PE NUMBER: 0603287F
PE TITLE: Physical Security Equipment

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2005

BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE: 0603287F Physical Security Equipment

	Cost ($ in Millions)	FY 2004 Actual	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
	Total Program Element (PE) Cost	23.519	24.621	21.937	26.045	30.659	30.400	31.105	31.635	Continuing	TBD
5121	Physical Security Equipment	23.519	24.621	21.937	26.045	30.659	30.400	31.105	31.635	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program is a budget activity level 4 based on the concept/technology development activities ongoing within the program. The purpose of this program is to develop physical security equipment (PSE) systems, to include Force Protection, for all DoD components. This program supports the protection of tactical, fixed, and nuclear weapons systems, DoD personnel and DoD facilities. The funds are used to provide PSE RDT&E for individual Service and joint PSE requirements. The PSE program is organized so that an ongoing USAF-coordinated Joint Action Group, consisting of Army, Navy, Air Force, and Defense Threat Reduction Agency (DTRA) representatives monitors, directs and prioritizes potential and existing PSE programs. OSD program oversight, as established by a Memorandum of Understanding, is provided by the Office of the Under Secretary of Defense, Acquisition, Technology and Logistics (AT&L), the Assistant Secretary of Defense for Intelligence (USD(I)), and the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological (ATSD(NCB)) programs. With few exceptions, each Service sponsors RDT&E efforts for technologies and programs that have multi-service application. This program element supports the Army's advanced engineering development of Interior and Exterior Detection, Security Lighting, Security Barriers and Security Display Units. In a like manner, the program element also supports the Air Force's PSE RDT&E effort in the areas of Exterior Detection/Surveillance, Entry Control, Delay/Denial, Tactical Systems and Airborne Intrusion. Finally, the program supports Navy RDT&E efforts in the areas of Waterside Security, Explosive Detection, and improved technology for Locks, Safes and Vaults. Beginning with FY 1997, this PE includes funding for Force Protection Commercial-Off-The-Shelf (FP COTS) evaluation and testing, which has received focus since the 1996 Khobar Towers terrorist bombing incident. The FP COTS testing applies to all available technologies, which are considered effective for DoD physical security use.

(U) B. Program Change Summary ($ in Millions)

		FY 2004	FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	24.275	24.621	21.937	26.045
(U)	Current PBR/President's Budget	23.519	24.621	21.937	26.045
(U)	Total Adjustments	-0.756	0.000		
(U)	Congressional Program Reductions	-0.756			
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification

DATE: February 2005

BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE: 0603287F Physical Security Equipment

PROJECT NUMBER AND TITLE: 5121 Physical Security Equipment

Cost ($ in Millions)	FY 2004 Actual	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
5121 Physical Security Equipment	23.519	24.621	21.937	26.045	30.659	30.400	31.105	31.635	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program is a budget activity level 4 based on the concept/technology development activities ongoing within the program. The purpose of this program is to develop physical security equipment (PSE) systems, to include Force Protection, for all DoD components. This program supports the protection of tactical, fixed, and nuclear weapons systems, DoD personnel and DoD facilities. The funds are used to provide PSE RDT&E for individual Service and joint PSE requirements. The PSE program is organized so that an ongoing USAF-coordinated Joint Action Group, consisting of Army, Navy, Air Force, and Defense Threat Reduction Agency (DTRA) representatives monitors, directs and prioritizes potential and existing PSE programs. OSD program oversight, as established by a Memorandum of Understanding, is provided by the Office of the Under Secretary of Defense, Acquisition, Technology and Logistics (AT&L), the Assistant Secretary of Defense for Intelligence (USD(I)), and the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological (ATSD(NCB)) programs. With few exceptions, each Service sponsors RDT&E efforts for technologies and programs that have multi-service application. This program element supports the Army's advanced engineering development of Interior and Exterior Detection, Security Lighting, Security Barriers and Security Display Units. In a like manner, the program element also supports the Air Force's PSE RDT&E effort in the areas of Exterior Detection/Surveillance, Entry Control, Delay/Denial, Tactical Systems and Airborne Intrusion. Finally, the program supports Navy RDT&E efforts in the areas of Waterside Security, Explosive Detection, and improved technology for Locks, Safes and Vaults. Beginning with FY 1997, this PE includes funding for Force Protection Commercial-Off-The-Shelf (FP COTS) evaluation and testing, which has received focus since the 1996 Khobar Towers terrorist bombing incident. The FP COTS testing applies to all available technologies, which are considered effective for DoD physical security use.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007
(U) FORCE PROTECTION/TACTICAL SECURITY EQUIPMENT	11.358			

