ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

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

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		109170	100190	143417	101574	72178	0	0	0	641871
E88	INTEGRATED FIRE CONTROL AIR MISSILE DEFENSE	19984	24480	41746	47995	50096	0	0	0	224576
S24	ARMY SIAP SYSTEMS ENGINEERING	9017	9994	10328	10292	199	0	0	0	53696
S25	ARMY SIAP OPERATIONAL INTEGRATION	2737	18651	3005	2813	2811	0	0	0	32660
S26	ARMY SIAP IMPLEMENTATION	14897	25742	41570	17073	903	0	0	0	110352
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	3163	3341	1314	0	0	0	0	0	11285
S32	JOINT SIAP SYSTEM ENGINEERING	35799	15222	45454	23401	18169	0	0	0	182969
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	23573	2760	0	0	0	0	0	0	26333

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). The Army IAMD comprises a broad range of systems acquired individually to support complementary missions. To provide this integrated capability, the PEO Missiles and Space must ensure that operational effectiveness and acquisition efficiency are achieved. Requirements must be integrated within the Army and also address joint needs. The Joint Distributed Engineering Plan (JDEP) will provide the capability to address Joint and Service system interoperability performance in a system-of-systems environment. The funding in this project provides for Army participation in this activity. The Single Integrated Air Picture (SIAP) is the culmination of four services SIAP developmental efforts into an objective joint capability. The engineering will fuse near real time and real time data to support situational awareness, battle management and target engagements across theater air and missile defense systems. This effort accelerates the development of systems to counter the threat of Land Attack Cruise Missiles. The Integrated Fire Control (IFC) effort will provide for the engineering and development of the battle management algorithms necessary to support Integrated Fire Control. IFC will provide the integrated capability necessary to counter emerging cruise missile threat, through the integration of ground based weapons with elevated sensors and the management of sensor, weapon and network resources. IFC supports the Cruise Missile Defense (CMD) initiative which was approved by the Vice Chief of Staff of the Army in 2003. This initiative accelerates the development of systems to counter the threat of Land Attack Cruise Missiles.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

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

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)	109217	83063	128570
Current BES/President's Budget (FY 2007)	109170	100190	143417
Total Adjustments	-47	17127	14847
Congressional Program Reductions		-660	
Congressional Rescissions		-1013	
Congressional Increases		18800	
Reprogrammings	-47		
SBIR/STTR Transfer			
Adjustments to Budget Years			14847

FY 2006 (+$17127) - Congressional increase (+$4800) Army Extended Range Attack Missile (AERAM), (+$4000) AERAM Turbine development, ($3500) Geospatial Info Decision Support-SIAP, (+$2700) Situspace Single Integrated Space Picture, (+$2800) Hardware in the Loop Test Bed, and (+$1000) Command Responder; Congressional reduction (-$1673) for Congressional general reductions and rescissions.
FY 2007 - Funds provided for Integrated Architectural Behavioral Model (IABM)

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**E88**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
E88	INTEGRATED FIRE CONTROL AIR MISSILE DEFENSE	19984	24480	41746	47995	50096	0	0	0	224576

A. Mission Description and Budget Item Justification: Cruise Missile Defense/Integrated Fire Control - This project will provide for development of the Integrated Fire Control (IFC) capability that is essential to defeat the emerging cruise missile threat. The IFC capability is a critical enabler for the transformation of the Army's current air and missile defense systems to a component-based, Integrated Air and Missile Defense (IAMD)Program Architecture. IFC will provide network centric air and missile defense protection of high value assets, operational flexibility through wide area battle coordination and counters stressing threats at extended ranges. IFC enables fire control quality track and/or measurement data from any sensor to be used to execute an engagement with the most effective/efficient available weapon system. IFC provides the network and functionality necessary to fully exploit the capabilities provided by advanced elevated sensors. This project defines the integrated air and missile defense program architecture for IFC, develops requirements and interface specifications, develops specific IFC capabilities, and performs integration and testing of the IFC architecture. The IFC capabilities that this project will develop are an essential component of the development of an effective cruise missile defense capability. This project will be coordinated with similar IFC projects/programs within the other services and the Missile Defense Agency to evolve toward a Joint IFC capability. (FY05 Funding for this project was moved from PE 0603327, project S24).

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Cruise Missile Defense - Integrated Fire Control	19984	24480	41746
Total	19984	24480	41746

B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
0603869A, Project 01C MEADS	251298	0	0	0	0	0	0	0	251298
0203801A, Project 036 PATRIOT Product Improvement	32067	15957	10770	11051	11297	12227	12734	0	106103
654869A, Project M06, PATRIOT/MEADS CAP	0	284695	329583	459684	517049	592013	422005	0	2605029
MSLS PROC C50001, PARTIOT/MEADS CAP	0	0	0	89735	65296	429735	674386	0	1259152
0604869A, Project 01C PAC-3	60408	0	0	0	0	0	0	0	60408
PE 0102419A, JLENS	79279	105888	264491	465214	353856	335490	301143	0	1905361
OPA BZ0525, JLENS Production	0	0	0	0	0	30471	476728	0	507199
0604802A, Project S23 SLAMRAAM	63084	35587	26961	10132	0	0	0	0	135764
SSN C81004, SLAMRAAM Production	2438	19061	22039	59314	82656	82143	60979	0	328630
0604820A, SENTINEL	5848	5008	2527	2622	0	0	0	0	16005

OPA WK5053, SENTINEL Production	10566	8289	15125	20914	33394	33239	25314	0	146841
MSLS PROC C49100 Patriot	496990	483260	489067	472907	478795	0	0	0	2421019

Comment: This PE project 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, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy Not applicable for this item

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
E88

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
CMD Integrated Fire Control Development	MIPR, 1095, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	19984		17129	1-4Q	27718	1-4Q	0	0	0
Integrated Product and Development	MIPR, 1095, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		1375	1-4Q	3040	1-4Q	0	0	0
Subtotal:			0	19984		18504		30758		0	0	0

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Cruise Missile Defense - Integrated Fire Control	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	1780	0		1081	1-4Q	1217	1-4Q	0	0	0
Science and Technology Analysis			2980	0		0		0		0	0	0
Army Space Architectural Analysis			3990	0		0		0		0	0	0
Subtotal:			8750	0		1081		1217		0	0	0

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Testing of IFC capability	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		4895	1-4Q	9771	1-4Q	0	0	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**E88**

Subtotal:			0	0		4895		9771		0	0	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
Project Total Cost:			**8750**	**19984**		**24480**		**41746**		**0**	**0**	**0**

