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Exhibit R-2, RDT&E Budget Item Justification								Date: February 2000	
APPROPRIATION/BUDGET ACTIVITY RESEARCH, DEVELOPMENT, TEST & EVALUATION, DEFENSE-WIDE, BUDGET ACTIVITY 4				R-1 ITEM NOMENCLATURE PHYSICAL SECURITY EQUIPMENT PE 0603228D8Z					
COST (\$ in Millions)	FY 1999	FY 2000	FY2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total PE Cost	24.981	25.351	35.108	35.284	35.566	36.160	36.768	CONTINUING	CONTINUING
Force Protection COTS	5.648	4.157	12.484	11.500	12.500	11.600	12.600		
Tactical Automated Security	2.230	2.560	1.875	2.000	2.000	2.000	2.000		
Weapon Storage Area	2.735	2.887	3.878	4.500	4.500	5.000	5.000		
MDARS-E	5.500	4.890	5.590	0.000	0.000	0.000	0.000		
Waterside Security System	3.330	2.650	2.000	2.500	3.000	3.000	3.000		
EDE	0.488	2.060	2.150	3.000	3.000	3.000	2.768		
Tech Base	2.800	3.000	3.000	4.384	4.000	4.000	3.500		
Dissuader	0.346	0.000	0.000	0.000	0.000	0.000	0.000		
HALT	0.093	1.097	0.921	0.000	0.000	0.000	0.000		
CROWS	0.180	0.100	0.200	0.000	0.000	0.000	0.000		
FPC2	0.246	0.000	0.000	0.000	0.000	0.000	0.000		
HVISS	0.050	0.200	0.460	2.500	2.500	3.000	2.500		
PEWD II	0.300	0.300	0.500	1.000	1.166	1.160	2.000		
ETF	0.135	0.200	0.850	1.500	1.000	1.500	1.500		
DoD Locks, Safes and Vaults	0.900	0.900	0.850	1.400	0.900	0.900	0.900		
D/D Development/Qualification	0.000	0.350	0.350	1.000	1.000	1.000	1.000		

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<p>A. <u>Mission Description and Budget Item Justification.</u> This program is a budget activity level 4 based on the demonstration/validation activities ongoing within the program. The purpose of this program is to develop physical security equipment (PSE) systems and to safeguard DoD acquisition information for all DoD components, to include Force Protection. This program supports the protection of tactical and nuclear weapons systems, DoD personnel and DoD facilities. Funding for critical RDT&E security improvements within service channels has fluctuated widely over the years and prompted the FY89 Congressionally directed consolidation of the Services and former Defense Nuclear Agency (DNA)/Defense Special Weapons Agency (DSWA) PSE RDT&E funds into this single OSD controlled program element. 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 DoD-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. With few exceptions, each Service sponsors RDT&E efforts for technologies and programs, which have multi-service applications. The funds are also employed to evaluate exploratory development of Physical Security Equipment. This program element supports the Army's advanced and engineering development of Interior Detection, 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 area of Exterior Surveillance, Entry Control and Airborne Intrusion. Finally, the program supports Navy RDT&E efforts in the areas of Shipboard Security, Waterside Security, Explosive Detection, Locks and anti-compromise and emergency destruction of classified material and equipment. 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 use.</p> <p>(U) <u>FY 1999 Accomplishments</u> DISSUADER (0.346 million)</p> <ul style="list-style-type: none">• Obtained units for Legal and Medical review and approval• Distributed units to several Government organizations to gather field data• Initiated EMD planning <p>HINDER ADVERSARIES WITH LESS THAN LETHAL TECHNOLOGY (HALT) (0.093 million)</p> <ul style="list-style-type: none">• Awarded effort to develop two Field of View (FOV) variants• Initiated EMD planning	

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<p>COMMON REMOTELY OPERATED WEAPON SYSTEM (CROWS) (0.180 million)</p> <ul style="list-style-type: none">• Established Army-USAF MOA to incorporate requirements• Assisted Army with proof of concept demonstration and risk reduction activities <p>FORCE PROTECTION COMMAND & CONTROL (FPC2) (0.246 million)</p> <ul style="list-style-type: none">• Developed a new system capability through the integration of Commercial-Off-The Shelf (COTS) products• Tested/demonstrated new capability at Joint Expeditionary Force Experiment(JEFX)'99 <p>HIGH VALUE ITEM SECURITY (HVISS) PHASE II Request For Information Document (RFID) (0.050 million)</p> <ul style="list-style-type: none">• Monitored Applied Research Efforts <p>PLATOON EARLY WARNING DEVICE II (PEWD II) (0.300 million)</p> <ul style="list-style-type: none">• Completed market investigation/TASS determination• Continued evaluation of candidate Non-Developmental Items (NDI)/COTS Systems <p>ELECTRONIC TRIP FLARE (ETF) (0.135 million)</p> <ul style="list-style-type: none">• Conducted Concept Exploration <p>DoD LOCKS, SAFES, VAULTS (0.900)</p> <ul style="list-style-type: none">• Developed repairable methods of entry for approved equipment• Provided engineering and consultation• Continued support for Mobile Detection Assessment Response System (MDARS) program• Developed anchoring methods for security equipment aboard ships• Evaluated and tested attack tools and security hardware• Tested alternative attack resistant concrete for high security magazine doors• Developed security seal user training	