- Completed an Aircraft Self -Protection Security System (ASPSS) prototype.
- Conducted ASPSS Design Testing
- Continued Pre-Planned Product Improvements (P3I) to the Tactical Automated Security System (TASS) annunciator.
- Continued TASS P3I efforts to incorporate long range detection, remotely operated weapons, and Unmanned Aerial Vehicle (UAV) capabilities.
- Completed the Electronic Trip Flare (ETF) Acquisition Strategy/Acquisition Plan.
- Completed the ETF Milestone B Decision Review Package.
- Completed the ETF Life Cycle Cost Estimate and Acquisition Program Baseline.
- Completed the development of the Remote Detection and Tracking Sensor (RDTS) and accomplish testing.
- Began the development of a RDTS Over-Water Detection Enhancement.
- Developed advanced concept systems that permit the informed selection of the correct sensor to be employed in a force protection environment, digitize video/IR images at the camera, classify targets, and network wireless sensors.
- Began development of a long range laser break-beam sensor.
- Conducted user assessment of 30 Battlefield Anti-Intrusion System (BAIS) systems deployed to Iraq in support of Stryker mission.

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603287F Physical Security Equipment**	PROJECT NUMBER AND TITLE **5121 Physical Security Equipment**

- Continued to manage, develop, evaluate, and test Delay/Denial products.
- Continued to manage sensor and assessment product developments and tests.
- Continued to research technological advances at DoD, DoE, University Labs, DARPA programs, within industry, etc., with PSE utility.
- Continued to prepare operational systems improvement plans; develop technology roadmap, update system architecture.
- Continued to test, develop, and integrate equipment to improve security and access to facilities.

(U) FORCE PROTECTION/TACTICAL SECURITY EQUIPMENT 15.652

- Award EFT SDD contract. Conduct Production Qualification Testing
- Correct ASPSS design deficiencies and develop a production model.
- Complete development of a RDTS over-water detection enhancement.
- Complete the development and testing of the PICS.
- Develop Identification of Friend or Foe capability to work with wide area sensors
- Begin Smart Gate P3I efforts to improve base access control
- Develop and document Operational, System, and Technical Architecures
- Continue to manage, develop, evaluate, and test Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to research technological advances at DoD, DoE, University Labs, DARPA, within industry, etc., with PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmap, update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

(U) FORCE PROTECTION/TACTICAL SECURITY EQUIPMENT 10.340

- Issue Federal Business Opportunities Announcement for the Tactical Video Surveillance System (TVSS).
- Conduct market survey for the TVSS.
- Conduct Concept Exploration for best technical approach to integrate TVSS with other phenomenology for Tactical Intrusion Detection.
- Refine or research improvements for the Smart Gate program.
- Conduct comparative testing of various airframes for the ASPSS.
- Continue TASS P3I efforts including improvements to the annnuciator.
- Continue to manage, develop, evaluate, and test Delay/Denial products.
- Continue to manage sensor and assessment product developments and tests.
- Continue to research technological advances at DoD, DoE, University Labs, DARPA, within industry, etc., with PSE utility.
- Continue to prepare operational systems improvement plans; develop technology roadmap, update system architecture.
- Continue to test, develop, and integrate equipment to improve security and access to facilities.

(U) FORCE PROTECTION/TACTICAL SECURITY EQUIPMENT 12.108

- Prepare to obtain LKMD Milestone C (LRIP) Decision
- Conduct a Leap Ahead assessment of current PSE capability.
- Design, build, and test ASPSS.

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603287F Physical Security Equipment	PROJECT NUMBER AND TITLE 5121 Physical Security Equipment

- Develop an enhanced CCDE.
- Develop the software to support the Common Operational Picture.