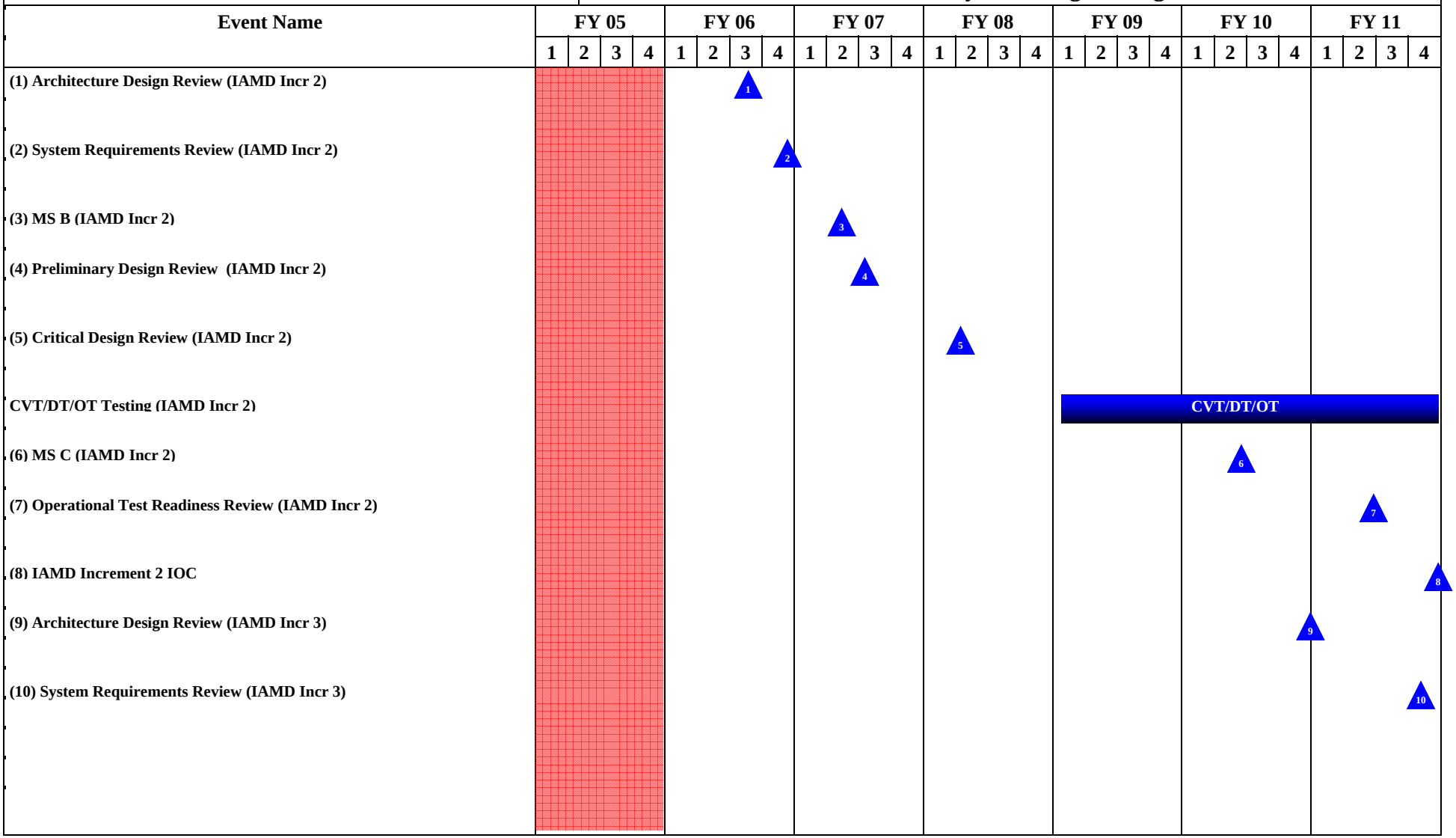
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
E88



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**E88**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Architecture Design Review (IAMD Incr 2)		3Q					
System Requirements Review (IAMD Incr 2)		4Q					
MS B (IAMD Incr 2)			2Q				
Preliminary Design Review (IAMD Incr 2)			3Q				
Critical Design Review (IAMD Incr 2)				2Q			
CVT/DT/OT Testing (IAMD Incr 2)					1-4Q	1-4Q	1-4Q
MS C (IAMD Incr 2)						2Q	
Operational Test Readiness Review (IAMD Incr 2)							2Q
Increment 2 IOC							4Q
Architecture Design Review (IAMD Incr 3)						4Q	
System Requirements Review (IAMD Incr 3)							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S24**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S24	ARMY SIAP SYSTEMS ENGINEERING	9017	9994	10328	10292	199	0	0	0	53696

A. Mission Description and Budget Item Justification: The establishment of a Single Integrated Air Picture (SIAP) capability is a critical enabler for many Army and Joint mission areas. Army execution of the SIAP effort requires the establishment and maintenance of a PEO Missiles and Space integrated engineering structure, the management and coordination of Army SIAP activities with numerous Army stakeholders and technical management of Army SIAP tasks. SIAP requires the development of Army integration engineering infrastructure to effectively support joint integration engineering activities. Army Systems Engineering effort has three main elements: 1) ensure persistent critical interoperability deficiencies are identified and fixed; 2) support the development and evaluation of the SIAP Integrated Architecture and available Joint Track Managers; and 3) provide management, staffing and infrastructure for the Joint SIAP System Engineering Organization (JSSEO) and Army SIAP programs.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Program Management / Systems Engineering	2729	2464	2230
Identify and Fix Critical Interoperability Deficiencies (SIAP)	1362	1527	1367
Development and Evaluation of SIAP Integrated Architecture and Joint Track Managers	4926	6003	6731
Total	9017	9994	10328

B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE 643327, Project S25, SIAP Operational Integration	2737	18651	3005	2813	2811	0	0	0	30017
PE 643327, Project S26, SIAP Implementation	14897	25742	41570	17073	903	0	0	0	100185
PE 643327, Project S32, Joint SIAP Systems Engineering	35799	15222	45454	23401	18169	0	0	0	138045
PE 643327, Project E88, Integrated Fire Control Air Missile Defense	19984	24480	41746	47995	50096	0	0	0	184301

Comment: This PE project 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, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S24

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering support for the development and evaluation of the SIAP Integrated Architecture	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	7401	3000	1-4Q	4163	1-4Q	4001	1-4Q	Continue	0	0
Identification and development of fixes for critical interoperability deficiencies	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	2169	1250	1-4Q	1343	1-4Q	1770	1-4Q	Continue	0	0
Subtotal:			9570	4250		5506		5771		Continue	0	0

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management, Army JSSEO Staff and Modeling and Simulation	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	4296	3089	1-4Q	1503	1-4Q	1520	1-4Q	Continue	0	0
Subtotal:			4296	3089		1503		1520		Continue	0	0

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development of Testbed and actual testing of Integrated Architecture solutions	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	1678	1-4Q	2985	1-4Q	3037	1-4Q	0	0	0
Subtotal:			0	1678		2985		3037		0	0	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S24

Remarks: IABM - Integrated Architecture Behavior Model

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
Project Total Cost:			**13866**	**9017**		**9994**		**10328**		**0**	**0**	**0**

