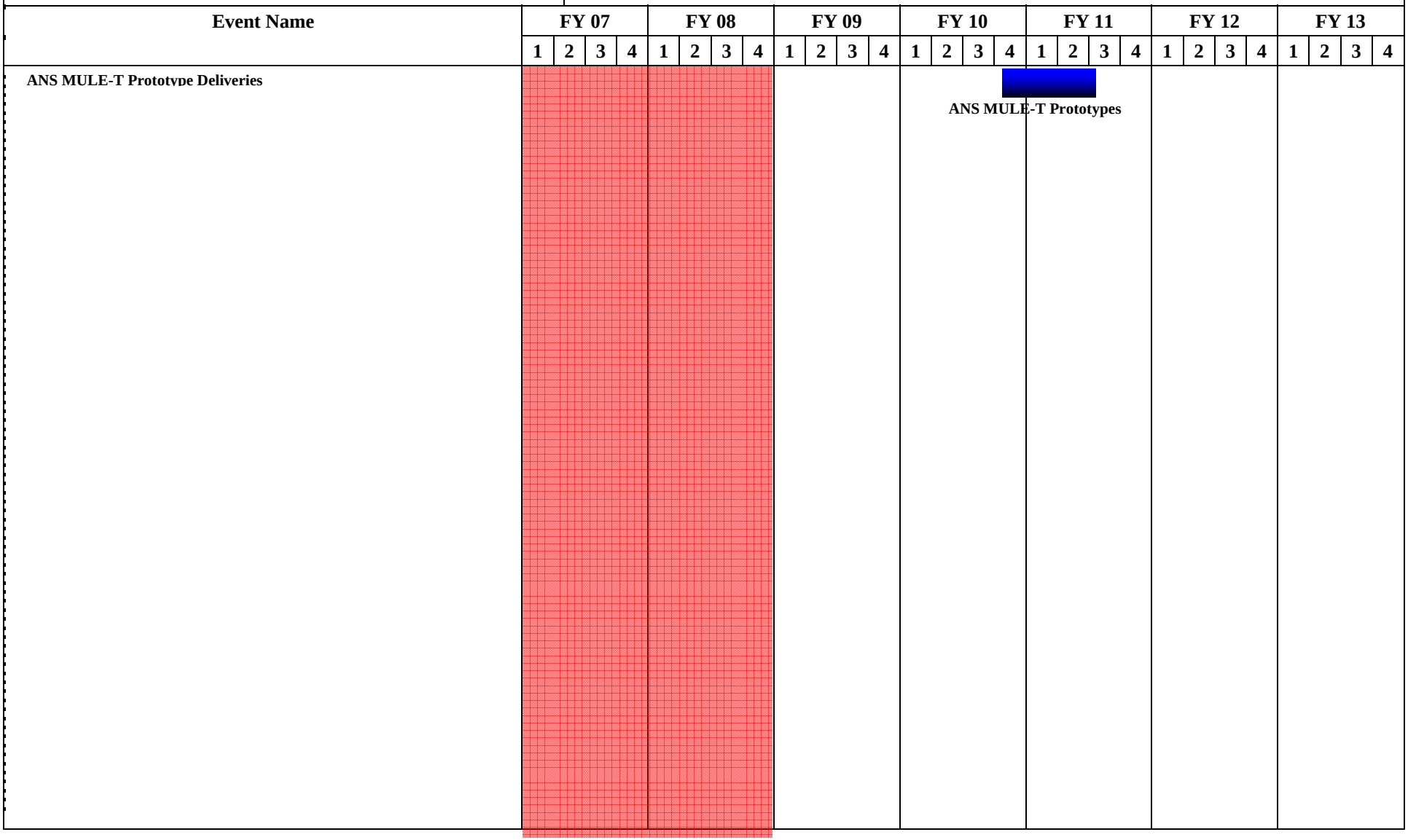
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604663A - FCS Unmanned Ground Vehicles

PROJECT
FC4



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604663A - FCS Unmanned Ground Vehicles**	**FC4**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews-PDR			3Q				
CDR					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							
SUGV Critical Reviews-PDR		4Q					
CDR				1Q			
SUGV Prototype Deliveries (7)					2Q - 4Q		
SUGV Testing					2Q - 4Q	1Q - 2Q	
MULE-T Critical Reviews - PDR		1Q					
MULE-T Critical Reviews - CDR				1Q			
MULE-T Prototype Deliveries (5)					3Q		
MULE-T Testing					3Q - 4Q	1Q - 3Q	
MULE CM Critical Reviews - PDR		1Q					
MULE CM Critical Reviews - CDR				1Q			
MULE CM Prototype Deliveries (5)					3Q		
MULE CM Testing					3Q - 4Q	1Q - 3Q	
ARV A(L) Critical Reviews - PDR		1Q					
ARV A(L) Critical Reviews - CDR				1Q			
ARV A(L) Prototype Deliveries (6)					3Q		

ARV A(L) Testing					3Q - 4Q	1Q - 3Q	
ANS Critical Reviews - PDR		1Q					
ANS Critical Reviews - CDR			4Q				
ANS NLOS-C Inc 0 Prototype Deliveries	3Q - 4Q	1Q - 2Q					
ANS MGV INS/GPS Prototype Deliveries				4Q	1Q - 3Q		
ANS ARV-A Prototype Deliveries				4Q	1Q - 3Q		
ANS MULE-C Prototype Deliveries				4Q	1Q - 3Q		
ANS MULE-T Prototype Deliveries				4Q	1Q - 3Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC5	FCS UNATTENDED GROUND SENSORS		10929	12967	18968	16754				59618

A. Mission Description and Budget Item Justification: The FCS BCT Unattended Ground Sensors (UGS) program is divided into two major configurations of sensing systems: URBAN-UGS (U-UGS), also known as Urban Military Operations in Urban Terrain (MOUT) Advanced Sensor System (UMASS):and TACTICAL-UGS (T-UGS), which includes Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Chemical, Biological, Radiological and Nuclear (CBRN)-UGS. U-UGS - Will provide a low cost, network-enabled reporting system for Situational Awareness (SA)and force protection in an urban setting, as well as residual protection for cleared areas of urban MOUT environments. The U-UGS system can support BCT operations by monitoring urban choke points such as rooms, halls, attics, basements, sewers, culverts, tunnels, caves, and alleyways. They can be hand-emplaced by Soldiers or robotic vehicles either inside or outside buildings and structures. When a platoon or squad clears a building for example, U-UGS are left behind to perform surveillance that would otherwise require dedicated soldiers.

The U-UGS system provides a self-organizing wireless network that consists of three configuration items; personnel detect sensors, imaging sensors, and gateways.
1. Personnel Detect Sensors provide dual mode, passive infrared and RF microwave motion sensing for "trip-wire" detection of intruders.
2. Imaging Sensors provide electro-optical visual imaging with a near-infrared illuminator for operation in full darkness.
3. Gateways organize and manage the sensor network, and communicate sensor data to FCS C2 Joint Tactical Radio System (JTRS) systems and to the local dismounts.

T-UGS - Tactical-UGS (T-UGS) includes Intelligence, Surveillance and Reconnaissance (ISR)-UGS and Chemical, Biological, Radiological and Nuclear (CBRN)-UGS. The UGS (T-UGS) are designed for remote tactical operations in open spaces, at road choke points, avenues of approach, etc, and are designed to be emplaced by hand or by remote deployment methods. T-UGS provides ISR and CBRN awareness to the FCS (BCT) areas not covered by manned/unmanned ground/air vehicles. Packaging the common form factor enables simplified scalability and upgrade paths for future technology insertion, while the distributed sensing capability enhances mission flexibility and system versatility. The T-UGS system consists of five configuration items (nodes), each containing a unique set of sensing capabilities, and sharing a common hardware form factor.
1.The T-UGS ISR sensor node provides for vehicle and personnel detection capabilities via seismic, acoustic and magnetic sensors. Seismic sensors are the primary means of personnel detection. The principal means of vehicle detection and tracking are the acoustic bearing sensors. The ISR-UGS will be modular and composed of tailorable sensor groups using multiple ground-sensing technologies. Multiple sensors support precision location and simultaneous tracking of multiple targets.
2. When confirmed as a valid target of interest, Electro Optical/Infrared (EO/IR) sensor nodes will autonomously capture multiple images of the target.
3. The CBRN node provides for chemical, biological, radiological, and nuclear sensing and reporting capability.
4. The Hazard/Clear Lane Marker (H/CLM) nodes are deployed to mark hazardous keep-out zones, or to define cleared lanes though hazardous areas such as minefields.
5. The final component of the T-UGS system is the Long-Haul gateway node that provides radio communications and integration into the FCS network.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
IAW Section 214 of the FY2006 National Defense Authorization Act, this Program Element was established commencing with FY2008 President's Budget request. This Program Element replaced the previous Project F57 under the Armored System Modernization Program Element 0604645A. The major FY2007 program accomplishments for that project are described below to show continuity of the			

development efforts.			
UNATTENDED GROUND SENSORS FY08 - UNATTENDED GROUND SENSORS - FY08 - Complete and release Thresholds PIDS. Complete delivery of 16 U-UGS and 10 T-UGS systems by 2nd Qtr 08. Complete safety certification at SO1 LUT Qualification Testing. Provide technical support to TFT & LUT test at JEFX 08. Update Future UGS LRIP Design by changing MSRT radio into a JTRS HMS. Conducting affordability initiatives to attempt to lower production costs. Also redesigning deck shape and material to lower production costs and make emplacement easier.		10623	
Unattended Ground Sensors FY09 - Conduct CDR for SO1 LRIP UGS design, incorporating new radio and affordability configurations. Build, qualify and deliver UGS systems for CVT (5 each T-UGS and 5 U-UGS). Conduct SRR for UGS Core Systems.			12967
Small Business Innovative Research/Small Business Technology Transfer Programs		306	
Total		10929	12967

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		10999	12942
Current BES/President's Budget (FY 2009)		10929	12967
Total Adjustments		-70	25
Congressional Program Reductions		-70	25
Congressional Recissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS M060anned Grd Vehicles & Common Grd Vehicle Components		592244	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight _ Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762		134020
0604645 F52 UAV Recon & Sensors	41813							Continuing	Continuing
0604645 F53 UGV	104301							Continuing	Continuing
0604645 F54 UGS	10391							Continuing	Continuing
0604645 F55 SUSTAINMENT	104302							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	516217							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2150508							Continuing	Continuing

Comment:

D. Acquisition Strategy The original FCS Contract was awarded to the Lead Systems Integrator 30 May 2003 and definitized 10 Dec 2003, to Boeing. The LSI contracted with its One Team Partner, Textron Systems, Wilmington, (MA) producing the Urban Unattended Ground Sensors (U-UGS) and Tactical Unattended Ground Sensor (T-UGS). T/U UGS prototypes were delivered to the Army Evaluation Task Force (AETF) and will complete Spin Out 1 Milestone C in Jan 09.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604664A - FCS Unattended Ground Sensors

PROJECT
FC5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Unattended Ground Sensors (UGS)	FAR	The Boeing Company - St Louis, MO See Remark 1				10623	1Q	12967	1Q		23590	
Subtotal:						10623		12967			23590	

Remarks: Remarks 1: Subcontractor: Textron Systems, Intelligent Battlefield System Division - Willington, MA

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR		OSD				306	2-3Q				306	
Subtotal:						306					306	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

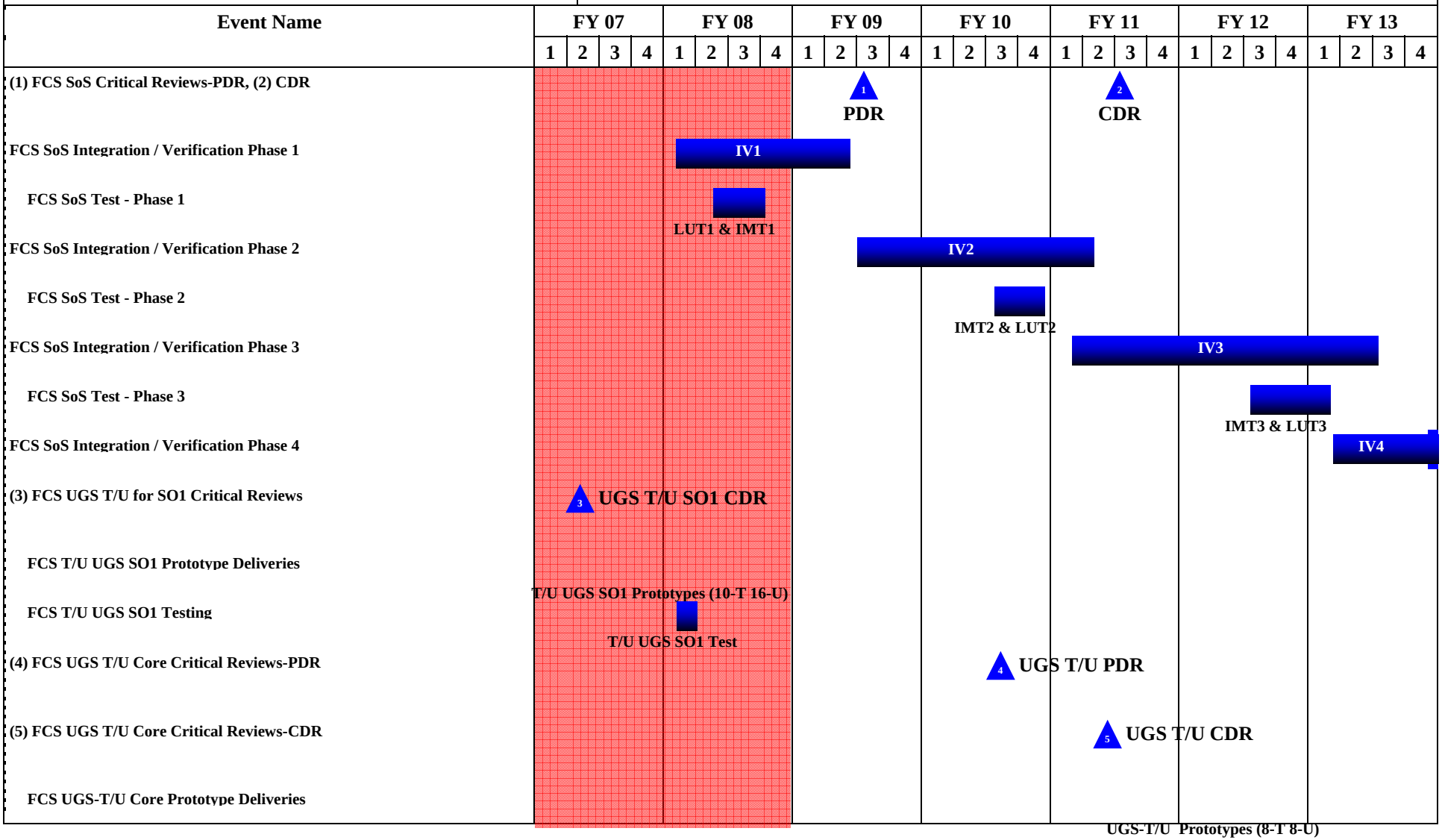
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:						**10929**		**12967**			**23896**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FCS UGS-T/U Testing																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604664A - FCS Unattended Ground Sensors**	**FC5**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews-PDR			3Q				
CDR					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							
FCS UGS T/U for SO1 Critical Reviews							
FCS UGS T/U for SO1 Critical Reviews	2Q						
FCS T/U UGS SO1 Prototype Deliveries		1Q					
FCS T/U UGS SO1 Testing		1Q - 2Q					
FCS UGS T/U Core Critical Reviews-PDR				3Q			
FCS UGS T/U Core Critical Reviews-CDR					2Q		
FCS UGS-T/U Core Prototype Deliveries						2Q	
FCS UGS-T/U Testing					3Q - 4Q	1Q - 2Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC6	FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing

A. Mission Description and Budget Item Justification: Network Software - Provides the tools and capabilities necessary for a collection of systems composed of computers, sensors, and platforms linked together to achieve a single capability. This is accomplished through distributed functionality that spans across the entire SoS and consists of the following applications and interfaces: a distributed information management backbone, Communications; Intelligence, Surveillance and Reconnaissance (ISR); Command and Control (C2); and training and supportability. These elements are integrated and managed as the Battle Command System (BCS) software.

The information management backbone necessary for the distributed SoS is composed of the Integrated Computer System (ICS) and System of Systems Common Operating Environment (SoSCOE). The ICS hardware consists of a computer processor, as well as network, graphics and memory cards, and is integrated with software functionality provided by a modified operating system (OS) and SoSCOE. SoSCOE serves as a middleware solution by separating software applications from the ICS hardware and OS. This isolates changes in the ICS from impacting software applications directly, reducing traditional integration and maintenance costs. It also provides services that network the collection of nodes (hardware and software applications) into a single, integrated system. SoSCOE addresses the needs of different system types, supporting real-time environments and platforms with processing and memory constraints. It also provides a suite of other services that are commonly required by BCS software applications. BCS software applications are integrated with SoSCOE and loaded onto the ICS.

Application Software: 1. Communication applications include the Network Management System (NMS) which provides the management of voice, data, and video communications between multiple, mobile system platforms, with the aid of SoSCOE communication services. The NMS manages these platforms as nodes that are changing due to availability and bandwidth limitations. 2. Fusion applications include the Sensor Data Management (SDM) and Level One Fusion (L1F). These items gather and fuse data from air and ground sensors necessary for Situational Understanding (SU). SU provides the Warfighter an informed representation of the battlefield. 3. Command and Control software provides battle command and mission execution, planning and preparation, and situational understanding, accessed thru the Warfighter Machine Interface (WMI). The C2 applications provide for distributed control of networked fires. 4. Embedded training applications, consisting of both common and unique software, providing a distributed training environment to the BCT. Embedded Training Common Components (TCC) are a set of common training capabilities available to Battle Command subsystems and platform developers, facilitating distributed training across the SoS. These capabilities are heavily leveraged from the reuse of software developed by the OneSAF, AATI, CTIA, and OneTESS programs. 5. Supportability applications are composed of the Platform Soldier Mission Readiness System (PS-MRS), Logistics Decision Support System (LDSS), and Logistics Data Management Services (LDMS) subsystems and are integrated into the BCS, providing distributed logistical capabilities. Functionality includes the translation of maneuver sustainment requirements by LDSS for Command and Control (C2). It gathers the common operational picture (COP) data through intelligence fusion and complements that with high fidelity records of mission progress and combat readiness to support the Warfighter. PS-MRS performs on-platform mission readiness assessments, including information on the soldier's physical health and re-supply needs. LDMS enables the collection, reporting, and collaboration of logistics data (LDSS and PS-MRS) on customer demands received from the Department of Defense (DOD), Standard Army Management Information Systems (STAMIS), and Enterprise Resource Planning (ERP) systems in support of Performance Based Logistics (PBL).

Software development is executed incrementally in five two-year build cycles (Build 0-4), aligning with each of the Engineering Iterations (EI). Each build now consists of early and final deliveries, each one year in duration, to better align with Program requirements. Each software build is initiated by a SoS level Build Definition Checkpoint (BDC),

phasing software functionality to support SoS needs. Requirements are then flowed down thru a series of BDCs at the Prime Item / Networked Systems and development team levels for implementation. Development teams begin the software build with either a Life Cycle Objective (LCO) review or Software Specification Review (SSR) to assess build objectives and requirements. Following the LCO, either a Life Cycle Assessment (LCA) or Preliminary Design Review (PDR) is held. This review ensures that the product build to the architecture will be able to meet all of its functional and performance requirements. Additional checkpoints are executed throughout the FCS SW build to ensure both horizontal and vertical consistency. Integration and Test (I&T) is initiated by unit testing by development teams. A Test Readiness Review (TRR) is held prior to Functional Qualification Test (FQT) to ensure that all lower level testing have been completed and the qualification test procedures adequately test the requirements implemented during the build. Further integration and testing between software subsystems and hardware occurs within respective Software/System Integration Labs (SIL), until all software is integrated at the SoS Integration Lab (SoSIL). A Build Assessment Checkpoint (BAC) is completed to ensure that all software was tested, delivered, and integrated. Lessons Learned are captured for implementation in future software builds.

Common Network Hardware - Includes design, development and prototype procurement of common hardware required for implementation of the data network. This includes sensors, communications hardware and computer processing capabilities.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
IAW Section 214 of the FY2006 National Defense Authorization Act, this Program Element was established commencing with FY2008 President's Budget request. This Program Element replaced the previous Project F57 under the Armored System Modernization Program Element 0604645A. The major FY2007 program accomplishments for that project are described below to show continuity of the development efforts.			
SOSCOE Development FY08: Complete development and pre-Formal Qualification Test (FQT) of SoSCOE Build 2.0 in 1Q FY08 to support Spin-Out 1 (SO1) Classified Verification Test (CVT). Complete FQT of SoSCOE Build 2.0 in 2Q FY08 for FCS SW Build 2 Early integrated with ICS Build 2.0. SoSCOE Build 2.0 planned functionality will include updates to previously included services, as well as initial functionality provided for Information Assurance, Input/Output, OS Abstraction, and Software Support Services. SoSCOE Build 2.0 will also include full functionality for System Services. Approximately 60% cumulative functionality delivered based on software sizing estimates. Complete SoSCOE Build 2.5 Life Cycle Objectives (LCO) and Life Cycle Assessment (LCA) Reviews. Detailed Design, Code, and Unit Test completed. SoSCOE Build 2.5 will include full functionality for Information Assurance Services. Purchase and maintain COTS License Agreements for all software supplied.		77807	
SOSCOE Development FY09: FQT and release SOSCOE Build 2.5 to support FCS SW Build 2 Final. Approximately 75% cumulative functionality delivered based on software sizing estimates. Begin requirements Analysis, Design, Code, and Unit Test for SoSCOE Build 3.0, leading to an engineering release delivered in Sept 09. The completion of SoSCOE Build 3.0 will include full functionality for Administrative, Communication, Configuration and Control, TIN, and Web Services. Purchase and maintain COTS License Agreements for all software supplied.			52772
Communication Systems Software FY08 - Develop and FQT Network Management software for Build 2 Early. Approximately 40% cumulative functionality delivered based on software sizing estimates. This will include initial functionality for Network Data Management (NDM)/Adaptor Management System (AMS), Security Management, and Embedded Training.		17500	
Communication Systems Software FY09 -Complete Life Cycle Architecture (LCA) checkpoints for Build 2 Final. Develop and FQT software for Build 2 Final. Approximately 65% cumulative functionality delivered based on software sizing estimates. NMS Build 2			12673

Final will include full functionality for Fault Management. Complete Network Management System Build 3 Early Life Cycle Objective (LCO) review.			
Battle Command Software FY08 - Complete Build 2 Early FQT for Warfighter Machine Interface (WMI), Mission Planning and Preparation, Situational Understanding, and Battle Management & Mission Execution to support SO1 Classified Verification Test (CVT). WMI Engineering Releases for early integration and FQT delivery (3Q08) made available to Battle Command Partners. Approximately 40% cumulative functionality delivered based on software sizing estimates.		75421	
Battle Command Software FY09 - Complete Build 2 Final FQT for Warfighter Machine Interface (WMI), Mission Planning and Preparation, Situational Understanding, and Battle Management & Mission Execution. Approximately 55% cumulative functionality delivered based on software sizing estimates.			50042
Networks Management FY08 - Provide requirements management, contract management, technical guidance, horizontal integration and architectural oversight of the NMS contract. FY08 - The NMS will develop and release two configurations of NMS software for the B2E, B2E CVT (classified verifications test) and B2E FF (future force). The major milestones are B2E TRR, B2E, FQT, B2F, LCO, B2F, LCA. The functionality of B2E two configurations (B2E CVT, B2E FF) includes: Dual Enclave Support, SO1 CVT IA Upgrades, Interface To SOSCOE RBAC, File Access Control, Digital Signatures, PKI User Authentication,Audit Logging, Password Management, Software Upgrades/Patches, (CR 300) LynxSE-based Qos Request Agent, Re-Host NMS QoS Agent On Lynx SE, (CR 278) SRW1.0c And CI Mgmt Upgrades To Planning And Management, SRW 1.0c ConfigurationAnd Monitoring Changes For GMR EDM (B- Kit) and HMS (U-UGS/T-UGS) Support,Controlled Interface Management, Start/Stop Message Flow, Status.		17878	
Network Management FY09 - Provide requirements management, contract management, technical guidance, horizontal integration and architectural oversight of the NMS contract. FY09 - The NMS will develop B2F NMS software. The major milestones for FY09 are B2F TRR, B3E, LCO, B3E, LCA. The functionality of B2F should include: FCS Network Planning CapacityUpdates, Network Topology Planning, Spectrum Planning, M&S Planning, NetworkPlanning Integrated With BC Mission Planning (PPS), GMR/HMS Driven NetworkPlanning, Management, And Service Updates, Integrated JWNM Red And Black ForJTRS Management Support For Multiple WNW Nets, Multicast Qos, BandwidthBudgets, Dismount Soldiers, FCS Network Mgmt Interface To BC Logistics(PS-MRS), Performance Monitoring Updates, Objective Performance Monitoring &Analysis, Initial Trending And Predictive Performance, Feedback To Policy,Time Based Policies, And Conflict Detection, Fault Management Updates, FaultAlarm Analysis, Event Correlation (Local), Network Fault And PerformanceAlert Correlation, Network Services Update, Session Mgmt, Mobility Mgmt,Interoperate With AKMS For Key Planning And Distribution and Embedded Training, Manage Wireless Training Nets , Training Modes, Logging TrainingData.			13387
Fusion Software FY08 - Sensor Data Management (SDM) and Level One Fusion (L1F) FQT completed for FCS SW Build 2 Early to support SO1 CVT with approximately 55% cumulative functionality delivered. FCS SW Build 2 Final Life Cycle Objectives (LCO) and Life Cycle Assessment (LCA) Reviews held for SDM and L1F. Detailed design and coding initiated.		16465	
Fusion Software FY09 - FQT completed in 3Q FY09 to support FCS SW Build 2 Final capturing approximately 75% cumulative functionality based on software sizing estimates. Initial Exploitation Tools and Embedded Training functionality to be provided by L1F. Additionally, initial SIGINT and Human Sensor Fusion Engines functionality to be provided by L1F. Build 2 Final includes the completion of Kernel functionality for SDM. Begin effort for FCS SW Build 3.			13152
Embedded Training Software FY08 - Perform integration with SoSCOE versions 1.5, 1.8, and 2.0. Continue integration with WMIS. Complete FQT of Training Common Components (TCC) for FCS SW Build 2 Early. Complete Life Cycle Objective (LCO) and Life Cycle Architecture (LCA) checkpoints for TCC to support FCS SW Build 2 Final.		10536	

Embedded Training Software FY09 - Complete integration with SoSCOE 2.5. Complete integration with WMIS. Complete FQT of Training Common Components (TCC) for FCS SW Build 2 Final. TCC delivered with full functionality to include Live Training Tactical Engagement Simulation System (LT-TESS) integration, Scenario Generation, Computer Generated Forces, Synthetic Operational Environment, Data Logger, After Action Review (AAR), and Training Management. Delivered TCC includes over 2.1 million reused source lines of code (SLOC) incorporated from OneSAF, AATI, CTIA, and OneTESS programs with modification to the FCS environment.			14934
Contractor Logistics Products Application Integration FY08 - Complete design, code, and unit test for LDSS and PS-MRS. Complete pre-FQT to support early integration activities within the Software Integration and Test (SWIT) lab for Battle Command System (BCS) Build 2 Early. Complete FQT scheduled in 3Q FY08 to support FCS SW Build 2 Early. Approximately 25% logistical functionality available at the completion of Build 2 Early. Complete FCS SW Build 2 Final LCO and LCA reviews for LDSS, LDMS, and PS-MRS.		34593	
Contractor Logistics Products Application Integration FY09 - Complete design, code, and unit test for Build 2 Final LDSS, LDMS, and PS-MRS with pre-FQT in 3Q FY09. Build 2 Final FQT scheduled for 4Q FY09. Approximately 45% logistical functionality delivered by Build 2 Final, including initial Interactive Electronic Technical Manual (IETM) viewer capabilities. Complete FCS SW Build 3 Early LCO and LCA reviews for LDSS, LDMS, and PS-MRS.			58082
Ground Sensors Integrator Hardware FY08 - Conduct Prototype Readiness Reviews (PRR) for Common EO Sensor (CEOS), Multi-Function RF Sensor (MFRFS), Combat Identification Sensor (CIDS). Conduct PDR for SREO Sensor. Conduct CDR for CID Sensor, SUGV EO/IR Sensor, Short Range Electro Optic (SREO) Sensor.		176331	
Ground Sensors Integrator Hardware FY09 - Conduct Prototype Readiness Reviews (PRR) for the following sensors:SUGV EO/IR : Sensor Short Range EO Sensor (SREOS). Chemical Detection (CD) Sensor. SREO Sensor. Deliver the following Sensor prototype hardware; SUGV EO/I Prototype 5 ea, SUGV CBRN Prototype 5 ea., MCS MREO Prototype 4 ea., MCS CID Prototype 4 ea. (transponder only), MCS MFRF Prototype 4 ea., ICV MREO Prototype 4 ea., ICV MFRF Prototype 4 ea., ICV CID Prototype 4 ea. (transponder only), NLOS CID - 5 ea. (transponder only) (includes both NLOS-C (ea. 3) and NLOS-M (2)) NLOS MFRF - 5 ea. (includes both NLOS-C (3) and NLOS-M (2)), NLOS SREOIR - 5 ea. (includes both NLOS-C (3) and NLOS-M (2)), FRMV MFRF - 2 ea., FRMV CID - 2 ea. (transponder only), FRMV MREOIR - 2 ea., MULE MREO - 4 ea. (ARV-L), MULE CID - 12 ea. (ARV-L (4), MULE-T (4), MULE-CM (4)), MULE Accoustic - 8 ea. (ARV-L (4), MULE-CM (4)), MULE Command Radio-feed Electronics Unit (CREU) - 12 ea. (ARV-L (4), MULE CM (4)) RSV LREO - 4 ea., RSV CID - 4 ea., RSV MFRF - 4 ea., RSV EMS - 4 ea., RSV SCDS (JSLSCAD) - 4 ea., C2V CID - 4 ea. (transponder only), C2V MFRF - 4 ea., C2V SREOIR - 4 ea., MV MFRF - 2 ea. (MV-T (1), MT-E (1)), MV CID - 2 ea. (transponder only) (MV-T (1), MT-E (1)), MV SREOIR - 2 ea. (MV-T (1), MV-E (1)).			144143
Air Sensor Hardware FY08 - Update Technical Performance Measures (TPMs) based on sensor PDRs, CDRs and verification testing (CL I & IV). CL I UAV prototype sensors integrated to SIL starting in 2Q FY08. C4ISR SIL Integration effort starts in 3Q FY08. CL IV UAV - deliver four prototype ASTAMIDS (EOIR/LD/CM), conduct Test Readiness Review, continue Prototype Qualification Tests, deliver 1 ASTAMIDS emulator to SIL, conduct Contractor Field Test. Continue Prototype development of Synthetic Aperture Radar (SAR) / Ground Moving Target Indicator (GMTI). Deliver 1 Emulator to support initial SIL integration.: Continue Hardware and Software development of the Aided Target Recognition (AiTR). Continue Software qualification tests. Deliver 3 Emulators with AiTR Algorithms Embedded. C4ISR SIL Integration effort starts in 1Q FY08.		17738	
Air Sensor Hardware - FY09 - Deliver 3 Electro Optical Infrared (EOIR) Class 1 Sensors. EOIR sensor Integration and Test onto the CL 1 UAV: Deliver 9 ASTAMIDS CL IV prototype sensors.			19278

Communication Hardware (Air and Ground) - FY08 - Deliver 2 Air Platform Comm Systems (APCS) Payloads to C4 SIL, and 8 to UAV IV. The APCS provides target designation, mine detection, communications extension, long endurance persistent staring, wide area surveillance, and chemical detection for the FCS BCT at the brigade level and supports manned/unmanned teaming operations with manned aviation. Deliver 1 Ground Platform Comm Systems Payloads to BAE SIL. Conduct Air Platform Comm Systems Class IV CDR. Conduct Network Systems PDR 4Q FY08. Ground Platform Comm Systems Payloads MGV; CDR in FY08. Deliver 4 Ground Control Stations (GCS) to UAV. Deliver GMR and HMS EDMs Radios to SILs. Deliver 2 Ground Platform Comm Systems Payloads to C4IT, and 4 to MGV.		61806	
Communication Hardware (Air and Ground) - FY09 - Deliver type 8 HMS to UGV (SUGV1). Deliver Integrated Communication Suites to C4ISR, MGV, and UGV System Integration Laboratories (SILs). FY09 Networks Hardware efforts: Upgrade Radios (HMS and GMR) with SRW 1.0c. Change Surrogate Radios (MSRT and ZigBee in T-UGS and MSRTs in U-UGS) with HMS SFF-A and SFF-H, in preparation for CVT. Change Surrogate Radios (SCRS) in the NLOS-LS CLU with HMS SFF-J, in preparation for CVT. PAM keeps SCRS until HMS SFF-G is available. Continue C4ISR HW Deliveries to Systems/Platforms. Conduct APCS UAV CL IV CDR. Conduct GPCS MGV/UGV CDR.			51690
ICS - Computer Processing, Hardware and Software FY08 - ICS Hardware: Plan to retrofit 2 ICS Brassboards (a full ICS shipset in terms of form, fit & function). Plan to deliver 1 ICS Brass-boards - ICS Type VI 1 unit. Plan to deliver 6 ICS Prototypes (and ICS brassboard shipset that has successfully passed formal qualification testing) - ICS Type VI -6. Retrofit 21 ICS type VI Prototypes. There is a retrofit activity in place now to correct some hardware deficiencies in the type VI computers delivered in support of SO1. There will also be a retrofit in FY08 to upgrade those computers to the dual domain computer needed for the CVT in FY09. Plan to deliver 12 ICS SDUs (pieces of emulators grouped in a useful manner). Plan to deliver 63 ICS Emulators (non-form/fit, affordable commercial approximations of an ICS shipset primarily for use as a preliminary software integration testbed) - ICS Type I qty.12; ICS Type II qty. 20; ICS Type IV qty.10; ICS Type VII qty.12; ICS Type VIII qty 9. ICS Software: Complete development of the ICS Objective Operating System (OOS) Build 2.0 with SQT on Software Development Unit (SDU) to support FCS SW Build.		87979	
ICS - Computer Processing, Hardware and Software FY09 - ICS Hardware: Deliver 26 ICS Brass-boards- ICS Type 1 qty 13, ICS Type II qty 6, ICS Type IV qty 4, ICS Type VIII qty 3. Deliver 3 ICS EDUs. Deliver 8 ICS Prototypes - ICS Type VI - qty 2, ICS Type VIII- qty 6. Deliver 5 ICS Emulators - ICS Type I qty 1, ICS Type II - qty 4. Deliveries of these items are scheduled to be made to various LSI SILs, platform developer, platform integrators, and test facilities. The single domain type VI will be tested in Jan 08 LUT, and the upgrade type VI will be tested in an FY09 CVT. Both tests will be performed at Ft. Bliss. ICS Software: Functional Qualification Test (FQT) of ICS 2.0 Red Hat Engineering Release (RHEL) 4.4 to support CVT and platform Integrated Qualification Tests (IQT). ICS Build 2.0 includes full functionality for Maintenance Support. Conduct Life Cycle Architecture (LCA) review for ICS Objective Operating System (OOS) 2.5 for FCS SW Build 2 Early. Release ICS OOS 2.5 for integration with FCS SW Build 2 Final. ICS Build 2.5 includes full Device Driver and Bootstrap functionality. Release ICS OOS 3.0 for integration with FCS SW Build 3 Early. ICS Build 3.0 includes full API Definition. Start activities for ICS OOS 3.5 to support delivery in FY10.			80418
Contractor C4ISR System IAT&C - FY08 - Early integration of Battle Command software applications in the SWIT to support delivery of Battle Command System (BCS) for SO1 CVT and Build 2 Engineering Iteration (EI). This will include integration of WMI, SoSCOE Build 2.0 and ICS Objective Operating System (OOS) Build 2.0 with other Battle Command Applications prior to completion of the BCS Build 2 Early DSQT. C4ISR level Integration, Test Planning, Test Execution, and Test results analysis for equipment that is integrated and tested at the C4ISR level for later incorporation as a unit to another product, such as a vehicle. Integrating and testing the suite is essential before delivering it for integration into the vehicle. Includes management and integration of sensor, communication and computer hardware and software in the SIL and integration of network management, Battle Command and ISR Fusion software packages		10705	

from partners into SOSCOE conducted in the SIL.			
Contractor C4ISR System IAT&C - FY09 - BCS Build 2 Early DSQT scheduled for 1Q FY09 within the SWIT. BCS Build 2 Early software delivered to C4ISR SIL for Hardware/Software integration. Cumulative integrated BCS functionality at 44% based on software sizing estimates. Capabilities provided during Build 2 Early include initial Situation Refinement (Level 2 Fusion), Threat Refinement (Level 3 Fusion), Fusion Process Refinement (Level 4 Fusion), Readiness Monitoring, Weather Services, and Embedded Training support within Situational Understanding (SU); and initial capabilities for Incoming Order Processing, Airspace Control, Unmanned Payloads Control, Unmanned Vehicle Control, and Embedded Training support within BCME. DSQT for BCS Build 2 Final scheduled for 4Q FY09. The Build 2 Final delivery will capture approximately 64% cumulative Battle Command functionality based on software sizing estimates. This includes full functionality of the Embedded Training Common Components (TCC), as well as integration of SoSCOE Build 2.5 and ICS OOS Build 2.5. SAR/GMTI Prototype Deliveries. T/U UGS will be integrated with the B-kit during the Formal NSIV testing in the Oct-Nov 2007 timeframe. This will include T-UGS Gateways, ISR and EOIR nodes and U-UGS gateways and intrusion/EO nodes. This also includes all SWIT software listed below. In the late 2008 to early 2009 timeframe there will similar NSIV testing for the CVT B-kit testing employing UGS. However, during this testing the NSIV testing will employ an UGS simulator from TEXTRON as opposed to real UGS. AiTR: Delivery 1 AITR prototype to C4ISR SIL.			11362
FY08 GFX - GFX supports the LSI contractor efforts. Networks GFX includes; Government support of C4ISR JEFX-08 Experimentation. JEFX08: Combines live air, space, naval, and ground forces, simulation, and technology insertion into a near-seamless warfighting environment. Focuses on joint air operations in a Live Fly environment demonstrating Net-centric Interoperability, Joint Networked Fires, and Networked Sensors. JEFX08 will examine improved network integration and joint interoperability: Demonstrate Joint/Multinational interoperability, Demonstrate Current Force to Future Force interoperability, Achieve assured GIG connectivity, Establish capability for evolving enterprise services, Achieve shared situational awareness and understanding. Hardware to support Experiments 2 and 3. C4ISR End-to-End Network. Night Vision Labs. Joint Interoperability. Multinational Interoperability. The C4ISR LVC environment will be used to conduct analyses to conduct the detailed experimental design (e.g. entity lay down, entity movements, entity behaviors, etc.) specifically regarding phase 1 of Experiment 2 (e.g. JEFX 08).		24769	
FY 09 GFX - Government support of C4ISR JEFX Experimentation. Hardware to support Experiments 2 and 4. C4ISR End-to-End Network. Night Vision Labs. Joint Interoperability. Multinational Interoperability. 1. Task: Integrated Network Performance and Risks Analysis/AssessmentSubtasks: Analyze distribution and connectivity for FBCT ISR platforms.Evaluate Transport FBCT Architecture in supporting Battle Command applications.Analyze connectivity options for TCN/TCN-E deployment.Baseline FBCT Network Performance evaluation.Routing design and simplification (improve ICS design and ease the network).End to End Voice Architecture and Performance Analysis / Experimentation.End to End Video Performance Analysis / Experimentation.2. Field ExperimentationLive Voice, Video and BC architecture, interoperability and risk assessment. Field trials of Build 2E BC/ SOSCOE and emerging follow-on BC/SOSCOE versions. TeleOps trials and overall Unmanned Vehicle (UxV) functionality within wireless BC/SOSCOE environment. Joint experimentation with FBCT connectivity with higher Army echelons Integration/Interoperability with Soldier Systems.3. Task: Complimentary Program Interoperability Subtask: Analysis of FBCT interoperability options with Medical and Logistic services. DCGS-A and FBCT interoperability services definition.			17212
Small Business Innovative Research/Small Business Technology Transfer Programs		18121	
Total		647649	539145

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		678781	536387
Current BES/President's Budget (FY 2009)		647649	539145
Total Adjustments		-31132	2758
Congressional Program Reductions		-31132	
Congressional Recissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			2758

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762		134020
0604645 F52 UAV Recon & Sensors	41813							Continuing	Continuing
0604645 F53 UGV	104301							Continuing	Continuing
0604645 F54 UGS	10391							Continuing	Continuing
0604645 F55 SUSTAINMENT	104302							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	516217							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2150508							Continuing	Continuing

Comment:

D. Acquisition Strategy The original FCS Contract was awarded to the Lead Systems Integrator 30 May 2003 and definitized 10 Dec 2003, to Boeing. The LSI is responsible to PM FCS BCT to provide the following: SOSCOE Development FY09, Communications Systems Software, Battle Command Software, Network Management, Embedded Training Software, Live Training Tactical Engagement Simulation System (LT-TESS), Contractor Logistics Products Application Integration, Ground Sensors Integrator Hardware, and will deliver the following prototype hardware to C4ISR SIL, UGV SILs, and MGV SILs, Air Sensor Hardware, Communication Hardware (Air and Ground), Integrated Computer System (ICS) processing, hardware and software. During FY09, government support of C4ISR JEFX 09 Experimentation.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SoSCOE / INFO MGT SYSTEM SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO,				77807	1-3Q	52772	1-3Q		130579	
COMMUNICATIONS SYSTEMS SOFTWARE & NETWORK MGT SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remark 2				17500	1-3Q	12673	1-3Q		30173	
BATTLE COMMAND SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 3,5,6,7				75421	1-3Q	50042	1-3Q		125463	
FUSION SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 1, 7				16465	1-3Q	13152	1-3Q		29617	
EMBEDDED TRAINING SOFTWARE FY08	FAR	THE BOEING COMPANY, ST LOUIS, MO, all tier one subcontractors				10536	1-3Q	14934	1-3Q		25470	
CONTRACTOR LOG PRODUCTS SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 4,12,13				34593	1-3Q	58082	1-3Q		92675	
GROUND SENSOR INTEGRATOR HARDWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remark 8				176331	1-3Q	144143	1-3Q		320474	
AIR SENSOR INTEGRATOR SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remarks 9				17738	1-3Q	19278	1-3Q		37016	
COMMUNICATION	FAR	THE BOEING				61806	1-3Q	51690	1-3Q		113496	

HARDWARE - AIR & GROUND		COMPANY, ST LOUIS, MO, see remark 10											
ICS COMPUTER PROCESSING HARDWARE AND SOFTWARE	FAR	THE BOEING COMPANY, ST LOUIS, MO, see remark 11				87979	1-3Q	80418	1-3Q		168397	
Contractor SEPM	FAR	THE BOEING COMPANY, ST LOUIS, MO,				17878	1-3Q	13387	1-3Q		31265	
CONTRACTOR C4ISR SYSTEM IAT&C & MANAGEMENT	FAR	THE BOEING COMPANY, ST LOUIS, MO,				10705	1-3Q	11362	1-3Q		22067	
Government GFX	MIPR	PM FCS (BCT) St. Louis, MO				24769	1Q	17212	1Q		41981	
Subtotal:						629528		539145			1168673	

Remarks: 1: Subcontractor: Lockheed Martin Integrated Systems and Solutions, San Diego, CA; (ISR Level 1 Fusion)
2: Subcontractor: Northrop Grumman Network Management Systems, Carson, CA; (Network Mgt Sys)
3: Subcontractor: Boeing Mesa, Mesa, AZ; (Warfighter Machine Interface)
4: Subcontractor: Northrop Grumman Mission Systems, Carson, CA; (Logistics Decision Support Software)
5: Subcontractor: Raytheon Network Centric, Fort Wayne, IN; (Battle Command & Mission Execution)
6: Subcontractor: Network Centric Systems/Austin Info Systems, Austin, TX; (Situational Understanding)
7: Subcontractor: General Dynamics C4 Systems, Scottsdale, AZ; (Sensor Data Mgt)(Planning & Preparation Services)
8. Subcontractor: Raytheon Network Centric Systems, Plano, TX; (Ground Sensor Integrator)
9. Subcontractor: Northrop Grumman Electronic Sys CMS, Belcamp, MD; (Air Sensor Integrator)
10. Subcontractor: BAE Systems, Wayne, NJ; (Air & Ground Communication Integration)
11. Subcontractor: General Dynamics Adv Info Sys, Bloomington, MN; (Integrated Computer Systems)
12. Subcontractor: Honeywell Defense & Electronics System, Albuquerque, NM; (Platform Soldier Mission Readiness System)
13. Subcontractor: IBM, Bethesda, MD; (Logistics Data Management Systems)

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR		OSD				18121	2-3Q				18121	
Subtotal:						18121					18121	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

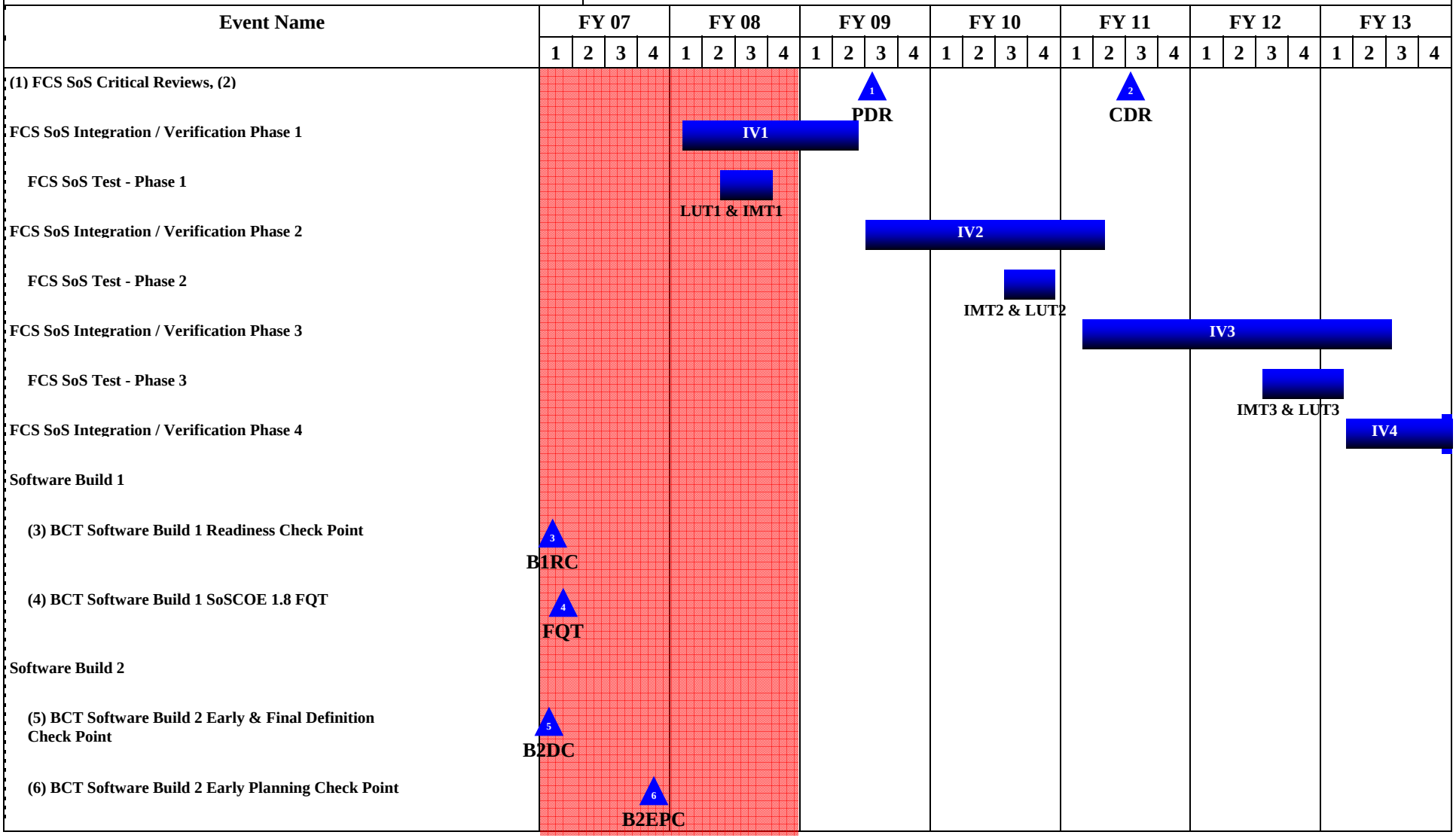
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:						**647649**		**539145**			**1186794**	

Schedule Profile (R4 Exhibit)

February 2008

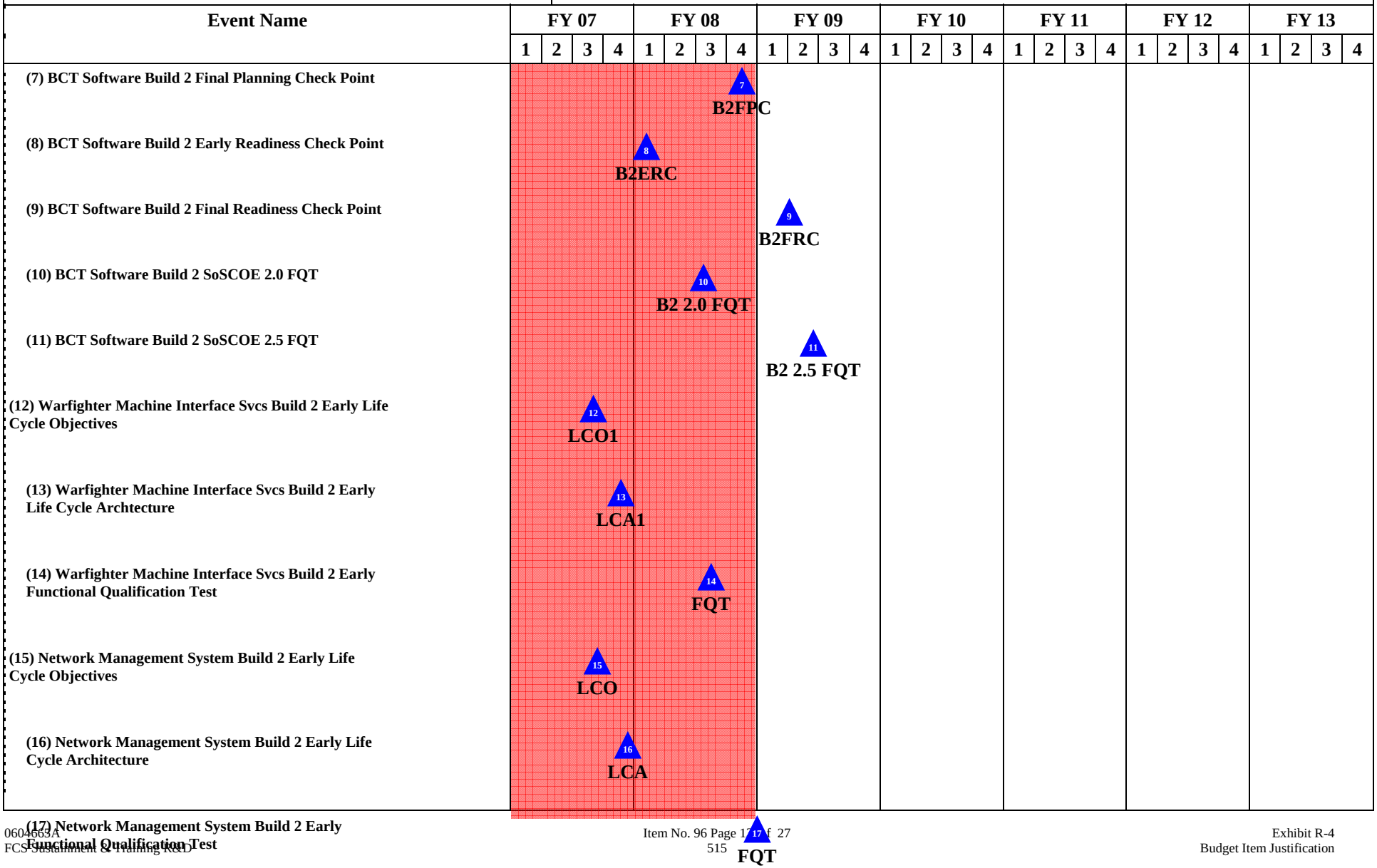
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**



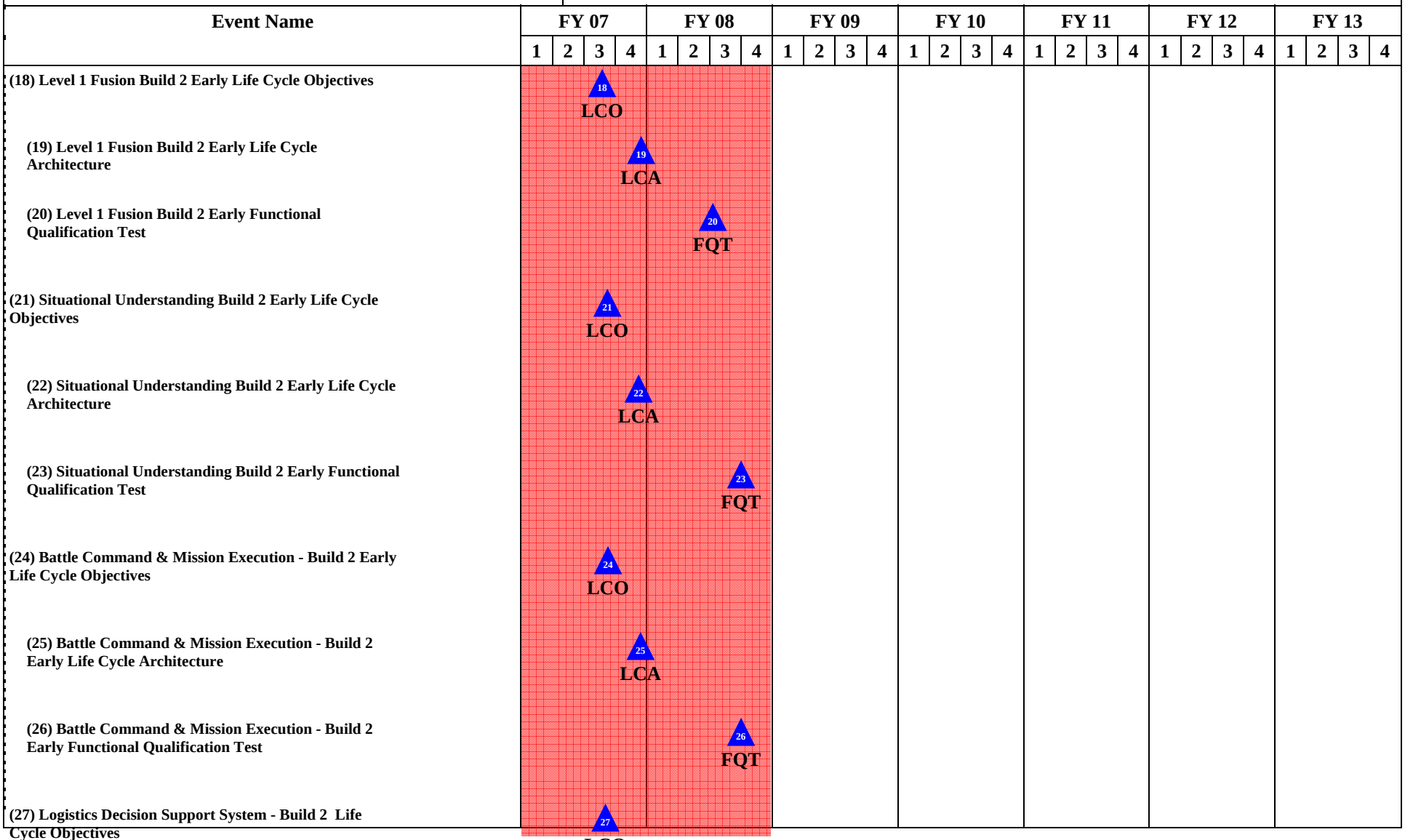
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6



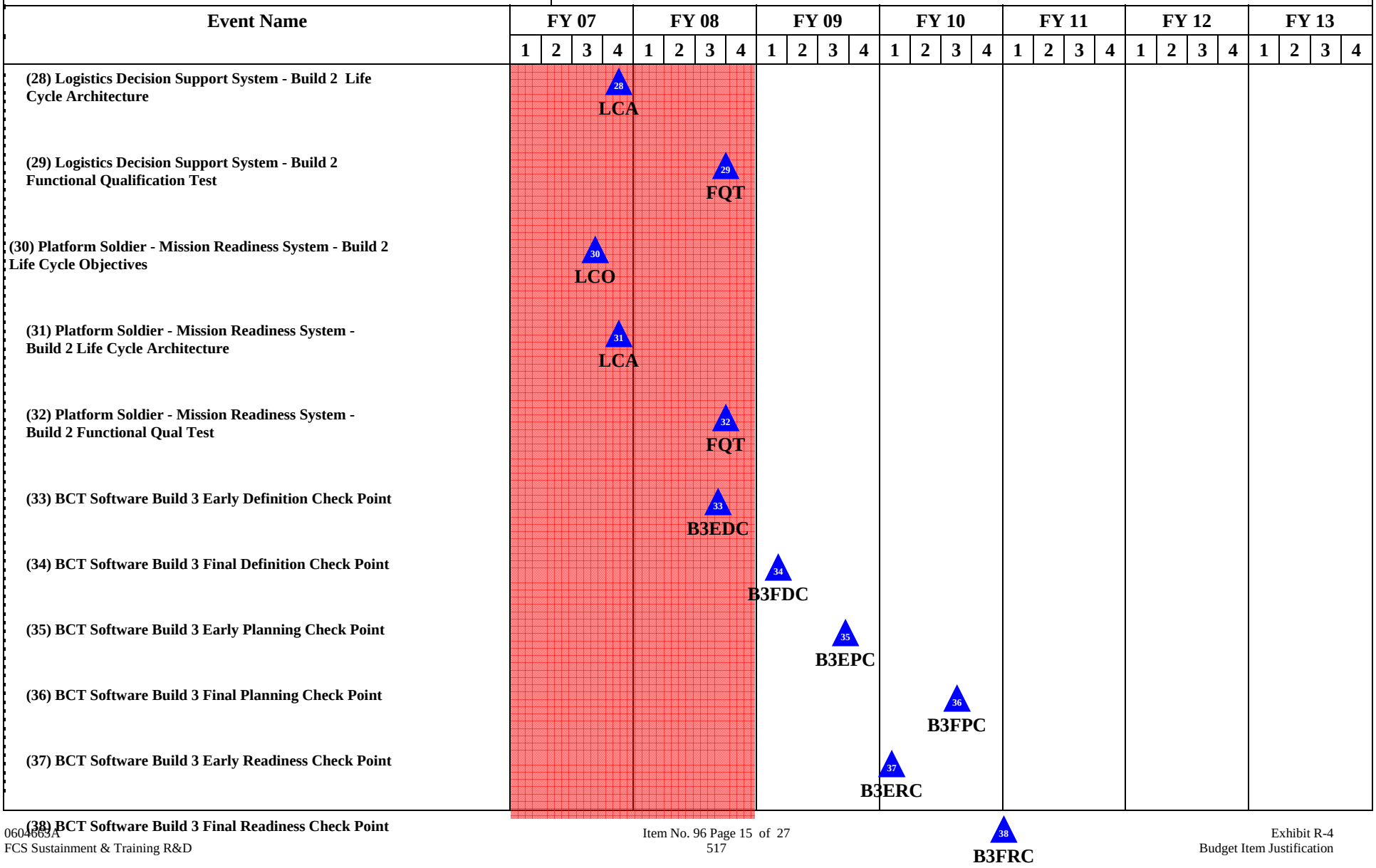
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6



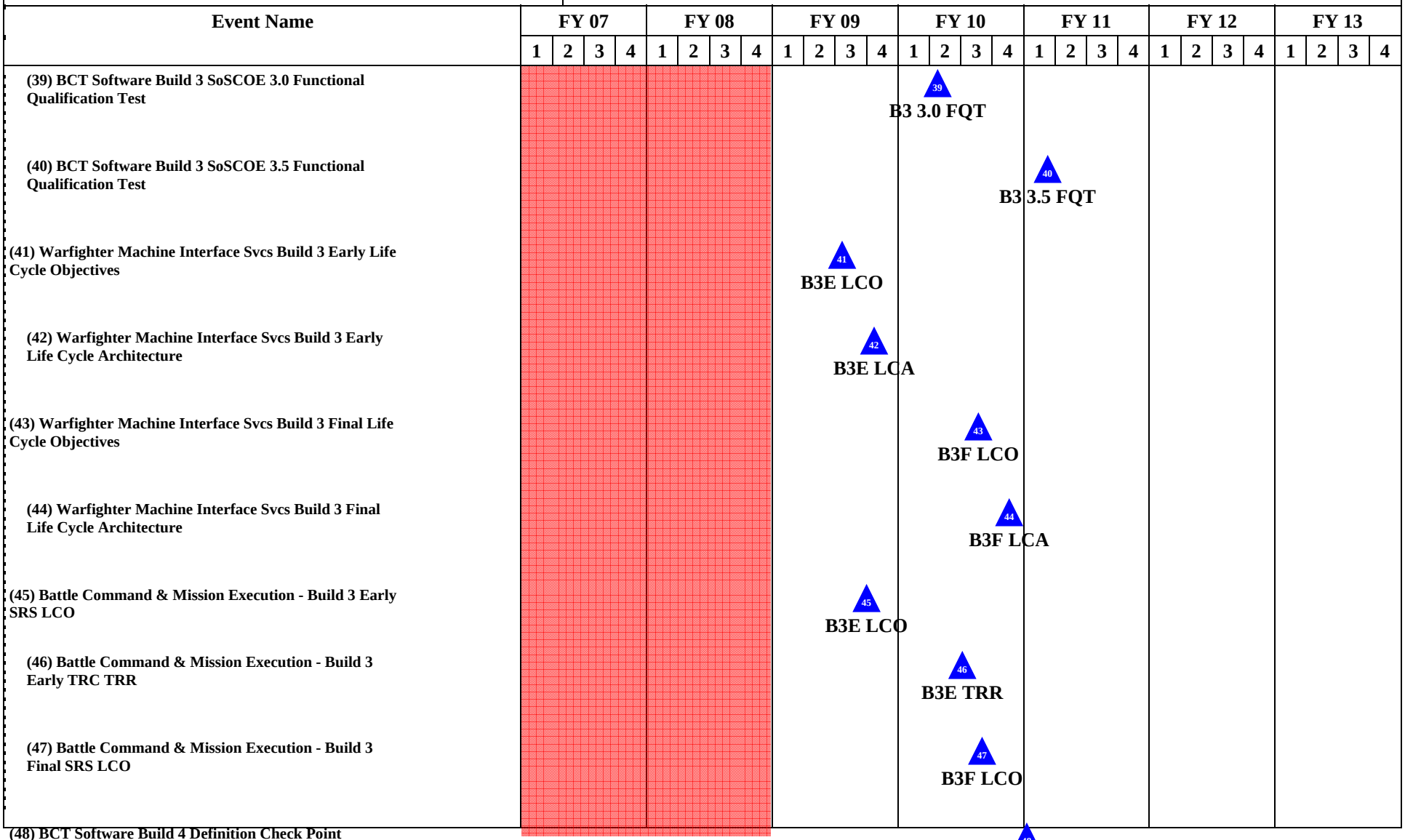
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

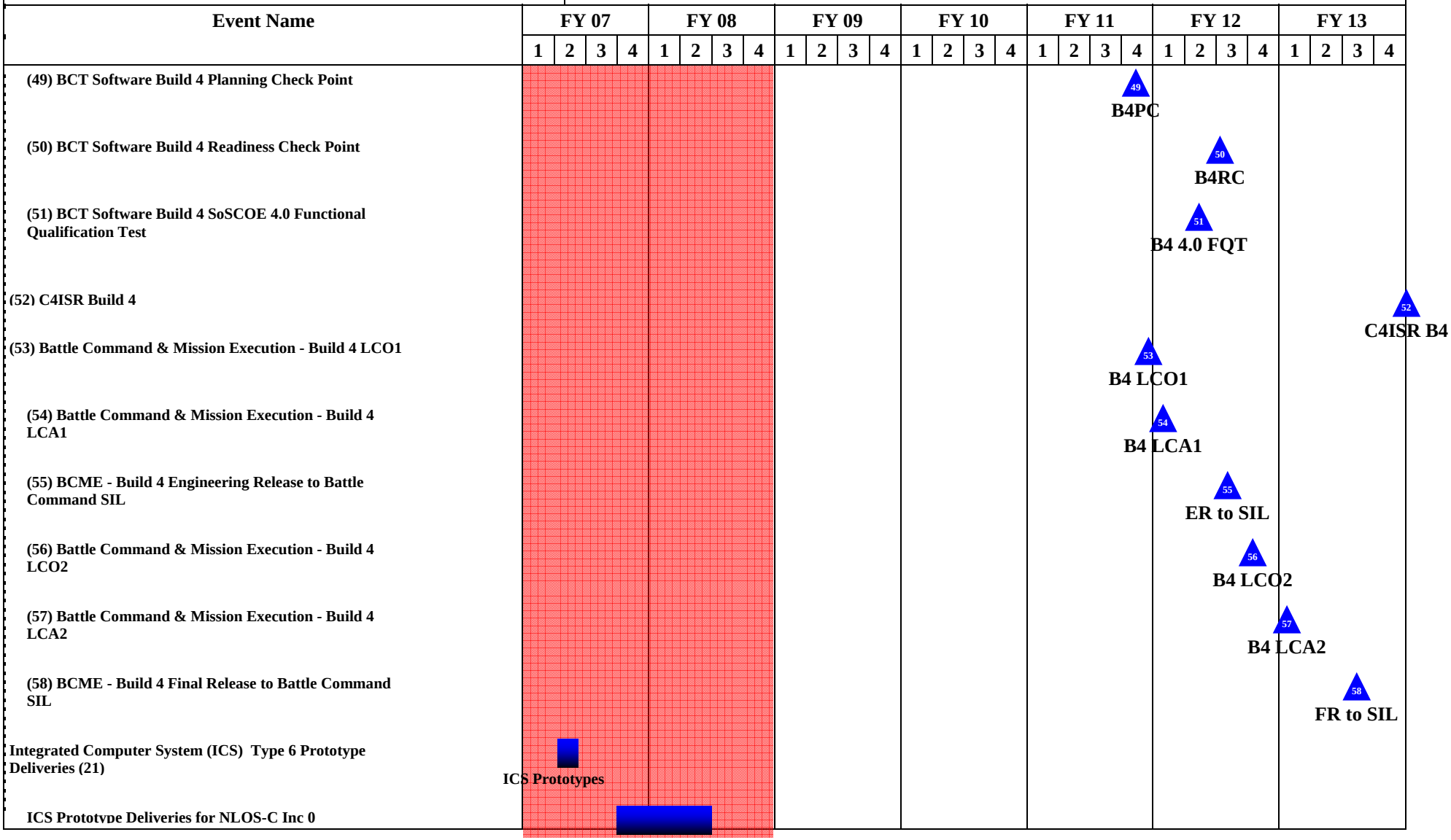
PROJECT
FC6



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**



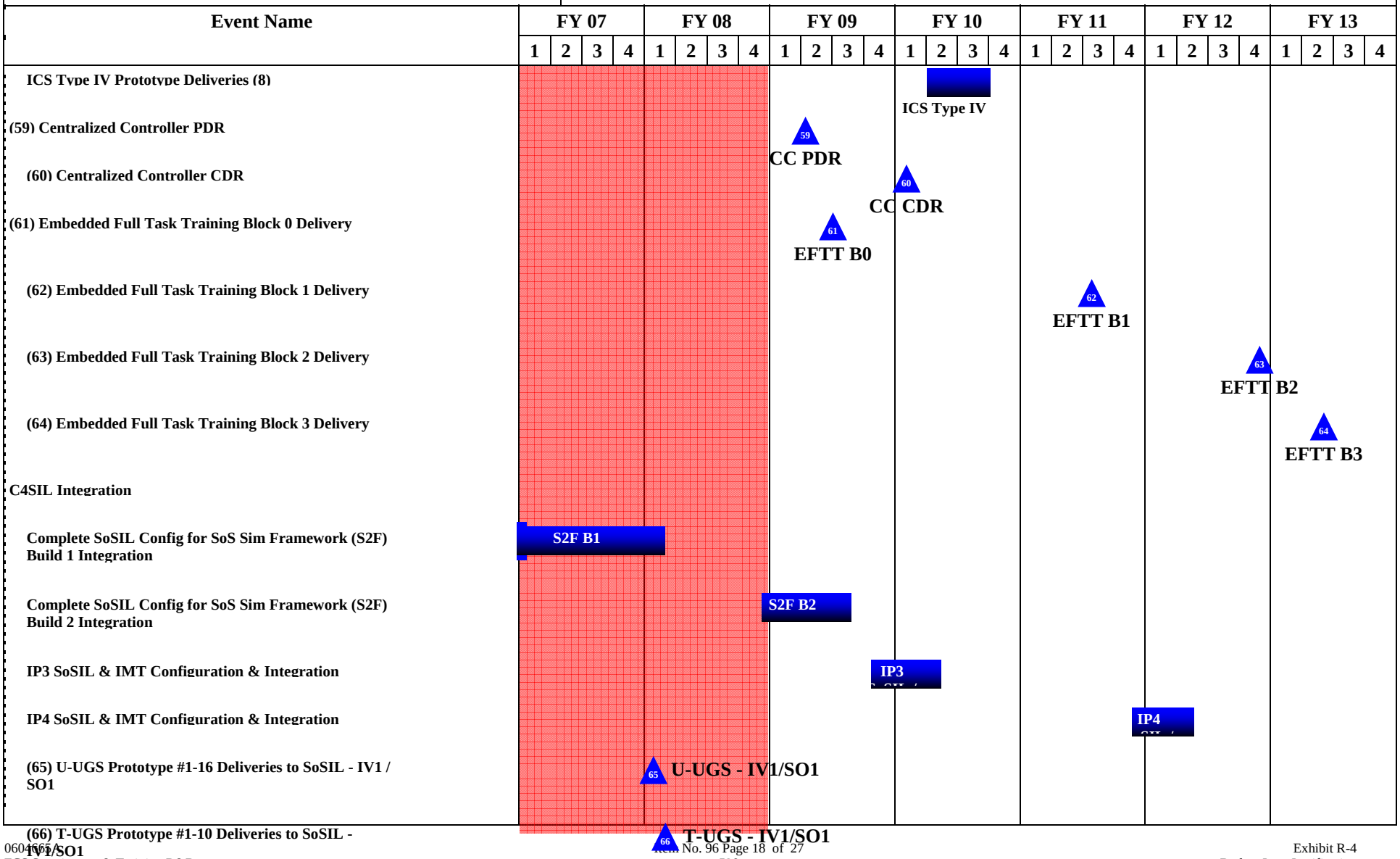
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6



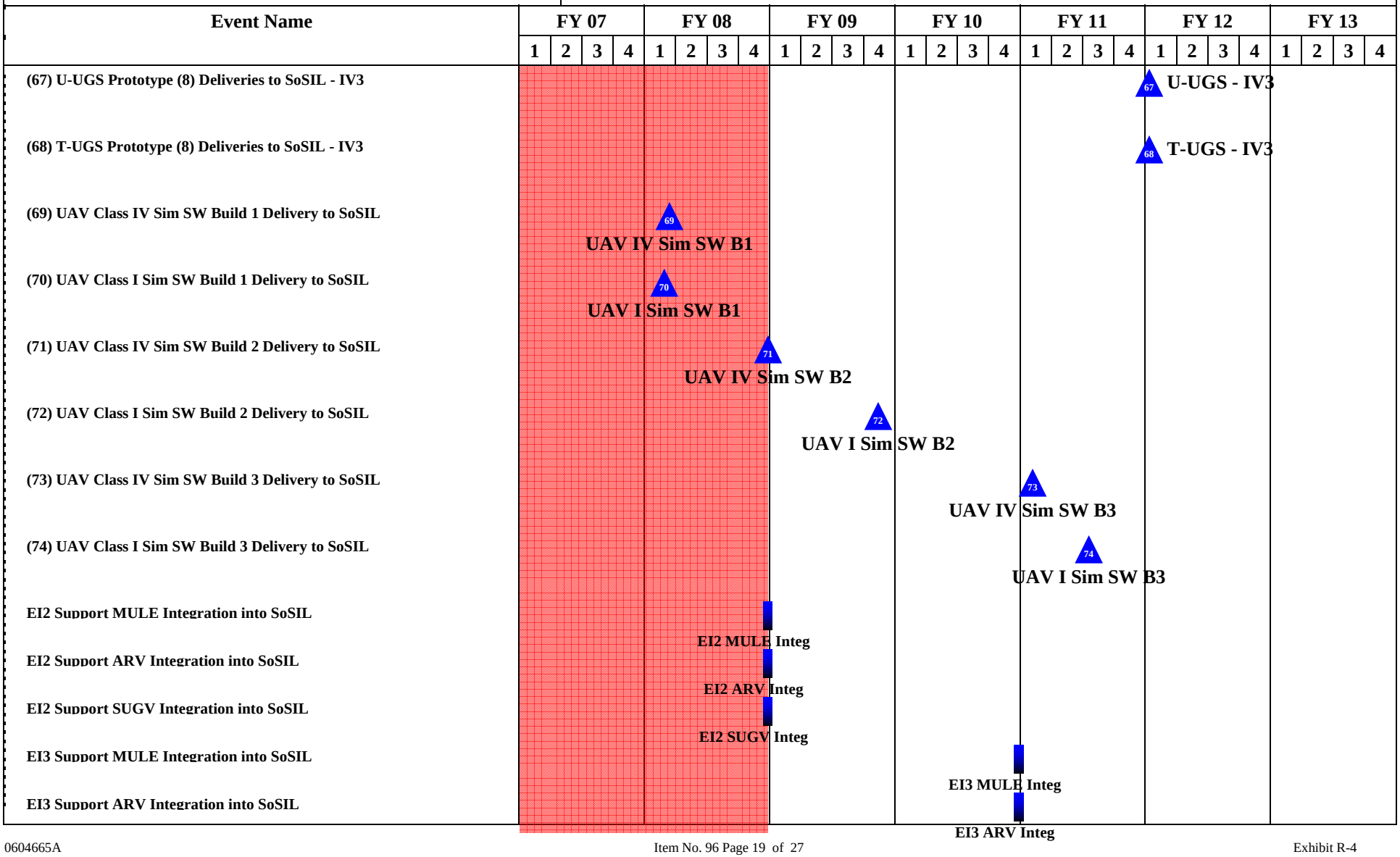
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

PROJECT
FC6



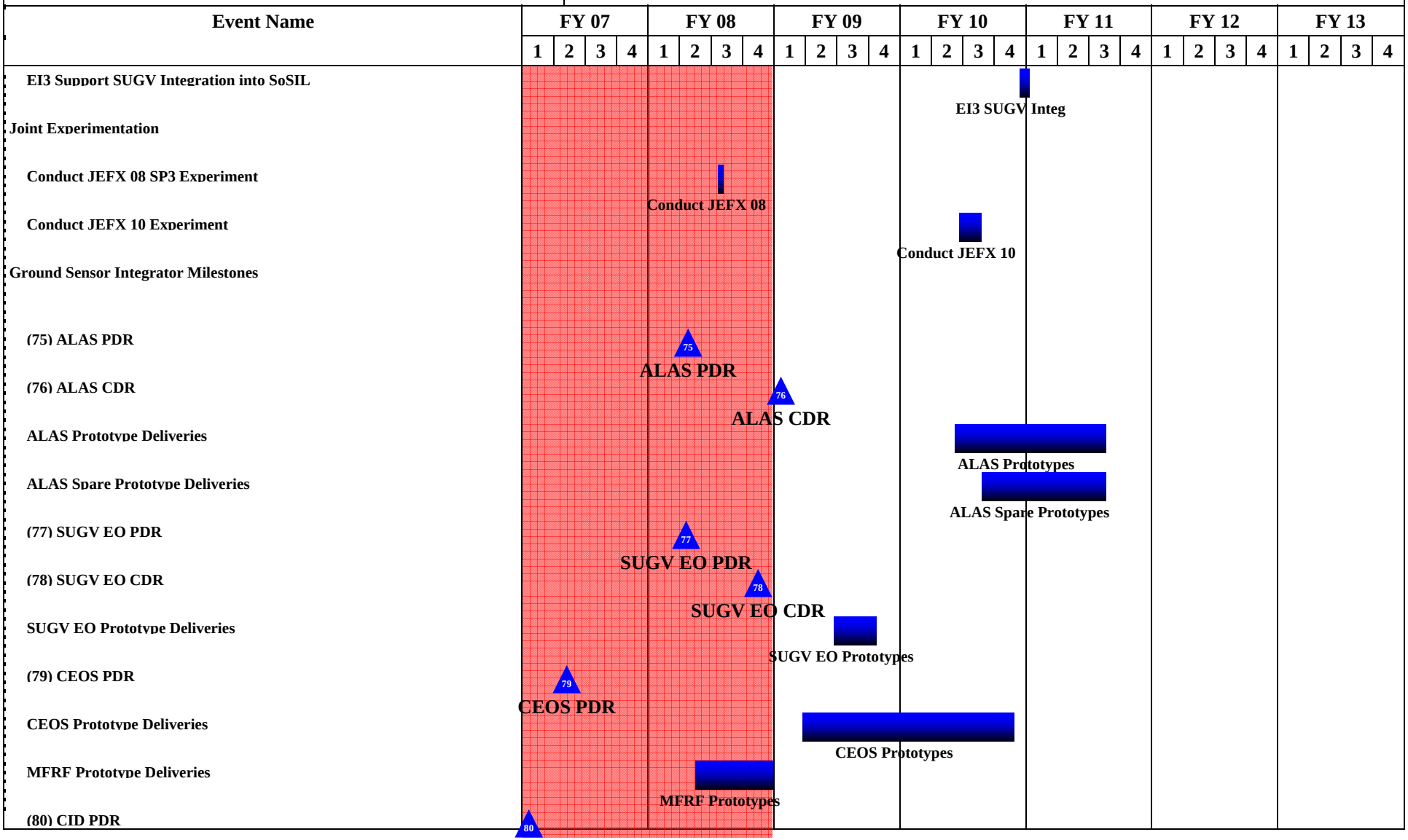
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604665A - FCS Sustainment & Training R&D

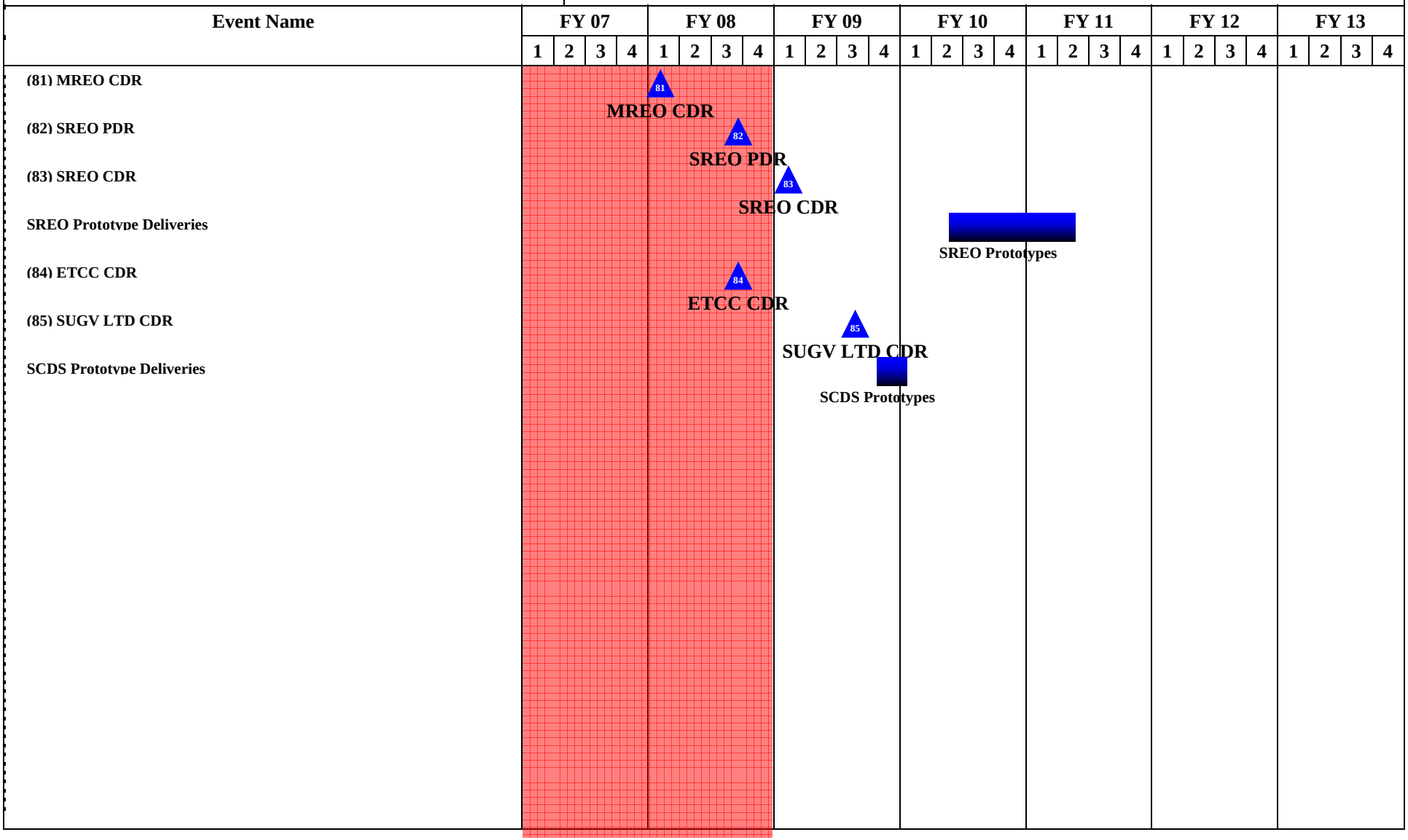
PROJECT
FC6



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604665A - FCS Sustainment & Training R&D**	**FC6**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FCS SoS Critical Reviews			3Q				
					3Q		
FCS SoS Integration / Verification Phase 1		1Q - 4Q	1Q - 2Q				
FCS SoS Test - Phase 1		2Q - 4Q					
FCS SoS Integration / Verification Phase 2			3Q - 4Q	1Q - 4Q	1Q - 2Q		
FCS SoS Test - Phase 2				3Q - 4Q			
FCS SoS Integration / Verification Phase 3					1Q - 4Q	1Q - 4Q	1Q - 3Q
FCS SoS Test - Phase 3						3Q - 4Q	1Q
FCS SoS Integration / Verification Phase 4							1Q - 4Q
FCS SoS Test - Phase 4							
Software Build 1							
BCT Software Build 1 Definition Check Point							
BCT Software Build 1 Planning Check Point							
BCT Software Build 1 Readiness Check Point	1Q						
BCT Software Build 1 SoSCOE 1.8 FQT	1Q						
Software Build 2							
BCT Software Build 2 Early & Final Definition Check Point	1Q						
BCT Software Build 2 Early Planning Check Point	4Q						
BCT Software Build 2 Final Planning Check Point		4Q					
BCT Software Build 2 Early Readiness Check Point		1Q					
BCT Software Build 2 Final Readiness Check Point			2Q				

BCT Software Build 2 SoSCOE 2.0 FQT		3Q					
BCT Software Build 2 SoSCOE 2.5 FQT			2Q				
Warfighter Machine Interface Svcs Build 2 Early Life Cycle Objectives	3Q						
Warfighter Machine Interface Svcs Build 2 Early Life Cycle Archtecture	4Q						
Warfighter Machine Interface Svcs Build 2 Early Functional Qualification Test		3Q					
Network Management System Build 2 Early Life Cycle Objectives	3Q						
Network Management System Build 2 Early Life Cycle Architecture	4Q						
Network Management System Build 2 Early Functional Qualification Test			1Q				
Level 1 Fusion Build 2 Early Life Cycle Objectives	3Q						
Level 1 Fusion Build 2 Early Life Cycle Architecture	4Q						
Level 1 Fusion Build 2 Early Functional Qualification Test		3Q					
Situational Understanding Build 2 Early Life Cycle Objectives	3Q						
Situational Understanding Build 2 Early Life Cycle Architecture	4Q						
Situational Understanding Build 2 Early Functional Qualification Test		4Q					
Battle Command & Mission Execution - Build 2 Early Life Cycle Objectives	3Q						
Battle Command & Mission Execution - Build 2 Early Life Cycle Architecture	4Q						
Battle Command & Mission Execution - Build 2 Early Functional Qualification Test		4Q					
Logistics Decision Support System - Build 2 Life Cycle Objectives	3Q						
Logistics Decision Support System - Build 2	4Q						

Life Cycle Architecture							
Logistics Decision Support System - Build 2 Functional Qualification Test		4Q					
Platform Soldier - Mission Readiness System - Build 2 Life Cycle Objectives	3Q						
Platform Soldier - Mission Readiness System - Build 2 Life Cycle Architecture	4Q						
Platform Soldier - Mission Readiness System - Build 2 Functional Qual Test		4Q					
Software Build 3							
BCT Software Build 3 Early Definition Check Point		3Q					
BCT Software Build 3 Final Definition Check Point			1Q				
BCT Software Build 3 Early Planning Check Point			3Q				
BCT Software Build 3 Final Planning Check Point				3Q			
BCT Software Build 3 Early Readiness Check Point				1Q			
BCT Software Build 3 Final Readiness Check Point					1Q		
BCT Software Build 3 SoSCOE 3.0 Functional Qualification Test				2Q			
BCT Software Build 3 SoSCOE 3.5 Functional Qualification Test					1Q		
Warfighter Machine Interface Svcs Build 3 Early Life Cycle Objectives			3Q				
Warfighter Machine Interface Svcs Build 3 Early Life Cycle Architecture			4Q				
Warfighter Machine Interface Svcs Build 3 Final Life Cycle Objectives				3Q			
Warfighter Machine Interface Svcs Build 3 Final Life Cycle Architecture				4Q			
Battle Command & Mission Execution - Build 3			4Q				

Early SRS LCO							
Battle Command & Mission Execution - Build 3 Early TRC TRR				3Q			
Battle Command & Mission Execution - Build 3 Final SRS LCO				3Q			
BCT Software Build 4 Definition Check Point					1Q		
BCT Software Build 4 Planning Check Point					4Q		
BCT Software Build 4 Readiness Check Point						3Q	
BCT Software Build 4 SoSCOE 4.0 Functional Qualification Test						2Q	
C4ISR Build 4							1Q
Battle Command & Mission Execution - Build 4 LCO1					4Q		
Battle Command & Mission Execution - Build 4 LCA1						1Q	
BCME - Build 4 Engineering Release to Battle Command SIL						3Q	
Battle Command & Mission Execution - Build 4 LCO2						4Q	
Battle Command & Mission Execution - Build 4 LCA2							1Q
BCME - Build 4 Final Release to Battle Command SIL							3Q
Integrated Computer System (ICS) Type 6 Prototype Deliveries (21)	2Q						
ICS Prototype Deliveries for NLOS-C Inc 0	4Q	1Q - 3Q					
ICS Type IV Prototype Deliveries (8)				2Q - 4Q			
Centralized Controller PDR			2Q				
Centralized Controller CDR				1Q			
Embedded Full Task Training Block 0 Delivery			3Q				
Embedded Full Task Training Block 1 Delivery					3Q		
Embedded Full Task Training Block 2 Delivery						4Q	
Embedded Full Task Training Block 3 Delivery							2Q

C4SIL Integration							
Complete SoSIL Config for SoS Sim Framework (S2F) Build 1 Integration	1Q - 4Q	1Q					
Complete SoSIL Config for SoS Sim Framework (S2F) Build 2 Integration		4Q	1Q - 3Q				
IP3 SoSIL & IMT Configuration & Integration			4Q	1Q - 2Q			
IP4 SoSIL & IMT Configuration & Integration					4Q	1Q - 2Q	
U-UGS Prototype #1-16 Deliveries to SoSIL - IV1 / SO1		1Q					
T-UGS Prototype #1-10 Deliveries to SoSIL - IV1/SO1		1Q					
U-UGS Prototype (8) Deliveries to SoSIL - IV3						1Q	
T-UGS Prototype (8) Deliveries to SoSIL - IV3						1Q	
UAV Class IV Sim SW Build 1 Delivery to SoSIL		1Q					
UAV Class I Sim SW Build 1 Delivery to SoSIL		1Q					
UAV Class IV Sim SW Build 2 Delivery to SoSIL			1Q				
UAV Class I Sim SW Build 2 Delivery to SoSIL			4Q				
UAV Class IV Sim SW Build 3 Delivery to SoSIL					1Q		
UAV Class I Sim SW Build 3 Delivery to SoSIL					3Q		
EI2 Support MULE Integration into SoSIL		4Q	1Q				
EI2 Support ARV Integration into SoSIL		4Q	1Q				
EI2 Support SUGV Integration into SoSIL		4Q	1Q				
EI3 Support MULE Integration into SoSIL				4Q	1Q		
EI3 Support ARV Integration into SoSIL				4Q	1Q		
EI3 Support SUGV Integration into SoSIL				4Q	1Q		
Joint Experimentation							
Conduct JEFX 08 SP3 Experiment		3Q					
Conduct JEFX 10 Experiment				2Q - 3Q			
Ground Sensor Integrator Milestones							

ALAS PDR		2Q					
ALAS CDR			1Q				
ALAS Prototype Deliveries				2Q - 4Q	1Q - 3Q		
ALAS Spare Prototype Deliveries				3Q - 4Q	1Q - 3Q		
SUGV EO PDR		2Q					
SUGV EO CDR		4Q					
SUGV EO Prototype Deliveries			2Q - 4Q				
CEOS PDR	2Q						
CEOS Prototype Deliveries			1Q - 4Q	1Q - 4Q			
MFRF PDR							
MFRF Prototype Deliveries		2Q - 4Q	1Q				
CID PDR	1Q						
MREO CDR		1Q					
SREO PDR		3Q					
SREO CDR			1Q				
SREO Prototype Deliveries				2Q - 4Q	1Q - 2Q		
ETCC CDR		3Q					
SUGV LTD CDR			3Q				
SCDS Prototype Deliveries			4Q	1Q			

B1 RC - Software Build 1 Readiness Check Point
B2 DC - Software Build 2 Definition Check Point
B2 EPC - Software Build 2 Early Planning Check Point
B2 FPC - Software Build 2 Final Planning Check Point
B2 ERC - Software Build 2 Early Readiness Check Point
B2 FRC - Software Build 2 Final Readiness Check Point
B2E - Software Build 2 Early
FQT - Functional Qualification Test
LCA - Life Cycle Architecture
LCO - Life Cycle Objectives
LDSS - Logistics Decision Support System
PSMRS - Platform Soldier - Mission Readiness System
SIL - Systems Integration Lab
TRR - Technical Readiness Review

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
FC7	FCS - Spin Out Technology/Capability Integration	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds all non-core Future Combat System (FCS) efforts required to develop and test the integration of FCS technologies and capabilities into the current force "Spin Out" Programs. This includes A-Kit development, unique Spin Out training, facilities, testing, etc. These Spin Out Programs will provide early capability in Force Protection, Networked Fires, Expanded Battle Space, and limited Battle Command to the current force.