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Exhibit R-2, RDT&E Budget Item Justification	Date: February 2000
<p>(U) <u>FY 2000 Plans</u></p> <p>HINDER ADVERSARIES WITH LESS THAN LETHAL TECHNOLOGY (HALT) (1.097 million)</p> <ul style="list-style-type: none">• Award an EMD contract to develop an eye-safe at all ranges version, tactically rugged, and capable of operating over full military temperature ranges <p>DELAY/DENIAL (D/D) DEVELOPMENT/QUALIFICATION (0.350 million)</p> <ul style="list-style-type: none">• Manage D/D product developments• Evaluate D/D COTS products• Recommend new D/D technologies <p>COMMON REMOTELY OPERATED WEAPON SYSTEM (CROWS) (0.100 million)</p> <ul style="list-style-type: none">• Continue FY99 efforts to assist the Army with proof of concept demonstration leading up to an EMD award <p>HIGH VALUE ITEM SECURITY SYSTEM (HVISS) PHASE II (RFID) (0.200 million)</p> <ul style="list-style-type: none">• Award Broad Agency Announcement (BAA)• Conduct Technical Feasibility Testing (TFT)• Prepare Analysis Of Alternatives (AOA) <p>ELECTRONIC TRIP FLARE (ETF) (0.200 million)</p> <ul style="list-style-type: none">• Prepare/release BAA• Develop draft specification & RFP components for EMD/Production contract• Conduct Technical Feasibility Testing <p>PLATOON EARLY WARNING DEVICE II (PEWD II) (0.300 million)</p> <ul style="list-style-type: none">• Complete Concept Formulation Package• Develop Project Plan <p>DoD LOCKS, SAFES, VAULTS (0.900)</p> <ul style="list-style-type: none">• Update DoD Lock Program Hotline• Support test requirements for combination locks• Complete internal locking device User Data Package (UDP) and obtain approval of system• Continue support of Army MDARS program• Publish financial guide on destruction of National Security Information• Update technical data sheets on security hardware	

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Exhibit R-2, RDT&E Budget Item Justification	Date: February 2000
<ul style="list-style-type: none">• Finalize specification for attack resistant concrete fill material, change High Security Magazine Door (HSMD) UDP to reflect material change• Install ten Internal Locking Device (ILD) systems in Germany for the Army• Evaluate and test attack tools and security hardware <p>(U) <u>FY 2001 Plans</u></p> <p>HINDER ADVERSARIES WITH LESS THAN LETHAL TECHNOLOGY (HALT) (0.921 million)</p> <ul style="list-style-type: none">• Complete EMD Phase <p>DELAY/DENIAL (D/D) DEVELOPMENT/QUALIFICATION (0.350 million)</p> <ul style="list-style-type: none">• Manage D/D product developments• Evaluate D/D COTS products• Recommend new D/D technologies <p>COMMON REMOTELY OPERATED WEAPON SYSTEM (CROWS) (0.200 million)</p> <ul style="list-style-type: none">• Assist Army with EMD Phase by providing Engineering, Logistics, and Cost Estimating support <p>HIGH-VALUE ITEM SECURITY SYSTEM (HVISS) PHASE II (RFID) (0.460 million)</p> <ul style="list-style-type: none">• Conduct Milestone (MS) I/II In-Process Review <p>ELECTRONIC TRIP FLARE (ETF) (0.850 million)</p> <ul style="list-style-type: none">• Continue Technical Feasibility Testing• Conduct MS I/II In-Process Review <p>PLATOON EARLY WARNING DEVICE II (PEWD II) (0.500 million)</p> <ul style="list-style-type: none">• Continue Technical Feasibility Testing• Develop MS I/II IPR Package and RFP <p>DoD LOCKS, SAFES, VAULTS (0.850)</p> <ul style="list-style-type: none">• Update or publish guide specifications for security equipment (as needed)• Update existing and publish new repairable methods of entry• Conduct a Security Seals Symposium• Update National Security Information destruction methods and guidance	