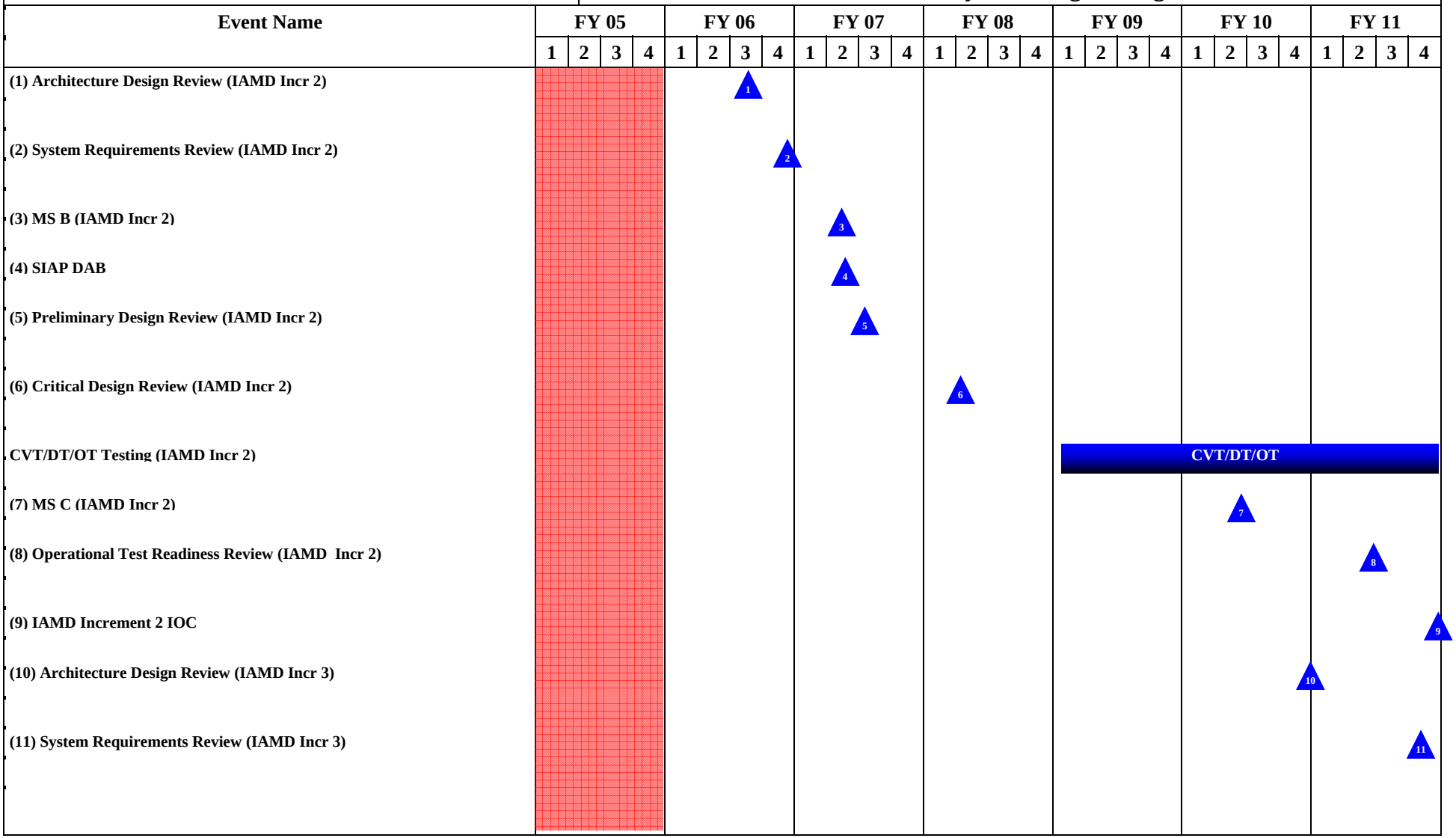
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S24



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S24**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Architecture Design Review (IAMD Incr 2)		3Q					
System Requirements Review (IAMDIncr 2)		4Q					
MS B (IAMD Incr 2)			2Q				
SIAP DAB			2Q				
Preliminary Design Review (IAMD Incr 2)			3Q				
Critical Design Review (IAMD Incr 2)				2Q			
CVT/DT/OT Testing (IAMD Incr 2)					1-4Q	1-4Q	1-4Q
MS C (IAMD Incr 2)						2Q	
Operational Test Readiness Review (IAMD Incr 2)							2Q
IAMD Increment 2 IOC							4Q
Architecture Design Review (IAMD Incr 3)						4Q	
System Requirements Review (IAMD Incr 3)							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

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 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S25	ARMY SIAP OPERATIONAL INTEGRATION	2737	18651	3005	2813	2811	0	0	0	32660

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, BMC4 and concepts of operations.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Continue efforts for coordinating SIAP operational requirements with Training and Doctrine Command (TRADOC) Directorates of Combat Developments (DCDs), integrating SIAP operational requirements into current and evolving doctrine, developing the Army position on SIAP-related acquistion strategy and tools, and supporting Joint SIAP Systems Engineering Organization initiatives related to Integrated Architecture Behavior Model development.	2737	2921	3005
Includes Congressional adds for Army Extended Range Attack Missile (AERAM), AERAM Turbine Engine Development, Geospatial Information Decision Support - SIAP, SituSpace Single Integrated Space Picture, and Command Responder.	0	15730	0
Total	2737	18651	3005

B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE 643327, Project S24, Army SIAP Systems Engineering	9017	9994	10328	10292	199	0	0	0	39830
PE 643327, Project S26, Army SIAP Implementation	14897	25742	41570	17073	903	0	0	0	100185
PE 643327, Project S32, Joint SIAP Systems Engineering	35799	15222	45454	23401	18169	0	0	0	138045

C. Acquisition Strategy Not applicable for this item

ARMY RDT&E COST ANALYSIS (R3)

February 2006

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 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Execute Congressional adds	Various	Various	0	0		15730	2-4Q	0		0	15730	0
Subtotal:			0	0		15730		0		0	15730	0

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government support & support contracts	MIPRs, 1095s, CPFF	OGAs, Inhouse, Contact spt.	2709	2737	1-4Q	2921	1-4Q	3005	1-4Q	Continue	11372	0
Subtotal:			2709	2737		2921		3005		Continue	11372	0

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									

Project Total Cost:			**2709**	**2737**		**18651**		**3005**		**0**	**27102**	**0**