(U) ROBOTIC SECURITY SYSTEMS INTEGRATION 0.425

- Investigated/developed motion detection algorithms for a Mission Payload Prototype (MPP)
- Investigated COTS computer hardware, acoustical/chemical/biological sensors for integration with the MPP.
- Continued to develop and analyze hardware and software to support the development of intrusion detection from an external robotics platform.
- Delivered and tested FPASS image processing for real-time video stabilization and mosaicking.
- Demonstrated FPASS interface with eTASS.
- Improved FPASS GPS lock.

(U) ROBOTIC SECURITY SYSTEMS INTEGRATION 0.850

- Design MPP modular architecture.
- Build a smaller weatherized/ruggedized MPP prototype.
- Develop interface between sensors and communications modules for the MPP.
- Perform lab and field analysis of mobile intrusion detection from an external robotics platform.
- Transition Doppler sensor and processing for the capability to detect intruders from a moving platform.
- Make FPASS improvements relative to battery life, IR and EO imaging, and airframe durability.

(U) ROBOTIC SECURITY SYSTEMS INTEGRATION 0.788

- Demonstrate ability to network robotic systems to provide enhanced detection, surveillance, and response in all aspects of installation force protection and installation security.
- Continue efforts to improve the operational capability and safety of integrated weapon systems and robotics platforms employed in force protection and security missions.
- Continue imagery improvements for the FPASS.

(U) ROBOTIC SECURITY SYSTEMS INTEGRATION 0.923

- Integrate data feeds obtained from unmanned air and ground vehicles to improve surveillance capability and the common operational picture.
- Begin to integrate remote weapon systems with robotic platforms

(U) WATERSIDE SECURITY SYSTEM 2.900

- Continued efforts with a foreign ally to develop the next generation of the WQX-2 sonar in support of Subsurface Threat Detection.
- Continued pre-planned production improvements (P3I) efforts for COTS sonar technologies in support of Subsurface Threat Detection.
- Conducted market investigations of anti-swimmer nets, barriers, and communications devices in order to enhance Swimmer Delay, Denial, and Response.
- Developed software that addresses the weaknesses of video motion detection in support of Shoreline Intrusion Detection.
- Provided report on the performance evaluation of selected animal recall devices that assist in developing a Non-Lethal Diver Deterrence.
- Began analysis of existing data and requirements for a Passive Broadband Intruder Classifier (PBIC)

(U) WATERSIDE SECURITY SYSTEM 1.700

- Conduct a comprehensive test program for the Reson, Thales, Lockheed, and other sonars in support of Subsurface Threat Detection.
- Conduct in-water tests of Sea Fence and a composite material lightweight barrier developed by the Naval Facilities Engineering Support Center to provide Swimmer Delay, Denial, and Response capability.

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603287F Physical Security Equipment**	PROJECT NUMBER AND TITLE **5121 Physical Security Equipment**

- Integrate subsurface response capabilities to the baseline weapon system security architecture at high profile naval facilities.
- Test and evaluate COTS VMD products that may integrate to provide shoreline intrusion detection
- Begin behavioral testing in support of Non-Lethal Diver Deterrence.
- Begin human effects testing in support of Non-Lethal Diver Deterrence.
- Collect data on divers using various types of equipment in an effort to use a Passive Broadband to Classify Underwater Intruders.
- Conduct surface WSS surveys of sister Air Force installations to maximize their protection from waterborne threats.

(U) WATERSIDE SECURITY SYSTEM 2.500

- C3 Integration of Pierside and Shipboard Security Systems.
- Begin upgrade of Swimmer Detection sonars.

(U) WATERSIDE SECURITY SYSTEM 2.928

- Continue efforts to develop the next generation WQX-2 Sonar with Allies.
- Leverage WSS efforts in support of SSBNs.
- Continue to explore opportunities to develop a viable non-lethal means to neutralize swimmer threats.
- Further develop brassboard WSS prototypes transitioned from applied research efforts.