The first Spin Out Program (Spin Out 1) will begin the process of providing interoperability of current force systems technologies (Force XXI Battle Command, Brigade and Below (FBCB2) and the Advanced Field Artillery Tactical Data System (AFATDS)) with new FCS capabilities (Unattended Ground Sensors (UGS) and the Non Line of Sight Launch System (NLOS-LS)). This will be accomplished by integrating a common B-Kit consisting of the Joint Tactical Radio System (JTRS), the Integrated Computer System (ICS), and limited Battle Command System (BCS) software, to include System of System Common Operating Environment (SOSCOE), into three current force platforms, the High Mobility Multipurpose Wheeled Vehicle (HMMWV), the Abrams System Enhancement Program (SEP) tank and the Bradley A3 Infantry Fighting Vehicle (IFV).

The Army has chosen to accelerate the current SUGV (Block 1) and Class I UAV (Block 0) technology to the current force in the Spin Out 1 timeframe. Both of these technologies are not full FCS threshold but the Army believes that the current level of technology would still greatly improve our Soldiers knowledge of the battlefield. These are not part of Spin Out 1. However, the Army is attempting to get them to the current force in the Spin Out 1 timeframe.

The Class I (Block 0) UAV Acceleration will field a Class I prototype to the AETF in FY08. If the Limited User Test (LUT) is successful at achieving the Army's goal, the unit will further undergo additional operator tests and go into production in FY09 with fielding in FY10.

The SUGV (Block 1) Acceleration features a FCS chassis with the Experiment 1.1 sensor head (not full FCS threshold capability). This unmanned platform will also undergo a LUT to measure their effectiveness to the current force. The platforms are scheduled for production in FY09 with fielding in FY10.

Both of these accelerations will be connected into the limited BCN so their pictures can be used by the current force vehicles within the FCS SO1 Network.

Future Spin Outs will continue to provide additional FCS technologies and capabilities to the current force.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Contractor Spin Out 1 A Kit Integration - Provides for the design of the current force platform A-Kits (wiring harness, mounts, brackets etc.) needed for the integration of FCS technologies that include the Integrated Computer System (ICS) and the Ground Platform Communication System (GPCS). Also provides for the administration of both the platform contract and any subcontract effort. FY07 funded the design of the integrations kits, finalization of hardware Interface Control Documents (ICD) and the Critical Design Reviews	7200	19782	20731

(CDR) for the three LUT configuration integration kits designs. FY08 will fund the completion of any design changes for the LUT configuration, start of the integration effort for the production configuration of the GMR and the ICS into the digital current force platforms to include ICD development. FY09 will continue to fund the integration effort for the production configuration for the digital current force platforms to include the completion of the design of the A-Kits.			
Contractor Spin Out 1 A Kit Prototype Build and Integration - Provides for the procurement of all material required for the current force platform A-Kits and the labor required for both the fabrication of the A-Kits as well as the installation of both A-Kits and FCS technologies and all associated material onto the current force platforms. FY07 funded the procurement of some of the material for the three LUT configuration integration kits. FY08 will fund the remaining material and labor required to make the LUT configuration prototype A-Kits and modify the digital current force platforms to receive the B-Kits, and procure some of the material for production configuration A-Kits. FY09 funding will procure the remaining material needed for the production configuration A-Kit as well as the labor required to build the prototype A-Kits and modify the digital current force platforms to accept the production configuration B-Kits.	4586	6680	4735
Contractor Spin Out 1 Test - Provides for all testing performed by the current force prime contractors in support of the A-Kit design. FY07 started contractor testing of the LUT configuration integration kits. FY08 funding completes any contractor testing required for the LUT configuration of the B-Kit and starts the contractor testing for the production configuration of the B-Kit. FY09 funding will complete the contractor testing required for the production configuration of the B-Kit.	3100	3170	1305
Contractor Spin Out 1 Software - Provides for the development and modification of any platform software needed for the integration of the ICS and GPCS into the current force platforms. FY07 funded the finalization of the software ICDs, the fielding of software updates for training devices and the continuing development of software for the LUT configuration of the B-Kit. FY08 funding will continue to integrate software drops for the LUT configuration and will start the software development of the production configuration of the B-Kit. FY09 funding will continue to integrate software drops for the LUT configuration to support the Classified Verification Test (CVT) and continue the development of software and integration of software changes for the production configuration of the B-Kit.	2500	2000	3500
Contractor Spin Out 1 Logistics - Provides for the development of installation and maintenance procedures, logistics support analysis, development of any required diagnostics capabilities, technical manual changes and development of training procedures required for the A-Kit. FY07 started the development of training manuals for the LUT configuration and fielded Ft. Bliss terrain databases for SO1 capability. FY08 funding will continue to develop training procedures in support of the government testing in FY08 as well as start the supportability planning and modification of training devices in support of the fielding of A & B Kits into the current force Heavy Brigade Combat Team (HBCT) structure. FY09 will continue the supportability planning and development of training procedures for the HBCTs.	1000	975	3489
Government Spin Out 1 Test - Provides for the development and coordination along with the Army Test Command (ATC) of any plans for the testing required at Aberdeen Proving Ground (APG) and the Electronic Proving Ground (EPG) to support safety releases, reliability, environmental and any other required testing. It also provides support to the Army Evaluation Task Force (AETF) during the completion of the Technical Field Test (TFT), Force Development Test and Experimentation (FDTE), Limited User Test (LUT), Initial Operational Test and Evaluation (IOTE) as well as any other testing that utilizes the AETF with current platforms. FY07 funded the start of IQT testing for the LUT configuration on the various current force platforms. FY08 funding will complete the IQT testing of the LUT configuration on the individual platforms and the operational field events to include the TFT and the LUT conducted by the US Army Operational Command. This includes Modeling and Simulation used to provide simulation of the FCS material and the wrap around virtual battlespace as well as unique instrumentation needed to support SO1 testing. FY09 funding will start IQT testing for the production configuration as well as the Classified Verification Test (CVT) required to test the ability of the B-Kit to support classified network operations.	3839	23277	6507

SO1 Software Integration with Current Force Software: Software development for key current force C4ISR systems (AFATDS, FBCB2) to construct necessary interfaces with FCS technologies. Engineering support to ensure that FCS systems, currently under development, will interoperate with current force . Develop systems architectures that bridge the current force to the FBCT and the derived data products that are necessary for zero time system initialization for spin out test events. On site tech support for current force software to the AETF to support success of Spin Out test events. Contractors involved are Northrop Grummam, Lockheed Martin, and CSC to include support from FBCB2, Tactical Radio Communications Systems (TRCS), PM Battle Command, PM NetOps, and SE&I.	5675	6700	4540
Training Devices Accomplishments - Continue the modification of training devices for the AETF and HBCTs: Includes:1. Close Combat Tactical Trainer (CCTT) 1.5M in FY08 and .7M in FY09: FY08 - Continues the FCS Spin Out hardware and software concurrency updates to the CCTT simulation facility at Fort Bliss, specifically for four Abrams M1A2 System Enhancement Package (M1A2SEP) modules, five Bradley M2A3 modules, four Reconfigurable Vehicle Simulator (RVS) modules, After Action Review (AAR) and Semi-Automated Forces (SAF). FY09 - Continues the FCS Spin Out hardware and software concurrency updates to the CCTT simulation facility at Fort Bliss. 2. Synthetic Environment (SE) (Core) .4 in FY08, .4M in FY09: FY08 - Development of concurrency updates and enhancements to the CCTT Fort Bliss terrain database (TDB). Tasks include the updating of the Database Virtual Environment Development (DVED) source data for the Fort Bliss training TDB and developing/enhancing FCS specific visual/3D models for use by the CCTT. FY09 - Continues concurrency updates and enhancements to the CCTT Fort Bliss terrain database (TDB) initiated in FY08.3. M1A2 SEP Trainer Upgrades for SO1 .6M in FY08, .1M in FY09: FY08 - Provides for the development upgrade to the currently fielded M1A2SEP MTS for individual maintenance level training of FCS unique enhancements to the M1A2SEP Abrams tank, specifically the Spin Out 1 A & B Kit technology.FY09 - Maintains concurrency with FCS Spin Out updates.4. M2A2 MTS Desktop Trainer Upgrades for SO1 .7M in FY08, .1M in FY09: FY08 - Provides for the development upgrade of the currently fielded Bradley M2A3 MTS for individual maintenance level training of FCS unique enhancements to the M2A3 Bradley Fighting Vehicle, specifically the Spin Out 1 A & B Kit technology.FY09 - Maintains concurrency with FCS Spin Out updates.			1300
SUGV Block 1 Prototypes Acceleration - Procure, fabricate 25 prototypes for AETF tests; 19 (1per squad) for test, 4 spares and 2 for Network Integration. Includes costs of radios, sensor, platforms, controller unit, central processing unit, neck.			1265
SUGV Block 1 Software Acceleration - Cost to integrate the pretest from SUGV into the Limited Battle Command Network for the Spin Out 1 platform.			690
SUGV Block 1 Test Acceleration - Cost to facilitate, train, provide sustainment support and provide technical expertise for tests			879
SUGV Block 1 SEPM Acceleration - Cost to manage program (government and LSI) to include development of logistic support and training support packages.			4845
Class I (Block 0) Prototype Acceleration - Procure and fabricate 13 prototypes for AETF: 9 for Test, 2 spares and 2 for Network Integration. Includes cost of radio, experiment 1.1 configuration, EO/IR gimbaled sensor, surrogate controller			3300
Class I (Block 0) Software Acceleration - Cost to integrate the pictures from Class I into the limited Battle Command Network n Spin Out 1 platforms.			
Class I (Block 0) Test Acceleration - Cost to facilitate, train, provide sustainment support and provide technical expertise for tests			2879
Class I (Block 0) SEPM Acceleration - Cost to manage program (government and LSI) to include development of logistic support and training support packages.			4935
Small Business Innovative Research/Small Business Technology Transfer Program		1801	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)		64796	32442
Current BES/President's Budget (FY 2009)	27900	64385	64900
Total Adjustments	27900	-411	32458
Congressional Program Reductions		-411	
Congressional Recissions			
Congressional Increases			
Reprogrammings	27900		
SBIR/STTR Transfer			
Adjustments to Budget Years			32458

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0604660A FCS Manned Grd Vehicles & Common Grd Vehicle Components		592254	774257	785575	358641	214207	103230	Continuing	Continuing
0604661A FCS System of Systems Engr & Program Management		1497321	1413945	1874987	1916207	1290308	1027816	Continuing	Continuing
0604662A FCS Reconnaissance (UAV) Platforms		43388	34379	14296	9235	4556	1336	Continuing	Continuing
0604663A FCS Unmanned Ground Vehicles		90091	96918	64744	43601	26855	3580	Continuing	Continuing
0604664A FCS Unattended Ground Sensors		10929	12967	18968	16754			Continuing	Continuing
0604665A FCS Network Hardware & Software		647649	539145	334085	365287	290790	169526	Continuing	Continuing
0604646A Non Line of Sight - Launch System	313981	253075	200099	40043	5957			Continuing	Continuing
0604647A Non Line of Sight - Cannon	108689	136929	89841	71396	43222	28775		Continuing	Continuing
0604666A FCS Spin Outs	27900	64385	64900	67021	51026	56287	14637	Continuing	Continuing
0603639A FCS MRM		44294	45866	71451	56296	106353	50757	Continuing	Continuing
0604715A STRICOM/NAWCTSD Support		378	388	398	406	415	426	Continuing	Continuing
WTCV G86100 FCS Core Program		80932	154583	148028	677820	2175327	5744649	Continuing	Continuing
WTCV G86200 FCS Spin Out Program		19987	176667	367962	550821	766274	944999	Continuing	Continuing

AMMO E88103					24634	47624	61762		134020
0604645 F52 UAV Recon & Sensors	26360							Continuing	Continuing
0604645 F53 UGV	106516							Continuing	Continuing
0604645 F54 UGS	10612							Continuing	Continuing
0604645 F55 SUSTAINMENT	106517							Continuing	Continuing
0604645 F57 MANNED GROUND VEHICLES	563946							Continuing	Continuing
0604645 F61 SoS Engineering and Program Management	2142970							Continuing	Continuing

Comment:

D. Acquisition Strategy The FY2008 President's budget reflects the Army successfully achieving a balance between three competing priorities: legislation, the demands of war, and the need to modernize the force. The FCS program was adjusted to help strike the balance. Due to FCS requirements changing in the last 3 years, coupled with the challenge to meet all its reset and modernization requirements, the number of platforms that the Army plans to develop and buy within the FCS family of systems, as well as the timeline for buying and fielding these platforms and simultaneously improving the Current Force through early delivery of selected FCS capabilities has been adjusted. The adjustments maintained the Army focus on FCS-equipped Brigade Combat Team (BCT) development and substantially reduced program risk. The following are adjustments made to the FCS program which affected the Spin Out program:

1. Adjusting the development of the Core and Spin Out capabilities so that the Army can benefit from the economies realized with concurrent testing.
2. Increasing the rate of fielding of FCS technologies to the current force
3. Fund the Spin Out Technology Insertion program.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604666A - Modular Brigade Enhancement

PROJECT
FC7

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor SO 1 A kit Integration	CPFF	Various - remarks 3 - 5		7200	2-3Q	19782	1-2Q	20731	1-2Q	Cont.	Cont.	
Contractor SO 1 A kit Prototype	CPFF	Various - remarks 3 - 5		4586	2-3Q	6680	1-2Q	4735	1-2Q	Cont.	Cont.	
Contractor SO 1 Software	CPFF	Various - remarks 3 - 5		2500	2-3Q	2000	1-2Q	3500	1-2Q	Cont.	Cont.	
Contractor SO 1 Logistics	CPFF	Various - remarks 3 - 5		1000	2-4Q	975	1-2Q	3489	1-2Q	Cont.	Cont.	
SO1 Software Integration with Current Force Software	CPFF	Various		5675	1-2Q	6700	1-2Q	4540	1-2Q	Cont.	Cont.	
Modification of Training Devices	CPFF	Various					1-2Q	1300	1-2Q	Cont.	Cont.	
SUGV Block 1 Prototype Acceleration	CPFF	The Boeing Company, St. Louis, MO (see remark 2)					1-3Q	1265	1-3Q	Cont.	Cont.	
SUGV Block 1 Software Acceleration	CPFF	The Boeing Company, St. Louis, MO (see remark 2)					1-3Q	690	1-3Q	Cont.	Cont.	
SUGV Block 1 Test Acceleration	MIPR	PM FCS (BCT) St. Louis, MO					1-3Q	879	1-3Q	Cont.	Cont.	
SUGV Block 1 SEPM Acceleration	CPFF	The Boeing Company, St. Louis, MO (see remark 2)					1-3Q	4845	1-3Q	Cont.	Cont.	
Class 1 (Block 0) Prototype Acceleration	CPFF	The Boeing Company, St. Louis, MO (see remark 1)					1-3Q	3300	1-3Q	Cont.	Cont.	
Class 1 (Block 0) Software Acceleration	CPFF	The Boeing Company, St. Louis, MO (see remark 1)					1-3Q			Cont.	Cont.	
Class 1 (Block 0) SEPM Acceleration	CPFF	The Boeing Company, St. Louis, MO (see remark 1)					1-3Q	4935	1-2Q	Cont.	Cont.	
Class 1 (Block 0) Test Acceleration	MIPR	PM FCS (BCT) St. Louis, MO					1-3Q	2879	1-3Q	Cont.	Cont.	
Subtotal:				20961		36137		57088		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

Remarks: Remark 1: Subcontractor: Honeywell Defense and Electronics System, Albuquerque, New Mexico
Remark 2: Subcontractor: iRobot Corporation, Burlington, MA
Remark 3: Spin Out Integration into the Abrams, General Dynamics, Sterling Heights, MI
Remark 4: Spin Out Integration into the Bradley Fighting Vehicle, BAE,Santa Clara, CA
Remark 5: Spin Out Integration into the High Mobility Multi Wheeled Vehicle (HMMWV), AM General, Livonia, MI

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR		OSD				1801	2-3Q				1801	
Subtotal:						1801					1801	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government SO1 Test	MIPR	Various		3839		23277	1-3Q	6507	1-3Q	Cont.	Cont.	
Contractor SO 1 Test	CPFF	Various		3100		3170	1-3Q	1305	1-3Q	Cont.	Cont.	
Subtotal:				6939		26447		7812		Cont.	Cont.	

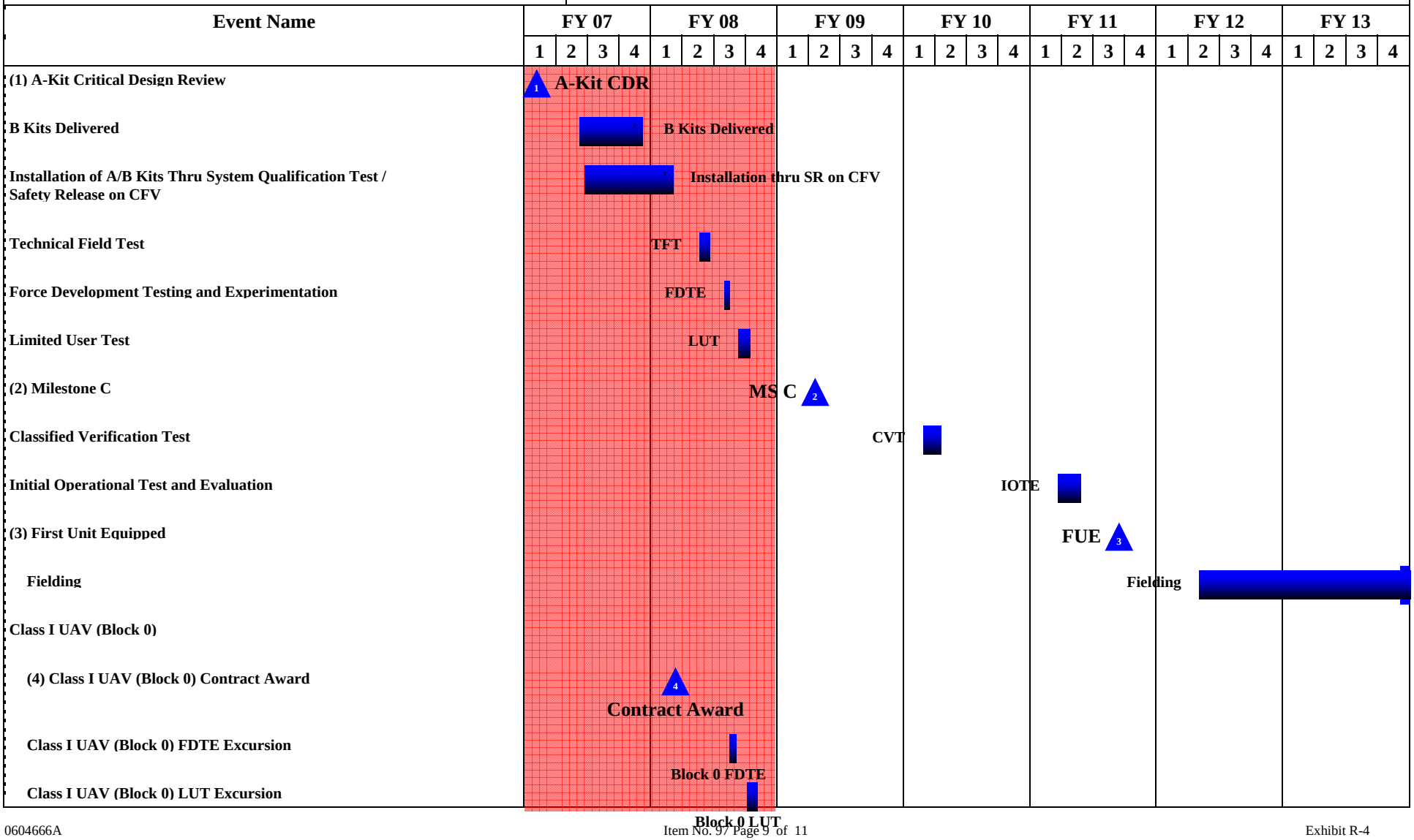
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:				**27900**		**64385**		**64900**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**



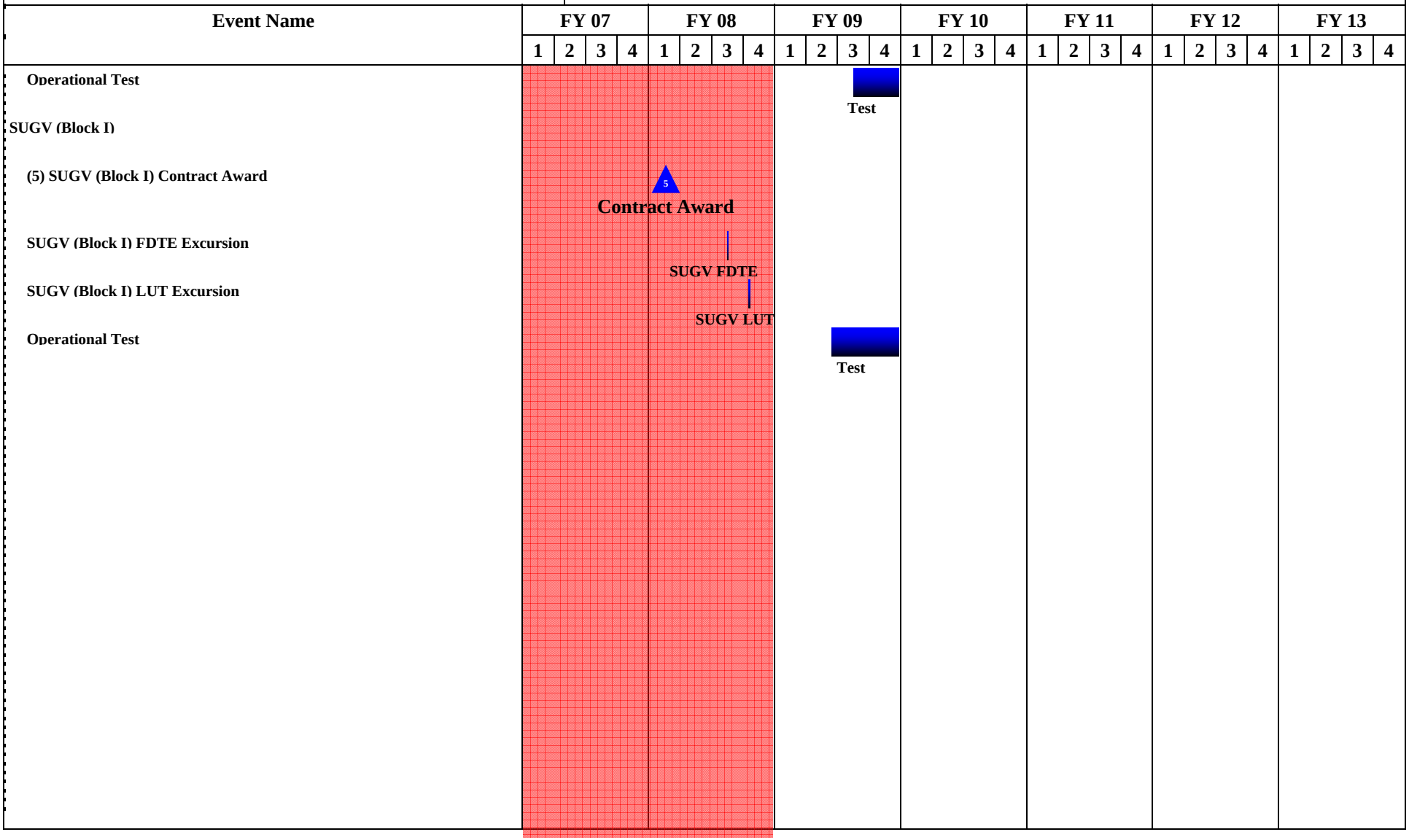
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604666A - Modular Brigade Enhancement

PROJECT
FC7



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604666A - Modular Brigade Enhancement**	**FC7**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
A-Kit PDR							
A-Kit Critical Design Review	1Q						
B Kits Delivered	2Q - 4Q						
Installation of A/B Kits Thru System Qualification Test / Safety Release on CFV	2Q - 4Q	1Q					
Technical Field Test		2Q					
Force Development Testing and Experimentation		3Q					
Limited User Test		3Q - 4Q					
Milestone C			2Q				
Classified Verification Test				1Q - 2Q			
Initial Operational Test and Evaluation					1Q - 2Q		
First Unit Equipped					3Q		
Fielding						2Q - 4Q	1Q - 4Q
Class I UAV (Block 0)							
Class I UAV (Block 0) Contract Award		1Q					
Class I UAV (Block 0) FDTE Excursion		3Q					
Class I UAV (Block 0) LUT Excursion		4Q					
Operational Test			3Q - 4Q				
SUGV (Block I)							
SUGV (Block I) Contract Award		1Q					
SUGV (Block I) FDTE Excursion		3Q					
SUGV (Block I) LUT Excursion		4Q					
Operational Test			2Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	40325	47317	44508	37892	36692	33969	34481	Continuing	Continuing
L67	SOLDIER NIGHT VISION DEVICES	19246	16199	27313	25167	24572	25030	19874	Continuing	Continuing
L70	NIGHT VISION DEV ED	16577	12354	8983	12725	12120	8939	14607	Continuing	Continuing
L76	Dismounted Fire Support Laser Targeting Systems	4502	18764	8212						31478

A. Mission Description and Budget Item Justification: This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for U. S. defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations. Project L67 focuses on night vision electro-optical, laser, and other target identification and location equipment for a variety of Future Combat System of Systems (FCS) Units of Action/Employment and Future Force soldiers. This project includes the enhanced night vision goggle, modular HTI multi-function laser activities, and thermal upgrades to include an uncooled medium thermal weapon sight. Project L70 focuses on night vision, reconnaissance, surveillance and target acquisition (RSTA) sensors and suites of sensors to provide well-defined surveillance and targeting capabilities for a variety of Current, Modular, Future Combat System of Systems (FCS) and Future Force platforms. This project includes night vision sensor acquisition support of FCS core systems, Risk Reduction Demonstration (RRD) of standard uncooled thermal sensor packages, Sense Through The Wall programs, Unattended Ground Sensor systems, common sensor message set management for FCS and other applications, upgrades to existing ground surveillance radars, provides Persistent Surveillance and Dissemination System-of-Systems (PSDS2) enhancements and capability improvements, transitions the 3rd Generation Forward Looking Infrared from an Advanced Technology Objective (ATO), and developes the Driver's Vision Device (DVD). Project DL76 focuses on the engineering development of technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), the Mark VII-E Laser Target Locator, and future programs based on emerging Army requirements. Advanced, cooled, InSb, infrared imaging focal plane arrays are now available in 1000 x 1000 pixel (mega-pixel) resolution which, when applied to LLDR, will provide much greater range performance in a package of similar size. With an associated optical redesign, greater LLDR imaging performance can be achieved with an overall reduction in weight. This project will also integrate the next generation uncooled, 17 micron pixel-pitch FLIRs being developed for the Thermal Weapon Sight program into the Mark VII-E, improving its imaging performance with no impact on its weight. New laser designator technology has been developed which will reduce laser designator weight by close to 50% and cut battery usage by a factor of 10. Further reductions can be gained by reducing laser designator output energy levels below currently accepted standards, which initial modeling and testing indicate will not compromise performance of laser guided munitions. A primary focus of this project will be to perform sufficient live-fire and captive-carry range tests over a wide variety of environmental conditions with all current and future laser guided munitions to build the necessary confidence that reduced designator energy levels will not adversely impact the mission. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as JDAM and Excalibur.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	41161	44619	28795
Current BES/President's Budget (FY 2009)	40325	47317	44508
Total Adjustments	-836	2698	15713
Congressional Program Reductions		-302	
Congressional Rescissions			
Congressional Increases		3000	
Reprogrammings	302		
SBIR/STTR Transfer	-1138		
Adjustments to Budget Years			15713

Change Summary Explanation: Funding - FY 2009: increase in Project L67 focuses on the integration of related multi-sensors suites to enable immediate improvements in near to long-range target acquistion and engagement as well as improved battlefield command and control in "around-the-clock" combat operations.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L67	SOLDIER NIGHT VISION DEVICES	19246	16199	27313	25167	24572	25030	19874	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. It focuses on technology that can bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents. Enhanced Night Vision Goggle (Digital) ENVG(D) will be a head/helmet mounted night vision system for the individual Soldier. The system will use both image intensifier and uncooled thermal technology to provide a multi-spectral image to the Soldier. Other efforts include a Soldier-borne gunfire detection system and the development of Sense Through The Wall (STTW) technology giving Soldiers the ability to detect threats through walls during Military Operations on Urban Terrain (MOUT), developing a Future Weapon Sight (FWS) with fused electro-optical performance, and developing focal plane technology increasing product resolution and range.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue development of next generation Enhanced Night Vision Goggles (Digital) ENVG(D). The Digital ENVG will provide Soldiers the ability to use both image intensifier and uncooled thermal technologies during day, night, and obscured battlefield conditions.	5985	4600	5813
Develop lightweight multi-purpose laser.		3000	2000
Continue development of Sense Through The Wall (STTW), which provides dismounted Soldiers with the capability to detect and locate threats through walls during Military Operations on Urban Terrain (MOUT).	2621	2395	3500
Initiate the development of the Future Weapon Sight (FWS), which is a passive fused electro-optical sight.		958	5500
Continue the development, testing and evaluation of 17 Micron technology, Focal Plane Arrays (FPA), with improved sensitivity, clarity and range.	5551	3834	4500
Completed the development of high accuracy Azimuth Vertical Angle Measurement (AVAM) devices for handheld, man-portable target location devices. This effort will transition to DL76.	2627		
Continue the development of sniper fire detection and location systems, using portable sensors on Soldiers to locate gunfire.	1676	958	4000
Develop laser defense capability for laser detection/laser warning system with the ability to "see" lasers in order to disrupt, deny, and intercept enemy laser weapons.			2000
Completed the development of DARPA's MANTIS program developing a helmet-borne vision system and hand-held targeting system for the individual Soldier that combine imagery from multiple sensors using image fusion.	786		
Small Business Innovative Research/Small Business Technology Transfer Programs.		454	
Total	19246	16199	27313

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Helmet Mounted Enhanced Vision Devices (K36400) OPA2	280550	214957	418087	449928	320852	177862	107903	Continuing	Continuing
Thermal Weapon Sight (TWS) (K22900) OPA2	311956	316941	416866	364420	402621	346973	69411	Continuing	Continuing
Sniper Night Sight (K41500)	24884	22194	11729	15107	13743	15625	7421	Continuing	Continuing
Multi-Function Aiming Light (MFAL) (K35000)	46234	44661	25961	28223	22870	23018	6941	Continuing	Continuing
Sense Throught The Wall (STTW) (KA2300)				27390	26610	67597	12891	Continuing	Continuing

Comment:

C. Acquisition Strategy The various developmental programs in this project will continue to exercise competitively awarded contracts using best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L67

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Enhanced Night Vision Goggles (Digital) ENVG(D)	MIPR		12562	1471	1-2Q	4150	1-2Q			Cont.	18183	
Enhanced Night Vision Goggles (Digital) ENVG (D)	C/FP	Various						5813	1-2Q	Cont.	Cont.	
Enhanced Night Vision Goggles (Digital) ENVG(D)	C/FP	EOIR, Fredericksburg, VA		269	2Q						269	
Enhanced Night Vision Goggles (Digital) ENVG(D)	C/FP	BAE Systems, Lexington, MA		2761	2Q						2761	
Enhanced Night Vision Goggles (Digital) ENVG(D)	C/FP	CACI Technologies, Chantilly, VA		333	2Q						333	
Multi-purpose Laser	MIPR	TBD				3000	2Q	2000	1-2Q	Cont.	Cont.	
Focal Plane Arrays (FPA)	MIPR	DOI - Ft Huachuca, AZ	6746	5551	1Q	4002	1-2Q	4500	1-2Q	Cont.	Cont.	
Sense Through The Wall (STTW)	MIPR	CERDEC - Fort Monmouth, NJ	103	2238	1Q	1880	1-2Q	1221	1Q	Cont.	Cont.	
Sense Through The Wall (STTW)		CACI Technologies		383	1Q						383	
Future Weapon Sight (FWS)	MIPR	TBD				250	2Q			Cont.	250	
Future Weapon Sight (FWS)	C/FP	TBD						5500	1-2Q	Cont.	Cont.	
Azimuth Vertical Angle Measurement (AVAM)	MIPR	NAVSEA, Washington Navy Yard, DC	412	280	1Q						280	
Azimuth Vertical Angle Measurement (AVAM)	C/FP	EOIR, Fredericksburg, VA		1457	2Q						1457	
Azimuth Vertical Angle Measurement (AVAM)	C/FP	Litton Systems, Orlando. FL		890	2Q						890	
Sniper Fire Detection and Location Technology Development	MIPR	ARDEC, Picatinny Arsenal, NJ	2950	1676	2Q	280	1Q	3000	1-2Q	Cont.	Cont.	
MANTIS Development Activities	MIPR	DOI, Ft. Huachuca, AZ		786	1Q						786	
Laser Detection/Combat Identification (CID)/Laser Warning Device	MIPR	TBD						2000	1-2Q		2000	

Subtotal:			22773	18095		13562		24034		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	NVESD, Ft Belvoir, VA	435	113	1Q	120	1Q	120	1Q	Cont.	Cont.	
Subtotal:			435	113		120		120		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government Test Support Activity	MIPR	Various	8175	1038	1-2Q	2517	1-2Q	3159	1-2Q	Cont.	Cont.	
Subtotal:			8175	1038		2517		3159		Cont.	Cont.	

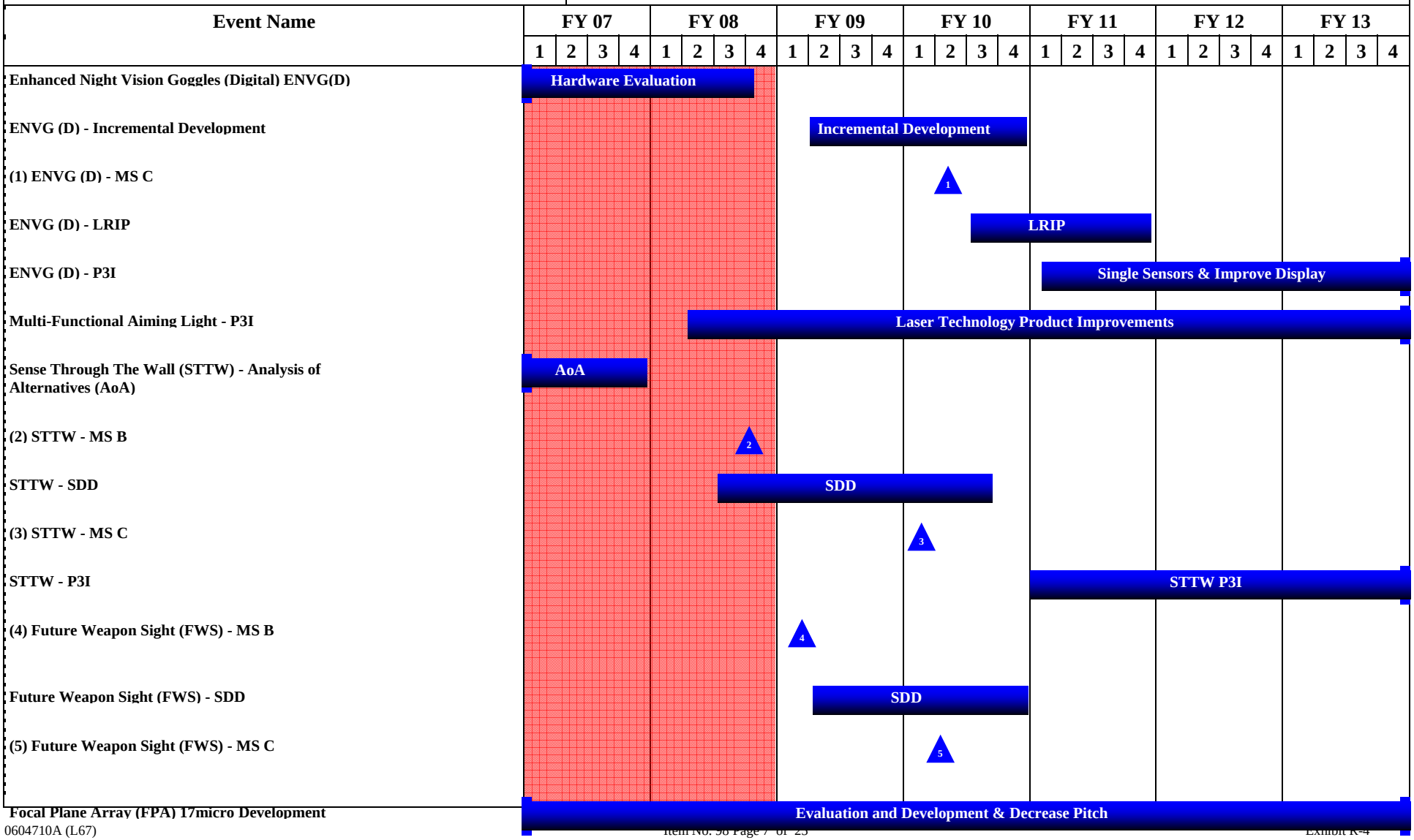
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**31383**	**19246**		**16199**		**27313**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

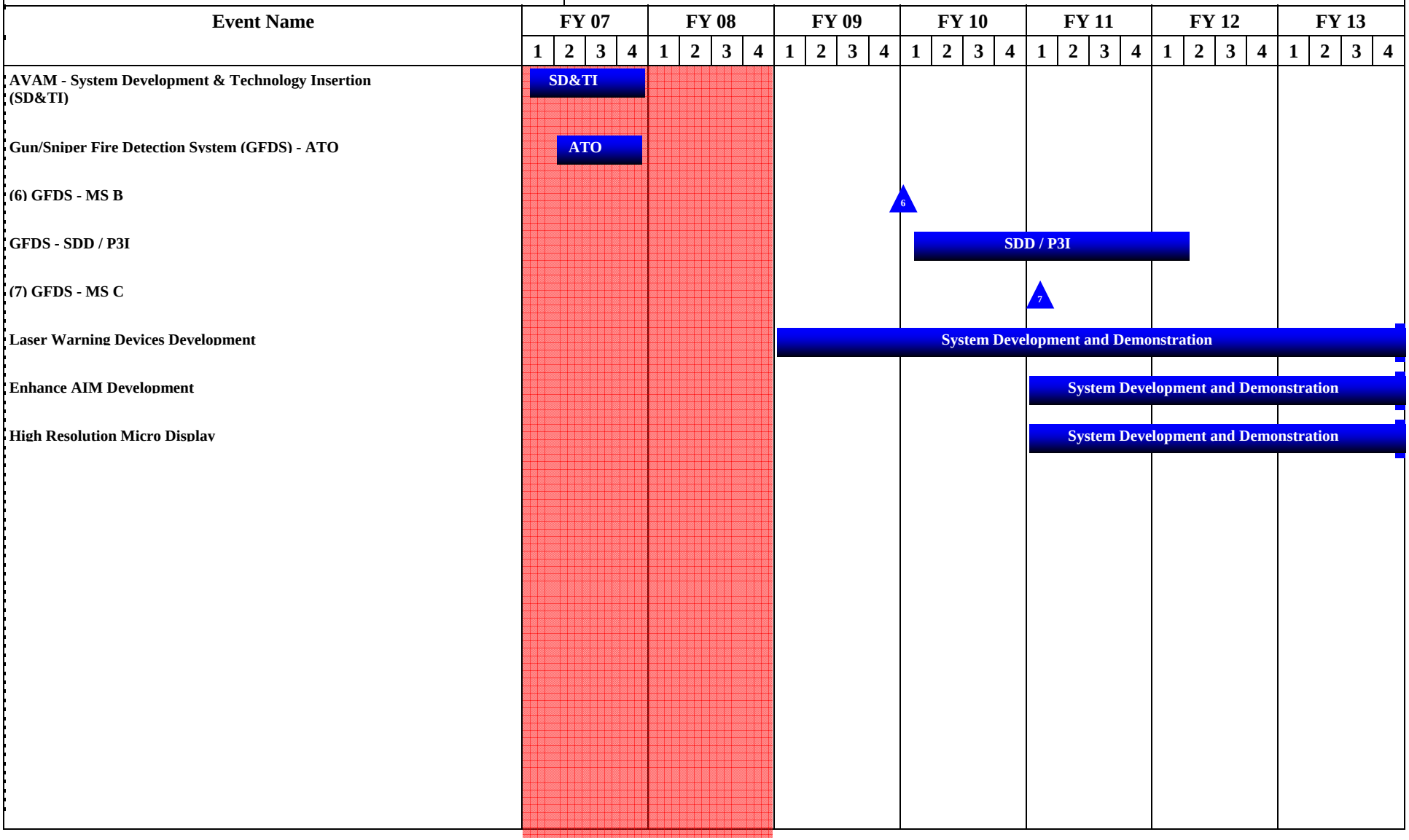
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L67**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Enhanced Night Vision Goggles (Digital) ENVG(D)	1Q - 4Q	1Q - 4Q					
ENVG (D) - Incremental Development			2Q - 4Q	1Q - 4Q			
ENVG (D) - MS C				2Q			
ENVG (D) - LRIP				3Q - 4Q	1Q - 4Q		
ENVG (D) - P3I					1Q - 4Q	1Q - 4Q	1Q - 4Q
Multi-Functional Aiming Light - P3I		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Sense Through The Wall (STTW) - Analysis of Alternatives (AoA)	1Q - 4Q						
STTW - MS B		4Q					
STTW - SDD		3Q - 4Q	1Q - 4Q	1Q - 3Q			
STTW - MS C				1Q			
STTW - P3I					1Q - 4Q	1Q - 4Q	1Q - 4Q
Future Weapon Sight (FWS) - MS B			1Q				
Future Weapon Sight (FWS) - SDD			2Q - 4Q	1Q - 4Q			
Future Weapon Sight (FWS) - MS C				2Q			
Focal Plane Array (FPA) 17micro Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AVAM - System Development & Technology Insertion (SD&TI)	1Q - 4Q						
Gun/Sniper Fire Detection System (GFDS) - ATO	2Q - 4Q						
GFDS - MS B				1Q			
GFDS - SDD / P3I				1Q - 4Q	1Q - 4Q	1Q - 2Q	
GFDS - MS C					1Q		
Laser Warning Devices Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Enhance AIM Development					1Q - 4Q	1Q - 4Q	1Q - 4Q

High Resolution Micro Display					1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L70**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L70	NIGHT VISION DEV ED	16577	12354	8983	12725	12120	8939	14607	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project performs System Development and Demonstration (SDD) on high performance night vision, Reconnaissance, Surveillance, and Target Acquisition (RSTA) systems and other related systems that allow forces to locate and track enemy units in day, night, and all battlefield conditions, and through natural and man-made structures and obscurants. It also develops and integrates suites of these sensors to provide well-defined surveillance and targeting capabilities, as well as architectures for these sensors to communicate automatically. The focus is on meeting the requisite night vision and RSTA capabilities required for evolving Current Force, Modular Force, and Future Force systems. Efforts will continue to refine a standard architecture among sensors with the Sensor Link Protocol (evolving to a joint message set called Sensor Data Link) to allow these sensors to communicate in a plug and play manner for improved force level sensor data fusion, aided target recognition and target hand-off.

This project will also demonstrate the producibility of interchangeable uncooled thermal focal plane arrays, and develop an uncooled infrared imaging B-Kit sensor family that will result in standardized sensor modules for a variety of applications. By eliminating the requirement for cryogenic coolers, uncooled thermal imagers are inherently smaller, lighter, more reliable, use less power, and are less expensive. Uncooled B-Kits can be used for a variety of Current Force, Modular Force, Future Combat System (FCS), and Future Force systems such as weapon sights, driver's viewers/situational awareness aids, missile seeker sensors, unattended ground sensors/security sensors, and unmanned ground and aerial vehicle payloads.

This project transitions 3rd Gen Forward Looking Infrared (3rd Gen FLIR) technology from the 3rd Gen Infrared Advanced Technology Objective (ATO) to the development of a 3rd Gen FLIR Engine for use in Current Force and Future Force systems. 3rd Gen FLIR provides Mid Wave Infrared and Long Wave Infrared digitized corrected video. 3rd Gen FLIR technology enhances the war-fighters' survivability and lethality through increased ID range performance when used in current sensor packages, while enabling detection of difficult and obscured targets as well as faster threat detection through automated processes. 3rd Gen FLIR technology can also be used to enhance mobility by maintaining current range performance in significantly smaller and lighter sensor packages.

This project continues Unattended Ground Sensors (UGS) hardware development, demonstration and test for a family of UGS systems for Intelligence, Surveillance and Reconnaissance (ISR). This will provide FCS and the Army a remotely employable Unattended Ground Sensor capability for ISR and physical security.

This project further developed the Persistent Surveillance and Dissemination System-of-Systems (PSDS2), a system-of-systems which linked numerous sensors (currently in theater) together, providing theater commanders with a single coordinated picture of the battlefield and the capability to quickly disseminate this "actionable information" to responders.

This project develops, integrates, and tests an upgrade to the long Range Advanced Scout Surveillance System (LRAS3) system, making it capable of digitizing, compressing and transmitting target information and imagery across the battlefield Network using Standard Army Radios. This enables the Current Force and Modular Force with the ability to cross-cue sensors that are linked to the network as well as share/exploit imagery and data from networked sensors on the battlefield.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L70**

This project develops the Driver's Vision Device (DVD) - leveraging Commercial Off-The-Shelf (COTS) available hardware to demonstrate and qualify a "Low Cost, lower Performance" configuration of the Driver's Vision Enhancer (DVE).

FY 2009 funding supports continuation of efforts for: Third Generation FLIR, Unattended Ground Sensor and Unmanned Air Vehicle (UAV) Electro-Optical/Infrared/Laser Designator (EO/IR/LD) Payloads developments; spirals in RSTA technologies from FCS into the Current Force; and continues evolution of Sensor Link Protocol.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue Sensor Link Protocol (SLP) as part of the DoD Joint Variable Message Format (JVMF) standard while maintaining configuration management and modifying application software tools. Sensor Link Protocol (SLP)/Sensor Architecture - A uniform and standard means of describing and coordinating the collection, preprocessing, communication, and fusion of RSTA functions for the Future Force and FCS. FY07 validated SDL functionality and implemented SDL on Rapid Aerostat Initial Deployment (RAID) in theater. FY08 will extend SDL to other sensors. FY09 will formalize SDL for networks.	513	767	729
Uncooled B-Kit (UBK)- Completed the Risk Reduction Demonstration (RRD) for B-Kit development on the first UBK configuration. FY07 accepted delivery of 27 prototype units to complete the RRD phase and qualify the UBK standards. Completed additional image processing algorithms for extended range (XR) capability as replacement option for 1st Generation FLIR for ground combat vehicles.	2003		
Unattended Ground Sensors (UGS) - Develop ISR, Chemical, Biological, Radiological, Nuclear (CBRN) and Urban UGS for FCS and other Army customers. Funds continue spiral integration efforts to include sensor systems remote employment capabilities. Demonstrate viability and technical feasibility of remotely employing a networked Unattended Ground Sensors (UGS) system from a UAV delivery platform. Supported successful Preliminary Design Review (PDR). Current focus is in support of the FCS Spin-Out 1. For FY07, supported successful program Critical Design Review (CDR), demonstrated and evaluated the deployment of FCS T-UGS from a Class IV UAV surrogate. FY08 will continue support for FCS UGS SDD effort with the execution of system qualification tests, system delivery and conduct of FCS Spin-Out One Limited User Test (LUT). FY09 continues development for Spin Out 1 for testing to verify JTRS network performance.	738	856	910
Third Generation FLIR (3rd Gen FLIR) - System Development and Demonstration (SDD) of 3rd Gen FLIR Engines. FY07 prepared for a MS B for 2Q FY08 to start SDD in FY08. FY08 and FY09 will initiate and continue (respectively) the development and qualification of a 3rd Gen FLIR Engine to meet current requirements for the Next Gen FLIR (AN/ZSQ-2/Q-3) aviation systems and for emerging requirements to include Stryker Mast Mounted Sensor, Future Combat Systems Medium and Long Range Sensors, the Common Sensor for the Armed Reconnaissance Helicopter (ARH), the Long Range Advanced Scout Surveillance System (LRAS3) and LRAS3 Next Generation.	2031	6010	6794
Development of payloads for the Army's UAV in accordance with TRADOC priorities and in support of FCS. This effort provides an EO/IR payload with an integrated laser designator for use in FCS Class III and IV UAVs. This effort is a joint program with PM Close Combat Support (CCS), expanding the capability of the Airborne Surveillance Target Acquisition and Minefield Detection System (ASTAMIDS) by adding the designator. Successfully completed PDR in FY06. In FY07, key components were built, including laser designators; FLIR sensors; multi-spectral imagers; and sensor control group. System build, initial flight testing and delivery of two full-up, integrated turret prototypes planned for FY08, and contractor technical test. In FY09 will take delivery of 5 additional prototypes, conduct Government Development Test.	1746	1150	550

Persistent Surveillance and Dissemination System-of-Systems (PSDS2) is operational in OIF. Efforts entailed integrating improvements: developed interoperability with DCGS and CRAM programs; improved architecture; improved dissemination of video and imagery; acquired Central Technical Support Facility (CTSF) validation; made multiple types of UAV data available to the warfighter; ensured Army Battlefield Command System (ABCS) 6.4 compliance; and, integrated Rapid Aerostat Initial Deployment (RAID) system high definition cameras. In FY07 modified and added Terasite software to PSDS2 capability for better geo-registration and enhanced terrain data display, and continues commonality with joint service efforts.	421		
LRAS3 Netted Sensor - Development, integration, and testing of hardware and software that supports digital compression, transmission and display of imagery and data to/from the battlefield network. This provides the Current Force and Modular Force with the ability to cross-cue sensors that are linked to the network as well as share/exploit imagery and data from networked sensors on the battlefield. FY07/08 completes development and implementation of hardware and software for 8 units as P3I to LRAS3. Current plan implements in production in FY08.	8670	3225	
Driver's Vision Device (DVD) - The effort leverages Commercial Off-The-Shelf (COTS) available hardware to demonstrate a "Low Cost, lower Performance" configuration of the Driver's Vision Enhancer (DVE). FY07 effort completed the specification for DVD to feed Pre-Product Improvement (P3I) for DVE. Completed a Market Survey and took delivery of 6 prototypes for environmental stress and demonstrations.	455		
Small Business Innovative Research / Small Business Technology Transfer Program		346	
Total	16577	12354	8983

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Night Vision Advanced Development PE 0603774A	5168	3432	2588	5644	5767	5959	6062	Continuing	Continuing
Night Vision DVE K31300 OPA2	67284	21993							89277
K38300 Long Range Advanced Scout Surveillance System (LRAS3) OPA2	187558	158411	210766	178255	188047	64923			987960
Future Combat System, G86100 WTCV		80932	154583	148028	677820				1061363
Advanced TUAV Payloads B00302 OPA2	27265	42135	141988	162602	149436	123076	116698	Continuing	Continuing
Next Gen FLIR for Army Special Operations Aviation Fleet - (AN/ZSQ-2/3): RDTE				9138	3818				12956
Next Gen FLIR for Army Special Operations Aviation Fleet - (AN/ZSQ-2/3): PROC						26371	22378	Continuing	Continuing

Comment:

C. Acquisition Strategy The development programs in this project are currently based on competitive awards and under cost reimbursement type contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L70

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DVE Development	C/CPIF	Various	21831								21831	
Modular HTI Multifunction Laser Activities	C/CP	Insight Technologies, Londonderry, NH & DRS Technologies, Torrence, CA	3868								3868	
LLDR RAPT	C/CP	Various	4253								4253	
Light Forward Observer Optics	C/CP	Various	1258								1258	
Thermal Upgrades for DVE (Dual wavelength) and competition	C/CP	Kaiser Electric San Diego, CA, Various	3608								3608	
LLDR Advanced Demonstration System	C/CP	Litton Laser, Apopka, FL	2556								2556	
Sensor Architecture/Digital RSTA/SLP	C/CPIF & C/CP	Various	11622	340	2Q	340	1-2Q	286	1-2Q	Cont.	Cont.	
Various Prototypes and Studies	C/CPIF	Various	2947								2947	
Thermal Upgrades for TWS (target location)	C/CP	Raytheon, El Segundo, CA, Various	5811								5811	
HTI Laser Trade Studies	C/CP	Various	1020								1020	
Enhanced NVG Analysis & Design (TX to DL67)	C/CP	Various	4782								4782	
HTI Laser MFS3 design and prototype activities	C/CPIF	Raytheon, Dallas,TX	565								565	
MANTECH Focal Plane Array and optics	C/CP	Raytheon, Dallas, TX	1500								1500	
Digital MELIOS Design & Fabrication	C/FP	Litton Lasers, Inc.	1000								1000	
AN/TMQ-41 Trade Studies and related activities	C/CP	Various	1232								1232	
Image Fusion for DVE	C/CP	Raytheon, Dallas, TX	1274								1274	
Digital RSTA SDD	C/CP	Booz-Allen Hamilton,	2190								2190	

		Tysons Corner, VA										
CIRISS Efforts	C/CP	Various	1500								1500	
LLDR Vehicle applications	C/CP	Litton Laser, Apopka, FL Various	3487								3487	
FLIR develop/integrate	Various	Various	1731								1731	
Uncooled B-Kit	Various	Various	8418	1936	1Q					Cont.	Cont.	
EO/IR/LD UAV Payloads	C/CP	Lockheed Martin	2495	1592	1Q	900	1Q	500	1Q	Cont.	Cont.	
LLDR EMD	C/CP	Litton Lasers, Apopka, FL	19873								19873	
GMTI Radar	C/FP & CP	General Atomics	2792								2792	
UGS	CP/FFP	Various	708								708	
FCS UGS / UGS	C/CP	FCS Boeing/Textron/Various /TBD	4397	702	2Q	756	2Q	810	2Q	Cont.	Cont.	
PSDS2 Efforts	C/CPFF	Various	11751								11751	
LRAS 3	SS/CP	Network Centrics, McKinney Texas	2271	6544	2-3Q	3225	2Q				12040	
DVD (DVE Light)	C/CP	CACI	238	334	3Q						572	572
3rd Gen FLIR	C/CPIF	Various		1532		4146	3Q	5010	2Q	Cont.	Cont.	
Small Business Innovative Research/Small Business Technology Transfer Programs.						346					346	
Subtotal:			130978	12980		9713		6606		Cont.	Cont.	572

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	Various	17151	2753	1-2Q	1896	1-2Q	1950	1-2Q	Cont.	Cont.	
Matrix Support	MIPR	NVESD	720								720	
Matrix Support	MIPR	TRADOC	400								400	

Matrix Support	MIPR	Various	231								231	
Subtotal:			18502	2753		1896		1950		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DT/IOT&E*	MIPR	ATEC	8769								8769	
Other Test Support*	MIPR	Various	5946	405	2Q	325	3Q			Cont.	Cont.	
Subtotal:			14715	405		325				Cont.	Cont.	

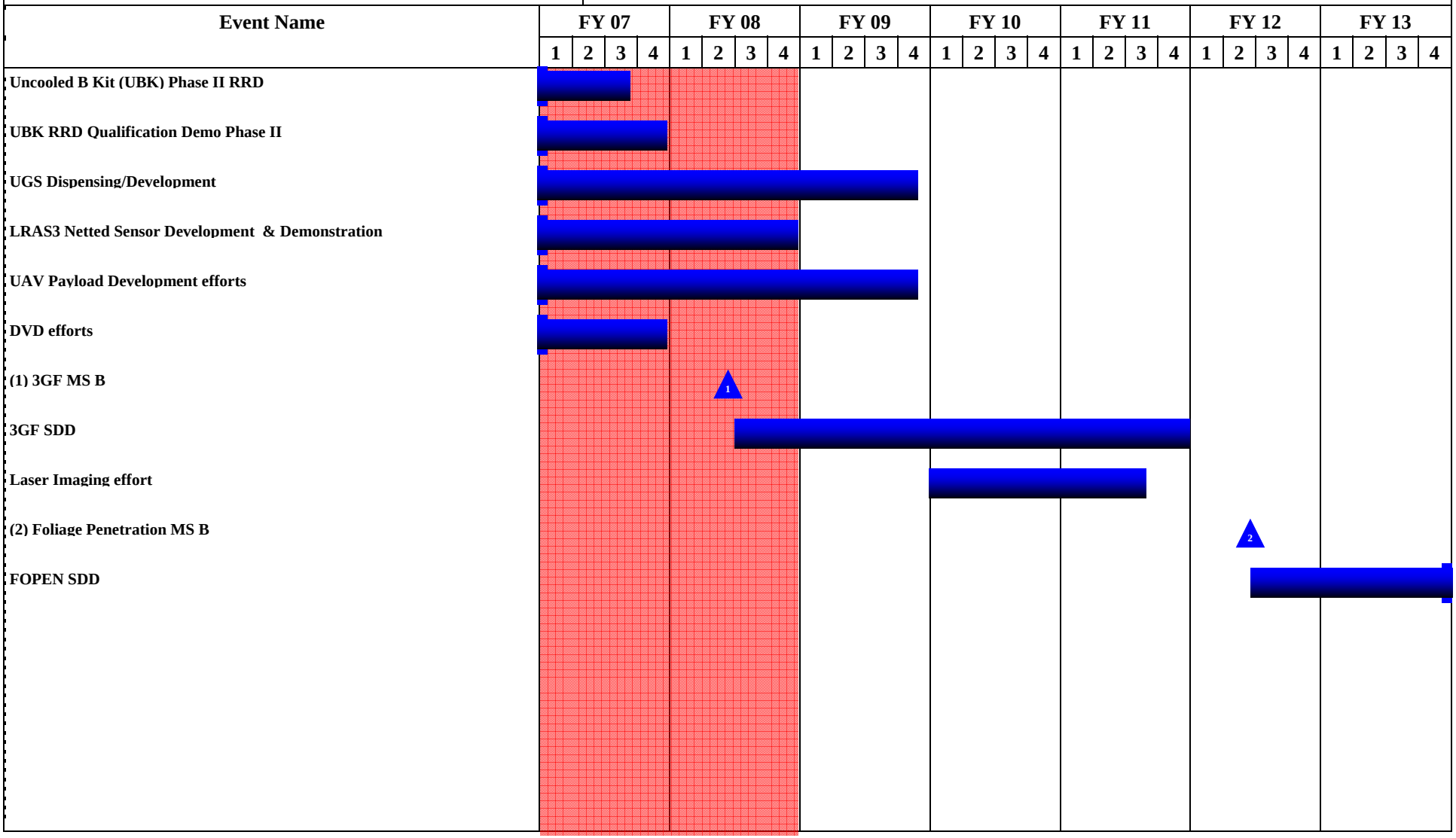
Remarks: * Includes PSDS2, UGS, STTW, 3GF and other sensor test and evaluation activities.
Includes PSDS2 and FCS UGS test and evaluation.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management	In house support	PM, NV/RSTA, Fort Belvoir, VA & Ft. Monmouth, NJ	5920	439	1-4Q	420	1-4Q	427	1-4Q	Cont.	Cont.	
Subtotal:			5920	439		420		427		Cont.	Cont.	
Project Total Cost:			**170115**	**16577**		**12354**		**8983**		**Cont.**	**Cont.**	**572**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L70**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L70

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Uncooled B Kit (UBK) Phase II RRD	1Q - 3Q						
UBK RRD Qualification Demo Phase II	1Q - 4Q						
UGS Dispensing/Development	1Q - 4Q	1Q - 4Q	1Q - 4Q				
LRAS3 Netted Sensor Development & Demonstration	1Q - 4Q	1Q - 4Q					
UAV Payload Development efforts	1Q - 4Q	1Q - 4Q	1Q - 4Q				
DVD efforts	1Q - 4Q						
3GF MS B		2Q					
3GF SDD		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Laser Imaging effort				1Q - 4Q	1Q - 3Q		
Foliage Penetration MS B						2Q	
FOPEN SDD						2Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L76**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L76	Dismounted Fire Support Laser Targeting Systems	4502	18764	8212						31478

A. Mission Description and Budget Item Justification: This project develops technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), the Mark VII-E Laser Target Locator, and future improvements. Targeting System (JETS). This project will integrate the next generation uncooled, 17 micron pixel-pitch Forward Looking Infrared (FLIRs) being developed for the Thermal Weapon Sight program into the Laser Target Locator Module (LTLM), improving its imaging performance with no impact on its weight. New laser designator technology has been developed which will reduce laser designator weight by close to 50% and cut battery usage by a factor of 10. Further reductions can be gained by reducing laser designator output energy levels below currently accepted standards, which modeling and testing indicate may improve performance of laser guided munitions. Live-fire and captive-carry range tests will be peformed with a wide variety of environmental conditions and laser guided munitions to build the necessary confidence that reduced designator energy levels will not adversely impact the mission. This project will initiate interface design for a reduced weight common laser designator to the next generation LTLM. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as Joint Direct Attack Munition (JDAM), Small Diameter Bomb, and Excalibur. The primary focus is developing high accuracy azimuth and vertical angle measurement (AVAM) devices to replace currently used digital magnetic compasses in a package that will have the lowest possible impact on cost, weight, and power. Initial integration of these devices will be performed on the LLDR system.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Completed the analysis of alternatives for laser targeting systems and continue to provide LTLM sytems engineering and technical assistance (SETA).	1340	320	320
Initiate the development of Azimuth and Vertical Angle Measurement (AVAM)devices. This program transitioned from DL67.		9695	4180
Completed the design and development of cooled, mega-pixel Foward Looking Infra-Red (FLIR) and optics for FLIR.	1322		
Initiate the development of Advanced uncooled FLIR integration for technology insertion into the LTLM.		884	3212
Completed Ultra-lightweight Laser Designator development and testing.	1626		
Initiate development of common laser designator module interfaces for LTLM.		7340	500
Completed the development of DARPA's MANTIS program developing a helmet-borne vision system and hand-held targeting system for the individual Soldier that combine imagery from multiple sensors using image fusion.	214		
Small Business Innovative Research / Small Business Technology Transfer Program.		525	
Total	4502	18764	8212

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost

Lightweight Laser Desingator Rangefinder (LLDR) (K31100) OPA2	139654	136457	150094	99060	61562	62886	64303	Continuing	Continuing
Laser Target Locating System (LTLS) (B53800) OPA2	39049	66981	9815					Continuing	Continuing

Comment:

C. Acquisition Strategy The various development programs in this project will continue to exercise competitively awarded contracts using the best value source selection procedures.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L76

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Analysis and Technical Evaluation	C/FP	John Hopkins Applied Physics Lab		1340	1Q	320	2Q	320	2Q		1980	
Azimuth and Vertical Angle Measurement (AVAM)	C/FP	Northrop Grumman, Orlando FL		1322	2Q	9695	2Q	3880	1-2Q		14897	
Laser Target Locator Module advanced uncooled FLIR integration	MIPR	Various			1-2Q	884	1-2Q	3012	1-2Q		3896	
Ultra Lightweight Designator	C/FP	Fibertek, Inc. Herndon, VA		1086	2Q		2Q				1086	
Common laser degisnator interface development	C/FP	Northrop Grumman, Orlando FL			2Q	7340	2Q	300	1-2Q		7640	
MANTIS Development Activities				214							214	
SBIR/STTR					1Q	525	1Q				525	
Subtotal:				3962		18764		7512			30238	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government Test Support Activity	MIPR	Various		540	2Q		1-4Q	700	1-2Q		1240	
Subtotal:				540				700			1240	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L76**

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:				**4502**		**18764**		**8212**			**31478**	

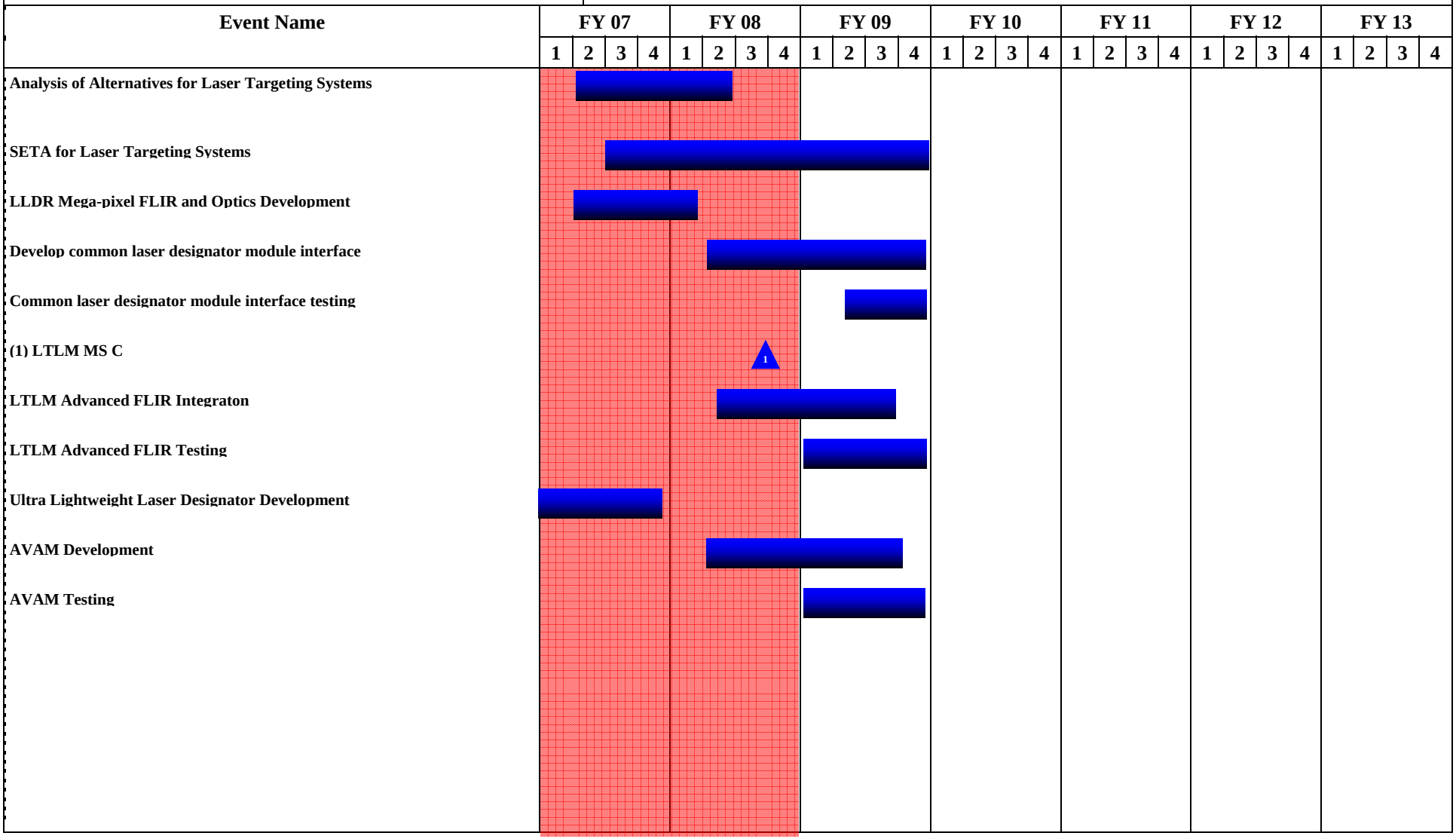
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604710A - Night Vision Systems - Eng Dev

PROJECT
L76



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604710A - Night Vision Systems - Eng Dev**	**L76**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Analysis of Alternatives for Laser Targeting Systems	2Q - 4Q	1Q - 2Q					
SETA for Laser Targeting Systems	3Q - 4Q	1Q - 4Q	1Q - 4Q				
LLDR Mega-pixel FLIR and Optics Development	2Q - 4Q	1Q					
Develop common laser designator module interface		2Q - 4Q	1Q - 4Q				
Common laser designator module interface testing			2Q - 4Q				
LTLM MS C		3Q					
LTLM Advanced FLIR Integraton		2Q - 4Q	1Q - 3Q				
LTLM Advanced FLIR Testing			1Q - 4Q				
Ultra Lightweight Laser Designator Development	1Q - 4Q						
AVAM Development		2Q - 4Q	1Q - 4Q				
AVAM Testing			1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
548 MIL SUBSISTENCE SYS	2922	2485	2499	2139	2183	2159	2206	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the development and demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance soldier efficiency and survivability, and to reduce food service logistics requirements for all four services. The project supports multi-fuel, rapidly deployable field food service equipment initiatives and engineering and manufacturing development to improve equipment, enhance safety in food service, and decrease fuel and water requirements. This project develops critical enablers that support the Joint Future Capabilities and Joint Expeditionary mindset, by maintaining readiness through fielding and integrating new equipment; by enhancing the field soldier's well-being; and providing soldier usable equipment. They also reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

This PE/Project supports Field Feeding programs for all the services.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Completed design and fabrication of prototype sink exhaust blower assembly and conducted functional and environmental testing and evaluation. Evaluated methods for reusing untreated rinse and sanitizing water as wash and rinse water, respectively. Analyzed closed loop treatment systems with regard to cost, ease of use, maintenance and reliability. FY08: Conduct test and evaluation of second iteration sink exhaust blower assembly and of the pump assembly for untreated gray water reuse. Finalize configuration for modernization kit.	290	92	
FY07: Fabricated improved Containerized Kitchen (CK) that features centralized thermal fluid heating system, onboard sanitation center and improved transportability. FY08: Conduct PQT and use positive test results to amend CK production contract to procure production representative model of the Thermal Fluid Containerized Kitchen (TFCK). FY09: Conduct PVT testing leading to full production of TFCK.	667	739	465
FY07: The acquisition strategy was developed for the Thermoelectric Water Heater Chiller (TEWCH). It was determined that the item was ready for transition to production without further R&D. The performance based technical data will be transitioned to the ILSC to proceed with a production contract in FY08.	187		
FY09: Analyze new kitchen equipment and ventilation options in order to determine the optimum legacy Containerized Kitchen reset kit concept. Acquire new appliances and initiate prototype fabrication.			228
FY 09: Complete performance requirement on Water Cooling for Vehicular Mounted Units, solicit and award contract for prototype fabrication.			213
FY08: Analyze new kitchen equipment and Mobile Kitchen Trailer (MKT) layout options in order to determine the optimum MKT reset kit concept. FY09: Solicit for, design, and build MKT Reset Kit prototype and commence developmental tests. FY10: Complete developmental and operational test and evaluation of the MKT Reset Kit prototype.		146	317
FY09: Transition technology and prototype of the Self Powered Tray Ration Heater (STRH) from System Development. Conduct User			390

evaluation, complete Performance Specification, and transition STRH to procurement.			
FY08: Identify and test commercial items that can be utilized to improve the quality of sanitation at forward deployed locations. Integrate selected components into rations or a portable sanitation kit for forward deployments.		151	
FY07: Finalized all First Strike Rations (FSR) procurement documents and transitioned to DSCP (1Q07). Completed delivery of MRE (2008 Date of Pack (DOP)), performance based contract requirements to DSCP for procurement (1Q07). Conducted field test/field evaluation of new ration components for Meals, Ready-To-Eat (MRE) (2009 DOP with 2nd and 12th Field Artillery Unit, Ft. Lewis, WA. Presented recommendations to Joint Services Operational Rations Forum (JSORF) in (2Q07) for continuous improvement of ration components of MRE (2009 DOP). Thirteen new items approved for MRE XXIX. Finalized all procurement documents to include Meals, Cold-Weather / Long Range Patrol (MCW/LRP) and initiate delivery to Defense Supply Center, Philadelphia (DSCP). Obtained Office of the Surgeon General (OTSG) approval. Performed cutting for industry/Other Goverment Agencies (OGA) to ensure consistent quality. Completed field testing for new ration components to include directional tear pouch for MRE (2010 DOP) and to enhance quality and expand variety. Provided extensive support to procurement for FSR first iteration. Conducted in-house evaluation of FSR PDM submissions from each of three ration assemblers and provided results and recommendations to DSCP. Rated product offerings after inspection of assembled rations and selected components. FY08: Present recommendations to JSORF (2Q08) for MRE (2010 DOP) and for continued product improvement. Complete delivery of MRE (2009 DOP) performance based contract requirements to DSCP for procurement (1Q08). Finalize MRE procurement documents and initiate transition to DSCP. Obtain OTSG approval. Perform cuttings for industry/OGA to ensure consistent ration quality, review PCR requirements, and resolve vendor/supplier issues. Identify new items and obtain and assemble selected new components for test. Plan, conduct and complete field testing of new ration components for MRE (2011 DOP), MCW/LRP, and FSR (2) to improve quality and expand variety.	283	336	
FY09: Based on field test results, present recommendations to JSORF (2Q09) for continued product improvement of ration components/packaging/ technologies for MRE (2011 DOP) and MCW/LRP, and FSR (2). Complete delivery of MRE (2010 DOP) performance based contract requirements to DSCP for procurement (1Q09). Finalize MRE /MCW/LRP and FSR procurement documents and initiate transition to DSCP. Obtain OTSG approval. Perform cuttings for industry/OGA to ensure consistent ration quality, understand PCR requirements, and resolve vendor/supplier issues. Identify new components based on user feedback, focus groups, emerging products and technologies, and known user requirements. Obtain and assemble selected new items for test. Conduct field testing/field evaluation of new ration components for MRE (2012 DOP), MCW/LRP, and FSR (3), and to improve quality, acceptability, nutrition, and expand variety.			142
FY07: Completed procurement documents for UGR-E and transitioned to DSCP for procurement. Presented recommended changes for the UGR-H&S and UGR-A based on field testing with Warfighters to the Joint Service Operational Rations Forum (JSORF), 2Q07. 12 new items were approved for UGR-H&S (2009 DOP) and 33 for UGR-A (2008 DOP). Obtained OTSG approval for new UGR-H&S and UGR-A menus. Performed ration component cuttings for industry/OGA to ensure consistent quality and producibility. Conducted field test of dehydrated Boil-in-Bag (BIB) menu items, candidate Bakery Enhancement Kit components, and new ration components for UGR-H&S (2010 DOP), UGR-A (2009 DOP) and UGR-E (2010 DOP). Finalized UGR procurement documents and initiated transition to DSCP. FY08: Present UGR-H&S (2010 DOP), UGR-A (2009 DOP), dehydrated BIB menu item and Bakery Enhancement Kit recommendations to JSORF for continuous improvement of ration components. Obtain OTSG approval of updated menus. Perform cuttings for industry/OGA to ensure consistent quality. Finalize all dehydrated BIB menu item and Bakery Enhancement Kit procurement documents and transition to DSCP (1Q08). Complete field testing of new ration components for UGR-H&S (2011 DOP), UGR-A (2010 DOP) and UGR-E (2011 DOP) to enhance quality and expand variety. Finalize UGR procurement documents and initiate transition to DSCP. FY09: Present recommendations to JSORF for UGR-H&S (2011 DOP), UGR-A (2010 DOP) and UGR-E (2011 DOP) for	208	157	75

continued product improvement. Obtain OTSG approval. Perform cuttings for industry/OGA to ensure consistent ration quality. Complete field testing of new ration components for UGR-H&S (2012 DOP), UGR-A (2011 DOP) and UGR-E (2012 DOP) to improve quality and expand variety. Finalize UGR procurement documents and initiate transition to DSCP.			
FY 08-09: Collaborate with Naval Support Command (NAVSUP) to identify product segments for Navy Standard Core Menu (NSCM) refresh scheduled in 2008/2009. Work with commercial suppliers to research advanced foods and conduct sensory evaluation panels and nutrition research. Identify existing Trans fats in the NSCM for modification of menu items. Prepare yearly product recommendations and support NAVSUP field testing for new menu item introductions. Transition to NSCM.		107	73
FY08: Participate in future naval vessel Integrated Process Team (IPT) meetings and obtain updates on crew size, food service space and foot print allocation, weight restrictions/reductions and program costs. Evaluate information and design future galleys to meet the proposed naval requirements. Utilize modeling, simulation and prototyping to validate designs to support Navy requirements for reductions in total life cycle costs in construction, design and equipment arrangement. FY09: A prototype of a future galley system will be constructed utilizing automated food service equipment, process controls, and ergonomic designs. The galley will be prototyped for initial operational testing and evaluation for potential inclusion into future galley designs onboard naval platforms. Galley designs will have the capacity to integrate future technologies that will significantly accommodate the reduction of shipboard manning requirements through automated processes, equipment technological advancements, and equipment diagnostics/prognostics for total system integration. Program efforts will facilitate efficient utilization of the Navy requirements for reduced culinary specialists and crew size onboard all Navy platforms. Advanced technology will contribute significantly to the quality of life shipboard personnel, morale of food service personnel, alleviate labor-intensive functions, and support life-cycle Operations and Sustaiment (O& S) cost reductions in the fleet.		241	168
FY09: Transition from 6.4. Evaluate beverage and self-service islands/lines for product quality, variety, ease of cleaning and maintenance. Identify specific automated self-serve equipment for crew mess deck applications to accommodate reduction in Food Service Attendants and Culinary Specialists. Conduct afloat test and recommend improvements to NAVSEA and NAVSUP.			138
FY07: Served as certifying agent for all Navy Food Service Equipment to be used onboard Navy Vessels. Monitored commercial development in food service to accommodate reductions in shipboard labor, extend service life of equipment. Tested and generated evaluation reports; down selected items; listed approved Galley equipment in Navy Food Service Equipment Catalog. A National Stock Number (NSN) was assigned for the INTEK Pressure-less Steamer based on completing a one-year user evaluation onboard the USS Nassau (LHA-4). NSN_s were assigned for nine different sized Stainless Steel RO-59 Coated serving pans based on completing a six month user evaluation on board the USS Providence 688 Attack Submarine. A TurbOChef cooker was installed onboard the USS San Jacinto (CG-56) and USS Leyte Gulf (CG 55) for a one-year shipboard evaluation. A self serve Campbells soup dispenser was installed onboard the USS Bataan (LHA-5) for a six month evaluation. Pending positive Warfighter feedback and operational testing, NSNs will be assigned. Conducted market research and completed evaluations of ovenable food products to support the Navy Standard Core Menu (NSCM) and the Navy_s nutritional guidelines. Forwarded nutritional results and recommendations to the Naval Supply Systems Command (NAVSUP) for inclusion into the menu. Participated in a NAVSUP/ Defense Supply Center Philadelphia, NSCM working group to develop a standard provisions load listing and the Consolidated Afloat Requisitioning Guide Overseas (CARGO) update for provision procurements based on the new menu.	842		
FY07: Seven efforts, which identified issues with fielded food service equipment and required quick evaluation, were recommended by the Services for technical support. All seven efforts were addressed. The major efforts conducted include: (1) A market investigation was performed for the Naval Facilities Engineering Services Center (NFESC) for hot water dispensing units for use with the Camel water distribution system. The hot water dispensing unit is needed to provide hot water for beverages under field conditions and extreme	138		

climates. The recommendations were reported to NFESC during 2QFY07. (2) A commercial portable, chilled water dispensing station to cool water and dispense it directly into canteens and beverage containers, was identified for use by the Air Force. A unit was procured tested in-house during 3-4Q07, and is currently being field tested at Dobbins AFB. (3) An automatic Temperature Control Unit (TCU) to improve safety was procured and interfaced with a Modern Burner Unit (MBU) and user testing was conducted with the 63rd RRC during 3Q07. The results of the test are being used by the manufacturer (Teleflex) to improve the TCU/MBU interface arrangement. (4) A training documentation package was developed to improve maintenance and repair for the MBU. User testing was conducted with the 4th ID during 4Q07 to determine the effectiveness of the new maintenance and repair information. After approval by the Quartermaster School, the MBU technical manual and training doctrine will be modified to reflect the new maintenance and training procedures.			
FY09: Continue to provide engineering support and services for product improvements for fielded food service equipment for joint services.			34
FY08: Evaluate and consolidate Air Force requirements in conjunction with user community for TriCon Kitchen. Develop performance based SOW based on service comments. FY09: Award a contract to design and develop a prototype modular all electric Air Force kitchen within a TriCon container. Conduct developmental testing of the prototype TriCon kitchen. Initiate user testing with the Air Force.		186	84
FY07: Provided technical support for the development, modernization and implementation of the Air Force Basic Expeditionary Airfield Resources (BEAR) field kitchen concept, which consolidates existing Air Force Harvest Falcon, Harvest Eagle, 9-1 and 9-2 tent field kitchens. Designed the BEAR-(i) (Initial), which provides all food service requirements to support 550 airmen, andBEAR-(f) (Follow-on) platforms, which incrementally support food service requirements for 550 to 1100 personnel. A BEAR-(i) system field test was successfully conducted at Dobbins AFB. A market research was conducted to down select a new Advanced Flooring System for installation in the BEAR-550(i) and the integration of a Combi Oven, portable hot and cold food serving counters, and food warming cabinets. FY08: Additional state-of-the art field feeding equipment for the BEAR-550(i) will be evaluated. Electrical systems, lighting fixtures, potable water and drainage systems will be developed and packaged to support the BEAR-550(i) as a modular system and field tested. FY09: The BEAR-550(f) system will be developed into a modular system that will be capable of supporting feeding requirements from 550 to 3300. The system will be designed to help reduce labor, provide modern, efficient equipment, increase the food production yield, and reduce life cycle cost. Initiate field testing with the Air Force.	307	261	103
FY09: Transition from 6.4. Upgrade/correct deficiencies with the Navy Communication Zone (COMMZ) kitchen identified based on results of the testing. Develop detailed equipment replacement list and an enhancement package to include cost data and transition to the Navy to support potential future procurement. The Navy will use the information developed under this program to determine feasibility of entire COMMZ fleet upgrade.			69
Small Business Innovative Research/Small Business Technology Transfer Program		69	
Total	2922	2485	2499

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	2984	2501	2515
Current BES/President's Budget (FY 2009)	2922	2485	2499
Total Adjustments	-62	-16	-16
Congressional Program Reductions		-16	
Congressional Recissions			
Congressional Increases			
Reprogrammings	22		
SBIR/STTR Transfer	-84		
Adjustments to Budget Years			-16

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603747.610, Food Adv Dev	2683	4766	3889	4284	4374	4330	4434	Continuing	Continuing
OPA 3, M65803, Kitchen, Containerized, Field	15494	24969	25543	34803	19272	5362	7179	Continuing	Continuing
OPA 3, M65802, Sanitation Center, Field Feeding	17987	8086	3496	4958	1151	1149		Continuing	Continuing

Comment:

D. Acquisition Strategy Complete System Development and Demonstration of food items and equipment for transition into competitive procurement contract. Complete advanced research efforts to support Engineer Change Proposals for previously developed equipment.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various combat feeding equipment, multi-fuel and water equipment	In-House	RDECOM, NSC	1400	1240	1-4Q	1225	1-4Q	1238	1-4Q		5103	
DOD Field Feeding Equipment	Contracts	Various	575	504	1-4Q	330	1-4Q	325	1-4Q		1734	
Army Field Feeding Equipment Development	In-House	PM Force Sustainment Systems (FSS)	340	281	1-4Q	285	1-4Q	274	1-4Q		1180	
Subtotal:			2315	2025		1840		1837			8017	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	MIPR	TECOM/OEC/ATC	580	476		345		351			1752	
Subtotal:			580	476		345		351			1752	

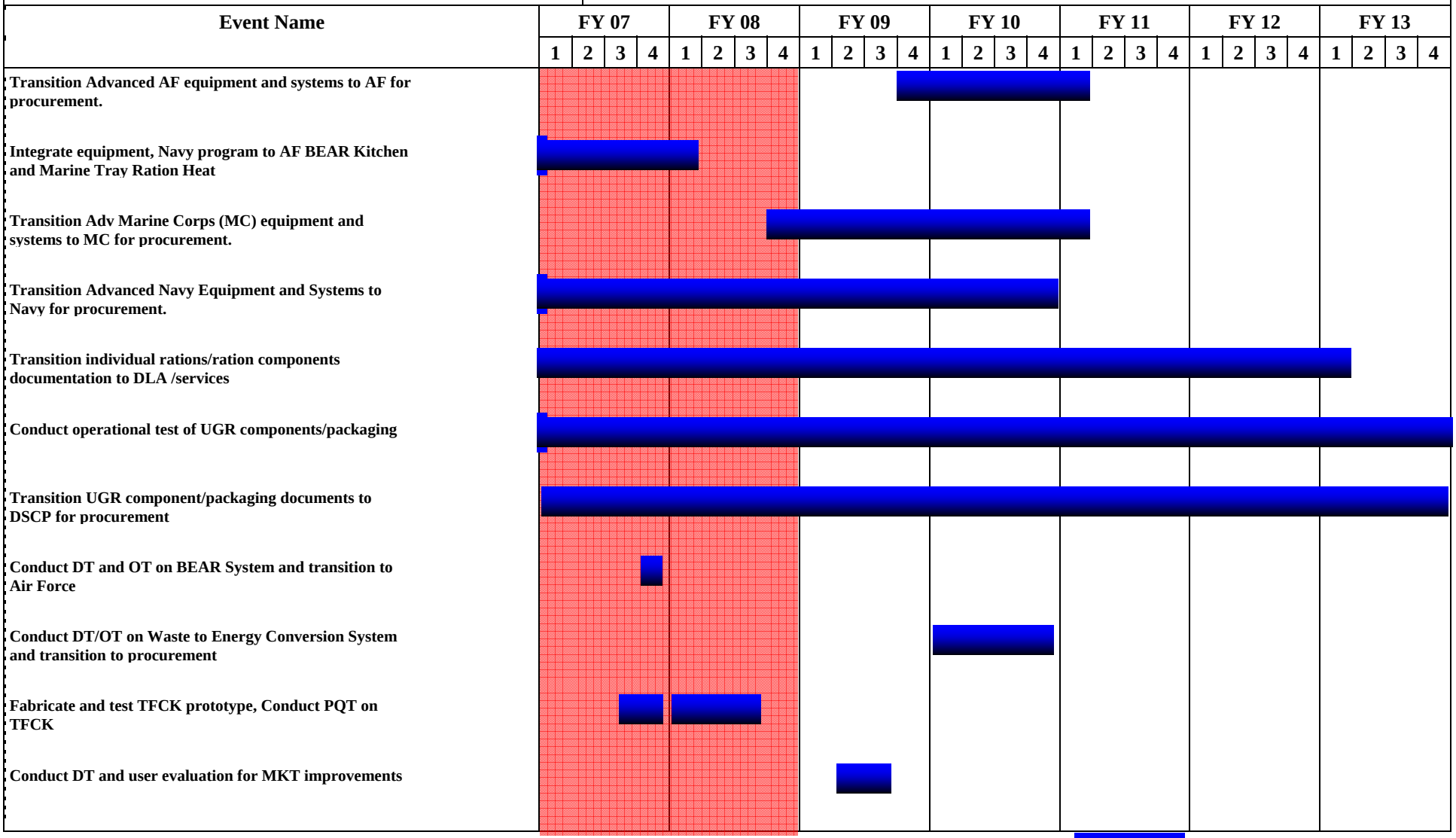
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CFP Management	In-House	RDECOM	329	337	1-4Q	300	1-4Q	311	1-4Q		1277	
SBIR/STTR				84							84	
Subtotal:			329	421		300		311			1361	

Project Total Cost:	**3224**	**2922**		**2485**		**2499**			**11130**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604713A - Combat Feeding, Clothing, and Equipment**	**548**



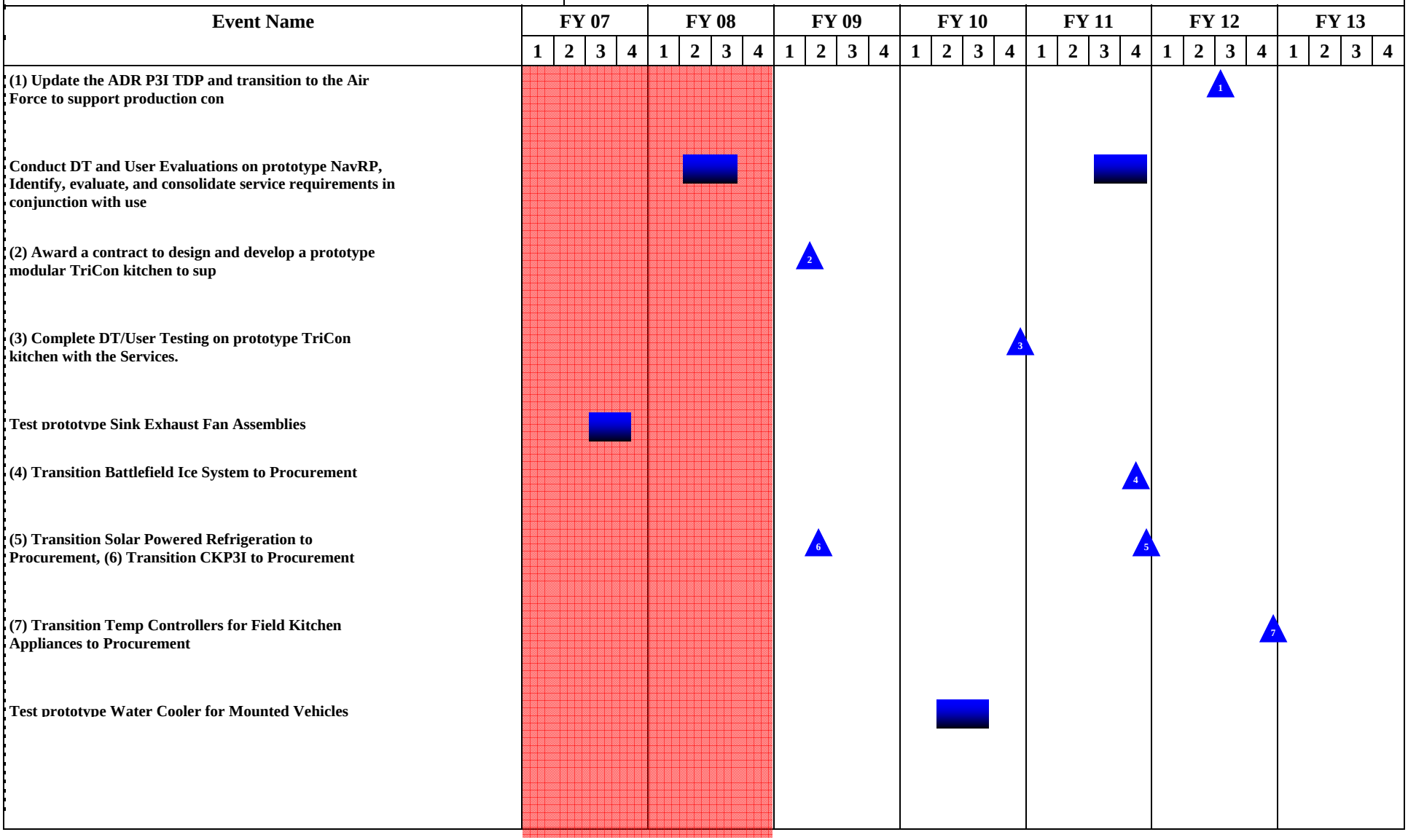
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604713A - Combat Feeding, Clothing, and Equipment

PROJECT
548

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Transition Advanced AF equipment and systems to AF for procurement.			4Q	1Q - 4Q	1Q		
Integrate equipment, Navy program to AF BEAR Kitchen and Marine Tray Ration Heat	1Q - 4Q	1Q					
Transition Adv Marine Corps (MC) equipment and systems to MC for procurement.		4Q	1Q - 4Q	1Q - 4Q	1Q		
Transition Advanced Navy Equipment and Systems to Navy for procurement.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Transition individual rations/ration components documentation to DLA /services	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q
Conduct operational test of UGR components/packaging	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Transition UGR component/packaging documents to DSCP for procurement	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Conduct DT and OT on BEAR System and transition to Air Force	4Q						
Conduct DT/OT on Waste to Energy Conversion System and transition to procurement				1Q - 4Q			
Conduct Field evaluation of the CDK							
Optimize and transisiton CDK to AF for procurement							
Fabricate and test TFCK prototype	3Q - 4Q						
Conduct PQT on TFCK		1Q - 3Q					
Conduct DT and user evaluation for MKT improvements			2Q - 3Q				
Conduct DT and OT on ADR P3I prototype refrigeration units.					1Q - 4Q		
Update the ADR P3I TDP and transition to the						3Q	

Air Force to support production con							
Conduct DT and User Evaluations on prototype NavRP					3Q - 4Q		
Identify, evaluate, and consolidate service requirements in conjunction with use		2Q - 3Q					
Award a contract to design and develop a prototype modular TriCon kitchen to sup			2Q				
Complete DT/User Testing on prototype TriCon kitchen with the Services.				4Q			
Test prototype Sink Exhaust Fan Assemblies	3Q - 4Q						
Transition Battlefield Ice System to Procurement					4Q		
Transition Solar Powered Refrigeration to Procurement					4Q		
Transition CKP3I to Procurement			2Q				
Transition Temp Controllers for Field Kitchen Appliances to Procurement						4Q	
Test prototype Water Cooler for Mounted Vehicles				2Q - 3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	122258	35731	35424	16240	19121	18761	16427	Continuing	Continuing
241	NSTD COMBINED ARMS	120266	33218	32973	13735	16572	16168	13778	Continuing	Continuing
573	STRICOM/NAWCTSD SUPPORT	1504	2020	1955	2009	2053	2096	2152	Continuing	Continuing
587	ARMY DEVELOP CTIA/TENA CAPABILITY	488	493	496	496	496	497	497	Continuing	Continuing

A. Mission Description and Budget Item Justification: Program Element funds development of Non-System Training Devices to support force-on-force training at the Combat Training Centers (CTC), general military training, and training on more than one item/system, as compared with system devices which are developed in support of a specific item/weapon system. Training devices and training simulations contribute to the modernization of the forces by enabling and strengthening combat effectiveness through realistic training solutions for the Warfighter. Training devices maximize the transfer of knowledge, skills, and experience from the training situation to a combat situation. Force-on-force training at the National Training Center (NTC), Ft. Irwin, CA; Joint Readiness Training Center (JRTC), Ft. Polk, LA, and Joint Multinational Readiness Center (JMRC), formerly the Combat Maneuver Training Center (CMTC), Hohenfels, Germany; and battle staff training in Battle Command Training Program (BCTP) provide increased combat readiness through realistic collective training in low, mid, and high intensity scenarios. Project 241, Non-System Training Devices-Combined Arms, develops simulation training devices for Army-wide use, including the CTCs. Project 573 funds key organizational support to Army/DoD Transformation via innovative simulation and training device efforts. Program Executive Office (PEO) Simulation, Training and Instrumentation (STRI's) unique geographic colocation with other services facilitates joint training solutions in a common environment.