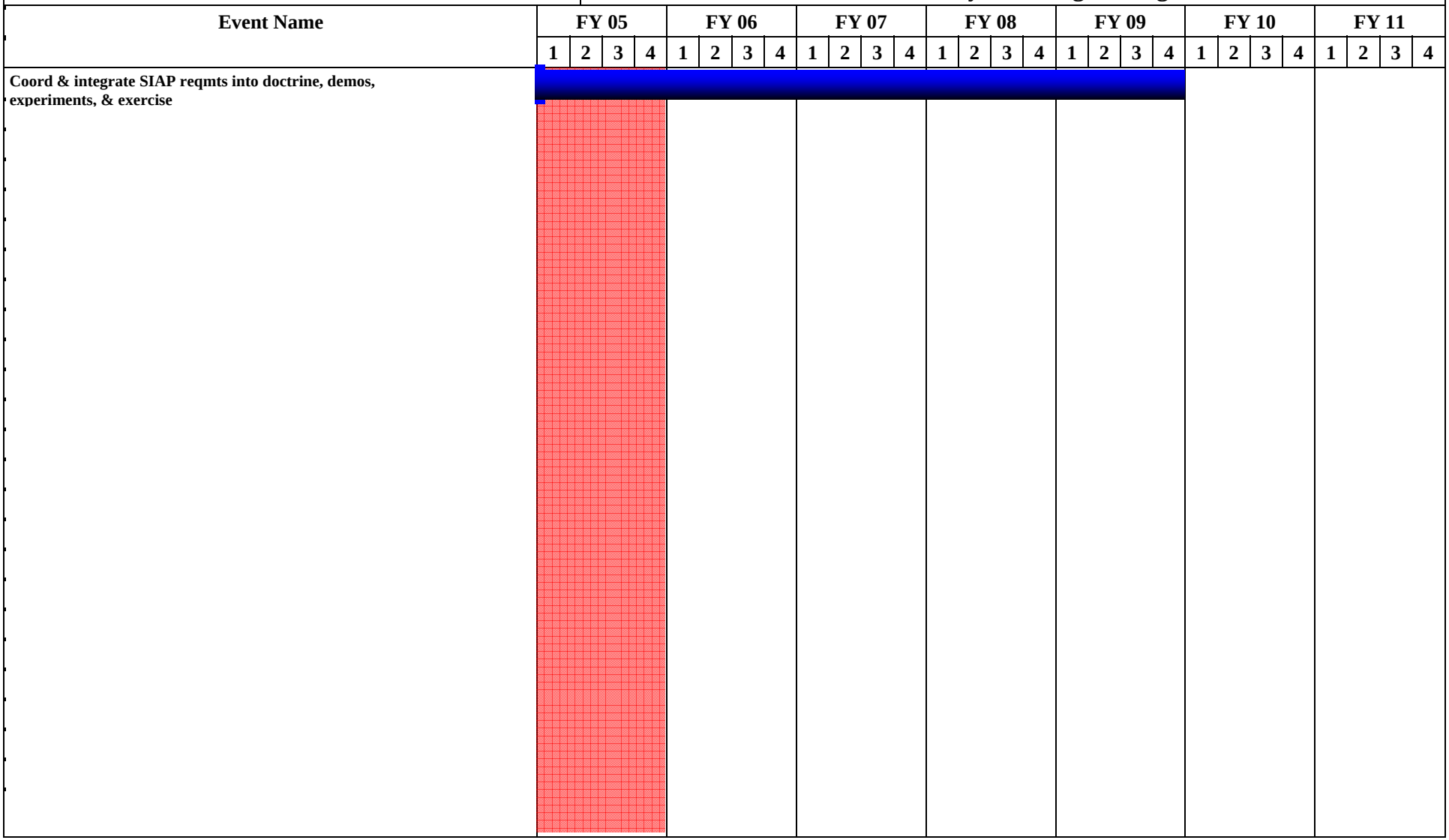
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S25



Schedule Detail (R4a Exhibit)

February 2006

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

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Coordinate and integrate SIAP requirements into doctrine, demonstrations, experiments and exercises.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S26**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S26	ARMY SIAP IMPLEMENTATION	14897	25742	41570	17073	903	0	0	0	110352

A. Mission Description and Budget Item Justification: The establishment of a Single Integrated Air Picture (SIAP) capability is a critical enabler for many Army and Joint mission areas. The Joint SIAP System Engineering Organization (JSSEO) has the lead for the joint development of SIAP capabilities. Initial SIAP capabilities will be delivered to the services as either a build of the JSSEO SIAP Integrated Architecture Behavior Model (IABM) or as an alternate Joint Track Manager (JTM) as defined by the Joint Architecture Working Group (JAWG). This project provides for the integration and test of the delivered Joint SIAP capability.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Perform engineering and analysis to identify and prioritize critical interoperability deficiencies, design and develop engineering fixes for high priority deficiencies, and begin implementation of those fixes.	6956	2581	1940
Prepare selected Army systems for implementation of the Joint SIAP solution.	7941	23161	39630
Total	14897	25742	41570

B. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
Army SIAP Systems Engineering (S24)	9017	9994	10328	10292	199	0	0	0	39830
Army Operational Integration (S25)	2737	18651	3005	2813	2811	0	0	0	30017
Joint SIAP Systems Engineering (S32)	35799	15222	45454	23401	18169	0	0	0	138045

Comment: This PE project 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, JTAGS, SENTINEL, and on-going initiatives to achieve Single Integrated Air Picture (SIAP).

C. Acquisition Strategy Not applicable to this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S26

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Army Critical Interoperability Deficiencies Engineering and Implementation	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	5237	5456	1-4Q	7240	1-4Q	7655	1-4Q	0	0	0
SIAP IABM Engineering and Implementation	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	4930	7941	4Q	15921	1-4Q	23725	1-4Q	0	0	0
Subtotal:			10167	13397		23161		31380		0	0	0

Remarks: Implementation of IABM Configuration occurs in FY07

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	1500	1-4Q	2581	1-4Q	4076	1-4Q	0	0	0
Subtotal:			0	1500		2581		4076		0	0	0

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Testing of Implementation of IABM into systems	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	0		0		6114	1-4Q	0	0	0
Subtotal:			0	0		0		6114		0	0	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S26

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
Project Total Cost:			**10167**	**14897**		**25742**		**41570**		**0**	**0**	**0**