(U) EXPLOSIVE DETECTION EQUIPMENT 5.615

- Provided support to the Counter Bomb/Counter Bomber (CB2) Advanced Concept Technology Demonstration (ACTD).
- Tested two non-imaging Millimeter Wave (MMW) prototype systems for effective range, sensitivity, resolution, penetration, and vulnerability to countermeasures.
- Redesigned the Laser IMS Handheld Explosive Detector pre-prototype into a production model.
- Completed the conceptual design of the Remote/Stand-off Explosive Detection System and provided a test-bed demonstration.
- Provided support to the effort to find solutions to the Improvised Explosive Detection (IED) threat.
- Continued to develop logistic support plans, summaries, operational manuals for selected COTS products.
- Updated and maintained the EDE web site.

(U) EXPLOSIVE DETECTION EQUIPMENT 2.705

- Repackage MMW prototype systems to meet operational requirements.
- Refine the MMW technology for optimization in the stand-off detection of IEDs and suicide bombers.
- Initiate LRIP of the Laser IMS Handheld Explosive Detector.
- Complete the development of the basic Remote/Stand-off Explosive Detection System design and transition the basic design to industry.
- Optimize technology identified in the Counter Bomb/Counter Bomber Advanced Concept Technology Demonstration (ACTD).

(U) EXPLOSIVE DETECTION EQUIPMENT 5.566

- Invest in the integration of image and chem/bio detection to counter the WMD threat.
- Invest in the reduction of the manpower footprint associated with the detection of vehicle and cargo explosive threats.

(U) EXPLOSIVE DETECTION EQUIPMENT 6.518

- Acquire emerging explosive detection technology for comparative testing and realignment of a Baseline Explosive Detection Architecture.
- Develop a hybrid image/trace explosive detection capability.

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603287F Physical Security Equipment**	PROJECT NUMBER AND TITLE **5121 Physical Security Equipment**

- Continue to invest in the development of a viable technology to provide a stand-off explosive detection capability against IEDs.
- Reduce R/SEDS detection time yet increase detection capability.
- Refine the capability of R/SEDS to speicficallt identify the type of explosive.

(U) LOCKS, SAFES, VAULTS 0.621

- Developed a universal mounting system for the Integrated Locking Device (ILD).
- Completed the ILD User Data Package.
- Provided ILD information and installation support.
- Investigated and reviewed storage magazine test data regarding the Physical Security of Storage Magazines.
- Prioritized storage magazine types based on quantity, risk to sensitive weapons/ammunition and delay times.
- Published a findings report and proposed a way-ahead regarding the security of Storage Magazines.
- Developed a Test and Evaluation Master Test Plan (TEMP).
- Acted as a repository/center of excellence for ILD information and provided ILD installation coordination, support and training for DoD activities.

(U) LOCKS, SAFES, VAULTS 1.314

- Develop a light-weight weapons armory door ILD system.
- Incorporate design improvements for the ILD to increase operation and forced entry resistance.
- Evaluate Storage Magazine construction for the purpose of determining the security of storage structures through testing and engineering analysis.
- Initiate development of cost effective upgrade packages for substandard magazine door systems.
- Act as a repository/center of excellence for ILD information and provide ILD installation coordination, support and training for DoD activities.

(U) LOCKS, SAFES, VAULTS 1.332

- Complete the light-wight weapons armory dorr ILD prototype.
- Develop ILD design improvements to increase operational capbility and improve resistance against forced entry.
- Continue evaluating Lock technology and attack tools.

(U) LOCKS, SAFES, VAULTS 1.560

- Develop an ILD universal mount prototype.
- Incorporate ILD design improvements that will increase operational capability and improve resistance against forced entry.
- Integrate biometric technology with high security lock technology.
- Integrate and automate Locking systems into other support systems.

(U) COMMERCIAL-OFF-THE-SHELF TESTING 2.600

- Began preparations for Force Protection Equipment Demonstration (FPED) V.
- Provided support to the effort to find solutions to the Improvised Explosive Detection (IED) in Iraqi and Afghanistan.
- Continued efforts that increase the situational awareness for system operators.
- Investigated COTS capability that avoids increases in the manpower footprint.
- Continued to support all testing of PSE products (COTS, NDI, Developmental), systems testing and development of required documentation.

(U) COMMERCIAL-OFF-THE-SHELF TESTING 2.400

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603287F Physical Security Equipment	PROJECT NUMBER AND TITLE 5121 Physical Security Equipment

- Execute FPED V.
- Continue to seek near-term (commercial) solutions for immediate force protection needs.
- Continue to support all testing of PSE products (COTS, NDI, Developmental), systems testing and development of required documentation.