In FY09, the Non-System Training Devices, 241 project line will develop prototype training devices to support Combined Arms (Infantry, Armor, Aviation, Air Defense, Artillery, Engineer, Chemical, and Support troops) training and multi-system training within the Army. There is an effort to replace the instrumentation system at the National Training Center (NTC), Ft. Irwin, CA and at the Joint Readiness Training Center (JRTC), Ft. Polk, LA with a system that meets the Army's existing and future, advanced collective training objectives. This is a complete modernization of these two systems, leveraging advanced technology using a modular concept. One Tactical Engagement Simulation System (One TESS) development continues to provide realistic force-on-force training for weapon systems that are not direct fire and maximizes embedded training capability where possible. In FY09, PEO STRI/NAWCTSD SUPT, 573 project line will provide for minimum PEO STRI core operations supporting development of training devices and simulations by PEO STRI Project Managers (PM TRADE, PM ITTS, PM CATT, PM Future Force (S) and PM Constructive Simulation).

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	124068	35992	17493
Current BES/President's Budget (FY 2009)	122258	35731	35424
Total Adjustments	-1810	-261	17931
Congressional Program Reductions		-261	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	1571		
SBIR/STTR Transfer	-3381		
Adjustments to Budget Years			17931

Change Summary Explanation:
FY 2009: $17.931 million was realigned from OPA to RDTE for the OneTESS program. The OneTESS program is now a designated program on the Secretary of Defense Test & Evaluation Oversight List. DOT&E recommended a Limited User Test (LUT) prior to Milestone C, which pushes Milestone C to 4th Quarter FY09. LUT is correctly funded with RDTE in FY09, and negates requirement for OPA in FY09.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**241**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
241 NSTD COMBINED ARMS	120266	33218	32973	13735	16572	16168	13778	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development of prototype training devices to support Combined Arms (Infantry, Armor, Aviation, Air Defense, Artillery, Engineer, Chemical, and Support troops) training and multi-system training within the Army, to include the Reserve Components.

The One Tactical Engagement Simulation System (One TESS) provides for an advanced, joint, collective, combined arms, live force-on-force training system using tactical weapon systems supported by a family of Training Aids, Devices, Simulations and Simulators (TADSS) that support up to brigade-level exercises, including all Battlefield Operating Systems, at Homestation, Maneuver Combat Training Centers (MCTC), and deployed sites. The Combat Training Center Objective Instrumentation System (CTC OIS), comprised of the prior National Training Center (NTC) and Joint Readiness Training Center (JRTC) OIS programs, provides a completely digital based system, and also provides the observer/controller, Training Analyst and Feedback analyst the ability to monitor unit approach, engagement, and departure maneuver activities and identify and isolate pertinent voice, data and video segments in a near real time manner for objective After Action Review (AAR) feedback to the unit based on approved Tactics, Techniques and Procedures (TTP) and Mission Training Plan (MTPs) for a Brigade-level training event. The NTC Military Operations in Urban Terrain (NTC MOUT) Instrumentation program provides Urban Operation sites the necessary instrumentation to support training data collection, data analysis and objective AAR feedback based on approved TTPs. The Common Training Instrumentation Architecture (CTIA) provides the common architecture framework for developing the Live Training Transformation (LT2) Product Line of live training systems supporting Army-wide Force-On-Force (FOF) and Force-On-Target (FOT) training requirements. CTIA is a spiral development, evolutionary acquisition program that continues to provide developmental support for the LT2 Product line in compliance with the DoD Test and Training Enabling Architecture (TENA). The Engagement Skills Trainer (EST) provides individual and crew weapon marksmanship at the squad level for collective training. Squad leaders are able to control and evaluate individual, team and squad performance. The Medical Simulation Training Center (MSTC) System provides a standardized combat medicine training capability to multi-component Army Soldiers, while being capable of training Joint, Interdepartmental, and Coalition Partner organizations to better prepare personnel for medical interventions under combat conditions. Each MSTC System is made up of sub-systems, to include the Virtual Patient System (VPS). The VPS contains multiple training devices which are delivering increasing degrees of fidelity and trauma patient responses. The MSTC System combines bleed/breathe and weighted mannequins, airway management and intravenous task trainers, standardized programs of instruction, skilled instructors, adaptive scenarios, and tactical lane training into a cohesive training capability for combat medicine. The Homestation Instrumentation Training System (HITS) is a deployable Homestation Instrumentation Training System that will provide CTC-like instrumented capability to support platoon through battalion FOF training.

FY09 funds significant development efforts on Enagement Skills Trailer (EST), Virtual Patient System (VPS), OneTESS, and further implementation of Live Training Transformation (LT2) through development of the Common Training Instrumentation Architecture (CTIA); enabling Joint training with the Joint Forces Command through modernization programs including the Objective Instrumentation Systems (OISs) for the Maneuver CTCs, Homestations, Integrated Military Operations in Urban Terrain (IMTS), and Digital Range Training System (DRTS). These systems provide integrated Live, Virtual, and Constructive training environments and tools in support of the Contemporary Operating Environment, funds Improvised Explosive Device Effects Simulator (IEDES) to develop realistic detection and reaction training against IED threats through simulated, but realistic battlefield cues and effects. Additionally, Homestation Instrumentation Training System (HITS) program will integrate and test LT2 products into HITS design.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Continues development, installation, integration and testing of CTC OIS Technology Capability Groupings (TCG) for support of Early Fielding at both the NTC and JRTC. The NTC MOUT will continue to design efforts and test in FY 07. Continue spiral development of CTIA to provide the common architecture capabilities that are essential for development and fielding of the CTC, IMTS, HITS, and DRTS training instrumentation programs.	63645	7477	5825
FY07: Completed CBS enhancements and security accreditation, and provided support to JLCCTC functionality and integration.	6831		
FY07-FY09: Continues development of One Tactical Engagement Simulation System (One TESS). Refine systems architecture, develop FCS/Joint, Live/Virtual and Constructive solutions and integrate operational testing that supports the training and testing communities into current combat systems under development.	43014	22434	23790
FY07: Completed TACSIM limited enhancements to support JLCCTC and TACSIM security accreditation.	2216		
FY07: Jamming Effects Training Module (Congressional Add)	3900		
FY08-FY09: Improvised Explosive Device Explosive Simulator (IEDES) - Develops realistic detection and reaction training against IED threats through simulated, but realistic battlefield cues and effects.		308	217
FY09: Engagement Skills Trainer 2000(EST) Pre-Planned Product Improvements (P3I) for weapon enhancements including: the M145 machine gun optic, Call for and adjust indirect fires, Vehicle Ring and Pedestal mounts to include Leaders Hatch skate ring and family of AN/PAS-13 Thermal Weapons Sights.			1795
FY08-FY09: Develop within the Virtual Patient System (VPS) an effective Tetherless Mannequin (TLM) training capability and a Medical Training Evaluation and Review (MeTER) System.		464	480
FY08-FY09: The Homestation Instrumentation Training System (HITS) program will integrate and test LT2 products into HITS design.		1676	866
FY08: Small Business Innovative Research/Small Business Technology Transfer Programs.		859	
FY07: Execute integration and interoperability initiatives across the entire Live, Virtual, Constructive portfolio.	660		
Total	120266	33218	32973

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0100 Training Devices, Non-System	340895	335957	218614	191173	189427	201573	209438	Continuing	Continuing
OPA3, Appropriation MA6601 CTC Support	151078	21491	16508	15041	3995	5709	2109	Continuing	Continuing

Comment:

C. Acquisition Strategy Competitive development efforts based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604715A - Non-System Training Devices - Eng Dev

PROJECT
241

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CTC OIS: NTC	CPAF	Lockheed Martin Simulation Training and Support, Orlando, FL	86097	25274	1-2Q						111371	111371
CTC OIS: JRTC	CPAF	Lockheed Martin Simulation Training and Support, Orlando, FL	5676	28572	1-2Q						34248	35442
NTC MOUT	FFP	Unitech, Orlando, FL	2279	1470	3Q						3749	3785
CTIA	C/FFP	Lockheed Martin Inc., Orlando, FL	41210	5171	1-2Q	5977	1-2Q	4325	1-2Q	Cont.	Cont.	Cont.
One TESS	Various	Multiple	31198	40653	1-2Q	19945	1-2Q	21282	1-2Q	Cont.	Cont.	Cont.
IEDES	TBS	TBS				308	2Q	217	2Q	Cont.	Cont.	Cont.
Jamming Effects Training Module	FFP	Unitech, Orlando, FL		3900	1-4Q						3900	3872
EST 2000 P3I Weapon Enhancements	SS/FFP	Cubic Simulation Systems Division, Orlando, Fl						1700	2Q	Cont.	Cont.	Cont.
Virtual Patient System	C/FFP	Medical Education Technologies, Inc., Sarasota, Fl				464	2Q	480	2Q	Cont.	Cont.	Cont.
HITS	TBS	TBS				1376	2-3Q				1376	1434
CBS Development	C/FFP	JPL, Cal Tech, Pasadena, CA	48059	5788	1-3Q						53847	53511
TACSIM Enhancement Development	C/CPFF	Nothrop Grumman	2873	1708	1-3Q						4581	4713
CBS Security	C/FFP	TITAN, Leavenworth, KS	470	240	1-3Q						710	710
TACSIM Development	various	multiple	85	85	1-4Q						170	170
Live Virtual Constructive Development		TBD		660							660	
Subtotal:			217947	113521		28070		28004		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CBS Engineering & Technical Support	Multiple	Multiple	1231	152	1-4Q						1383	1383
TACSIM Engineering, Technical and Administrative Support	Multiple	Multiple	169								169	169
CTC OIS: NTC	Various	Multiple	12045	1053	1-4Q						13098	13098
CTC OIS: JRTC	Various	Multiple	317	381	1-4Q						698	698
NTC MOUT	Various	Multiple	100	224	1-4Q						324	324
CTIA	Various	Various	7675	1500	1-4Q	1500	1-4Q	1500	1-4Q	Cont.	Cont.	Cont.
OneTESS	Multiple	Various	3898	692	1-4Q	682	1-4Q	667	1-4Q	Cont.	Cont.	Cont.
HITS	TBS	TBS				300	1-4Q	100	1-4Q	Cont.	Cont.	Cont.
Subtotal:			25435	4002		2482		2267		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CBS Test Support	Various	Multiple	232		1-4Q						232	232
TACSIM Accreditation Testing	Various	Multiple	113	57	1-4Q						170	170
OneTESS Development and Test	MIPR	Multiple	1561	497	1-4Q	496	1-4Q	488	1-4Q	Cont.	Cont.	Cont.
HITS	TBS	TBS						766	1-2Q	Cont.	Cont.	Cont.
Subtotal:			1906	554		496		1254		Cont.	Cont.	Cont.

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604715A - Non-System Training Devices - Eng Dev

PROJECT
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	Type				Date		Date		Date			Contract
CBS Program Management	Various	PEO STRI, Orlando, FL 32826	2323	651	1-4Q						2974	2974
TACSIM Program Management	Various	Multiple	368	366	1-4Q						734	1134
OneTESS Program Management	Various	PEO STRI, Orlando, FL 32826	3007	1172	1-4Q	1311	1-4Q	1353	1-4Q	Cont.	Cont.	Cont.
EST 2000 Program Management	Various	PEO STRI, Orlando, FL 32826						95	1-4Q		95	95
SBIR/STTR						859					859	
Subtotal:			5698	2189		2170		1448		Cont.	Cont.	Cont.
Project Total Cost:			**250986**	**120266**		**33218**		**32973**		**Cont.**	**Cont.**	**Cont.**

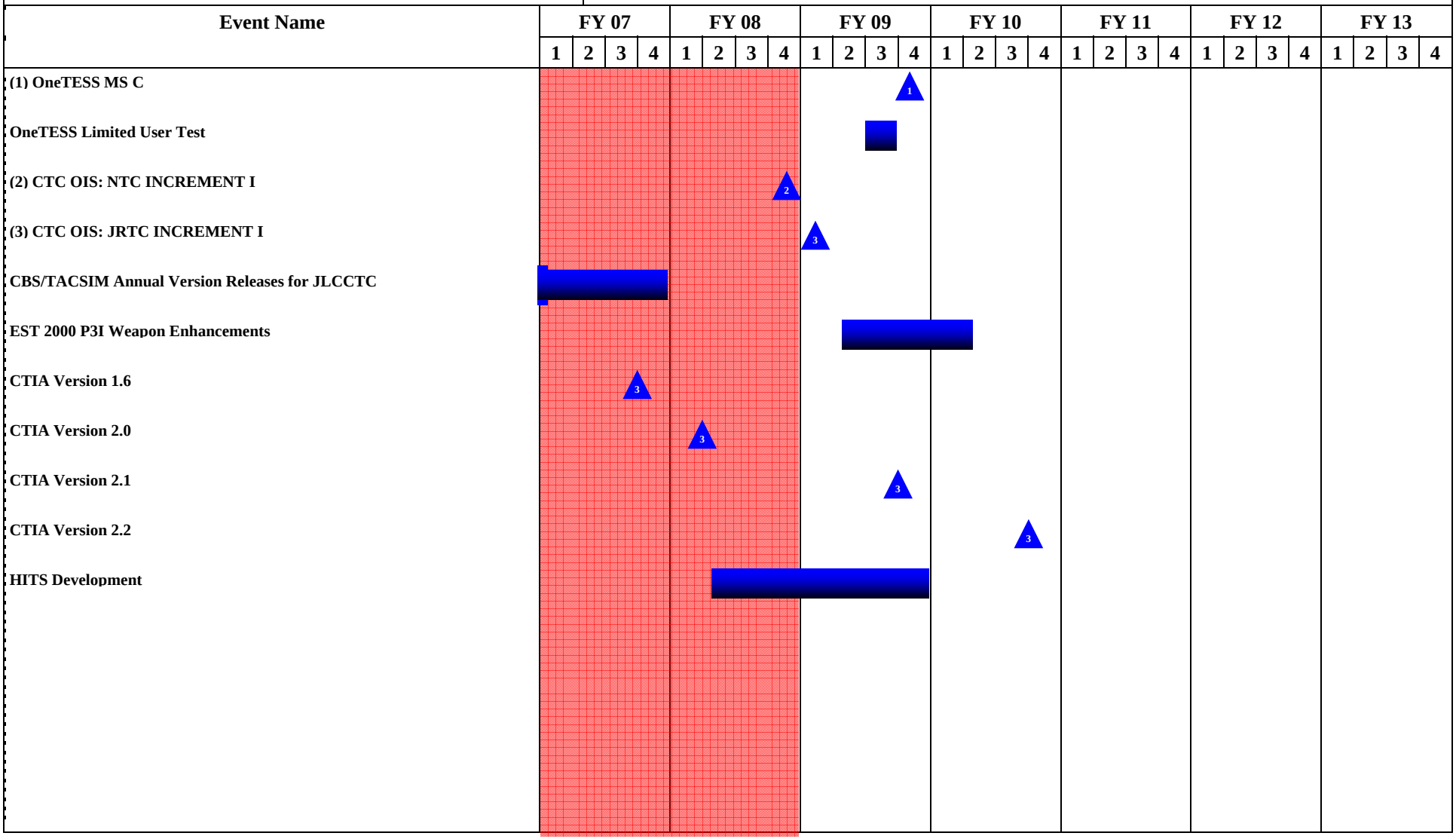
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604715A - Non-System Training Devices - Eng Dev

PROJECT
241



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**241**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
OneTESS MS C			4Q				
OneTESS Limited User Test			3Q				
CTC OIS: NTC INCREMENT I		4Q					
CTC OIS: JRTC INCREMENT I			1Q				
CBS/TACSIM Annual Version Releases for JLCCTC	1Q - 4Q						
EST 2000 P3I Weapon Enhancements			2Q - 4Q	1Q - 2Q			
CTIA Version 1.6	4Q						
CTIA Version 2.0		2Q					
CTIA Version 2.1			4Q				
CTIA Version 2.2				4Q			
HITS Development		2Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604715A - Non-System Training Devices - Eng Dev**	**573**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
573 STRICOM/NAWCTSD SUPPORT	1504	2020	1955	2009	2053	2096	2152	Continuing	Continuing

A. Mission Description and Budget Item Justification: In support of Non-System Training Devices (NSTD), this project funds the US Army Program Executive Officer Simulation, Training and Instrumentation (PEO STRI) core operations supporting development of training devices and simulations by PEO STRI project managers (PM TRADE, PM ITTS, PM CATT, PM Constructive Simulation and PM (Future Force) Simulation. FY09 project funds labor in support of PEO operations.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Continues to support PEO STRI labor for project managers in PM TRADE, PM ITTS, PM CATT, PM Constructive Simulation and PM Future Force (Simulation).	1504	1634	1564
FY08-09:Public Law mandated the Army track FCS related work for accountability purposes. This funding represents salary dollars for three Department of the Army Civilians for the research and development of simulation systems to support the Army Future Combat System		376	391
Small Business Innovative Research/Small Business Technology Transfer Program		10	
Total	1504	2020	1955

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

C. Acquisition Strategy Not Applicable.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	58492	21375	22415	23267	23778	22854	22866	Continuing	Continuing
126	FAAD C2 ED	47547	1331	2981	2879	2986	2987	2988	Continuing	Continuing
146	AIR & MSL DEFENSE PLANNING CONTROL SYS (AMC PCS)	10945	10184	9516	10459	10863	9935	9941	Continuing	Continuing
149	COUNTER-ROCKETS, ARTILLERY & MORTAR (C-RAM) DVPMT		9860	9918	9929	9929	9932	9937	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Air and Missile Defense Planning and Control System (AMDPCS) is an Army Objective Force System with Homeland Defense capabilities that allows for the integration of Air and Missile Defense (AMD)operations for Air Defense Artillery (ADA) Brigades at Corps and Echelons above Corps (EAC), the Army Air and Missile Defense Command (AAMDC) Headquarters, at Army, Joint, or Coalition level forces.

The Forward Area Air Defense Command, Control, and Intelligence (FAAD C2I) System provides continuously tailored situational awareness and situational understanding of the battlespace (including data on threat aircraft, cruise missiles and unmanned aerial vehicles (UAVs) to support the planning and decision process at various levels of command. The mission is to collect, digitally process and disseminate real time target cueing and tracking information, common tactical air picture, and C2I information to all Short Range Air Defense (SHORAD) weapons (Avenger, Bradley Linebacker, Manportable Air Defense System (MANPADS), joint and combined arms). Unique FAAD C2 software will provide this mission capability by integrating FAAD C2 engagement operations software with the Joint Digital Radio (JDR), Single Channel Ground and Airborne Radio System (SINCGARS), Enhanced Position Location Reporting System (EPLRS), Global Positioning System (GPS), Airborne Warning and Control System (AWACS), Sentinel and the Army Battle Command System (ABCS) architecture. Provides joint C2 interoperability and horizontal integration with PATRIOT, THAAD, MEADS, JLENS and SHORAD weapon systems by fusing sensor data to create a scalable and filterable single integrated air picture (SIAP) and common operating picture (COP) at Army divisions and below. System software will provide target data and engagement commands/status to the Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) air defense system. A small portion of RDTE funding is dedicated to SLAMRAAM C2 threshold requirements. FAAD C2 is the first system to digitize for Army Transformation in the First Digitized Division (FDD), III (Digitized) Corps, the Joint Contingency Force (JCF) and the STRYKER Brigade Combat Teams (SBCTs). The FAAD C2 netted and distributed system architecture has been briefed as the basis for a potential BM/C4I Future Combat Ssytem (FCS).

AMDPCS is the backbone of Army Air Defense, operating through the Battle Management/Command, Control, Communications, Computers, and Intelligence (BM/C4I), and the common tactical and operational air picture, (2) Air Defense System Integrator (ADSI), a communications data link processor and display system, provides real time joint airspace situational awareness and fire direction Command and Control (C2) for AMD, and (3) shelter configurations using computer hardware and tactical communications equipment (e.g., JTIDS 2M Terminals, Commanders Tactical Terminal). The AMDPCS enables Active, Passive and Attack Operations coordination and a correlated Single Integrated Air Picture (SIAP) to Army AMD and Joint Forces. The AMDPCS provides the Army Battle Command System (ABCS) architecture and the Army AMD Task Forces (AMDTF) with Joint BM/C4I capability and the Army component of interoperabile Joint Theater Air and Missile Defense (JTAMD) BM/C4I.

In addition, the Air Missile Defense Work Station (AMDWS) supports the Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) air defense system by

providing an automated defense planning capability for deployed units.

Counter-Rockets, Artillery and Mortar (C-RAM) is a spiral Initiative Non-Developmental program initiated by the Army Chief of Staff in response to Iraqi threat and twice validated theater ONS. The primary mission of the C-RAM program is to develop, procure, field and maintain a system of systems that can detect rocket, artillery or mortar launches; warn the defended area with sufficient time for personnel to take cover; intercept rounds in flight, thus preventing damage to ground forces or facilities; and enhance response to and defeat of enemy forces. C-RAM utilizes a system of systems (SoS) approach, and is comprised of a combination of multi-service fielded and non-developmental item (NDI) sensors, command and control (C2) systems and a modified U.S. Navy intercept system, with a low cost commercial off-the-shelf (COTS) warning system and wireless local area network. The system will be fielded to various fixed or sites, providing them correlated air and ground pictures and linking them to the Army Battle Command System (ABCS) and the Joint Defense Network (JDN), via various forms of communications to provide situational awareness and exchange of timely and accurate information to synchronize and optimize automated Shape, Sense, Warn, Intercept, Respond and Protect decisions.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	21516	21513	22552
Current BES/President's Budget (FY 2009)	58492	21375	22415
Total Adjustments	36976	-138	-137
Congressional Program Reductions		-138	
Congressional Rescissions			
Congressional Increases	38900		
Reprogrammings	-1342		
SBIR/STTR Transfer	-582		
Adjustments to Budget Years			-137

Change Summary Explanation: Funding - FY 2007: $38.9 million received in the FY 07 supplemental for the Counter-Rocket, Artillery & Mortar (C-RAM) system.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**126**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
126 FAAD C2 ED	47547	1331	2981	2879	2986	2987	2988	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Forward Area Air Defense Command and Control (FAAD C2) system collects, digitally processes, and disseminates real-time target cueing and tracking information; the common tactical air picture; and command, control, and intelligence information to all Maneuver Air and Missile Defense (MAMD) weapon systems (Avenger and Man-Portable Air Defense System (MANPADS)), and joint and combined arms systems. The FAAD C2 system provides alerting data to air defense gunners, air space battle management, and up linking of mission operations, thereby enhancing force protection against air and missile attack. Situational awareness and targeting data is provided on threat aircraft, cruise missiles, and unmanned aerial vehicles (UAVs). The FAAD C2 system provides this mission capability by integrating dynamic FAAD C2 engagement operations software with the Multifunctional Information Distribution System (MIDS), Joint Tactical Terminal (JTT), Single Channel Ground and Airborne Radio System (SINCGARS), Enhanced Position Location System (EPLRS), Global Positioning System (GPS), Airborne Warning and Control Systems (AWACS), Sentinel radar, and the Army Battle Command System (ABCS) architecture. In addition, FAAD C2 provides interoperability with Joint C2 systems and horizontal integration with PATRIOT, Theater High-Altitude Area Defense (THAAD), Medium Extended Air Defense System (MEADS), and the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) by fusing sensor data to create a scalable and filterable Single Integrated Air Picture (SIAP) and common tactical picture. The system software is a key component of the Air Defense and Airspace Management (ADAM) Cell that is being fielded to Stryker Brigade Combat Teams (SBCTs), Brigade Combat Teams (BCTs), and Division Headquarters as part of the Army's modularity concept. The FAAD C2 software has been fielded to 62 ADAM Cells to date. System software is able to provide target data and engagement commands/status to MAMD Battalions. FAAD C2 is also a principal air defense system within the Homeland Security Program. Soldiers from activated ARNG MAMD battalions operate the FAAD C2 systems in the National Capital Region and other locations.

In support of the Global War on Terrorism (GWOT), FAAD C2 systems are in MAMD units and ADAM Cells deployed to Iraq and Afghanistan. These FAAD systems are critical in providing the local air picture to supported units and higher headquarters. FAAD C2 is also the integrating software that provides target track data and weapon system control for the initial Counter-Rocket, Artillery and Mortar (C-RAM) capability deployed to Iraq.

FY09 will fund the efforts listed in Accomplishments/Planned Program below.

NOTE: FY 2007 funding total includes $38,900 received in GWOT supplemental.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue FAAD C2 Blk III software development/engineering, including external Beyond Line of Sight/Non-Line of Sight, SINCGARS Data Looping, Sentinel Identification Friend or Foe Mode 5/S development, and Single Integrated Air Picture Blk 0 & 1 implementation. Software is being fielded to active and reserve component Maneuver Air and Missile Defense Battalions, to units in support of Homeland Defense, and to ADAM Cells deployed in support modularity and Operation Iraqi Freedom/Operation Enduring Freedom.	4152		
Support FAAD C2 software development for new Air and Missile Defense Composite Battalions, including unique software	3556	1308	

enhancements in support of Homeland Defense and security accreditation upgrades. As a complementary Future Combat System (FCS), continue FAAD C2 integration and interoperability with FCS Mission Applications. Consistent with DA and DoD guidance, migrate FAAD C2 Engagement Operations software modules to the Joint Command and Control Mission Capability Packages. Integrate Sentinel radar Enhanced Target, Range and Classification (ETRAC). Implement software modifications necessary for Internet Protocol version 6 (IPv6), continue integration of interfaces for the Joint Tactical Terminal (JTT), and design Joint Tactical Radio System (JTRS) interfaces. Incorporate IFF modes 1,2 and 3 (active decode) capabilities.			
Develop, test and integrate FAAD C2 software with new hardware versions of FBCB2 and FACT that are fielded. FAAD C2 software cohost/rehost includes the development , test and integration of FAAD C2 software on newer versions of CHS hardware.	262		2981
Implement IFF Mode 5/S in order to enhance positive friendly identification and provide an associated robust civil aviation identification capability.	677		
FY07 Supplemental funds - Enhance C-RAM Response capability (digital clearance of fires, etc.) initiate consolidation of workstations and improvements in the Shape function, and conduct system integration testing at Yuma Proving Ground (YPG).	38900		
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR)		23	
Total	47547	1331	2981

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 2, AD5050 - FAAD C2	41877	12276	7489	8956	3806	4993	4958	Continuing	Continuing
Spares (BS9702) - FAAD C2	842							Continuing	Continuing

Comment:

C. Acquisition Strategy The FAAD C2 acquisition strategy relies on evolutionary software development to rapidly meet the demands of air defense battle management/command, control, communications, computers, and intelligence (BM/C4I) requirements, and to keep pace with automated information technologies. The concept of evolutionary software development is being followed and will be accomplished in Blocks I, II, and III. Blocks I and II and III have been completed.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intelligence - Eng Dev

PROJECT
126

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Northrop Grumman/TRW, BLK I	C/CPIF	Carson, CA	176461								176461	
Northrop Grumman/TRW, BLK II	SS/CPIF	Carson, CA	32206								32206	
Northrop Grumman/TRW, BLK III	SS/CPIF	Carson, CA	97909	1052	1Q					Cont.	98961	
Northrop Grumman/TRW	SS/T&M	Carson, CA	10346	713	1Q	92	1Q	205	1Q	Cont.	Cont.	
Northrop Grumman				4276	1Q	805	1Q	1807	1Q	Cont.	Cont.	
Program Management Administration	MIPR	Various	33302	1075	2Q	130	2Q	296	2Q	Cont.	Cont.	
Sentinel GBS	MIPR	Huntsville, AL	3791								3791	
JTIDS	MIPR	Ft. Monmouth, NJ	6000							Cont.	6000	
ABCS SE&I	MIPR	Ft Monmouth, NJ	346								346	
Software Engineering	Various	Various	17614	717	1-4Q	93	1-4Q	206	1-4Q	Cont.	Cont.	
C-RAM Sense, Warn & Intercept	Various	Variuos	45753	38089							83842	
Subtotal:			423728	45922		1120		2514		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ADATD	MIPR	Ft Bliss, TX	11274	289	1-4Q	37	1-4Q	83	1-4Q	Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**126**

RTTC	MIPR	WSMR, NM	2924	5	1-4Q						Cont.	Cont.	
AATD	MIPR	Ft Eustis, VA	160	45	1-4Q	7	1-4Q	13	1-4Q		Cont.	Cont.	
ATEC	MIPR	Alexandria, VA	978	278	1-4Q	36	1-4Q	81	1-4Q		Cont.	Cont.	
Yuma Proving Ground	MIPR	Yuma, AZ	3545	1008	1-4Q	131	1-4Q	290	1-4Q		Cont.	Cont.	
Subtotal:			18881	1625		211		467			Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

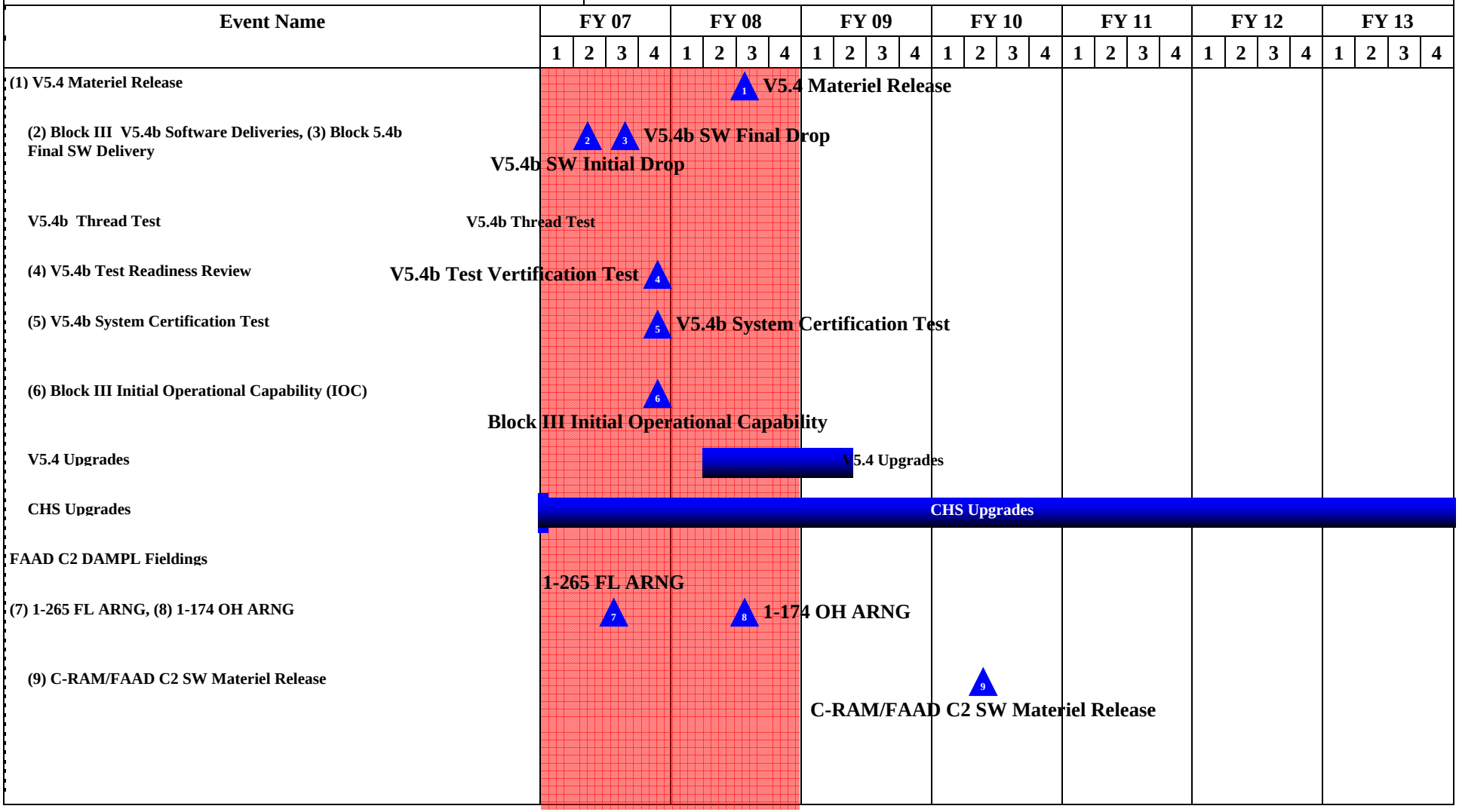
Remarks: Not Applicable

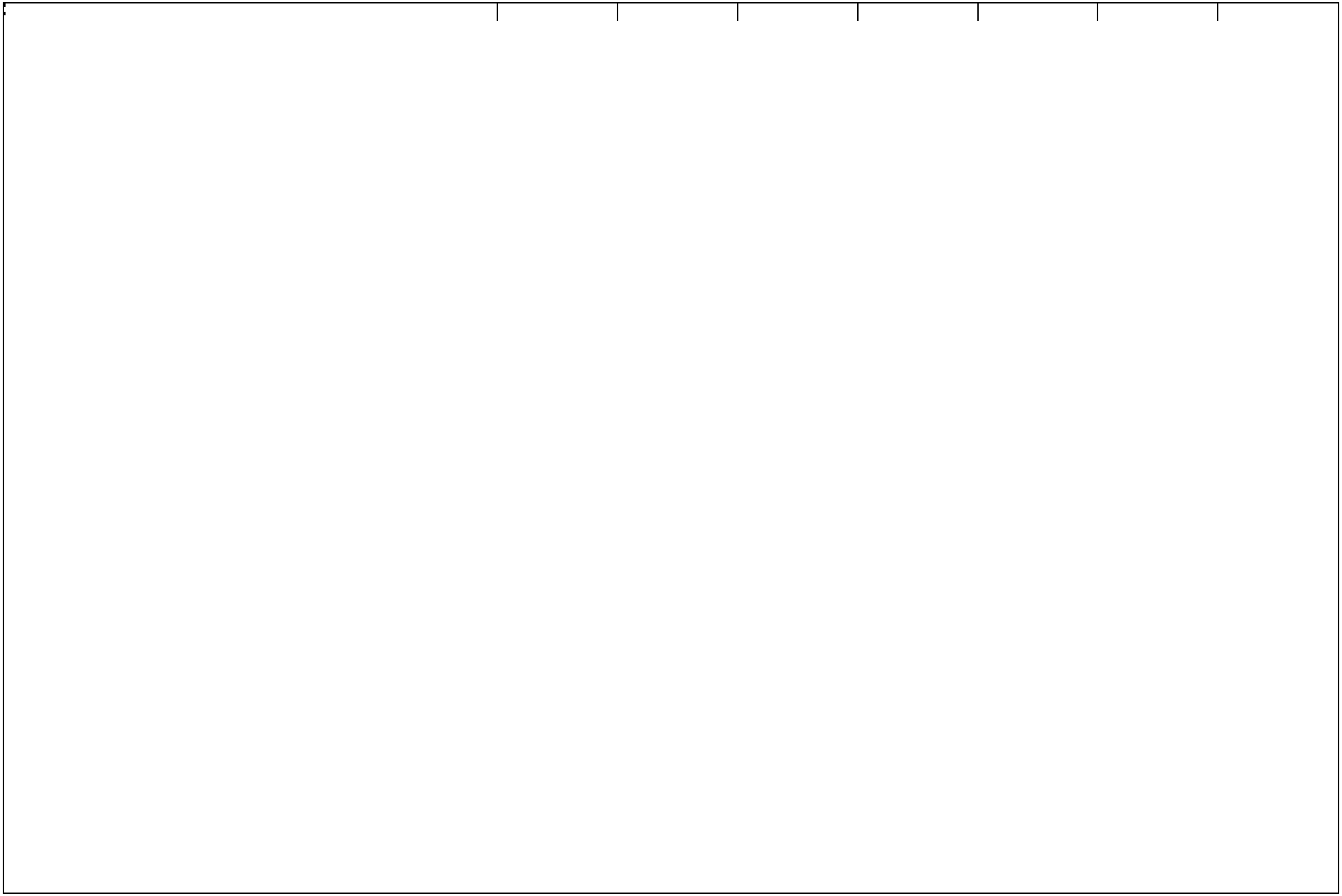
Project Total Cost:	**442609**	**47547**		**1331**		**2981**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**126**





Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**126**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Materiel Release							
V5.2 Materiel Release							
V5.4 Materiel Release		3Q					
Block III V5.4b Software Deliveries	2Q						
Block 5.4b Final SW Delivery	3Q						
V5.4b Thread Test	3Q						
V5.4b Test Readiness Review	4Q						
V5.4b System Certification Test	4Q						
Block III Initial Operational Capability (IOC)	4Q						
V5.4 Upgrades		2Q - 4Q	1Q - 2Q				
CHS Upgrades	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FAAD C2 DAMPL Fieldings							
2-174 OH ARNG							
1-265 FL ARNG	3Q						
1-174 OH ARNG		3Q					
C-RAM/FAAD C2 SW Materiel Release				2Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**146**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
146	AIR & MSL DEFENSE PLANNING CONTROL SYS (AMC PCS)	10945	10184	9516	10459	10863	9935	9941	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Air and Missile Defense Planning and Control System (AMDPCS) is an Army Objective Force System that provides integration of Air and Missile Defense (AMD) operations at all echelons. AMDPCS systems are deployed with Air Defense Artillery (ADA) brigades, Army Air and Missile Defense Commands (AAMDCs), and Air Defense and Airspace Management (ADAM) Cells at the Brigade Combat Teams (BCT's), Fires Brigades and Divisions. AMDPCS systems also provide air defense capabilities to Homeland Defense systems.

The development of ADAM Cells is essential in fulfilling the Army's Modularity requirement. ADAM Cells provide the Commander at BCTs, Brigades and Divisions with air defense situational awareness and airspace management capabilities. They also provide the interoperability link with Joint, multinational and coalition forces. AMDPCS components are vital in the transformation of ADA units and the activation of the Maneuver Air & Missile Defense (MAMD) Composite Battalions. AMDPCS has three major components:

(1) The Air and Missile Defense Workstation (AMDWS) is an automated defense and staff planning tool that displays the common tactical and operational air picture. AMDWS provides the Battle Command (BC) capabilities embedded within the Warfighter Mission area. AMDWS is also the Net-centric interface to BC for all components of the AMD force. AMDWS provides an interoperability link to multinational air defense forces IAW Annex C to a Joint US/NATO Air Defense Agreement;

(2) The Air Defense System Integrator (ADSI) is a communications data link processor and display system that provides near-real time joint airspace situational awareness and fire direction command and control for Air and Missile Defense forces;

(3) The Army Air Defense shelter configurations use automated data processing equipment, tactical communications, Common Hardware Systems, standard vehicles and tactical power to provide AMD unit commanders and staffs with the capabilities to plan missions, direct forces, and control the airspace.

In support of the Global War on Terrorism (GWOT), AMDWS and ADSIs are vital components of the AMDPCS shelter systems fielded to ADAM Cells that have deployed to Iraq and Afghanistan. In addition, these components have also been integrated into non-ADA higher headquarters such as the Coalition Forces Land Component Command (CFLCC). AMDWS is a critical component in the integration and fielding of a Counter-Rocket, Artillery and Mortar (C-RAM) capability to Operating Bases in Iraq and elsewhere. In support of Homeland Defense missions, the AMDWS has been integrated as the Force Operations component into the Joint Service/Air Force architecture. These AMDPCS systems provide the common tactical air picture, a major component of the Common Operating Picture (COP), and are critical to the development and planning of offensive and defensive operations.

FY09 funds the development, software engineering, testing and certificiation of the AMDWS, ADSI, and sheltered subsystem software as described below.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue AMDWS development and support of Software Blocking and Battle Command. Complete AMDWS software engineering and development consistent with Software Block 2, 2+ and 3 requirements, evolving the air and missile defense planning and control	6938	5879	6006

requirements to a net-centric environment, and fulfilling the air defense force operations capabilities identified in the AMD TRADOC capabilities requirement list. Continue AMDWS software development and rehost onto emerging light/laptop common hardware systems. Continue integration of the PATRIOT Air Defense system Tactical Planner (PTP) and the Theater Battle Management Core Systems (TBMCS). Initiate development of the SLAMRAAM, JLENS, MEADS and Joint Theater Battle Operations Net-Centric Environment interfaces. Continue supporting the Air Force Joint Tactical Air and Missile Defense (JTAMD), and support the evolving development of the Force Operations portion of the Integrated Air and Missile Defense (IAMD) System of Systems. As a complimentary Future Combat System (FCS), initiate AMDWS integration and interoperability with FCS command and control system development. Begin migration of AMDWS software modules to the Net Enabled Command and Control Mission Capability Packages.			
Continue ADSI software engineering and development in software versions 14, 14.0.1, 14.1, and 14.2 including development of capabilities for TAC View Situational Awareness, full TADIL-J, Joint Range Extension Application Protocols (JREAP) for link 16 messages, MIDS TADIL-J connectivity, and Windows XP Pro and LINUX Realtime.	1329	1232	1050
Continue engineering, development, test and evaluation of the AMDPCS shelter subsystem Objective configurations; continue evaluation and definitization of the AMDPCS tactical communications, data processing and vehicle/shelter/power generation/environmental system block upgrade program for fielded systems.	1805	1950	1668
Continue software system certification testing, accreditation, and approval of Authority-to-Operate for the various software systems; continue Army and Joint integration and interoperability assessments.	873	845	792
Small Business Innovative Research/Small Business Technology Transfer Programs.		278	
Total	10945	10184	9516

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA, AD 5070 - AMDPCS	69011	40362	58054	91267	38205	24557	24273	Continuing	Continuing

Comment:

C. Acquisition Strategy The acquisition strategy relies on non-development items (NDI) and evolutionary software development to rapidly meet the demands of air defense battle management command, control, communications, computers, and intelligence (BM/C4I) requirements and to keep pace with automated information technologies. The concept of evolutionary software development will be accomplished in a series of AMDWS and ADSI Block releases and upgrades. AMDPCS is being developed for both the Army's Active and Reserve components.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intelligence - Eng Dev

PROJECT
146

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Northrop Grumman/TRW	SS/CPIF	Huntsville, AL	41369	6481	1Q	5997		5625		Cont.	Cont.	
ULTRA Electronics, ADSI	SS/CPIF	Austin, TX	5366	155	1Q	144		133		Cont.	Cont.	
Program Management Administration	Various	Various	22432	3485	2Q	3267		3099		Cont.	Cont.	
ABCS SE&I	MIPR	Ft Monmouth, NJ	619								619	
Software Engineering	Various	Various	5858	764	2-3Q	718		607		Cont.	Cont.	
Subtotal:			75644	10885		10126		9464		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Certification	MIPR	JITC, Ft Huachuca, AZ	598	38	3Q	36		33		Cont.	Cont.	
Interoperability Assessment	MIPR	CTSF, Ft. Hood, TX	972	22	3Q	22		19		Cont.	Cont.	
Subtotal:			1570	60		58		52		Cont.	Cont.	

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**146**

	Type				Date		Date		Date			Contract
Subtotal:												

Remarks: Not Applicable

Project Total Cost:	**77214**	**10945**		**10184**		**9516**		**Cont.**	**Cont.**	

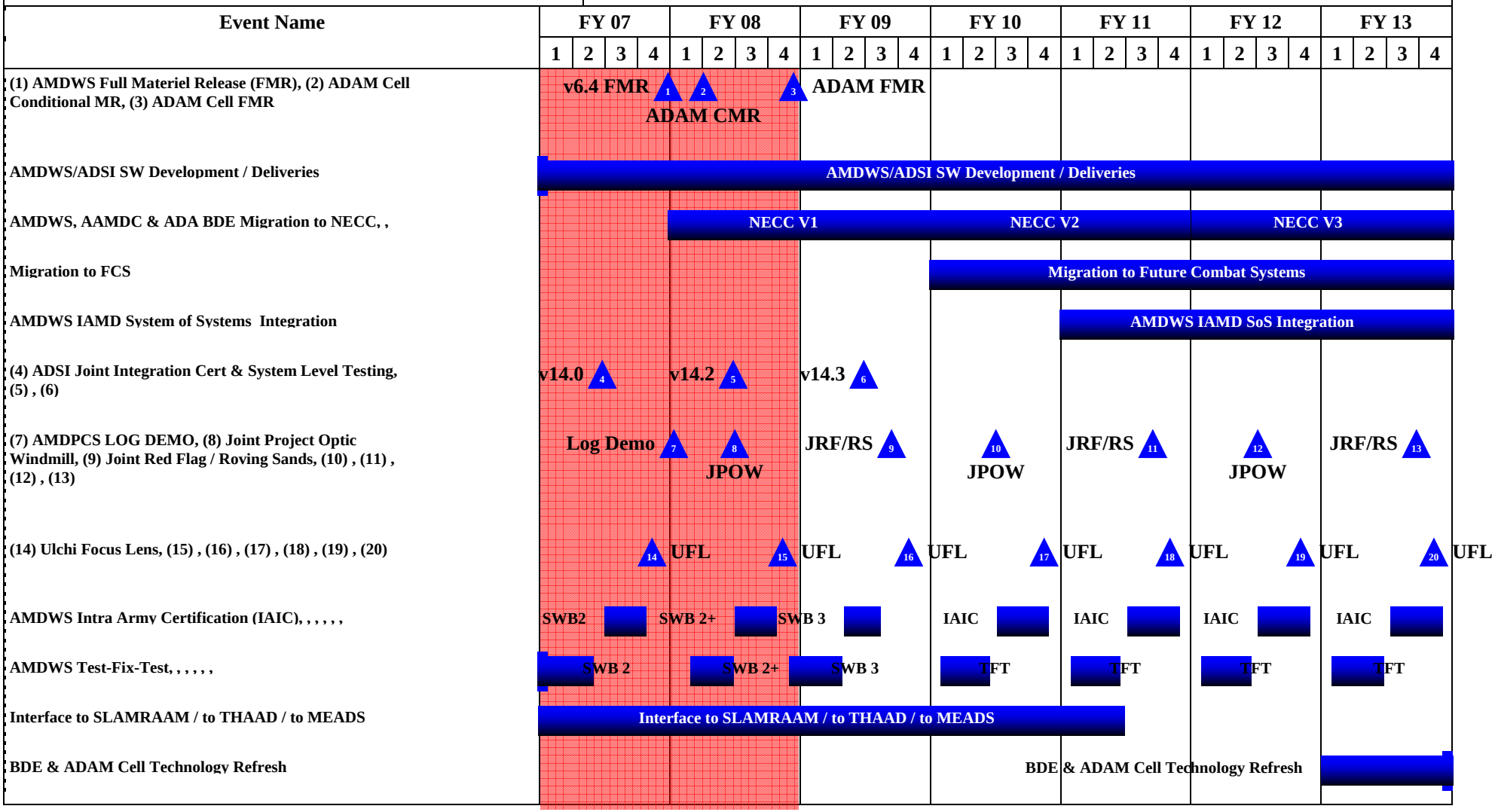
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intelligence - Eng Dev

PROJECT
146



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**146**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
AMDWS Full Materiel Release (FMR)		1Q					
ADAM Cell Conditional MR		2Q					
ADAM Cell FMR		4Q					
AMDWS/ADSI SW Development / Deliveries	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMDWS, AAMDC & ADA BDE Migration to NECC		1Q - 4Q	1Q - 4Q				
				1Q - 4Q	1Q - 4Q		
						1Q - 4Q	1Q - 4Q
Migration to FCS				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
AMDWS IAMD System of Systems Integration					1Q - 4Q	1Q - 4Q	1Q - 4Q
ADSI Joint Integration Cert & System Level Testing	2Q						
		2Q					
			2Q				
AMDPCS LOG DEMO		1Q					
Joint Project Optic Windmill		3Q					
Joint Red Flag / Roving Sands			3Q				
				3Q			
					3Q		
						3Q	
							3Q
Ulchi Focus Lens	4Q						
		4Q					
			4Q				
				4Q			

					4Q		
						4Q	
							4Q
AMDWS Intra Army Certification (IAIC)	3Q - 4Q						
		3Q - 4Q					
			2Q - 3Q				
				3Q - 4Q			
					3Q - 4Q		
						3Q - 4Q	
							3Q - 4Q
AMDWS Test-Fix-Test	1Q - 2Q						
		1Q - 2Q					
		4Q	1Q - 2Q				
				1Q - 2Q			
					1Q - 2Q		
						1Q - 2Q	
							1Q - 2Q
Interface to SLAMRAAM / to THAAD / to MEADS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q		
BDE & ADAM Cell Technology Refresh							1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**149**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
149	COUNTER-ROCKETS, ARTILLERY & MORTAR (C-RAM) DVPMT		9860	9918	9929	9929	9932	9937	Continuing	Continuing

A. Mission Description and Budget Item Justification: Counter-Rockets, Artillery and Mortar (C-RAM) is a spiral Initiative Non-Developmental program initiated by the Army Chief of Staff in response to Iraqi threat and twice validated theater ONS. The primary mission of the C-RAM program is to develop, procure, field and maintain a system of systems that can detect rocket, artillery or mortar launches; warn the defended area with sufficient time for personnel to take cover; intercept rounds in flight, thus preventing damage to ground forces or facilities; and enhance response to and defeat of enemy forces. C-RAM utilizes a system of systems (SoS) approach, and is comprised of a combination of multi-service fielded and non-developmental item (NDI) sensors, command and control (C2) systems and a modified U.S. Navy intercept system, with a low cost commercial off-the-shelf (COTS) warning system and wireless local area network. The system will be fielded to various fixed or sites, providing them correlated air and ground pictures and linking them to the Army Battle Command System (ABCS) and the Joint Defense Network (JDN), via various forms of communications to provide situational awareness and exchange of timely and accurate information to synchronize and optimize automated Shape, Sense, Warn, Intercept, Respond and Protect decisions.

The fielding of the C-RAM SoS will be accomplished through an incremental fielding approach that is driven by an urgent operational need, theater priorities and emerging capability requirements to provide counter-RAM capability to fielded forces. The C-RAM Program Office has fielded equipment to eighteen (18) Forward Operating Bases (FOBs) (Sense, Warn and Intercept to three (3) FOBs; Sense and Warn to fifteen (15) additional FOBs). The C-RAM SoS approach was validated by a Proof of Principle demonstration in December 2004 and Army Test and Evaluation Command (ATEC) tests in Feb 05, Apr 05, Nov-Dec 05, and Sep 06.

Current development efforts include the implementation of improvements and upgrades to fielded C-RAM and the initial development of Indirect Fire Protection Capability (IFPC) capabilities. C-RAM is the current program for the Iraq theater of operations. The follow-on program to address future requirements (mobile, semi-fixed and fixed sites) will be titled Indirect Fire Protection Capability (IFPC). In parellel with a JFIIT led effort to develop JCIDS documemtation for IFPC program initiation, the Army is persuing designation of a program office to provide materiel developer input to the JCIDS documentation and concurrent designation of IFPC as a Pre-MDAP Program.

FY09 will fund the efforts listed in Accomplishments/Planned Program below.

NOTE: FY 2008 funding total does not include $38,900 previously requested for current FY 2008 GWOT requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Develop advanced user interface/capabilities		4860	
Test/demonstration support for new C-RAM capabilities		4724	2000
Develop Threat Evaluation and Weapons Assignment (TEWA) capabilities			2718

Integrate with Rapid Digital "Clearance of Fires"			2000
Develop Advanced Defense Design System Exerciser			2000
Support Joint, Interagency and Multi-national (JIM) interoperability (Common Link Integration Processing (CLIP) integration, communications improvement)			1200
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR)		276	
Total		9860	9918

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 2 BZ0526- COUNTER-ROCKETS, ARTILLERY& MORTAR (C-RAM)	245000							Continuing	Continuing

Comment:

C. Acquisition Strategy The C-RAM program is following an evolutionary acquisition strategy for rapid acquisition of mature technology to the user. The approach will deliver capabilities in increments, recognizing up front the need for future improvements. The objective of the strategy is to balance needs and available capability with resources and put a robust capability to engage rockets, artillery, and mortars into the hands of the user quickly. Success will depend on continuous user feedback, consistent definition of capability needs, maturation of technology, and allocation of required resources. To achieve the evolutionary acquisition of C-RAM, the program director will collaborate and coordinate with the user, combat developer, tester, logistician, PEO C3T, and resource provider (e.g., G8). The program will follow the Spiral Development process (per DoDI 5000.2), where the desired capability is identified, but the end-state requirements are not fully known at program initiation. Those end-state C-RAM requirements will be refined through demonstration and risk management. Each fielded increment provides the user with the best possible capability over time. The requirements for future increments depend on feedback from users and technology maturation.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604741A - Air Defense Command, Control and Intelligence - Eng Dev

PROJECT
149

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Northrop Grumman	ID/IQ CPFF	Carson, CA				875		2125		Cont.	Cont.	70500
Nortrop Grumman	CPIF	Carson, CA			2Q	8600		6357		Cont.	Cont.	40000
Program Management Administration	MIPR	Various				385	2Q	1436	2Q	Cont.	Cont.	
Subtotal:						9860		9918		Cont.	Cont.	110500

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

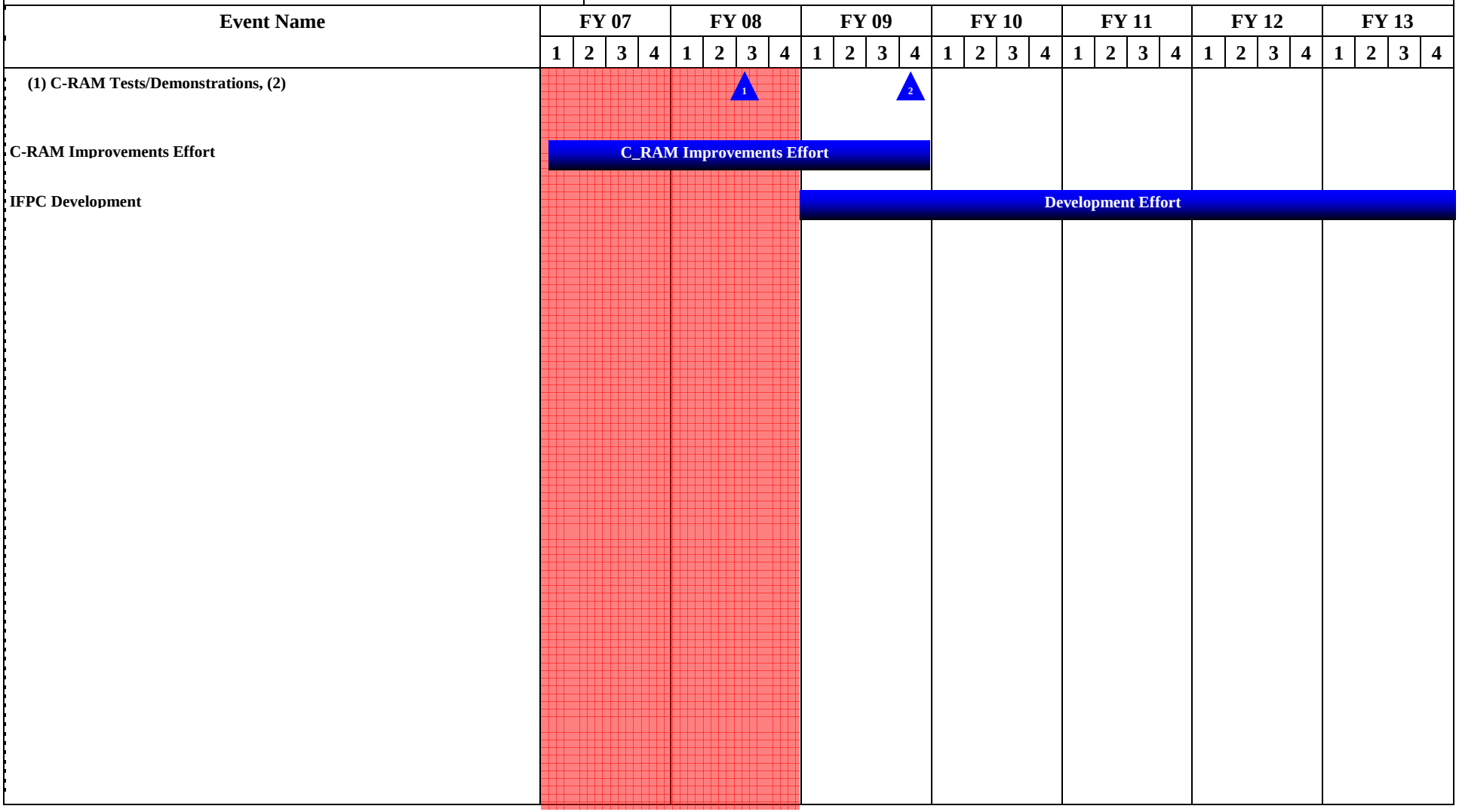
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

ARMY RDT&E COST ANALYSIS (R3)									February 2008	
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604741A - Air Defense Command, Control and Intelligence - Eng Dev**									PROJECT **149**
Project Total Cost:				**9860**		**9918**		**Cont.**	**Cont.**	**110500**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**149**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intelligence - Eng Dev**	**149**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
C-RAM Tests/Demonstrations		3Q					
			4Q				
C-RAM Improvements Effort	1Q - 4Q	1Q - 4Q	1Q - 4Q				
IFPC Development			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	38849	31645	26244	16996	17355	21871	21515	Continuing	Continuing
361	INTELLIGENCE SIMULATION SYSTEMS (MIP)	6947	4114	2814	538	550	560	576	Continuing	Continuing
362	Jnt Land Component Constructive Trng Capability	31902	27531	23430	16458	16805	21311	20939	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element funds the development of constructive and wargame simulations used to realistically train commanders and their battle staffs on today's complex battlefield conditions. Project D361 funds the development of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) that provides Warfighting Commanders at all echelons the ability to train with Intelligence, Surveillance, and Reconnaissance (ISR) products based on realistic ISR assets, people (including the maneuver commander, G-2, G-3, collection manager, analyst/operator) and processes. IEWTPT provides embedded training capability for Future Combat Systems (FCS) ISR systems. IEWTPT will interface/stimulate ISR systems including Tactical Unmanned Aerial Vehicle (TUAV), Joint Surveillance Target Attack Radar System-Common Ground Station (JSTARS-CGS), Tactical Exploitation System/Distributed Tactical Exploitation System (TES/DTES), Guardrail, Counter Intelligence/Human Intelligence Management Systems (CHIMS), Prophet and Distributed Common Ground Station-Army (DCGS-A). IEWTPT is the only Army Simulation System supporting ISR training from the Warfighter to the Military ISR Analyst/System Operator. Project 362, Joint Land Component Constructive Training Capability (JLCCTC), develops the Army's premier wargame simulation for training leaders and Battle Staffs at Brigade, Division, Corps, and echelons above Corps. JLCCTC will provide functionality not currently available (digital, stability, support and information operations), link to unit organizational Command, Control, Communications, Computers and Integration (C4I) equipment, improve exercise generation and after-action reporting. WARSIM will interoperate with One Semi Automated Forces (OneSAF) and other simulations as an integral part of an Army simulation toolkit, so that a warfighter training exercise can represent in simulation all Army echelons and can also be represented in a Joint environment. JLCCTC pulls together current constructive simulation systems and future constructive simulations and uses a comprehensive strategy to ensure interoperability among all of those systems. This strategy will allow JLCCTC to meet current and future user needs. JLCCTC leverages the best pieces of current systems to meet current training needs and evolves to meet the training needs of the future.

FY09 funding continues product improvements with annual spiral releases of the IEWTPT and continues development of Joint Land Component Constructive Training Capability.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	39563	31962	26379
Current BES/President's Budget (FY 2009)	38849	31645	26244
Total Adjustments	-714	-317	-135
Congressional Program Reductions		-317	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	292		
SBIR/STTR Transfer	-1006		
Adjustments to Budget Years			-135

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**361**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
361	INTELLIGENCE SIMULATION SYSTEMS (MIP)	6947	4114	2814	538	550	560	576	Continuing	Continuing

A. Mission Description and Budget Item Justification: Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT) provides Warfighting Commanders at all echelons the ability to train with Intelligence, Surveillance, and Reconnaissance products based on realistic assets, people (including the maneuver commander, G-2, G-3, collection manager, analyst/operator) and processes. IEWTPT Technical Control Cell (TCC) and HUMINT Control Cell (HCC) provides the enhancements to simulated battlefields required to stimulate ISR systems in their go to war equipment. IEWTPT interoperates with the Army's constructive simulation training systems and actual operator level field equipment identified as Target Signature Arrays. IEWTPT will interface/stimulate ISR systems including Tactical Unmanned Aerial Vehicle (TUAV), Joint Surveillance Target Attack Radar System-Common Ground Station (JSTARS-CGS), Tactical Exploitation System/Distributed Tactical Exploitation System (TES/DTES), Guardrail, Counter Intelligence/Human Intelligence Management Systems (CHIMS), Prophet and Distributed Common Ground Station-Army (DCGS-A). IEWTPT is the only Army Simulation System supporting ISR training from the Warfighter to the Military ISR Analyst/System Operator.
The FY09 funding continues product improvements with annual spiral releases in the 4th Quarter of each year. Improvements in the Human Intellience (HUMINT) and Signals Intelligence (SIGINT) will coincide with tactical fielded Intelligence, Surveillance and Reconnaissance systems.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY 2007 - Started the Human Intelligence (HUMINT) capability; developing Signals Intelligence (SIGINT) capability based on Top Secret/Special Compartmented Information (SCI) threat types and started the Service Oriented Architecture (SOA) efforts.	6947		
FY 2008 - SOA will be completed by 2008, however, upgrades required as new functionality is added. Continue HUMINT and SIGINT capabilities development.		4114	
FY 2009 - Continue HUMINT and SIGINT capabilities development.			2814
Total	6947	4114	2814

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0100, Training Devices, Nonsystem	340895	335957	218614	191173	189427	201573	209438		1687077

Comment:

C. Acquisition Strategy Competitive development based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
361

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IEWTPT System Dev & Demo	CPIF	Gen Dynamics C4 Systems, Orlando, FL	19200	5320	1-3Q	2835	1-3Q	1456	1-3Q	Cont.	Cont.	Cont.
IEWTPT System Dev & Demo	multiple	various	737					225	1-4Q	Cont.	Cont.	Cont.
Subtotal:			19937	5320		2835		1681		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IEWTPT Engineering & Technical Support	Multiple	Various	1943	228	1-4Q	259	1-4Q	207	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1943	228		259		207		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IEWTPT TEMP Support	Various	Multiple	319								319	319
IEWTPT Operational Test Event Support	Various	Multiple	359					253	1-3Q	Cont.	Cont.	Cont.
Test Engineer Support	various	Multiple	324	989	1-3Q	470	1-3Q	270	1-3Q	Cont.	Cont.	Cont.
Subtotal:			1002	989		470		523		Cont.	Cont.	Cont.

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
361

	Type				Date		Date		Date			Contract
IEWTPT Program Management	Various	Multiple	1487	410	1-4Q	550	1-4Q	403	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1487	410		550		403		Cont.	Cont.	Cont.

Remarks: 632

Project Total Cost:	**24369**	**6947**		**4114**		**2814**		**Cont.**	**Cont.**	**Cont.**

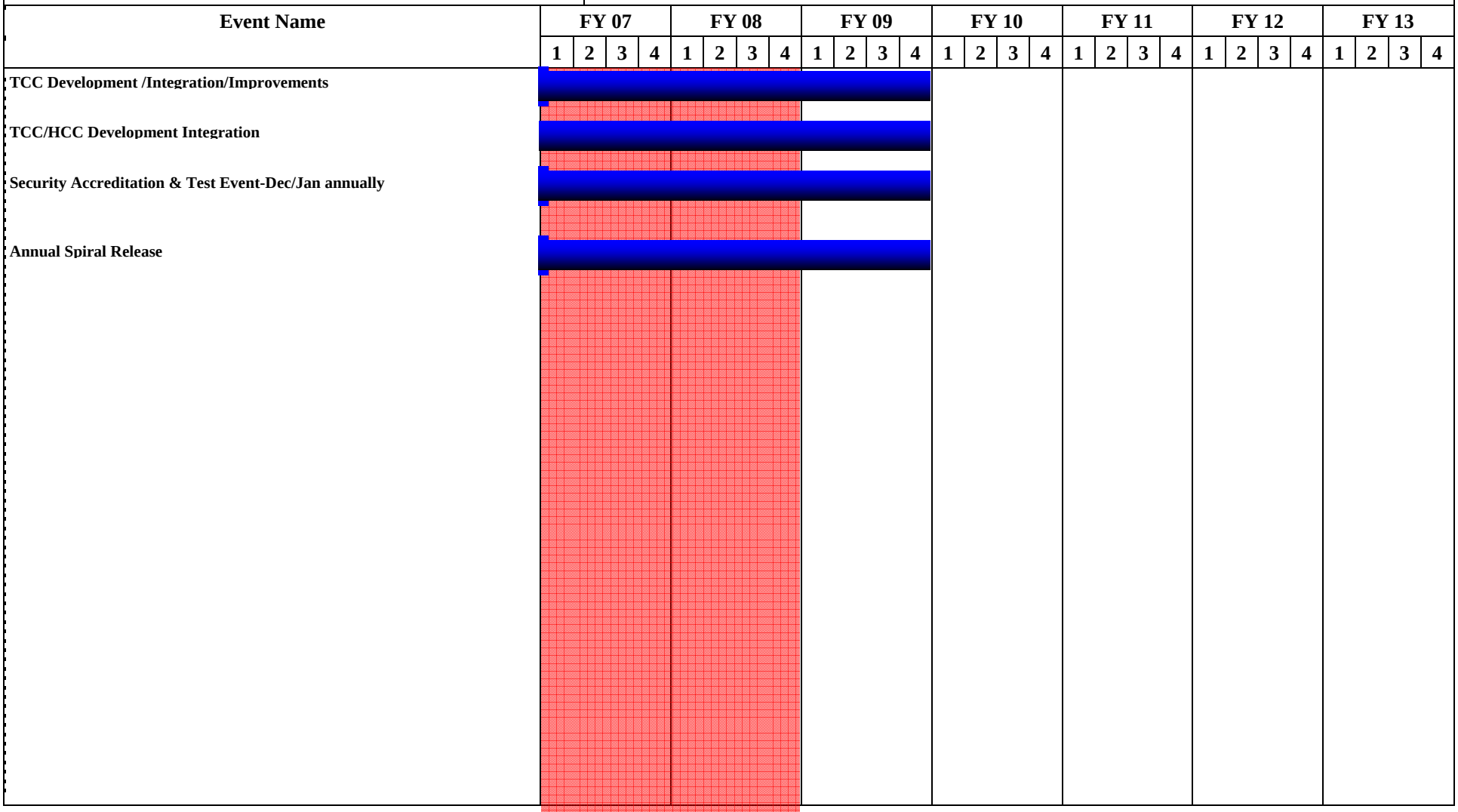
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
361



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**361**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
TCC Development /Integration/Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q				
TCC/HCC Development Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Security Accreditation & Test Event-Dec/Jan annually	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Annual Spiral Release	1Q - 4Q	1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**362**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
362	Jnt Land Component Constructive Trng Capability	31902	27531	23430	16458	16805	21311	20939	Continuing	Continuing

A. Mission Description and Budget Item Justification: This Project funds the development of the Joint Land Component Constructive Training Capability (JLCCTC), the Army's premier wargaming simulations for training leaders and Battle Staffs from Battalion through echelons above Corps. JLCCTC pulls together current constructive simulation systems and future constructive simulations and uses a comprehensive strategy to ensure interoperability among all of those systems. JLCCTC will provide functionality not currently available (digital operations, stability and support operations and information operations), link to organic Battle Commands equipment, and improve exercise generation and after-action reporting.

The FY09 funding continues the development of the Army training system, integration and system evaluation. The JLCCTC leverages the best capabilities of current systems to meet current training needs and evolves to meet the training needs of the future force.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Verify and validate JLCCTC software models	2552	2243	1888
FY07-FY09: Continue integration of JLCCTC components for interoperability	19381	15850	14034
FY07-FY09: Develop and integrate user interface enhancements for Army training applications	6141	5392	4677
FY07-FY09: Develop and evaluate system performance and conduct system test events	3828	3364	2831
Small Business Innovative Research/Small Business Technology Transfer Programs.		682	
Total	31902	27531	23430

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
CBCSE is the Procurement funds for JLCCTC	29391	26636	16474	17621	17472	17974	18372	Continuing	Continuing

Comment:

C. Acquisition Strategy Competitive development based on performance specifications.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
362

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
WARSIM Development of Army Training System	C/CPAF	Lockheed Martin Info Systems, Orlando, FL	57942	14700	1-3Q	12000	1-3Q	10878	1-3Q	Cont.	Cont.	Cont.
Integration of JLCCTC	Multiple	Various	17572	9424	1-2Q	7207	1-2Q	5323	1-2Q	Cont.	Cont.	Cont.
Development of logistics model	T&M	Tapestry, San Diego, CA	8192	2500	1-4Q	2500	1-2Q	1750	1-2Q	Cont.	Cont.	Cont.
Subtotal:			83706	26624		21707		17951		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Tech Spt	Multiple	Various	6029	40	1-3Q	430	1-3Q	430	1-3Q	Cont.	Cont.	Cont.
Subtotal:			6029	40		430		430		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Verification, Validation and Accreditation	Multiple	Various	8084	250	1-3Q	550	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
System Evaluation and Test	Multiple	Various	11184	500	1-3Q	500	1-3Q	475	1-3Q	Cont.	Cont.	Cont.
Subtotal:			19268	750		1050		975		Cont.	Cont.	Cont.

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
362

	Type				Date		Date		Date			Contract
Program Management	Multiple	Various	17081	4488	1-4Q	3662	1-4Q	4074	1-4Q	Cont.	Cont.	Cont.
Cost Analysis Support	T&M	Northrup Grumman-TASC, Orlando FL	414								414	493
SBIR/STTR						682					682	
Subtotal:			17495	4488		4344		4074		Cont.	Cont.	Cont.
Project Total Cost:			**126498**	**31902**		**27531**		**23430**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT

PROJECT
362

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Milestone C, (2) JLCCTC V4, (3) OneSAF integration into JLCCTC Version 5, (4) JLCCTC V5, (5) JLCCTC V6 partial, (6) JLCCTC V6 partial	1 MS C		2				3	4			5				6													

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604742A - CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT**	**362**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone C	1Q						
JLCCTC V4	3Q						
OneSAF integration into JLCCTC Version 5		3Q					
JLCCTC V5		3Q					
JLCCTC V6 partial			3Q				
JLCCTC V6 partial				3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	7896	9961	23582	15633	14589	14948	15358	Continuing	Continuing
L59	DIAGNOST/EXPERT SYS DE	5296	6497	20003	11992	10873	11279	11610	Continuing	Continuing
L65	Test Equipment Development	2600	3464	3579	3641	3716	3669	3748	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element (PE) provides for development and testing of general-purpose test equipment, and state-of-the-art diagnostics and prognostics technology, software, and systems to support the increasingly complex electronic components of the Army's new and upgraded weapon systems. It focuses on implementation of commercial test and diagnostic technologies across multiple weapon platforms to minimize the cost of troubleshooting and maintenance of Army equipment in the field.

Modular, reconfigurable automatic and semi-automatic systems are developed under this program to satisfy weapon system test and diagnostics requirements. The Next Generation Automatic Test System (NGATS), also known as the Base Shop Test Facility (BSTF) (V)6, currently under development will provide state-of-the-art test and diagnostic capabilities to support current and future weapon systems. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure, and it will replace several aging automatic test systems (ATS) which are becoming prohibitively expensive to operate and maintain.

This PE also provides for continued development and improvement of measurement equipment with emphasis on the incorporation of digital electronics and tailoring of configurations to improve deployability, mobility, and survivability of the support equipment. Artificial intelligence and anticipatory maintenance applications are being developed to support the integration of self-diagnostic capabilities in Army weapons and support systems. The goal of these efforts is to reduce logistics burdens and improve readiness by minimizing the need for external testers and improving the troubleshooting abilities of soldiers in the field.

FY2009 funding for this program continues to support development in accordance with DoD and Army policies of the Army Standard Next Generation Automatic Test System which will improve deployability and mobility of test and diagnostic equipment and replace automated equipment currently supporting the Abrams and Bradley. It will also develop or significantly modify test equipment to satisfy modular force and homeland security support requirements that cannot be accommodated with test equipment currently available in the commercial marketplace.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	8046	18025	23728
Current BES/President's Budget (FY 2009)	7896	9961	23582
Total Adjustments	-150	-8064	-146
Congressional Program Reductions		-8064	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	59		
SBIR/STTR Transfer	-209		
Adjustments to Budget Years			-146

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L59 DIAGNOST/EXPERT SYS DE	5296	6497	20003	11992	10873	11279	11610	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds development of and system enhancements for the Next Generation Automatic Test System (NGATS). The NGATS, also known as the Base Shop Test Facility (BSTF) (V)6, is a general-purpose automatic test system (ATS) that will provide test and diagnostic capabilities required to support current and future weapons and combat support systems and will facilitate retirement of aging and obsolete test equipment that is imposing increasing logistics and operations and support cost burdens. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure. The ARGCS initiative was sponsored by the Department of Defense, and all Services are expected to transition demonstrated technologies into their automatic test systems programs. This project also provides for continuing efforts to upgrade and improve general-purpose automatic test equipment to satisfy test and diagnostic requirements of the Army's new and upgraded weapon systems; development and adaptation of automatic test equipment required to overcome existing deficiencies and voids in organic test and diagnostic capabilities; development and testing of common procedures utilizing existing test program sets and software applications; and market surveys of commercially available test equipment, methods, and procedures to determine applicability to Army requirements. The test and diagnostic systems and procedures developed under this project are essential for ensuring the operational readiness, accuracy, and effectiveness of the Army's warfighting systems.