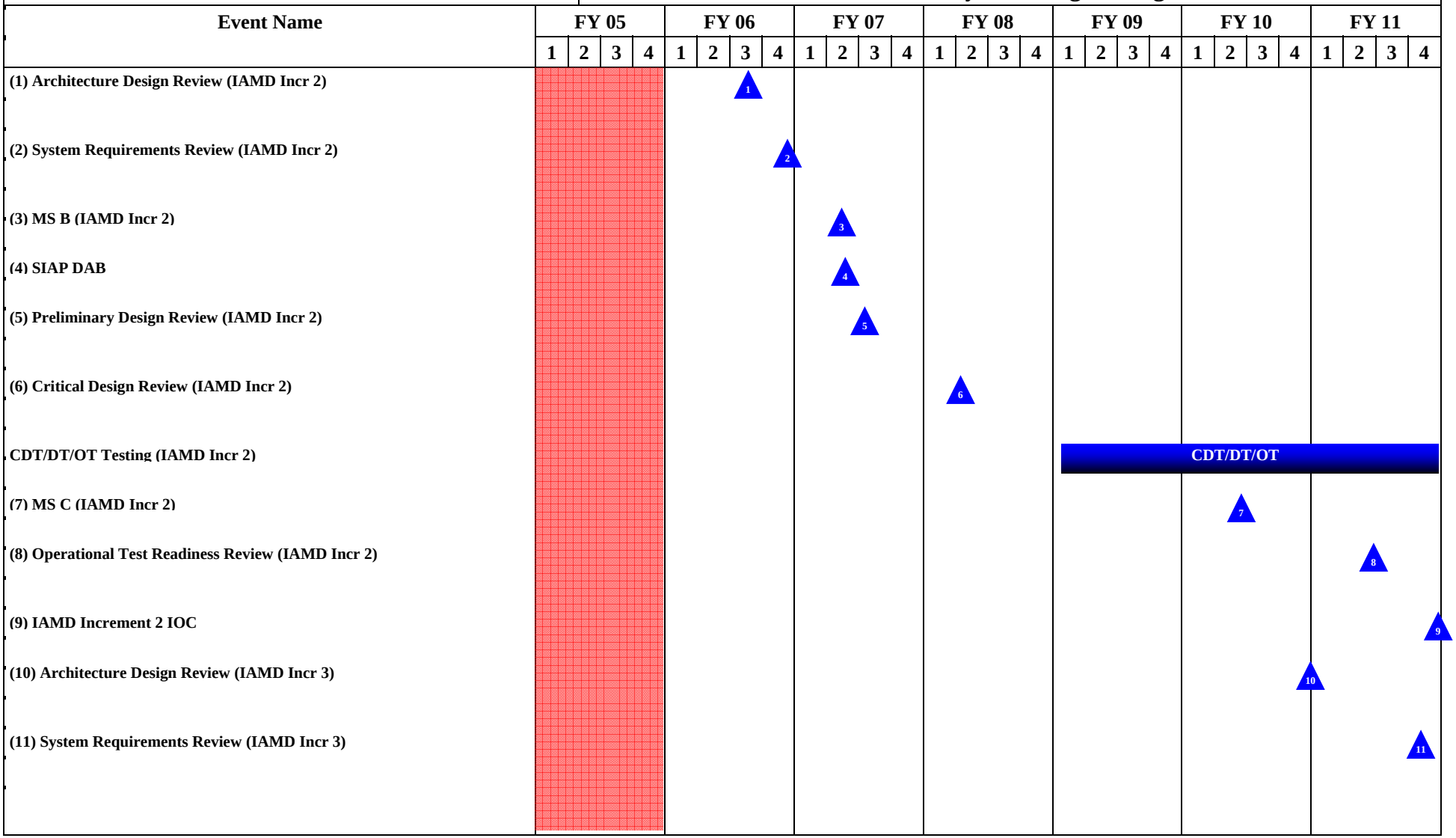
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S26



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S26**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Architecture Design Review (IAMD Incr 2)		3Q					
System Requirements Review (IAMD Incr 2)		4Q					
MS B (IAMD Incr 2)			2Q				
SIAP DAB			2Q				
Preliminary Design Review (IAMD Incr 2)			3Q				
Critical Design Review (IAMD Incr 2)				2Q			
CDT/DT/OT Testing (IAMD Incr 2)					1-4Q	1-4Q	1-4Q
MS C (IAMD Incr 2)						2Q	
Operational Test Readiness Review (IAMD Incr 2)							2Q
IAMD Increment 2 IOC							4Q
Architecture Design Review (IAMD Incr 3)						4Q	
System Requirements Review (IAMD Incr 3)							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S27**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S27	JOINT DISTRIBUTED ENGINEERING PLANT (JDEP)	3163	3341	1314	0	0	0	0	0	11285

A. Mission Description and Budget Item Justification: The Joint Distributed Engineering Plant (JDEP) is a concept that expands on the Navy's land-based Distributed Engineering Plant (DEP) which assesses integration and interoperability problems (air and missile defense) of the fleet. This program will be used to evaluate interoperability of joint forces, test and evaluate interoperability of new acquisition systems, and engineering hardware and software to correct deficiencies and develop new capabilities. The initial focus of this program is directed toward integrated air and missile defense. The program consists of individual combat systems distributed throughout the US connected with ATM telecommunication network(s) and High Level Architecture (HLA) protocols. The JDEP management structure consists of service execution cells. This funding provides for the Army involvement in the overall JDEP program.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
JDEP Test Event Participation	1370	1434	0
Communication Equipment	696	700	700
Operational Center Support: Support during JDEP testing and pre-event simulations.	1097	1207	614
Total	3163	3341	1314

C. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

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

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

PROJECT: **S27**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development of Simulation/Stimulation for JDEP	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	1491	1000	1-4Q	816	1-4Q	420	1-4Q	0	0	0
Subtotal:			1491	1000		816		420		0	0	0

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Digital/integrated system network and equipment	MIPRs, 1095s, CPFF	OGAs, Inhouse, contract spt.	685	696	1-4Q	700	1-4Q	700	1-4Q	Continue	2781	0
Subtotal:			685	696		700		700		Continue	2781	0

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
JDEP Test Event Support	MIPRs, 1095s, CPFF	OGAs, Inhouse, contract spt.	1011	1167	1-4Q	1425	1-4Q	0		Continue	0	0
Subtotal:			1011	1167		1425		0		Continue	0	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Army management of JDEP activity	MIPRs, 1095s, CPFF	OGAs, Inhouse, contract spt.	280	300	2-4Q	400	1-4Q	194	1-4Q	0	0	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S27**

Subtotal:	280	300		400		194		0	0	0
Project Total Cost:	**3467**	**3163**		**3341**		**1314**		**0**	**2781**	**0**