(U) COMMERCIAL-OFF-THE-SHELF TESTING 1.411

- Deliver FPED V After Action Report
- Distribute FPED V CDs
- Launch FPED VI on-line registration
- Prepare to execute FPED VI.
- Continue to seek near-term (commercial) solutions for immediate force protection needs.

(U) COMMERCIAL-OFF-THE-SHELF TESTING 2.008

- Deliver FPED V Vendor and Attendee Survey.
- Refine FPED VI on-line registration and informational website.
- Execute FPED VI.
- Continue to seek near-term (commercial) solutions for immediate force protection needs.

(U) Total Cost	23.519	24.621	21.937	26.045

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2004 Actual	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
(U) Not Applicable										

(U) D. Acquisition Strategy

Not Applicable

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2005**

BUDGET ACTIVITY: **04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE: **0603287F Physical Security Equipment**

PROJECT NUMBER AND TITLE: **5121 Physical Security Equipment**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2004 Cost	FY 2004 Cost	FY 2004 Award Date	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
(U) Product Development														
HQ ESC (Air Force)	PO			6.273	Jan-04	7.621		6.115		7.161		Continuing	TBD	TBD
PM-PSE (US Army)	MIPR			5.702	Dec-03	4.610		4.756		5.569		Continuing	TBD	TBD
CNO-N34 (US Navy)	MIPR			7.456	Dec-03	6.910		7.062		8.270		Continuing	TBD	TBD
DTRA	MIPR			1.850	Jan-04	2.040		2.018		2.385		Continuing	TBD	TBD
Subtotal Product Development			0.000	21.281		21.181		19.951		23.385		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Program Office Support				2.238		3.440		1.986		2.660		Continuing	TBD	TBD
Subtotal Management			0.000	2.238		3.440		1.986		2.660		Continuing	TBD	TBD
Remarks:														
(U) Not Applicable														
(U) Total Cost			0.000	23.519		24.621		21.937		26.045		Continuing	TBD	TBD
Remarks:														

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)	**0603287F Physical Security Equipment**	**5121 Physical Security Equipment**

Exhibit R-4, Schedule Profile		Date: September 2004
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE PE0603287F Physical Security Equipment	PROJECT NUMBER AND NAME 5121 Physical Security Equipment

Fiscal Year	2003				2004				2005				2006				2007				2008				2009				2010				2011			
	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	2	3	4	1	2	3	4
Further develop WSS brassboard prototypes transitioned from applied research efforts																	▲																			
Refine MMW technology to counter standoff and suicide bomber threats										▲																										
C3 integration of Pierside and Shipboard Security Systems															▲																					
Initiate LRIP of Laser IMS HH ED											▲																									

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)	**0603287F Physical Security Equipment**	**5121 Physical Security Equipment**

Exhibit R-4, Schedule Profile		Date: September 2004
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE PE0603287F Physical Security Equipment	PROJECT NUMBER AND NAME 5121 Physical Security Equipment