NOTE: FY 2008 funding total does not include $6.5 million previously requested for current FY 2008 GWOT requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Complete NGATS prototype development (Increment 1) (including CTI integration and shelter modifications)	3817		
FY07-FY08: Complete NGATS developmental testing (Increment 1) (including environmental, dynamic, E3, reliability, and log demo)	400	400	
FY08: Complete NGATS (Increment 1) operational testing	579	594	
FY08-FY09: Develop initial NGATS logistics (including provisioning, calibration, and technical data)		1338	4003
FY07-FY08: Test and evaluate Abrams and Bradley electronic test program sets (TPS) for use on NGATS	500	2500	
FY08-FY09: Continue development of the NGATS electro-optics subsystem to include the capability to support new ground and aerial sensors for unmanned air and ground vehicles		500	5000
FY08-FY09: Develop and test hardware and software required for Increment 2 systems (Avenger, MLRS, TOW, Paladin and CROWS II) and E-O TPSs for Abrams and Bradley systems		500	8000
FY08-FY09: Develop NGATS Net Centric maintenance capability to support condition-based maintenance (CBM+), embedded diagnostics and Smart TPS development for all supported platforms		500	3000
FY08: Small Business Innovative Research/Small Business Technology Transfer Programs		165	
Total	5296	6497	20003

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MB4000, Integrated Family of Test Equipment (IFTE)	142054	36269	46296	114807	122041	95564	53458	Continuing	Continuing

Comment:

C. Acquisition Strategy This developmental project consists of cooperative in-house and competitive and sole-source contractual actions. When the necessary expertise and capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source; otherwise, commercial contracts are used. Equipment required for developmental projects is obtained by contract from the commercial supplier. Developmental efforts for the Next Generation Automatic Test System (NGATS) are being completed under a sole-source contract awarded to the prime contractor for the Integrated Family of Test Equipment off-platform testers. NGATS will follow an evolutionary acquisition strategy using spiral development. The NGATS Increment 1 will replace the Direct Support Electrical Systems Test Set (DSESTS). Increments 2 and 3 will replace the Base Shop Test Facility (BSTF) (V)3 and BSTF (V)5 systems respectively.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L59

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prototype Development	SS/CPFF	Northrop Grumman, Rolling Meadows, IL	13472	1604	2Q						15076	15116
Hardware/Support Items Development	SS/CPFF(5)	Northrop Grumman, Rolling Meadows, IL	47000	1174	2Q	299	2-4Q	8654	2-4Q	Cont.	Cont.	Cont.
Software Development/ Verification/Validation	SS/CPFF(5)	Northrop Grumman, Rolling Meadows, IL	4239	1122	2Q	4014	2-4Q	10249	2-4Q	Cont.	Cont.	Cont.
Subtotal:			64711	3900		4313		18903		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management/Technical Support		Various	43590	252	1-4Q	525	1-4Q	600	1-4Q	Cont.	Cont.	Cont.
Other Direct		Various	1390	165	1-4Q	500	1-4Q	500	1-4Q	Cont.	Cont.	Cont.
Subtotal:			44980	417		1025		1100		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Operational Testing	Various	Various	2814	579	2Q	594	1-3Q			Cont.	Cont.	Cont.
Developmental Testing	Various	Various	597	400	2Q	400	1-3Q			Cont.	Cont.	Cont.
Subtotal:			3411	979		994				Cont.	Cont.	Cont.

Remarks: Test Program Set (TPS) test and evalutation is included in the product development cost.

IV. Management Services	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

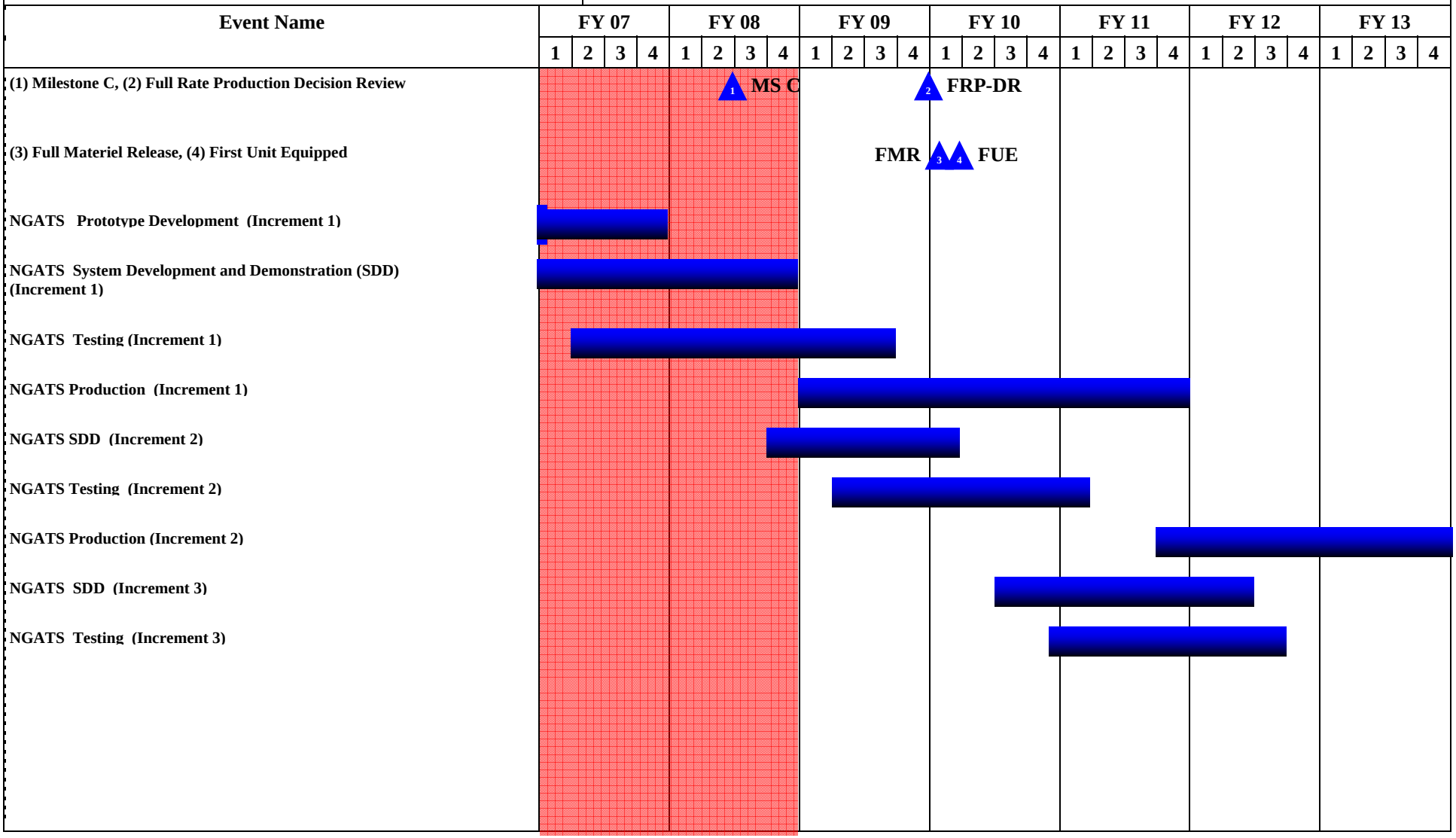
PROJECT
L59

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
SBIR/STTR						165	2Q				165	
Subtotal:						165					165	
Project Total Cost:			**113102**	**5296**		**6497**		**20003**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone C		2Q					
Full Rate Production Decision Review				1Q			
Full Materiel Release				1Q			
First Unit Equipped				1Q			
NGATS Prototype Development (Increment 1)	1Q - 4Q	1Q					
NGATS System Development and Demonstration (SDD) (Increment 1)	1Q - 4Q	1Q - 4Q					
NGATS Testing (Increment 1)	2Q - 4Q	1Q - 4Q	1Q - 3Q				
NGATS Production (Increment 1)			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
NGATS SDD (Increment 2)		4Q	1Q - 4Q	1Q			
NGATS Testing (Increment 2)			2Q - 4Q	1Q - 4Q	1Q		
NGATS Production (Increment 2)					3Q - 4Q	1Q - 4Q	1Q - 4Q
NGATS SDD (Increment 3)				3Q - 4Q	1Q - 4Q	1Q - 2Q	
NGATS Testing (Increment 3)				4Q	1Q - 4Q	1Q - 3Q	

* Test program set (TPS) compatibility testing runs continually throughout the product development process.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L65 Test Equipment Development	2600	3464	3579	3641	3716	3669	3748	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports development and demonstration of state-of-the-art calibration standards, techniques, and upgrades/improvements to existing Army calibration systems. It provides for feasibility studies, market research, inventory analyses, bid sample testing, and prototyping to support calibration systems and general-purpose test and diagnostic equipment. Primary efforts under this project include development of an up-armor ready AN/GSM-421(V2) tactical calibration capability, improvement of test and measurement equipment performance envelopes via preplanned product improvements (P3I), and development/evaluation of advanced technology and higher reliability calibration systems and general-purpose test, measurement and diagnostic equipment (TMDE). Preplanned product improvements are underway to current test and measurement systems to overcome deficiencies and voids in existing organic capabilities and to ensure the operational readiness, accuracy, effectiveness, and safety of Army weapons and combat support systems. These improvements will employ reconfigurable open electronics architecture and computer-based instrumentation wherever feasible and will be focused on reducing test equipment footprints to improve deployability and mobility in area of operations.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Develop hardware via preplanned product improvements to enhance TMDE systems' performance capabilities	560	580	600
FY07-FY09: Test and integrate hardware developed for preplanned product improvements	730	775	827
FY07-FY09: Develop, evaluate, and integrate test and measurement equipment	919	1007	1100
FY07-FY09: Continue development and evaluation of test and calibration procedures	190	200	210
FY07-FY09: Perform market research and evaluation of commercial equipment, and develop performance specifications for acquisitions	201	805	842
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs		97	
Total	2600	3464	3579

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, N10000, Calibration Sets Equipment	19118	10572	9689	18621	14283	14280	20166	Continuing	Continuing
OPA3, N11000, General Purpose Electronic Test Equipment	22385	19172	22377	22515	19238	13139	5802	Continuing	Continuing

Comment:

C. Acquisition Strategy Projects are focused on use of commercial and nondevelopmental item technologies. When programmatic and engineering expertise and capability are available within the Department of Defense, services required for the individual development projects are acquired from the government source; otherwise, commercial services contracts are used to provide these capabilities. Equipment required for development projects is obtained from the commercial supplier. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government testing and evaluation.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L65

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	Various	Various	5948	934	1-2Q	1407	1-2Q	1572	1-2Q	Cont.	Cont.	Cont.
Procedures Development and Evaluation	Various	Various	1918	190	1-3Q	200	1-3Q	210	1-3Q	Cont.	Cont.	Cont.
Government Engineering		Various	1340	330	1-4Q	515	1-4Q	515	1-4Q	Cont.	Cont.	Cont.
Subtotal:			9206	1454		2122		2297		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Support Services	Various	Various	738	229	2Q	300	2Q	310	2Q	Cont.	Cont.	Cont.
Subtotal:			738	229		300		310		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Testing	Various	Various	1052	579	1-2Q	595	1-2Q	612	1-2Q	Cont.	Cont.	Cont.
Subtotal:			1052	579		595		612		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Personnel		Various	544	338	1-4Q	350	1-4Q	360	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						97	2Q				97	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

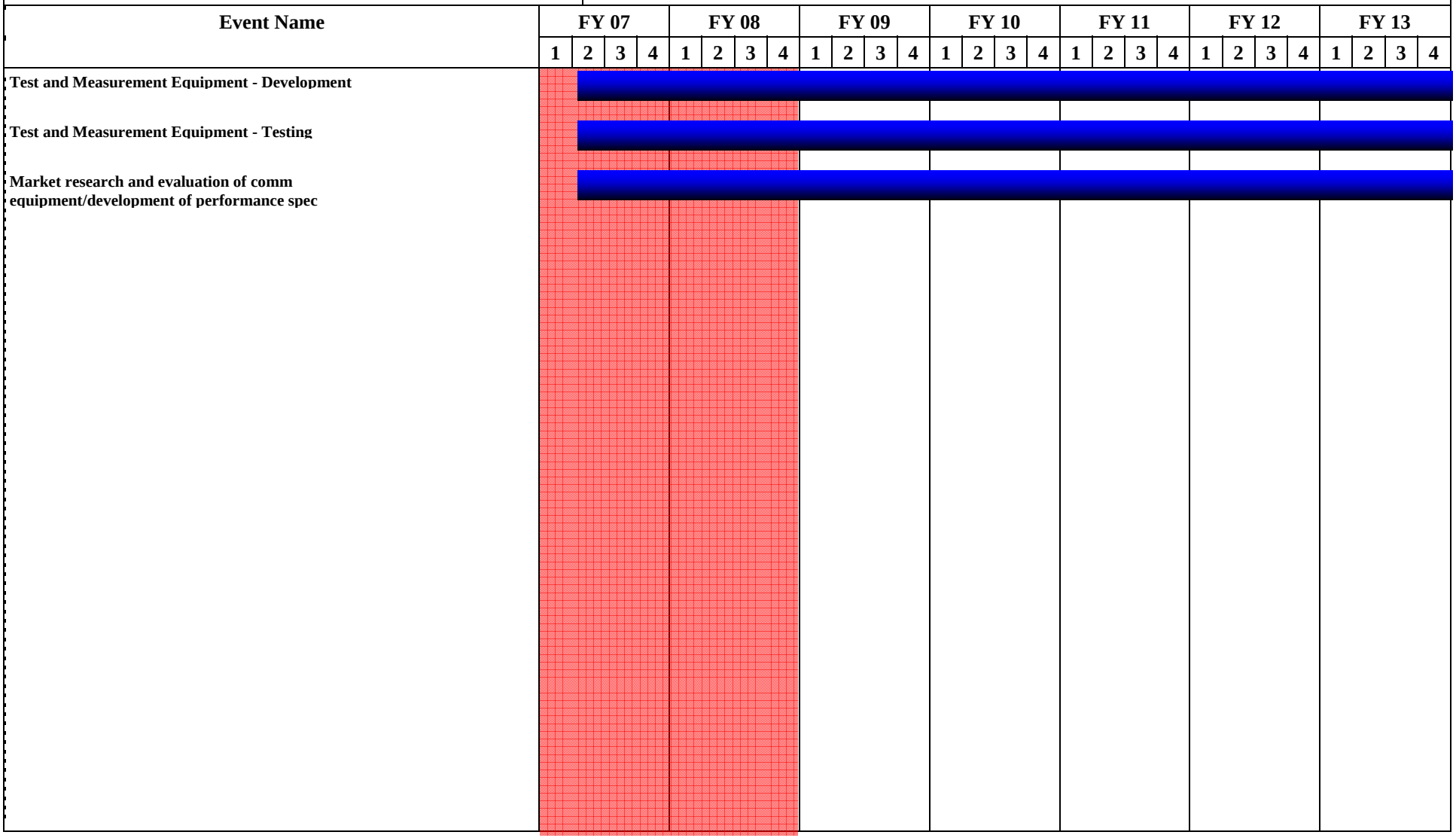
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**

Subtotal:	544	338		447		360		Cont.	Cont.	Cont.
Project Total Cost:	**11540**	**2600**		**3464**		**3579**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L65**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Test and Measurement Equipment - Development	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Test and Measurement Equipment - Testing	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Market research and evaluation of comm equipment/development of performance spec	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	20052	18180	16095	15629	16067	16700	17070	Continuing	Continuing
C73	SYNTHETIC THEATER OF WAR	1939								5194
C74	DEVEL SIMULATION TECH	1677	3598	3702	3788	3597	3950	4034	Continuing	Continuing
C77	Army Geospatial Data Master Plan	186	64	675		500	512	523	Continuing	Continuing
C78	One Semi-Automated Forces (OneSAF)	15233	12809	11718	11841	11970	12238	12513	Continuing	Continuing
C81	Joint Training Integration & Evaluation Center	1017	1709							3685

A. Mission Description and Budget Item Justification: This program element supports the Army's Advanced Simulation Program which enables operational readiness and supports the development of concepts and systems for Stryker and Future Force through the application of new simulation technology and techniques. This development and application of simulation technology will provide the tools to electronically link all subcomponents together in a manner that is transparent to the user. The synthetic environment is used to verify the scenarios, tactics/techniques and procedures, train testers on new hardware/software and conduct trial test runs before costly live field tests. The tools developed are available for reuse by developers and users of simulations throughout the Army. Project C73, Synthetic Theater of War-Army (STOW-A), provided innovative applications of current systems (live, virtual and constructive, Command, Control, Communications, Computers and Integration (C4I) Surveillance and Reconnaissance) to meet the urgent training requirements until availability of the next generation systems. STOW-A provides direct support to the Training, Exercises and Military Operations (TEMO) domain and the Advanced Concepts Requirements (ACR) domain. TEMO support derives from the demonstrated, low cost training capabilities that are provided by the toolkit. ACR support derives from the demonstrated capability of the kit to support battle lab and Army Warfighting Experiments (AWE) exercises and the development of Tactics, Techniques and Procedures (TTP) to support digital operations. Project C74 provides the resources necessary to perform the formally chartered mission of the Army's Simulation to C4ISR Interoperability Overarching Integrated Product Team (SIMCI OIPT). Project C77, Army Geospatial Data Master Plan, focuses on activities starting with data acquisition from multiple sources and culminating with accurate, robust and timely geospatial data and data management, integration and verversion tools that support multiple battle command, training and mission rehearsal applications. This program will benefit the Army and DOD by providing standards for interoperability and software. The project also develops and enhances reconfigurable simulators which are used as Advanced Concepts Research Tools (ACRT) that will allow the battlelabs to accomplish their mission in support of the ACR, Research, Development and Acquisition (RDA), and TEMO domains. Project C78 develops the One Semi-Automated Forces (OneSAF) program that will combine and improve the functionality and improve behaviors of several current semi-automated forces to provide a single SAF for Army use in simulations.

The FY09, C74 Project line provides for Simulation-to-C4I interoperability (SIMCI) effort between the models and simulations and tactical C4I Systems. The FY09, C77 project line develops a geospatial process and policy for data management. The FY09, C78 Project funding will continue development of the software to provide OneSAF initial operational capability functionality for Army evaluation and test.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	20418	16594	16181
Current BES/President's Budget (FY 2009)	20052	18180	16095
Total Adjustments	-366	1586	-86
Congressional Program Reductions		-134	
Congressional Rescissions			
Congressional Increases		1720	
Reprogrammings	150		
SBIR/STTR Transfer	-516		
Adjustments to Budget Years			-86

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**	**C74**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C74 DEVEL SIMULATION TECH	1677	3598	3702	3788	3597	3950	4034	Continuing	Continuing

A. Mission Description and Budget Item Justification: The funding in this project line supports the HQDA-chartered mission of the Simulation to Command, Control, Communications, Computers and Intelligence (C4I) Interoperability (SIMCI) Overarching Integrated Product Team (OIPT). The SIMCI OIPT mission is to provide recommendations to Army senior leadership regarding Army policy, organization and processes to improve Battle Command (BC) and Modeling & Simulation (M&S) systems interoperability. BC systems capabilities encompass not only command and control functions, but also "decision and planning support capabilities that cover all functions including deployment, mission rehearsal, sustainment, ISR, etc., en route as well as from fixed locations." (TRADOC Pamphlet 525-66) The PEO STRI-led SIMCI OIPT uses collaborative processes among its approximately 30 Army organizations (including HQDA staff, combat developers and material developers) to identify key interoperability shortfalls and material solutions to them.

The functions of the SIMCI OIPT are: (1) Change Agent: Serve as a catalyst for change to achieve interoperable systems of systems; (2) Facilitator: Facilitate the integration of Army interoperability initiatives with Service and Joint, Interagency, and Multinational (JIM) programs; (3) Advisor to Army Leadership: Recommend and influence BC and M&S interoperability programs, policies, resourcing and procedures; (4) Technical Investment: Sponsor/support solution initiatives for BC and M&S systems' interoperability issues, including targeted, technical investments for projects to develop and (where applicable) implement BC and M&S interoperability architectures, standards, and interface products; (5) Research: Promote cooperative research and coordination among existing and emerging BC and M&S programs; and (6) Outreach: Conduct & participate in interoperability outreach activities such as conferences and publications.

SIMCI investments are comprised primarily of cost sharing opportunities, leveraging partial solutions in programs of record to enhance the interoperability of multiple systems in the joint operational environment. Key programs that will benefit from the cross-domain vision and practices of SIMCI include ABCS, Future Combat System (FCS) System of Systems Common Operating Environment (SOSCOE), Force XXI Battle Command Brigade and Below (FBCB2) Joint Capabilities Release (JCR), Joint Land Component Constructive Training Capability (JLCCTC), Live/Virtual/Constructive Integrating Architecture (LVC-IA), Software Blocking (SWB), Objective Initialization Capability (OIC), Joint Forces Command's Joint National Training Capability (JNTC), and DISA's Net Enabled Command Capability (NECC).

SIMCI investment will accelerate the implementation, within BC and M&S systems, of a common Joint Consultation, Command and Control Information Exchange Data Model (JC3IEDM) that is used by other Services and Coalition nations, thus enhancing the inherent ability of Army systems to seamlessly interoperate in a JIM environment. The SIMCI-sponsored Army C4I and Simulation Initialization System (ACSIS) capability will be expanded to the Objective Initialization Capability (OIC) to address key training and operational data initialization gaps, providing timely, flexible, and common data updates to BC and M&S systems, thus reducing data latency and inter-system ambiguity. SIMCI's direct involvement with FCS will increase the visibility of that program's needs and capabilities, providing the various OIPT organizations with opportunities to leverage their systems' fundamental capabilities to meet the needs of FCS, and vice versa. SIMCI investments will cement those relationships through co-development of common use products.

FY09 funding continues management of the SIMCI efforts in support of the SIMCI OIPT'S collaborative, Army-wide interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: Identify and articulate to HQDA Senior Leadership specific

standards that require Army-wide implementation; co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; and co-develop BC/M&S products to meet the FCS Spin Out. Continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint Programs of Record. Based on HQDA G3 and ASA(ALT) guidance, create an Initialization IPT that oversees the activities of the lead Combat and Material Development Integrators for Army Initialization capabilities/requirements and material solutions, respectively. The Initialization IPT reports through the Warfighting Mission Area (WMA) Integrating Working Group (IWG) to the BC GOSC and other Army leadership forums, as required, to facilitate development and implementation of cross-functional Intialization solutions.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continues management of the SIMCI efforts in support of the SIMCI OIPT'S collaborative, Army-wide interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: Identify and articulate to HQDA Senior Leadership specific standards that require Army-wide implementation; co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; and co-develop BC/M&S products to meet the FCS Spin Out. Continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint Programs of Record. Based on HQDA G3 and ASA(ALT) guidance, create an Initialization IPT that oversees the activities of the lead Combat and Material Development Integrators for Army Initialization capabilities/requirements and material solutions, respectively. The Initialization IPT reports through the Warfighting Mission Area (WMA) Integrating Working Group (IWG) to the BC GOSC and other Army leadership forums, as required, to facilitate development and implementation of cross-functional Intialization solutions.	1677	3522	3702
Small Business Innovative Research/Small Business Technology Transfer Programs		76	
Total	1677	3598	3702

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

C. Acquisition Strategy SIMCI OIPT resources are allocated to multiple organizations and contracts to procure and execute approved functions and projects to support the SIMCI and components-based architecture alignment efforts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Eng Dev

PROJECT
C74

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
C2 Information Exchange Data Model (C2IEDM) Data Translator	T&M	COLSA Corporation, Huntsville, AL	997								997	904
JC3IEDM Migration/Implementation	CPFF	Alion Science & Technology, Tysons Corner, VA		96	2-4Q	198	2-4Q	203	2-4Q	Cont.	Cont.	Cont.
Implementation of Initialization Products	CPFF	Alion Science & technology, Tysons Corner, Va		187	2-4Q	382	2-4Q	392	2-4Q	Cont.	Cont.	Cont.
Transition of ACSIS simulation initialization capability	MIPR	NAVSEA, Pax River, MD		240	2-3Q	525	2-3Q	539	2-3Q	Cont.	Cont.	Cont.
Expanding Modified Table of Equipment System Architecture (SA) data	T&M	General Dynamics, Orlando, FL		175	2-3Q	388	2-3Q	398	2-3Q	Cont.	Cont.	Cont.
Adding JC3IEDM to the Common C4I adapter	In-House	PEO STRI, Orlando, Fl		290	1-2Q	590	1-2Q	589	1-2Q	Cont.	Cont.	Cont.
Adding JC3IEDM to C2 systems data mediation	T&M	Viecore FSD, Ft. Monmouth, NJ		110	1-2Q	225	1-2Q	231	1-2Q	Cont.	Cont.	Cont.
JC3IEDM sample application and reference implementation	T&M	CSC, Ft. Monmouth, NJ		288	1-2Q	579	1-3Q	594	1-3Q	Cont.	Cont.	Cont.
Initialization Scope Study	T&M	IDA, Alexandria, VA		50	2-3Q						50	50
Initialization Study Implementation	T&M	IDA, Alexandria, VA				210	1-2Q	216	1-2Q	Cont.	Cont.	Cont.
Subtotal:			997	1436		3097		3162		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Facility Support for Digital Integration Lab (DIL)	In-House	PEO STRI (formerly STRICOM), Orlando,	655								655	410

		FL										
SIMCI Program Support	CPFF	Alion Science & Technology		95	2-3Q	105	2-3Q	108	2-3Q	Cont.	Cont.	Cont.
Army Initialization Program	CPFF	Alion Science & Tecnology				183	2-3Q	188	2-3Q	Cont.	Cont.	Cont.
Subtotal:			655	95		288		296		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software Certification Testing	T&M		280								280	
Subtotal:			280								280	

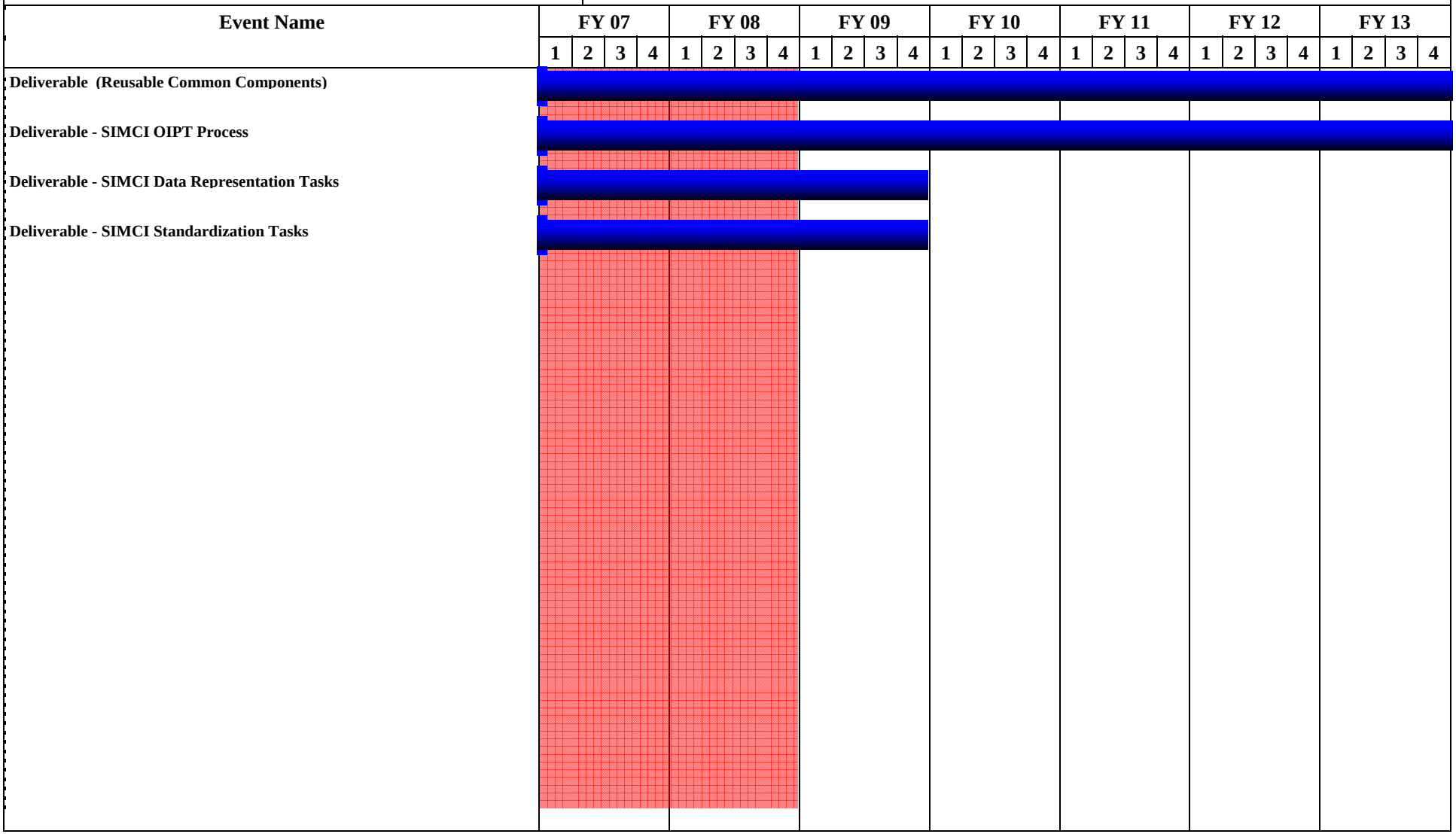
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Multiple	Various	7863	146	1-2Q	137	1-4Q	244	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						76					76	
Subtotal:			7863	146		213		244		Cont.	Cont.	Cont.

Project Total Cost:			**9795**	**1677**		**3598**		**3702**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**	**C74**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**	**C74**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Deliverable (Reusable Common Components)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Deliverable - SIMCI OIPT Process	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Deliverable - SIMCI Data Representation Tasks	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Deliverable - SIMCI Standardization Tasks	1Q - 4Q	1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**	**C78**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C78	One Semi-Automated Forces (OneSAF)	15233	12809	11718	11841	11970	12238	12513	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project develops and delivers software systems to realistically represent activities of units and forces in simulation. This representation is used to support the concept evaluation, experimentation, materiel acquisition and training communities. Initiatives include the systems engineering and design for development and evolution of the architecture and software tools for a universal Army computer generated forces system, One Semi-Automated Forces (OneSAF). OneSAF is a next generation higher fidelity Brigade and below SAF that will represent a full range of operations, systems and control processes in support of stand alone and embedded training and research, development and acquisition simulation applications. OneSAF will be fully interoperable with the Army's emerging virtual, live, and division and above constructive simulations and will provide next generation simulation products. OneSAF will replace a variety of simulations currently used within the Army to support analytic and training simulation activities.

The FY09 program will continue the development of the software required to provide OneSAF Pre-Planned Product Improvements as prioritized and approved by the TRADOC Project Office.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Continues development of functionality to provide architectural services, components, synthetic environment and infrastructure capable of supporting initial model development.	3348	2900	4467
FY07-FY09: Continues to develop functionality to represent behaviors, physical models, and communication models for OneSAF.	6662	5386	5225
FY07-FY09: Continues verification & Validation of newly developed and integrated software.	2485	2200	2026
FY07: Initiates Software Distribution and New Equipment Training Team	2738		
FY08: Continues Software Distribution and Equipment Training		2000	
Small Business Innovative Research/Small Business Technology Transfer		323	
Total	15233	12809	11718

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA, 121014	5520	5177	4908	4727	4856	4973	5092	Continuing	Continuing

Comment: OMA funding provides for OneSAF life cycle software maintenance of existing software.

C. Acquisition Strategy Pre-Planned Product Improvements requirements development based on performance specifications via multiple Task Orders on competitively selected contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Eng Dev

PROJECT
C78

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Architecture Dev & System Integration	CPFF	Science Applications International Corp, Orlando, FL	40865	3095	1-2Q	2000	1-2Q	2934	1-2Q	Cont.	Cont.	Cont.
Integrated Environment Dev	CPFF	Advanced Systems Technology, Inc., Orlando FL	7452	1200	1-2Q	450	1Q	1000	1Q	Cont.	Cont.	Cont.
Synthetic Environment Dev	CPFF	Science Applications International Corp, Orlando, FL	6065	525	1-2Q	400	1Q	400	1Q	Cont.	Cont.	Cont.
Knowledge Acquisition/Knowledge Engineering	CPFF	Aegis Technologies Group, Huntsville, AL	5162								5162	4834
OneSAF System Development	CPFF	Various	8482	416	1-2Q	350	1-2Q	200	1-2Q	Cont.	Cont.	Cont.
Model and Tools Development	CPFF	Science Applications International Corp, Orlando, FL	16411	2727	1-2Q	2725	1-2Q	3000	1-2Q	Cont.	Cont.	Cont.
NETT - SW Distribution and Training	CPFF	Aegis Technologies Group, Huntsville, AL		2400	1-3Q	2260	1-3Q				4660	
Subtotal:			84437	10363		8185		7534		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Analysis	Various	Multiple	3627	600	1-2Q	550	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
Domain Analysis	Various	Multiple	3437	600	1-2Q	350	1-3Q	294	1-3Q	Cont.	Cont.	Cont.
Architecture Engr & Tech Spt	C/CPFF	MITRE FFRDC	2136	270	1-2Q	290	2Q	290	2Q	Cont.	Cont.	Cont.
Subtotal:			9200	1470		1190		1084		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604760A - Distributive Interactive Simulations (DIS) - Eng Dev

PROJECT
C78

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
OneSAF integration, evaluation and test	C/CPAF	National Simulation Center, FT Leavenworth, KS/Multiple	2954	1000	1-3Q	1000	1-3Q	1000	1-3Q	Cont.	Cont.	Cont.
OneSAF Verification, Validation & Accreditation	Various	WSMR, NM/Aberdeen Proving Grounds, MD/Multiple	3475	1000	1-3Q	500	1-3Q	500	1-3Q	Cont.	Cont.	Cont.
Subtotal:			6429	2000		1500		1500		Cont.	Cont.	Cont.

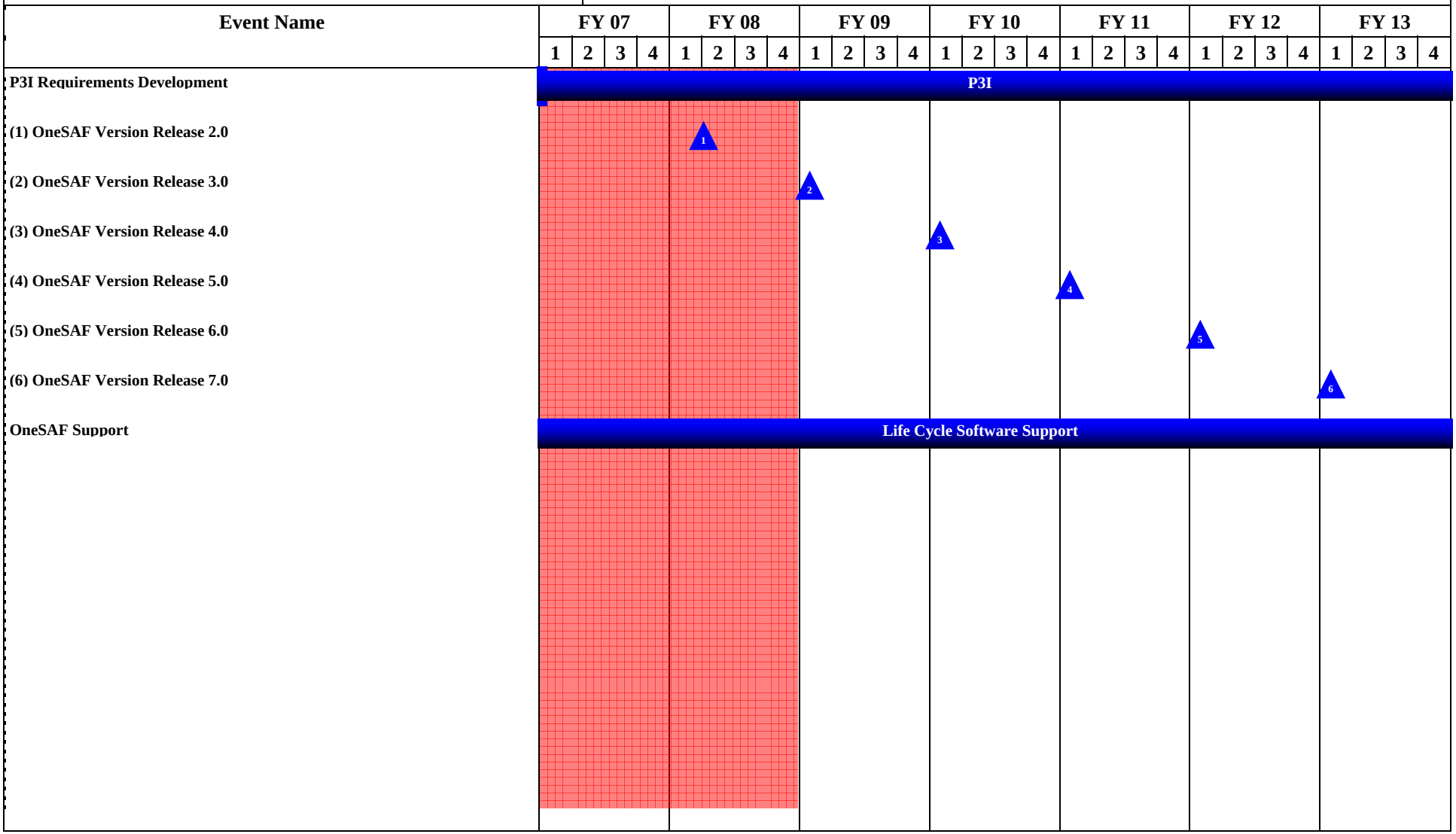
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program management	Various	Multiple	7345	1400	1-4Q	1611	1-4Q	1600	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						323					323	
Subtotal:			7345	1400		1934		1600		Cont.	Cont.	Cont.

Project Total Cost:			**107411**	**15233**		**12809**		**11718**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**	**C78**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604760A - Distributive Interactive Simulations (DIS) - Eng Dev**	**C78**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
P3I Requirements Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
OneSAF Version Release 2.0		2Q					
OneSAF Version Release 3.0			1Q				
OneSAF Version Release 4.0				1Q			
OneSAF Version Release 5.0					1Q		
OneSAF Version Release 6.0						1Q	
OneSAF Version Release 7.0							1Q
OneSAF Support	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	37683	36800	29468	20927	23643	15830	15035	Continuing	Continuing
571	CLOSE CBT TACT TRAINER	5569	1595	1686	1346	1370	1396	1422	Continuing	Continuing
582	SYNTHETIC ENVIR CORE	18881	23592	26418	18218	20915	14434	13613	Continuing	Continuing
585	AVIATION COMBINED ARMS TACTICAL TRAINER	13233	11613	1364	1363	1358				44783

A. Mission Description and Budget Item Justification: The Combined Arms Tactical Trainer (CATT) is a family of combined arms simulation systems designed to support the Army's simulation-based Combined Arms Training Strategy. CATT enables units, from crew to the battalion task force level, to conduct a wide variety of combat tasks on a realistic, interactive synthetic battlefield. CATT's combination of manned simulators and staff officer workstations enables units to train as a combined arms team in a cost effective manner. CATT reinforces the successes and corrects the shortcomings of the Simulator Network (SIMNET) and Aviation Network (AIRNET) Demonstration Programs executed by the Defense Advanced Research Projects Agency (DARPA). The initial CATT system is the Close Combat Tactical Trainer (CCTT), which provides the underlying baseline (architecture, terrain databases, After Action Review [AAR], Semi-Automated Forces [SAF], and models/algorithms) for future CATT expansions, pre-planned product improvements and system enhancements. Reconfigurable Vehicle Simulator (RVS) variants will support the level of readiness required by the user at CCTT fixed sites in support of convoy operations. Synthetic Environment (SE) Core provides for the expansion of the Synthetic Environment baseline to include enhanced interoperability and the products and infrastructure to support current and future combat operations and Mission Rehearsal for operations currently required by the contemporary Operating Environment (COE). The first synthetic environments to be expanded are the Aviation Combined Arms Tactical Trainer (AVCATT) and the CCTT for both Active and Reserve components. By practicing skills in CATT, units are able to make more effective use of scarce resources and costly live fire and maneuver exercises as well as train tasks deemed too hazardous to conduct in the field. Fielded in both fixed site and mobile/transportable versions, CATT enables both Active and Reserve component units to prepare for real world contingency missions. By being able to process a wide array of terrain databases and modify the behavior of the computer generated opposing forces, CATT offers a virtually unlimited array of training options to support the Army's many regional contingency missions. The combination of tough field and live fire training and realistic simulation training in CATT is the catalyst to prepare soldiers and their leaders for the uncertainties they will face in an unpredictable world of current and future combat operations, especially in support of GWOT operations.

FY2009 funding for CCTT will provide the U.S. Army with additional variants for Reconfigurable Vehicle Simulator (RVS) in support of convoy operations and reconnaissance. FY2009 funds for SE Core will provide the U.S. Army with continued development of a series of interoperable software and hardware components that will enable an Army Common Virtual Environment to train with integrated virtual simulations. SE Core will provide standardized, rapid terrain generation process, a master terrain database facility, OneSAF Integration and Common Virtual Components (CVCs). FY2009 funding will develop refinements to the AVCATT system to include but not limited to: Armed Reconnaissance Helicopter capabilities and SE Core integration. Funding will also support interoperability with other combined arms simulators, life cycle baseline enhancements to the AVCATT infrastructure and technology obsolescence. These refinements will improve readiness by providing more realistic collective training in support of current and future combat operations, GWOT and the flexibility to support Army Campaign Plan.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	38471	37035	29652
Current BES/President's Budget (FY 2009)	37683	36800	29468
Total Adjustments	-788	-235	-184
Congressional Program Reductions		-235	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	282		
SBIR/STTR Transfer	-1070		
Adjustments to Budget Years			-184

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**571**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
571 CLOSE CBT TACT TRAINER	5569	1595	1686	1346	1370	1396	1422	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program provides for System Development and Demonstration (SDD), Pre-Planned Product Improvements (P3I), and Reconfigurable Vehicle Simulator (RVS) variants for the Close Combat Tactical Trainer (CCTT), which will enhance readiness for both Active and Reserve component forces to support execution of current and future combat operations including the Global War on Terror (GWOT). The program develops a networked system of interactive computer driven simulators, emulators and semi-automated forces that replicate combat vehicles and weapon systems, combat support systems, combat service support systems, and command and control systems to create a fully integrated real-time collective task training environment. This trainer will allow soldiers to practice, repetitively, tactics, techniques and procedures that, if performed on real equipment, would be too hazardous, time-consuming and expensive. These trainers enhance realism and allow soldiers and units to learn tactical combat lessons on maneuver, command and control, convoy operations, and improved teamwork for increased survivability. The pre-planned product improvements enhance CCTT capabilities as a tactical trainer and maintain concurrency with the structural changes the current battle force is experiencing. These improvements will provide the interoperability with Aviation Combined Arms Tactical Trainer, Army Battle Command System (ABCS) [including Force XXI Battle Command Brigade and Below (FBCB2) and Army Tactical Command and Control System (ATCCS)], and other simulation systems needed to execute training for current and future combat operations and for GWOT.

FY2009 funding for CCTT will enable the development of additional variants for Reconfigurable Vehicle Simulator (RVS) in support of convoy operations and reconnaisance training.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Supports government program management, engineering, technical contract, and continue operational evaluation support.	247	224	228
FY07-FY09: Continue development of RVS variants and design for obsolescence items.	2802	1344	1458
FY07: Provided integrated multi-sided computer generated forces into the CCTT program, Dismounted Infantry Common Moving Models, urban and high resultion inserts in the Database process, OneSAF Terrain Format plug-in to produce compter generated databases to be used in CCTT and Common Virtual Components for CCTT in the areas of AAR, LHN and C4SIR.	2520		
FY08: Small Business Innovative Research/Small Business Technology Transfer Programs		27	
Total	5569	1595	1686

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0170 SIMNET/CCTT	16344	66669	60676	40431	12092	6767	6916	Continuing	Continuing

Comment:

C. Acquisition Strategy FY07 is a Small Business 8A Set Aside Award for development of RVS variants.

FY08/09 will continue development of Small Business 8A Set Aside Award for development of RVS variants.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - Combined Arms Tactical Trainer (CATT) Core

PROJECT
571

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CCTT SDD and Pre Planned Product Improvements (P3I)	Various	Various	245042								245042	245042
P3I and Development of RVS variants	C/CPFF	Lockheed Martin Corporation, Orlando, FL	10178								10178	9713
Development of RVS Variants	SS/FP	DEI Services Corp., Winter Park, FL		2802	3Q					Cont.	Cont.	Cont.
Continued Development of RVS Variants and Obsolescence Items	C/CPFF	DEI Services Corp., Winter Park, FL				1344	1Q	1458	1Q	Cont.	Cont.	Cont.
Dismounted Infantry Soldier-level collective simulation requirements for CCTT	C/CPFF	Various		2520	2Q						2520	
Subtotal:			255220	5322		1344		1458		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Support	MIPRs/T&M	Various activities	32062								32062	
Subtotal:			32062								32062	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - Combined Arms Tactical Trainer (CATT) Core

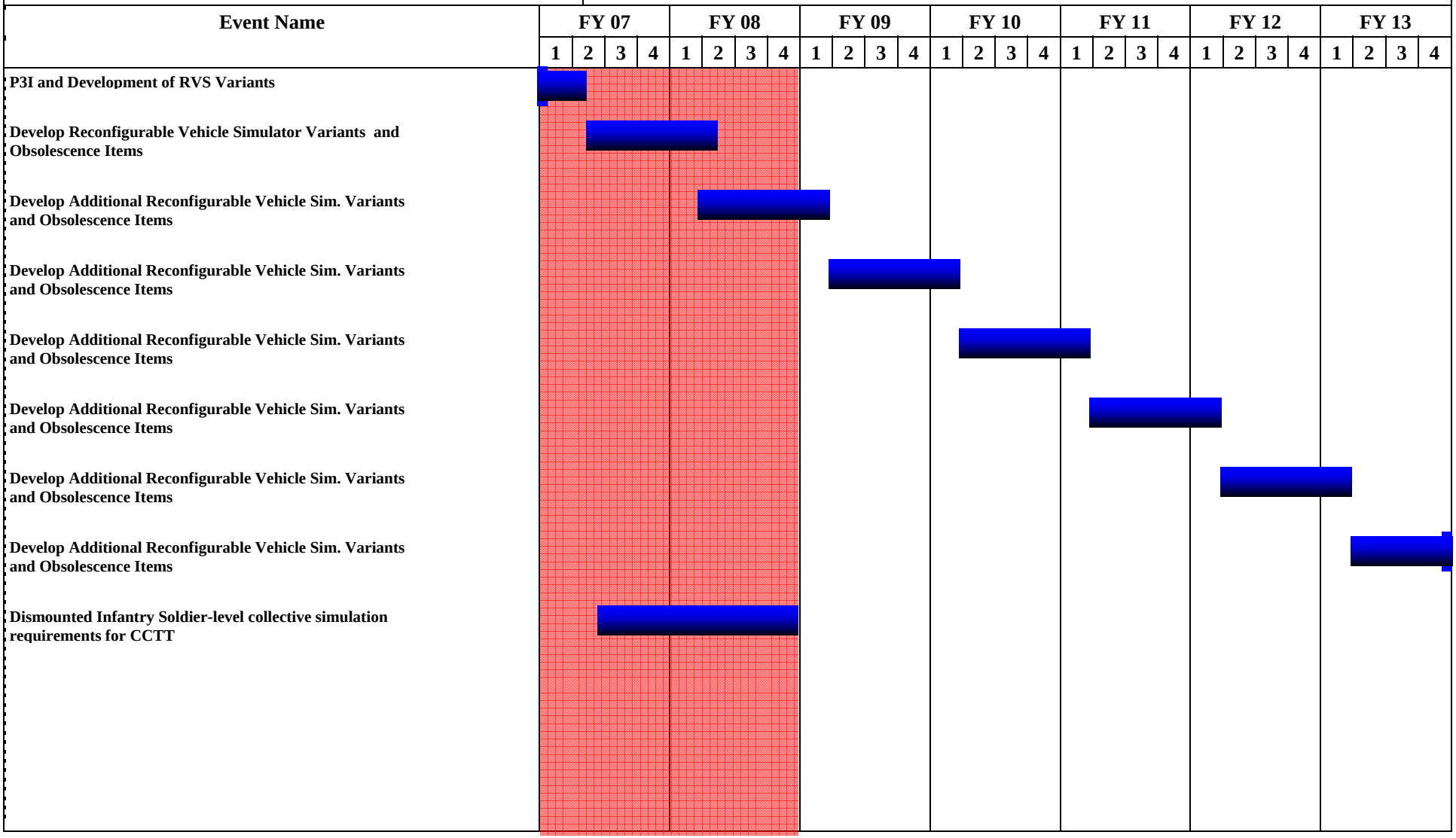
PROJECT
571

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Office Support	Various	PEO STRI/NAVAIR, Orlando, FL	15910	247	1-4Q	224	1-4Q	228	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						27					27	
Subtotal:			15910	247		251		228		Cont.	Cont.	Cont.
Project Total Cost:			**303192**	**5569**		**1595**		**1686**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**571**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**571**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
P3I and Development of RVS Variants	1Q - 2Q						
Develop Reconfigurable Vehicle Simulator Variants and Obsolescence Items	2Q - 4Q	1Q - 2Q					
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items		1Q - 4Q	1Q				
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items			1Q - 4Q	1Q			
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items				1Q - 4Q	1Q		
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items					1Q - 4Q	1Q	
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items						1Q - 4Q	1Q
Develop Additional Reconfigurable Vehicle Sim. Variants and Obsolescence Items							1Q - 4Q
Dismounted Infantry Soldier-level collective simulation requirements for CCTT	2Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**582**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
582 SYNTHETIC ENVIR CORE	18881	23592	26418	18218	20915	14434	13613	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the Synthetic Environment Core (SE Core) and is the Army's Common Virtual Environment (CVE) answer for linking virtual training simulations into an integrated and interoperable training system with fair fight capability that is sufficient for current and future combat operations, Mission Rehearsal, and Contemporary Operating Environment (COE) training. SE Core will reduce redundancy, increase realism and facilitate an integrated Live, Virtual and Constructive (LVC) Training Environment (TE). This CVE will link to the live and constructive environments for an integrated LVC capability to support Army Transformation and the Combined Arms Training Strategy. SE Core is a key element in the Army's Training Transformation Plan linking the Future Combat Systems (FCS) embedded multi-mode LVC training capability with Current Systems, Stryker Forces and Joint Interagency Intergovernmental Multinational (JIIM) simulations.

SE Core will enable the Army to execute combined arms and joint training, mission planning and rehearsals at home station, en route and deployed locations critical to training for COE operations. SE Core consists of a series of interoperable software components that will be integrated into the Army's CVE and will facilitate interoperability in a LVC TE. The components are One Semi-Automated Forces (OneSAF) integration; a Standard Terrain Database Generation Capability (STDGC); a master Terrain Database; open format standard visual models; dynamic terrain; atmospheric effects; Chemical, Biological, Radiological, Nuclear and High Explosive (CBRNE) effects; common After Action Review (AAR); a long haul networking capability; Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR) interfaces; training support packages and exercise management tools. The STDGC uses automated tools, processes and standard source data to create a Master Database (MDB). The MDB provides open format data that can be translated into correlated runtime databases to support the LVC TE and for mission planning/rehearsal/execution in an operational environment. Once developed, SE Core's Common Virtual Components (CVCs) will reduce redundancy, increase realism and facilitate an integrated LVC TE.

FY2009 funds for SE Core will provide common terrain databases from the Central Terrain Database Center and the establishment of one CONUS and one OCONUS Terrain Database Center. FY2009 funds will also continue the integration of OneSAF into the SE Core Architecture. OneSAF will replace the SAFs currently supporting CCTT and AVCATT. Integration of OneSAF as the SAF for virtual simulations enables interoperability with the LVC TE and reduces costs as CCTT and AVCATT will no longer develop and maintain separate SAFs. The SE Core Long Haul Network will continue with upgrades in integration and common visual models will continue development.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Provides program management, engineering, technical, contract, and test support for development of SE Core.	2404	2953	4025
FY07-FY09: SE Core will provide common terrain databases from the Central Terrain Database Center and the establishment of CONUS and OCONUS Terrain Database Centers. Continued refinement of the STDGC will be made with the incorporation of advanced automated processing tools. Planned enhancements to OneSAF will continue to be integrated into the SE Core Architecture. Six Common Virtual Components will be added - CBNRE, Net Ready capability, Atmospheric Effects, Dynamic Terrain, Exercise Management Tools, and Training Support Packages. Common Model development will continue.	16477	19979	22393
FY08: Small Business Innovative Research/Small Business Technology Transfer Programs		660	

Total	18881	23592	26418

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer	77871	66931	23106	10207	10439	10275	8021	Continuing	Continuing
OPA3, Appropriation NA0170 Close Combat Tactical Trainer (CCTT)	16344	66669	60676	40431	12092	6767	6916	Continuing	Continuing
RDTE, Appropriation 654760 One Semi-Automated Forces (OneSAF)	15233	12809	11784	11911	12040	12306	12576	Continuing	Continuing

Comment:

C. Acquisition Strategy An extension to the Architecture & Integration (A&I) contract was awarded to Science Applications International Corp. in 1 QTR FY08. The A&I contract will be recompeted in 4 QTR FY09. A competitive CPFF type contract for the development of SE Core Database Virtual Environment Development project was awarded in FY06 to CAE with options to be executed yearly until FY11.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - Combined Arms Tactical Trainer (CATT) Core

PROJECT
582

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Architecture and Integration	C/CPFF	Science Applications International Corporation, Orlando, FL	12690	10475	1Q	10488	1-2Q	8291	1-2Q	Cont.	Cont.	Cont.
Master Database (MDB) Study	C/CPFF	Various	2011								2011	2011
Database Virtual Environment Development	C/CPFF	CAE, USA, Tampa, FL	8937	6002	1Q	9491	1-2Q	14102	1-2Q	Cont.	Cont.	Cont.
Subtotal:			23638	16477		19979		22393		Cont.	Cont.	Cont.

Remarks: Not Applicable

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services & Technical Support	C/FFP/T&M	Morgan Research Corporation, Orlando, FL	539	476	1Q	488	1-4Q	497	1-4Q	Cont.	Cont.	Cont.
Subtotal:			539	476		488		497		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Support	MIPR	Test Community				125	2Q				125	125
Subtotal:						125					125	125

Remarks: Not Applicable

IV. Management Services	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - Combined Arms Tactical Trainer (CATT) Core

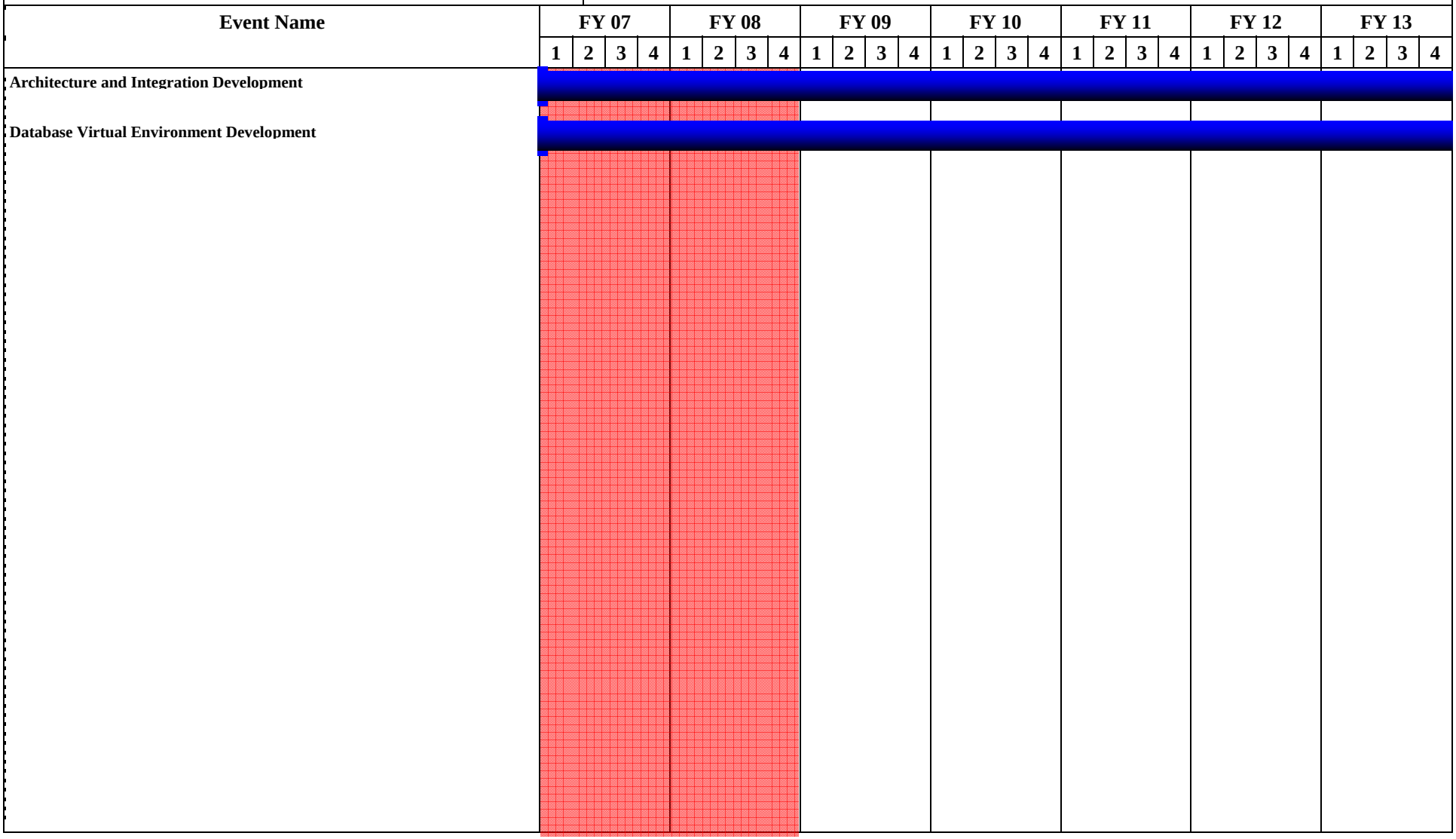
PROJECT
582

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Project Office Support	Various	PEO STRI/NAVAIR Orlando	3363	1928	1-4Q	2340	1-4Q	3528	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						660					660	
Subtotal:			3363	1928		3000		3528		Cont.	Cont.	Cont.
Project Total Cost:			**27540**	**18881**		**23592**		**26418**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**582**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**582**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Architecture and Integration Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Database Virtual Environment Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
OneSAF Integration (KPP #1)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Standard Terrain Process Capability Complete (KPP #2)	1Q - 4Q	1Q - 4Q					
Database Centers (KPP #2 Follow-on)	2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Dynamic Terrain Complete (KPP #3)				2Q			
Atmospheric Effects Complete (KPP #4)				2Q			
Net Ready Complete (KPP #5)					2Q		
C4ISR Complete (KPP #6)			4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**585**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
585	AVIATION COMBINED ARMS TACTICAL TRAINER	13233	11613	1364	1363	1358				44783

A. Mission Description and Budget Item Justification: This project supports the Aviation Combined Arms Tactical Trainer (AVCATT) which is an Army Aviation Collective training system for both the Active and Reserve Component to provide mission rehearsal and training in support of the Global War on Terrorism (GWOT). AVCATT completed Initial Operational Test & Evaluation (IOT&E) on 1 August 2003 and received Full Rate Production Decision on 19 December 2003. A single suite of equipment consists of two (2) mobile trailers housing six (6) reconfigurable networked simulators that support the AH-64A/D, UH-60A/L, CH-47D, and OH-58D aircraft. In the future the Armed Reconnaissance Helicopter (ARH) will be added. Supporting roleplayer, Semi-Automated Forces (SAF), and after action review (AAR) workstations are also provided as part of each suite. AVCATT is a fully mobile system, capable of utilizing shore and generator power and is transportable worldwide. The AVCATT system will permit various aviation units to conduct collective task training on a real-time, computerized battlefield in a combined arms scenario by leveraging Synthetic Environment Core (SE Core) capabilities. Other required elements that are present on the modern, high intensity battlefield, such as the Combat Support (CS) and Combat Service Support (CSS) elements are an integral part of the simulation database. AVCATT is designed to provide realistic, high intensity collective and combined arms training to aviation units as well as the full spectrum of operations in support of current and future combat operations including GWOT. AVCATT supports Aviation Combined Arms Training Strategy, Army Campaign Plan and GWOT. AVCATT also supports Aviation Functional Area Assessment (FAA), providing collective, combined arms training. This system is designated a complementary program for the Future Combat Systems (FCS).

FY2009 funding will develop refinements to the AVCATT system to include but not limited to: ARH capabilities and SE Core integration. Funding will also support interoperability with other combined arms simulators, life cycle baseline enhancements to the AVCATT infrastructure and technology obsolescence.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Continues enhancement efforts on the SEE and classified operations capabilities. Initiates Phase II to integrate into AVCATT and SEE the first article development of the new Image Generator. Continue refinements to the system to include: ARH development, support to interoperability with other combined arms simulators through implementation of SE Core common products such as OneSAF, Common Virtual Components (CVC) and common data bases. In addition, provide improved interoperability and improved interaction between live and virtual systems.	11071	11178	1251
FY07 Congressional adds for AVCATT Gunner Chief Crew Station (GCCS) and Longbow Block III.	2000		
FY07-FY09: Provides Government program management, engineering, technical, contract, and test support for AVCATT refinements.	162	110	113
Small Business Innovative Research (SBIR)/Small Business Technology Transfer Programs (STTR)		325	
Total	13233	11613	1364

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost

OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer	77871	66931	23106	10207	10439	10275	8021	Continuing	Continuing

Comment:

C. Acquisition Strategy System Development and Demonstration (SDD) competitive contract against performance specification.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - Combined Arms Tactical Trainer (CATT) Core

PROJECT
585

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AVCATT	C/CPAF/FPIF/ FFP	L3 Communications Corportion, Arlington, TX	15508	13071	2-4Q	11178	2-3Q	1251	2-3Q	Cont.	Cont.	Cont.
Subtotal:			15508	13071		11178		1251		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Office Support	Mutlple	PEO STRI, Orlando, FL	344	162	1-4Q	110	1-4Q	113	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR						325					325	
Subtotal:			344	162		435		113		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

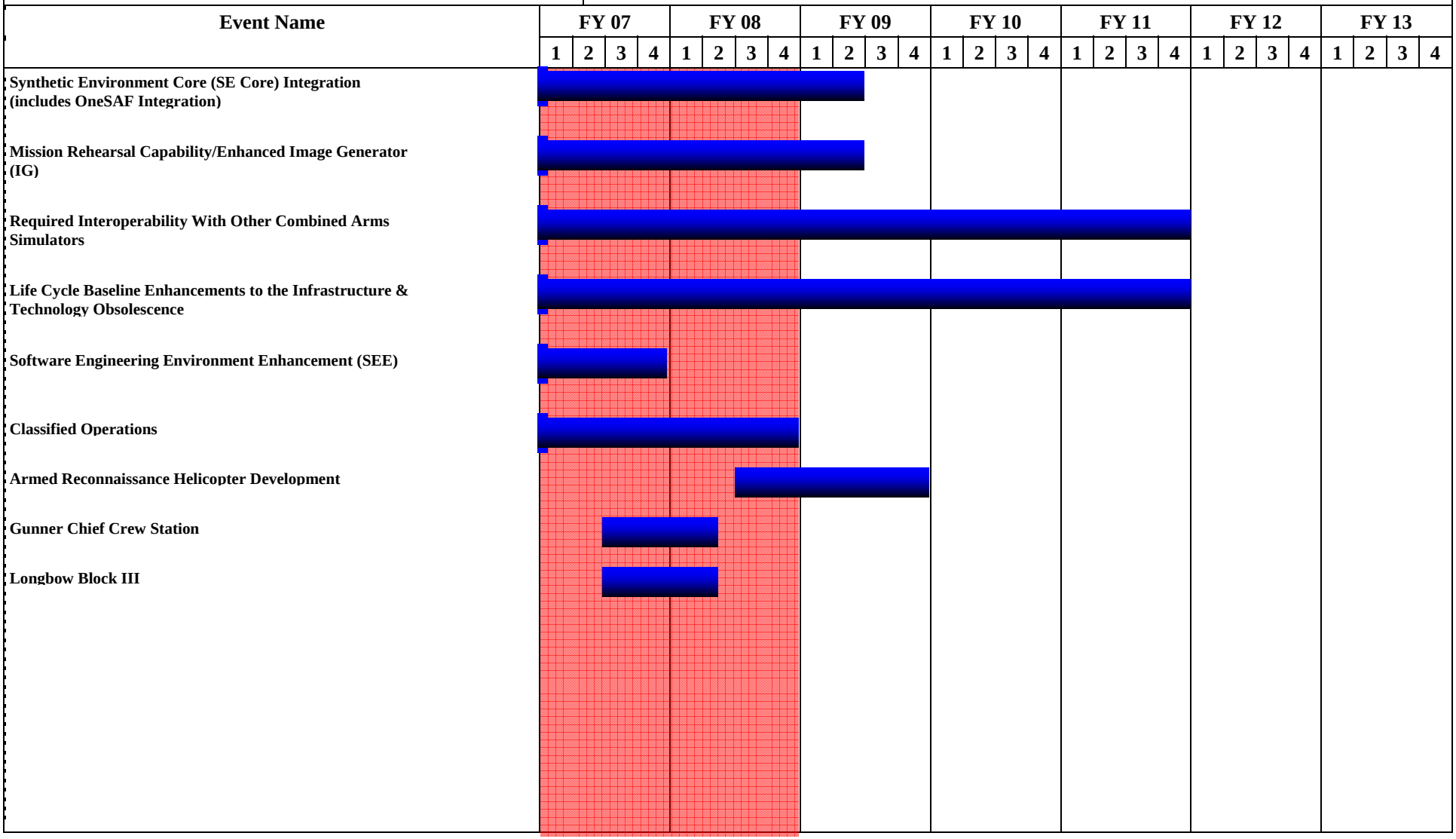
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**585**

Project Total Cost:	**15852**	**13233**		**11613**		**1364**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604780A - Combined Arms Tactical Trainer (CATT) Core**	**585**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604780A - Combined Arms Tactical Trainer (CATT) Core

PROJECT
585

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Synthetic Environment Core (SE Core) Integration (includes OneSAF Integration)	1Q - 4Q	1Q - 4Q	1Q - 2Q				
Mission Rehearsal Capability/Enhanced Image Generator (IG)	1Q - 4Q	1Q - 4Q	1Q - 2Q				
Required Interoperability With Other Combined Arms Simulators	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Life Cycle Baseline Enhancements to the Infrastructure & Technology Obsolescence	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Software Engineering Environment Enhancement (SEE)	1Q - 4Q						
Classified Operations	1Q - 4Q	1Q - 4Q					
Armed Reconnaissance Helicopter Development		3Q - 4Q	1Q - 4Q				
Gunner Chief Crew Station	2Q - 4Q	1Q - 2Q					
Longbow Block III	2Q - 4Q	1Q - 2Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604783A - JOINT NETWORK MANAGEMENT SYSTEM**	**363**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
363	JOINT NETWORK MANAGEMENT SYSTEM	5026	2759	676						8461

A. Mission Description and Budget Item Justification: This program element supports the Joint Network Management System (JNMS) RDTE development effort. The JNMS is a Combatant Commander and Commander, Joint Task Forces (CJTF), joint communications planning and management tool. JNMS is an automated software system. It will provide communication planners with a common set of tools to conduct high level planning (war planning), detailed planning and engineering, monitoring, control and reconfiguration, spectrum planning and management, and security of communications and data systems used to support a Joint Task Force (JTF). These systems include circuit switches, data switches, message switches, single channel networks, transmission systems and satellite systems. It will promote force level situational awareness; provide enhanced flexibility to support the commander's intent; improve management of scarce spectrum resources; and provide increased security of these critical systems and networks. This development effort entails development of the JNMS architecture, software development and integration of Government-Off-the-Shelf and Commercial-Off-the Shelf software, functional and operational testing, and development of Integrated Logistics Support data and documentation. Initial software baseline was developed to provide base capability to the user with subsequent baselines developed providing additional functionality and capability.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Software Development (System Design, Software Integration, and Functional Qualification Testing) for Baseline Build 1.4/1.5	450		
Software Development (System Design, Software Integration, and Functional Qualification Testing) for Baseline 1.5	4576	2685	676
Small Business Innovative Research/Small business Technology Transfer Programs		74	
Total	5026	2759	676

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	5129	2786	679
Current BES/President's Budget (FY 2009)	5026	2759	676
Total Adjustments	-103	-27	-3
Congressional Program Reductions		-27	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	38		
SBIR/STTR Transfer	-141		
Adjustments to Budget Years			-3

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
B95700 JOINT NETWORK MGT SYSTEM	8246	10745	11132	10007				Continuing	Continuing

Comment:

D. Acquisition Strategy TRADOC approved Revision 2 to the JNMS Operational Requirements Document (ORD)on 16 May 00. Milestone A/B approval led to two contract awards to SAIC on 14 May 2001. The first contract, a cost-plus-fixed-fee (CPFF) and firm fixed price (FFP) contract, is for software integration/development, non-recurring engineering efforts, and optional hardware and software procurement for limited and full rate production quantities. This development contract provides the vehicle for the phased development of the JNMS operational baselines, combined build Key Performance Parameter (KPP) Threshold Baselines and subsequent Baselines. The second contract, a time-and-materials contract, covers tasks such as fielding, training, technical assistance, and an option for Post Deployment/Post Production Software Support (PD/PPSS). The SAIC contracts were awarded based on a competitive, best value source selection process. The Initial Operational Test and Evaluation (IOT&E) was conducted in 2QFY04. The Milestone C decision review with the Milestone Decision Authority (MDA), the Program Executive Officer, Command, Control, and Communications - Tactical (PEO C3T) was held in 3QFY04 resulting in Low Rate Initial Production (LRIP) approval. After successful development testing and a satisfactory Government Assessment, a subsequent Milestone decision review was held 2QFY05 with the MDA approving an increase in the LRIP to 35%. In 4QFY05, a Limited User Test (LUT) was successfully conducted which supported the approval of the Full Rate Production Decision (FRPD) on 8 Dec 05 signaling entry into full production and fielding. Fieldings began 2QFY06.

The SAIC contract option for the development of software Build 2 awarded 3QFY05 was scheduled into several incremental releases (1.4/1.5) due to a re-prioritization of the software development based on recent Joint Staff J6 guidance. The J6 desired smaller software increments to expedite releases to enable the field to utilize the additional

capabilities sooner. Functional enhancements were added to builds 1.4 and 1.5 in order to meet the J6 guidance. FY09 will provide PDSS support to the JNMS Program to include Software maintenance, Information Assurance Vulnerability Management (IAVM), and Enhancements Requests/Problem Reports.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604783A - JOINT NETWORK MANAGEMENT SYSTEM

PROJECT
363

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JNMS Software Development	CPFF	SAIC - San Diego, CA	31066	2961	2-3Q	223	2-3Q				34250	
Hardware/Software Suites	FFP	SAIC - San Diego, CA	1972								1972	
Subtotal:			33038	2961		223					36222	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	Various	Misc	306	154	2Q	155	2Q			Cont.	Cont.	
Software Development Support	Various	Misc	2031	481	2Q	250	2Q			Cont.	Cont.	
Contractor Engineering	MIPR	Various	1871	214	1-2Q	350	2Q	147	2Q	Cont.	Cont.	
Government Engineering	MIPR	Various	4353	242	2Q	353	2Q	100	2Q	Cont.	Cont.	
Subtotal:			8561	1091		1108		247		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test Support	T&M	SAIC - San Diego, CA	1729	100	2Q	50	2Q			Cont.	Cont.	
Operational Test Support	T&M	Misc	5368							Cont.	Cont.	
Initial Operational Test & Evaluation (IOTE)	T&M	SAIC, San Diego CA & Piscataway,NJ	478							478	478	
Other Test Support (Cert, GA, etc)	Various	Misc	350	255	1-2Q	250	1-2Q	79	1-2Q	Cont.	Cont.	
Subtotal:			7925	355		300		79		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604783A - JOINT NETWORK MANAGEMENT SYSTEM

PROJECT
363

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Support	Various	Ft Monmouth, NJ	2646	476	1-4Q	685	1-4Q	350	1-4Q	Cont.	Cont.	
JNMS MITRE Support	PWD	Eatontown, NJ	755	143	2Q					Cont.	Cont.	
NETOPS Integration & Engineering Spt						443	3-4Q				443	
Subtotal:			3401	619		1128		350		Cont.	Cont.	
Project Total Cost:			**52925**	**5026**		**2759**		**676**		**Cont.**	**Cont.**	

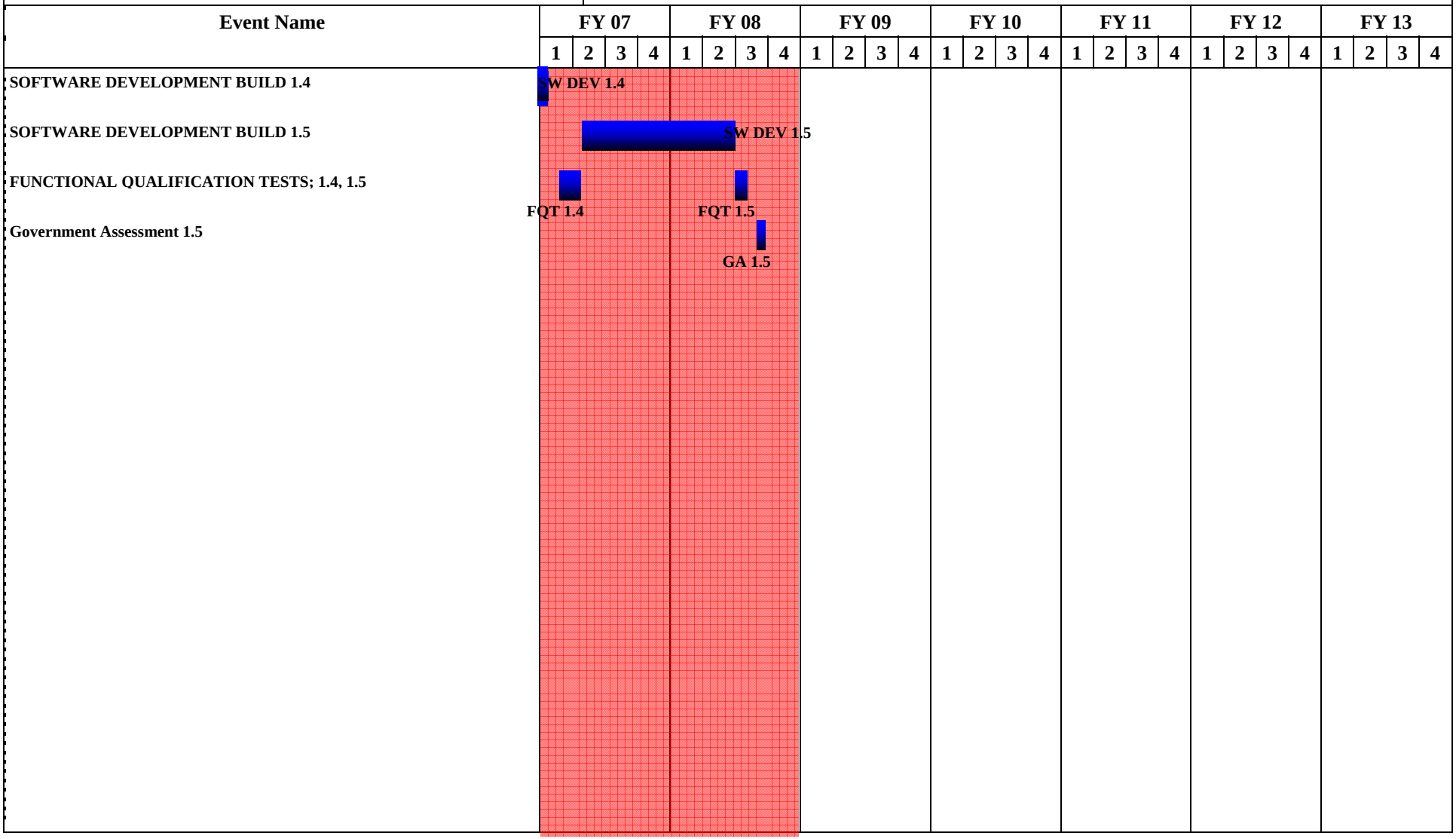
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604783A - JOINT NETWORK MANAGEMENT SYSTEM

PROJECT
363



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604783A - JOINT NETWORK MANAGEMENT SYSTEM**	**363**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FRPD							
FIRST UNIT EQUIPPED (FUE)							
SOFTWARE DEVELOPMENT BUILD 1.3							
SOFTWARE DEVELOPMENT BUILD 1.4	1Q						
SOFTWARE DEVELOPMENT BUILD 1.5	2Q - 4Q	1Q - 3Q					
FUNCTIONAL QUALIFICATION TESTS; 1.4	1Q - 2Q						
1.5		3Q					
Government Assessment 1.5		3Q					
SW Dev Build 1.3							
Material Release 1.3							
Build 1.4 Release	3Q						
Build 1.5 Release		4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	96673	65236	52140	23662	25096	10211	144	Continuing	Continuing
613	MORTAR SYSTEMS	1126	2385							29823
705	Adv Precision Kill Weapon System (APKWS) - SD&ED	18904								44929
AS5	Artillery Munitions Engineering Development	2140	7849							44241
AS8	XM395 PRECISION GUIDED MORTAR MUNITION (PGMM)	37949								64882
S23	SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)	28549	34526	31774						94849
S36	COURSE CORRECTING FUZE (CCF)	8005	20476	20366	23662	25096	10211	144	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element funds multiple efforts for engineering development of weapons and munitions systems.

Project 613 funds completed the RDTE effort for the Mortar Fire Control System (MFCS), a revolutionary improvement in mortar capability seamlessly linking mortar fires in the future digital battlefield in FY06. FY07 funds are for the XM932 120mm Mortar - Short Range Practice Cartridge.

Project 705, 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, the OH-58 Kiowa Warrior, and armed reconnaissance helicopters (AHRs). FY08 and all future funding was realigned to other higher priority requirements.

Project AS5 funded through FY06 the Advanced Cannon Artillery Ammunition Program (ACAAP), a product improvement program for 105mm and 155mm families of extended range artillery munitions using common airframes for various payloads. ACAAP munitions have ballistic similitude intended to meet FCS and Force Entry range and ballistic requirements. FY07 funds the Hybrid Propellant program for the Future Combat System (FCS). Hybrid Propellant is a unique propellant under development for future application in small, medium and large caliber munitions. Hybrid propellant releases energy more efficiently than conventional propellants and provides FCS munitions with the highest possible muzzle velocity for extended ranges/lethality, the prospect of lighter barrels with less recoil, extended wear characteristics and the ability to use heavier projectiles at standard muzzle velocities for greater lethality.

Project AS8 funds Increment 1 Precision Guided Mortar Munition (PGMM). PGMM is a precision strike round with advanced sensors, guidance systems and enhanced lethal mechanism technology. It will be capable of a first round defeat of high-value, hard-point targets such as bunkers, command and control centers and stationary lightly armored vehicles. FY08 and all future funding was realigned to other higher priority requirements.

Project S23, the Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM), is the initial kinetic energy component of Integrated Air & Missile Defense (IAMD), an Air and Missile Defense (AMD) Future Force system. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km.

Project S36 funds the design, development, assembly and test of the Course Correcting Fuze (CCF). CCF is currently being pursued as a solution to meet the Precision Guidance Kit (PGK) Capability Development Document requirement. The PGK corrects the ballistic trajectory of the projectile to reduce delivery errors and thus improves projectile accuracy. The PGK will effectively reduce target delivery error of conventional artillery munitions and reduce the number of projectiles required to execute a fire mission.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	121427	55368	32344
Current BES/President's Budget (FY 2009)	96673	65236	52140
Total Adjustments	-24754	9868	19796
Congressional Program Reductions		-432	
Congressional Rescissions	-13300		
Congressional Increases		10300	
Reprogrammings	-8067		
SBIR/STTR Transfer	-3387		
Adjustments to Budget Years			19796

Change Summary Explanation: Funding - FY 2009: Funds realigned to SLAMRAAM (Project S23) in the amount of $20.0M to reflect approved rebaselined program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S23**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S23	SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)	28549	34526	31774						94849

A. Mission Description and Budget Item Justification: Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is a critical component of the Army's future Cruise Missile Defense capability. It will be resident within Integrated Air & Missile Defense (IAMD) Task Forces and Composite Battalions. SLAMRAAM is part of the Missiles and Space (MS) System of Systems concept, consisting of a launcher platform, AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAMs), a common Army vehicle, launch rails, launcher electronics, on-board command, control, communications, and computer (C4) components, Sentinel (Enhanced Target Range and Classification) Sensor, other external Sensors, and an Integrated Fire Control Station (IFCS). SLAMRAAM is a lightweight, day or night, adverse weather, non-line-of-sight (NLOS) system for countering cruise missile (CM), fixed wing (FW), unmanned aerial vehicle (UAV), and reconnaissance, surveillance, and target acquisition (RSTA) platforms. SLAMRAAM's mission is to engage the low-altitude aerial threats in excess of 18km. It is highly mobile and able to operate in close combat areas to protect maneuver forces and critical stationary units, as well as provide cruise missile defense protection for operational and strategic-level critical assets.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Product Development	10882	12532	237
Contractor Support Cost	3576	3852	5334
Test and Evaluation	1288	7712	20340
Project Management	12803	9464	5863
Small Business Innovative Research/Small Business Technology Transfer Program		966	
Total	28549	34526	31774

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0604869A, Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)	322915	369786	431270	585597	424948	433464	76911	Continuing	Continuing
SSN C50001, PATRIOT/MEADS CAP			31049	400215	668463	1032860	1305623	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	237795	478204	356434	335071	318513	181294		Continuing	Continuing
SSN BZ0525, JLENS Production					442084	440585	391876	Continuing	Continuing
PE0604802A, Proj S23, SLAMRAAM	28549	34526	31774						94849
SSN C81001, SLAMRAAM Production			40468	117094	76073	61307	61307	Continuing	Continuing

PE 0604820A, Proj E10, SENTINEL	2446	7022						Continuing	Continuing
PE 0603327A, Proj E88, Integrated Fire Control AMD	36342							Continuing	Continuing
PE 0303327A, Proj S34, AMD System of System Engineering and Integration	1870	137517	113853	81057	37608	5203		Continuing	Continuing

Comment: This PE is an integral part of the Missile and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control, JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy System Development and Demonstration (SDD) contract award in 2nd Quarter FY04. SDD is an ongoing effort that will result in completion of IOT&E, followed by a First Unit Equipped (FUE).