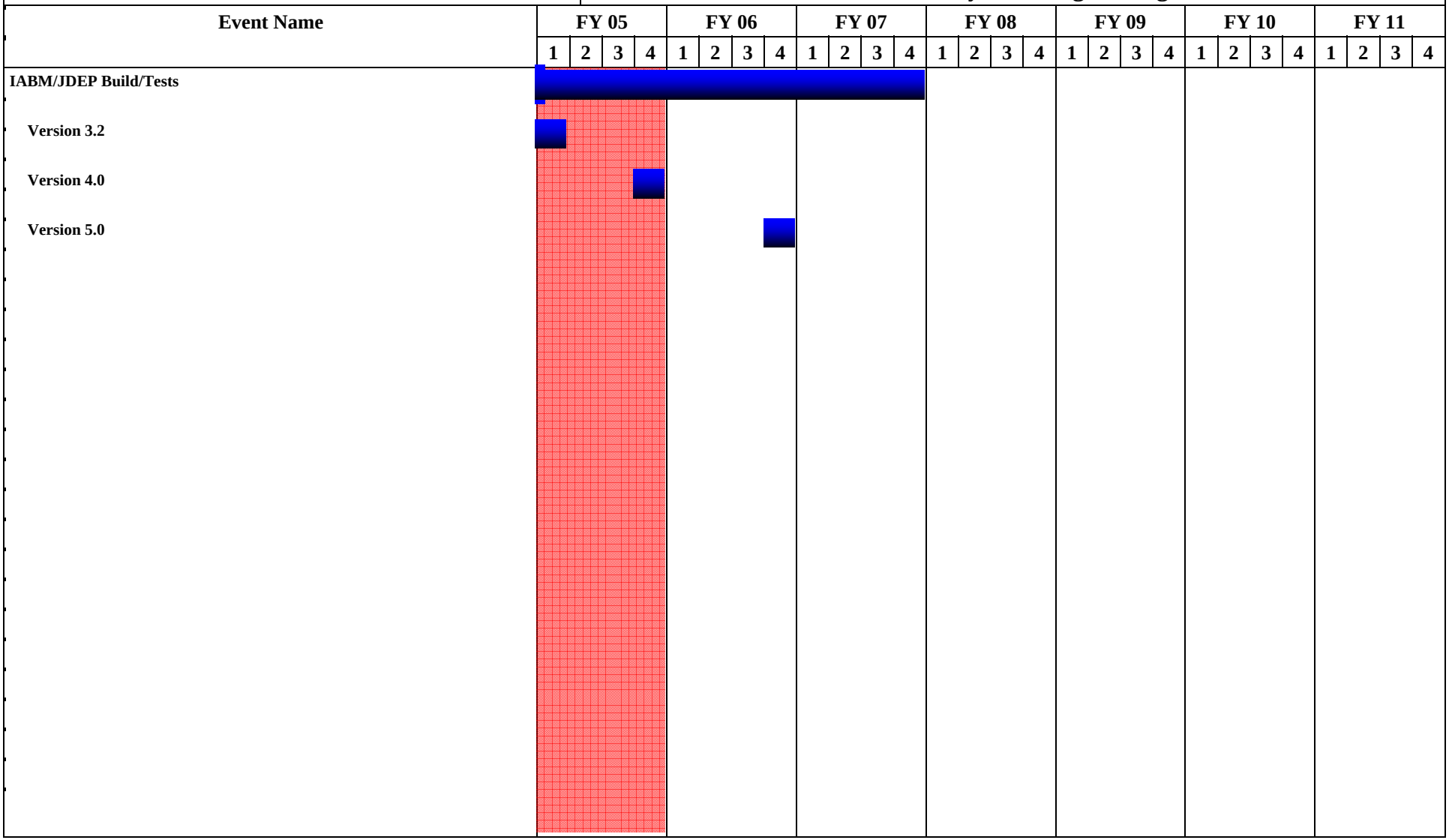
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S27



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S27**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
IABM/JDEP Build/Tests	1-4Q	1-4Q	1-4Q				
Version 3.2	1Q						
Version 4.0	4Q						
Version 5.0		4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S32**

COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S32	JOINT SIAP SYSTEM ENGINEERING	35799	15222	45454	23401	18169	0	0	0	182969

A. Mission Description and Budget Item Justification: A Single Integrated Air Picture (SIAP) is the product of fused, near-real-time data from multiple sensors to allow development of common, continuous, and unambiguous tracks of all airborne objects in the surveillance area. All airborne objects must be detected, tracked, and reported. Each object must have one and only one track identifier and associated characteristics to be incorporated into SIAP. Current systems do not provide this capability.

The Joint SIAP System Engineering Organization (JSSEO) develops the tools and processes and performs the system engineering designed to net US and coalition warfighting systems and tactical data link systems for the theater air and missile defense. The JSSEO focuses on specific problem areas and translates the solutions into an integrated, executable architecture-- the Integrated Architecture Behavioral Model (IABM). This model describes the functional behavior and expected performance of Joint and coalition netted sensors to meet DoD Net-Ready Key Performance Parameter requirements as well as Theater Air & Missile Defense, Combat Identification and Global Information Grid mission area requirements. The results of specific engineering studies (called Block 0, Block 1, and Block 2 engineering) were used to describe the functions and performance needed in the integrated air and missile defense architecture. The model of this architecture (the IABM) then becomes a reference specification that the JSSEO releases every two years as IABM Configuration 05, 07, 09, etc. This spiral-developed standard began with the release of IABM Configuration 05 in September 2005. The Services and industry use this model to develop and integrate these specified functions into their combat systems. The Joint Interoperability Test Command also uses this model to evaluate system conformance and to validate these combat systems performance against the behavior described in the integrated air and missile defense architecture. SIAP was designated a Special Interest Acquisition program by OUSD (AT&L) in FY 05.

Block 0 addressed four joint warfighting shortfalls selected for their impact in reducing tactical confusion, applicability across the Services, and the engineering maturity reflected by interface change proposals already on record with the Joint Interoperability of Tactical Command and Control System process. The change proposals addressed were: improved correlation/de-correlation, identification (ID) taxonomy, ID conflict resolution matrix, and strength-track reporting (strength-track reporting final approval Feb 2005).

IABM Configuration 05 incorporated solutions developed under Block 1 and some Block 2 engineering and established the baseline for future spirals. This initial release focused on the technical foundations for geodetic/time synchronization and addressed United States Joint Forces Command and JROC-endorsed deficiencies that could be implemented in the near term. IABM Configuration 05 capabilities addressed are: further reduction of dual tracks, improved combat ID capability, improved data sharing (network capacity), and improved air picture for integrated theater air and missile defense performance.

IABM Configuration 07 builds on the Configuration 05 baseline, and focuses on improving efficiency and throughput, improving beyond line-of-sight capability, and providing track management and combat identification performance enhancements. The engineering issues being addressed to provide those capabilities are host computer implementation consistency, distributed database consistency improvement, network latency reduction, and interface with ground systems.

The integrated architecture is captured in an Integrated Architecture Behavior Model (IABM) to give engineers a tool, with operations context and supporting engineering detail, to make decisions about what design functions produce the most cost effective solution in meeting Joint Battle Management Command and Control requirements. By using modern software development techniques, we can specify the performance within nodes and between nodes of a tactical network in a way that will increase machine-to-machine precision and reduce integration costs in current and future combat systems.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Block 1 - (FY05) Service implementation planning and risk reduction of Block 1 recommendations began. JSSEO monitored and assisted	100	0	0