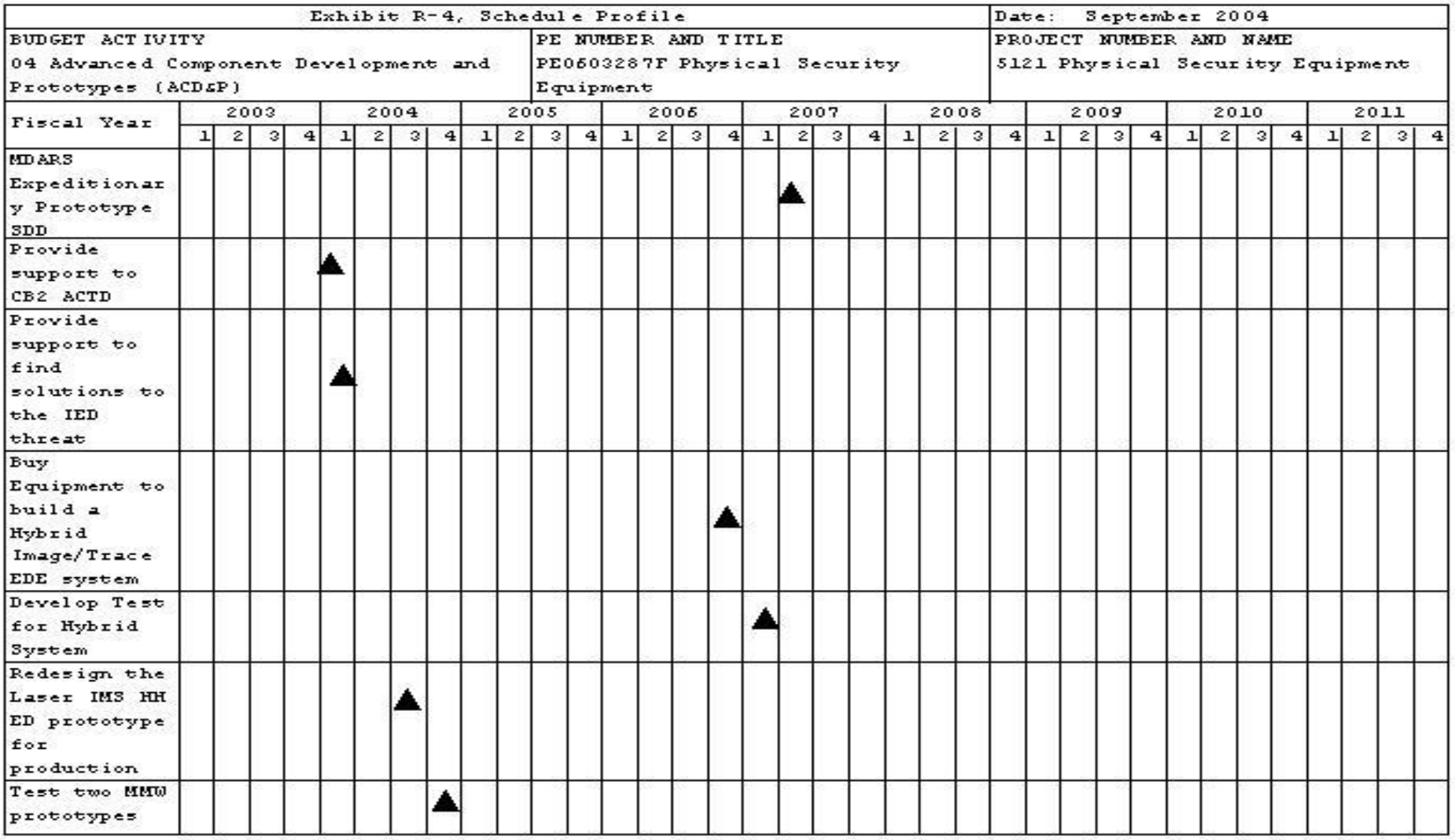

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)	**0603287F Physical Security Equipment**	**5121 Physical Security Equipment**

Exhibit R-4, Schedule Profile		Date: February 2005
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE PE0603287F Physical Security Equipment	PROJECT NUMBER AND NAME 5121 Physical Security Equipment

Fiscal Year	2003				2004				2005				2006				2007				2008				2009				2010				2011			
	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	2	3	4	1	2	3	4
Conduct Market Investigations for anti-swimmer technology							▲																													
Network robotics systems for increased PS/FP capability																	▲																			
Develop software to assess the weaknesses of Shoreline Intrustion Detection VHD								▲																												
T&E COTS VMD products for Shoreline Intrusion Detection									▲																											
Follow-on Early User Appraisal for MDARS																▲																				

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)	**0603287F Physical Security Equipment**	**5121 Physical Security Equipment**

Exhibit R-4, Schedule Profile		Date: February 2005
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE PE0603287F Physical Security Equipment	PROJECT NUMBER AND NAME 5121 Physical Security Equipment

Fiscal Year	2003				2004				2005				2006				2007				2008				2009				2010				2011			
	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	2	3	4	1	2	3	4
Award LKMD SDD contract										▲																										
Continue TASS P3I efforts including the annunciator													▲																							
Conduct a Leap Ahead assessment of current PSE technology																			▲																	
Investigate motion detection alogorithms for MPP					▲																															
Investigate COTS sensors for integration with MPP						▲																														
Begin Smart Gate P3I									▲																											
Design MPP modular architecture										▲																										