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Exhibit R-2, RDT&E Budget Item Justification					Date: February 2000			
B. <u>Program Change Summary</u> (\$ million)								
		<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>Total</u>			
Previous President's Budget		24.465	37.107	36.201	<u>Cost</u>			
Appropriated Value			26.107		Continuing			
Adjustments to Appropriated Value								
a. Congressionally Directed								
Appropriation Reduction								
b. Congressionally Directed								
Undistributed Reduction								
c. Below threshold reprogrammings,								
inflation Savings, government-wide rescission		(0.484)	(0.756)	(1.093)				
Current Budget Submit/President's Budget		24.981	25.351	35.108	Continuing			
Change Summary Explanation:								
Funding:	Adjustments reflect inflation savings, below threshold reprogrammings and the Government-wide rescission							
Schedule:	N/A							
Technical:	N/A							
C. <u>Other Program Funding Summary</u>								
		<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>Compl</u>
	<u>Cost</u>							
Procurement Line P-1 No(s)	- USAF	1.000	1.000	1.000	1.000	1.000	TBD	TBD
Milcon Project No(s)	- N/A							
Related RDT&E:	- N/A							
D. <u>Acquisition Strategy:</u>								
E. <u>Schedule Profile</u>								
Fiscal Year actual and planned events:								
		<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>				

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Exhibit R-2, RDT&E Budget Item Justification		Date:
Acquisition Milestones		
DISSUADER	MS II	
HALT	MS II	
CROWS	MS II	
FPC2		
HVISS		MSI/II
PEWD II		
ETF		MSI/II
Engineering Milestones		
N/A		
T&E Milestones		
HALT	QT&E	
HVISS	TFT	
PEWD II		TFT
ETF		TFT
Contract Milestones		
HVISS	BAA Awd	
ETF	BAA Awd	

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Exhibit R-2a, RDT&E Project Justification								Date: February 2000	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z			FORCE PROTECTION (FP) COTS EQUIPMENT EVALUATION AND INTEGRATION				
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
FP COTS	5.648	4.157	12.484	11.500	12.500	11.600	12.600	Continuing	Continuing
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> The DoD Force Protection Commercial-Off-The-Shelf (COTS) evaluation and integration project identifies and evaluates commercial systems and equipment that have potential for solving critical Force Protection problems. Equipment is tested in laboratory and operational settings to determine its suitability for a wide range of Force Protection applications. These include applications in nuclear, aircraft flight line, personnel facilities and resource protection security. Products that are identified as having military value are made available for use by incorporating them into existing or new programs. Current emphasis is on products that provide day/night all-weather detection/surveillance, sniper location, non-lethal defensive capability, barriers, large vehicle explosives detection, water-side security systems, and personal and tactical security systems. Planned testing may be accomplished at the established DoD Test Facility at Eglin AFB FL or other appropriate/necessary facility.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> • Procured and delivered COTS equipment, i.e., Explosive Detectors for SWA, Personnel Alerting System for EUCOM, Vehicle Barriers for Military District of Washington • Conducted Force Protection Equipment Demonstration II (3-6 May, 1999 at MCB Quantico, VA) • Performed scheduled FY 1999 evaluation and test of selected COTS equipment/systems • Published appropriate reports • Updated the methodology and published the evaluation and test schedule for FY2000 • Updated the User's Guide of Commercially available Non Developmental Items for Force Protection uses <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Procure and deliver COTS Force Protection Equipment in support of DoD urgent and compelling requirements • Perform scheduled FY 2000 evaluations and test of selected COTS equipment/systems • Publish appropriate reports • Update the User's Guide of Commercially available Non Developmental Items for Force Protection users • Update methodology and publish evaluation and test schedule for FY 2001 									

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Exhibit R-2a, RDT&E Project Justification	Date: February 2000																				
<p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none">• Procure and deliver COTS Force Protection Equipment in support of DoD urgent and compelling requirements• Perform scheduled FY 2001 test and evaluations of selected COTS equipment/systems• Conduct Force Protection Equipment Demonstration III• Publish appropriate reports• Update the User's Guide of Commercially available Non Developmental Items for Force Protection users• Update methodology and publish test and evaluation schedule for FY 2002 <p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy: Identify available government contracts or commence action to competitively awarded delivery order contracts.</p> <p>D. Schedule Profile: Fiscal Year actual and planned events:</p> <table><thead><tr><th></th><th>FY 1999</th><th>FY 2000</th><th>FY2001</th></tr></thead><tbody><tr><td>Acquisition Milestones</td><td></td><td></td><td></td></tr><tr><td>Engineering Milestones</td><td></td><td></td><td></td></tr><tr><td>T&E Milestones</td><td></td><td></td><td></td></tr><tr><td>Contract Milestones</td><td></td><td></td><td></td></tr></tbody></table>			FY 1999	FY 2000	FY2001	Acquisition Milestones				Engineering Milestones				T&E Milestones				Contract Milestones			
	FY 1999	FY 2000	FY2001																		
Acquisition Milestones																					
Engineering Milestones																					
T&E Milestones																					
Contract Milestones																					