the Services with test infrastructure development and acquisition planning, monitored technical configuration management and conducted technical design reviews with affected weapon systems.			
Block 2 (FY05) Refined planning and requirements, and continued engineering analysis for Block 2. Translated JROC validated requirements into system-level objectives for quality of service and information assurance capabilities to support Joint sensor netting. Coordinated design and solution development with the Services and Agencies and introduced industrial integrating contractors to Joint technical approach.	4255	0	0
Architecture - (FY05) Delivered version 2.1 of the SIAP Integrated Architecture. Expanded engineering detail to capture additional tactical functionality and updated Joint Theater Air and Missile Defense (TAMD) requirements. Integrated Block solutions into models to provide integrated architecture artifacts to Joint Staff and OSD roadmaps and other decision-making tools. Continued to update the IABM with increased functional scope and began to align with other tactical data functions. Delivered IABM Baseline (Configuration 05).(FY06-07) Deliver SIAP Integrated Architecture updates. Expand engineering detail to capture additional tactical functionality and updated Joint TAMD requirements. Support technical design reviews with affected weapon systems. Support analysis focused on network latency reduction, ground system interfaces. Integrate support for IPv6 routing into the IABM to enable weapon systems to take advantage of future increases in comm bandwidth, and posture weapon systems to integrate with the Global Information Grid (GIG) and Net-centric Enterprise Services (NCES). Configuration 07 will deliver in Sep 2007 to establish a 2-yr cadence for DoD integrating contractors. Begin engineering work to define Config 09, targeted capabilities include better ID of blue forces, reduced fratricide, and improved ability to engage time critical targets.	20295	8246	25100
Systems Engineering Tools and Analysis - (FY05) Continued to evaluate the technical and warfighting benefits of SIAP engineering. Updated analysis tools to support modeling and simulation capabilities, hardware in the loop laboratories and data reduction of open-air live exercises. Coordinated with Joint Interoperability Test Command for Mil-Standard conformance, architecture conformance certification and JROC validated requirements assessment. (FY06-07) Continue to evaluate the technical and warfighting benefits of the SIAP improvements. Update analysis tools to support modeling and simulation capabilities, hardware in the loop laboratories, and planning/data reduction of open-air live exercises (i.e., exercises for assessing achieved improvements). Coordinate with Joint Interoperability Test Command (JITC) for verification and validation of the Integrated Architecture Behavior Model (IABM). Analyze installed performance of Block 0 fixes in systems in Joint Exercises. Products include updates to technical reports on Common Reference Scenarios (CRS), SIAP Attributes, and SIAP Measures of Performance (MOPs), environmental and comm model simulations, and improved data parsing and analysis tools that provide greater fidelity in testing the IABM.	7245	1855	11600
Customer Support (Requirements and Technical Analyses) - (FY06-07) Assist Services with integration tasks initiated under Block efforts. Resolve technical discrepancies and provide track management and combat identification performance enhancements. Monitor and assist the Services in the implementation of Config 05, into their weapon systems. Assist with risk reduction and demonstration planning for the Integrated Architecture Behavior Model (IABM).	0	800	1300
Program Management - Support SIAP TF infrastructure requirements such as rent, LAN (local area network), telephone, computers, VTC (video teleconferences) rooms, office equipment, facilities management and administrative support. With the designation of SIAP as a Special Interest program, this line now includes Acquisition management planning and documentation to support Integrated Process Team (IPT) and Defense Acquisition Board (DAB) activities starting FY 06.	3904	4321	7454
Total	35799	15222	45454

C. Acquisition Strategy Document in development for this project.

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S32

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Block 1	MIPR	NAVSEA-JHU-APL. Laurel, MD	800	0		0		0		Continue	800	0
Block 1	MIPR	GSA-Sparta, Centerville, VA	222	0		0		0		Continue	222	0
Block 1	MIPR	Various	2552	100	1-4Q	0		0		Continue	2652	0
Block 2	MIPR	NAVSEA - JHU/APL Laurel, MD	2000	800	1-4Q	0		0		Continue	2800	0
Block 2	MIPR	GSA-BAH, McLean VA	0	375	1-4Q	0		0		Continue	375	0
Block 2	MIPR	GSA - Northrop Grumman, McLean, VA	463	50	1-4Q	0		0		Continue	513	0
Block 2	MIPR	Various	595	3030	1-4Q	0		0		Continue	3625	0
Customer Support	Various	Various	7738	0		800	1-4Q	1300	1-4Q	Continue	9838	0
Architecture	MIPR	NAVSEA - JHU/APL, Laurel, MD	750	6066	1-4Q	2066	1-4Q	4735	1-4Q	Continue	13617	0
Architecture	MIPR	GSA - BAH, McLean, VA	1692	2867	1-4Q	1882	1-4Q	4129	1-4Q	Continue	10570	0
Architecture	MIPR	GSA, Northrup Grumman	1944	681	1-4Q	681	1-4Q	1305	1-4Q	Continue	4611	0
Architecture	MIPR	GSA, Sparta, McLean, VA	1088	800	1-4Q	800	1-4Q	1213	1-4Q	Continue	3901	0
Architecture	Various	Various	12022	9881	1-4Q	2817	1-4Q	13718	1-4Q	Continue	38428	0
System Eng Tools and Development	MIPR	NAVSEA - JHU/APL, Laurel, MD	625	170	1-4Q	170	1-4Q	63	1-4Q	Continue	1028	0
System Eng Tools and Development	MIPR	GSA, Northrop Grumman, McLean, VA	741	2008	1-4Q	308	2-3Q	770	1-4Q	Continue	3827	0
System Eng Tools and Development	MIPR	GSA - Sparta, Centreville, VA	0	338	1-4Q	170	1-4Q	117	1-4Q	Continue	625	0
System Eng Tools and Development	MIPR	Various	9002	4729	1-4Q	1207	1-4Q	9193	1-4Q	0	24131	0
Subtotal:			42234	31895		10901		36543		Continue	121563	0

ARMY RDT&E COST ANALYSIS (R3)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S32

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation Support	Various		0	0		0		1457	1-4Q	0	0	0
Subtotal:			0	0		0		1457		0	0	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various		3843	3904	1-4Q	4321	1-4Q	7454	1-4Q	Continue	19522	0
Subtotal:			3843	3904		4321		7454		Continue	19522	0
Project Total Cost:			**46077**	**35799**		**15222**		**45454**		**Continue**	**141085**	**0**