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
S23

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Hardware/Software Development	Sole Source (SS)/Cost Plus Incentive Fee (CPIF)	Raytheon, Tewksbury, MA	82652	11632	1-3Q	12532	1-3Q	237	1-3Q		107053	107053
Government Prototype Manufacturing (Government Furnished Equipment)	Not Applicable (N/A)	Multiple	3625								3625	
Subtotal:			86277	11632		12532		237			110678	107053

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support Costs	SS/CPIF	Raytheon, Tewksbury, MA	6562	3576	1Q	3852	1Q	5334			19324	19324
Subtotal:			6562	3576		3852		5334			19324	19324

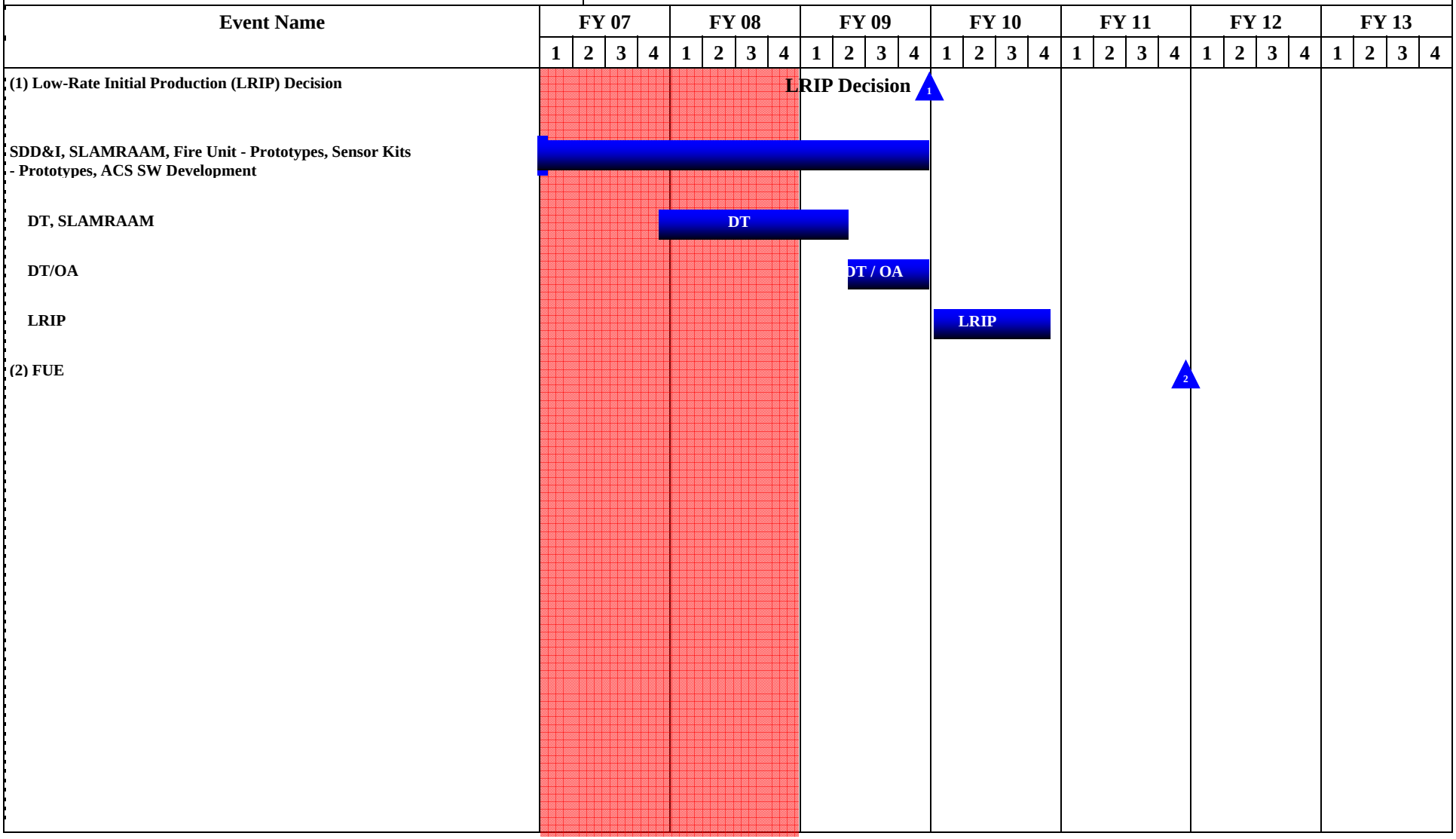
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government Modeling & Simulation	N/A	Multiple	6600		1-2Q						6600	
Government System Test & Evaluation	N/A	Multiple	5136		1-2Q	6324	1-2Q	20340	1-2Q		31800	
Contractor System Test & Evaluation	SS/CPIF	Raytheon, Tewksbury, MA	4455	1288	1Q	1388	1Q				7131	7131
Subtotal:			16191	1288		7712		20340			45531	7131

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor SE/PM	SS/CPIF	Raytheon, Tewksbury, MA	16887	7080	1Q	7628	1Q	2074	1Q		33669	33669
Government SE/PM	N/A	Multiple	8979	4973	1-2Q	2802	1-2Q	3789	1-2Q		20543	
Subtotal:			25866	12053		10430		5863			54212	33669
Remarks: Government Modeling & Simulation included in Test & Evaluation.												
Project Total Cost:			**134896**	**28549**		**34526**		**31774**			**229745**	**167177**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S23**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S23**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Low-Rate Initial Production (LRIP) Decision				1Q			
DEVELOPMENT / TEST							
SDD&I, SLAMRAAM	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Fire Unit - Prototypes	1Q - 2Q						
Sensor Kits - Prototypes	1Q - 3Q						
ACS SW Development	1Q - 4Q	1Q - 2Q					
DT, SLAMRAAM	4Q	1Q - 4Q	1Q - 2Q				
DT/OA			2Q - 4Q				
LRIP				1Q - 4Q			
FUE					4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S36	COURSE CORRECTING FUZE (CCF)	8005	20476	20366	23662	25096	10211	144	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Course Correcting Fuze is currently being pursued as a solution to meet the Precision Guidance Kit (PGK) Capability Development Document requirement. The PGK is adaptable to existing stockpile and future conventional cannon artillery projectiles. The PGK corrects the ballistic trajectory of the projectile to reduce delivery errors and thus improves projectile accuracy. The PGK will effectively reduce target delivery error of conventional artillery munitions and reduce the number of projectiles required to execute a fire mission. The PGK will benefit 155mm projectiles as well as the family of 105mm projectiles. The increase in effectiveness offered by the PGK gives commanders the operational capability to defeat more targets with the same basic load, while reducing the logistical burden associated with current mission requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Execute Milestone B Requirements and initiate MS B Increment 2			400
Conduct Systems Development and Demonstration - Increment 1 and Increment 2	7739	13900	10200
Engineering Support and Platform Integration	249	5003	4266
Testing	17	1000	5500
Small Business Innovative Research/Small Business Technology Transfer Programs		573	
Total	8005	20476	20366

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
E99250 Course Correcting Fuze (CCF)			15633	20140	29631	35578	35868	Continuing	Continuing

Comment:

C. Acquisition Strategy Acquisition Strategy/Acquisition Plan was approved by Milestone Decision Authority (MDA) on 20 October 2005. The Army approved Milestone A (MS A) and awarded Technology Development (TD) contracts to ATK and BAE in FY06; each TD contract included options for Systems Development and Demonstration (SD&D) and 3 years of production. A Technology Development Demonstration was conducted in 3QFY07 to satisfy the MS A Exit Criteria. ATK was selected as the prime contractor based on the downselect criteria, and the PGK achieved entry into Milestone B (MS B) in May 2007. Milestone C (MS C) of Increment 1 (MSC1) is scheduled for 2QFY09, and Initial Operational Capability (IOC) is scheduled for 2QFY10.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

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

PROJECT
S36

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PGK TD Contract	CPIF	ATK, Minneapolis, MN	3978								3978	
PGK TD Contract	CPIF	BAE, Minneapolis, MN	2978								2978	
PGK SDD Contract - Increment 1	CPIF/Option	ATK, Minneapolis, MN		7544	3Q	13900	1-2Q	3156	1-2Q	Cont.	24600	
PGK SDD Contract- Increment 2	CPIF/Option	TBD						7044	1-2Q	Cont.	Cont.	
Soft Recovery Modules	MIPR	SubSystems Technology, Rosslyn, VA		116	3Q						116	
M107 Metal Parts	MIPR	US ARMY Field Support Command, RIA, IL		79	4Q						79	
Subtotal:			6956	7739		13900		10200		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Manager's Office	In House	PM CAS, Picatinny NJ	320	249	1-4Q	700	1-4Q	1142	1-4Q	Cont.	Cont.	
Government IPT Support	MIPR	ARDEC, Picatinny NJ	5715			2118	1-4Q	2624	1-4Q	Cont.	Cont.	
Platform Integration		Various				1990	1-4Q	700	1-2Q		2690	
Miscellaneous Support	Various	Various	2504				1-4Q			Cont.	Cont.	
Subtotal:			8539	249		4808		4466		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Component Air Gun/Railgun	MIPR	ARDEC, Picatinny, NJ	150	17	2-3Q					Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**

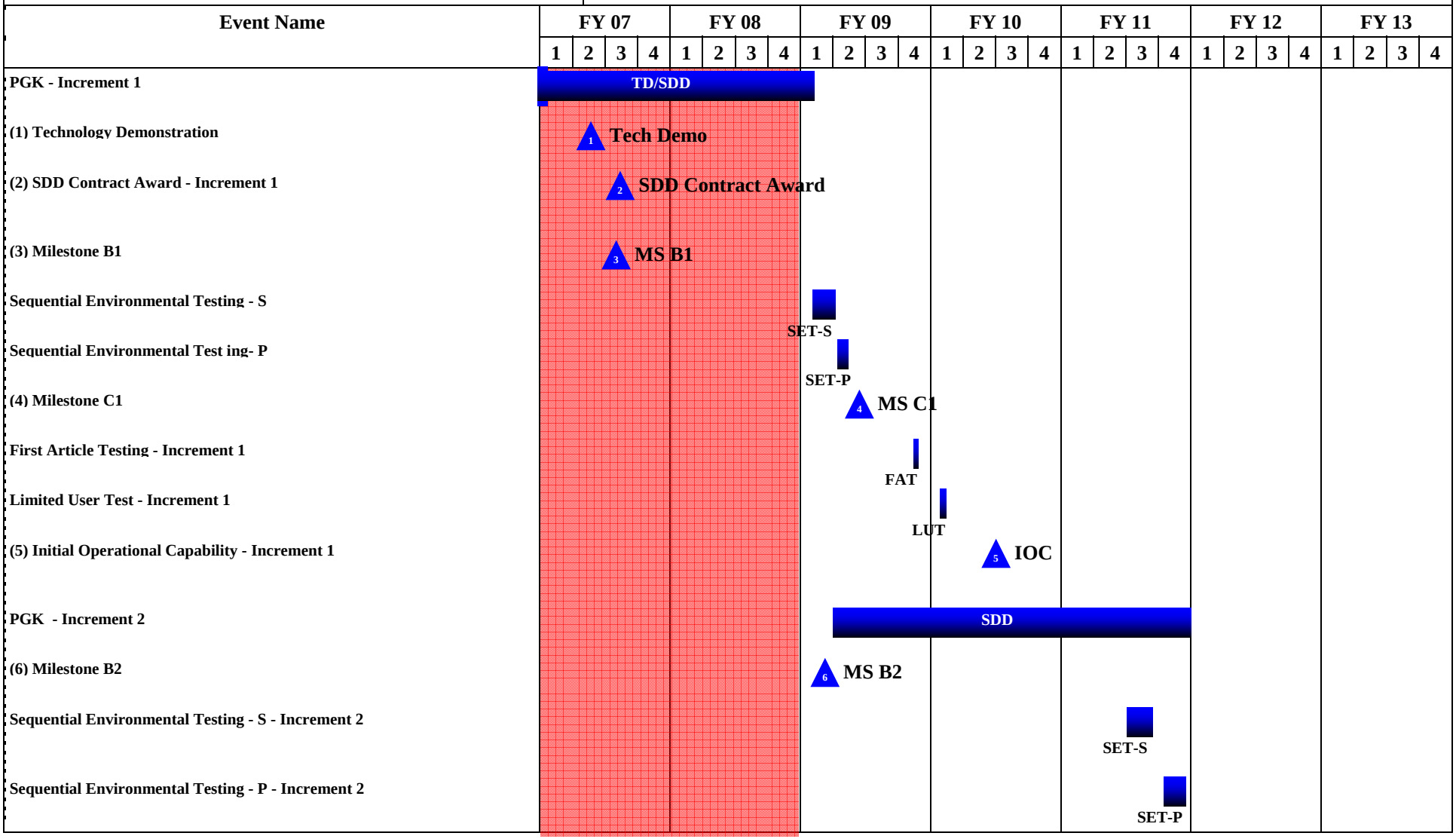
Testing													
System Demonstration	MIPR	Yuma Proving Ground, Yuma, AZ	1170		2Q	1000	2Q	5500	2-4Q	Cont.	Cont.	
Subtotal:			1320	17		1000		5500		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PGK Management Support Contract	FFP	Camber, Mt. Arlington, NJ	75		2Q	195	2Q	200	2Q	Cont.	Cont.	
SBIR/STTR						573					573	
Subtotal:			75			768		200		Cont.	Cont.	
Project Total Cost:			**16890**	**8005**		**20476**		**20366**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

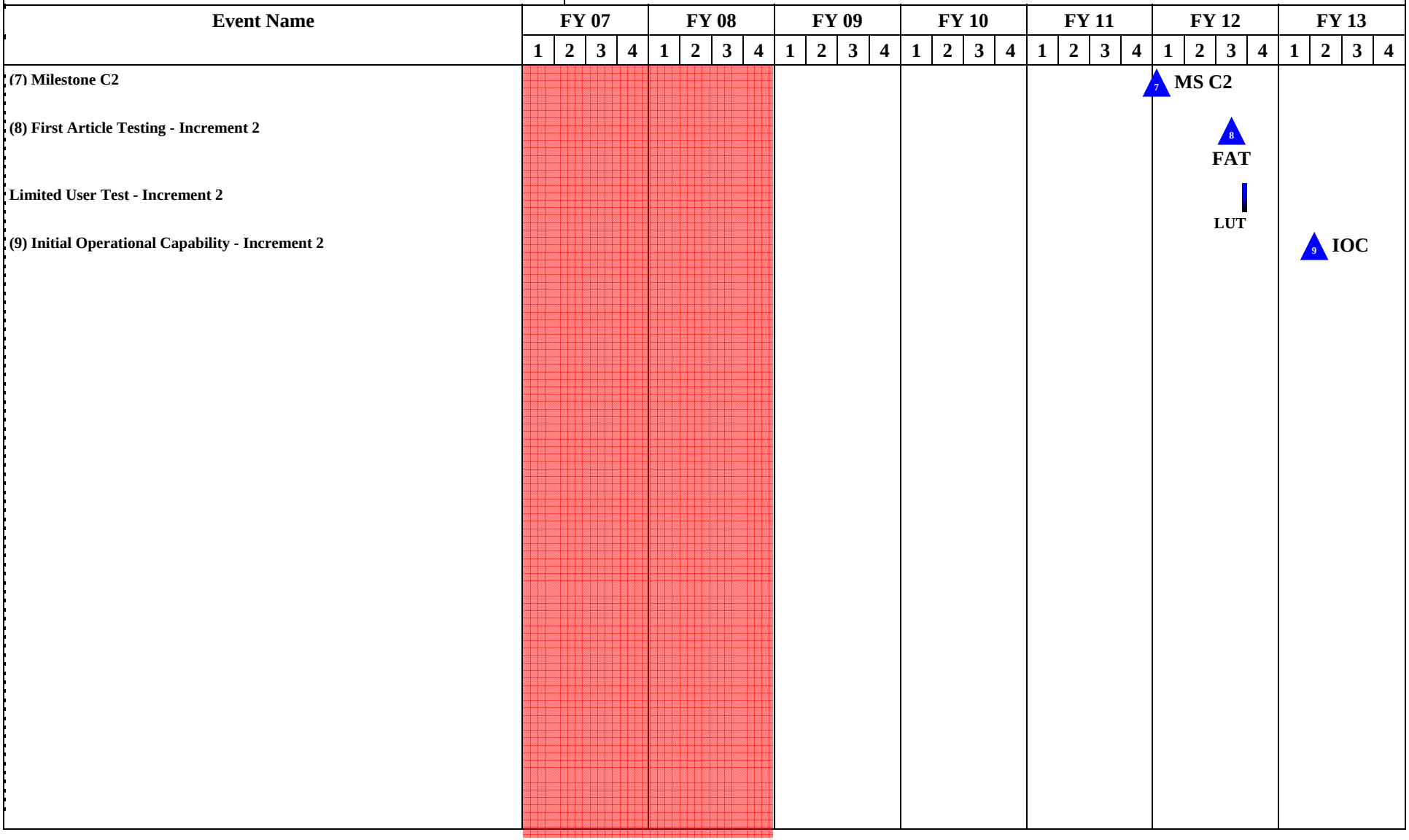
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604802A - Weapons and Munitions - Eng Dev**	**S36**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PGK - Increment 1	1Q - 4Q	1Q - 4Q	1Q				
Milestone A							
TD Contract Award							
Technology Demonstration	2Q						
SDD Contract Award - Increment 1	3Q						
Milestone B1	3Q						
Sequential Environmental Testing - S			1Q - 2Q				
Sequential Environmental Test ing- P			2Q				
Milestone C1			2Q				
First Article Testing - Increment 1			4Q				
Limited User Test - Increment 1				1Q			
Initial Operational Capability - Increment 1				3Q			
PGK - Increment 2			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Milestone B2			1Q				
Sequential Environmental Testing - S - Increment 2					3Q		
Sequential Environmental Testing - P - Increment 2					4Q		
Milestone C2						1Q	
First Article Testing - Increment 2						3Q	
Limited User Test - Increment 2						3Q	
Initial Operational Capability - Increment 2							2Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	33205	47108	37718	47619	51519	57492	46595	Continuing	Continuing
194	ENGINE DRIVEN GEN ED	11036	11026	6368	1396	1397	2366	1549	Continuing	Continuing
H01	COMBAT ENGINEER EQ ED	2443	3365	3270	10640	10659	9770	7979	Continuing	Continuing
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	2565	9270	12251	12144	12520	14935	16923	Continuing	Continuing
H14	MATERIALS HANDLING EQUIPMENT - ED	268	411	454	513	985	1099	1249		5927
L39	Field Sustainment Support ED	8183	7441	2091	4629	6640	6572	4223	Continuing	Continuing
L41	WATER AND PETROLEUM DISTRIBUTION - ED	7030	8955	5058	3335	3359	2035	3940	Continuing	Continuing
L42	CAMOUFLAGE SYSTEM ED		247	248	1573	1365	2582	1689		9240
L43	ENGINEER SUPPORT EQUIPMENT - ED	300	510	514	6575	4932	9932	5068		28937
L46	Maintenance Support Equipment	1380	1446	1513	3339	8173	8201	3975	Continuing	Continuing
L47	IMPROVED ENVIRONMENTAL CONTROL UNITS ED		4437	5951	3475	1489				15352

A. Mission Description and Budget Item Justification: This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	42330	45009	35971
Current BES/President's Budget (FY 2009)	33205	47108	37718
Total Adjustments	-9125	2099	1747
Congressional Program Reductions		-301	
Congressional Rescissions			
Congressional Increases		2400	
Reprogrammings	-7962		
SBIR/STTR Transfer	-1163		
Adjustments to Budget Years			1747

Change Summary Explanation: Funding - FY 2007: $7.962 million was reprogrammed to support Army high priority programs.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**194**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
194 ENGINE DRIVEN GEN ED	11036	11026	6368	1396	1397	2366	1549	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY09 will fund completion of Advanced Medium Mobile Power Sources (AMMPS) pre-production tests, development tests and operational tests, complete type classification, materiel release and other actions required for Milestone C production award.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Awarded Phase II System Development and Demonstration (SDD) contract to build 120 pre-production sets for operational testing and developmental testing in FY08 for AMMPS and continue engineering and logistics data deliverables	8536		
FY07: Conducted product enhancement efforts to extend service life and minimize operator maintenance requirements for the 2 kW Military Tactical Generator (MTG).	1500		
FY07: Conducted market research analysis and user requirements study to better define acquisition strategy for the 9, 18, 36K Improved Environmental Control Unit (IECU)	1000		
FY08: Complete AMMPS pre-production test sets. Continue engineering and logistics data deliverables.		8420	
FY08: 2KW Military Tactical Generator Product Improvement		2318	
FY09: Complete DT and begin Operational Test (OT) for AMMPS. Prepare Documentation for Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g.,TM's, sustainment test, fielding plans.			6368
Small Business Innovative Research/Small Business Technology Transfer Program		288	
Total	11036	11026	6368

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
0603804A - Logistics and Engineer Equipment - Adv Dev G11	1889	3151	3357	2898	2915	1624	729	Continuing	Continuing
OPA3, MA9800, Generators and Associated Equipment	141581	110723	217749	162861	130790	133008	9854	Continuing	Continuing

Comment:

C. Acquisition Strategy Perform Developmental Testing (DT)/Operational Testing (OT) for the AMMPS family; perform phase II contract award through a down select. Developmental test and evaluation of technologies that transition into procurement after Milestone C.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	CPFF	Various	16492	8081	3-4Q	7806	2-4Q	700	2Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	CPFF	Various	1800	1500	2Q	2318	4Q				5618	
IECU	CPFF	Various		613	2-4Q					Cont.	Cont.	
Subtotal:			18292	10194		10124		700		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	2275			400	2Q	400	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	In-house	CECOM, Ft Belvoir, VA	65								65	
IECU		CECOM, Ft Belvoir, VA/		372	2-4Q					Cont.	Cont.	
Subtotal:			2340	372		400		400		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	MIPR	Various	1878	153	2Q	200	2Q	4966	1Q	Cont.	Cont.	
Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Beloir, VA	216								216	
IECU												
Subtotal:			2094	153		200		4966		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	1969	302	1-4Q	302	1-4Q	302	1-4Q	Cont.	Cont.	
Follow-on 2kW Improvement Program												
IECU		CECOM, Ft Belvoir, VA		15	1-4Q					Cont.	Cont.	
Subtotal:			1969	317		302		302		Cont.	Cont.	
Project Total Cost:			**24695**	**11036**		**11026**		**6368**		**Cont.**	**Cont.**	

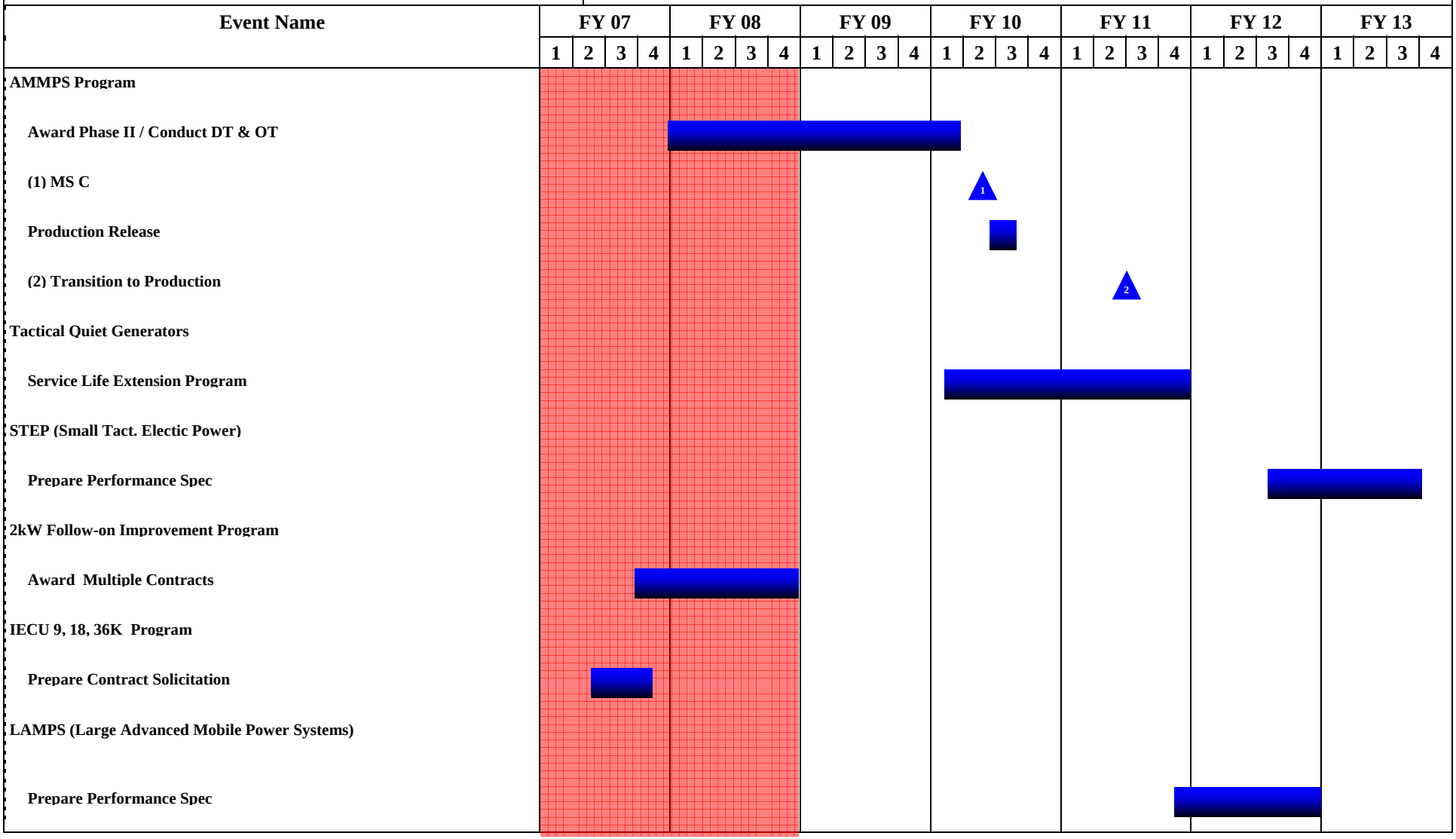
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194



Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
194

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**194**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
AMMPS Program	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
Award Phase II / Conduct DT & OT		1Q - 4Q	1Q - 4Q	1Q			
MS C				2Q			
Production Release				2Q - 3Q			
Transition to Production					3Q		
Tactical Quiet Generators							
Service Life Extension Program				1Q - 4Q	1Q - 4Q		
STEP (Small Tact. Electic Power)							
Prepare Performance Spec						3Q - 4Q	1Q - 3Q
2kW Follow-on Improvement Program							
Award Multiple Contracts	3Q - 4Q	1Q - 4Q					
IECU 9, 18, 36K Program							
Prepare Contract Solicitation	2Q - 4Q						
LAMPS (Large Advanced Mobile Power Systems)							
Prepare Performance Spec					4Q	1Q - 4Q	
MS B							1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H01**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
H01 COMBAT ENGINEER EQ ED	2443	3365	3270	10640	10659	9770	7979	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration of military Construction Equipment used in support of horizontal and vertical engineer construction tasks; required in order to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) modular forces. This project also supports the SDD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground (A/G) Line of Communication (LOC) and Rapid Tactical Earthmoving (RTE) repair and construction which increase the operational reach of modular forces. The BCT and CSB systems include: High Mobility Engineer Excavators (HMEE, Types I and III); Scrapers, Scoop Loaders, Skid Steer Loaders, Deployable Universal Combat Earthmover (DEUCE), Hydraulic Excavators (HYEX), Dozers and Graders.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Conducts market research and update specs for future engineer transformation.	50	20	20
FY07-FY09: Continues development of engineer and acquisition documents required for Milestone Decisions.	475	20	20
FY07-FY09: Conducts Test and Evaluation of future engineer equipment.	460		150
FY07-FY09: Design armor kits for Construction Equipment.	1336	1592	
FY07-FY08: Conducts Armor Test and Evaluation for Construction Equipment Systems	122	1639	
FY07: Productivity analysis of commercial tactic, techniques and procedures (TTP) for load and haul.			
FY09: Development of Robotics Research			1580
FY09: Simulator Development			1500
Small Business Innovative Research/Small Business Technology Transfer Program		94	
Total	2443	3365	3270

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, R05900, High Mobility Engineer Excavator I	28513	25637	24309	24997	25762	13080	495	Continuing	Continuing
OPA3, R05910, High Mobility Engineer Excavator III	17346	14179	30199	22088	2185	2279	248		88524
OPA3, R03801, Grader, Mtzd, Hvy	13879	14908	37698	28023	25694	25938	22753	Continuing	Continuing
OPA3, R14200, Scraper, Elevating SP 11 CY Min Sec	29407	22980			9168	3662			65217
OPA3, M06400, Loader, Scoop Type, 2 1/2 CU YD		6547	14212	9578	6840	6700	6753		50630

OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD	17725	13205	13776	11189	496	765	248		57404
OPA3, X01500, Hydraulic Excavator	4580	3904	9565	10262	9025	3419			40755
OPA3, M08100, Plant, Asphalt Mixing			7960	14278	14712				36950
OPA3, M06100, Tractor Full Tracked, Med T-9	5259	8134	33727	33642	12795	25565	24477		143599

Comment:

C. Acquisition Strategy Conduct research, development, and investigations on future Construction Equipment (CE) and identify the pathforward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliablity, availability, and maintainability and reduce the logistical footprints for future CE equipment.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H01

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Non-split rim wheel development	FFP	Hutchinson Tire, Hutchinson, KS	400								400	400
Complete SDD Contracts for HMEE Type I	FFP	ADI, Australia; JCB, Pooler, GA	4047								4047	4047
Market Research, Studies, Update Specs for future engineer	various	multiple activities	1353	50	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Continue development of engineer and acquisition documents	various	multiple activities	1127	475	1-4Q	20	1-4Q	20	1-4Q	Cont.	Cont.	Cont.
Design armor kits for Construction Equipment	various	multiple activities	1748	1200	1-4Q	1592	1-2Q			Cont.	Cont.	Cont.
Conduct feasibility studies to armor Construction Equipment Systems	various	multiple activities	100							Cont.	Cont.	Cont.
Initiate SDD for A/G LOC Repair and Construction	TBD	TBD								Cont.	Cont.	Cont.
Development of Robotic Research for Construction Equipment	TBD	TBD						1580	1-4Q		1580	
Armor Development for HMEE I Light & Heavy Loaders and HYEX	TBD	TBD	4115	122	1-2Q	1639	2-4Q				5876	
Development of Simulator	MIPR	PEO Stricom, Orlando, FL						1500	1-4Q		1500	
Subtotal:			12890	1847		3271		3120		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	TACOM & TARDEC, Warren, MI	10580							Cont.	Cont.	Cont.
Engineering Operational Integrator	MIPR	DA/Pentagon,	156								156	156

Support		Washington, DC										
Construction Equipment Lease Study	MIPR	DA/Pentagon, Washington, DC	200								200	400
Subtotal:			10936							Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
HMEE Type I (6 prototypes)	MIPR	ATEC, Aberdeen, MD	784								784	784
Armor Tests for IHMEE & DEUCE	MIPR	ATEC, Aberdeen, MD	342							Cont.	Cont.	Cont.
Future Engineer Equipment (various)	MIPR	ATEC, Aberdeen, MD	2287	460	1-4Q			150	1-4Q	Cont.	Cont.	Cont.
Productivity analysis of TTP	various	multiple			2-4Q						122	1500
Subtotal:			3413	460				150		Cont.	Cont.	Cont.

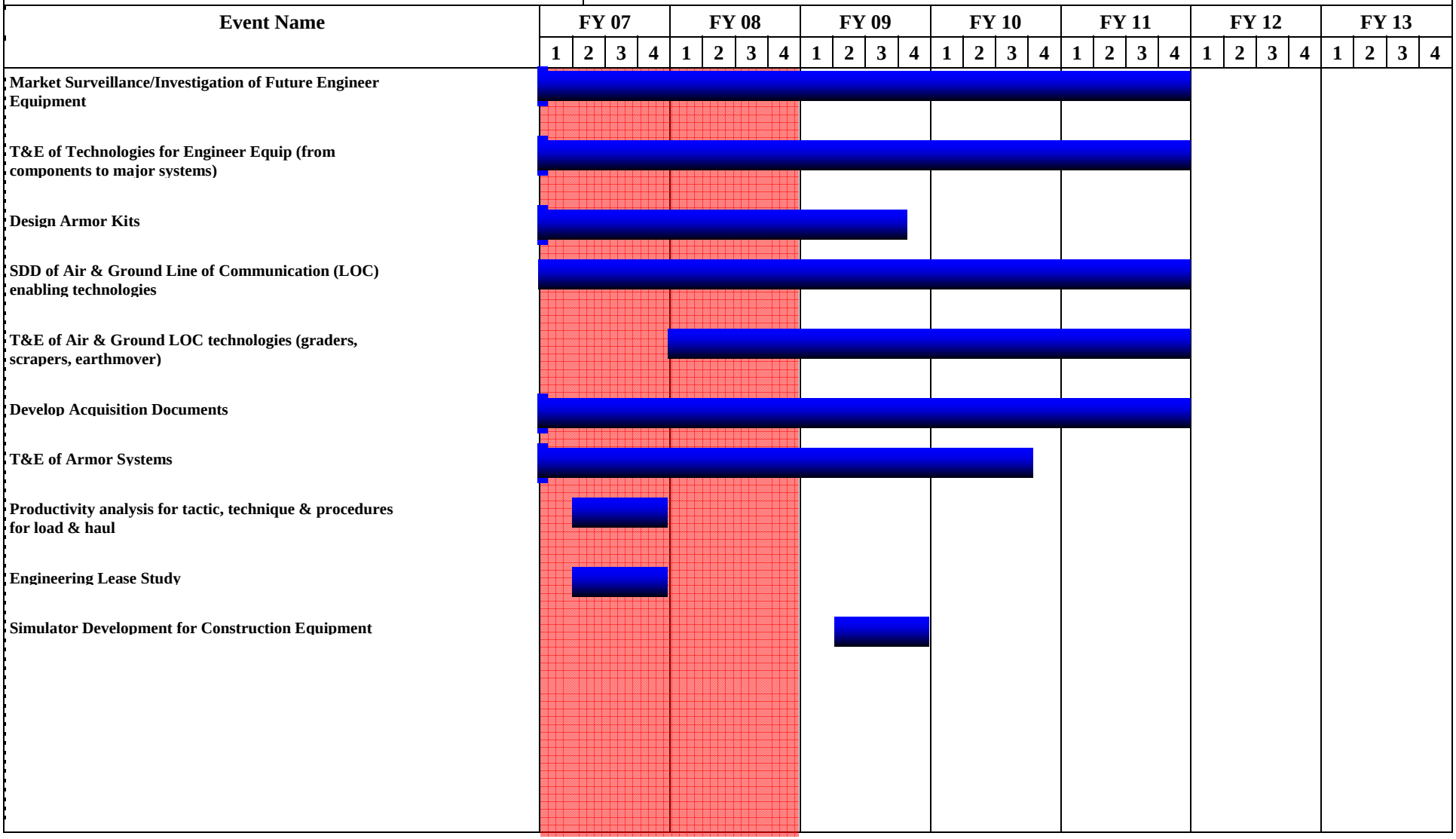
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Mgt	In-house	PM CE/MHE, Warren, MI	762							Cont.	Cont.	Cont.
SBIR/STTR				136	1-2Q	94	1-2Q				230	
Subtotal:			762	136		94				Cont.	Cont.	Cont.

Project Total Cost:			**28001**	**2443**		**3365**		**3270**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H01**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H01**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Market Surveillance/Investigation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
T&E of Technologies for Engineer Equip (from components to major systems)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
HMEE Source Selection							
HMEE System Demonstration Contract Award (2 contractors)							
HMEE System Demonstration Testing (PPT & LUT)							
HMEE MS C/ TC Generic							
Design Armor Kits	1Q - 4Q	1Q - 4Q	1Q - 4Q				
SDD of Air & Ground Line of Communication (LOC) enabling technologies	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
T&E of Air & Ground LOC technologies (graders, scrapers, earthmover)		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
T&E of Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Milestone C and LRIP Approval for HMEE I							
Milestone C and LRIP Approval for HMEE III							
Productivity analysis for tactic, technique & procedures for load & haul	2Q - 4Q						
Engineering Lease Study	2Q - 4Q						
Market Surveillance/Investigation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Test and Evaluation of Future Engineer Equipment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Design Armor Kits for various Construction Equipment systems	1Q - 4Q	1Q - 4Q					

Air & Ground Line Of Communication (LOC) SDD	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Air & Ground LOC Test & Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
Develop Acquisition Documents	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
T&E Armor Systems	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Productivity analysis for tactic, technique & procedure for load & haul							
Engineering Lease Study							
Simulator Development for Construction Equipment			2Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H02**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	2565	9270	12251	12144	12520	14935	16923	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include: Assessment of the Rapidly Emplaced Bridging System (REBS) for the Stryker Brigade Combat Team (SBCT) the development, integration and testing of forty-six meter capability for the Dry Support Bridge (DSB). Also included: is the development, integration and testing for float capabilities for the Dry Support Bridge (DSB), development, integration and testing of the Bridge Erection Boat(BEB) SLEP, test Line of Communication (LOC) bridge Program of Record (POR), refurbishment of Joint Assault Bridge (JAB) assets, development of a 4-8m self contained and independent bridge for Interim Brigade Combat Team (IBCT) and Future Brigade Combat Team (FBCT), a remote controlled automatic launch for the REBS and integrate and test the REBS on a Stryker chassis and start Multi-Functional Gap Crossing effort.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07-FY09: Continues Development, integration, and test for the DSB 46 meter bridge.	2565	2140	1000
FY09: LOC Bridge POR Testing			2000
FY09: JAB refurbishment of Test Assets.			2200
FY08-FY09: BEB Engine		3000	2830
FY09: Market investigations (BEB,Multifunctional Bridging, alternative material solution)			150
FY09: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT).			100
FY09: IBCT/FBCT 4-8 m Platform Independent Gap Defeat Solution Broad Agency Announcement, Demostration and Government Test.			1500
FY09: Multi-Functional Gap Crossing Effort: Feasibility Study & Investigation of a Bridge Launcher for current bridges.			400
FY08-FY09: Bridging Product Improvements		3870	2071
Small Business Innovative Research/Small Business Technology Transfer Program		260	
Total	2565	9270	12251

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA3, MX0100, Tactical Bridge	143328	50102	93930	86100	73769	75769	58950	Continuing	Continuing
OPA3, MA8890, Tactical Bridging, Float Ribbon	163268	74280	147270	149457	114037	73035	52322	Continuing	Continuing

Comment:

C. Acquisition Strategy Limited RDT&E effort to support testing and follow-on production.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H02

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DSB 46 meter bridge	SS-CPFF	WFEL, Stockport, England	866					1000	1Q	Cont.	Cont.	1366
DSB System	SS-CPFF	WFEL, Stockport, England	237	2484	1Q	6260	2Q	2000	1Q	6000	16981	8944
JAB refurbishment of Test Assets								2200	1Q		2200	
BEB Engine		FBM Babcock Marine Ltd, United Kingdom				3000	3Q	2830	1Q		5830	
Market Investigation BEB, Multifunctional Bridging								150	1Q		150	
IBCT/FBCT 4-8 m Gap Defeat		KMWMMB, Mainz Germany/Qinetiq, Hampshire, UK/UCSD, San Diego, CA						1500	1Q		1500	
Feasibility Study & Investigation of a Bridge Launcher for current bridges.		TBD						400	2Q	Cont.	Cont.	
REBS Auto Launch-Retrieve		GDELS, Germany, DE					1Q	100	4Q		100	
LOC Bridge POR Testing		GDSBS, Germany, DE					4Q	2000	1Q		2000	
Subtotal:			1103	2484		9260		12180		Cont.	Cont.	10310

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Government Agencies	MIPR	TACOM, Warren, MI--Various	130		1Q	10	1Q	10	1Q		150	
Subtotal:			130			10		10			150	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H02

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
DSB 46 meter Bridge	SS-CPFF	WFEL, Stockport, UK	246									208
Subtotal:			246									208

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	NA	TACOM, Warren, MI	727								727	
SBIR/STTR				81	1Q			61	1Q		142	
Subtotal:			727	81				61			869	
Project Total Cost:			**2206**	**2565**		**9270**		**12251**		**Cont.**	**Cont.**	**10518**

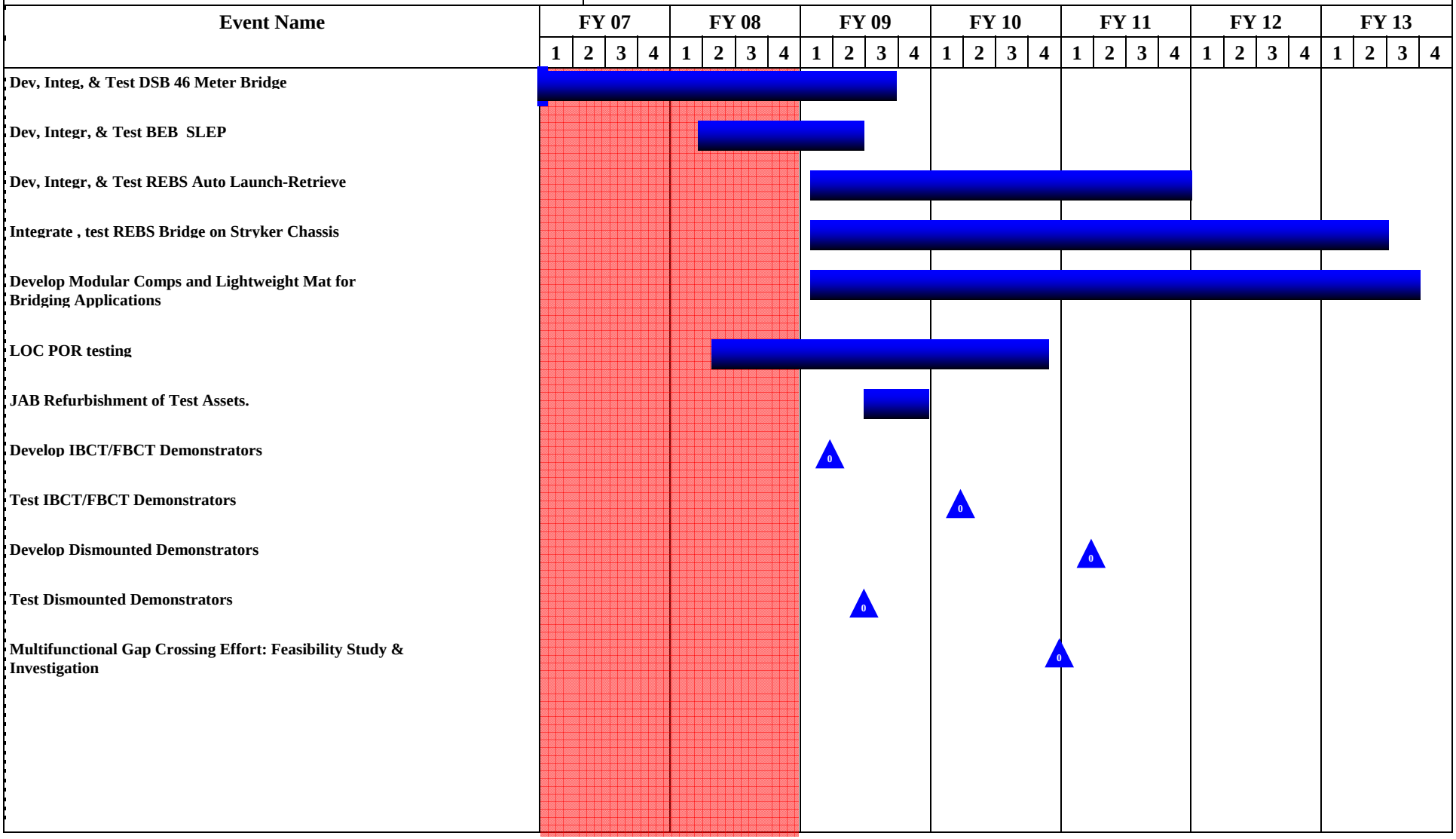
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
H02



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**H02**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Dev, Integ, & Test DSB 46 Meter Bridge	1Q - 4Q	1Q - 4Q	1Q - 3Q				
Dev, Integr, & Test BEB SLEP		1Q - 4Q	1Q - 2Q				
Dev, Integr, & Test REBS Auto Launch-Retrieve			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q	
Integrate , test REBS Bridge on Stryker Chassis			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
Develop Modular Comps and Lightweight Mat for Bridging Applications			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
LOC POR testing		2Q - 4Q	1Q - 4Q	1Q - 4Q			
Test BEB SLEP	1Q - 4Q	1Q - 2Q					
Test BEB SLEP		3Q - 4Q	1Q - 2Q				
Test BEB SLEP		1Q - 4Q	1Q - 3Q				
Develop REBS Fully Automated Launch/Retrieve		1Q - 4Q					
Integrate REBS Fully Automated Launch/Retrieve			1Q - 2Q				
Test REBS Fully Automated Launch/Retrieve			3Q - 4Q				
Develop Modular Comps and Lightweight Material for Bridging Applications			1Q - 4Q	1Q - 4Q			
JAB Refurbishment of Test Assets.			2Q - 4Q				
Develop IBCT/FBCT Demonstrators			1Q - 4Q	1Q - 4Q			
Test IBCT/FBCT Demonstrators				1Q - 4Q	1Q - 4Q		
Develop Dismounted Demonstrators					1Q - 4Q		
Test Dismounted Demonstrators			2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
Multifunctional Gap Crossing Effort: Feasibility Study & Investigation				4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L39**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L39	Field Sustainment Support ED	8183	7441	2091	4629	6640	6572	4223	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, mortuary affairs systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY 07: Completed Developmental Testing (DT) and conducted Operational Testing (OT) of Mobile Integrated Remains Collection System (MIRCS) prototypes. FY 08: Complete documentation package and obtain Milestone C approval for MIRCS to transition into production.	1737	333	
FY 07: Procured Joint Precision Airdrop System 2K (JPADS 2K) Design Validation (DV) and Developmental Test (DT) prototypes and conducted DV. FY 08: Start and complete JPADS 2K DT and OT. FY09: Obtain JPADS 2K Milestone C and transition into production.	6446	1888	333
FY 08: Procure JPADS 10K DT and OT test articles, and initiate DT/OT test activities. FY 09: Complete JPADS 10K DT and OT.		5012	1758
Small Business Innovative Research/Small Business Technology Transfer Program		208	
Total	8183	7441	2091

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 3, M77700 Mobile Integrated Remains Collection System		9874	17803	18335	5282			Continuing	Continuing
OPA 3, MA7806 Precision Airdrop		199	17953	21826	22850	15355	14970	Continuing	Continuing

Comment:

C. Acquisition Strategy Accelerate product development and testing to transition into production.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L39

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	In-House	PM FSS, Natick	1648	944	1-4Q	1940	1-4Q	582	1-4Q	Cont.	Cont.	3241
Soldier Support Equipment	In-House	CECOM, FT Belvoir	1441							Cont.	Cont.	
Soldier Support Equipment	Contracts	Various	7929	3873	1-2Q	5070	1-4Q	546	1-4Q	Cont.	Cont.	
Subtotal:			11018	4817		7010		1128		Cont.	Cont.	3241

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	812	774	1-4Q					Cont.	Cont.	130
Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ, AEC	3972	2112	1-4Q			900	1-4Q	Cont.	Cont.	76
Subtotal:			4784	2886				900		Cont.	Cont.	206

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support		PM FSS, Natick	444	245	1-4Q	223	1-4Q	63	1-4Q	Cont.	Cont.	
SBIR/STTR				235		208					443	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

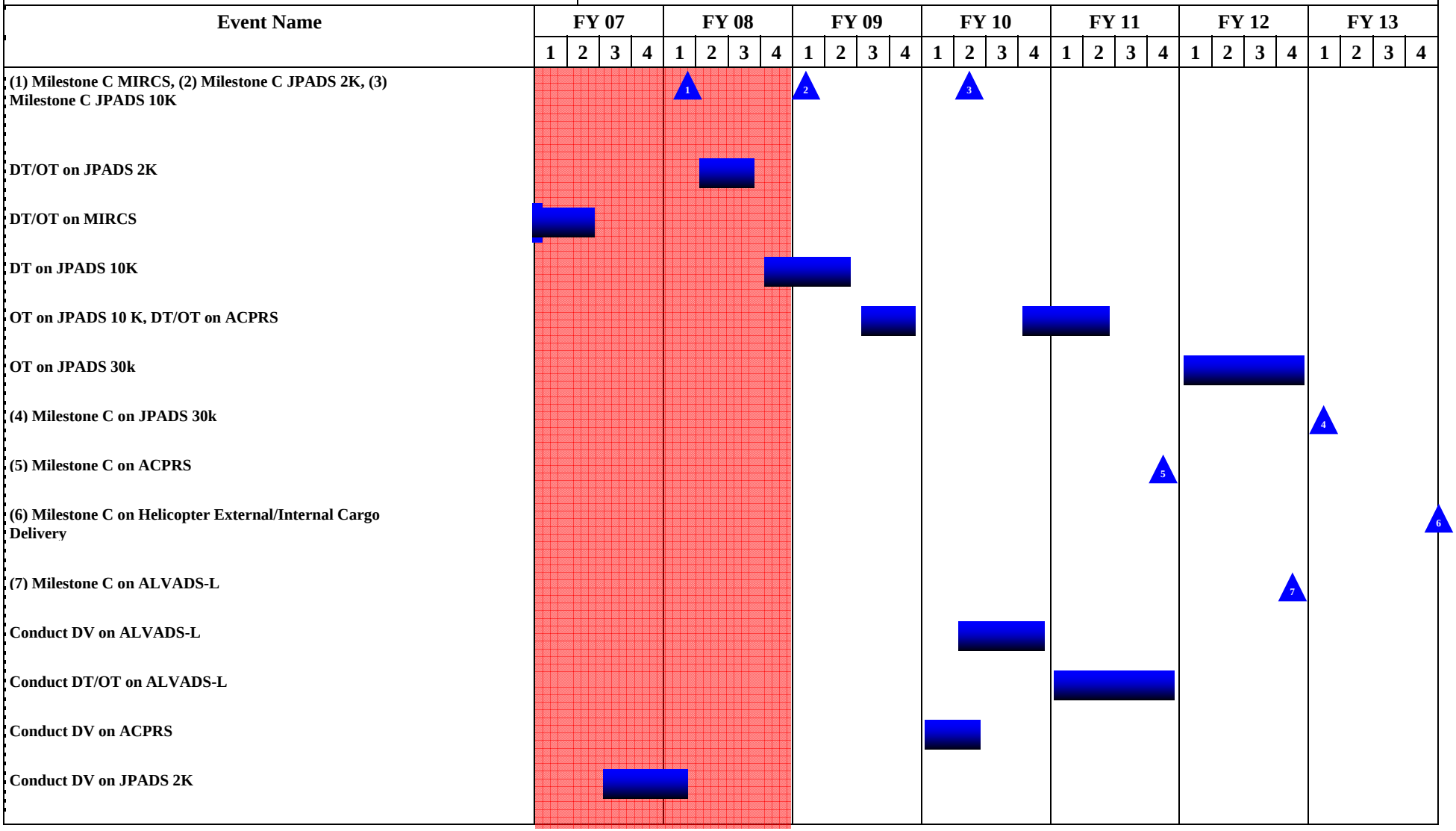
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L39**

Subtotal:	444	480		431		63		Cont.	Cont.	
Project Total Cost:	**16246**	**8183**		**7441**		**2091**		**Cont.**	**Cont.**	**3447**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L39**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L39**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Milestone C MIRCS		1Q					
Milestone C JPADS 2K			1Q				
Milestone C JPADS 10K				2Q			
DT/OT on JPADS 2K		2Q - 3Q					
DT/OT on MIRCS	1Q - 2Q						
DT on JPADS 10K		4Q	1Q - 2Q				
OT on JPADS 10 K			3Q - 4Q				
DT/OT on ACPRS				4Q	1Q - 2Q		
OT on JPADS 30k						1Q - 4Q	
Milestone C on JPADS 30k							1Q
Milestone C on ACPRS					4Q		
Milestone C on Helicopter External/Internal Cargo Delivery							
Milestone C on ALVADS-L						4Q	
Conduct DV on ALVADS-L				2Q - 4Q			
Conduct DT/OT on ALVADS-L					1Q - 4Q		
Conduct DV on ACPRS				1Q - 2Q			
Conduct DV on JPADS 2K	3Q - 4Q	1Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L41	WATER AND PETROLEUM DISTRIBUTION - ED	7030	8955	5058	3335	3359	2035	3940	Continuing	Continuing

A. Mission Description and Budget Item Justification: Description: This project provides all services ample supply of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to its soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and, dispensing in support of tactical operations, including rapid refueling of aircraft. The mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These R&D missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve its transformation vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.

Justification: FY 2009 funding will focus on efforts for the Fuel System Supply Points (FSSP). Water distribution and purification systems will be transitioned from component development efforts under Project K41 (06043804). Selected components and other improvements will be integrated into the parent system. System-level tests and evaluations will be conducted. Successfully demonstrated improvements will be incorporated into the system through inserting these proven, new technologies into an on-going production via an Engineering Change Proposal (ECP), into fielded systems via a Modification Work Order (MWO), or via Modernization thru Spares. Petroleum System P3I efforts will include reliability data collection and analysis to improve reliability of the Fuel System Supply Point (FSSP), as well as procuring, integrating and testing automated tank gauging and flow metering components into a surrogate FSSP to verify system operation, maintenance, software, and human interface requirements. Water Distribution and Purification efforts will include performing engineering integration analysis and system design to incorporate in-line water quality monitoring, chlorine dosing and controls into the Tactical Water Purification System (TWPS), Lightweight Water Purifier (LWP) and Reverse Osmosis Water Purification Units (ROWPUs). P3I efforts will also include integrating water monitoring equipment into a military water treatment system and performing technical and operational testing. A development contract will be awarded for a Petroleum Test Kit (PTK) to design and integrate a comprehensive set of fuel quality analysis instruments and to conduct technical acceptance testing. Production-level prototype PTKs will be fabricated, a logistics and test support package will be procured, Production Prove Out Testing and Limited User Testing will be conducted, a tailored logistics demonstration will be performed, and management and procurement documentation will be prepared to support a Milestone C decision. Camel efforts will include completing technical data, preparing environmental assessments and reporting test results and assessments; performing a system-level Logistics Demonstration, and conducted Limited User Testing. These efforts will support the Full Rate Production Decision.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block I development. Complete production qualification testing. Prepare Milestone C program documents.	3639		
FY07-FY08: Continues Rapidly Installed Fuel Transfer System (RIFTS) Block II development, prototype design, fabrication and test.		3755	

FY08-09: Develop prototype Advanced Petroleum Test Kit (PTK) and conduct developmental testing and limited user testing. Prepare technical data package for production.		1200	1200
FY08-09: Continue improvements for the Family of Fuel System Supply Points (FSSPs). Conduct system level demonstrations and evaluations of common 600 Gallon Per Minute (GPM) Fuel/Water tactical pump and prepare technical data package and logistic support data.		1500	2267
FY08-09: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP)and Rverse Osmosis Water Purification Units, Hippo Sytem and the Unit Water Pod (Camel) System. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring into the TWPS, LWP, and ROWPUs and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.		749	1591
FY08: Complete Production Verification Testing on the 900 Gallon Unit Water Pod (Camel), document and verify logistical data, prepare program management documentation for type classification standard and materiel release, and conduct Milestone C. Complete system-level logistics demonstration and operational testing.	3391	1500	
FY07: Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		251	
Total	7030	8955	5058

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	4451	2442	439	3280	2834	4793	2981	Continuing	Continuing
OPA 3, R05600, Water Purification Systems	19931	43719	51164	44915	18976	20960	4845	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	111423	34173	61545	105999	91800	12440	9984	Continuing	Continuing
OPA 3, MB6400, Quality Surveillance Equipment	43508	1284	1285						46077

Comment:

C. Acquisition Strategy System Development and transitions to competitive procurement for most items under this project. Exceptions include Small Business Set Aside for the Rapidly Installed Fuel Transfer System (RIFTS).

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L41

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rapidly Installed Fuel Transfer System (RIFTS) - BLOCK I	In-House	TARDEC, Warren, MI	2512	135	1Q					Cont.	Cont.	Cont.
RIFTS - BLOCK I	C-CPFF	Southwest Research Institute, San Antonio, TX	11027	2312	1-4Q					Cont.	Cont.	Cont.
RIFTS - BLOCK II	C-CPFF	Southwest Research Institute, San Antonio, TX				3075	1Q			Cont.	Cont.	Cont.
RIFTS - BLOCK II	In-House	TARDEC, Warren, MI				220	1Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI				200	1Q	200	1Q	Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	C-CPFF	TBD				700	2Q	900	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP) Improvements	In-House	TARDEC, Warren, MI				50	1Q	200	2Q	Cont.	Cont.	Cont.
FSSP Improvements	C-CPFF	MTC, Dayton, OH				600	1Q	900	2Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements	In-House	TARDEC, Warren, MI				100	1Q	150	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements	MIPR	NFESC, Port Hueneme, CA				149	1Q	200	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	In-House	TARDEC, Warren, MI		150	1Q	100	1Q			Cont.	Cont.	Cont.
Subtotal:			13539	2597		5194		2550		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rapidly Installed Fuel Transfer System (RIFTS) - Block I	In-House	TARDEC, Warren, MI		25	1Q					Cont.	Cont.	Cont.
Rapidly Installed Fuel Transfer System (RIFTS) - Block I	C-CPFF	Southwest Research Institute San Antonio,		290	2Q					Cont.	Cont.	Cont.

		TX										
Rapidly Installed Fuel Transfer System (RIFTS) - Block II	In-House	TARDEC, Warren, MI	76			60	1Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI				50	1Q	50	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point (FSSP)	In-House	TARDEC, Warren, MI				25	1Q	100	1Q	Cont.	Cont.	Cont.
Water Purification Systems Improvements)	In-House	TARDEC, Warren, MI				50	1Q	100	1Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	In-House	TARDEC, Warren, MI		100	1Q	75	1Q			Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	C-CPFF	TBD		1394	1Q	125	1Q			Cont.	Cont.	Cont.
Subtotal:			76	1809		385		250		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rapidly Installed Fuel Transfer System (RIFTS) - PQT-Block I	MIPR	Yuma Proving Ground, Yuma, AZ	4228	500	2Q					Cont.	Cont.	Cont.
RIFTS (Block I) PQT	In-House	TARDEC, Warren, MI								Cont.	Cont.	Cont.
RIFTS (Block II)	In-House	TARDEC, Warren, MI				100	1Q			Cont.	Cont.	Cont.
RIFTS (Block II	MIPR	TARDEC, Warren, MI				600	4Q			Cont.	Cont.	Cont.
Advanced Petroleum Test Kit (PTK)	In-House	TARDEC, Warren, MI				50	1Q	50	1Q	Cont.	Cont.	Cont.
Fuel System Supply Point Improvements	In-House	TARDEC, Warren, MI				275	1Q	200	1Q	Cont.	Cont.	Cont.
FSSP Improvements	MIPR	Yuma Proving Ground, Yuma, AZ				450	1Q	867	2Q	Cont.	Cont.	Cont.
Water Purification Improvements	MIPR	NFESC, Port Hueneme, CA	332			400	1Q	300	1Q	Cont.	Cont.	Cont.
Water Purification Improvements	In-House	TARDEC, Warren, MI				50	1Q	351	1Q	Cont.	Cont.	Cont.
Water Purification Improvements	MIPR	Aberdeen Proving Ground, Aberdeen, MD						490	3Q	Cont.	Cont.	Cont.
Unit Water Pod (Camel) 900 Gallon	MIPR	Yuma Proving Ground,		1800	3Q	1200	1Q			Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

		Yuma, AZ										
Subtotal:			4560	2300		3125		2258		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support-Rapidly Installed Fuel Transfer System (RIFTS)	In-House	TARDEC, Warren, MI	977							Cont.	Cont.	Cont.
Program Management Support - RIFTS	Contract	ICI, Dayton, OH	40	128	2Q					Cont.	Cont.	Cont.
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)				196		251					447	196
Subtotal:			1017	324		251				Cont.	Cont.	Cont.

Remarks: Not Applicable

Project Total Cost:			**19192**	**7030**		**8955**		**5058**		**Cont.**	**Cont.**	**Cont.**

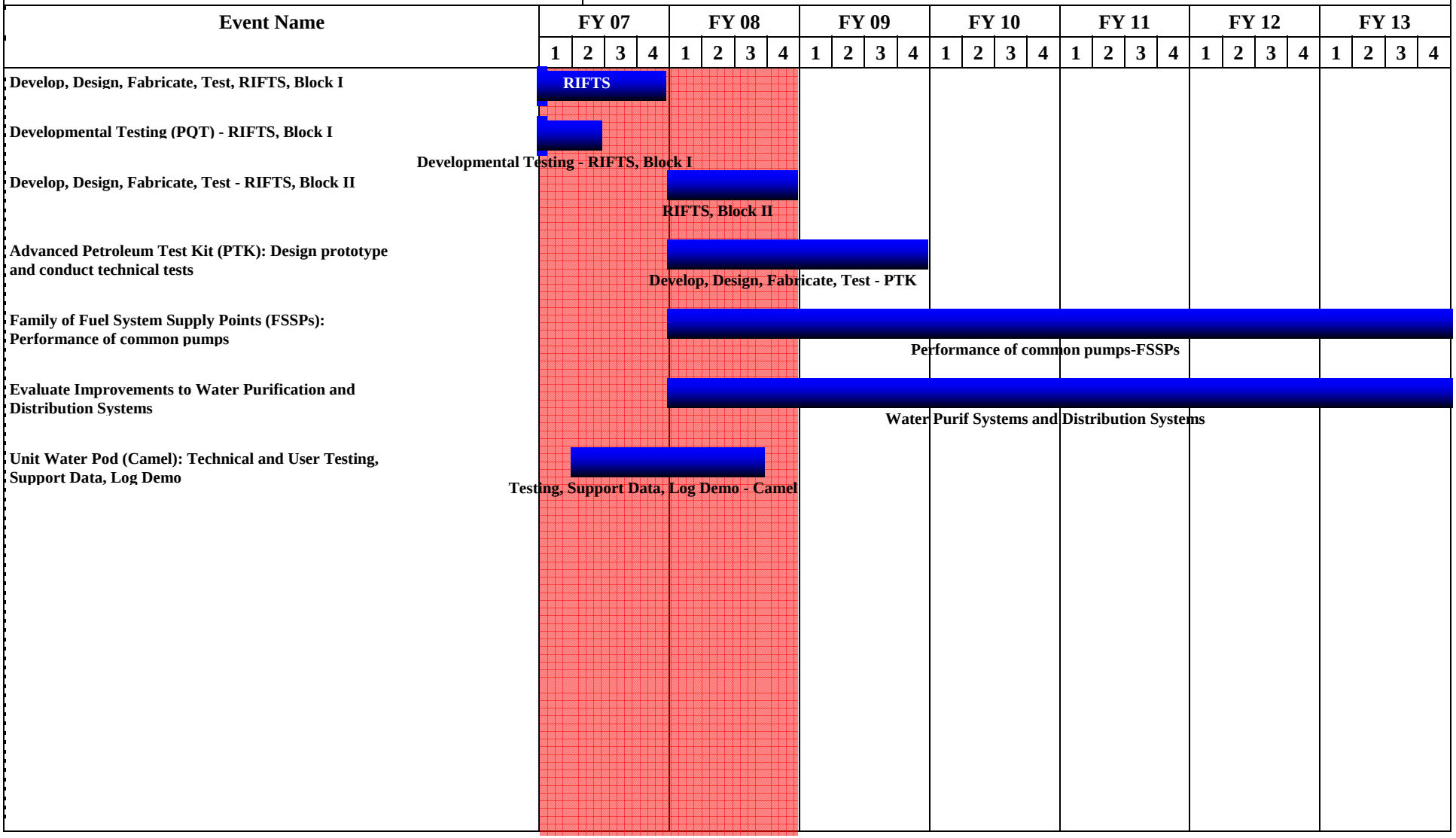
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L41



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L41**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Develop, Design, Fabricate, Test, RIFTS, Block I	1Q - 4Q						
Developmental Testing (PQT) - RIFTS, Block I	1Q - 2Q						
Develop, Design, Fabricate, Test - RIFTS, Block II		1Q - 4Q					
Advanced Petroleum Test Kit (PTK): Design prototype and conduct technical tests		1Q - 4Q	1Q - 4Q				
Family of Fuel System Supply Points (FSSPs): Performance of common pumps		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Evaluate Improvements to Water Purification and Distribution Systems		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Unit Water Pod (Camel): Technical and User Testing, Support Data, Log Demo	2Q - 4Q	1Q - 3Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L46	Maintenance Support Equipment	1380	1446	1513	3339	8173	8201	3975	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports requirements generation for Sets, Kits, and Outfits (SKOs), and creation of purchase descriptions for Industrial Plant Equipment (IPE) and Air Compressors. Modernize and procure new technical tools for SKO's optimization based on field feed back to include Rapid Deployment SKO, and modernization of the Forward Repair System (FRS) tool load. Funding includes efforts to update Machinist Tool Sets, Engineering, and Quality Assurance in support of SKO's, and modernization and redesign of the Shop Equipment Contact Maintenance Vehicle (SECM) in support of next generation vehicles.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Optimization of antiquated SKOTs to support modularity in a 2 level maintenance environment	1380		
Modernize and update tool loads - Procure and verify additional items based on field feedback.		200	
Uniform Identification Codes		80	
Future Combat Systems		220	
Fund efforts to create documentation for Industrial Plan Equipment and air compressors to allow creation of Purchase Descriptions and procurement of test articles		360	
Procure test articles of Allied Trade configurations		151	
Composite Manipulation		183	
Machinist Tool Sets Shelter and Non-Shelter		100	70
Perform testing on Flat Rack design for the FRS. FY09 Modernize/Update Tool Load (verify additional items based on Field Feedback)		100	50
Procure new technical tools and subsequent evaluations of tools for SKO optimization		12	12
Modernization / Redesign efforts of SECM for next generation of vehicles.			392
Support for requirements generation.			360
Create Purchase Descriptions and procure IPE and Air Compressors			334
Develop Rapid Deployment SKO - Special Tool Initiative.			154
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.			141

SBIR/STTR		40	
Total	1380	1446	1513

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA 1, D16400, FHTV FORWARD REPAIR SYSTEM	90259	95146	127577	119127	17400	2659		Continuing	Continuing
OPA 1, DL5110 ITEMS LESS THAN $5M, TACTICAL VEHICLES	12382	8000	511	309		325	333	Continuing	Continuing
OPA 3, M61500, Shop Equipment, Contact Maintenance	137444	26913	17807	51449	56380	8637		Continuing	Continuing
OPA 3, ML5345, ITEMS LESS THAN $5M Maintenance Equipment,	93612	1238	1329	898	1057	3086		Continuing	Continuing

Comment:

C. Acquisition Strategy Programs will progress from product development to market samples and First Article Testing. Efforts will be performed to transition into production and incorporate enhanced future technologies to support the war fighter in a two level maintenance environment. Procurement and testing of new technologies as well as updating and enhancing current systems will support modularity, modernize and enhance war fighting capabilities, and ensure stability and progression of systems into the future.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L46

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MSE Life Cycle Configuration Analyses and Initial Capabilities Document (ICD) Development Support	In-House	PM SKOT Rock Island	505	360	1-3Q					Cont.	Cont.	Cont.
SATS Additional Field Maintenance Module Development and feasibility of incorporating LHS capability	In-House	PM SKOT Rock Island	183		1Q					Cont.	Cont.	Cont.
Modernization of Industrial Plant Equipment	MIPR / In-House	TBD / PM SKOT Rock Island						334	1-3Q	Cont.	Cont.	Cont.
EMIP/BOD Procurement of new Technical Tools	In-House	PM SKOT Rock Island				12	1-3Q	12	1-3Q	Cont.	Cont.	Cont.
Machinest Tool Sets, Shelter / Non-Shelter	In-House	PM SKOT Rock Island				100	1-3Q	70	1-3Q	Cont.	Cont.	Cont.
Allied Trades Test Article Configurations	In-House	PM SKOT Rock Island				151	1-3Q			Cont.	Cont.	Cont.
Modernization / Redesign efforts of SECM for next generation vehicles	In-House	PM SKOT Rock Island						392	1-3Q	Cont.	Cont.	Cont.
Develop Rapid Deployment SKO - Special Tool Initiative.	In-House	PM SKOT Rock Island						154	1-3Q	Cont.	Cont.	Cont.
Subtotal:			688	360		263		962		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	In-House	PM SKOT Rock Island	52	100	1-2Q					Cont.	Cont.	Cont.
Future Combat Systems	In-House	PM SKOT Rock Island				220	1-3Q			Cont.	Cont.	Cont.

Modernization of Tool Loads based on Field Feedback	In-House	PM SKOT Rock Island				200	1-3Q			Cont.	Cont.	Cont.
Industrial Plant Equipment Documentation for new test articles	MIPR / In-House	TBD / PM SKOT Rock Island				360	1-3Q	360	1-3Q	Cont.	Cont.	Cont.
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.	MIPR / In - House	ECBC / ARDEC / PM SKOT Rock Island						141	1-2Q	Cont.	Cont.	Cont.
Subtotal:			52	100		780		501		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	MIPR/In-House	Army Test & Evaluation Command (ATEC)/PM SKOT Rock Island/CASCOM Ordinance Center & School, Ft. Lee	430	400	1-2Q					Cont.	Cont.	Cont.
SATS Additional Field Maintenance Modules and feasibility of incorporating LHS capability		PM SKOT Rock Island	163	100	1-3Q					Cont.	Cont.	Cont.
Forward Repair System Flatrack Redesign. FY09 Modernize/Update Tool Load.	In-House	PM SKOT Rock Island				100	1-3Q	50	1-3Q	Cont.	Cont.	Cont.
Subtotal:			593	500		100		50		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Conduct SKO Modernization Efforts	MIPR/In-House	Army Test & Evaluation Command & PM SKOT	268	420	1-2Q					Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L46

		Rock Island										
Composite Manipulation	In-House	PM SKOT Rock Island				183	1-3Q			Cont.	Cont.	Cont.
Unique Identification Codes	In-House	PM SKOT Rock Island				80	1-3Q			Cont.	Cont.	Cont.
SBIR/STTR						40					40	
Subtotal:			268	420		303				Cont.	Cont.	Cont.
Project Total Cost:			**1601**	**1380**		**1446**		**1513**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Modernization / Redesign efforts of SECM for next generation of vehicles.																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L46**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Modernization / Redesign efforts of SECM for next generation of vehicles.	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Modernization / Redesign efforts of SECM for next generation of vehicles.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L47**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L47	IMPROVED ENVIRONMENTAL CONTROL UNITS ED		4437	5951	3475	1489				15352

A. Mission Description and Budget Item Justification: The Improved Enviromental Control Units (IECU) program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of Environmental Control Units (ECUs). The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II Ozone Depleting Chemicals (ODCs) and to improve the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance, and increased reliability. 60K British Thermal Unit/Hour (BTU/H) IECU: The 60K BTU/H IECU is a joint program between the Army and Air Force. The 60K BTU/H IECU will be a replacement for the existing Army 54K BTU/H ECU and Air Force developed 66K BTU/H Field Deployable Environmental Control Unit (FDECU). 9, 18, and 36K BTU/H IECUs: The 9, 18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD-ECU variants. FY09 will fund the System Development and Demonstration (SDD) Phase activities for 9, 18 and 36K IECUs.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY08: 9, 18 and 36K IECU System Development and Demonstration (SDD) contract award.		3269	
FY08: Milestone C Decision for the 60K BTU/H IECU		600	
FY08: Complete Type Classification Materiel Release (MR) and other actions required for Milestone C Full Rate Production (FRP) decision for the 60K IECU.		444	
FY09: Continue SDD for the 9, 18 and 36K IECUs.			5951
Small Business Innovative Research/Small Business Technology Transfer Program		124	
Total		4437	5951

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDT&E:PE0603804A - Logistics & Engineer Equipment - Adv Dev K39	1202								1202
RDT&E:PE0604804A - Logistics and Engineer Equipment - Eng Dev 194	1000								1000
OPA 3, Improved Environmental Control Units , MF9303	3846	11549	11201	12032	11668	110			50406

Comment:

C. Acquisition Strategy The 9/18/36K IECU variants contract will be executed in four phases: 1) one year Cost-Plus-Fixed-Fee contract for the first phase of System Development and Demonstration (SDD) , 2) two year CPFF contract to complete the SDD efforts, 3) an eight-month Firm-Fixed-Price (FFP) option for the Low Rate Initial Production (LRIP) phase, and 4) 5 one-year Fixed Price, Indefinite Delivery-Indefinite Quantity (IDIQ) options for the Full Rate Production (FRP) phase. During Phase I, two contractors will be required to design and fabricate two prototypes each for two government selected variants. These units will be subjected to limited testing. A down select based primarily on test results will be used by the Government to determine which contractor will continue development of all four variants in Phase II of the SDD effort. These variants will include four configurations: (1) 9K BTU/H, 115V, 1 phase, 60 Hertz; (2) 18K BTU/H, 208V, 3 phase, 60 Hz; (3) 18K BTU/H, 230V, 1 phase, 60 Hz; and (4) 36K BTU/H, 208V, 3 phase, 60 Hz.

60K BTU/H IECU: Prepare, update and revalidate the Operational Requirements Documents (ORD) and other acquisition documentation prior to Milestone C decision.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	CPFF	Various				2773	4Q	4611	2Q	Cont.	Cont.	
60K IECU	CPFF	Various				500	2Q			Cont.	Cont.	
Subtotal:						3273		4611		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA				458	2Q	450	2Q	Cont.	Cont.	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA				264	2Q			Cont.	Cont.	
Subtotal:						722		450		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	CERDEC, Ft Belvoir, VA						500	3Q	Cont.	Cont.	
60K IECU	MIPR	CERDEC, Ft Belvoir, VA				100	3Q			Cont.	Cont.	
Subtotal:						100		500		Cont.	Cont.	

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47

	Type				Date		Date		Date			Contract
9, 18 and 36K IECU	In-house	PM-MEP, Ft Belvoir, VA				162	1-4Q	390	1-4Q	Cont.	Cont.	
60K IECU	In-house	PM-MEP, Ft Belvoir, VA				180	1-4Q			Cont.	Cont.	
Subtotal:						342		390		Cont.	Cont.	
Project Total Cost:						**4437**		**5951**		**Cont.**	**Cont.**	

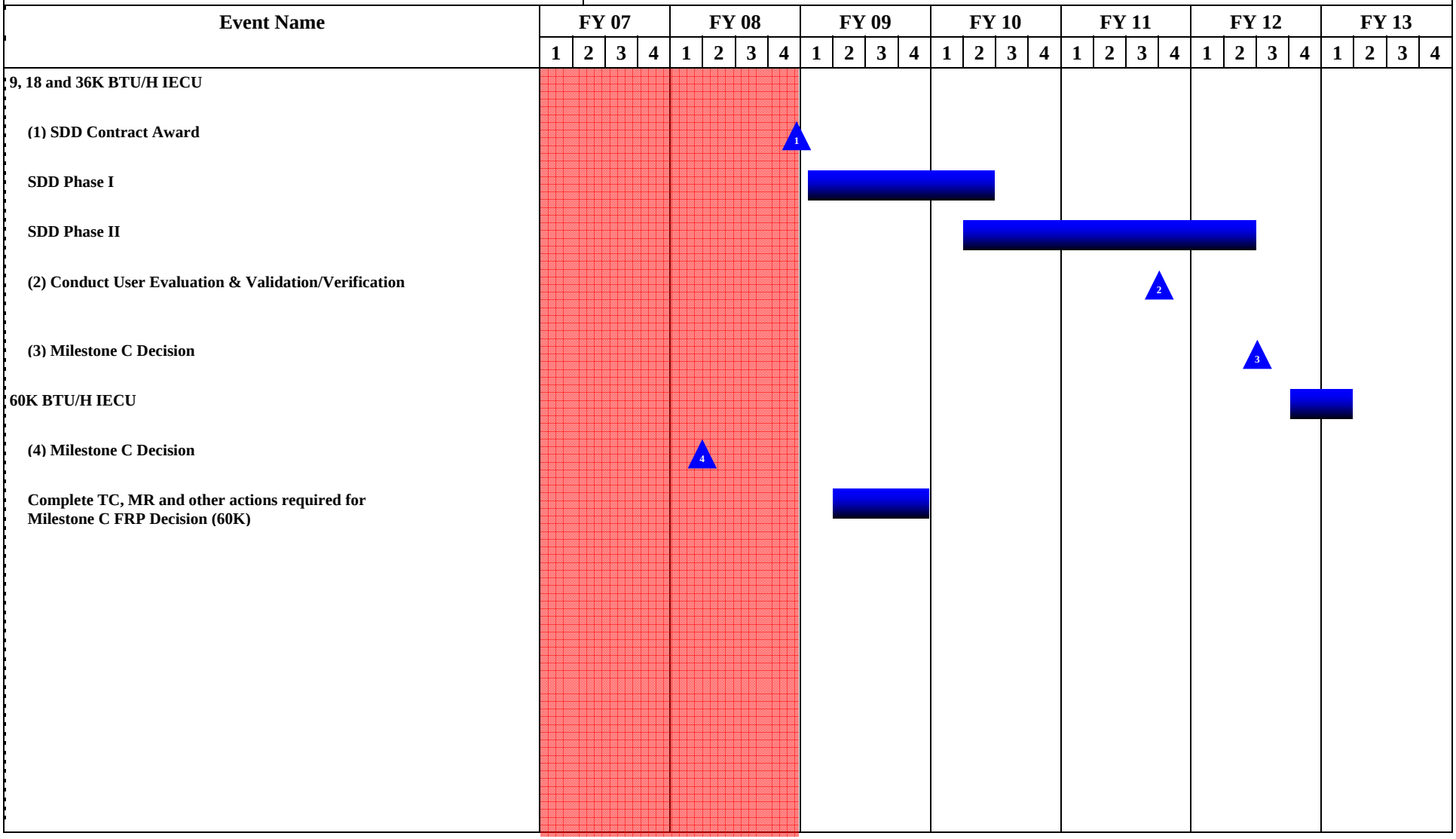
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L47



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604804A - Logistics and Engineer Equipment - Eng Dev**	**L47**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
9, 18 and 36K BTU/H IECU							
SDD Contract Award		4Q	1Q				
SDD Phase I			1Q - 4Q	1Q - 2Q			
SDD Phase II				2Q - 4Q	1Q - 4Q	1Q - 2Q	
Conduct User Evaluation & Validation/Verification					4Q		
Milestone C Decision						3Q	
Complete TC, MR, etc. for Full Rate Production (FRP) Decision						4Q	1Q
60K BTU/H IECU							
Milestone C Decision		2Q					
Complete TC, MR and other actions required for Milestone C FRP Decision (60K)			2Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	13037	10047	9858	10155	10444	10674	10908	Continuing	Continuing
485	Info Standards Interop Eng/Joint Interop Cert	5179	4838	4792	4884	5175	5289	5405	Continuing	Continuing
589	ARMY SYS ENGINEERING & WARFIGHTING TECH SUP	7858	5209	5066	5271	5269	5385	5503	Continuing	Continuing
615	JTRS-GROUND DOMAIN INTEGRATION									264301
61A	JTRS CLUSTER 5 DEVELOPMENT									220683
F99	NUCLEAR ARMS CTRL TECH - SENSORE NETWORK MONIT									22661

A. Mission Description and Budget Item Justification: This Program Element (PE) supports efforts to develop interoperability of Army programs and products, horizontally and vertically for the digitized battlefield. Project D485 supports Information Standards Interoperability Engineering and Joint Interoperability Certification. It provides the critical elements of the Army/Joint Technical Architecture, the mandated standards and communication protocols for Army/Joint ground and air operations, and crucial certification test tools to evaluate systems' interoperability for the Warfighter in support of the Vice Chief of Staff of the Army (VCSA) and Army Acquisition Executive (AAE). It also provides Joint certification testing and certification recommendations to the Joint Chiefs of Staff (JCS) for Army systems. This Army-wide effort directly supports the management, oversight, development, maintenance, and interoperability at the Army enterprise level C4I/IT (Command, Control, Communications, Computers, and Intelligence/Information Technology) architecture efforts required to implement Unit Set Fielding (USF), Software Blocking (SWB) Policy and Army Knowledge Management. Project D589 Army Systems Engineering (ASE) & Warfighter Technical Support provides essential technology expertise on all Systems Engineering and Technical Architecture (SE/TA) matters critical to gain Information Dominance and foster interoperability among all Army systems. The Weapons Systems Technical Architecture (WSTA), Project D591, supports the Army's development and employment of a Real-Time and Embedded Weapon Systems Common Operation Environment (COE). The WSTA Working Group also defines the Defense Information Standards Repository (DISR) specific Weapons Domain profiles and standards (mandatory and emerging) that provide the Department of Defense "building code" which is the foundation for designing, building, fielding, and supporting interoperable systems in an expedient and cost-effective manner. Project D615 supports the JTRS Cluster 1 program, which is being renamed to Ground Mobile Radios (GMR). This project provides for the development of Ground Vehicular platforms. Project D61A supports JTRS Cluster 5 program, which is being renamed to Handheld, Manpack, and Small Form Fit (HMS) radios. This project provides for the development of three radio form factors: Handheld; Manpack (including vehicular mounted); and a family of Small Form Fit (SFF) embedded applications. Project D629, Tactical Communications System - Demonstration Validation, provides for insertion of selected proven communications technology from program elements 0602782A, Project AH92 applied research and 0603008A, advanced technology development, into the next phase of development. The Protocol Investigation for the Next Generation (PING) program evaluates and assesses emerging network protocols, concentrating on the assessment and evaluation of the next generation of Internet Protocol (IPv6) and its protocol dependencies affecting the Army Enterprise Architecture. The Applied Communications and Information Networking (ACIN) project provides for the evaluation and capitalization of emerging commercial communications and networking technologies by leveraging advances, influencing development efforts, influencing standards and delivering technical solutions in support of emerging architectures (JTA-A).

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	13037	10047	9858
Current BES/President's Budget (FY 2009)	13037	10047	9858
Total Adjustments			
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
485	Info Standards Interop Eng/Joint Interop Cert	5179	4838	4792	4884	5175	5289	5405	Continuing	Continuing

A. Mission Description and Budget Item Justification: Focus for this project is to support the engineering or evaluation of commercially-available information technology (IT) tools to develop architecture products Information Technology based Command, Control, Computers, and Communications (C4/IT) systems such as Applications Program Interfaces for Weapons Systems. A significant effort will be on building Army (consistent with DoD) C4/IT technical standards-compliant Army data repositories that are web-accessible but secure. These repositories will be consistent with DoD standards and policies and virtually appear to be a single repository for Army C4/IT architecture products.

To support the Army Vice Chief of Staff (VCSA) and the Army Chief Information Officer/G6, as cited in the AEA Master Plan, this initiative fulfills the Clinger-Cohen Act mandate of developing sound integrated Information Technology (IT) architectures and the Army's Software Blocking Policy. The increased combat power of the Future Force will be dependent on the information superiority of network & knowledge centric warfare and the ability of systems to be fully ¿interoperable as a member of the joint, multinational, interagency team as well as emerging Future Force (FF) C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) Systems. It identifies and reduces interoperability issues earlier in the life cycle by intra-Army/FF/Joint/combined experiments and assessments, and through the establishment & sustainment of common standards. This Army wide effort directly supports the management, oversight, development, maintenance, and interoperability of the Army enterprise level C4I/IT architecture efforts required to implement Unit Set Fielding, Software Blocking and Army Enterprise Architecture (AEA). Specifically, this project resources the Army's messaging standards conformance authority in assessing compliance with the Defense Information Systems Repository (DISR), in meeting the warfighter information exchange requirements and in facilitating their interoperability. It also resources, in accordance with the DISR, the development and maintenance of the following information standards: Variable Message Format (VMF) & Combat Net Radio (CNR) protocol, which support Army/Joint ground operations; Tactical Digital Information Links (TADILs), which support Air Defense operations; and US Message Text Format (USMTF), which support Intel and Commanders operations. It provides the Army's lead for configuration management functions of these standards and test tools at both Army and Joint levels. This project resources the Army participation in joint/allied messaging certification testing & configuration management processes. This project also resources the development and fielding of a suite of four (4) crucial tools which are used throughout the entire Army. These tools which are currently under development will provide the ideal means to: a) validate JTA-A critical messaging and protocol standards; b) improve systems interoperability; c) verify/certify correct system implementations and interpretation to JTA-A; d) sustain/support digitization and transition of fielded systems; e) support Software Blocking and interoperability testing; f) provide Legacy AEA interoperability with Future Combat System (FCS) command and control systems. These crucial tools are critical to the JTA-A Compliance, Certification Testing mission & Interoperability programs. The task also supports the Army¿s transformation campaign while mitigating interoperability issues resulting in reducing cost & program slippages. This project also provides the Configuration Management & Control for the Software Blocking (SWB)/USF (Unit Set Fielding).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Develop and update architecture standards and protocols necessary to ensure C4ISR systems interoperabilty.	1552	1543	1529
Engineer, develop & publish Army Warfighter Information Standards (i.e. XML-USMTF/VMF,Wireless XML, database exchange, etc...) incorporating DoD standards requirements.	1000	977	968

Identify, analyze, and provide solutions to gaps in technical architecture standards requirements.	1140	1065	1055
Develop and engineer Army Net-Centric Enterprise Service standards and protocols supporting OSD Global Information Grid messaging requirements and serve as Army focal point for messaging working group.	1200	1121	1110
Knowledge Center Development - Build & update as necessary access to website repositories for key policies, directives, and architecture products.	141	132	130
Small Business Innovative Research/Small Business Technology Transfer Programs	146		
Total	5179	4838	4792

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

C. Acquisition Strategy The efforts funded in this project are non-system specific, interoperability experimentation, evaluation and certification across multiple systems. The contractual efforts/services are obtained from existing competitive omnibus support service contracts.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
485

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Labor	In House	USACECOM , Fort Monmouth, NJ	17548	5179		4838		4792		Cont.	Cont.	
Travel	In House	USACECOM, Fort Monmouth, NJ	457							Cont.	457	
Subtotal:			18005	5179		4838		4792		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Support	C/CPFF	Arinc, Fort Monmouth, NJ	5699								5699	
Development Support	C/CPAF	Telos, Fort Monmouth, NJ	4581								4581	
Development Support	C/CPFF	CSC, Fort Monmouth, NJ	1963								1963	
Development Support	C/CPFF	C3I, Fort Monmouth, NJ	1374								1374	
Development Support	SS/CPFF	Mitre, Fort Monmouth, NJ	280								280	
Development Support/ Army Enterprise Applications Architecture	C/T&M	Binary, Ft. Belvoir, VA	46								46	
Development Support- Knowledge Center	C/T&M	ITEL, Ft Monmouth, NJ	1198								1198	
Development Support	C/T&M	ITEL, Ft Monmouth, NJ	2640							Cont.	2640	
Development Support	C/T&M	Northrop Grumman (SEC SSES), Ft Monmouth, NJ	2579							Cont.	2579	
Technical Support	C/CPFF	TFE, Fort Monmouth, NJ	95							Cont.	95	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

Technical Support	C/CPFF	Marconi, Fort Monmouth, NJ	183								183	
Equipment	In House	USACECOM, NJ	485							Cont.	485	
Equipment (Development Support)	C/FFP	GTE, Tauton, MA	106								106	
Telecommunications	MIPR	USASC, Fort Huachuca, AZ	1145							Cont.	1145	
Subtotal:			22374							Cont.	22374	

Remarks: *Contracts/awards cited are 5 year (1 base + 4 option years). Future award dates imply future competitive award, contractor TBD.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**40379**	**5179**		**4838**		**4792**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

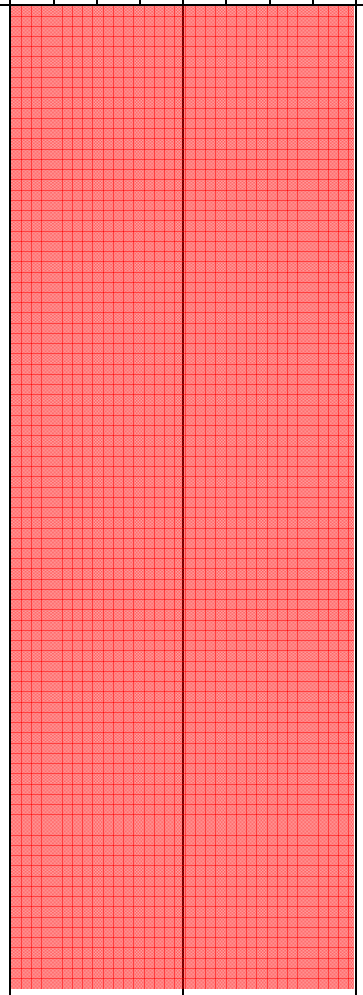
February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
485

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**485**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Knowledge Center Development							
Army Enterprise Architecture Policy Development							
Develop Comfiguration Management Processes							
Engineer Warfighter C4/IT Standards							
Evaluate, experiment, and provide systems integration for testing of ACTD, ATD,							
Experiment/Evaluate Joint Interoperability in conjunction with CIPO initiatives							
Conduct Joint/Coalition Experiments							
Evaluate, certify systems for and support SDD							
Evaluate, certify systems for and support FDC							
DOTE/JDEP Initial Concept/Evaluation/Experiments							
Develop and maintain Combat Net Radio (CNR) Standard							
Develop and maintain Variable Message Format (VMF) application header standards							
Develop and maintain Variable Message Format (VMF) Standards & standard databas							
Configuration Management and control of TADIL(A,B,J) and USMTF standards							
Represent Army on Army/DOD forums							
Test and promulgate Defense Collaborative Tools Set within the Army							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**589**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
589	ARMY SYS ENGINEERING & WARFIGHTING TECH SUP	7858	5209	5066	5271	5269	5385	5503	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project has been re-aligned to better support the mission of Army Chief of Staff (CSA) sanctioned Army Architecture Integration Center (AAIC) for developing, implementing and maintaining the Army Enterprise Architecture for Information Technology based Command, Control, Computers & Communications (C4/IT) systems. AAIC mission is to develop standards-based architecture products that are inter-operable within the Army as well as the with Joint, Interagency, and Multinational systems.

This project funded the Army Systems Engineering Office (ASEO) by providing technical research and development and modeling and simulation with the primary mission of developing technical architecture standards without compromising DoD-mandated standards but ensuring Army C4/IT systems under development are interoperable with legacy systems still utilized by the Army warfighter, which extend from tactical levels up through operational and strategic components of the Army Battle Command Architecture (ABCA), as well as, the institutional portions of the Enterprise to include the Army¿s Business Enterprise Architecture (BEA). The ASEO supports the Army CIO/G6 Architecture Integration Center (AAIC) in establishing an integrated AEA framework that complements, and is a natural extension of, the GIG-Enterprise Services (GIG-ES). In addition, the ASEO is an essential contributor in the development of the JBMC2 integrated architecture, the Battle Command Architecture, and emerging Cross-Service Integrated Architecture efforts. Each of these architecture definition and integration efforts is elemental to achieving the Army¿s goal of a NetCentric Future Force.