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)	**0603287F Physical Security Equipment**	**5121 Physical Security Equipment**

Exhibit R-4, Schedule Profile		Date: February 2005
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE PE0603287F Physical Security Equipment	PROJECT NUMBER AND NAME 5121 Physical Security Equipment

Fiscal Year	2003				2004				2005				2006				2007				2008				2009				2010				2011			
	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	2	3	4	1	2	3	4
Market Survey for TVSS														▲																						
TVSS Prototype Design, Fabrication, & Integration														▲																						
TVSS Early User Appraisal																	▲																			
PAS Market Survey and Investigation														▲																						
Develop a RDTS Over-Water Detection Capability						▲																														
Complete LKMD Milestone B decision review package						▲																														
Development of the long range laser break-beam sensor					▲																															

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
04 Advanced Component Development and Prototypes (ACD&P)	**0603287F Physical Security Equipment**	**5121 Physical Security Equipment**

Exhibit R-4, Schedule Profile		Date: September 2004
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE PE0603287F Physical Security Equipment	PROJECT NUMBER AND NAME 5121 Physical Security Equipment

Fiscal Year	2003				2004				2005				2006				2007				2008				2009				2010				2011			
	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	2	3	4	1	2	3	4
Publish Report on the security of Storage Magazines								▲																												
Develop a light weight ILD for weapons armory doors																▲																				
Begin prep for FPED V					▲																															
Execute FPED V							▲																													
Integrate biometric technology with high security lock technology																▲																				

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2005
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603287F Physical Security Equipment	PROJECT NUMBER AND TITLE 5121 Physical Security Equipment

(U) Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007
(U) Conduct market survey for the TVSS			2Q	
(U) TVSS Prototype Design, Fabrication, & Integration			2Q	
(U) TVSS Early User Appraisal				1Q
(U) PAS Market Survey and Investigation			2Q	
(U) Begin to develop a RDTS Over-Water Detection Capability	2Q			
(U) Complete LKMD Milesone B decision review package	2Q			
(U) Begin development of the long range laser break-beam sensor	1Q			
(U) Award LKMD SDD contract		2Q		
(U) Continue TASS P3I efforts including the annuinciator			1Q	
(U) Conduct a Leap Ahead assessment of current PSE technology				3Q
(U) Investigate motion detection alogorithms for MPP	1Q			
(U) Investigate COTS sensors for integration with MPP	2Q			
(U) Begin Smart Gate P3I		1Q		
(U) Design MPP modular architecture		2Q		
(U) Conduct market investigation for anti-swimmer technology	3Q			
(U) Network robotics systems for increased PS/FP capability				1Q
(U) Develop sorftware to assess the weaknesses of Shoreline Intrustion Detection VMD	4Q			
(U) T&E COTS VMD products for Shoreline Intrusion Detection		1Q		
(U) Follow-on Early User Appraisal for MDARS			3Q	
(U) MDARS Expeditionary Prototype SDD				2Q
(U) Provide support to CB2 ACTD	1Q			
(U) Provide support to find solutions to the IED threat	1Q			
(U) Buy Equipment to build a Hybrid Image/Trace EDE system			4Q	
(U) Develop test Hybrid system				1Q
(U) Redesign the Laser IMS HH ED prototype for production	3Q			
(U) Test two MMW prototypes	4Q			
(U) Further develop WSS brassboard prototypes transitioned from applied research				1Q
(U) Refine MMW technology to counter standoff and suicide bomber threats		2Q		
(U) C3 integration of Pierside and Shipboard Secuirty Systems			3Q	
(U) Initiate LRIP of Laser IMS HH ED		3Q		
(U) Develop universal mounting system for the ILD	3Q			

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2005
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(U) Publish Report on the security of Storage Magazines	4Q		
(U) Develop a light weight ILD for weapons armory doors		4Q	
(U) Begin prep for FPED V	1Q		
(U) Execute FPED V		3Q	
(U) Integrate biometric technology with high security lock technology			1Q