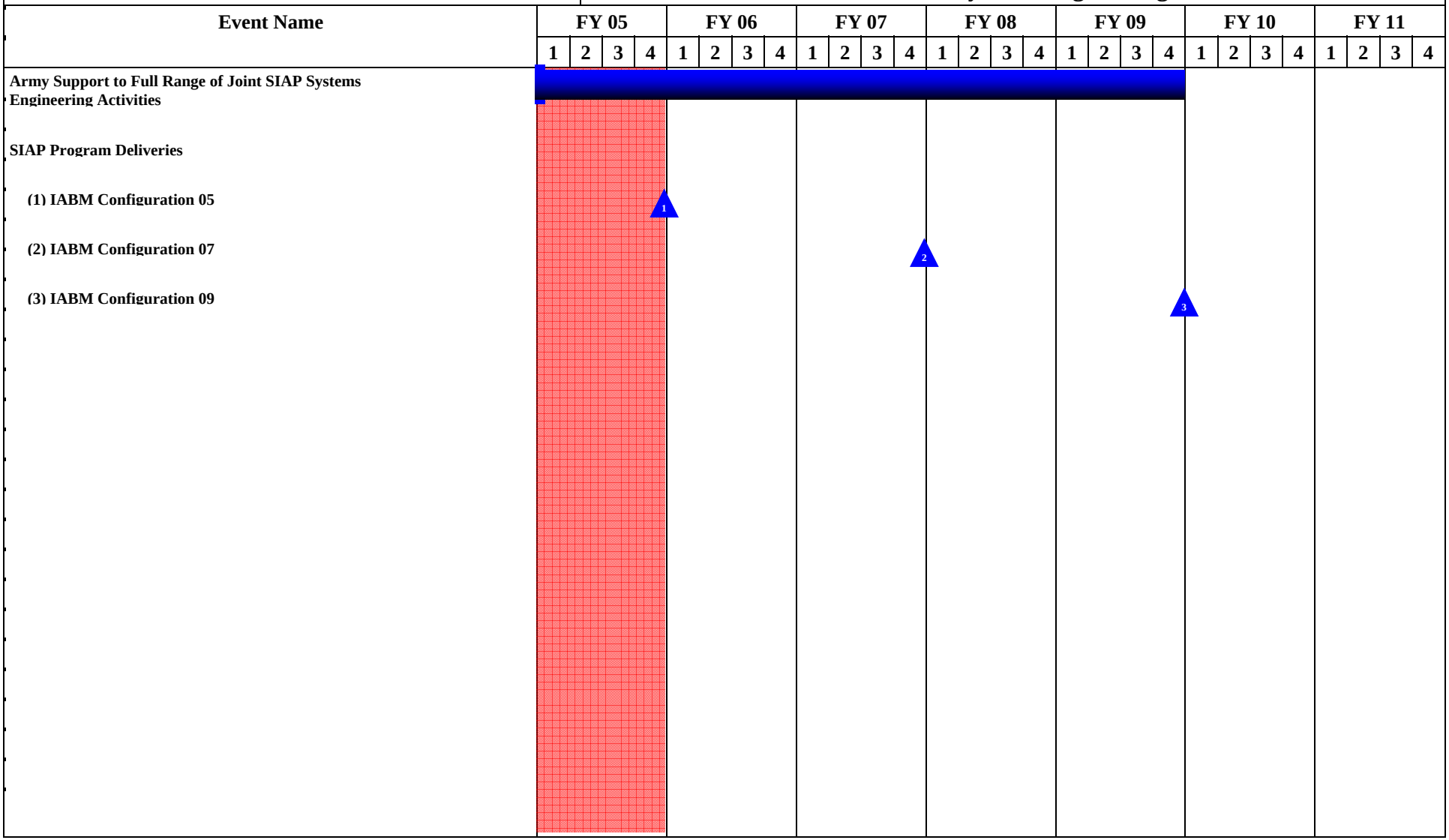
Schedule Profile (R4 Exhibit)

February 2006

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

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

PROJECT
S32



Schedule Detail (R4a Exhibit)

February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603327A - Air and Missile Defense Systems Engineering**	**S32**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Army Support to Full Range of Joint SIAP Systems Engineering Activities	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
SIAP Program Deliveries							
IABM Configuration 05	4Q						
IABM Configuration 07			4Q				
IABM Configuration 09					4Q		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2006

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 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S34	AMD SYSTEM OF SYSTEMS ENGINEERING AND INTEGRATION	23573	2760	0	0	0	0	0	0	26333

A. Mission Description and Budget Item Justification: Funding in the project provides components to produce an integrated capability or Integrated Air and Missile Defense (IAMD). To provide this integrated capability, the PEO Missiles and Space (M&S) must ensure operational effectiveness and acquisition efficiency are achieved. The Army integrated air and missile defense comprises a broad range of elements/components acquired individually to support complementary missions. PEO M&S must have the needed resources to execute this integration task. This project will provide for insertion of technology initiatives, development of alternative architectures and the modeling and simulation associated with development of a PEO M&S IAMD program. FY05/FY06 funding in this project is a result of congressional increases.

Geospatial Information Decision Support for Single Integrated Air Picture - This effort provides the Army aerospace warfighter the view and effects from space to ground to support time-critical targeting of missile threats.

SituSpace Single Integrated Space Picture - Provides critical decision support and visualization of the view up into space, in support of space control, satellite control, and laser-assisted missile defense missions.

ASMD Architecture Analysis Program - The PEO M&S Architecture Analysis Program (A3P) Develops the Modeling and Simulation infrastructure for the Army's Integrated Air and Missile Defense (IAMD) Program. A3P provides key capabilities for the IAMD Simulation Lab, IAMD Integration Lab and IAMD User Lab. A3P analyses are critical for the definition of the IAMD architecture and requirements, and the integration of AMD components/systems into the Army and Joint IAMD architectures.

Future Army Attack and Missile Defense System (FAAMDS) - This project will provide for the initiation of the preliminary design of a direct fire rocket capable of engaging and destroy a mortar in flight.

E-Strike Technology Enhancement for the Maneuver Air Defense Capability - Provides for the Army's future needs in development of a radar that can acquire, track, and provide fire control for a kinetic energy and a directed energy rocket, artillery, and mortar (RAM) defense system. This funding will provide for the performance analysis to develop the necessary requirements for the radar and shooters and the overall integration requirements.

ASMD System of Systems Hardware in the Loop Test Bed - provides funding for development of a prototype shelter for user evaluation and training.

Accomplishments/Planned Program	FY 2005	FY 2006	FY 2007
Geospatial Information Decision Support for Single Integrated Air Picture	5019	0	0
SituSpace Single Integrated Space Picture	4390	0	0
ASMD Architecture Analysis Program (A3P)	5010	0	0

Future Army Attack and Missile Defense System (FAAMDS)	1672	0	0
E-Strike Technology Enhancement for the Maneuver Air Defense Capability	4808	0	0
ASMD System of Systems Hardware-in-the-Loop Testbed	2674	2760	0
Total	23573	2760	0

C. Acquisition Strategy Not applicable for this item

ARMY RDT&E COST ANALYSIS (R3)

February 2006

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 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Geospatial Information Decision Support for Single Integrated Air Picture	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	5019	1-4Q	0		0		0	5019	0
ASMD Architecture Analysis Program (A3P)	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	5010	1-4Q	0		0		0	5010	0
SituSpace Single Integrated Space Picture	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	4390	1-4Q	0		0		0	4390	0
Future Army Attack and Missile Defense System (FAAMDS)	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	1672	1-4Q	0		0		0	1672	0
E-Strike Technology Enhancement for the Maneuver Air Defense Capability	MIPRs, 1095s, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	4808	1-4Q	0		0		0	4808	0
ASMD SOS Hardware-in-the- Loop Testbed	MIPRs, 1095, CPFF	Various OGA's, Inhouse and Contractor, Huntsville, AL and various other locations	0	2674	1-4Q	2760	1-4Q	0		0	0	0
Subtotal:			0	23573		2760		0		0	20899	0

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									

ARMY RDT&E COST ANALYSIS (R3)

February 2006

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

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									

Project Total Cost:			**0**	**23573**		**2760**		**0**		**0**	**20899**	**0**