Previously, the Joint Technical Architecture (JTA) and JTA-Army (JTA-A) have provided the foundation for designing, building, fielding and supporting Joint interoperable Army systems in an expedient and cost-effective manner. With the revision to the standardization process as implemented by the Defense Information Systems Agency (DISA), technical architecture standards are encompassed in the new Defense Information Systems Repository (DISR) program. The Army must participate in DISR to ensure Army requirements are adequately captured and reflected in any new baseline developed by DISA. The ASEO identifies emerging standards in support of the integration of new technologies into existing Army systems and Advanced Technology Demonstrations/Advanced Concept Technology Demonstrations (ATD/ACTDs), enabling the Army transformation to the Future Force. The ASEO's work efforts in the development and maintenance of Army IT standards within the context of DISR guidelines are critical path elements to achieve transformation, increase joint interoperability and to provide the future Army with the ability to fight and win on tomorrow's battlefields. However, the Technical Architecture (TA) alone only provides the foundation for interoperability. Integrated Army Enterprise Architectures (e.g., ABCA, BEA, etc.) fuse Operational, Systems and Technical views of the Army Enterprise into cohesive and manageable information sets that allow the Army to make consequent decisions regarding the Army¿s inventory of present and future systems and their associated funding. In this area the ASEO specializes in defining and exploiting (through analysis) the relationships between architectural views to provide quantitative answers to complex questions regarding the Army¿s future capabilities and the roadmap the Army will pursue in realizing them.

The allocated resources fund two support efforts for CIO/G6. First, subsequent to the development of the AKEA (Army Knowledge Enterprise Architecture) Guidance Document, V1.1, the effort has shifted to development of the Army Technical Reference Model (TRM) for information broker/mediation services, and mapping the Army¿s architecture requirements to DOD Net-Centric Operations and Warfare Reference Model, including NCES (Net-Centric Enterprise Services). Second, support of the design, development, deployment and maintenance of the AAIC (Army Architecture Integration Cell) Web-based Knowledge Center continues with increased development requirements and

functionality, including the consolidation of architectural repositories, design of the DARS-A (Defense Architecture Repository-Army) database, and acting as the Army¿s agent for DARS/DARS-A.

Actual availability for FY2007 was $3,071K, due to ABO withhdrawl of $2M.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Analyze and provide Systems Engineering solutions to fill in gaps identified in C4ISR systems under development as well as fielded systems.	1407	1675	1600
Identify unique Army requirements to influence Army/DoD Architecture Technical standards under new Defense information Systems Repository developed under Defense Information Systems Agency (DISA) oversight. Prior years: Technically influence the development/implementation of Joint Technical Architecture (JTA). FY03 accomplishments: JTA Versions 5.x, 6.0 restructured and aligned with Net-Centric Philosophy and redefined scope and standards applicability. Planned activities: JTA-A version 7.0, 7.5 to include major revision of Information Security Section, to include results of Tactical Imagery Transport Study	185	210	176
Investigate information technical standards for inclusion in DSR, Defense Standards Repository. Global Information Grid (GIG) Technologies (XML, JPEG 2000, MPEG 4, IPV6)	185	180	180
Research and incorporate applicable emerging open standards-based commercial technologies to influence future force systems. Ensure that open commercial standards adopted by Future Force enabling systems are reflected in the DISR baseline. Maintain subject matter expertise on DISR, Defense Standards Repository Information Technology (IT) standards' mandates to ensure current and future force systems remain interoperable. Ensure a logical and cost-effective evolution of TA baselines while maximizing Joint interoperability.	740	740	740
DISR Compliance Requirements -Ensure Program Managers have an executable and effective strategy for implementing the Army/DoD Technical Architecture standards.	555	364	350
Validate/Integrate Army Enterprise Technical Views to enable the Army Technical and Systems Architect (CIO/G6) to monitor, assess and control the inherent risks associated with leveraging continuously changing technologies across all Army Enterprise Functionals/PEO/Communities.	925	830	800
Provide systems analysis for implementing IPv6 protocol across Army to ensure communications/data-sharing/data-exchange between systems. Prior Years: As a result of the decision agreed to at the 19 Dec 02 AKEA, GOSC, direction of MU17 funding was realigned to support the Protocols Investigation for the Next Generation (PING) program. The PING supported current technology agreements with various technology developers such as HP, Cisco, Microsoft and Telecordia. In addition, PING represented the ARMY CIO/G6 office at various ASD (NII)/DoD CIO meetings discussing DoD IPv6 policy and Transisition Planning, participated with JITC at DISA's Def Interop Comm Exercise 2003 (DICE 2003) demonstrating IPv6 interoperability, active member of DoD IPv6 Test Bed evaluating and testing IPv6 benefits and trade-offs, first Army lab participating with North American IPv6 Task Forces MoonV6 initiative, drafted ARmy's Phase I IPv6 Transition plan and initial transition strategy to migrate Army systems and networks to native IPv6 by FY08 in compliance with DoD policy,prepared evaluation criteria for selecting early IPv6 adopter candidates in support of the Army GIO/G6 office, hosted first Army IPv6 data call to collect systems impact information and baseline on Army IPv6 transition plan, provided IPv6 technical guidance and knowledge to the Army acquisition community.	370	370	370
Define and exploit (through analysis) the relationships between architectural views to provide quantitative answers to complex questions	370	370	370

regarding the Army's future capabilities and the roadmap the Army will pursue in realizing them.			
Provide systems engineering solutions including techincal architectures for Army systems supporting Joint Blue Force Situational Awareness (JBFSA)initiative	500	470	480
Development of software based voice over internet protocol	2400		
Small Business Innovative Research/Small Business Technology Transfer Programs	221		
Total	7858	5209	5066

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

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604805A - Command, Control, Communications Systems - Eng Dev

PROJECT
589

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government Systems Engineering Support	In House	ASEO, DCTS, PING/03 only, Fort Monmouth, NJ	15711	1978		1970		1970		Cont.	Cont.	
Contract Support	C & T&M-R	C3ISGI, Tinton Falls, NJ	3080								3080	
Contract Support	C & FP	TRW, Domingues Hills, CA	1281								1281	
Overhead		ASEO/WTS CECOM, Fort Monmouth, NJ	1422								1422	
Contract Systems Engineering Support	C & FP	Battelle, Alexandria, VA	354								354	
System Development and Integration	MIPR	PEO C3S, PM TOCS, Fort Monmouth, NJ	25								25	
Travel	In House	SEC, USACECOM, Ft. Monmouth, NJ	45	25		25		25			120	
Development Support	C/T&M	Northrop Grummon (SEC SSES), Ft. Monmouth, NJ	100	50		50		50			250	
Contract Systems Engineering Support	C & FP	SRI, Menlo Park, CA	199								199	
Labor (Internal Government)	In House	SEC, USACECOM, Ft. Monmouth, NJ	1734	867		850		856			4307	
Equipment	In House	USACECOM, NJ	10	5		5		5			25	
Development Support	C & TM	ITEL, Mays Landing, NJ	100	50		50		50			250	
Contract Support	C & FP	Lockheed Martin, Eatontown, NJ	545								545	
Development Support - Army Enterprise Applications Architecture	C/T&M	Binary, Ft. Belvoir, VA										
Contract Support	C & T&M	SAIC, Falls Church,	1811								1811	

		VA										
Contract Systems Engineering Support	C & FP	SRC, Atlanta, GA	612								612	
Contract Systems Engineering Support	SS & FP	MITRE, Tinton Falls, NJ	8131	299		290		290			9010	
Systems Engineering and Integration	MIPR	WTS - ISIO CECOM, Fort Monmouth, NJ	2341							Cont.	2341	
Contract Support	C & T&M	Datron, Simi Valley, CA	305								305	
Contract Systems Engineering Support	C & FP	Gemini, Billerica, MA	137								137	
Development Support- Knowledge Center	C & TM	ITEL, Mays Landing, NJ	849								849	
Contract Support	IPA Agreement	Rutgers University, New Brunswick, NJ	528								528	
Contract Systems Engineering Support	C & FP	Suntek Systems, Eatontown, NJ	460								460	
Contract Systems Engineering Support	C & FP	HTPi, Shrewsbury, NJ	145								145	
Contract Support	C & TM	Telos, Eatontown, NJ	24								24	
Engineering Support	MIPR	ISEC, Fort Huachuca, AZ	1357							Cont.	1357	
Contract Support	C & TM	PTG/CACI, Eatontown, NJ	26								26	
Contract Systems Engineering Support	C & FP	Litton, Reading, MA	245	245		240		240			970	
Contract Support	C & FP	CSC, Eatontown, NJ	1746								1746	
Contract Support	C & T&M	BAE, Tinton Falls, NJ	139								139	
Contract Support	C & FP	Janus Research Group, Appling GA	72								72	
Contract Systems Engineering Support	C & FPI	CSC, Eatontown, NJ	14096	1859		1649		1500			19104	
Contract Systems Engineering Support	C & FP	GTE/BBN, Cambridge, MA	960								960	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604805A - Command, Control, Communications Systems - Eng Dev**	**589**

Travel	In House	ASEO/WTS CECOM, Fort Monmouth, NJ	1536	80		80		80		Cont.	Cont.	
Development of software based VOIP	TBD			2400							2400	
Subtotal:			60126	7858		5209		5066		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**60126**	**7858**		**5209**		**5066**		**Cont.**	**Cont.**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	22226	27745	34971	33613	15488	17229	17643	Continuing	Continuing
812	MIL HIV VAC&DRUG DEV	4076	4635	4697	4541	4541	4539	4647	Continuing	Continuing
832	COMBAT MEDICAL MATL ED	3365	5241	14852	14177	5456	6176	6325	Continuing	Continuing
834	SOLDIER SYS PROT-ED	2917	1844	1783	1686	1679	1777	1820	Continuing	Continuing
849	INFEC DIS DRUG/VACC ED	2852	4002	13639	13209	3812	4737	4851	Continuing	Continuing
A11	LSTAT MEDICAL TECHNOLOGY (CA)	2130	3180							8953
A12	BIOMEDICAL ENGINEERING TECH & ADV MATERIALS (CA)	2528								7033
A14	CHITOSAN BANDAGE COMPONENT (CA)	4358								9628
CS5	MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)		8843							8843

A. Mission Description and Budget Item Justification: This program element (PE) funds advanced development of medical materiel within the System Demonstration and Low Rate Initial Production portions of the Acquisition Life Cycle. It supports products successfully transitioned through the Systems Development and Demonstration In-Process Review (IPR). This PE primarily includes conclusive human clinical trials, along with related stability and production manufacturing testing for medical pharmaceuticals, biologics, and devices. Added operational testing and evaluation (OT&E) for military unique requirements is evaluated and fulfilled as required.

Disease and non-battle injuries (DNBI) are the largest contributor to the medical footprint. Infectious disease vaccines and preventive drugs reduce the risk of service members contracting debilitating or fatal diseases, which reduces levels of DNBI affected soldiers and in turn, negates the requirement for supporting echelon 3 facilities in the theater of operations, as well as mitigates the strain placed on the Army's personnel replacement and logistical systems. This is especially important due to the higher risk posed by the ever expanding urban warfare environments. The reduction of patient evacuation requirements within Future Force (F2) units will act as a force multiplier, due to the retention of uniquely skilled and combat tested soldiers in the theater.

Combat Casualty Care devices and medicines have the major effects of: (1) enhancing forward care at the first responder level and, (2) reducing the medical footprint. The result is a far greater mobile and more easily sustained medical force. The F2 concept places soldiers into a more austere environment with lengthened evacuation times (both arrival and transit). This requires medics and first responders to improve their ability to save lives and extend stabilization. Reduction in weight, cube, and sustainment allows medical units to increase mobility and maintain contact with their supported Units of Action.

Soldier performance enhancers in the form of drugs or diagnostics, allow commanders to increase soldiers cognitive awareness and stamina. This improves soldiers operational capabilities and has the potential to reduce casualties.

The U.S. Army Medical Research and Materiel Command manages this program.

Project 812, Military HIV Vaccine and Development funds militarily relevant human immunodeficiency virus (HIV) research.

Major contractors/intra-governmental agencies include Allied Technologies & Consulting, IGR Enterprises, Army Medical Department Board Test Center, and SeQual Technologies, Inc.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	24536	15823	35190
Current BES/President's Budget (FY 2009)	22226	27745	34971
Total Adjustments	-2310	11922	-219
Congressional Program Reductions		-178	
Congressional Rescissions			
Congressional Increases		12100	
Reprogrammings	-1637		
SBIR/STTR Transfer	-673		
Adjustments to Budget Years			-219

In FY 07 reduction of $2.31 million was due to reprogramming to higher priorities.
In FY 08 increase of $12.1 million was due to Congressional adds to the following projects:
A11 LSTAT Medical Technology (CA) $3.2 million
CS5 Medical Materiel/Med Bio Defense Initiatives $8.9 million.

In FY 09 decrease of $219 thousand was due to adjustments to Budget Years.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**812**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
812 MIL HIV VAC&DRUG DEV	4076	4635	4697	4541	4541	4539	4647	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds Congressionally mandated, militarily relevant human immunodeficiency virus (HIV) medical countermeasures. These funds provide for engineering and manufacturing development of multiple candidate vaccines and drugs to permit large-scale field testing. Development efforts are focused on militarily unique needs affecting manning, mobilization, and deployment.

The major contractor is Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, MD.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Reviews, evaluations and trials of Human Immunodeficiency Virus (HIV) Vaccine: In FY07, continued the observation and follow-up phase of the multi-year Phase 3 trial of the Prime-Boost HIV Vaccine in Thailand, conducted and Interim Analysis of study data to date, and conducted a Design Readiness Review. In FY08, continue the observation and follow-up phase of the Phase 3 trial in Thailand. In FY09, complete the observaton and follow-up phase of the Phase 3 trial in Thailand and begin data analysis for the HIV Vaccine.	4076	4505	4697
Small Business Innovative Research/Small Business Technology Transfer Programs.		130	
Total	4076	4635	4697

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

C. Acquisition Strategy Test and evaluate commercially developed vaccine candidates in government-managed trials.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev

PROJECT
812

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	Cooperative Agreement	Henry M. Jackson Foundation, Rockville, MD	9721	2768		3282		3326			19097	
Subtotal:			9721	2768		3282		3326			19097	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			310	45		46		47			448	
Subtotal:			310	45		46		47			448	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	Government Laboratory	Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD	2755	1173		1213		1229			6370	
Subtotal:			2755	1173		1213		1229			6370	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**812**

No product/contract costs greater than $1M individually			314	90		94		95			593	
Subtotal:			314	90		94		95			593	
Project Total Cost:			**13100**	**4076**		**4635**		**4697**			**26508**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**812**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) HIV Vaccine Design Readiness Review (DRR)	1																											

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**812**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
HIV Vaccine Design Readiness Review (DRR)	1Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**832**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
832 COMBAT MEDICAL MATL ED	3365	5241	14852	14177	5456	6176	6325	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical products for the advancement of combat casualty care, especially far forward on the battlefield with first responders, combat lifesavers, and field medics. This primarily funds Phase 3 human clinical trials or mechanical engineering evaluations for efficacy of devices or biologics unique to military operational requirements. This work is frequently completed through a joint laboratory and contractor team with the contractor obtaining ultimate U.S. Food and Drug Administration (FDA) licensure. These products (enhanced location and diagnostic devices of patients and more potent resuscitative biologics) will decrease mortality rates and increase soldier's morale and willingness to place themselves in danger. Additionally, several products, Dental Field Treatment and Operating System (DEFTOS), Ventilatory Assist Device (VAD), and Oxygen Generator will reduce medical organizational sustainment footprint through smaller weight and cube volume, or equipment independence from supporting materiel. Priority is given to those products that provide the greatest clinical benefit balance with the technical and financial risks

Major contractors/intra-governmental agencies include: Bell Dental Inc., Allied Technologies & Consulting, IGR Enterprises, Army Medical Department Board Test Center, SeQual Technologies, Inc., and Enginivity, Inc.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Conduct testing & milestone reviews for the following field medical treatment and treatment aid devices: (1) Dental Field Treatment & Operating System (DEFTOS): In FY07, completed transition of latest model to field. (2) Ceramic Oxygen Generator (COG): In FY08, complete development of new prototype to satisfy form and fit requirements. In FY09, conduct technical and user evaluations. Obtain FDA clearance. Milestone C. (3) Rotary Valve Pressure Swing Adsorption Oxygen Generator (RVPSAOG): In FY08, conduct user testing and evaluation of Omni II system. In FY09, conduct Milestone C review of Omni II. Initiate low rate production. (4) Battery Powered IV Fluid Warmer: In FY07, conducted airworthiness release of line-powered unit. In FY08, conduct Milestone C.	3365	5097	14852
Small Business Innovative Research/Small Business Technology Transfer Programs.		144	
Total	3365	5241	14852

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

C. Acquisition Strategy Develop in-house or industrial prototypes in government-managed programs to meet military and regulatory requirements for production and fielding.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev

PROJECT
832

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Rotary Valve Pressure Swing Adsorption oxygen Generator		Sequal Technologies,Inc., San Diego, CA	2137	703		5241		14852			22933	
Cartledge Infuser		Smisson-Cartledge Biomedical L.L.C., Macon, GA	3110								3110	
Subtotal:			5247	703		5241		14852			26043	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Not Applicable												
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Not Applicable												
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**832**

No product/contract costs greater than $1M individually			15112	2662						Cont.	Cont.	
Subtotal:			15112	2662						Cont.	Cont.	
Project Total Cost:			**20359**	**3365**		**5241**		**14852**		**Cont.**	**Cont.**	

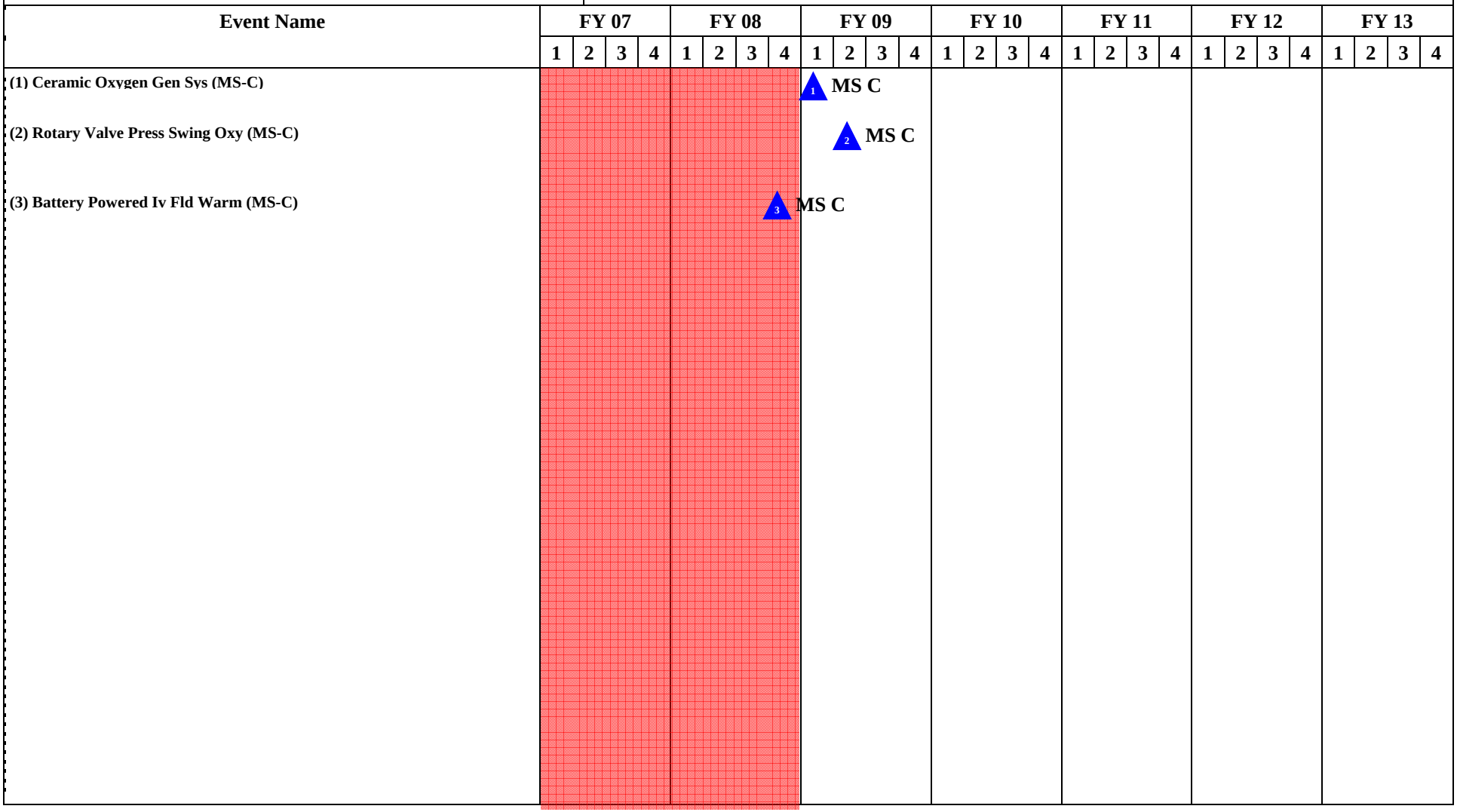
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev

PROJECT
832



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**832**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Ventilatory Assist Device (MS-C)			2Q				
Ceramic Oxygen Gen Sys (MS-C)			1Q				
Rotary Valve Press Swing Oxy (MS-C)			2Q				
Battery Powered Iv Fld Warm (MS-C)		4Q					
Cartledge Infuser (MS-C)		4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**834**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
834 SOLDIER SYS PROT-ED	2917	1844	1783	1686	1679	1777	1820	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports system development and demonstration of preventive medicine materiels to include devices and medicines in order to provide protection, sustainment, and enhancement of the physical and psychological capabilities of soldiers engaged in combat operations across environmental conditions. The focus is on reduction of personnel losses due to preventable disease and non-battle injuries through development of environmental and physiological performance monitors and other preventive medicine countermeasures.

Major contractor is Allermed Laboratories, Inc., San Diego, CA.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
(1) Special Medical emergency Evacuation Device (SMEED): FY 08, conduct Milestone C. (2) Life Support for Trauma and Transport (LSTAT): In FY08, conduct AWR for LSTAT-Lite in preparation for LRIP. (3) Coliform analyzer: In FY08, finalize design. In Fy 09, conduct technical testing and user evaluation.	2917	1792	1783
Small Business Innovative Research/Small Business Technology Transfer Programs		52	
Total	2917	1844	1783

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

C. Acquisition Strategy Test and evaluate in-house and commercially developed preventative medicine materiel to meet FDA and EPA regulatory requirements.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev

PROJECT
834

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			2317	1371		853		826			5367	
Congressional Add in Support of Chem-Bio Protection			4550								4550	
Subtotal:			6867	1371		853		826			9917	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			74	89		56		54			273	
Subtotal:			74	89		56		54			273	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			480	566		353		341			1740	
Subtotal:			480	566		353		341			1740	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**834**

No product/contract costs greater than $1M individually			901	891		582		562			2936	
Subtotal:			901	891		582		562			2936	
Project Total Cost:			**8322**	**2917**		**1844**		**1783**			**14866**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**834**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Special Medical emergency Evacuation Device (SMEED) (MS-C)	**MS C** ▲1																											

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**834**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Special Medical emergency Evacuation Device (SMEED) (MS-C)	4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**849**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
849 INFEC DIS DRUG/VACC ED	2852	4002	13639	13209	3812	4737	4851	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project funds technical development of candidate medical countermeasures for infectious diseases that occur within militarily relevant areas of the world. These products fall within three major areas: vaccines, drugs, and diagnostic kits/devices. The funds support conclusive human clinical trials for large-scale human efficacy testing, expanded human safety clinical trials, long-term animal studies, and related manufacturing tests. This work, which is jointly performed by military laboratories, civilian contracted pharmaceutical firms and foreign research partners, is directed toward the prevention of disease, early diagnosis if contracted, and speeding recovery once diagnosed. These trials are required to meet U.S. Food and Drug Administration (FDA) regulatory approval guidance, a mandatory obligation for all military products placed into the hands of medical providers or service members. Priority is based upon four major factors: (1) the extent of the disease within the Combatant Commands' theater of operations, (2) the clinical severity of the disease, (3) the technical maturity of the proposed solution, and (4) the affordability of the solution (development and production). Currently malaria, dysentery, hepatitis, and dengue diseases (which are found in Central Command, European Command, Southern Command, and Pacific Command areas) are at the top of the infectious disease requirements list.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Clinical trials, developmental testing, & reviews of malarial/antimalarial vaccines, drugs, diagnostics and insect repellents: In FY07 for Malaria Rapid Diagnostic Device (MRDD) conducted FDA's required Cross-Reactivity Laboratory Testing on human blood samples spiked with levels of infectious bacteria, parasites, and viruses to characterize if the MRDD cross-reacts with non-malaria infectious agents, conducted a FDA mandated Human Clinical Specificity Trial with volunteers who had a fever or history of fever and live within the United States in an area with low incidence of malaria. and submitted both test results to the FDA for their review, obtained FDA Clearance (approval) for commercial sales by the manufacturer, and developed an External Control Kit (to accompany the actual MRDD device) for use by clinical laboratories in support of their good laboratory practices. In FY07 for anti-malarial drug, Tafenoquine, conducted a Design Readiness Review to re-baseline product development plan and began protocol review for a drug-drug-Interaction human clinical trial; In FY07 for the Combined Camouflage Face Paint/Insect Repellent (CCFP) obtained approval for commercial sales from the Environmental Protection Agency (EPA) and prepared a clinical protocol for a soldier acceptability clinical trial. In FY08 for the MRDD program obtain FDA approval of the External Control Kit for marketing with the MRDD, and conduct a Milestone C. In FY08, for Tafenoquine ,begin a drug-drug interaction human clinical trial and begin pre-trial planning for a efficacy and safety human clinical trial in a malaria endemic country; and conduct the CCFP soldier acceptability clinical trial. In FY09, for Tafenoquine complete the drug-drug interaction clinical trial and conduct data analysis, continue pre-trial activities for Tafenoquine large-scale efficacy and safety human clinical trial (treatment indication) in a malaria endemic country; and for CCFP provide assistance to DLA.	2471	2100	6790
Clinical trials, developmental testing, and appropriate reviews of grouped vaccines, drugs, and diagnostics (Leishmaniasis, Dengue, and other viral diseases): In FY07, for the Paromomycin/Gentamicin Topical Antileishmanial Cream (for treatment of cutaneous (skin) leishmaniasis), conducted laboratory assay validations, manufactured drug batches for clinical use, continued stability testing of drug lots, and conducted pre-trial regulatory coordination for the pivotal human efficacy clinical trial in Tunisia; continued a technology watch on	381	1808	6849

the industry partner's progress with a new Hepatitis E vaccine; and for Dengue Tetravalent Vaccine (DTV) conducted potency and stability testing of manufactured vaccine lots. In FY08, continue monitoring industry partner's Hepatitis E vaccine effort; for the DTV continue vaccine potency & stability testing and support pre-trial activities in Thailand for an expanded safety and efficacy human clinical trial; and for the Topical Antileishmanial Cream begin preparing the FDA licensure submission package and continue stability testing of drug lots. In FY09 for Topical Antileishmanial Cream continue developing the FDA licensure submission package and continue the Tunisia pivotal human clinical efficacy trial; and for the DTV vaccine begin in Thailand the expanded safety and efficacy human clinical trial and continue vaccine potency & stability testing.			
Small Business Innovative Research/Small Business Technology Transfer Programs.		94	
Total	2852	4002	13639

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

C. Acquisition Strategy Test and evaluate in-house and commercially developed products in government-managed trials to meet FDA requirements and Environmental Protection Agency registration.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev

PROJECT
849

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			7230	967		1369		4665		Cont.	Cont.	Cont.
Subtotal:			7230	967		1369		4665		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			521	63		81		274		Cont.	Cont.	Cont.
Subtotal:			521	63		81		274		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			10611	1388		1893		6449		Cont.	Cont.	Cont.
Subtotal:			10611	1388		1893		6449		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than $1M individually			3062	434		659		2251		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)								February 2008		
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**							PROJECT **849**		
Subtotal:	3062	434		659		2251		Cont.	Cont.	Cont.
Project Total Cost:	**21424**	**2852**		**4002**		**13639**		**Cont.**	**Cont.**	**Cont.**

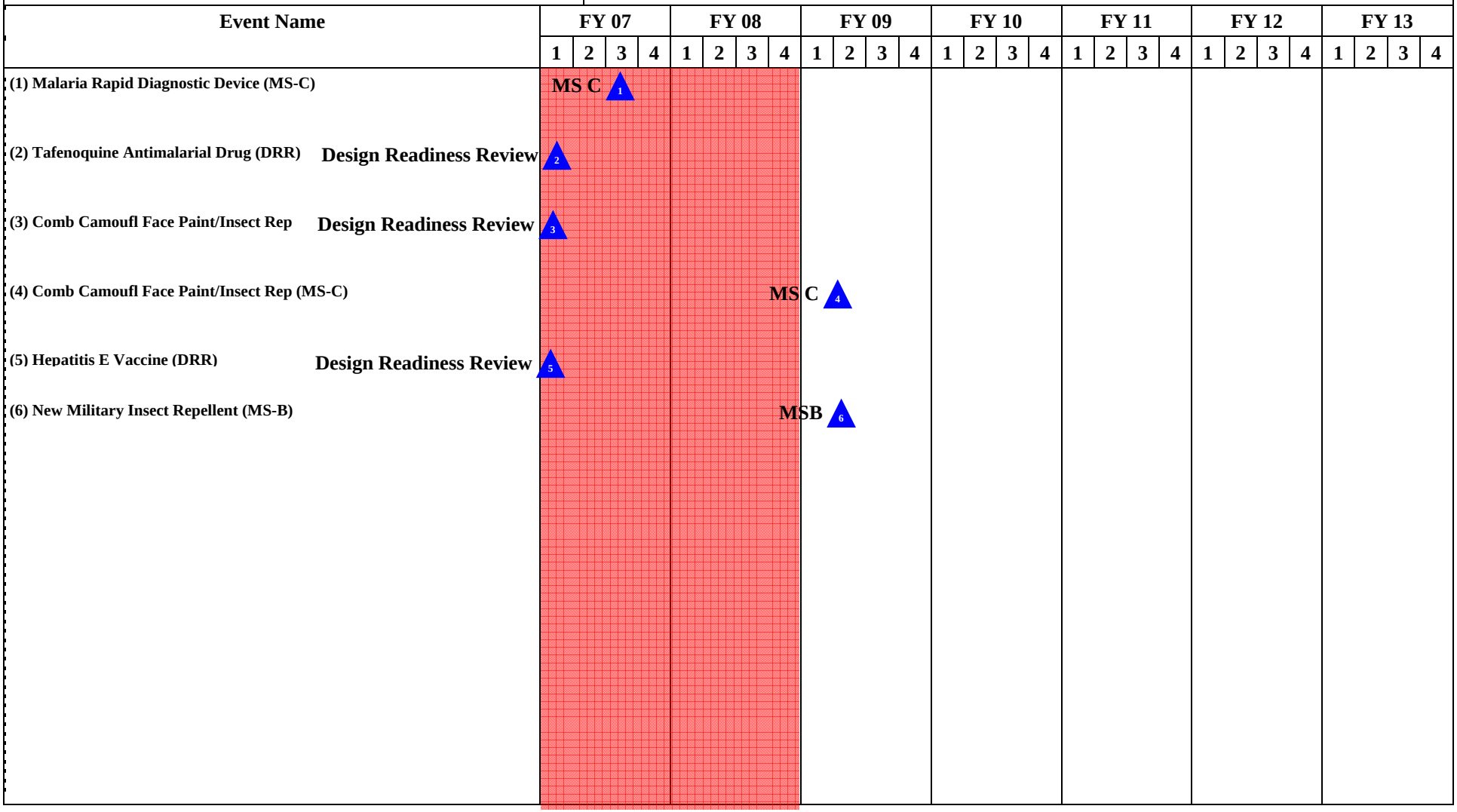
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev

PROJECT
849



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604807A - Medical Materiel/Medical Biological Defense Equipment - Eng Dev**	**849**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Malaria Rapid Diagnostic Device (MS-C)	3Q						
Tafenoquine Antimalarial Drug (DRR)	1Q						
Comb Camoufl Face Paint/Insect Rep	1Q						
New R4 Event							
Comb Camoufl Face Paint/Insect Rep (MS-C)			2Q				
Hepatitis E Vaccine (DRR)	1Q						
New Military Insect Repellent (MS-B)			2Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	97555	160079	126475	62393	41099	51217	39700	Continuing	Continuing
016	Close Combat Capabilities ENG DEV	52170	90528	74000	18966	19694	31088	21166	Continuing	Continuing
415	MINE NEUTRAL/DETECTION	42185	46807	52475	43427	21405	20129	18534	Continuing	Continuing
419	FULL SPECTRUM EFFECTS PLATFORM (F-SEP)									31300
434	ANTI-PERSONNEL LANDMINE ALTERNATIVES (NSD)		19563							31255
443	APL-A (MIXED SYSTEMS)	3200	3181							6381

A. Mission Description and Budget Item Justification: This program element (PE) provides for System Development and Demonstration of networked munitions and countermine systems. This PE implements the National Landmine Policy to develop alternatives to the non-self-destructing anti-vehicle and anti-personnel landmine systems.

Project 016, Close Combat Capabilities Engineering Development, provides for the development of the anti vehicle mine replacement, the Intelligent Munitions System (IMS), a Future Combat System Core system.

Project 415, Mine Neutralization/Detection provides for development of the Airborne Surveillance, Target Acquisition and Minefield Detection (ASTAMIDS), Ground Standoff Mine Detection System, Future Combat System (GSTAMIDS - FCS), and the Advanced Mine Detection System (AMDS).

Project 434, Anti-Personnel Landmine Alternatives (NSD) provides for system enhancements towards addressing committee language associated with the Spider program.

Project 443, APL-A (Mixed Systems) provides for a variety of demolition efforts to include development of Magneto-Inductive Remote Activation Munition System (MI-RAMS), and for performance enhancing product improvements to demolitions, grenades, pyrotechnics and non-lethal systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	92237	142315	89105
Current BES/President's Budget (FY 2009)	97555	160079	126475
Total Adjustments	5318	17764	37370
Congressional Program Reductions		-5124	
Congressional Rescissions			
Congressional Increases		22888	
Reprogrammings	7827		
SBIR/STTR Transfer	-2509		
Adjustments to Budget Years			37370

Change Summary Explanation: Funding:

FY 2008: $4.0M Congressional decrease for Intelligent Munitions System (IMS) for decoupling of requirement to FCS, Project 016. $3.2M Congressional increase for Magneto-Inductive Remote Activation Munition System (MI-RAMS), Project 443. $19.6M Congressional transfer from Spider production (Other Procurement Army, SSN B55501) to provide system enhancements towards addressing committee language associated with Spider program, Project 434.

FY 2009: Funds transfered ($37.4M) from IMS production (Procurement of Ammunition Army, SSN E96901), Project 016.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**016**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
016 Close Combat Capabilities ENG DEV	52170	90528	74000	18966	19694	31088	21166	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Intelligent Munitions System (IMS) is an integrated system of effects (lethal anti-vehicle, anti-personnel, non-lethal, demolitions), software, sensors/seekers and communications that may be emplaced by multiple means and is capable of unattended employment for the detection, classification, tracking and engagement of selected targets in accordance with the commander's intent. With its self-destructing/self-deactivating capability IMS is the materiel solution that will comply with the National Landmine Policy to replace all non-self-destructing anti-vehicle mines from the U.S. inventory. IMS will enhance the effectiveness for both the current and future force in the areas of force protection and battle space shaping.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY06-FY09: Continues with the IMS system development.	38142	66034	63704
FY06-FY09: Continues integration of IMS into FCS.	4200		
FY06-FY09: Continues to conduct IMS modeling and simulation.	1100	1340	970
FY06-FY09: Conduct IMS system Contractor/Government, Development and Operational Testing.	7410	17469	7365
FY06-FY09: Provide Government Furnished Material to contractor for development of IMS	1318	3152	
FY09-13 Develop IMS Trainer in coordination with PEO STRI			1961
Small Business Innovative Research/Small Business Technology Transfer Programs		2533	
Total	52170	90528	74000

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PAA E96901 - Intelligent Munitions System				82432	206653	207372	212180	Continuing	Continuing
OPA2 B55503 - Intelligent Munitions System (IMS) Remote Control Unit				19910	51663	51843	53044	Continuing	Continuing

Comment:

C. Acquisition Strategy The Intelligent Munitions System (IMS) is being developed as an evolutionary acquisition, in an incremental approach. The incremental strategy will address all IMS requirements in the Requirements Document. The first increment will meet US National Landmine Policy and provide future force capability to the current force.

In June 2006 a System Development and Demonstration contract was awarded to Textron Defense Systems of Wilmington, MA. This contract has two Low Rate Initial Production (LRIP) Options. Increment 1 will serve as the baseline design for the follow-on increments and enabling technology development will be conducted to ensure the follow-on increments requirement can be rapidly achieved at the lowest cost possible.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
016

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IMS System Development & Demonstration	C-CPIF	Textron Defense System Corp., Wilmington, MA	35646	36256	2Q	65745	2Q	44889	2Q	Cont.	Cont.	
IMS - MITRE provide C4 support		MITRE, McLean, VA	1296	1175	1Q	805	1-3Q	805	1-3Q	Cont.	Cont.	
Subtotal:			36942	37431		66550		45694		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IMS Engineering Support	MIPR	ARDEC Picatinny Arsenal, NJ	9438	4200	1Q	4800	1Q	5000	1Q	Cont.	Cont.	
IMS Engineering Support	MIPR	Various	3101	2948	1-4Q	200	1-4Q	200	1-4Q	Cont.	Cont.	
IMS - PM HMS	MIPR	Fort Monmouth, NJ	1400	1344	3Q						2744	
Subtotal:			13939	8492		5000		5200		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IMS	MIPR	Various	999	1030	1-4Q	200	1-4Q	200	1-2Q	Cont.	Cont.	
IMS	MIPR	DTC,APG,MD	7	1000	2Q	12850	2-4Q	19606	1-2Q	Cont.	Cont.	
Subtotal:			1006	2030		13050		19806		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

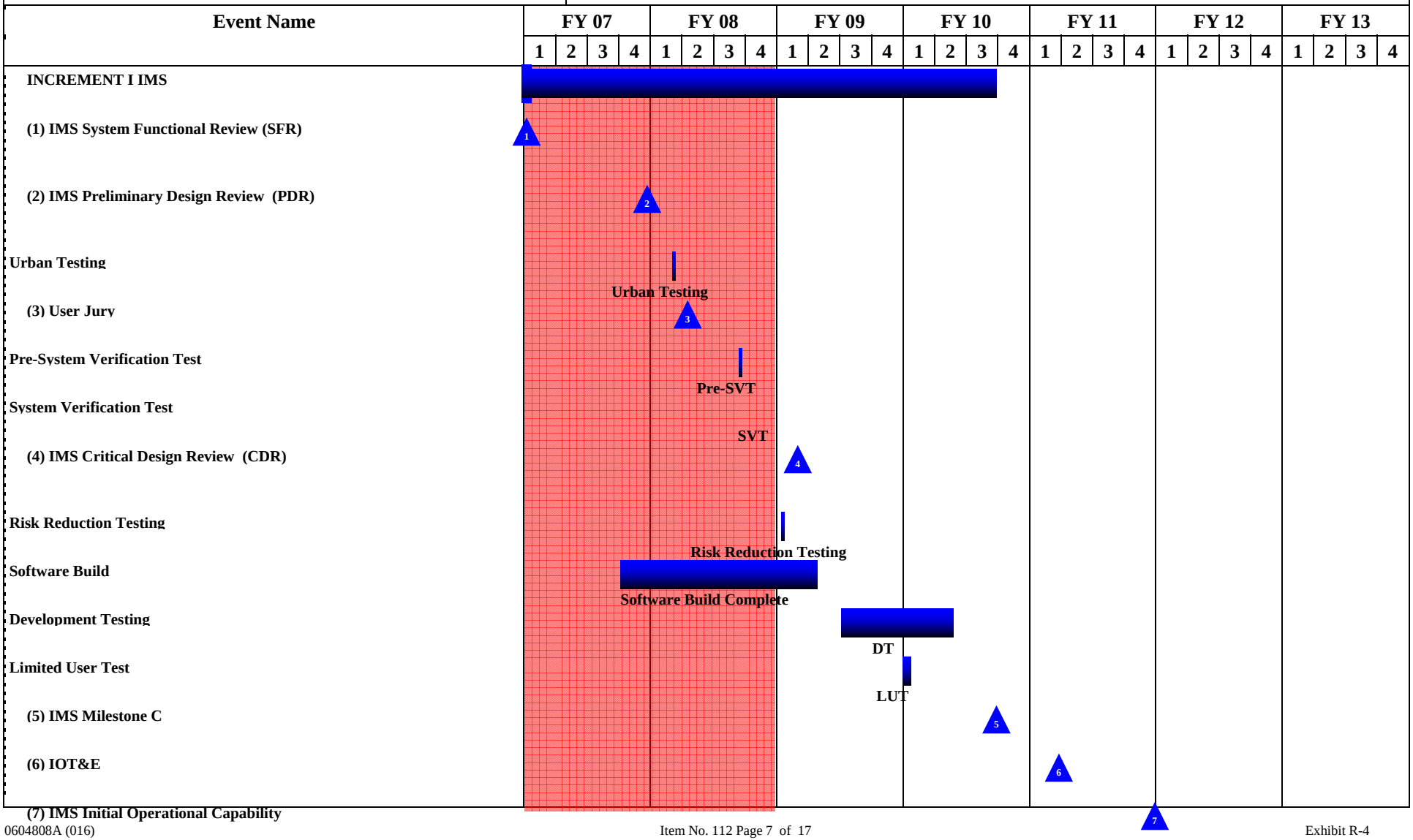
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**016**

IMS	In-House	PM CCS, Picatinny Arsenal, NJ	2067	3257	1-4Q	2400	1-4Q	2300	1-4Q	Cont.	Cont.	
IMS	T.O. Contract	Robbins-Goia, Alexandria, VA	829	440	2Q	450	2Q	500	2Q	Cont.	Cont.	
IMS	T.O. Contract	BRTRC, Alexandria, VA	282	520	2Q	545	2Q	500	2Q	Cont.	Cont.	
SBIR/STTR						2533					2533	
Subtotal:			3178	4217		5928		3300		Cont.	Cont.	
Project Total Cost:			**55065**	**52170**		**90528**		**74000**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**016**



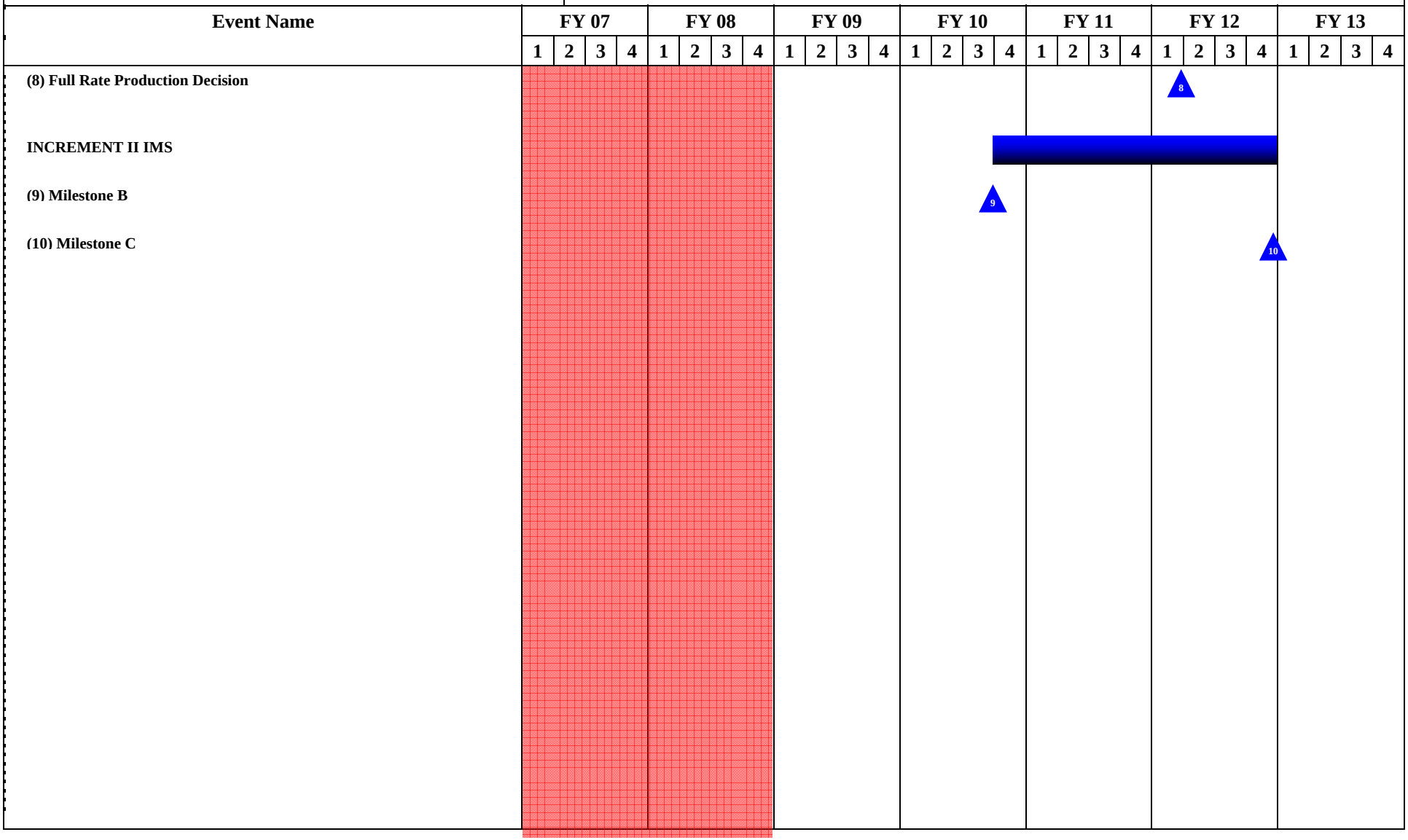
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
016



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**016**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
INCREMENT I IMS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q			
IMS System Functional Review (SFR)	1Q						
IMS Preliminary Design Review (PDR)	4Q						
Urban Testing		1Q					
User Jury		2Q					
Pre-System Verification Test		3Q					
System Verification Test		4Q					
IMS Critical Design Review (CDR)			1Q				
Risk Reduction Testing			1Q				
Software Build	4Q	1Q - 4Q	1Q - 2Q				
Development Testing			3Q - 4Q	1Q - 2Q			
Limited User Test				1Q			
IMS Milestone C				3Q			
IOT&E					1Q		
IMS Initial Operational Capability					4Q		
Full Rate Production Decision						1Q	
INCREMENT II IMS				3Q - 4Q	1Q - 4Q	1Q - 4Q	
Milestone B				3Q			
Milestone C						4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**415**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
415 MINE NEUTRAL/DETECTION	42185	46807	52475	43427	21405	20129	18534	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides System Development and Demonstration (SDD) for the Airborne Surveillance, Target Acquisition, and Minefield Detection System (ASTAMIDS). The ASTAMIDS uses Multi-Spectral Imaging (MSI) and visible/Near Infrared sensor mounted on a Future Combat System Brigade Combat Team (BCT) Unmanned Aerial Vehicle to detect and locate combat targets and to detect minefields and obstacles that are impediments to maneuver forces. ASTAMIDS can be used in tactical operations day and night, to detect surface emplaced and recently buried minefields and obstacles. ASTAMIDS can also recognize and identify combat targets and designate them for laser guided munitions.

Ground Standoff Mine Detection System Future Combat Systems (GSTAMIDS FCS). With the advent of the Army's Future Force Transformation, the GSTAMIDS Program was restructured to meet the countermine requirements for FCS. The April 2003 Joint Requirements Oversight Council (JROC) approved the FCS Operational Requirements Document (ORD) which includes countermine requirements. The GSTAMIDS FCS will provide the Unit of Action (UA) a capability that can be used for on-route mine detection, mine and temporary lane marking, precision mine neutralization and interfaces with FCS host platform(s) and Command, Control, Communications, and Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR). ASTAMIDS and GSTAMIDS have been identified in FCS Spinouts 2 & 3 respectively as part of the Army's initiative to spiral future capabilities to the current force.

Autonomous Mine Detection Sensors (AMDS) is the Mine Detection Mission Payload for a robotic platform.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: ASTAMIDS - Completes Spiral 1 Prototype Fabrication	1746		
FY07: ASTAMIDS - Initiates Contractor Functional and Qual Test	5738		
FY07: ASTAMIDS - Completes Critical Design Reviews	7204		
FY08: ASTAMIDS - Completes Spiral 2 Prototype Fabrication /Delivery AP #3, #4		3500	
FY08: ASTAMIDS - Initiates Spiral 3 Component Fabrication		4805	
FY08: ASTAMIDS - Initiates Spiral 3 Gimbal/Prototype Fabrication		5000	
FY08: ASTAMIDS - Completes Test Readiness Review (TRR)		3500	
FY08: ASTAMIDS - Completes Contractor DT Testing		5682	
FY08: ASTAMIDS - Delivery of AP PROTOTYPES #1, #2		3000	
FY09: ASTAMIDS - Completes Critical Design Review.			7204
FY09: ASTAMIDS _ Initiates Spiral 3 Gimbal/Prototype Fabrication			5000

FY09: ASTAMIDS - Complete Spiral 3 Prototype Fabrication AP#5, #6, #7			8379
FY09: ASTAMIDS - Deliver Spriral 2 & 3 Prototypes for FCS Integration/Test			2200
FY09: ASTAMIDS - Complete all SDD Contract Data Deliverables			1500
FY09: ASTAMIDS - Prepare MS C IPR Package			2000
FY09: ASTAMIDS - Prepare LRIP Procurement Package			1000
FY07: GSTAMIDS FCS - Computer system and subsystem manager with initial integration with scanning sensor	11371		
FY07: GSTAMIDS FCS - Conduct lane marker visibility experiment with manned platform	226		
FY07: GSTAMIDS FCS - Complete scanning sensor final prototype preliminary design and detection algorithm	6162		
FY07: GSTAMIDS FCS - Complete initial fuze prototype, RF command initiated fuze simulator, and initial design of munition	5714		
FY07: GSTAMIDS FCS - Complete Preliminary Design review, SRR 3, integration/test of computer and scanning sensor	3552		
FY07: GSTAMIDS FCS - Complete fabrication and build of surrogate test vehicle	472		
FY08: GSTAMIDS FCS - Complete computer s/w and hardware, deliver initial emulator hardware and s/w		2322	
FY08: GSTAMIDS FCS - Complete build and test of Lane Marking subsystem final prototype		2439	
FY08: GSTAMIDS FCS - Complete build and test of scanning sensor final prototype and deployment mechanism		4266	
FY08: GSTAMIDS FCS - Complete neutralizer munition design, neutralizer magazine and deliver mechanism design		7287	
FY08 - GSTAMIDS FCS - Complete critical design review and final prototype development and testing		3785	
FY09 _ GSTAMIDS FCS _ Continue development of the Mine Neutralization Subsystem			12316
FY09 _ GSTAMIDS FCS _ Complete integration and testing of the Mine Detection Subsystem			4440
FY09 _ GSTAMIDS FCS _ Complete integration and testing of the Lane Marking subsystem			1776
FY09 _ GSTAMIDS FCS _ Complete Integration and testing of the GSTAMIDS Computer Subsystem			3700
FY09 _ GSTAMIDS FCS _ Complete Test Review for Final Prototype and conduct Contractor Verification Testing in the Systems Integration Laboratory and on the Surrogate Test Vehicle.			2960
Small Business Innovative Research/Small Business Technology Transfer Programs		1221	
Total	42185	46807	52475

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PE 0603619A, Project 606, Countermine/Barrier Advanced Dev	1022	24580	29234	18873	19077	19666	20172	Continuing	Continuing
OPA 3, R68102, GSTAMIDS / Interim capability	965921	62590	46783	67656	109742	118412	29828	Continuing	Continuing

Comment: Program R68102 includes route clearing vehicles procured for OIF / OEF.

C. Acquisition Strategy The ASTAMIDS competitively selected Prime System contractor was awarded Cost Plus Incentive Fee (CPIF) System Development and Demonstration (SDD) in FY03 after MDA Milestone B approval. Milestone C is scheduled for FY 2009.

GSTAMIDS FCS entered the SDD Phase in June 2004 with MDA approval of MS B and competitively awarded a SDD Cost Plus Fixed Fee (CPFF) contract. Milestsone C is scheduled for 2Q FY2013, in conjunction with FCS Mule-C. Production will be initiated/executed via noncompetitive contract in FY2013.

AMDS - The acquisition strategy for SDD supports a competitive effort with one or more contractors/technology approaches. AMDS funding will transition from Advanced Development (D606) to Engineering Development (D415) in FY2011.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

PROJECT
415

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
GSTAMIDS FCS	C-CPFF	BAE Systems, Austin,TX	32758	20823	1Q	13932	1Q	16826		Cont.	Cont.	Cont.
ASTAMIDS	C-CPIF	Northurp Grumman	26220	9300	1Q	17873		19100		Cont.	Cont.	Cont.
Subtotal:			58978	30123		31805		35926		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
GSTAMIDS FCS	MIPR	Various OGAs	715	1333	1Q	1582	1Q	1639	1Q	Cont.	Cont.	
GSTAMIDS FCS Engineering Support	MIPR	NVESD/CECOM, Ft Belvoir, VA	1662	2145	1Q	1959	1Q	2900	1Q	Cont.	Cont.	
GSTAMIDS FCS Support	Task Orders	Various Contractors	305	360	1Q	360	1Q	418	1Q	Cont.	Cont.	
ASTAMIDS Engineering Support	MIPR	NVESD/CECOM, Fortt Belvoir, VA	1266	1550	1Q	1300	1Q	1548	1Q	Cont.	Cont.	
ASTAMIDS Support	Various	Various	131	21	1Q	171	1Q	1101	1Q	Cont.	Cont.	
Subtotal:			4079	5409		5372		7606		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
GSTAMIDS FCS Test Support	MIPR	ATEC, Alexandria, VA	620	509	2Q	250	2Q	500		Cont.	Cont.	
ASTAMIDS	MIPR	ATEC, Alexandria, VA	175	1950	2Q	2623	2Q	2980		Cont.	Cont.	
Subtotal:			795	2459		2873		3480		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604808A - Landmine Warfare/Barrier - Eng Dev

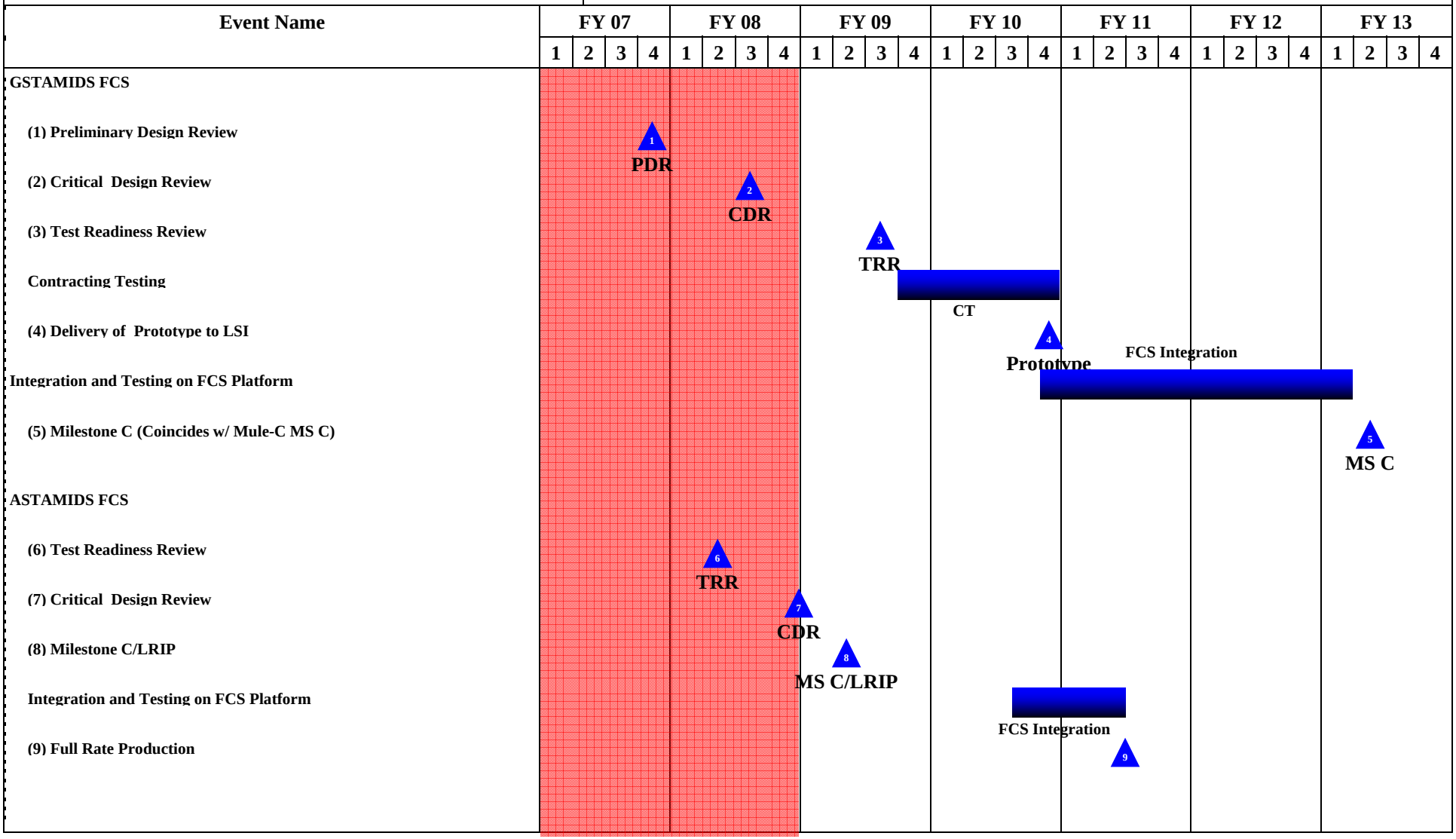
PROJECT
415

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program management	In-House	PM-CCS, Picatinny Arsenal, NJ	601	2314	1-4Q	3786	1-4Q	3558	1-4Q	Cont.	Cont.	
Program management Contractor support	Task Order	BRTRC	1885	1880	1-4Q	1750		1905	1-4Q	Cont.	Cont.	
SIBR/STTR						1221					1221	
Subtotal:			2486	4194		6757		5463		Cont.	Cont.	
Project Total Cost:			**66338**	**42185**		**46807**		**52475**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**415**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604808A - Landmine Warfare/Barrier - Eng Dev**	**415**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
GSTAMIDS FCS							
Milestone B							
Preliminary Design Review	4Q						
Critical Design Review		3Q					
Test Readiness Review			3Q				
Contracting Testing			4Q	1Q - 4Q			
Delivery of Prototype to LSI				4Q			
Integration and Testing on FCS Platform				4Q	1Q - 4Q	1Q - 4Q	1Q
Milestone C (Coincides w/ Mule-C MS C)							2Q
ASTAMIDS FCS			2Q				
Milestone B							
Preliminary Design Review							
Test Readiness Review		2Q					
Critical Design Review			1Q				
Milestone C/LRIP			2Q				
Integration and Testing on FCS Platform				3Q - 4Q	1Q - 2Q		
Full Rate Production					2Q		
AMDS							
Milesstone B			2Q				
System Requirements Review				4Q			
Preliminary Design Review					4Q		
Critical Design Review						2Q	
Prototype Deliveries							4Q
Milestone C							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
708 XM982 PROJECTILE	99344	64214	78197	43313	2778	2115	2315	Continuing	Continuing

A. Mission Description and Budget Item Justification: Excalibur provides improved fire support through a Precision Guided Extended Range family of munitions with greatly increased accuracy and offer significant reduction in collateral damage in most of all urban environments. The Excalibur will be interoperable with the M777A2 Lightweight 155mm howitzer (LW155), the M109A6 (Paladin) howitzer, and the Future Combat System (FCS) Non-Line of Sight Cannon (NLOS-C). Excalibur will provide a 33% range increase over current Rocket Assisted Projectiles, with a 10 meter accuracy (Circular Error Probable) at all ranges. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributes resources towards the development in accordance with an established Project Agreement.

The Excalibur program is using an incremental development approach to provide a combat capability to the Soldier as quickly as possible, and to deliver advanced capabilities and lower costs as technology matures. The Increment Ia-1 is being fielded to the Muli National Forces - Iraq (MNF-I) in Iraq to fulfill an Urgent Need Request. Additional fielding in FY08 is planned to LW155 howitzers. Increment Ia-2, qualification scheduled to complete in FY08, will provide greatly increased range to LW155, Paladin and FCS Cannon forces Army-wide when fielded. The third planned increment will provide a further performance improvement while significantly lowering unit costs.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Complete airframe structure, warhead, guidance, systems and procure and test projectiles for system level qualification testing for Increment Ia qualification.	73856	16655	
Conduct 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 reliability.	3725	11872	16526
Procure development test hardware and conduct test and evaluation.	6230	4806	3500
Engineering support for Excalibur platform integration to include development and qualification of the Enhanced Platform Integration Kit and Portable Inductive Artillery Fuze Setter (EPIAFS), Portable Excalibur Fire Control System (PEFCS), Advanced Field Artillery Tactical Direction System (AFATDS), and digital howitzer integration	4880	750	200
Procure production representative projectiles and conduct Independent Operational Test & Evaluation (IOT&E) efforts for Increment Ia.	9908	2185	250
Initiate and implement follow-on Artillery Precision Development	745	26202	57721
Small Business Innovative Research/Small Business Technology Transfer Programs.		1744	
Total	99344	64214	78197

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	101422	63039	78532
Current BES/President's Budget (FY 2009)	99344	64214	78197
Total Adjustments	-2078	1175	-335
Congressional Program Reductions		-425	
Congressional Rescissions			
Congressional Increases		1600	
Reprogrammings	745		
SBIR/STTR Transfer	-2823		
Adjustments to Budget Years			-335

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Procurement Ammunition Army: Proj 155mm Extended Range: XM982-U Excalibur: E80103	69862	28586	34220	64753	61915	85939	102291	1074793	1522359
OPA2: Enhanced Portable Inductive Fuze Setter (E-PIAFS): AD3260	7188	7521	2579	1273					18561

Comment:

D. Acquisition Strategy Excalibur is a family of Precision Guided Extended Range Munitions. A competitive source selection awarded an Engineering and Manufacturing Development (E&MD) contract for the initial increment, with options for the other increment's development and all Low Rate Initial Production quantities (LRIP). In coordination with the Defense Acquisition Executive, the Army has implemented an incremental development process that provided for an early fielding capability in FY07 in response to an Urgent Needs Statement. The Product Manager's Office is currently managing a contract for the Increment Ia-1 LRIP concurrent with the balance of System Development and Demonstration (SDD) for follow-on Artillery Precision Development.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604814A - Artillery Munitions - EMD

PROJECT
708

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Excalibur Increment Ia Development	C/CPIF	Raytheon Missile System,Tucson, AZ	374970	41675	1-4Q	14308	2-4Q				430953	
Fee on Excalibur Development Contract	N/A	Raytheon Missile System,Tucson, AZ	29354	6025	2-4Q						35379	
TCM Merger Assessment	FP	Bofors Defence, Karlskoga, Sweden	14430								14430	
Platform Integration-Systems Contractor	MIPR	ARES, Annapolis, MD	600	120	2Q	120	2Q	120	2Q	Cont.	Cont.	
Misc Support Contracts	Various	Various	2116	350	1-2Q	400	1-2Q	200	1-2Q	Cont.	Cont.	
Platform Integration/Fire Control - AFATDS	SS/CPIF	Raytheon AFATDS, Ft Wayne, IN	4495	450	1-2Q	300	1-2Q	200	1-2Q	Cont.	Cont.	
Platform Integration Firing Tables Development	MIPR	ARDEC, Firing Tables Branch, Picatinny, NJ/Aberdeen, MD	1724	250	1Q	150	1Q	150	1Q	Cont.	Cont.	
Platform Integration LW155 M777A2	C/CPIF	BAE, Burlington Vt.	11989			50	2Q				12039	
SS-SFM Test Projectiles	C/FFP	Various	10815								10815	
Follow-On Precision Artillery development	Various	Various		745	2-4Q	21500	2-4Q	64207	1-4Q	Cont.	Cont.	
Govt IPT Support Platform Integration Development	MIPR	ARDEC, Picatinny, NJ	2850	3700	1-4Q	250	1-4Q	500	1-4Q	Cont.	Cont.	
Platform Integration & EPIAFS Software Development	MIPR	Navy, Surface Warfare Center, MD	230								230	
Follow-On Precision Artillery risk reduction	C/CPFF	DOTC, Picatinny, NJ		3234	2Q					Cont.	Cont.	
ARDEC fuze technology maturation	DOTC	Picatinny, NJ				2500	2Q	1200	2Q		3700	
Subtotal:			453573	56549		39578		66577		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604814A - Artillery Munitions - EMD

PROJECT
708

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In House	PM Excalibur , Picatinny, NJ	20612	3458	1-4Q	2103	1-4Q	980	1-4Q	Cont.	Cont.	
Government IPT Support-Excalibur XM982	MIPR	ARDEC, Picatinny, NJ	41733	12306	1-4Q	5380	1-4Q	4370	1-4Q	Cont.	Cont.	
Government TCM Support	MIPR	ARDEC, Picatinny, NJ	910								910	
Goverment Support- Ft Sill	MIPR	Ft. Sill, OK	2827	582	1-2Q	458	1-2Q	200	1-2Q	Cont.	Cont.	
Paladin Platform Integration	MIPR	PM Paladin Picatinny, NJ	650	280	1-2Q						930	
Modeling and Structural Development	MIPR	Army Research Labs, Adelphi, MD	5976	1198	1-4Q	400	1-4Q	200	1-4Q	Cont.	Cont.	
Govt IPT Support Platform Integration	MIPR	ARDEC, Picatinny, NJ	5591	450	1-4Q	200	1-4Q	120	1-4Q	Cont.	Cont.	
Milestone Support	SS/FP	Camber, Alexandria, VA	1290	250	2Q		1Q	250	1-4Q	Cont.	Cont.	
Technical Spt Contract for Platform Integration	SS/FP	Camber, Dallas, TX	696	125	1-2Q			150	1-2Q	Cont.	Cont.	
Fire Control development support	MIPR	Ft Monmouth, NJ/Ft Sill, OK	883	125	1-2Q					Cont.	Cont.	
Miscellaneous Support	MIPR	Various	1375	2475	1-4Q	300	1-4Q	300	1-4Q	Cont.	Cont.	
Platform Integration Software Support	MIPR	Navy Surface Warfare Center, MD	390								390	
PM CAS SS-SFM	In-House	PM CAS, Picatinny, NJ	700								700	
Government IPT Support - SS-SFM	MIPR	ARDEC, Picatinny, NJ	1625								1625	
Increment Ia Engineering Services	C/CPFF	DRS, Eatontown, NJ		5784	4Q	6261	1-4Q				12045	
Increment Ia Engineering Services	TBS	TBS				1500	2-4Q	1500	1-4Q	Cont.	Cont.	
Subtotal:			85258	27033		16602		8070		Cont.	Cont.	

III. Test And Evaluation	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604814A - Artillery Munitions - EMD

PROJECT
708

	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
TECOM Test Range	MIPR	YPG, Yuma, AZ	13893	4600	1-4Q	2350	1-4Q	2000	1-4Q	Cont.	Cont.	
Test Instrumentation and Analysis	MIPR	Army Research Labs, Adelphi, MD	3252	125	1-4Q	150	1-4Q	350	1-4Q	Cont.	Cont.	
Telemetry Support	SS/FF	Physical Science Laboratories (PSL), Las Cruces, NM	1996	550	2Q	400	2Q	450	2Q	Cont.	Cont.	
Telemetry Support	MIPR	ARDEC, Picatinny, NJ	12318	4743	1-4Q	940	1-4Q	250	1-4Q	Cont.	Cont.	
Telemetry Cryptographic Support & Anti-Jam Support	MIPR	Ft. Huachuca, AZ	138	85	2-3Q	500	2-3Q	50	2-3Q		773	
Tri-Service Software Assessment	MIPR	OSD, Wash, DC	61								61	
Operational Test Support & AEC	MIPR	ATEC, Alexandria, VA	5390	3281	2Q	500	1-4Q				9171	
Target Replacement, Definition, Maintenance and Repair and Threat Assessment	MIPR	Target Management Office, Huntsville, AL.	1000	250	1-2Q	500	2-3Q	100	2-3Q	Cont.	Cont.	
ARDEC Testing	MIPR	ARDEC, Picatinny, NJ	1515	350	1-4Q	450	1-4Q	350	1-4Q	Cont.	Cont.	
Test Gun Equipment	MIPR	Watervliet Arsenal, NY	3772	200	1-2Q					Cont.	Cont.	
SS-SFM Testing	MIPR	Yuma Proving Grounds, Yuma, AZ	2300								2300	
Live Fire Test and Evaluation	MIPR	ARL, Aberdeen, MD		296	1-4Q	300	1-4Q			Cont.	Cont.	
White Sands Missile Range	MIPR	White Sands Missile Range, NM		1032	2-3Q					Cont.	Cont.	
Test Hardware	SS/CPFF	SAVIT, Parsippanny, NJ		250	2-3Q	200	2-3Q				450	
Subtotal:			45635	15762		6290		3550		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR						1744					1744	
Subtotal:						1744					1744	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**

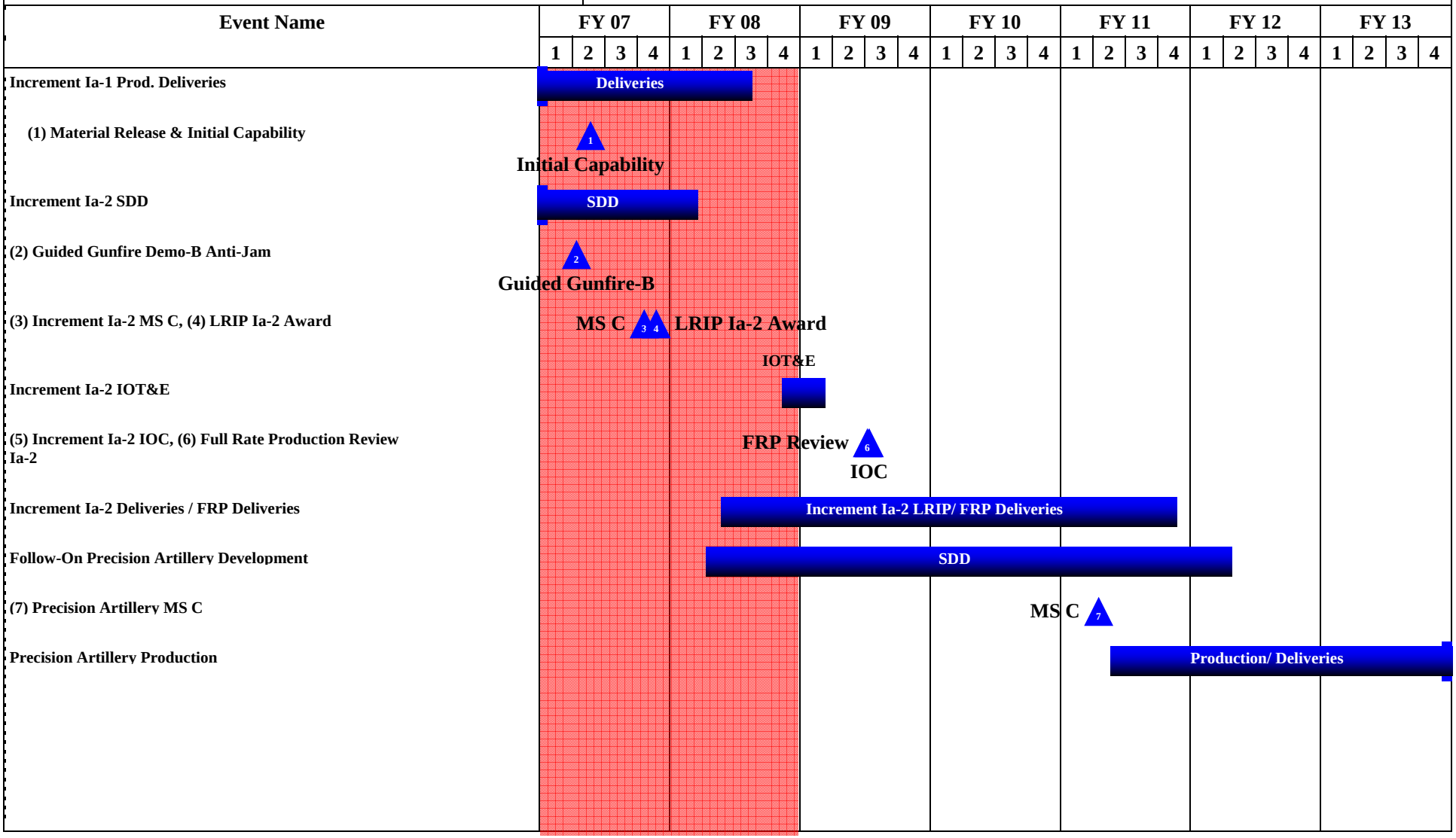
Remarks: Not Applicable

Project Total Cost:	**584466**	**99344**		**64214**		**78197**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604814A - Artillery Munitions - EMD**	**708**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Increment Ia-1 Prod. Deliveries	1Q - 4Q	1Q - 3Q					
Material Release & Initial Capability	2Q						
Increment Ia-2 SDD	1Q - 4Q	1Q					
Guided Gunfire Demo-B Anti-Jam	2Q						
Increment Ia-2 MS C	4Q						
LRIP Ia-2 Award	4Q						
Increment Ia-2 IOT&E		4Q	1Q				
Increment Ia-2 IOC			3Q				
Full Rate Production Review Ia-2			3Q				
Increment Ia-2 Deliveries / FRP Deliveries		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Follow-On Precision Artillery Development		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q	
Precision Artillery MS C					2Q		
Precision Artillery Production					2Q - 4Q	1Q - 4Q	1Q - 4Q

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)							February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604814A - Artillery Munitions - EMD**						PROJECT **708**
Funding in $000							
Program	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
XM982 Excalibur							
Total Termination Liability Funding:							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
482 Ground Combat Identification	38	11290	10909						22237

A. Mission Description and Budget Item Justification: Combat Identification (CID) is a system to maximize overall combat effectiveness by minimizing and mitigating incidents of fratricide and maximizing the situational understanding of the trigger puller across a broad spectrum of Joint and Coalition vehicles. This is achieved by rapid, reliable identification of friends, enemies/foes, and neutrals in the Joint and Coalition battle space. Joint Cooperative Target ID-Ground (JCTI-G) supports the development of mounted ground-to-ground (G-G) CID solutions for the current force, while insuring interoperability with the Future Combat System (FCS). Air to ground is the Army's critical gap for CID. Plan to assess the most cost effective solution for Air to ground CID.

FY09 supports JTCI-G efforts and air to ground integration into attack helicopters.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Prepare JCTI-G Milestone (MS) B		1000	1000
Initiate JCTI-G System Demonstration and Development (SDD)			1000
JCTI-G Risk Reduction Effort		9974	4930
BTID Cost Reduction Effort	38		
Execute JCTI-SDD			2979
Air to Ground Risk Reduction Effort			1000
Small Business Innovative Research/Small Business Technology Transfer Programs		316	
Total	38	11290	10909

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	39	11362	3404
Current BES/President's Budget (FY 2009)	38	11290	10909
Total Adjustments	-1	-72	7505
Congressional Program Reductions		-72	
Congressional Recissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-1		
Adjustments to Budget Years			7505

Program Summary Explanation: Funding - FY 2009: Funding increse to support the Combat Identification program.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA2, SSN BA0510 Combat Identification Program		4199		53722	101105	103306	96376	Continuing	Continuing

Comment:

D. Acquisition Strategy C. Acquisition Strategy : JCTI-G This will be a joint Army and Marine Corps acquisition beginning with a Milestone B decision to move forward with an SDD effort for a Cooperative Target Identification (CTI) device for use in joint and coalition operations. Post Milestone B activities will consist of the solicitation of a competitive cost-plus contract award to baseline the design consistent with the existing Joint Capability Development Document (CDD) and to conduct a demonstration phase, resulting in a baseline production configuration item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604817A - Combat Identification

PROJECT
482

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
B-Kit Development	C/CPAF	TRW, CA	69765								69765	69765
A-Kit Development (Abrams)	C/CPFF	GDLS, MI	10909								10909	10909
A- Kit Development (Bradley)	C/CPFF	UDLP, CA	3364								3364	3364
A-Kit Development (Various)	Misc.	E&S, TRW, UDLP, AM General, Raytheon.	5836								5836	5836
Air-to-Ground Efforts	MIPR	I2WD Ft. Monmouth, NJ	2206								2206	
Air-to-Ground Solution Efforts	MIPR	Sandia National Labs/DOE Albuquerque, NM	550								550	
Combat Identification International Efforts	C/CPFF	Raytheon Ft. Wayne, IN	415								415	
BTID Cost Reduction Efforts	FFP	Raytheon Ft. Wayne, IN	5064	38	4Q						5102	
RF Tags Program Efforts	MIPR	I2WD Ft. Monmouth, NJ	2023								2023	
RF Tag Prototypes	C/CPFF	BAE Nashua, NH	800								800	
JCTI-G MS B Documentation	MIPR	CE LCMC/Support Contractors				500	1-4Q	500	1-4Q		1000	
JCTI Risk Reduction	TBD	TBD				9690	1-4Q	4230	1-4Q		13920	
JCTI-G Initiate SDD	C/CP	TBD						3429	1-4Q		3429	
Air to Ground Risk Reduction Effort								1000	1-4Q		1000	
Subtotal:			100932	38		10190		9159			120319	89874

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

Matrix Support	MIPR	CE LCMC, Fort Monmouth NJ	8385			250	1Q	500	1Q		9135	
System Eng/Tech Assistance	MIPR	COLSA, Falls Church, VA; Tecolote, Crystal City, VA; Lockheed Martin/Sytex, Eatontown, NJ	7540			600	1Q	1000	3Q		9140	
Test Planning	MIPR	CERDEC, Fort Monmouth NJ	437								437	
Technical Support	MIPR	Sandia National Laboratories/IDA Albuquerque, NM	570								570	
Subtotal:			16932			850		1500			19282	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test, Log Demo, SCD, IOTE		ATEC, TBD	3513								3513	
Limited User Test		ATEC, YPG, AZ	673								673	
ASCIET		Misc.	6651								6651	
New R3 Line												
Subtotal:			10837								10837	

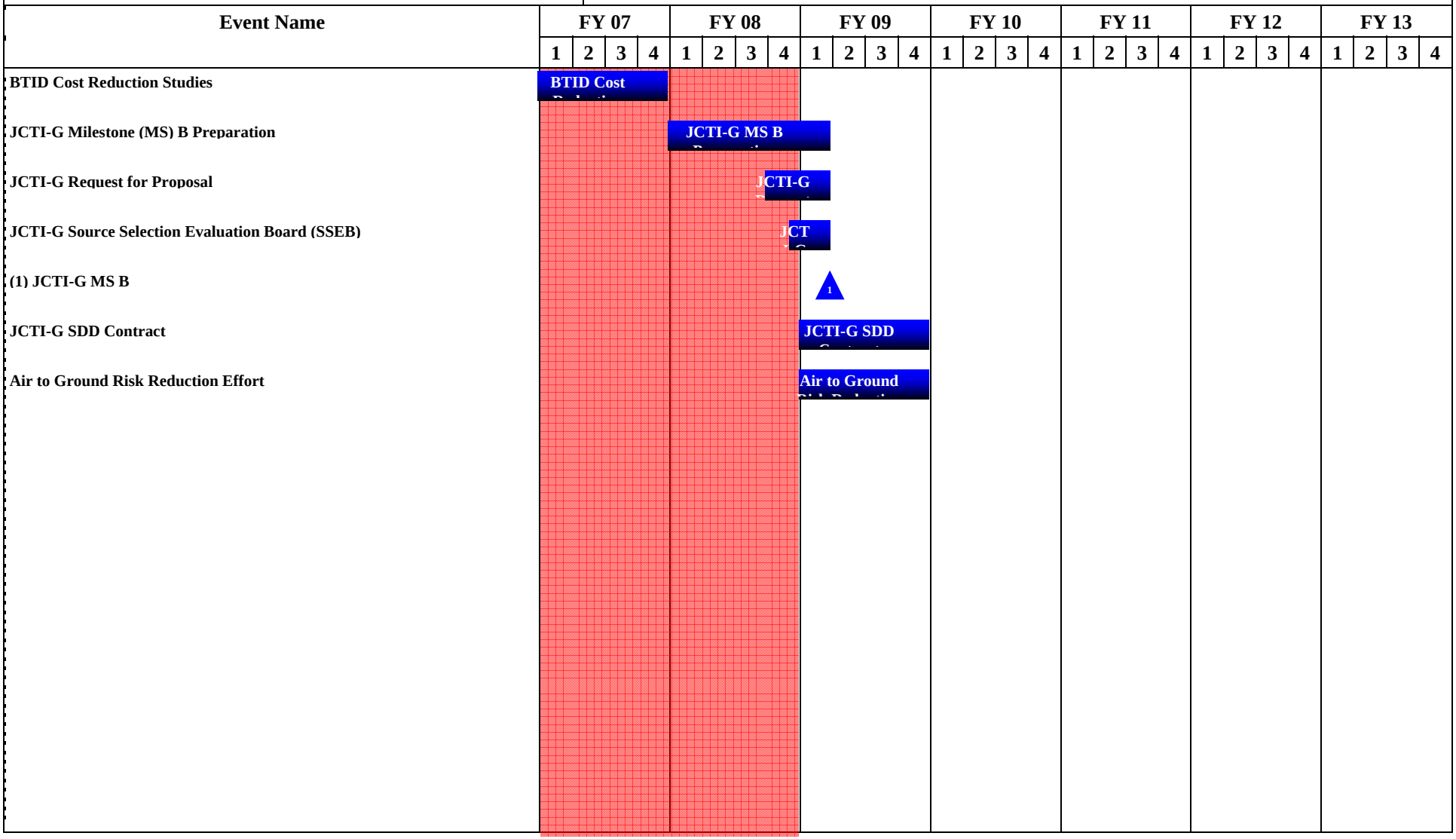
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	In-house support	PM NavSys/PM TIMS, Ft. Monmouth, NJ	6165		1Q	250	1-4Q	250	1-4Q		6665	
Subtotal:			6165			250		250			6665	

Project Total Cost:	**134866**	**38**		**11290**		**10909**			**157103**	**89874**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604817A - Combat Identification**	**482**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BTID Cost Reduction Studies	1Q - 4Q						
JCTI-G Milestone (MS) B Preparation		1Q - 4Q	1Q				
JCTI-G Request for Proposal		3Q - 4Q	1Q				
JCTI-G Source Selection Evaluation Board (SSEB)		4Q	1Q				
JCTI-G MS B			1Q				
JCTI-G SDD Contract			1Q - 4Q				
Air to Ground Risk Reduction Effort			1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	67619	100132	67535	57163	39814	50231	58571	Continuing	Continuing
323	COMMON HARDWARE SYSTEMS	6539	6964	7292	7472	7771	7946	7950	Continuing	Continuing
334	COMMON SOFTWARE	11437	20977	23828	12275	12532	19956	20416	Continuing	Continuing
C15	MOUNTED BATTLE COMMAND ON-THE-MOVE (MBCOTM)	7779	21879	11828	8324	993				50803
C29	CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)	9921	20357	13011	9680	8589	8553	8745	Continuing	Continuing
C34	ARMY TAC C2 SYS ENG	13865	13586	11576	19412	9929	13776	21460	Continuing	Continuing
C39	Tactical Operations Centers (TOCs)									15651
C3A	ARMY AIRBORNE COMMAND & CONTROL SYS (A2C2S)	9878								24626
JN1	JOINT NETWORK NODE (JNN) TESTING	8200	16369							24569

A. Mission Description and Budget Item Justification: The umbrella program to exploit automation technology for the conduct of combat operations is the Army Tactical Command and Control System (ATCCS) program which is a component of the Army Battle Command System (ABCS). The ATCCS program provides automation in the five battlefield functional areas (BFAs) with the following specific systems: (1) Maneuver Control System (MCS); (2) Effects and Fires Command and Control Systems (EFCCS); (3) All Source Analysis System (ASAS) for Intelligence/Electronic Warfare; (4) Forward Area Air Defense Command, Control and Intelligence System (FAADC2I); and (5) Battle Command Sustainment Support System (BCS3). To provide an overall technically sound, cost effective, and operationally responsive approach, the design and development of ATCCS must be accomplished on a total systems basis. The ATCCS Engineering Program, more commonly known as Systems Engineering and Integration (SE&I), provides the required overall systems engineering to assure integrated Army tactical command and control and the utilization of common hardware and software throughout the five ATCCS nodal systems. This program element also includes the Central Technical Support Facility (CTSF) which provides a single technical "center of mass" for software checkout and physical system integration. The Common Hardware and Software projects provide common products to customers to meet their developmental and fielding needs. The Tactical Operations Centers (TOCs) project designs and develops the TOCs that form the structural backbone of the Army's digitized fielding concept. Starting in FY04 this program includes funding for the SICPS program which was previously funded in project C12 in FY03. The Army Airborne Command & Control (A2C2S) provides the avionics system required to horizontally and vertically integrate the battlefield. These systems support the Legacy to Objective transition path.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	59901	99202	65082
Current BES/President's Budget (FY 2009)	67619	100132	67535
Total Adjustments	7718	930	2453
Congressional Program Reductions		-750	
Congressional Rescissions			
Congressional Increases		1680	
Reprogrammings	9341		
SBIR/STTR Transfer	-1623		
Adjustments to Budget Years			2453

Change Summary Explanation: Funding - FY 2007: $8.2 million reprogrammed into this PE to support testing the Joint Network Node.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**323**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
323 COMMON HARDWARE SYSTEMS	6539	6964	7292	7472	7771	7946	7950	Continuing	Continuing

A. Mission Description and Budget Item Justification: CHS provides state of the art, fully qualified, interoperable, compatible, deployable and survivable hardware and COTS software for Command, Control and Communications at all echelons of command for the United States Army and other DoD services with worldwide repair, maintenance and logistics support through contractor-operated CHS Repair Centers and management of a comprehensive warranty program. In FY08-FY09, CHS continues to manage the acquisition and delivery of CHS equipment, Technology Insertion and Common Standardized Testing in support of customer requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue management of the acquisition and delivery of CHS equipment in support of customer requirements	5803	5921	6417
Continue supporting customers testing efforts with CHS equipment	300	154	300
Continue CHS technology insertion	436	694	575
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		195	
Total	6539	6964	7292

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

C. Acquisition Strategy The overall goal is to improve interoperability and compatibility and lower life cycle costs by standardizing battlefield command and control automation and other warfighting systems (net centric, etc) through centralized buys of non-developmental items, standardized protocols and reusable commercial common software. This project provides a coherent migration strategy for Army Battle Command Systems and other acquisition warfighting systems through the use of technolgy insertion.

CHS also conducts common environmental and developmental testing of hardware items thereby reducing the testing requirements for individual Battlefield Functional Areas. An Indefinite Delivery/Indefinite Quantity firm fixed priced, full and open competition contract was awarded to GDC4S in May 2003, for ruggedization and production.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

PROJECT
323

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
GDC4S/CHS-3 Non-Recurring Engineering	C/FFP/IDIQ	Taunton, MA	12000							12000	Cont.	
Technology Insertion	Various	Various	12685	436	1-3Q	694	1-3Q	575	1-3Q	Cont.	Cont.	
Product Development	Various	Fort Monmouth, NJ	66915	2457	1-3Q		1-3Q	2820	1-3Q	Cont.	Cont.	
Support Costs	MIPR	Fort Monmouth, NJ/Huntsville, AL	54547	3346	1-3Q	5921	1-3Q	3597	1-3Q	Cont.	Cont.	
SBIR/STTR					1Q	195	1Q				195	
Subtotal:			146147	6239		6810		6992		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Not applicable												
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CHS Test Activities	MIPR	Other Government Activities	1500	300	3Q	154	1-3Q	300	1-3Q	Cont.	Cont.	
Subtotal:			1500	300		154		300		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

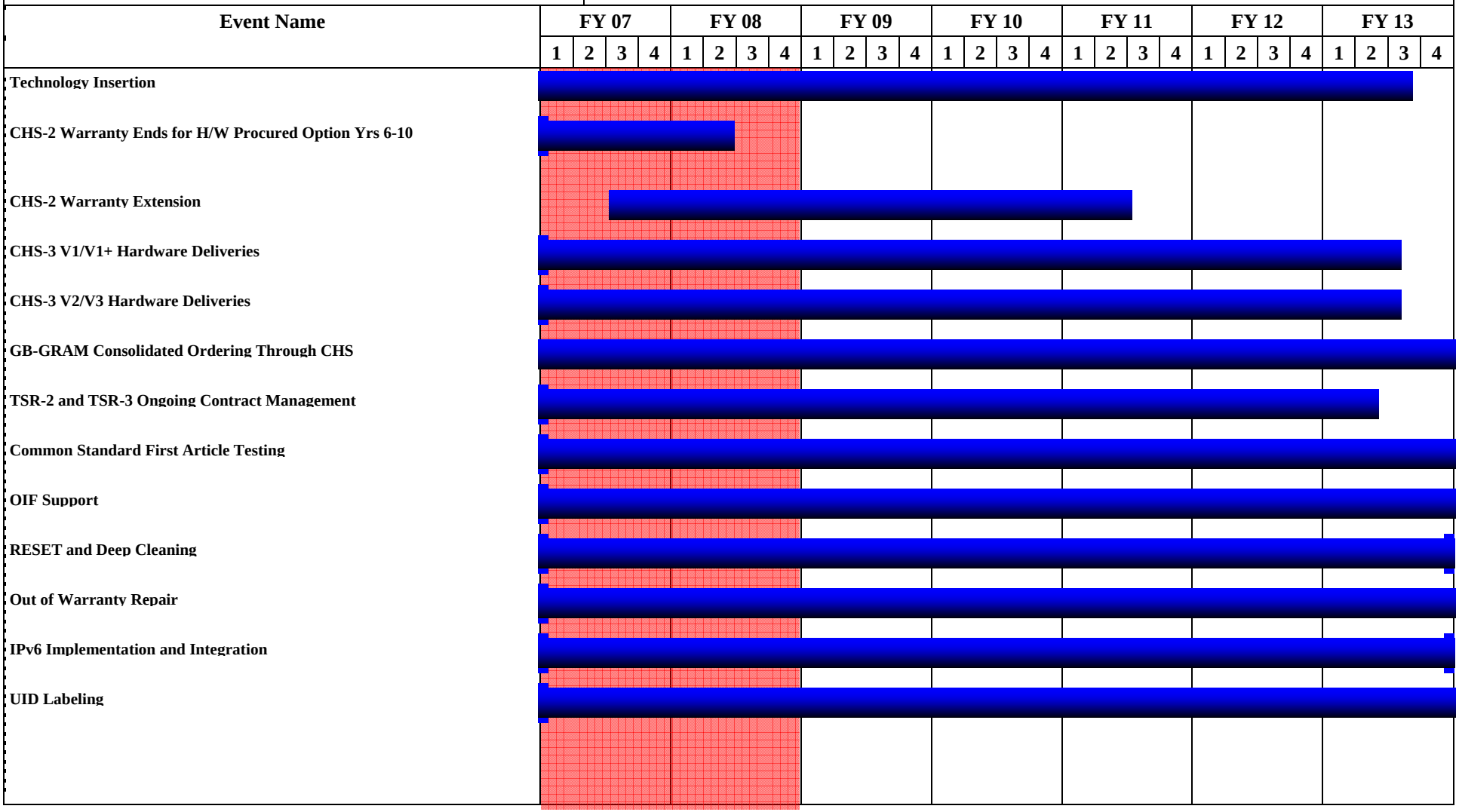
PROJECT
323

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			**147647**	**6539**		**6964**		**7292**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**323**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**323**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Technology Insertion	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
CHS-2 Warranty Ends for H/W Procured Option Yrs 6-10	1Q - 4Q	1Q - 2Q					
CHS-2 Warranty Extension	3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q		
CHS-3 V1/V1+ Hardware Deliveries	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
CHS-3 V2/V3 Hardware Deliveries	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q
GB-GRAM Consolidated Ordering Through CHS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
TSR-2 and TSR-3 Ongoing Contract Management	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q
Common Standard First Article Testing	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
OIF Support	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
RESET and Deep Cleaning	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Out of Warranty Repair	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
New R4 Event							
Out of Warranty Repair	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
IPv6 Implementation and Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
UID Labeling	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**334**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
334 COMMON SOFTWARE	11437	20977	23828	12275	12532	19956	20416	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project 334 Common Software (CS): Common Software is the program through which the Army procures, develops, integrates and tests common software products and/or components used for communication between Army Battle Command Systems (ABCS), Joint and coalition Command and Control (C2) applications. The CS project provides state-of-the-art software technologies and functionality that is used by numerous Army Battle Command Systems (ABCS) and joint systems to eliminate the need for service independent development and duplication of effort. The CS program is a cornerstone in the Army's digitization efforts.

FY09 funding will continue the development, acquisition management, and delivery of CS products in support of Army and Joint Service customer requirements. Funding will also be used to develop the System of Systems (SOS) architecture for Battle Command systems providing a cohesive development strategy amongst C2 systems.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue the development, acquisition management and delivery of Common Software (CS) products in support of Army and Joint Services customer requirements.	9377	12791	15440
Serve as the executive agent and provide software for interoperability, for Joint and Coalition efforts.	2060	3375	3861
Develop the System of System (SOS) architecture for Battle Command (BC) systems.		4270	4527
Small Business Innovative Research/Small Business Technology Transfer Programs		541	
Total	11437	20977	23828

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Not applicable for Common Software Program									

Comment:

C. Acquisition Strategy Competitively award time and material contracts to support efforts for development, integration, maintenance and test of Common Software products and services. The overall goal is the improvement of life cycle costs by providing common products that are used horizontally across programs avoiding duplication of efforts by Army and Joint programs.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

PROJECT
334

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support of CS Lab, Data Access	MIPR	CECOM, Fort Monmouth, NJ	1853								1853	
Engineering/Software Development	C, T&M	Various Contractors / Various Locations	53711	8470	1-4Q	11604	1-4Q	14437	1-4Q	Cont.	Cont.	
ABCS System Engineering & Integration	MIPR	PEO C3T, Fort Monmouth, NJ	210								210	
ABCS/Army System Engineering & Integration	C, T&M	Various Contractors / Various Locations		118	2Q	1330	1-4Q	1410	1-4Q	Cont.	Cont.	
Battle Command Chief Architect Support						4270	1-4Q	4527	1-4Q	Cont.	Cont.	
Digital System Engineers	C, T&M	Mantech, Ft. Hood, TX	14400								14400	
3D Display Technology	OTA	Concurrent Technology Corp., Johnstown, PA	9083								9083	
IDM-T Engineering Support	MIPR	GSA Contractors	2000								2000	
DISA Support for COE	MIPR		1486								1486	
Small Business Innovative Research/Small Business Technology Transfer Programs						541	2Q				541	
Subtotal:			82743	8588		17745		20374		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Support	In-house	PM Battle Command, Ft. Monmouth, NJ	2434	866	1-3Q	904	1-3Q	955	1-3Q	Cont.	Cont.	
Technical Support	C, T&M	ESP, Oceanport, NJ	835	179	1-2Q	194	2Q	209	2Q	Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**334**

Subtotal:			3269	1045		1098		1164		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test	C, T&M	Various Contractors/Various locations		1033	2-3Q	1324	1-3Q	1440	1-3Q	Cont.	Cont.	
Subtotal:				1033		1324		1440		Cont.	Cont.	

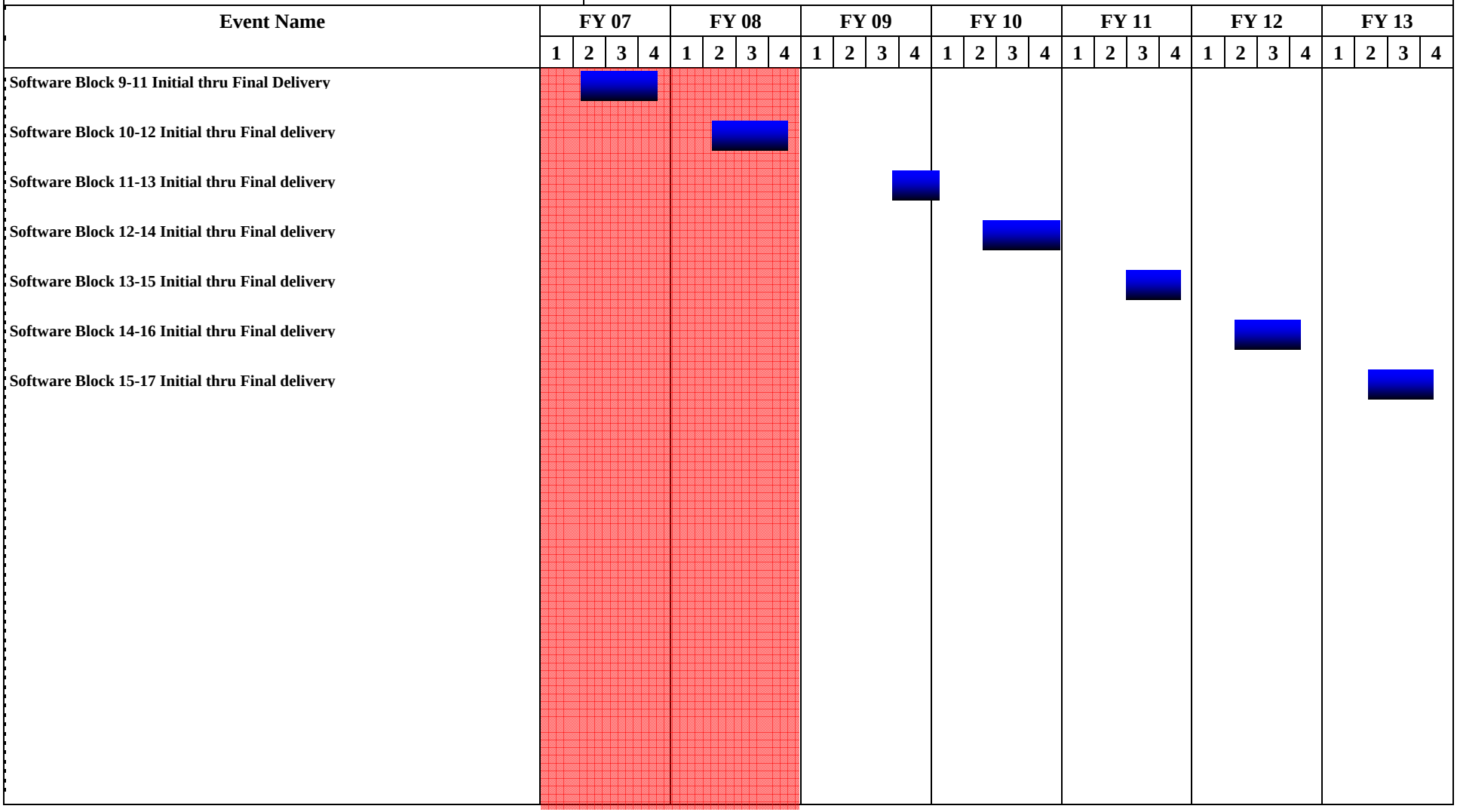
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	In-House	Fort Monmouth, NJ	3822	771	1-4Q	810	1-4Q	850	1-4Q	Cont.	Cont.	
Subtotal:			3822	771		810		850		Cont.	Cont.	

Project Total Cost:			**89834**	**11437**		**20977**		**23828**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**334**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**334**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Software Block 9-11 Initial thru Final Delivery	2Q - 4Q						
Software Block 10-12 Initial thru Final delivery		2Q - 4Q					
Software Block 11-13 Initial thru Final delivery			3Q - 4Q	1Q			
Software Block 12-14 Initial thru Final delivery				2Q - 4Q			
Software Block 13-15 Initial thru Final delivery					2Q - 4Q		
Software Block 14-16 Initial thru Final delivery						2Q - 4Q	
Software Block 15-17 Initial thru Final delivery							2Q - 4Q

Note: Scheduled deliveries are based on Software Blocking timelines.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C15**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C15	MOUNTED BATTLE COMMAND ON-THE-MOVE (MBCOTM)	7779	21879	11828	8324	993				50803

A. Mission Description and Budget Item Justification: The Mounted Battle Command On The Move System (MBCOTM) is a Command, Control, Computers, Communications, Intelligence (C4I) mission equipment package (B Kit) integrated onto Bradley, Stryker and Light Tactical Vehicle (A-Kit) platforms which allows brigade and above commanders to move to the decisive point on the battlefield. The focus of MBCOTM is to facilitate commander execution of net centric operations versus command post centric operations. MBCOTM provides the battle command commander situational awareness in the form of a digital common operational picture enabling a commander to maintain situational understanding while On The Move and when physically separated from fixed command posts. MBCOTM provides battle command enablers to support war (i.e., deterring aggression and coercion; fighting conflicts) and operations other than war (i.e., peacekeeping, domestic disaster relief, reducing potential conflicts, promoting regional stability, humanitarian missions and homeland security). MBCOTM supports the mission area of Command and Control. Future capabilities will include adding Joint Tactical Radio System and Wideband Gapfiller System. Future improvements will include addition of Secure Wireless Local Area Network, Land Warrior, and Unmanned Aerial Vehicle feed, as well as the integration of Multiple Frequencies Time Division Multiple Access (MF-TDMA) technology which allows large numbers of MBCOTMs to populate the battlefield and provide OTM communications services and range extension on the battlefield. In FY09, MBCOTM will go through an IOT&E test event.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
System Development/Tech Upgrades	1895	5659	7660
Prototype Build	2153	2164	2890
Program Spt/SSEB	1200	1153	
Test/Evaluation	2531	12290	1278
Small Business Innovative Research/Small Business Technology Transfer Programs.		613	
Total	7779	21879	11828

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Mounted Battle Command on the Move MBCOTM (BZ9970	69599	41716	25869	22094	74929	16097	42365	Continuing	Continuing

Comment:

C. Acquisition Strategy Mounted Battle Command on the Move (MBCOTM) will be integrated on three vehicle platforms: Light Tactical Vehicle (LTV), Bradley Command Vehicle, and the Stryker Command Vehicle. Upgrades will include Precision Lightweight GPS Receiving System to Defense Advanced GPS Receiver System and Ku Antenna. The Government is developing technology demonstrators of the Common Army-Marine Command and Control Vehicle (CAMC2 B-Kit) which will be designed to be a transit case solution (Mission Equipment Package/B Kit) to be integrated on a LTV. This was a cooperative variant developed with the Army and Marine Corps to gather information for writing the product specification, as well as to gain better insight on the B-Kit design. This competitive Request for Proposal (RFP) for the Production phase for the B-Kit for Bradley, Stryker and LTV was released during 3QFY07. Award of this contract is scheduled for 2QFY08. Major testing requirements such as Development Test and Initial Operational Test & Evaluation will be funded with FY08 dollars. Development will continue with Bradley and Stryker vehicle A-Kit design, prototype manufacturing and testing during the reporting period.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

PROJECT
C15

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Development/Prototype build	T&M	TBD	5198	4048	3Q	7823	1-2Q	10550	1-2Q	Cont.	Cont.	
Subtotal:			5198	4048		7823		10550		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services/ICS/Log Development					3Q		1-2Q		1-2Q			
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Operational Assessments/IOT&E	MIPR	Army Test and Evaluation Center	1168	2531	3Q	12290	1-2Q	1278	1-2Q	Cont.	Cont.	
Subtotal:			1168	2531		12290		1278		Cont.	Cont.	

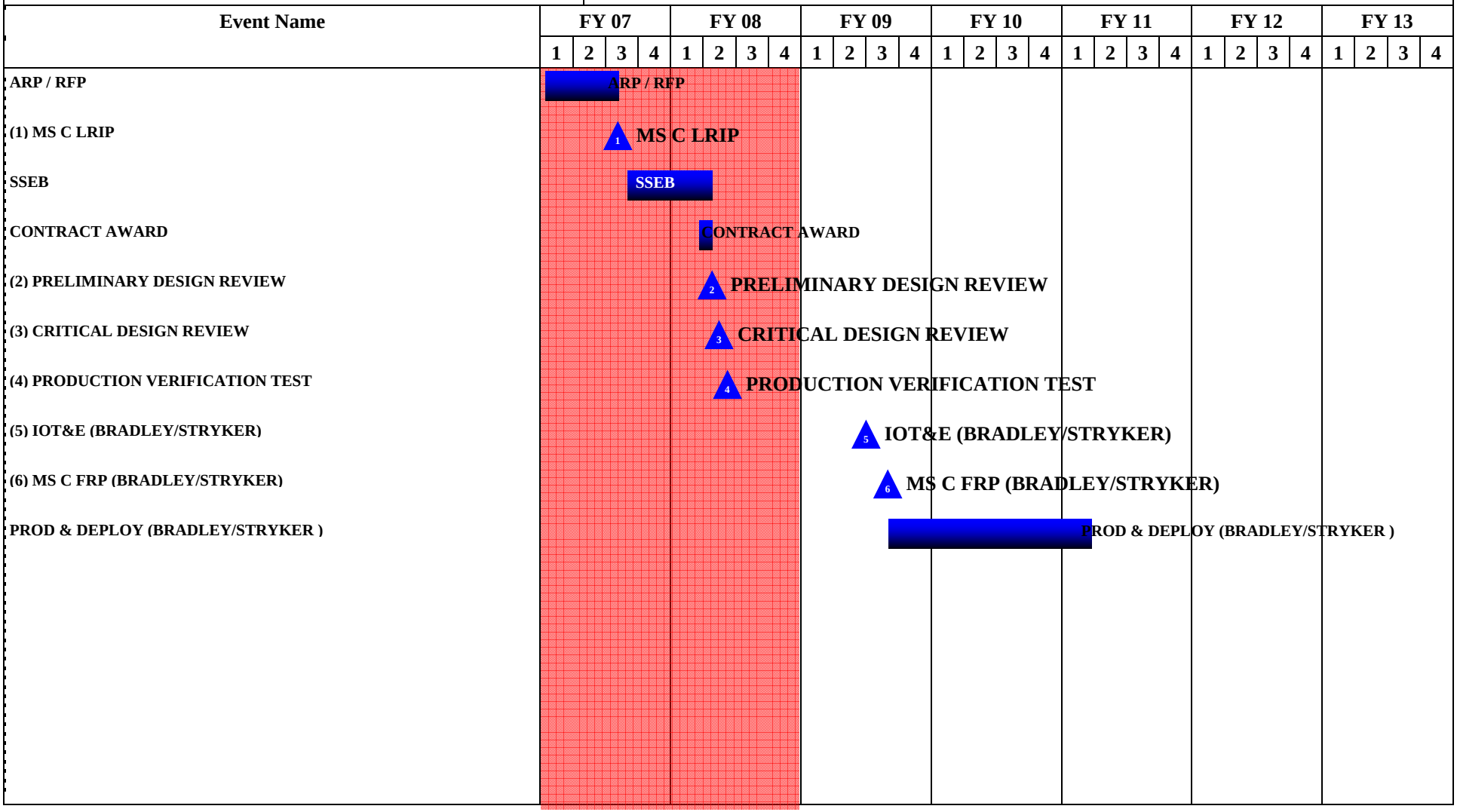
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management				1200	1-2Q	1153	1-2Q				2353	
SBIR/STTR					1-2Q	613	1-2Q				613	

ARMY RDT&E COST ANALYSIS (R3)										February 2008	
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604818A - Army Tactical Command & Control Hardware & Software**									PROJECT **C15**	
Subtotal:		1200		1766					2966		
Project Total Cost:	**6366**	**7779**		**21879**		**11828**		**Cont.**	**Cont.**		

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C15**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C15**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
ARP / RFP	1Q - 3Q						
MS C LRIP	3Q						
SSEB	3Q - 4Q	1Q - 2Q					
CONTRACT AWARD		1Q - 2Q					
PRELIMINARY DESIGN REVIEW		2Q					
CRITICAL DESIGN REVIEW		2Q					
PRODUCTION VERIFICATION TEST		2Q - 4Q	1Q - 2Q				
IOT&E (BRADLEY/STRYKER)			3Q				
MS C FRP (BRADLEY/STRYKER)			3Q				
PROD & DEPLOY (BRADLEY/STRYKER)			3Q - 4Q	1Q - 4Q	1Q		
MS B							

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C29**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C29	CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)	9921	20357	13011	9680	8589	8553	8745	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project DC29 - Centralized Technical Support Facility: The Central Technical Support Facility (CTSF) is located in Fort Hood, Texas. The CTSF provides a centralized on-the-ground capability to ensure interoperability among various digitized platforms and serves as the final integration and maturation facility for Common Operating Environment (COE). The CTSF is the Warfighters "Edge" that acts as an enabler for rapid integration of dissimilar software and hardware systems through real time, on-site integration of soldiers, contractors, testers, Program Managers and the requirements community. Also the CTSF provides a single technical "center of mass" for software checkout and system integration and provides a controlled environment with connectivity to other C4I systems either on-site or through the Army Interoperability Network (AIN) to support digital integration and fielding. This effort supports the Current to Future transition path.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue test planning/procedures/execution/reporting	1814	5009	2000
Continue software engineering.	1597	100	400
Provide infrastructure (Facilities, upgrades, additions).	1236	1640	2790
Continue Digital System Engineering	1120	4935	3425
Continue management operations.	1403	6217	3241
Provide equipment for instrumentation, simulation/stimulation, software evaluation and development tools.	777		
Continue configuration management.	709	750	500
Provide networks connections to include DISN, SIPRNET, NIPRNET, GUARDNET.	270	500	500
Provide logistics support.	200	150	155
Provide DA Mandated Intra-Army Digital Certification test and validation.	795	500	
Small Business Innovative Research/Small Business Technology Transfer		556	
Total	9921	20357	13011

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

C. Acquisition Strategy This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition

management, testing, software development, interoperability, fielding and sustainment to ensure an interoperable and affordable ATCCS. The Program Executive Officer for Command, Control, Communications, Tactical (PEO C3T) has planned an evolutionary approach to fielding ATCCS as soon as possible.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

PROJECT
C29

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CSC (MANTECH -Direct Labor)	C/CPFF	Fort Hood, TX	15056	1183	1Q	6582	1-2Q	5031	1-2Q	Cont.	Cont.	Cont.
COMPUTER SCIENCE CORP (System Engineering)	C/CPAF	Fort Hood, TX/Fort Monmouth, NJ	4571	1086	1Q	3000	1-2Q	1500	1-2Q	Cont.	Cont.	Cont.
MITRE Corp (System Engineering)	C/CPFF	Fort Hood, TX/Eatontown, NJ	4141	948	1Q	1925	1-2Q	1925	1-2Q	Cont.	Cont.	Cont.
CAMBER (Config Mgt/)	C/CPAF	Fort Hood, TX	2301	515	1Q	750	1-2Q	500	1-2Q	Cont.	Cont.	Cont.
Northrop Grumman (Field Engineering)	C/CPIF	Fort Hood, TX	3808	868	1Q					Cont.	4676	Cont.
NICHOLS (Logistics Support)	C/CPAF	Fort Hood, TX	2970	678	1Q					Cont.	3648	Cont.
ILEX (Field Engineering)	C/CPAF	Fort Hood, TX	1488	339	1Q					Cont.	1827	Cont.
ROBBINS- GIOIA (Data Base Management)	C/CPAF	Fort Hood, TX/Fort Monmouth, NJ	1183	270	1Q	500	1-2Q	500	1-2Q	Cont.	Cont.	Cont.
GTE	C/CPFF	Fort Hood, TX	914	209	1Q					Cont.	Cont.	Cont.
EWA	C/CPAF	Fort Hood, TX	551	125	1Q					Cont.	676	Cont.
Subtotal:			36983	6221		12757		9456		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CECOM Matrix	MIPRs	Fort Hood, TX/Fort Monmouth, NJ	145	145	1-2Q	150	1-2Q	155	1-2Q	Cont.	Cont.	Cont.
In-House Support	MIPRs	Fort Hood, TX	565	500	1-2Q	500	1-2Q	500	1-2Q	Cont.	Cont.	Cont.
Other Government Support	MIPRs	Fort Hood, TX	184	225	1-2Q	1000	1-2Q	400	1-2Q	Cont.	Cont.	Cont.
Subtotal:			894	870		1650		1055		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C29**

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ELECTRONIC PROVING GROUNDS (EPG)	MIPR		9121	2082	1-2Q	5200	1-2Q	2000		Cont.	Cont.	Cont.
CAMBER (Testing)	CPAF	Fort Hood, TX	1747	480	1-2Q	750	1-2Q	500		Cont.	Cont.	Cont.
Subtotal:			10868	2562		5950		2500		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR / SBTT				268	1-2Q						268	
Subtotal:				268							268	

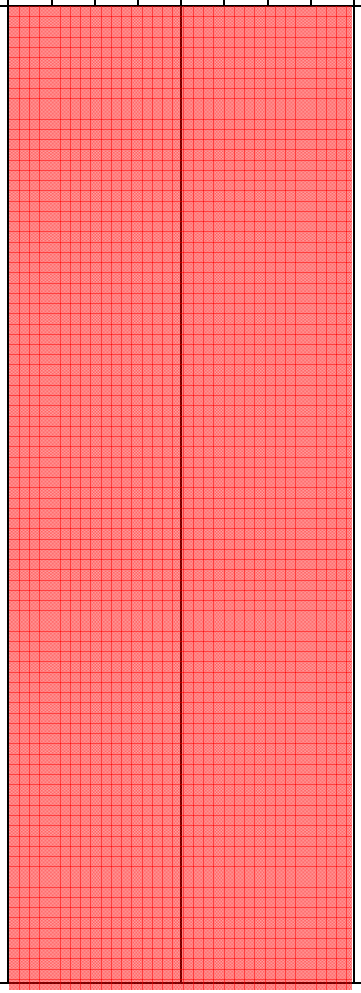
Project Total Cost:			**48745**	**9921**		**20357**		**13011**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C29**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C29**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Army Battle Command System (ABCS) 6.3 Test/Fixes/Integration							
ABCS 6.4 System of System (SoS) Integration							
Operation Iraqi Freedom (OIF)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
ABCS 6.4 Test Window							
Operation Enduring Freedom (OEF)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
I Corps Warfighter							
Prairie Warrior 05							
III Corps Warfighter							
Prairie Warrior	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Ulchie Focus Lens (UFL)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Certification Software Blocking	1Q - 4Q	1Q - 4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C34**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
C34 ARMY TAC C2 SYS ENG	13865	13586	11576	19412	9929	13776	21460	Continuing	Continuing

A. Mission Description and Budget Item Justification: Project DC34 - Army Tactical Command and Control Systems (ATCCS) Engineering which is also referred to as Systems Engineering and Integration (SE&I): Doctrine requires military leaders to make sound and timely command and control decisions to direct the activities of assigned and supporting units. The umbrella program to exploit automation technology in support of this mission is the ATCCS or SE&I program. The effort to achieve horizontal integration of the ATCCS Battlefield Functional Areas (BFAs), although going on independently in each BFA, was not disciplined enough to address all connections and needs within the entire spectra of command, control and communications. Therefore, to ensure this horizontal integration effort is complete and fully automated, a significant management, systems engineering and integration effort is required. This effort, supporting the Army Battle Command Systems (ABCS) Version 6.30, includes fielding the ABCS Version 6.4 to the entire Army in four years and the current to the future transition path. The four year fielding is with "Good Enough" software and the future transition path was developed as the "Top Down Architecture".

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue Army Battle Command System (ABCS) Integrated Logistics Support	713	752	729
Continue ABCS Testing and Evaluation of all Battlefield Functional Area (BFA) fielded software	747	788	764
Continue ABCS Fielding/Scheduling	1306	1034	980
Continue ABCS information engineering	1507	1040	1153
Conduct and support system interoperability engineering	318	335	325
Continue exploring state of the art technology insertion in support of the ABCS program	2015	1729	1512
Continue development and implementation of the ABCS information assurance	292	307	298
Continue System of Systems Development	3502	2400	2763
Continue ABCS System Engineering	3465	3141	3052
TENIX		1680	
Small Business Innovative Research/Small Business Technology Transfer Programs		380	
Total	13865	13586	11576

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

C. Acquisition Strategy This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition management, testing, interoperability, support to fielding and sustainment to ensure an interoperable and affordable Army Tactical Command and Control Systems (ATCCS). The Program Executive Officer for Command , Control, Communications, Tactical (PEO C3T) has planned an evolutionary approach to fielding ABCS 6.4 in four years which ends in first quarter FY08. Fiscal years FY08 and FY09 will focus on "Systems of Systems" Engineering and integration for evolution toward JC2 and FCS.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

PROJECT
C34

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Northrop Grumman	C/CPIF	Fort Monmouth, NJ/Fort Hood, TX	11148	1692	1Q	1960	1-2Q	1767	1-2Q	Cont.	Cont.	Cont.
IDA	MIPR	Fort Monmouth, NJ	1724							Cont.	1724	Cont.
CSC	C/CPAF	Fort Monmouth, NJ/Fort Hood, TX	36578	1750	1-2Q	1605	1-2Q	1408	1-2Q	Cont.	Cont.	Cont.
MANTECH (Direct Labor)	C/CPFF	Fort Monmouth, NJ/Fort Hood, TX	6496								6496	6546
SYTEX	C/CPFF	Eatontown, NJ		330		340		350			1020	
CAMBER (Config Mgt/)	C/CPAF	Fort Hood, TX	1788								1788	855
ATSC	MIPR	Fort Leavenworth, KY	1850							Cont.	Cont.	Cont.
LOCKHEED MARTIN	C/CPAF	Eatontown, NJ	6034	640	1Q	618	1-2Q	604	1-2Q	Cont.	Cont.	Cont.
GTE (Labor and Equipment)	C/CPFF	Fort Hood, TX	2281		1Q					Cont.	2281	Cont.
Misc Contracts	C/CPAF	Fort Monmouth, NJ/Fort Hood, TX	5888	97	1-2Q	196				Cont.	Cont.	Cont.
Unixpros	C/CPAF	Eatontown, NJ	3711								3711	3711
ROBBINS-GIOIA	C/CPAF	Fort Monmouth, NJ/Fort Hood, TX	7132	890	1Q	160	1-2Q	165	1-2Q	Cont.	Cont.	Cont.
MITRE	C/CPFF	Ft Monmouth, NJ/Eatontown, NJ	38104	5350	1Q	4122	1-2Q	4587	1-2Q	Cont.	Cont.	Cont.
ITT	C/CPAF	Eatontown, NJ	1070							Cont.	Cont.	Cont.
MISCELLANEOUS SUPPORT	C/CPAF	Eatontown, NJ/Fort Hood, TX	1985	566	1-2Q	300				Cont.	Cont.	Cont.
BOOZ-ALLEN	C/CPAF	Eatontown, NJ	1950		1Q					Cont.	Cont.	Cont.
Subtotal:			127739	11315		9301		8881		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604818A - Army Tactical Command & Control Hardware & Software

PROJECT
C34

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IN-HOUSE SUPPORT	MIPRs	Fort Monmouth, NJ/Fort Hood, TX	6414	1294	1Q	1630	1-2Q	1680	1-2Q	Cont.	Cont.	Cont.
CECOM MATRIX	MIPRs	Fort Monmouth, NJ/Fort Hood, TX	6058	791	1Q	815		840		Cont.	Cont.	Cont.
OTHER GOVERNMENT SUPPORT	MIPRs	Fort Monmouth, NJ/Fort Hood, TX/Fort Belvoir, VA	3606	144	1Q	160		175		Cont.	Cont.	Cont.
TENIX Support						1680					1680	
Subtotal:			16078	2229		4285		2695		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
EPG	MIPR	Fort Huachuca, AZ	2737		1Q					Cont.	Cont.	
Subtotal:			2737							Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR			792	321	1-2Q						1113	
Subtotal:			792	321							1113	

Project Total Cost:			**147346**	**13865**		**13586**		**11576**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C34**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
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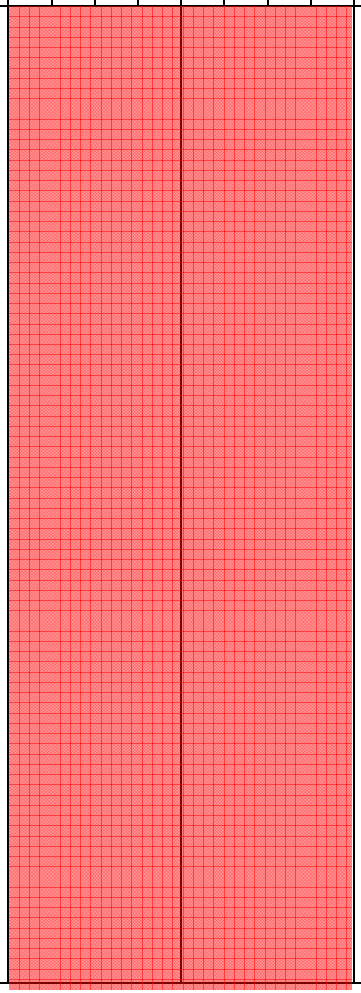
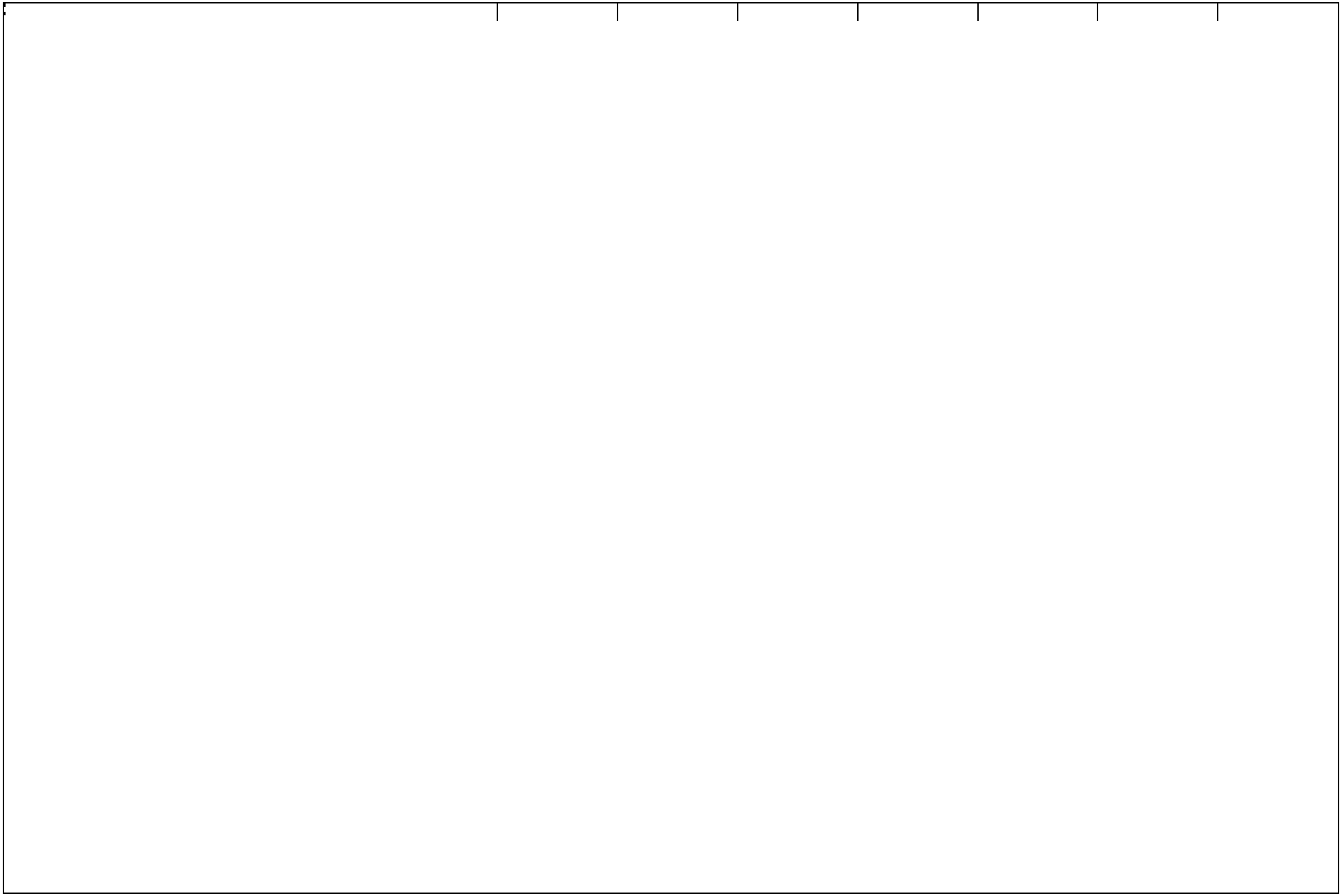




Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**C34**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NATIONAL TRAINING CENTER (NTC) ROTATIONS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
ABCS 6.4 SOFTWARE DEVELOPMENT and TESTING							
SBCT - 4 FIELDING							
SBCT-5 FIELDING							
SBCT-6 FIELDING	1Q - 3Q						
FUTURE OPERATIONAL ARCHITECHTURE (OA)/SYSTEM ARCHITECTURE (SA)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
ABCS SYSTEMS ENGINEERING & INTEGRATION TRANSITION TO FCS	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
FIELDING OF ABCS 6.4 TO ARMY	1Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604818A - Army Tactical Command & Control Hardware & Software**	**JN1**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
JN1	JOINT NETWORK NODE (JNN) TESTING	8200	16369							24569

A. Mission Description and Budget Item Justification: As the emerging major component of the Army Bridge to Future Network, the Joint Network Node (JNN) Network is intended to replace legacy Mobile Subscriber Equipment (MSE), while moving the Army to a unified Everything Over Internet Protocol (EOIP) Communication System. This fundamental shift in the Tactical backbone communications system prepares the Army culture and leadership for the future introduction of both Warfighter Information Network-Tactical (WIN-T) and Future Combat System (FCS). Once proliferated throughout the force structure, tied to modernizations for the Global War on Terrorism (GWOT) deployment missions, the JNN Network will provide encrypted internet connectivity, from landfall sanctuaries to the Battalion Echelon. The Network is capable of passing unclassified and classified traffic levels, throughout its entire structure, from Home Station Operations Center (HSOC) to the furthest forward Battalion Elements. Designed to meet modularity and rapid deployment mandates, the Network is also intended to support Joint Communications Requirements, as well as Internet Applications from approved National federal Agencies and Coalition Partners. The Network, by its basic design, will allow incorporation of Future Communication improvements, as well as a lot of technologies for modular Communications, offered by both overmanned and industry sources.

FY 08: RDT&E funding will be used to test the initial out put of the production from the competitive contract award which was awarded in Sep 07.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Operational Testing Event	8200	15911	
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR)		458	
Total	8200	16369	

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

C. Acquisition Strategy Joint Network Node (JNN)Network has previously been acquired in substantial quantities as urgent Army directive procurement. The JNN program attained Milestone C on 14 May 2007. The Product Manager was given verbal approval to proceed, in addition to instruction to await an Acquisition Decision Memorandum (ADM) that was to follow finalization of the Warfighter Information Network - Tactical (WIN-T) Nunn-McCurdy hearings. The ADM was issued 5 June 2007 implementing the expected merger of JNN and WIN-T, laying the foundation for the restructured WIN-T program, and directing a number of actions to start the way ahead for the combined program. The WIN-T ACAT 1D program now consists of four separately reporting Increments, with JNN re-designated as WIN-T Increment 1. RDT&E funding will be used to test the initial out put of the production.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604822A - General Fund Enterprise Business System (GFEBS)**	**GF5**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
GF5	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)	59998	111873	60308						232179

A. Mission Description and Budget Item Justification: The General Fund Business Enterprise System (GFEBS) is a Major Automated Information System (MAIS) program and is in the developmental phase. It will follow the DoD Business Enterprise Architecture which is aligned to the mandated Federal Enterprise Architecture. GFEBS was implemented to fulfill the needs and comply with the Federal Financial Management Improvement Act (FFMIA), The Chief Financial Officers Act of 1990, the Government Performance and Results Act of 1993, the Government Management Reform Act of 1994, and the Clinger-Cohen Act of 1996 and to fulfill the stated mission of the Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C). GFEBS will replace financial systems operating in excess of 30 years like the Standard Finance Systems (STANFINS) and other costly feeder systems which do not allow the Department of Defense (DoD) or the U.S. government to achieve an unqualified opinion on its financial statements. GFEBS will become the Department of the Army's new core financial management system for administering its General Fund. GFEBS will be a commercial off-the-shelf (COTS) Enterprise Resource Planning (ERP) system that is certified by the Chief, Financial Officer Council (CFOC) and provides the six core financial functions. GFEBS will allow tactical commanders to make informed decisions on a virtually real time system.

In FY09, GFEBS will Go-Live with Release 1.2 at Ft. Jackson South Carolina. Subsequently, Release 1.3 and Release 1.4 will be built and tested, and any additional required capabilities will be added. Later in the year, GFEBS will begin fielding Release 1.3 at all STANFINS locations and Release 1.4 at all SOMARDS locations.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
System Concept Exploration	2939		
Development	14580	80781	44266
Project Management	42479	27969	16042
Small business Innovative Research/Small Business Technology Transfer Programs		3123	
Total	59998	111873	60308

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604822A - General Fund Enterprise Business System (GFEBS)**	**GF5**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	21751	53559	50237
Current BES/President's Budget (FY 2009)	59998	111873	60308
Total Adjustments	38247	58314	10071
Congressional Program Reductions		-727	
Congressional Rescissions			
Congressional Increases		59041	
Reprogrammings	38860		
SBIR/STTR Transfer	-613		
Adjustments to Budget Years			10071

Change Summary Explanation: Funding - FY 2007: Funding increaase was a result of a Congressinally approved reprogramming in support of GFEBS. FY 2009: Funds realigned to support further GFEBS development.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
RDTE, 655013MO5								Continuing	Continuing
OPA, BE4168000	1992	39353	109141					Continuing	Continuing
OMA, 432612000		29822	50511	87779	95921	98031	100188	Continuing	Continuing

Comment:

D. Acquisition Strategy GFEBS is being procured as a performance-based acquisition to encourage innovative and creative solutions and to avoid hampering, dictating, or prescribing how the work must be performed. Therefore, the focus of the Statement of Objectives (SOO) was on "what" the Army is trying to achieve instead of "how" it must be achieved. The use of an SOO is an emerging method that transforms the acquisition process by requiring each of the competing contractors to develop their unique proposed technical approach, work breakdown schedule, project plan and schedule, schedule of deliverable items, performance metrics, performance measurement plan, and quality assurance plan. To achieve its GFEBS project objectives, the Army used an existing Blanket Purchase Agreement (BPA) to select a System Integrator (SI). The contract period of performance is 1 base year with 9 option years. DoD through the Department of the Navy has established enterprise agreements for ERP System Integration Services with five qualified SI(s) that are General Services Administration (GSA) Federal Supply Service (FSS) Schedule holders under the Enterprise Software Initiative (ESI). The Army has selected the SI; all contractor work will be performed under the selected SI's ESI-SI BPA through the award of one task order with several options. Multiple options are anticipated to support each project objective. The products and services described in task orders will be grouped and referenced as Contract Line Item Numbers (CLIN). All

CLINs will be awarded on a Fixed Price basis with performance based incentives and disincentives. The task order and all options exercised will be performance based, containing financial incentive and disincentive provisions. Offerors were provided performance based metrics and were required to propose performance incentive and disincentive provisions by CLIN in their Quality Assurance Surveillance Plan (QASP) submitted in response to the Request for Quote (RFQ). The QASP elements were evaluated as part of the evaluation of the Offerors' proposals.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604822A - General Fund Enterprise Business System (GFEBS)

PROJECT
GF5

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Concept Exploration	FFP	Accenture Springfield, Va.	20393	2939	1-4Q						23332	
Development	FFP	Accenture Springfield Va.	8045	14580	1-4Q	83904	1-4Q	44266	1-4Q	Cont.	Cont.	
Subtotal:			28438	17519		83904		44266		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	FFP	Accenture Springfield Va.	60602	40799	1-4Q	27969	1-4Q	16042	1-4Q	Cont.	Cont.	
Subtotal:			60602	40799		27969		16042		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Small Business Innovative Research	FFP	Accenture Springfield Va.	4664	1680						Cont.	Cont.	
System Procurement	FFP	Accenture Springfield Va.	15389							Cont.		
System Maintanence/Item Management	FFP	Accenture Springfield Va.	7897							Cont.		
Hardware Maintanence	FFP	Accenture Sprinfield Va.	949							Cont.		
Software Maintanence	FFP	Accenture Sprinfield Va.	8440							Cont.		

Subtotal:			37339	1680						Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			**126379**	**59998**		**111873**		**60308**		**Cont.**	**Cont.**	

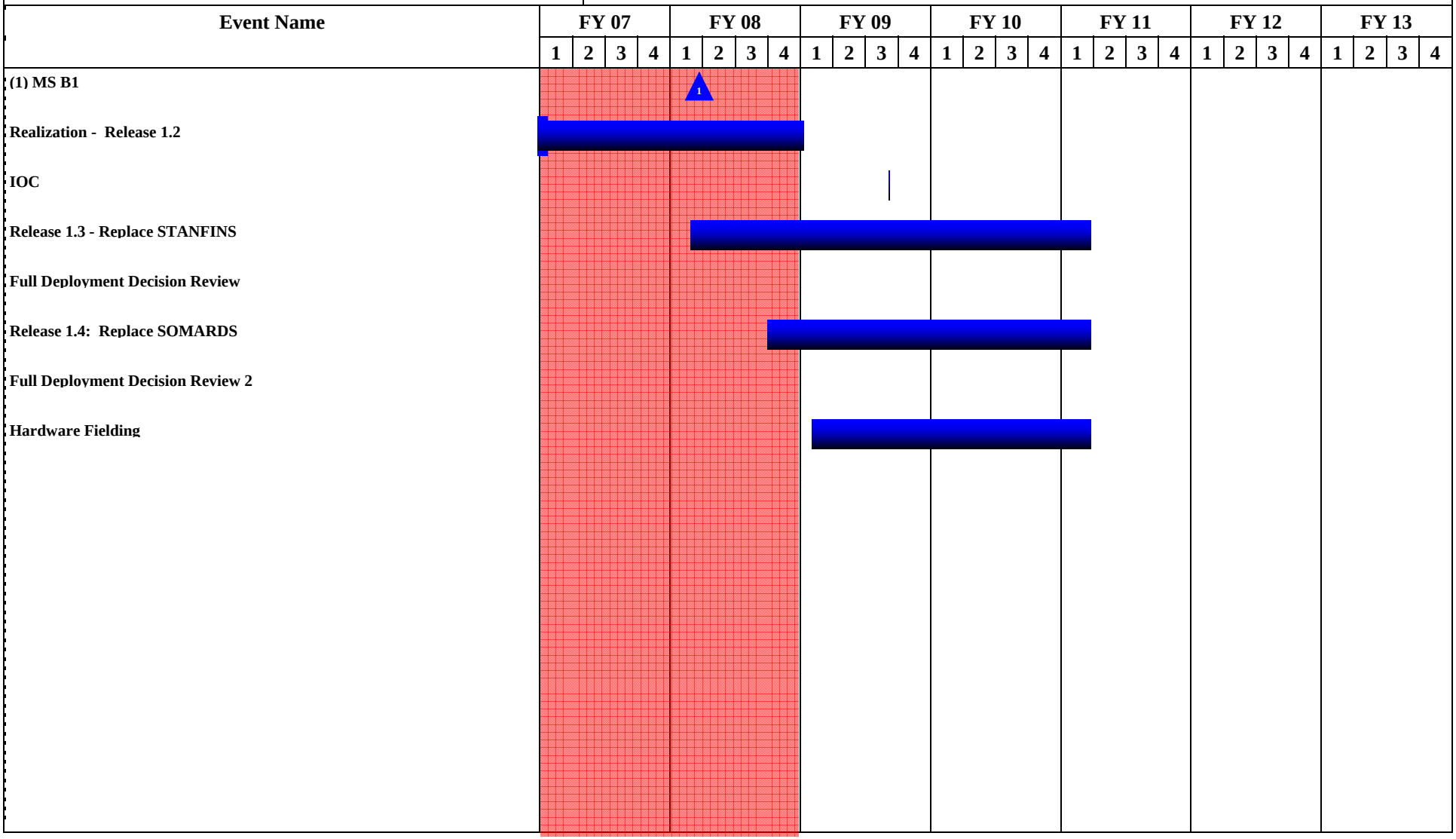
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604822A - General Fund Enterprise Business System (GFEBS)

PROJECT
GF5



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604822A - General Fund Enterprise Business System (GFEBS)**	**GF5**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Map/Blueprint/Build Release 1.1							
MS B1		1Q					
Realization - Release 1.2	1Q - 4Q	1Q - 4Q	1Q				
IOC			3Q				
Release 1.3 - Replace STANFINS		1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
Full Deployment Decision Review			3Q				
Release 1.4: Replace SOMARDS		4Q	1Q - 4Q	1Q - 4Q	1Q		
Full Deployment Decision Review 2				1Q			
Hardware Fielding			1Q - 4Q	1Q - 4Q	1Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604823A - FIREFINDER**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	53408	76767	47845	9790	102				187912
L86	LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)	6400	7864							14264
L87	LONG RANGE COUNTERFIRE RADAR		11	100	108	85				304
L88	ENHANCED AN/TPQ 36	47008	68892	47745	9682	17				173344

A. Mission Description and Budget Item Justification: This Program funds design, development and test of primary target acquisition and counterfire radars to automatically detect, locate and classify hostile indirect fire weapons (mortars, artillery, rockets, and missiles). This PE directly supports the prioritization, tracking, and locating of targets, and dissemination of that information for simultaneous attack of multiple threats. It provides the Warfighter with continuous and responsive counterfire target acquisition systems for all types and phases of military operations. Project L85, Phoenix Battlefield Sensor System AN/TPQ-47, was re-structured in FY05 to an alternate contract conclusion due to technical challenges and competing near term radar performance shortfalls identified in Operation Iraqi Freedom (OIF). Project L86, Lightweight Counter Mortar Radar, Version 3 (LCMR (V)3) will provide 360 degree coverage and be used to detect, locate and report hostile locations of enemy indirect firing systems out to a range of 10 kilometers. Project L88, Enhanced AN/TPQ-36 (EQ-36), is a highly mobile radar system that will leverage the latest in technology design to accelerate technology infusion and increase range while improving False Alarm Rate, reducing obsolescence and increasing reliability. EQ-36 will provide 90 degree coverage and extended range, with an incremental development to increase detection capability to 360 degrees. The EQ-36 will be interoperable with Firefinder and future Battle Command Systems.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604823A - FIREFINDER**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	54542	77279	31424
Current BES/President's Budget (FY 2009)	53408	76767	47845
Total Adjustments	-1134	-512	16421
Congressional Program Reductions		-512	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	401		
SBIR/STTR Transfer	-1535		
Adjustments to Budget Years			16421

Change Summary Explanation: Funding - FY 2009: Additional funding required to support EQ-36 development.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L86**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L86	LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)	6400	7864							14264

A. Mission Description and Budget Item Justification: The AN/TPQ-48(V)3 Lightweight Counter Mortar Radar (LCMR) will provide 360 degrees of azimuth coverage and be used to detect, locate, and report hostile locations of enemy indirect firing systems. It will cover a range of 500 meters to 10 kilometers and provide observed fires from friendly units. The AN/TPQ-48(V)3 shall be a digitally connected, day/night mortar, cannon, and rocket locating system. The AN/TPQ-48(V)3 will be a spiral enhancement to the existing AN/TPQ-48(V)2. The LCMR was originally designed to operate as a stand alone capability for Special Forces and is man portable when disassembled. This capability has been fielded to Operation Iraqi Freedom (OIF) as a Limited Procurement Urgent (LPU) capability.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Primary development of thirteen (13) test articles to include non recurring engineering and Program Management support.	3834	4163	
Develop/build Radar Environmental Simulator (RES) to simulate system hardware/software and emulate the radar performance.	1563	1063	
Activities to support Development Test/Operational Test. Efforts include conduct of Live Ammunition Test at Yuma Proving Ground (YPG), Limited User Test, ammunition and manpower to support system test.	1003	2418	
Small Business Innovative Research/Small Business Technology Transfer Programs		220	
Total	6400	7864	

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SSN: B05201 Lightweight Counter Mortar Radar	26240	48864	46397	38932	36830	34940	35836	Continuing	Continuing

Comment:

C. Acquisition Strategy The Lightweight Counter Mortar Radar (LCMR) prototype was developed as a Special Operations Command (SOCOM) program under the Office of Special Technology, Broad Agency Announcement (BAA). The LCMR Engineering Development Program was also SOCOM funded which resulted in to a functional system. The LCMR leverages the SOCOM developed program and serves as a spiral development effort to provide greater range, accuracy, interoperability and transportability to support Army's requirements. Acquisition Strategy Approval was obtained in May 06 and a contract was awarded in Sep 06 to spiral the existing system into the Army's objective system.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

PROJECT
L86

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Dev	SS/CPFF	SRCTec, North Syracuse, NY	18307	2876	2Q	3053	2Q			Cont.	Cont.	
Radar Environmental Simulators (RES)	TBD	TBD		500	2Q	1063	2Q			Cont.	Cont.	
Systems Engineering Contractor	SS/T&M	Various	1570	507	1-2Q	300	1-2Q			Cont.	Cont.	
Systems Engineering Government	MIPR	CERDEC, Fort Monmouth, NJ	700	300	1-2Q	350	1-2Q				1350	
SBIR/STTR Transfers						220					220	
Subtotal:			20577	4183		4986				Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Support (Government)	MIPR	Various	161	145	1-2Q					Cont.	306	
Subtotal:			161	145						Cont.	306	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Support (Contractor)	MIPR	TBD		150	2Q	240	1Q			Cont.	Cont.	
Developmental Test & Evaluation	MIPR	Yuma, AZ/WSMR, NM		300	2-3Q	1786	1-2Q			Cont.	Cont.	
Test Support (Government)	MIPR	Various	250	150	2Q	154	1-2Q			Cont.	Cont.	
Subtotal:			250	600		2180				Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

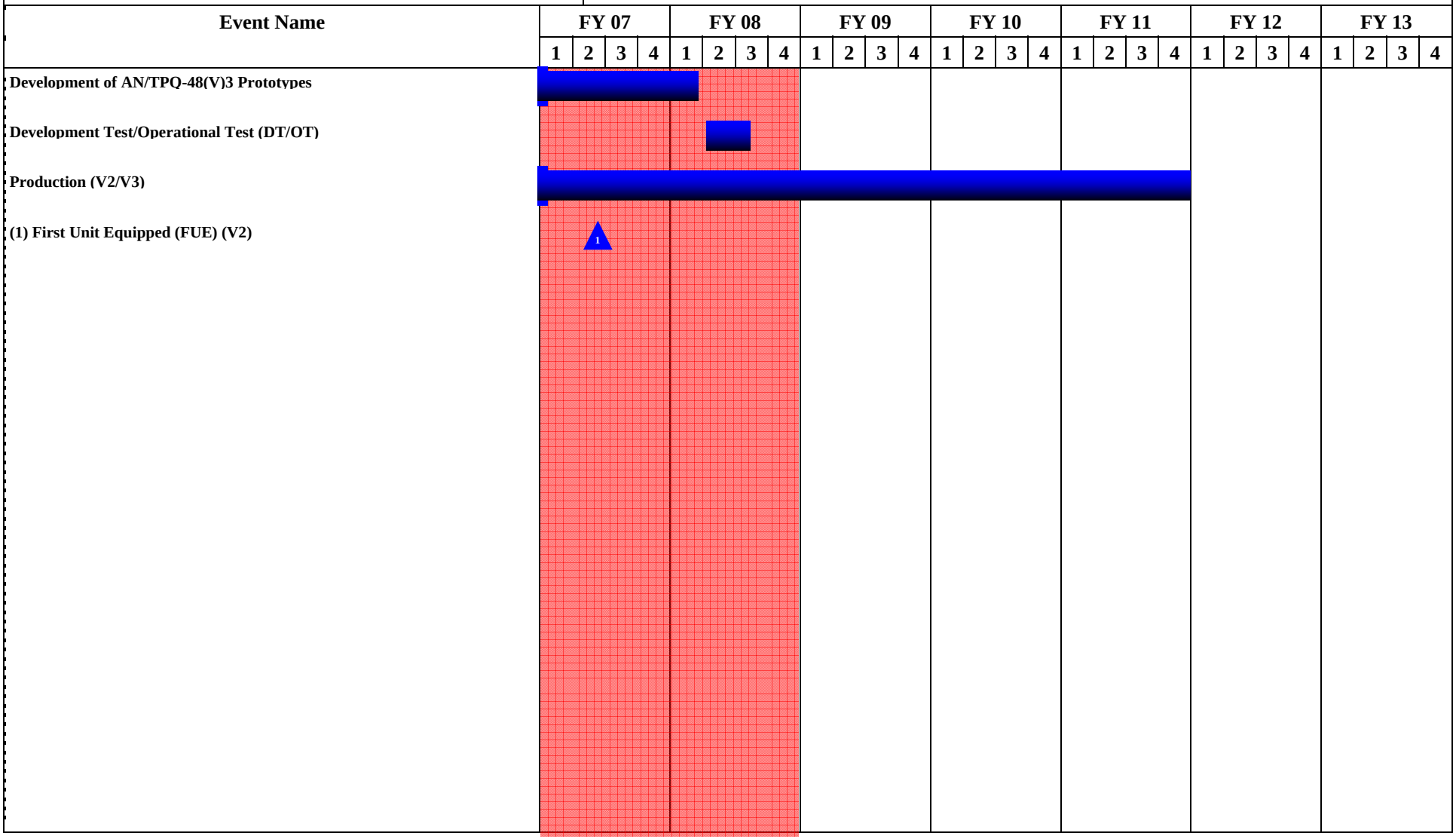
PROJECT
L86

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management (Contractor)	C/FP	Various	890	652	1-3Q					Cont.	Cont.	
Program Management	In House	PM NV/RSTA, Fort Monmouth, NJ	435	444	1-4Q	342	1-4Q			Cont.	1221	
Program Management (Government Matrix)	MIPR	Various	444	376	1-2Q	356	1-2Q			Cont.	Cont.	
Subtotal:			1769	1472		698				Cont.	Cont.	
Project Total Cost:			**22757**	**6400**		**7864**				**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L86**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L86**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development of AN/TPQ-48(V)3 Prototypes	1Q - 4Q	1Q					
Development Test/Operational Test (DT/OT)		2Q - 3Q					
Production (V2/V3)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
First Unit Equipped (FUE) (V2)	2Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L88**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
L88 ENHANCED AN/TPQ 36	47008	68892	47745	9682	17				173344

A. Mission Description and Budget Item Justification: The Enhanced AN/TPQ-36 (EQ-36) is a highly mobile radar system designed to classify targets for automatic first-round location of mortar, cannon and rocket enemy fires and to provide observed fires from friendly units. The EQ-36 will provide 90 degree coverage against the entire threat set, with 360 degree coverage for mortars. This program will leverage the latest in technology design to provide increased range, reduced crew size, as well as increased reliability, availability, and maintainability. The EQ-36 will provide digital communications and be interoperable with Firefinder and future Battle Command Systems.
FY2009 funds:
a. Continuation of development and manufacture of five (5) Non-Recurring Engineering (NRE) Increment 1 systems
b. Design and integration of Increment 2

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Primary development and test of five (5) Enhanced AN/TPQ-36 NRE Increment 1 systems, and associated Program Management support to meet the Army's counterfire requirements.	46258	63966	38583
Increment 2 Design and Integration		2998	4494
Develop/Build Radar Environmental Simulator (RES) to simulate system hardware/software and emulate the radar performance.	750		
Activities to support Development Test/Operational Test. Efforts include cost of range times at YUMA Proving Ground (YPG), gun crews,and manpower to support system test.			4668
Small Business Innovative Research/Small Business Technology Transfer Programs		1928	
Total	47008	68892	47745

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
B05310 Enhanced AN/TPQ-36			107061	160849	174026	261130	249004	Continuing	Continuing

Comment:

C. Acquisition Strategy The Enhanced AN/TPQ-36 (EQ-36) leverages technology developed in the Multi-Mission Radar Advanced Technology Objective (ATO) program incorporating the latest antenna technology into the EQ-36. In order to field the EQ-36 capability to the Warfighter in the most expeditious manner with the least amount of risk, the EQ-36 will be produced in two increments based on two tiers of technical threshold requirements. Increment 1 capabilities are planned to be fielded as a replacement to the

AN/TPQ-36 and AN/TPQ-37 radar systems. Increment 2 capabilities will provide increased performance over Increment 1 and will meet all of the user's threshold requirements. A contract was awarded in 4QFY06 based on full and open competition. The system will be procured in two Initial Production lots, followed by a full rate production contract. The system is planned to eventually replace all of the AN/TPQ-36 and AN/TPQ-37 legacy systems in the fleet.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

PROJECT
L88

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPIF	TBD	11000	41590	1-4Q	59314	1-4Q	37457	1-4Q	Cont.	Cont.	
Ancillary Equipment	MIPR/Requisitions	Various	1032			2080	2Q	1450	2Q		3530	
Radar Environmental Simulators (RES)	MIPR	Oakridge National Labs, Oak Ridge, TN	3750	750	3Q						750	
Systems Engineering (Contractor)	C/FP	Various	1054	1036	1-2Q	1715	1-2Q	1530	1-2Q	Cont.	Cont.	
Systems Engineering (Government)	MIPR	Various	300	240	1-4Q	230	1-2Q	200	1-2Q	Cont.	Cont.	
SBIR/STTR Transfers						1928					1928	
Subtotal:			17136	43616		65267		40637		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Source Selection Efforts	MIPR	Various	828							Cont.	Cont.	
Development Support (Government)	MIPR	Various	100	978	1-2Q	1335	1-2Q	1000	1-2Q		3313	
Development Support (Contractor)	C/FF	Various	190	1003	1-2Q	750	1-2Q	500	1-2Q		2253	
Subtotal:			1118	1981		2085		1500		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Support (Government)	MIPR	Various	125		2Q	210	2Q	4668	2Q	Cont.	Cont.	
Subtotal:			125			210		4668		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604823A - FIREFINDER

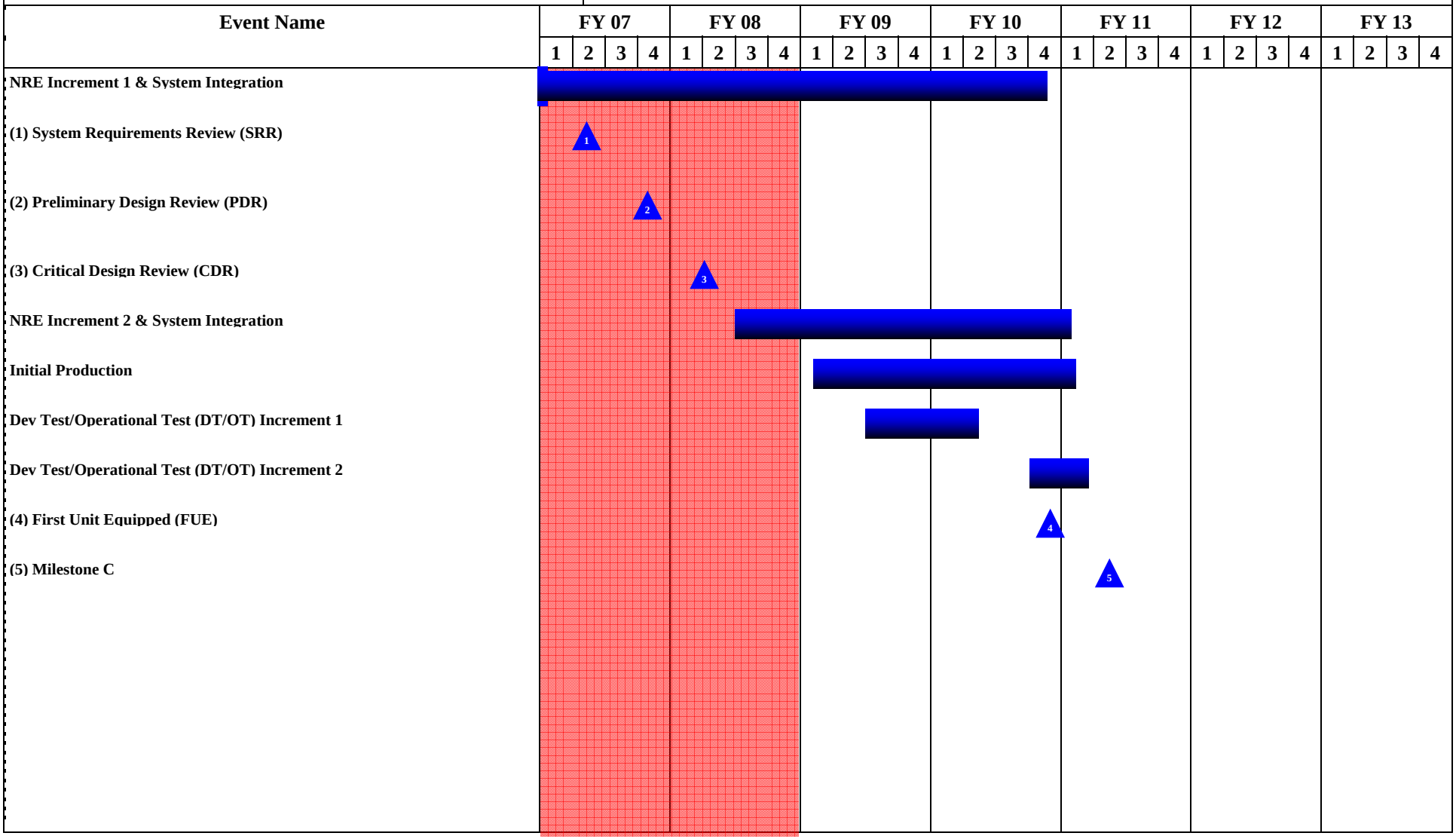
PROJECT
L88

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management (Contractor)	C/FP	Various	1074	653	1-3Q	500	1-3Q	250	1-3Q	Cont.	Cont.	
Program Management (Government)	MIPR	Various	421	135	1-2Q	140	1-3Q	140	1-3Q	Cont.	Cont.	
Program Management	In-House	PM NV/RSTA, Fort Monmouth, NJ	1080	623	1-4Q	690	1-4Q	550	1-4Q	Cont.	Cont.	
Subtotal:			2575	1411		1330		940		Cont.	Cont.	
Project Total Cost:			**20954**	**47008**		**68892**		**47745**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L88**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604823A - FIREFINDER**	**L88**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NRE Increment 1 & System Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q			
System Requirements Review (SRR)	2Q						
Preliminary Design Review (PDR)	4Q						
Critical Design Review (CDR)		2Q					
NRE Increment 2 & System Integration		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q		
Initial Production			1Q - 4Q	1Q - 4Q	1Q		
Dev Test/Operational Test (DT/OT) Increment 1			3Q - 4Q	1Q - 2Q			
Dev Test/Operational Test (DT/OT) Increment 2				4Q	1Q		
First Unit Equipped (FUE)				4Q			
Milestone C					2Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604827A - Soldier Systems - Warrior Dem/Val**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	28227	1589	15790	13901	13901				121269
S56	MOUNTED WARRIOR	1598	1589	15790	13901	13901				46779
S57	LAND WARRIOR	26629								74490

A. Mission Description and Budget Item Justification: This program element is composed of two projects: Project S56 for Mounted Warrior Soldier System (MWSS) and Project S57 for Land Warrior (LW). MWSS provides combat crewmembers and vehicle commanders in the Current and Future force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility, and sustainability. MWSS provides the dismounted and mounted combat crewmembers increased capabilities to conduct offensive and defensive operations by providing uninterrupted viewing of their platform and dismounted Soldiers. MWSS Helmet Mounted Display extends fire control information to vehicle crewmembers while they are standing up in, or viewing out of the hatch allowing them to maintain immediate situational awareness of their direct battle space, while simultaneously controlling inter-netted fires, vehicle, or dismounted Soldiers. Project S57 supports the LW concept, a first generation, modular, integrated fighting system focused on the needs of the individual infantry Soldier and Soldiers in support of the close fight. An Army Stryker Battalion was equipped with LW and MW for evaluation purposes in FY 2006. The LW and MW systems proved to be highly reliable and provided a significantly increased level of Battle Command Situational Awareness for dismounted forces and mounted crew members. As a result, the Battalion that was conducting the assessment decided to take the systems to war with them in the Spring of 2007.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604827A - Soldier Systems - Warrior Dem/Val**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	28826		
Current BES/President's Budget (FY 2009)	28227	1589	15790
Total Adjustments	-599	1589	15790
Congressional Program Reductions		-11	
Congressional Rescissions			
Congressional Increases		1600	
Reprogrammings	212		
SBIR/STTR Transfer	-811		
Adjustments to Budget Years			15790

Change Summary Explanation: Funding - FY 2009 funding increase to support the Mounted Warrior program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604827A - Soldier Systems - Warrior Dem/Val**	**S56**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S56 MOUNTED WARRIOR	1598	1589	15790	13901	13901				46779

A. Mission Description and Budget Item Justification: Mounted Warrior Soldier System (MWSS) provides combat crew members and vehicle commanders in the Current force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility, and sustainability. MWSS Helmet Mounted Display extends fire control information to vehicle crewmembers while they are standing up in or viewing out of the hatch allowing them to maintain immediate situational awareness of the their direct battle space, while simultaneously controlling netted fires, vehicle, or dismounted Soldiers. FY06 Congressional plus-up of $8.2 million and FY07 Congressional plus-up of $1.644 million funds development of command and control heads up display (see-through, daylight readable, retinal scanning helmet mounted displays). The Mounted Soldier System (MSS) will provide combat vehicle crewmembers and platform commanders with increased mission effectiveness on the network centric battlefield in the areas of command and control, situational awareness, communications, force protection, survivability, mobility, and sustainability. The MSS provides the combat vehicle commander increased capabilities to conduct offensive and defensive operations. The MSS equips Combat Vehicle Crewman/Vehicle Commanders on Heavy Brigade Combat Team (HBCT), Styrker Brigade Combat Team (SBCT) and FCS platforms.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
FY07: Congressional Plus-up funded development of command and control heads up display (see-through, daylight readable, retinal scanning helmet mounted displays).	1598		
FY08: Congressional Plus-up funds development of optimized M-25 Soldier Fuel Cell System.		1544	
FY09: Developmental engineering, prototyping, manufacturing, and systems engineering, assessment, limited test and evaluation, and program management support for Mounted Soldier System (MSS).			15790
Small Business Innovative Research/Small Business Technology Transfer Program		45	
Total	1598	1589	15790

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

C. Acquisition Strategy The MSS acquisition roadmap is comprised of two increments. The MSS Increment I is documented in the MWSS Capability Production Document (CPD) and was fielded to the 4/9 IN BN of the 4th SBCT to maintain tethered voice communciations, tethered access to host platform displays, sensors, and sights via a tethered helmet mounted display (HMD). The MSS Increment II is documented in the MSS Capability Development Document (CDD). Increment II implements a strategy of time-phased requirement implementation driven by technology maturity, vehicle availability, and user prioritization. The acquisition approach is centered around vehicle kit development and integration since the planned MSS subsystems are using relatively mature technology. The MSS program takes advantage of components available from other Government agencies, and Commercial-Off-the-Shelf (COTS) components and technologies as available.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604827A - Soldier Systems - Warrior Dem/Val

PROJECT
S56

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop Mounted Warrior Soldier System technologies	CPFF	GDC4S, Scottsdale, AZ	4494								4494	
Develop Command and Control Heads up Display	CPFF	Microvision, Redmond, WA	7919	1309	3Q						9228	
Develop Optimized M-25 Soldier Fuel Cell System	TBD	TBD				1436	2-3Q				1436	
Develop and Engineer Mounted Soldier System	CPFF	TBD, TBD						12498			12498	
Subtotal:			12413	1309		1436		12498			27656	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Mounted Warrior Program Soldier System support	OGA, MIPR	Various	270	255	4Q						525	
Mounted Soldier System support	OGA, MIPR	Various				108	2-4Q	500			608	
Subtotal:			270	255		108		500			1133	

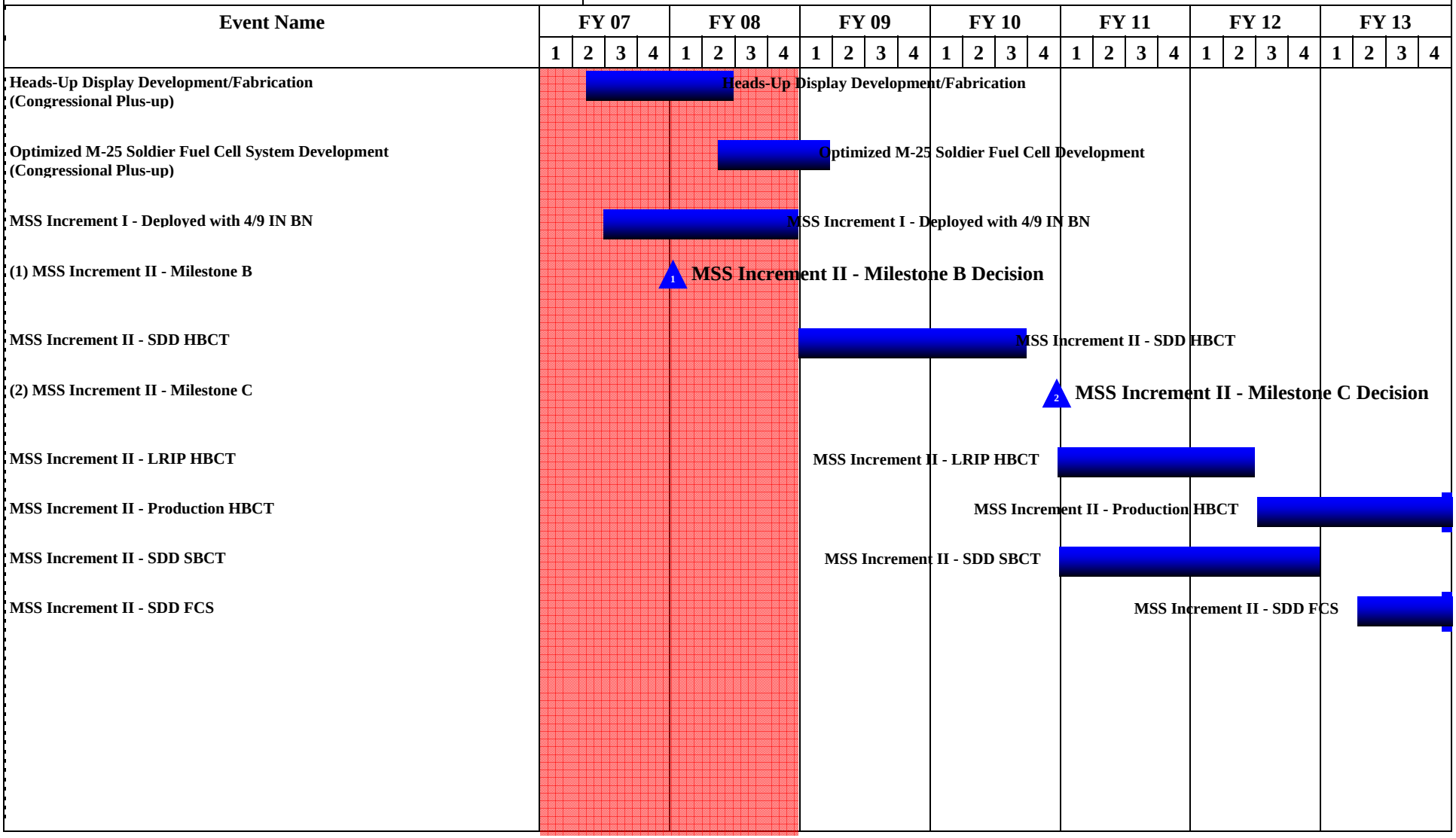
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	OGA, MIPR	ATEC, TTC/YPG/DTC/EPG/ARL-SLAD, etc.	1000					300			300	
Subtotal:			1000					300			300	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Soldier Warrior oversight of MSS program	In-House/Task Order	PM Soldier Warrior, Ft. Belvoir, VA						2492			2492	
SBIR/STTR	Withheld			34	1Q	45	1Q				79	
Subtotal:				34		45		2492			2571	
Project Total Cost:			**13683**	**1598**		**1589**		**15790**			**31660**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604827A - Soldier Systems - Warrior Dem/Val**	**S56**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604827A - Soldier Systems - Warrior Dem/Val

PROJECT
S56

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MWSS Development							
MWSS Initiate Long Leads							
MWSS Limited Testing & Evaluation							
Stryker BN Equipped							
DOTMLPF Assessment							
Heads-Up Display Development/Fabrication (Congressional Plus-up)	2Q - 4Q	1Q - 2Q					
Optimized M-25 Soldier Fuel Cell System Development (Congressional Plus-up)		2Q - 4Q	1Q				
MSS Increment I - Deployed with 4/9 IN BN	3Q - 4Q	1Q - 4Q					
MSS Increment II - Milestone B		1Q					
MSS Increment II - SDD HBCT			1Q - 4Q	1Q - 3Q			
MSS Increment II - Milestone C				4Q			
MSS Increment II - LRIP HBCT				4Q	1Q - 4Q	1Q - 2Q	
MSS Increment II - Production HBCT						3Q - 4Q	1Q - 4Q
MSS Increment II - SDD SBCT					1Q - 4Q	1Q - 4Q	
MSS Increment II - SDD FCS							2Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	1598	24067	42300	23808	5858	5562	5366	Continuing	Continuing
509	LIGHTWEIGHT 155M HOWITZER		5925	5570	5737					17232
516	PALADIN/FAASV	1598	18142	36730	18071	5858	5562	5366	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element supports the Joint Light Weight 155mm Howitzer (LW155) and the Paladin/FAASV Improvement programs.

The LW155, a joint program with the Marine Corps, provides the replacement for the current 1970's vintage M198, 155mm Towed Howitzer. The LW155 provides significant improvement in strategic and tactical mobility over the M198. Project 509 supports Towed Artillery Digitization (TAD) Block II, a software upgrade to the digital fire control system for the M777A2(LW155).

The current Paladin/Field Artillery Ammunition Vehicle (FAASV) project allows for the integration of several selected system improvements which provide for: development and integration of the Excalibur (M982) extended range projectile requirements into the Paladin Digital Fire Control System (PDFCS). These systems improvements improved the Paladin mission effectiveness, increase reliability as well as reduce life cycle costs and address electronic obsolescence with the obsolete Paladin Automatic Fire Control System (AFCS). The Paladin Integrated Management (PIM) Program which will begin in FY08 will take the Paladin product cycle to the next level to address all obsolescence, reliability, maintainability and supportability faced by the Paladin and FAASV today and the near future to include: Power Train upgrade; Suspension system; electronic sub-systems to include the next generation fire control system, navigation system, communication/data transfer and Vehicle Health Management system; Improvement Gun Drive System to meet the needs of the future battle field.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	1632	24221	24073
Current BES/President's Budget (FY 2009)	1598	24067	42300
Total Adjustments	-34	-154	18227
Congressional Program Reductions		-154	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	12		
SBIR/STTR Transfer	-46		
Adjustments to Budget Years			18227

Change Summary Explanation: Funding: FY 2009 -- Lightweight 155 program, funding increased to support software development and engineering efforts for lethality and survivability enhancements, to include ballistic computation at the weapon system and the addition of a Muzzle Velocity System to increase accuracy.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**509**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
509 LIGHTWEIGHT 155M HOWITZER		5925	5570	5737					17232

A. Mission Description and Budget Item Justification: The Lightweight 155mm (LW155) Towed Howitzer, a jointly managed program with the Marine Corps, will provide the replacement for the M198, 155mm Towed Howitzer. LW155 provides significant strategic and tactical mobility improvements. Project 509 supports Towed Artillery Digitization (TAD) Block II, a software upgrade to the digital fire control system for the M777A2 (LW155).

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Funds Matrix Support Software Engineers for TAD Block II Software Development		5759	5570
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		166	
Total		5925	5570

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Procurement, Marine Corps LW155 Towed Howitzer with TAD Prod, BLIN 218500	93960	175500	2500	2600	2700				277260
Procurement, WTCV, Army, LW155 with TAD G01700	172194	410972	113205	38067	35765	46699	46679		863581

Comment:

C. Acquisition Strategy Towed Artillery Digitization (TAD) is an evolutionary acquisition strategy for the Lightweight 155mm Towed Howitzer (LW155). Block 0 consisted of "glass and iron" optical sights as the weapon's fire control. Block 1 TAD incorporated digitized aiming and pointing which increased accuracy and enabled a battery of howitzers to emplace and engage the enemy within 2 to 3 minutes as opposed to 15 to 20 minutes. Block 1a added the ability for the LW155 Howitzer to fire the XM982 Excalibur Precision Munition. Funding identified above will be used to upgrade to Block 2, which is the objective TAD configuration. The primary benefit of TAD Block 2 will be the addition of mission processing capability at the platform, enabling enhanced responsiveness and flexibility to the battlefield commander. It will also integrate a Muzzle Velocimeter for increased accuracy.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
509

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Funds Matrix Support Software Engineers for TAD Software Development		ARDEC, Picatinny Arsenal, NJ				5759	1Q	5570	1Q		11329	
Small Business Innovative Research/Small Business Technology Transfer Program						166					166	
										14100	14100	
Subtotal:						5925		5570		14100	25595	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**509**

	Type					Date		Date		Date			Contract
Subtotal:													
Project Total Cost:							**5925**		**5570**		**14100**	**25595**	

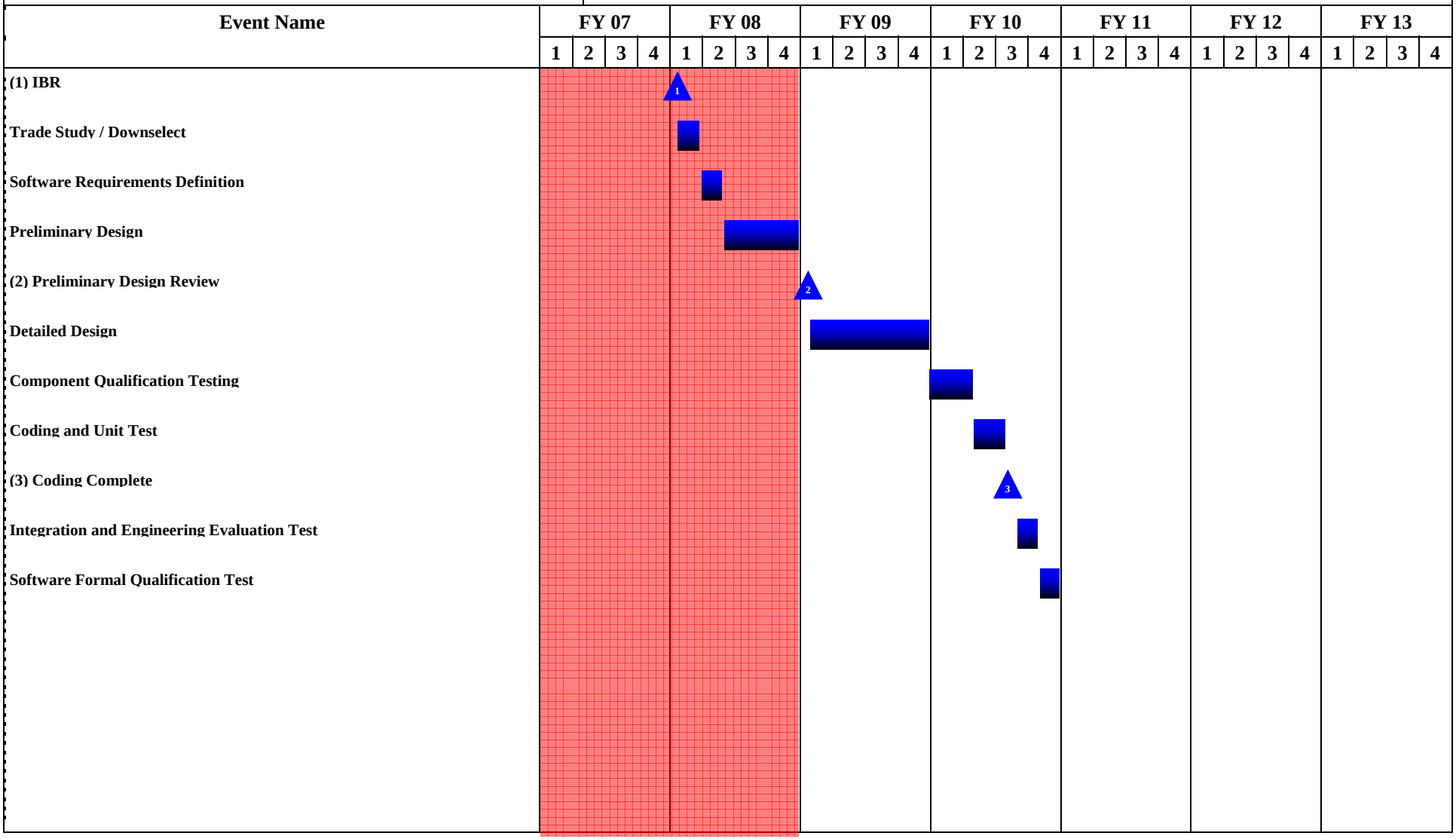
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
509



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**509**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
IBR		1Q					
Trade Study / Downselect		1Q					
Software Requirements Definition		2Q					
Preliminary Design		2Q - 4Q					
Preliminary Design Review			1Q				
Detailed Design			1Q - 4Q				
Component Qualification Testing				1Q - 2Q			
Coding and Unit Test				2Q - 3Q			
Coding Complete				3Q			
Integration and Engineering Evaluation Test				3Q - 4Q			
Software Formal Qualification Test				4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**516**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
516 PALADIN/FAASV	1598	18142	36730	18071	5858	5562	5366	Continuing	Continuing

A. Mission Description and Budget Item Justification: The current Paladin/Field Artillery Ammunition Vehicle (FAASV) project allows for the integration of several selected system improvements which provide for: development and integration of the Excalibur (M982) extended range projectile requirements into the Paladin Digital Fire Control System (PDFCS). These systems improvements improved the Paladin mission effectiveness, increase reliability as well as reduce life cycle costs and address electronic obsolescence with the obsolete Paladin Automatic Fire Control System (AFCS). The Paladin Integrated Management (PIM) Program which will begin in FY08 will take the Paladin product cycle to the next level to address all obsolescence, reliability, maintainability and supportability faced by the Paladin and FAASV today and the near future to include: Power Train upgrade; Suspension system; electronic sub-systems to include the next generation fire control system, navigation system, communication/data transfer and Vehicle Health Management system; Improvement Gun Drive System to meet the needs of the future battle field.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Initiate PIM IPT Structure	1598		
Paladin Integrated Management (PIM) Development		17635	36730
Small Business Innovative Research/Small Business Technology Transfer Program		507	
Total	1598	18142	36730

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
PA, WTCV, Paladin/FAASV	44384	22471	28913	98785	157504	176912	221414	Continuing	Continuing

Comment:

C. Acquisition Strategy The Paladin/FAASV project will leverage both Government and Contractor capabilities to accomplish the development of the Paladin/FAASV system improvement projects. Government in-house engineering will perform some component level design and system integration. Final System Level Testing will be performed by Other Government Agencies (OGA). Competitive contracts will be used for many of the component level design and hardware fabrication. To the extent possible, maximum use of existing commercial off-the-shelf hardware and software will be utilized.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
516

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Component Design and Software Development	STS/CPFF	Northrop Grumman, Carson, CA	5027								5027	6250
System Integration	STS/CPFF	BAE Systems, York, Pa	4569								4569	7304
TDP Development	MIPR	Other Gov't Agencies	452								452	452
Software Development & System Integration	MIPR	TACOM-ARDEC, Picatinny, NJ	7093								7093	4136
PIM Development	STS/CPFF	BAE/Northrup Grumman				16635	2Q	29763	2Q		46398	
Initiate PIM IPT Structure	STS/CPFF	BAE/Northrup Grumman	361	966	2Q						1327	966
Small Business Innovative Research/Small Business Technology Transfer Program						507					507	
Subtotal:			17502	966		17142		29763			65373	19108

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Logistics	MIPR	TACOM-ACALA, Moline, IL	229								229	370
TARDEC				367	2-3Q						367	
Engineering	MIPR	Various						4967	2Q		4967	
Subtotal:			229	367				4967			5563	370

III. Test And Evaluation	Contract Method &	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award	FY 2008 Cost	FY 2008 Award	FY 2009 Cost	FY 2009 Award	Cost To Complete	Total Cost	Target Value of

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604854A - Artillery Systems - EMD

PROJECT
516

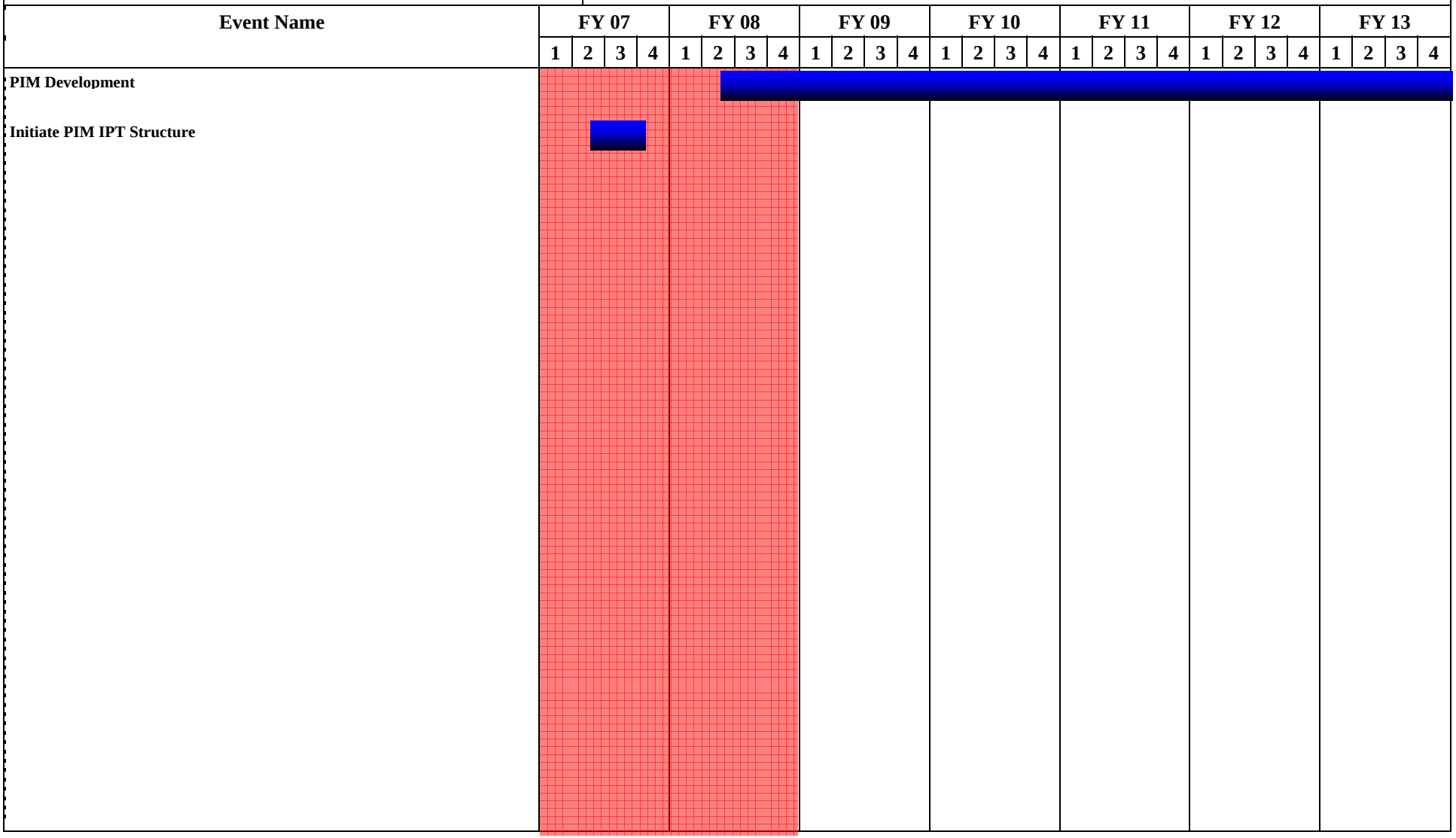
	Type				Date		Date		Date			Contract
Component Level Testing	MIPR	TACOM-ARDEC, Picatinny, NJ	953								953	1158
System Level Testing	MIPR	Various OGAs	930			800	2Q	2000	2Q		3730	4022
Subtotal:			1883			800		2000			4683	5180

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PMO Support	NA	PM Paladin/FAASV, Picatinny, NJ/TACOM	898	265	2Q	200	2Q				1363	995
Subtotal:			898	265		200					1363	995
Project Total Cost:			**20512**	**1598**		**18142**		**36730**			**76982**	**25653**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**516**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604854A - Artillery Systems - EMD**	**516**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PIM Development		2Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Initiate PIM IPT Structure	2Q - 4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
M06	PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	322915	369786	431270	585597	424948	433464	76911	Continuing	Continuing

A. Mission Description and Budget Item Justification: Medium Extended Air Defense System (MEADS) is a tri-national co-development program among the United States, Germany, and Italy to replace the U.S. PATRIOT air defense systems, PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. Participating countries will sign a Memorandum Of Understanding (MOU) for each successive program phase. The NATO MEADS Management Agency (NAMEADSMA) is the NATO contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the Design and Development (D&D) MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a $3.4 Billon D&D definitized contract to MEADS International Inc. on May 31, 2005. Within the PATRIOT/MEADS CAP there are two synergistic efforts: an international MEADS development effort managed by NAMEADSMA, and a U.S. effort to inject U.S.-specific capability requirements into the MEADS Major End Items (MEIs).

MEADS will provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, unmanned aerial vehicles (UAVs) and tactical air-to-surface missiles (TASMs). MEADS will have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, which will be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the MSE missile; an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search.

In addition, MEADS will provide significant improvements in strategic deployability, transportability, mobility and maneuverability. Its substantially reduced lift requirements enable MEADS to be deployed rapidly with essential combat loads via inter/intra-theater land, sea, and airlift anywhere in the world. MEADS will provide Combatant Commanders with an Air Missile Defense (AMD) system that is fully transportable by C-130 aircraft, thus increasing strategic and tactical mobility. Further, its decreased size/weight and ability to conduct rapid march order and system emplacement will enhance maneuverability, thereby providing better AMD protection to maneuvering forces.

The Missile Segment Enhancement (MSE) missile has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The PAC-3 MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Continue the U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel)budgets to manage the Design and Development (D&D) Phase contract to design, build, test and evaluate the production representative MEADS hardware.	152935	289418	380121
Implement program integration efforts that will examine Department of Defense (DOD) Joint Integrating Concept and Army Transformation Future Force mix and integration issues; support development and maintenance of Joint Data Network interface requirements; and appropriate planning of manpower, training, human factors, safety issues, cost reduction initiatives, and protection of U.S. background technology.	75139	41393	18020
Continue management, support and salaries for the national and international program offices.	5964	8328	7259
Includes US only efforts to support Exciter & Exportable Missile Model and Missile Segment Enhancement. Includes White Sands Missile Range (WSMR) Support and Targets.	88877	20300	25870
Small Business Innovative Research/Small Business Technology Transfer Programs		10347	
Total	322915	369786	431270

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	325945	372146	408182
Current BES/President's Budget (FY 2009)	322915	369786	431270
Total Adjustments	-3030	-2360	23088
Congressional program reductions		-2360	
Congressional rescissions			
Congressional increases			
Reprogrammings	6143		
SBIR/STTR Transfer	-9173		
Adjustments to Budget Years			23088

Change Summary Explanation: Funding - FY 2009 increase provides funding for:
1. United States Only Development of the MFCR Exciter and Security Contract;
2. Raytheon Integration efforts for the MSE missile;
3. Range and Support Costs for the MSE missile.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
SSN C50001, Patriot/MEADS CAP			31049	400215	668463	1032860	1305623	Continuing	Continuing
PE 0102419A, Proj E55, JLENS	237795	478204	356434	335071	318513	181294		Continuing	Continuing
SSN BZ0525, JLENS Production					442084	440585	391876	Continuing	Continuing
PE 0604082A, Proj S23, SLAMRAAM	28549	34526	31774					Continuing	Continuing
SSN C81001, SLAMRAAM Production			40468	117094	76073	61307	61307	Continuing	Continuing
PE 0604820A, Proj E10, SENTINEL	2446	7022						Continuing	Continuing
PE 0603327A, Proj E88, Integrated Fire Control AMD	36342							Continuing	Continuing
PE 0603327A, Proj S34, AMD System of System Engineering and Integration	1870	137517	113853	81057	37608	5203		Continuing	Continuing

Comment: PAC-3 / MEADS CAP RDTE funding was combined under PE0604869A beginning in FY06. This PE is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD) Program including Integrated Fire Control (IFC), JLENS, Patriot/MEADS Combined Aggregate Program (CAP), SLAMRAAM, SENTINEL and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

D. Acquisition Strategy On 1 July 2004, the Defense Acquisition Board approved the Acquisition Strategy (AS) for the PATRIOT/MEADS CAP Milestone B. On 6 April 2006, the Lower Tier Project Manager submitted a Program Deviation Report (PDR) to notify the Under Secretary of Defense for Acquisition, Technology, and Logistics, of changes affecting the 6 August 2004, approved PATRIOT/MEADS CAP Acquisition Program Baseline (APB). On 9 February 2006, the Army System Acquisition Review Council (ASARC) approved establishment of the Integrated Air and Missile Defense (IAMD) Project Office (PO) to lead development efforts for the Army IAMD. On 8 May 2006, the Army established the IAMD PO which will manage the U.S. Army's initiatives to implement the user's operational concept from a System-Centric focus to a Network-Centric, Component-Based (Plug and Fight) architecture. The lead proponent for the U.S. oversight of the International MEADS Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) effort now resides with the IAMD PO. The PATRIOT/MEADS CAP Acquisition Program Baseline (CAP APB) and Acquisition Strategy will be modified to reflect these changes.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604869A - Patriot/MEADS Combined Aggregate Program (CAP)

PROJECT
M06

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Design and Development	CPIF	NAMEADSMA, Huntsville, AL	113500	138600	2-3Q	284500	2-3Q	375900	2-3Q	Cont.	Cont.	
Missile Segment Enhancement - Lockheed Martin Missiles and Fire Control (LMMFC)	SS-CPIF	LMMFC, Dallas, TX	18000	37000	3Q	12700	2Q			Cont.	Cont.	
Missile Segment Enhancement (MSE) - Raytheon	SS-FP	Raytheon, Boston, MA	10400	11000	1-2Q	5800	1-2Q	8000	2-3Q	Cont.	Cont.	
Program Integration	N/A	Various, Huntsville, AL	32339	30243	1Q	16112	1-2Q	6300	1-2Q	Cont.	Cont.	
U.S. Only Security / Exciter	N/A	Lockheed Martin, Sycracuse, NY, Dallas, TX & Orlando, FL	7650	20600	2Q	500		16800	1-2Q	Cont.	Cont.	
U. S. Other Government Agencys (OGA's)	N/A	Various, Huntsville, AL	7830	8254	2-3Q	514	1-2Q			Cont.	Cont.	
In-House	N/A	PO, Huntsville, AL	8880	12180	1-4Q	10977	2-3Q	7918	2-3Q	Cont.	Cont.	
U.S. Only Combined Aggregate Program (CAP)	N/A	Various, Huntsville, AL & Dallas, TX	29725	7700	2-3Q					Cont.	Cont.	
Design and Development Government Furnished Equipment (GFE) Procurement Efforts	N/A	TACOM, Warren, MI	4844	4399	2-3Q	888	2-3Q				10131	9243
Subtotal:			233168	269976		331991		414918		Cont.	Cont.	9243

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
International Program Office	N/A	NAMEADSMA, Huntsville, AL	3010	2236	2Q	4030	2Q	4221	2Q	Cont.	Cont.	
U.S. Contracts	N/A	CAS, Huntsville, AL	12043	12294	2Q	7185	2Q			Cont.	Cont.	
Systems Engineering	N/A	MRDEC, Huntsville,	5698	9245	2Q	6104	2Q	3802	2Q	Cont.	Cont.	

		AL										
Subtotal:			20751	23775		17319		8023		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Range Support	N/A	WSMR, White Sands, NM	1800	4800	2-3Q	1800	2-3Q	1070	1-3Q	Cont.	Cont.	
Targets	N/A	SMDC, Huntsville, AL	9000	17400	2-3Q					Cont.	Cont.	
Modeling and Simulation	N/A	Huntsville, AL	3500	1000	1Q					Cont.	Cont.	
Subtotal:			14300	23200		1800		1070		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Internal Operating	N/A	NAMEADSMA, Huntsville, AL	6120	5964	2-3Q	8329	2-3Q	7259	2-3Q	Cont.	Cont.	
Small Business Innovative Research & Small Business Technology Transfer Programs	N/A	N/A				10347	3-4Q				10347	
Subtotal:			6120	5964		18676		7259		Cont.	Cont.	

Project Total Cost:			**274339**	**322915**		**369786**		**431270**		**Cont.**	**Cont.**	**9243**

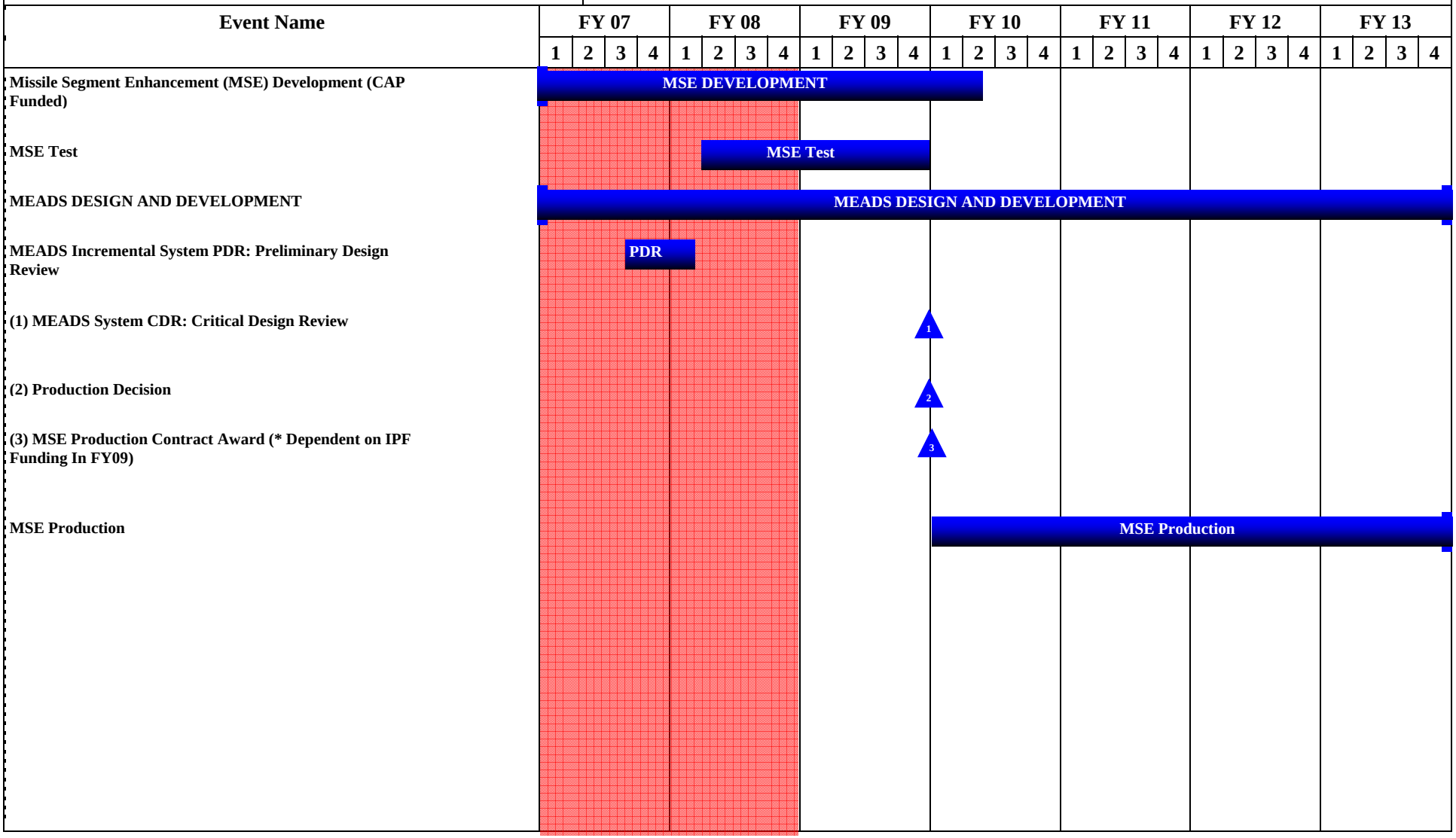
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604869A - Patriot/MEADS Combined Aggregate Program (CAP)

PROJECT
M06



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Missile Segment Enhancement (MSE) Development (CAP Funded)	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q			
MSE Test		2Q - 4Q	1Q - 4Q	1Q			
MEADS DESIGN AND DEVELOPMENT	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Integrated Baseline Reviews							
MEADS Incremental System PDR: Preliminary Design Review	3Q - 4Q	1Q					
MEADS System CDR: Critical Design Review				1Q			
Production Decision				1Q			
MSE Production Contract Award (* Dependent on IPF Funding In FY09)				1Q			
MSE Production				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)	February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604869A - Patriot/MEADS Combined Aggregate Program (CAP)**	**M06**

Funding in $000

Program	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Patriot/MEADS CAP							
Total Termination Liability Funding:							

Remarks:

The Patriot/Meads CAP Prime Contract Incorporates the "Limitation Of Funds" Clause (DFARS 52.232-22) To Limit The Government's Liability. For the Patriot Meads CAP Program, The "Limitation Of Funds" Clause Limits The Government's Financial Liability Per The Contract To Those Funds Placed On Contract Plus Any Outstanding Commitments Plus Costs Associated With The Orderly Termination Of Contractual Actions.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
SE1	NACT SENSOR ENGINEERING	7193	7253	6260						20706

A. Mission Description and Budget Item Justification: This project provides Research, Development, Testing & Evaluation (RDT&E) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addresses requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conforms to the administration's research and development priorities as related to Weapons of Mass Destruction (WMD) arms control and disarmament. Technical assessments are made to provide the basis for sound project development, evaluate existing programs and provide the data required to make compliance judgments and support US policy, decision-makers and negotiating teams. Technology developments and system improvement projects are conducted to ensure that capabilities for monitoring systems are available when required.

Primary emphasis is on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins.

The program includes development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provide an invaluable source of information on equipment and procedures that is extensively used by US and international agencies. This project also supports the warfighting capability area of combating Weapons of Mass Destruction (WMD).

The Department of Defense transferred the Nuclear Arms Control Technology Program from the Defense Threat Reduction Agency (DTRA) to the Army under PBD 289 to be executed by the US Army Space and Missile Defense Command. For FY04 the RDT&E funding request was placed in PE 0603782A Warfighter Information Network-Tactical-Dem/Val under Project F98 Nuclear Arms Control Tech-Sensor & Network Monitoring. For FY05 and FY06 the funding request was placed in PE 0604805A Command, Control, Communications Systems-Eng Dev under Project F99 Nuclear Arms Control Technology-Sensor Network Monitoring. Congress directed the Secretary of Defense to create a stand alone PE for this effort - not a new start. PE 0604870A is the new PE.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Conduct analyses as required to support the OSD treaty manager.	450	500	500
Continue development of a prototype sensor.	1400	1300	1200
Continue development of radionuclide particle and noble gas detectors	200	325	400
Continue Information management systems enhancements	1300	1200	1200
Continue the R&D support system	654	700	660
Continue on-location research of calibration for infrasound events	128	350	400
Continue development of techniques to identify signals from sensor systems	1611	1250	1000

Continue development of nuclear detection and measurement systems	1450	1425	900
Small Business Innovative Research/Small Business Technology Transfer Programs		203	
Total	7193	7253	6260

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	7346	7300	7300
Current BES/President's Budget (FY 2009)	7193	7253	6260
Total Adjustments	-153	-47	-1040
Congressional Program Reductions		-47	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	54		
SBIR/STTR Transfer	-207		
Adjustments to Budget Years			-1040

Change Summary Explanation: Funding - FY 2009 funds realigned to higher priority requirements.

C. Other Program Funding Summary Not applicable for this item.

D. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604870A - Nuclear Arms Control Monitoring Sensor Network

PROJECT
SE1

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	Various	MS, VA		1731	1-3Q	2428	1-3Q	2400	1-3Q		6559	
Subtotal:				1731		2428		2400			6559	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Monitoring Sensor Systems, Program Data Analysis, Verification Systems Concept Demo	Various	SAIC, General Dynamics, VA		2615	1-4Q	2160	1-4Q	1600	1-4Q		6375	
Support Contracts & Government Support	Various	FL, NM, VA, AL		1347	1-4Q	1165	1-4Q	760	1-4Q		3272	
SMDC Support	Various	Huntsville, AL		500	1-4Q	500	1-4Q	500	1-4Q		1500	
Subtotal:				4462		3825		2860			11147	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Huntsville, AL		500	2-3Q	500	2-3Q	500	2-3Q		1500	
Subtotal:				500		500		500			1500	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SMDC Support	Various	Huntsville, AL		500	1-4Q	500	1-4Q	500	1-4Q		1500	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

Subtotal:		500		500		500			1500	
Project Total Cost:		**7193**		**7253**		**6260**			**20706**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
NACT Technology Development																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604870A - Nuclear Arms Control Monitoring Sensor Network**	**SE1**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NACT Technology Development	1Q - 4Q	1Q - 4Q	1Q - 4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0605013A - Information Technology Development**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	104435	106075	73740	41240	35956	25122	18684	Continuing	Continuing
087	Distributed Learning System (DLS)	1251	446	455	464	473	483	493	Continuing	Continuing
099	Army Human Resource System (AHRS)	39510	58068	10189	2219	1514	1505	1505	Continuing	Continuing
137	TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II	18128	3123	147	457	554	177			22586
184	INSTALLATION SUPPORT MODULES (ISM)	1038	750	735	729	730	748	763	Continuing	Continuing
193	MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE	11311	8647	6839	5857	6059	1141	1146	Continuing	Continuing
316	STACOMP	14926	2385							34134
474	ENTERPRISE TRANSMISSION SYSTEMS	2962	997	1987	3023	4548	4649	4754	Continuing	Continuing
738	Future Business Systems (FBS)	11309	21396	37254	10892	9188	9249	9447	Continuing	Continuing
FM1	FINANCIAL DISCLOSURE MANAGEMENT SYSTEM	4000								4000
M05	Enterprise Army Workload & Performance Sys (eAWPS)		1535	1255	526	542	559	576	Continuing	Continuing
T04	USMEPCOM TRANSFORMTION - IT MODERNIZATION		8728	14879	17073	12348	6611			59639

A. Mission Description and Budget Item Justification: Supports efforts to plan, design, develop, and test information technology solutions to fulfill the Army's Warfighter Support Mission and accommodate changing Army requirements while fulfilling future Army needs. Provides for development and acquisition of Combat Service Support (CSS) and business information technology solutions to help arm, sustain, fix, move, train and man the force. Completed development/acquisition efforts will also enhance sustaining base functions and power projection capabilities and facilitate global messaging and electronic data interchange (EDI). Ongoing development efforts support multiple functional areas including logistics, personnel, transportation, training, medical/health protection, and sustaining base.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
5 - System Development and Demonstration	**0605013A - Information Technology Development**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	96515	103485	55978
Current BES/President's Budget (FY 2009)	104435	106075	73740
Total Adjustments	7920	2590	17762
Congressional Program Reductions		-710	
Congressional Rescissions			
Congressional Increases		3300	
Reprogrammings	9531		
SBIR/STTR Transfer	-1611		
Adjustments to Budget Years			17762

Change Summary Explanation: Funding - FY 2009: Funding increase made in support of the General Fund Enterprise Business Systems (GFEBS) program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**099**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
099	Army Human Resource System (AHRS)	39510	58068	10189	2219	1514	1505	1505	Continuing	Continuing

A. Mission Description and Budget Item Justification: Army Human Resource System (AHRS)is the Army's system of systems that provides commanders the necessary personnel information to make informed decisions on mobilized military personnel resources (both Active Duty and Reserve Component). The implementation of AHRS requires the development of an authoritative Army Corporate database to support the eventual migration to the Defense Integrated Military Human Resource System (DIMHRS). However, major elements of AHRS are not planned to be subsumed into DIMHRS. AHRS consists of three major components:

- Electronic Military Personnel Office (eMILPO) is a web-based, multi-tiered application, accessed via the AKO portal. eMILPO provides the U.S. Army with a reliable, timely, and efficient mechanism for performing personnel actions and managing strength accountability. The application is vital in determining the strength and capability of the Army and subordinate commands. It delivers enhanced performance to the Soldier, providing superior data accuracy, and a more intuitive web-based approach resulting in increased productivity, quality, timeliness, security, and user satisfaction. It re-hosted the USC Title 10 functionality, formerly resident in the Standard Installation Division Personnel System-3 (SIDPERS-3) application, for the migration to DIMHRS. Select elements of eMILPO will need to be operated in parallel with DIMHRS until/unless DIMHRS is able to absorb all eMILPO functionality.
- Deployed Theater Accountability System (DTAS) is a web-enabled system residing on the Secret Internet Protocol Router (SIPRNet) that accounts for military and civilian personnel in a deployed theater by unit, day and location supporting force tracking and deployed Operations Tempo (OPTEMPO) tracking. DTAS will continue to exist after DIMHRS migration and will be interfaced to DIMHRS in order to provide this accountability function, which is not present within DIMHRS.
- The Tactical Personnel System (TPS) is a stand-alone application for task organization/manifests and jump manifests used by tactical units. The system interfaces with DTAS, allowing soldiers to be loaded into DTAS en mass upon arrival in theater. TPS will need to operate for some time after DIMHRS migration, and will eventually be subsumed into DIMHRS or the Army Enterprise Human Resource System (eHRS).

Personnel Transformation (PT)- Enterprise Service Bus (ESB)- The Army_s Enterprise Service Bus (ESB) provides a data integration service in which data can be extracted from the legacy human resource systems and transferred to DIMHRS. The ESB will be a middleware application which will provide a single interface to and from DIMHRS from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between DIMHRS, the Army Legacy Systems, and external systems.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
AHRS - Post Deployment Software Support (PDSS) - Engineering Change Packages (ECPs)/System Change Packages (SCPs) Interim Change Packages(ICPs)in support of eMILPO and DTAS	10220	18069	4890
AHRS - Development	10985	19766	5299
Personnel Transformation - Enterprise Service Bus (ESB)	18305	18608	
Small Business Innovative Research/Small Business Technology Transfer Programs		1625	
Total	39510	58068	10189

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
AHRS, OPA, SSN W00800, STACOMP	5061	10001	10579	10781	10987			Continuing	Continuing
AHRS, OMA, 432612/432615	4480	5570	5586	5736	5888			Continuing	Continuing
Personnel Transformation- ESB, OPA, BE4164000	3025	3043	3243	3305	3368			Continuing	Continuing
Personnel Transformation-ESB OPA, SSN W00800								Continuing	Continuing
Personnel Transformation-eHRS, OMA, 432612	18120	25155	22320	22870	23433			Continuing	Continuing

Comment:

C. Acquisition Strategy Army Human Resource System (AHRS)- The program manager makes extensive use of Integrated Product Teams (IPTs). Sub-elements of the acquisition (engineering and design, logistics planning, testing, etc.) are intensively managed by integrated teams of government and contractor personnel. Task performance is tracked against the Work Breakdown Structure (WBS) and resources allocated to each task are adjusted based on performance against the WBS. AHRS contractual efforts are acquired on a time and materials basis through GSA schedule and existing contractual vehicles. The Title 10 functionality has transferred to AHRS. Additionally, as the Personnel community manages their migration to the Defense Integrated Military Human Resource System (DIMHRS), the functionality resident in the 320+ external interface current systems will migrate to AHRS. This migration began in FY03, and will ensure the personnel community retains functionality necessary to meet operational requirements while addressing Transformation requirements.

Personnel Transformation - The Enterprise Service Bus (ESB) program management approach is a middleware application which will provide a single interface to and from DIMHRS from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between DIMHRS, the Army Legacy Systems, and external systems. Contractor selection will be accomplished through open competition, administered by a federal certified contracting agency. Program Management is accomplished by combining a "best practices" approach coupled with standard tools.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
099

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
AHRS - PDSS ECPs/SCPs/ICPs	C/FP	Electronic Data Systems, Herndon, VA	9924	10220	1Q	1512	1Q	4889	1Q	Cont.	Cont.	Cont.
Personnel Transformation ESB - Research/Development PT Impacts on Objective Force	C/FP	Science Applications International Corp (SAIC) , San Diego, CA	4639	18305	2Q	1216				Cont.	Cont.	Cont.
AHRS - Software Development		Electronic Data Systems, Herndon, VA	26506	10985	1Q	1640	1Q	5300	1Q	Cont.	Cont.	Cont.
DIMHRS						53700					53700	
Subtotal:			41069	39510		58068		10189		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
										Cont.	Cont.	Cont.
Subtotal:										Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract

ARMY RDT&E COST ANALYSIS (R3)

February 2008

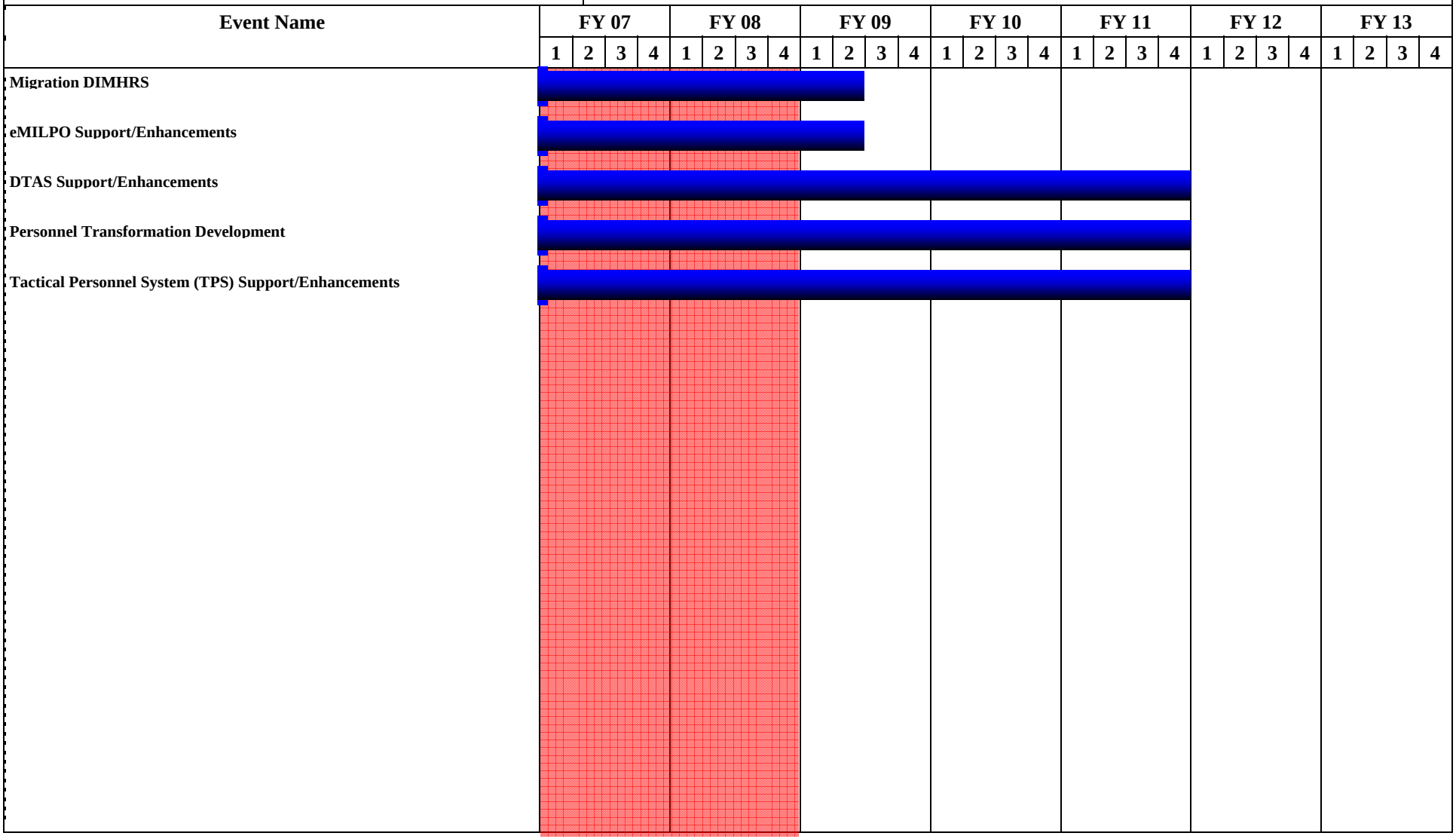
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**099**

Subtotal:										
Project Total Cost:	**41069**	**39510**		**58068**		**10189**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**099**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**099**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Migration DIMHRS	1Q - 4Q	1Q - 4Q	1Q - 2Q				
eMILPO Support/Enhancements	1Q - 4Q	1Q - 4Q	1Q - 2Q				
DTAS Support/Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
DIMHRS							
Personnel Transformation Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Tactical Personnel System (TPS) Support/Enhancements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**137**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
137	TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II	18128	3123	147	457	554	177			22586

A. Mission Description and Budget Item Justification: Transportation Information Systems (TIS) Product Office funding supports design, development, testing, and program management functions for Transportation Coordinators' - Automated Information for Movement System II (TC-AIMS II).
TC-AIMS II:
- Provides an integrated information transportation system capability for deployment, sustainment, and redeployment operations during both war and peacetime operations for the U.S. Army and U.S. Navy.
- Consolidates the management of unit/installation-level transportation functions of Unit Movement, Load Planning, and Installation Transportation Office/Traffic Management Office (ITO/TMO) operations, and facilitates the movement and support of personnel and cargo during all phases of military operations in all environments, including sustainment; reception, staging, onward movement and integration (RSO&I); and battlefield operations.
- Supports routine and surge requirements and automates shipping/receiving, and deployment; sustainment and redeployment processes; produces movement documentation, unit move data; and furnishes timely transportation information to major commands, transportation component commands, and United States Transportation Command.
- Supports Pre-Planned Product Improvements (P3I), a post Block 3 development capabilities.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Project Management Office (PMO) Contractor Support	6636		
PMO Operations	3561		
Facility Lease/Service Management	3038		
Block 3 (Movements Control & Planning; Map Graphics) System Development	2372		
Block 3 (Movements Control & Planning; Map Graphics) System Test and Evaluation	661		
Pre-Planned Product Improvements (P3I)	1860	3110	147
Small Business Innovative Research/Small Business Technology Transfer Programs.		13	
Total	18128	3123	147

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA - SSN: BZ8900 TC AIMS II	29923	29037	31500	17600	16300	13640	21900	Continuing	Continuing
OMA - APE: 432612	23427	34750	40800	36562	44700	29022	24300	Continuing	Continuing

Comment:

C. Acquisition Strategy Transportation Information Systems (TIS) Product Office for the Transportation Coordinators' - Automated Information for Movement System II (TC-AIMS II) uses an Integrated Support Memorandum of Agreement (MOA) to develop and maintain the software. A separate contract provides program management support, fielding of the system, and training to the software. TC-AIMS II system development is following a multi-block, phased development and fielding strategy to reduce technical, program, and user acceptance risks. TC-AIMS II system capability is broken into three separate, software blocks including: Block 1 - Unit Move, Block 2 - Enhanced Unit Move (Web), and Block 3 - Reception, Staging, Onward Movement and Integration (RSO&I), Movement Control and Planning, and Map Graphics. Infrastructure requirements are being satisfied by the establishment of an Enterprise Architecture composed of a Central Management Facility supporting Multiple Regional Access Nodes. Additional infrastructure requirements include the acquisition and deployment of Commercial-Off-The-Shelf (COTS) hardware to provide a breakaway client-server capability which will function in isolated workgroups or in stand-alone modes. Funding supports the operations of a Central Management Facility (CMF) with a minimum of three Regional Access Nodes. This Enterprise Management System operating at the CMF supports central software distribution to remote sites. Funding for Army hardware is included in the TIS program.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
137

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Development	C/CPAF	Computer Sciences Corporation (CSC), Springfield, VA	32703	2372							35075	
System Development	MOA	Army Engineer Research & Development Center (ERDC), Springfield, VA	32703							Cont.	Cont.	Cont.
Pre-Planned Product Improvements (P3I)	MOA	Army Engineer Research & Development Center (ERDC), Springfield, VA		2433		3123	3Q	147		Cont.	Cont.	Cont.
Subtotal:			65406	4805		3123		147		Cont.	Cont.	Cont.

Remarks: The Cost Review Board (CRB) developed an Army Cost Position (ACP) for Transportation Coordinators' Automated Information Movement System II (TC-AIMS II) to support Increment 3 Full Deployemnt Decision REview. The Army Cost Poistion was approved on 29-November-2007.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Facility Lease/Service Management	T&M	Smart Technologies, Springfield, VA	10825	3038	1Q					Cont.	Cont.	Cont.
Project Management Office (PMO) Contractor Support	T&M	L3/Titan, Springfield, VA	27020	6063	4Q					Cont.	Cont.	Cont.
PMO Operations	NA	PMO, Springfield, VA	12907	3561	1-4Q					Cont.	Cont.	Cont.
Subtotal:			50752	12662						Cont.	Cont.	Cont.

Remarks: Product Management Office (PMO) Operations includes direct pay of government employees, Temporary Duty (TDY), training, supplies, etc.

III. Test And Evaluation	Contract	Performing Activity &	Total	FY 2007	FY 2007	FY 2008	FY 2008	FY 2009	FY 2009	Cost To	Total	Target

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**137**

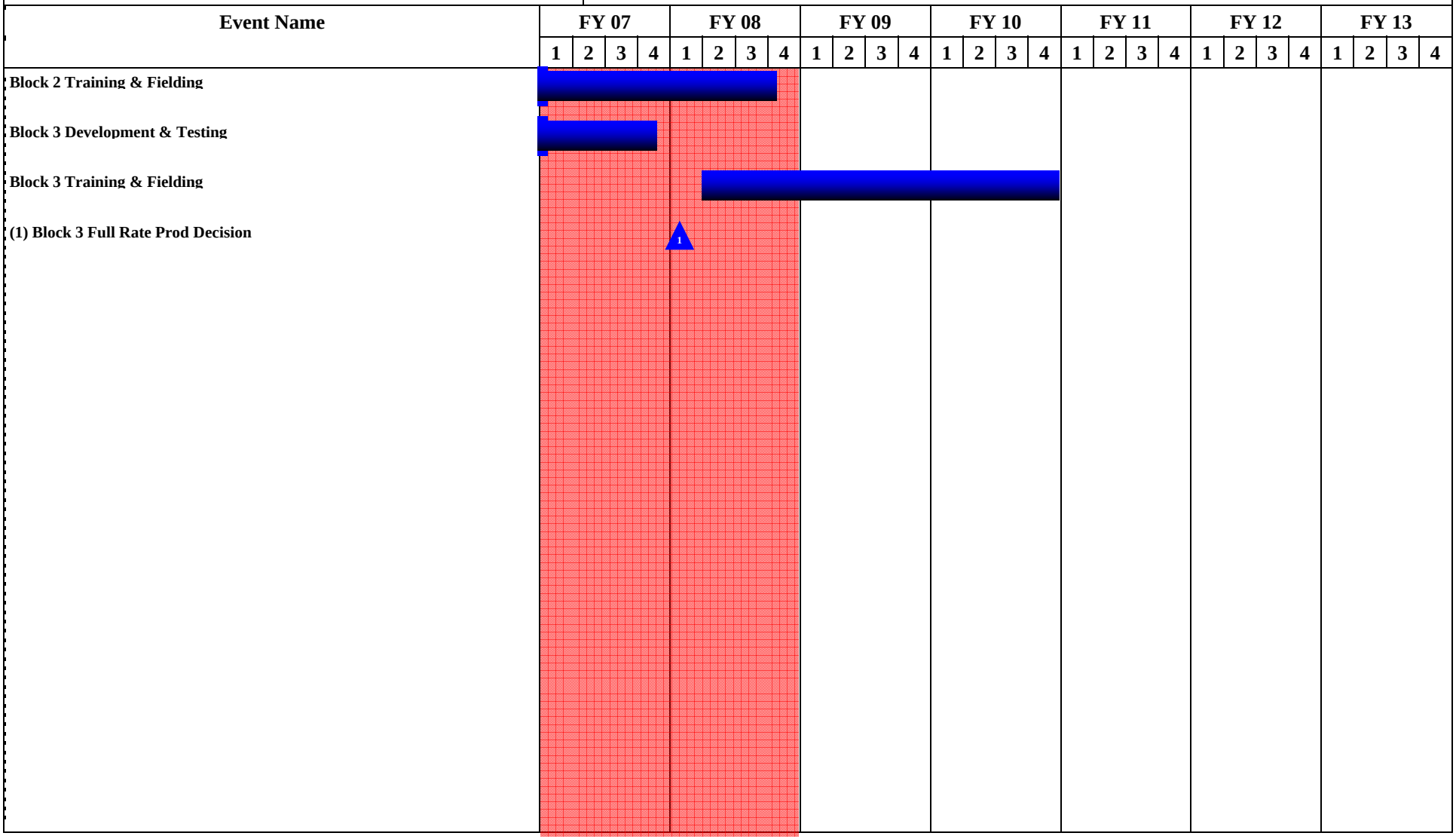
	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
OT & DT	MOA	Various	5598	661						Cont.	Cont.	Cont.
Subtotal:			5598	661						Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:			**121756**	**18128**		**3123**		**147**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**137**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**137**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Block 2 Training & Fielding	1Q - 4Q	1Q - 4Q					
Block 3 Development & Testing	1Q - 4Q						
Block 3 Training & Fielding		2Q - 4Q	1Q - 4Q	1Q - 4Q			
Block 3 Full Rate Prod Decision		1Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
193	MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE	11311	8647	6839	5857	6059	1141	1146	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Medical Communications for Combat Casualty Care (MC4) System provides multipliers to the medical force structure through the acquisition of digital communications and information technology solutions for the deployable medical forces. The MC4 System will also fulfill the requirements highlighted in United States Code; Title 10; Subtitle A; Part II; Chapter 55; Section 1074f; mandating the proper documentation of deployed service members' medical treatment to include pre- and post-deployment screening and its associated medical surveillance. The MC4 System will interface Force Health Protection and medical surveillance information with Army Battle Command and Combat Service Support information technology systems as they evolve to support the Army Transformation. The MC4 System also indirectly supports other soldier protection initiatives as analysis of injury data collected from the MC4 systems is used to support the identification and development of other critical soldier support systems such as body armor, improved helmets, traumatic brain injury protection and trauma reduction. Current MC4 Program efforts are focused on system engineering, testing and integration, and fielding automation infrastructure for Army users of the Joint Theater Medical Information Program (TMIP) suite of software. Funding provides support system engineering, integration and developmental testing of information management/information technology to better support Force Health Protection in the Army Campaign Plan and Global War On Terrorism units as well as overall MC4 Project Management.

NOTE: FY 2008 funding totals do not include $5,000 previously requested for current FY 2008 GWOT requirements.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Program Management	180	195	210
Logistics Support Planning for P3I and System Upgrades	156	167	179
Engineering and Technical Support for P3I and System Upgrades	2306	2546	1554
MC4 Testing for P3I and System Upgrades	1140	1130	1200
Integration and testing for Army Unique Solutions	1135	354	389
MC4/TMIP Integration and Testing for P3I and System Upgrades	5394	4013	3307
Electronic Commodity, provided to GOV WORKS, from Congressional MARKS	1000		
Small Business Innovative Research/Small Business Technology Transfer Programs		242	
Total	11311	8647	6839

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA SSN MA8046 (MC4)	10506	21954	38533	8718	5326	16862	17279	Continuing	Continuing

OMA APE 432612	6938	13831	9037	9352	9689	4968	3701	Continuing	Continuing

Comment:

C. Acquisition Strategy The MC4 Program supports a number of Army Medical Information Technology/Communications initiatives. The near and mid-term focus of the MC4 program is to engineer, design, test, acquire and field the Army automation/communications infrastructure capabilities supporting fielding of the Joint Theater Medical Information Program (TMIP) integrated software application suite and other Army requirements. The MC4 hardware is procured as Commercial-off-the-Shelf (COTS) components. Since TMIP software is a major component of the MC4 System, the MC4 Program will deliver capabilities in increments, recognizing the need for future system upgrades and Preplanned Product Improvements (P3Is). The MC4 Program continues to work with the user community to continually define and refine additional requirements and match them with available technologies to provide the user enhanced capabilities. These enhanced capabilities will be provided to the user at the earliest possible date. This approach yields the most operationally useful and supportable capability in the shortest time possible with Cost As an Independent Variable. Moreover, this approach provides an initial capability with the explicit intent of delivering improved and updated capability in subsequent upgrades and Pre-Planned Product Improvements. This evolutionary development approach will be accomplished through a rapid prototyping process that will progress the system from its current functional capabilities to fully integrated objective capabilities. Appropriate commercial technology enhancements (e.g. advances in operating systems, voice activated technology, etc) will be incorporated into MC4 products and systems as they become available. Each MC4 System component will undergo a full range of developmental testing to include software unit testing, integration testing, interoperability testing and software qualification testing. The MC4 system upgrades and improvements will continue to undergo follow-on operational testing.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
193

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PMO Support	C/CPFF	General Dynamics (was Anteon Inc.), Fairfax, VA	708							Cont.	Cont.	Cont.
PMO Support	C/CPFF	CACI Inc-Federal, Arlington, VA	2275							Cont.	Cont.	Cont.
Logistics Planning	In House	PMO, Ft. Detrick, MD	2094	156	1-4Q	167	1-4Q	179	1-4Q	Cont.	Cont.	Cont.
Logistics Planning Spt	C/CPFF	CACI Inc-Federal, Arlington, VA	1481		1Q					Cont.	Cont.	Cont.
Engineering & Technical Spt	In House	PMO, Ft. Detrick, MD	2336		1-4Q					Cont.	Cont.	Cont.
Engineering & Tech Spt	C/CPFF	L3 (was Titan), Reston, VA	5306	1165	1Q	354	1Q	389	1Q	Cont.	Cont.	Cont.
Electronic Commodity		GOV WORKS	900	1000	2Q						1900	
Subtotal:			15100	2321		521		568		Cont.	Cont.	Cont.

Remarks: Electronic Commodity is a pass-through to GOV WORKS, an initiative of SEN Byrd of West Virginia, from Congressional MARKS. SBIR/STTR reductions taken from program.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
MC4 Integration and Testing	C/CPFF	L3 (was Titan), Reston, VA	5587	5263	1Q	4255	1Q	3307	1Q	Cont.	Cont.	Cont.
PMO Testing Spt	MIPR	ATEC/AMEDD Board	2228	407	1-4Q	425	1-4Q	425	1-4Q	Cont.	Cont.	Cont.
MC4/TMIP System Engineering	C/CPFF	John Hopkins University	10898	3140	1Q	3251	1Q	2329	1Q	Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

		(JHU) Applied Physics Lab, Laurel, MD										
Subtotal:			18713	8810		7931		6061		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prog Mgmt Operations	In House	PMO, Ft Detrick, MD	6660	180	1-4Q	195	1-4Q	210	1-4Q	Cont.	Cont.	Cont.
Subtotal:			6660	180		195		210		Cont.	Cont.	Cont.

Remarks: Funding in Program Management Operations includes direct pay of PMO government employees, TDY, training, supplies, etc.

Project Total Cost:			**40473**	**11311**		**8647**		**6839**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Pre-Planned Product Improvements, System Upgrades																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**193**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Pre-Planned Product Improvements	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
System Upgrades	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Pre Planned Product Improvements correspond to current TMIP Acquisition Strategy schedules for updgrades and enhanced capability of the TMIP software. System Upgrades correspond to projected software change packages throughout this time period. Both P3I and Upgrades require integration and testing prior to acceptance and release.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**474**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
474 ENTERPRISE TRANSMISSION SYSTEMS	2962	997	1987	3023	4548	4649	4754	Continuing	Continuing

A. Mission Description and Budget Item Justification: Combat Service Support (CSS) Automated Information System Interface (CAISI) is a high-data-rate wireless system that provides sensitive information (SI) and is the backbone for logistics connectivity down to individual Combat Service Support (CSS) computer systems located within the sustainment area. The CAISI design effort focuses on integrating Commercial Off-The-Shelf (COTS) equipment from various manufacturers to create a standard deployable set of communications equipment. Current CAISI equipment is being fielded with new equipment training to logistics units Army-wide. Maintenance support is provided at depot level with additional support at forward repair activities. Computer based training, on-line refresher training and technical support is also provided for CAISI users. A standard set of CAISI equipment currently provides network communications to up to 40 tents, vans, or shelters within a 7 x 7 kilometer area using wireless bridging between tents. CAISI design incorporates full lifecycle sustainability features to ensure reliability and supportability in full spectrum operations. Ongoing design efforts are being focused in three areas: 1) updating security accreditation for compliance with new communications security regulations, 2) improving the distance and range capabilities, 3) testing and fielding a replacement version of CAISI starting in FY 2008.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Research Test and evaluate COTS equipment in order to develop a new version of CAISI with improved capabilities for fielding in FY08 as a life-cycle replacement.	2962	969	1987
Small Business Innovative Research/Small Business Technology Transfer Program		28	
Total	2962	997	1987

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OPA, BD3512	9875	12813	16444	18867	22089	14456	17170	Continuing	Continuing
OMA 463612	3521	3561	5803	5803	5803	5803	5803	Continuing	Continuing

Comment:

C. Acquisition Strategy Acquisition strategy will be to obtain engineering support, as well as applicable hardware and software to enhance current CAISI capabilities. Funding provides the development of prototypes, environmental, operational and functional testing in order to select the best technologies for lifecycle replacement of current system. Integral to this strategy is the imperative of developing the capability for inserting and integrating emerging technologies into the new CAISI.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
474

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test satellite links and associated equipment	C/FFP	ISEC, Ft Huachuca, AZ	9790	2962		997		1987		Cont.	Cont.	Cont.
Subtotal:			9790	2962		997		1987		Cont.	Cont.	Cont.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

Project Total Cost:			**9790**	**2962**		**997**		**1987**		**Cont.**	**Cont.**	**Cont.**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**474**

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Test and Evaluation																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**474**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Test and Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**738**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
738 Future Business Systems (FBS)	11309	21396	37254	10892	9188	9249	9447	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Future Business System (FBS) is the Program Element (PE) designed to capture funding for the Research, Development, Test and Evaluation (RDT&E) projects required to transform the acquisition inventory of Information Technology (IT) systems into a centrally managed and centrally funded suite of enterprise capabilities that enable the acquisition community to more effectively support the war-fighter. It includes project funds to develop the Army acquisition business enterprise architecture, the National Defense Authorization Act (NDAA)'05 required tool for developing a roadmap for IT systems transformation; it includes project funds to support domain requirements development and documentation activities; it includes project funds to support analysis and study activities that enable portfolio management and inventory reduction; and it includes project funds to establish the FBS program to manage the development, fielding and improvement of an enterprise solution to the documented business system requirements. FBS will not field just another business system; rather, it will provide an integrated set of business capabilities that supports an agile and highly adaptive info-structure and the constantly evolving business environment. FBS will implement a Service Oriented Architecture and implement the Army and DoD data strategy. By doing so, FBS will provide the business tools that enable knowledge-based decision making and focus on the acquisition of end-items. It will reduce the costs related to management and support of existing acquisition business tools. It will enable interoperability among acquisition programs and with other domains and Office of the Secretary of Defense (OSD) enterprise IT business systems by optimizing access to and sharing of data. It will contribute to the security of the network by substantially reducing the number and variety of IT systems. The FBS program will enable effective and efficient support to the decision and management processes through which the Army Acquisition Community obtains or develops supplies and materiel for the war-fighter. The FBS acquisition program, the dominant project within the FBS PE, will provide the IT and Information Management (IM) support for reengineered business processes that will standardize how the business of acquisition is accomplished. FBS will utilize spiral development and rely on commercial-off-the-Shelf (COTS) tools in order to continuously improve its ability to meet Army demands for capability and efficiency. By providing the RDT&E funding for the above projects, the FBS PE provides for the development and fielding of a priority information management capability that will dramatically improve the effectiveness and efficiency of the process that equips the war-fighter.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Analysis and Design, Development, Test and Integration of FBS.	9574	10084	19116
Training and Customer Support	50	3255	5756
Application Software and Licenses		5425	9592
Program Management	1685	2033	2790
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		599	
Total	11309	21396	37254

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA APE 432612	3755	15879	13297	12001	10626	10820	11019	Continuing	Continuing

Comment:

C. Acquisition Strategy The Future Business System (FBS) program employs a spiral development strategy in order to deliver managed, incremental sets of capabilities required by the domain. This incremental approach enables the managed evolution of Information Technology (IT) capabilities that flow from Lean-Six-Sigma enabled process improvements and formal requirements development and documentation. The FBS acquisition strategy utilizes a test bed to validate the Service Oriented Architecture (SOA) and to enable user prototyping of process improvements and IT capability enhancements. By relying primarily on Commercial-Off-The-Shelf (COTS) software, the FBS strategy ensures the necessary flexibility and reliability of proven solutions, leading edge technologies and an IT environment that can be maintained at low cost and with minimal impact to using elements. It provides for the continued support to the acquisition business by integrating the development and fielding of required capabilities with the phased retirement of existing systems. The strategy keeps cost down by promoting incorporation of select existing systems into the SOA where doing so satisfies a required domain capability with a best-value solution. The strategy is designed around a coordinated process reengineering and requirements development and documentation process, which is a precursor to solution set development and fielding. The spiral development strategy aligns to the fielding of Department of Defense (DoD) and other Army domain enterprise systems (e.g. General Fund Enterprise Business Systems (GFEBS), Logistics Modernization Plan (LMP), Defense Information Management Human Resources Systems (DIHMRS), Defense Acquisition Management Information Retrieval (DAMIR), Standard Procurement System (SPS), etc.) so as to preclude fielding of duplicate capability and ensure optimal interoperability among systems. Most importantly, the FBS acquisition strategy incorporates the rigor of the Acquisition lifecycle management process and in doing so, enables the risk and cost management controls that ensure a managed solution that meets domain requirements.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
738

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Analysis and Design, Development , Integration and Testing	C & T&M	Northrup Grumman, McLean, VA	5697	9074	1-4Q					Cont.	Cont.	Cont.
Application Licenses	SS & FP	Mythics, Virginia Beach, VA	4420							Cont.	Cont.	Cont.
Application Licenses	C & FP	Immix Technologies Inc, McLean, VA				5425	1-4Q	9592	1-4Q	Cont.	Cont.	Cont.
Analysis and Design, Development, Integration	C & T&M	L3 Communication ILEX, Chantilly, VA				9183	1-4Q	12716	1-4Q	Cont.	Cont.	Cont.
Subtotal:			10117	9074		14608		22308		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Training Development	SS	Bearing Point Inc, McClean, VA	62	50	1Q	3118	1-4Q	4710	1-4Q	Cont.	Cont.	Cont.
Subtotal:			62	50		3118		4710		Cont.	Cont.	Cont.

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPRs to Various Agencies		425	500	1-4Q	1500	1-4Q	6400	1-4Q	Cont.	Cont.	Cont.
Subtotal:			425	500		1500		6400		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
738

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	T&M	BearingPoint, McLean, VA	1165	1685	1-4Q	2170	1-4Q	3836	1-4Q	Cont.	Cont.	Cont.
Subtotal:			1165	1685		2170		3836		Cont.	Cont.	Cont.
Project Total Cost:			**11769**	**11309**		**21396**		**37254**		**Cont.**	**Cont.**	**Cont.**

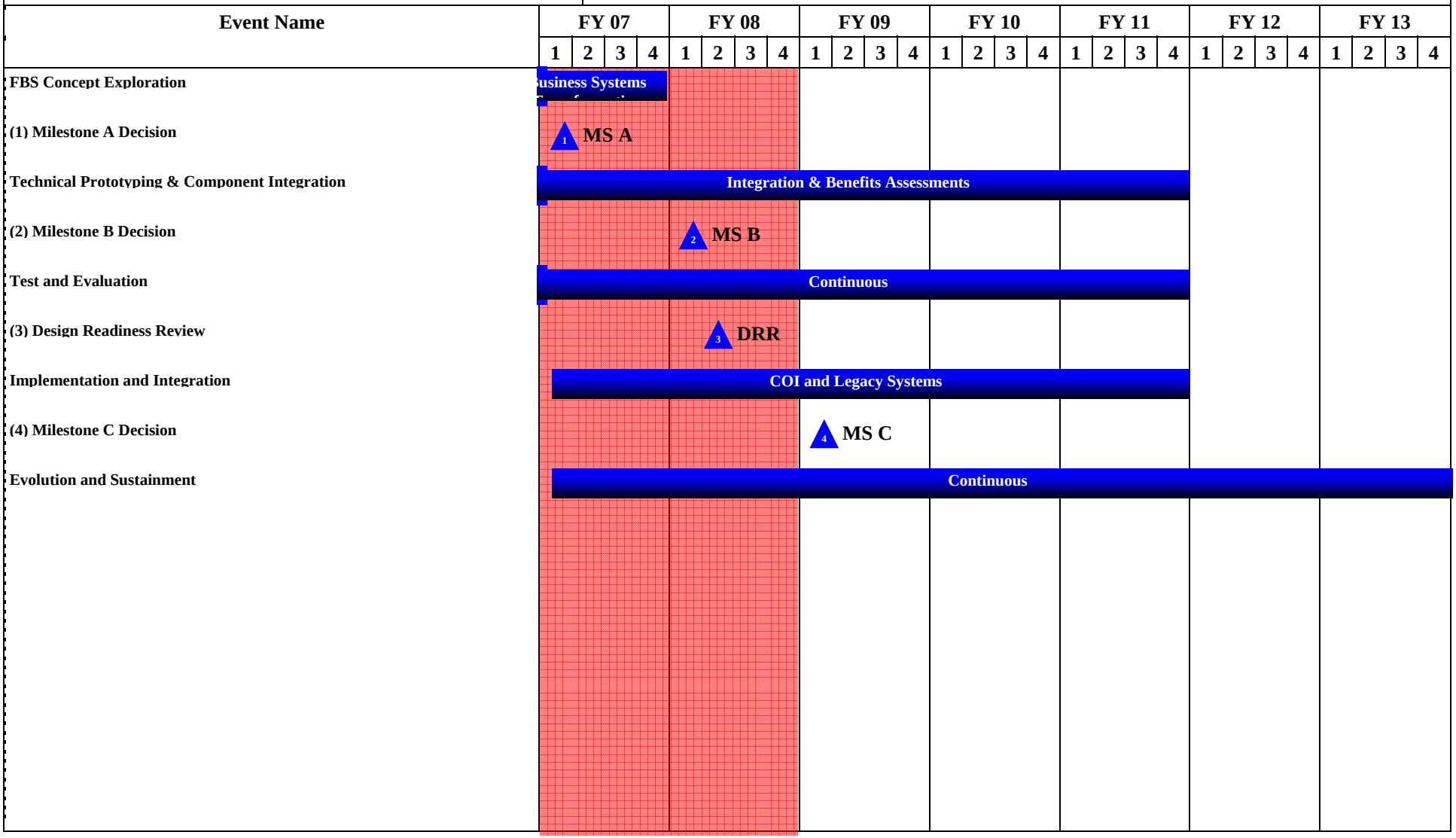
Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
738



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**738**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FBS Concept Exploration	1Q - 4Q						
FBS Concept Decision							
Milestone A Decision	1Q						
Technical Prototyping & Component Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Milestone B Decision		1Q					
Test and Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Design Readiness Review		2Q					
Implementation and Integration	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Milestone C Decision			1Q				
Evolution and Sustainment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**M05**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
M05	Enterprise Army Workload & Performance Sys (eAWPS)		1535	1255	526	542	559	576	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Enterprise Army Workload and Performance System (eAWPS) is a capstone Human Resource based system that combines information from multiple Army business operations into an integrated data environment to support senior decision making. Additionally, it provides scenario planning to identify program alternatives and risks linked to the transformation of the Army business enterprise. eAWPS operates on the principle of building information from workload and performance data derived from authoritative Army systems (existing and future) to create an enterprise view. The system is comprised of five major modules integrating data on operational requirements, current performance information, resource management, time and attendance, and output to facilitate the linkage between manpower and budget programming, planning, and execution. eAWPS provides strategic and operational decision makers the ability to view information at user-specified levels of aggregation providing unique customization capabilities. eAWPS was originally designed for the Army Material Command maintenance community and is now being extended to non-maintenance activities commencing with the Office of the Administrative Assistant, Army Reserve, Human Resources and Army Medical Command, as well as maintenance expansion into Army Reserve and Army National Guard maintenance sites.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Software and architecture development		1260	1040
Program Management		232	215
Small Business Innovative Research/Small Business Technology Transfer Program		43	
Total		1535	1255

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

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
M05

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software and architecture development	TBD	TBD	100			1303		1040		Cont.	Cont.	Cont.
Subtotal:			100			1303		1040		Cont.	Cont.	Cont.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management	TBD	TBD	20			232		215		Cont.	Cont.	
Subtotal:			20			232		215		Cont.	Cont.	

Project Total Cost:			**120**			**1535**		**1255**		**Cont.**	**Cont.**	**Cont.**

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**T04**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
T04	USMEPCOM TRANSFORMTION - IT MODERNIZATION		8728	14879	17073	12348	6611			59639

A. Mission Description and Budget Item Justification: The US Military Entrance Processing Command (USMEPCOM) is responsible for determining the physical, mental, and moral qualifications of candidates for enlistment into the Armed Forces of the United States. As such, USMEPCOM is an integral and essential part of the military recruiting and personnel systems of the Services because the command serves as an entry point for much of the information that supports recruiting, training, and management of the nation's warfighting resources. Critical to USMEPCOM fulfilling its mission is the capability to electronically acquire, process, store, secure, and seamlessly share personnel information across the command and the Accessions Community of Interest (ACOI). The Virtual Interactive Processing System (VIPS) will modernize and enhance the Information Technology (IT) capabilities of USMEPCOM to collect, evaluate, validate, and exchange enlistee qualification information during peacetime and mobilization. The VIPS system will provide automated baseline personnel data for Department of Defense (DoD) health, human resources, and biometrics systems. When fully implemented, VIPS will substantially expand the capacity of USMEPCOM to qualify and process applicants and will reduce the cycle time required to induct enlistees to meet the warfighting needs of the Services and the Combatant Commands. Moreover, VIPS will allow USMEPCOM to break its current _brick and mortar_ paradigm by enabling pre-qualification and screening of candidates without the need for potential enlistees to physically travel to Military Entrance Processing Stations (MEPS). This Program Element supports acquisition of a VIPS system will be based on a Service Oriented Architecture that will enable 100% electronic capture of required applicant qualification data; make accession data fully, appropriately and securely available to applicants and accession partners (i.e., Recruiting and Training Commands); enable full compliance with DoD direction to move toward a paperless, net-centric environment and electronically provide complete data to official DoD health (Armed Forces Health Longitudinal Technology Application) and human resources (Defense Integrated Military Human Resources System) systems; and take advantage of automated data capture technology (i.e., medical equipment with the capability to capture and electronically transmit exam results). When VIPS is implemented, USMEPCOM's role in the ACOI will shift from carrying out the execution of qualifying processes and activities to verifying qualification information and serving as an information broker and provider, not only to its ACOI partners, but secondary stakeholders as well. The USMEPCOM of the future will be location independent, virtually paper-free and highly automated. In this environment VIPS data will be highly available and easily shared with ACOI and stakeholder organizations, dramatically improving the effectiveness and efficiency of manning the Armed Forces.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Product Development - Prototype Development		5935	1960
Product Development - Design and Development of Increment 1/Release 1			9059
Test and Evaluation - Prototype Evaluation			325
Test and Evaluation - IOT&E for Increment 1/Release 1			450
Project Support			250
Program Management		2549	2835
Small Business Innovative Research/Small Business Technology Transfer Program		244	

Total		8728	14879

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
OMA APE 33271600		11815	9171	4007	11847	16813	24000		77653
OPA SSN BE4164				9000	13900	21300	14242		58442

Comment:

C. Acquisition Strategy The VIPS project will be acquired using an evolutionary acquisition strategy to develop and field the system in two increments consisting of two or more releases each. Releases will be developed using a spiral approach to meet known/defined user requirements and to place a useful capability in the hands of the users as early in the program as possible. The spiral release development strategy will allow for opportunities to align VIPS engineering and development with the deployment of other Service modernization projects such as AHLTA and DIMHRS, promoting incorporation of existing systems into the VIPS SOA and mitigating program costs. Requirements will be based on business process reengineering and continuous process improvement activities conducted by USMEPCOM and the ACOI as a precursor to VIPS development. RDT&E funding beginning in FY 08 will support technology demonstration activities and risk reduction efforts for development of the first increment of functionality that will improve applicant processing in a web based paperless environment. Technology demonstration activities and risk reduction efforts for Increment 1, Release 1 will lead to successful completion of milestone (MS) B during early FY 09. Completion of MS B in early FY 09 will ensure start of System Development and Demonstration in FY 09 and early achievement of MS C-1 for Increment 1 in FY 10. Following Initial Operational Test & Evaluation, Increment 1 will be deployed to USMEPCOM Headquarters and the 65 MEPS, thereby providing a functional baseline and Initial Operational Capability early in the program life cycle. Subsequently, VIPS will begin development of Release 2 of Increment 1 leading to a MS C-2 and deployment in FY 11. The final Increment will be deployed in FY 12 with Full Operational Capability attained in FY 13 following completion of a Final Operational Test and Evaluation to verify that functional capability requirement have been fulfilled and that the system is operationally effective and suitable. The VIPS system will be acquired using a competitive contracting strategy using performance based contracting. The VIPS Program Office will employ rigorous cost controls using Earned Value and a comprehensive risk management program to ensure development and deployment of a managed solution that meets USMEPCOM and ACOI requirements and fulfills identified capability gaps.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

PROJECT
T04

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prototype	C/CPAF	TBD				6179	2Q	1960	1Q		8139	8139
Increment 1/Release 1	C/CPAF	TBD						9059	1-2Q	Cont.	Cont.	10382
Increment 1/Release 2	C/CPAF	TBD										9154
Increment 2/Release 1	C/CPAF	TBD									5105	5105
Increment 2/Release 2	C/CPAF	TBD									9253	9253
Subtotal:						6179		11019		Cont.	Cont.	42033

Remarks: See acquisition strategy discussion. A prototype will be developed to serve as a test bed to validate reengineered business processes, validate requirements, and reduce risks. The prototype will support a Milestone B decision in early FY 09. Product development contracts will be competitively awarded and will be performance based.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Support and Engineering Studies	Various	TBD/Ft. Belvoir						250	1-4Q	Cont.	Cont.	1400
Subtotal:								250		Cont.	Cont.	1400

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
IOT&E	MIPR	TBD						775		Cont.	Cont.	2570
FOT&E	MIPR	TBD										770
Subtotal:								775		Cont.	Cont.	3340

Remarks: Cost for developmental test activities are included in the Product Development costs shown above. Operational testing will follow an incremental approach that aligns with the evolutionary acquisition strategy. A final operational test will be conducted to verify that the VIPS system has fulfilled requirements and is operationally effective and suitable for its intended operational environment.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605013A - Information Technology Development

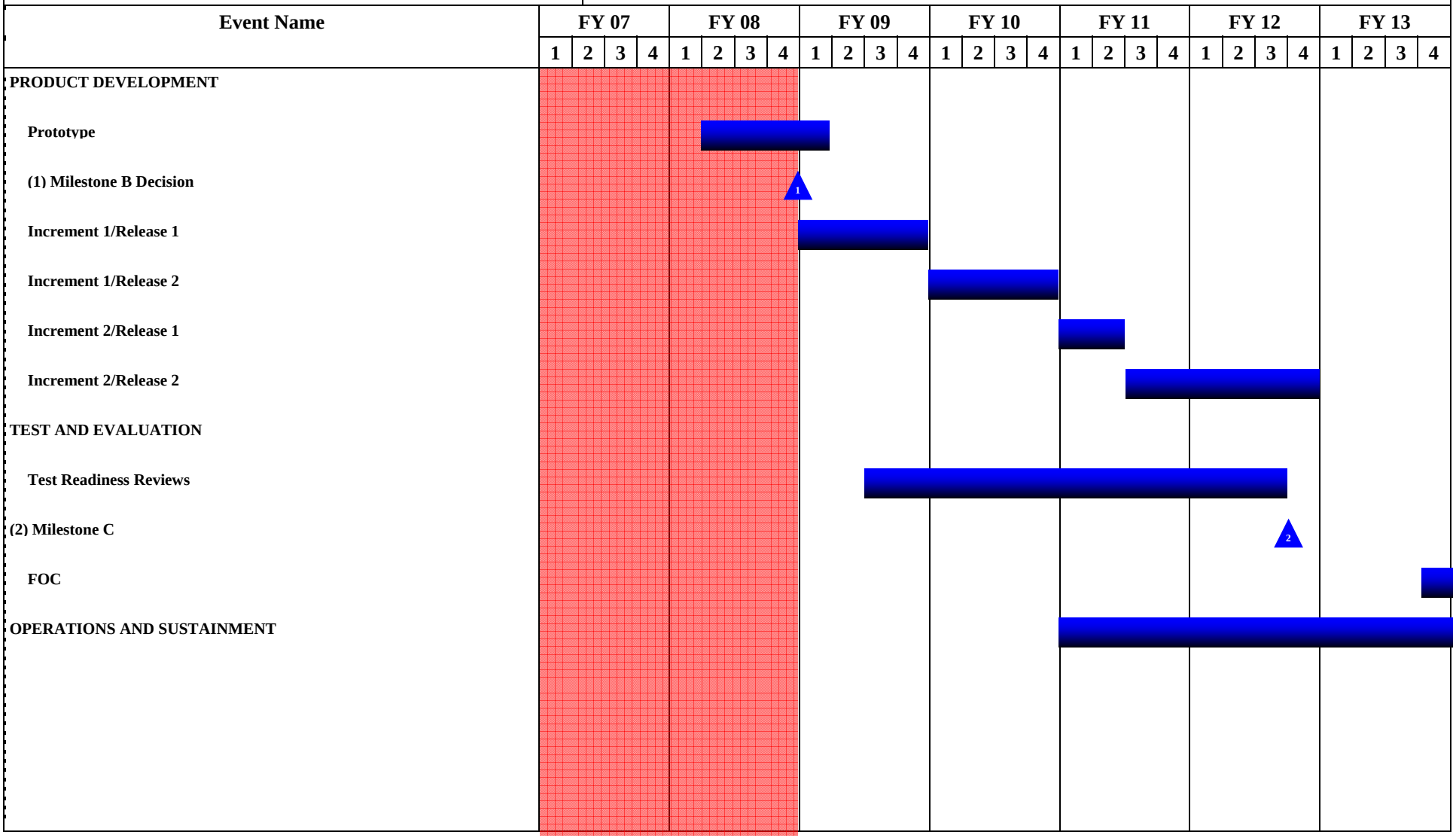
PROJECT
T04

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PMO Personnel	Reqn	VIPS PM, Ft. Belvoir				104	2-4Q	170	1-4Q	Cont.	Cont.	828
Government Eng Support	MIPR	SEC, Ft. Belvoir				191	2-4Q	170	1-4Q	Cont.	Cont.	886
Contractor PM Support	C/CPIF	TBD/Ft. Belvoir				2239	2Q	2345	1Q	Cont.	Cont.	10552
Travel/ODCs	Various	VIPS PM, Ft. Belvoir				15	2-4Q	150	1-4Q	Cont.	Cont.	600
Subtotal:						2549		2835		Cont.	Cont.	12866
Project Total Cost:						**8728**		**14879**		**Cont.**	**Cont.**	**59639**

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**T04**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605013A - Information Technology Development**	**T04**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PRODUCT DEVELOPMENT							
Prototype		2Q - 4Q	1Q				
Milestone B Decision			1Q				
Increment 1/Release 1			1Q - 4Q				
Increment 1/Release 2				1Q - 4Q			
Increment 2/Release 1					1Q - 2Q		
Increment 2/Release 2					3Q - 4Q	1Q - 4Q	
TEST AND EVALUATION							
Test Readiness Reviews			3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 3Q	
Milestone C						4Q	
FOC							4Q
OPERATIONS AND SUSTAINMENT					1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605450A - Joint Air-to-Ground Missile (JAGM)**	**JA6**

COST (In Thousands)		FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
JA6	JOINT AIR-TO-GROUND MISSILE (JAGM)			118517	129401	133050	131107	94398	Continuing	Continuing

A. Mission Description and Budget Item Justification: The Joint Air-to-Ground Missile (JAGM) is a fixed wing, rotary wing, and Unmanned Aircraft System (UAS) launched missile system that provides advanced line-of-sight (LOS) and beyond-line-of-sight (BLOS) capabilities, including precision point targeting (both active and passive) and fire-and-forget seeker technologies; increased range; and increased lethality against soft and hardened moving and stationary targets.

The JAGM System will replace aviation-launched TOW, the HELLFIRE family of missiles, and the Navy's Maverick family of missiles. JAGM will be a joint program with the Army, Navy and USMC that addresses rotary/fixed wing and UAS requirements. The Navy is funding the integration of the missile system on the Navy platforms. The Super Hornet (F/A 18E/F), the Apache (AH-64D), and the Super Cobra (AH-1Z) are Milestone C threshold platforms with integration occurring no later than (NLT) the end of FY13 and Initial Operating Capability (IOC) beginning NLT the end of FY16. Other threshold platforms are the Army Reconnaissance Helicopter (ARH)-70, the Seahawk (MH-60R) and Extended Range Multi Purpose (ERMP) UAS. MH-60R integration will occur NLT FY14. Integration timelines for ERMP and ARH are notional and will be updated prior to Milestone B as those programs mature. The JAGM will increase the warfighters' operational flexibility by effectively engaging a variety of stationary and mobile targets on the battlefield, including advanced heavy/light armored vehicles, bunkers, buildings, patrol craft, command and control vehicles, transporter/erector (e.g., SCUD) launchers, artillery systems, and radar/air defense systems. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/countermeasure environment, against both stationary and moving targets. JAGM supports more efficient logistics for expeditionary force tailoring by replacing several missile variants with a single, interoperable weapon. The warhead is designed for high performance against both armored and non-armored targets. It also allows flexibility in the location of resupply on the battlefield, thereby minimizing the logistic burden of the combat force. The JAGM System includes missile, trainers, containers, support equipment, and launcher MODS.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Software Simulation Algorithm Maturity			8232
Integrated Baseline Review (IBR)			11174
Design Verification Test/Engineering Development Test (EDT)			54414
System Requirement Review (SRR)			44697
Total			118517

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605450A - Joint Air-to-Ground Missile (JAGM)**	**JA6**

B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)			
Current BES/President's Budget (FY 2009)			118517
Total Adjustments			118517
Congressional Program Reductions			
Congressional Recissions			
Congressional Increases			
Reprogrammings			118517
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation: Funding - FY 2009: Funding increase (+118,517) for the JAGM Program will continue the existing technology maturation effort funded in FY08 for this type of missile system. The JAGM Program funding for FY09 and out was moved to Budget Activity 5 (System Development and Demonstration) and this is the new Program Element that was established.

C. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
Joint Common Missile (JCM) PE: 654329	24210								24210
Joint Air-to-Ground Missile (JAGM) PE: 643460		53160							53160
Navy (RDTE) Joint Air-to-Ground Missile (JAGM)		15400	62300	80100	113200	134400	118900	Continuing	Continuing

Comment:

D. Acquisition Strategy The JAGM System is an ACAT 1D Joint Army/Navy program with the Army designated as lead service. The JAGM system will be a common air-to-ground precision guided missile for use by Joint Service manned and unmanned aircraft to destroy high-value stationary, moving, and relocateable land and naval targets. JAGM will be required to provide a common, multi-mode weapon capable of providing both current and future aviation platforms with reactive targeting capabilities satisfying the sum of needs across the joint platforms, and eliminates the requirement for separate upgrades to multiple existing missile systems. The government will utilize full and open competition to acquire the JAGM System. The government will issue one solicitation that includes three JAGM program phases: Phase I Competitive Preliminary Design and Fly-Off (27 months); Phase II System Development and Demonstration (48 months); Phase III Low Rate Initial Production 1 & 2. The government plans to award two Fixed Price Incentive (FPI) contracts (with full cost performance reporting) and each contract will include Phase I as the basic effort with options for phases II and III. The phase II CPIF/AF option will consist of a 48 month SDD and Demonstration Phase and will include provision for procurement of long lead-time items to support the follow-on-Phase III effort.

Phase III will consist of two FPI LRIP options for the JAGM program. The opportunity to assess the viability of continuation of multiple contractors into/through SDD and LRIP will be provided through a series of three decision points aligned with MS B, DRR, and MS C. The decision criteria for carrying one of more contractors into the subsequent phase will be established in the acquisition strategy update for Milestone B prior to issuing the request for updated proposals at the conclusion of Phase I.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0605450A - Joint Air-to-Ground Missile (JAGM)

PROJECT
JA6

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prime Contract	FPIF/AW	To Be Determined						100336	1-4Q	Cont.	Cont.	
Support Contracts	Various	Various						2925	1-3Q	Cont.	Cont.	
Development Engineering	Various	Various						5041	1-3Q	Cont.	Cont.	
Subtotal:								108302		Cont.	Cont.	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support	Various	Various						1906	1-3Q	Cont.	Cont.	
Subtotal:								1906		Cont.	Cont.	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Other Gov Agencies	Various	Various						2107		Cont.	Cont.	
Subtotal:								2107		Cont.	Cont.	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Eng/ Project Management	Various	Various						6202	1-4Q	Cont.	Cont.	
Subtotal:								6202		Cont.	Cont.	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

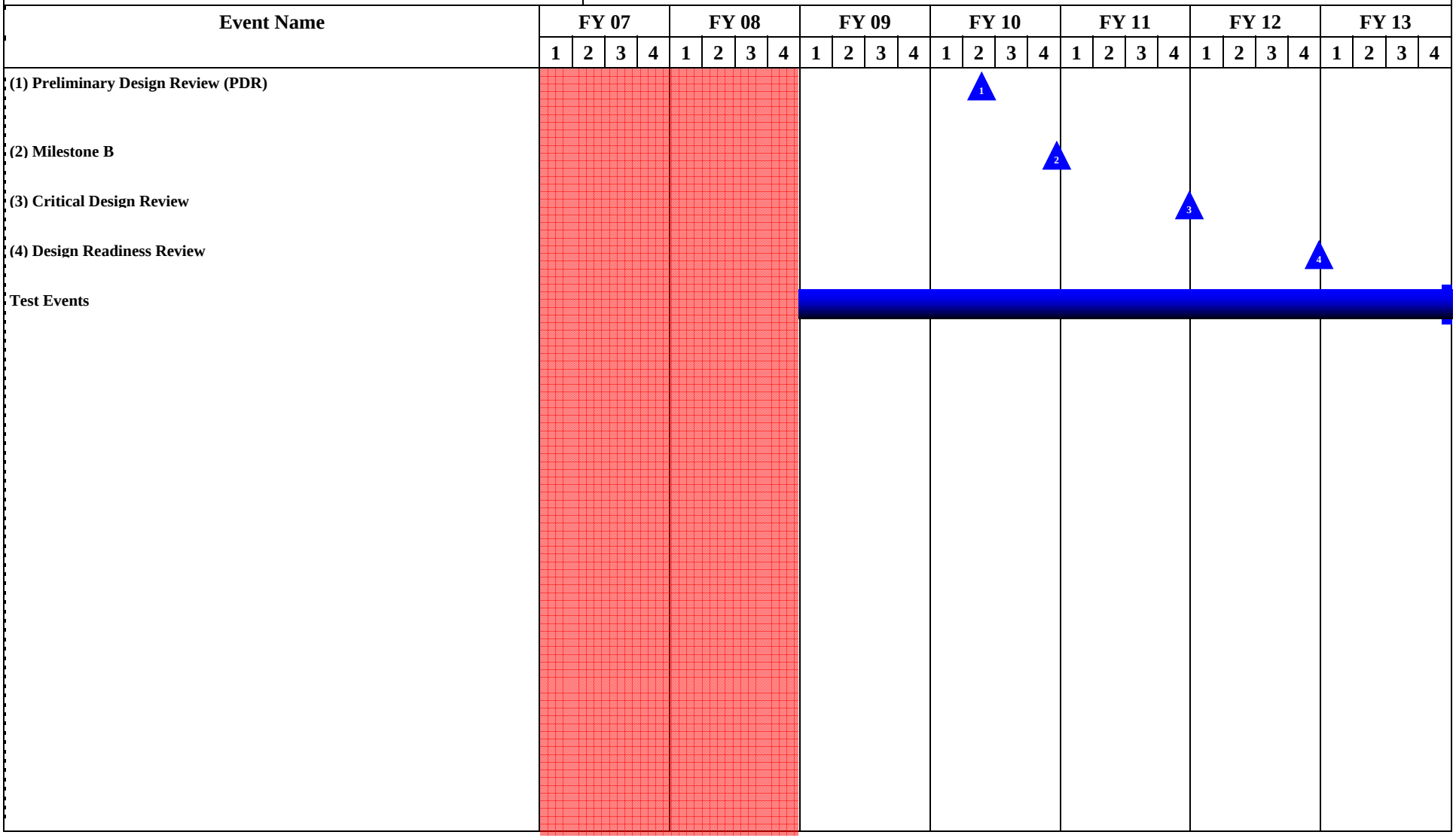
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605450A - Joint Air-to-Ground Missile (JAGM)**	**JA6**

Project Total Cost:						**118517**		**Cont.**	**Cont.**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605450A - Joint Air-to-Ground Missile (JAGM)**	**JA6**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0605450A - Joint Air-to-Ground Missile (JAGM)**	**JA6**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Preliminary Design Review (PDR)				2Q			
Milestone B				4Q			
Critical Design Review					4Q		
Design Readiness Review						4Q	
Test Events			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

Termination Liability Funding For Major Defense Acquisition Programs, RDT&E Funding (R5)							February 2008
BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0605450A - Joint Air-to-Ground Missile (JAGM)**						PROJECT **JA6**

Funding in $000

Program	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Joint Air-To-Ground (JAGM)							
Total Termination Liability Funding:							

Remarks:

For the FPIF Phase I, the JAGM Prime Contract will incorporate the "Limitation of Government_s Obligation" clause (DFARS 252.232-7007) to limit the Government's liability.

For the CPIF/AF Phase II, the JAGM Prime Contract will incorporate the "Limitation of Funds" clause (FAR 52.232-22) to limit the Government's liability.

For the JAGM Program, these two clauses limit the Government's financial liability per the contract to those funds placed on contract plus any outstanding commitments plus costs associated with the orderly termination of contractual actions.