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							FORCE PROTECTION COTS		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development						1.000		2.446				
Ancillary Hardware Development						0.300		0.504				
Systems Engineering						0.200		0.400				
Licenses												
Tooling												
GFE						0.150		0.250				
Award Fees												
Subtotal Product Development						1.650		3.600		CONT	CONT	
Remarks:												
Development Support						0.150		0.250				
Software Development												
Training Development						0.150		0.250				
Integrated Logistics Support												
Configuration Management						0.050		0.050				
Technical Data						0.050		0.150				
GFE												
Subtotal Support						0.400		0.700		CONT	CONT	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)									Date: February 2000			
RDT&E, DEFENSE-WIDE BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						FORCE PROTECTION COTS			
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				1.330		1.000		1.100				
Operational Test & Evaluation				3.100		1.082		6.100				
Tooling												
GFE												
Subtotal T&E				4.430		2.082		7.200		CONT	CONT	
Remarks												
Contractor Engineering Support				0.804		0.025		0.616				
Government Engineering Support				0.348				0.318				
Program Management Support												
Program Management Personnel												
Travel				0.066				0.050				
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				1.218		0.025		0.984		CONT	CONT	
Remarks												
Total Cost				5.648	[1]	4.157	[1]	12.484	[1]			
Remarks [1] On going program to demonstrate and document availability of COTS equipment for force protection missions												

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Exhibit R-2a, RDT&E Project Justification								Date:	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT		PROJECT NAME AND NUMBER					
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z		TACTICAL AUTOMATED SECURITY SYSTEM (TASS)					
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
TASS	2.230	2.560	1.875	2.000	2.000	2.000	2.000	Continuing	Continuing
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> The Tactical Automated Security System (TASS) originally an Air Force and now DoD program, is an ongoing effort to develop an integrated portable relocatable security system to provide Force Protection capability for personnel, dispersed assets, fixed base facilities and Air Base Ground Defense applications. The system includes remote sensing, alarm monitoring through fiber optic and wireless data communications and remote assessment through the use of day/night all weather Thermal Imaging systems.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> • Conducted Follow On Test and Evaluation (FOT&E) and corrected "critical" FOT&E deficiencies • Conducted testing of COTS products to add capabilities to the TASS suite of products • Awarded and performed technology enhancement Engineering Change Proposals (ECP) to improve/provide new capabilities. This included adding an interface to an Army chemical/biological sensor and reducing the occurrence of nuisance and false alarm messages <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Conduct testing of COTS products to add capabilities to the TASS suite of products. This will include testing a blacklight night vision illuminator and several new intrusion detection sensors • Award and perform technology enhancement ECPs to improve/provide new capabilities. This will include developing a man-portable version of TASS to meet Air Force and Army requirements; annunciator software upgrade III; and miniaturize TASS components <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • Conduct testing of COTS products to add capabilities to the TASS suite of products. This will include testing short-range thermal imagers and a new class hand-held thermal imager • Award and perform technology enhancement ECPs to improve/provide new capabilities. This will include developing an entry control feature and capabilities required to protect nuclear assets • Continue the development of the man-portable version of TASS 									

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Exhibit R-2a, RDT&E Project Justification								Date:	
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B. Other Program Funding Summary									
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	To Complete	Total Cost
Procurement	15.500	22.200	20.700	12.200	10.900	11.200	11.200	TBD	TBD
C. Acquisition Strategy: One (1) large, two (2) Small Business competitively awarded contracts with technology enhancement delivery order available.									
D. Schedule Profile:									
Fiscal Year actual and planned events:									
	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>						
- FOT&E									
- P3I/COTS									
- P3I/ECPS									
Acquisition Milestones									
Engineering Milestones									
T&E Milestones									
Contract Milestones									

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							TACTICAL AUTOMATED SECURITY SYSTEM (TASS)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPFF	ESC Hanscom		0.610	2/99	0.312	11/99	0.299	11/00			
Ancillary Hardware Development	CPFF	ESC		0.079	2/99	0.062	11/99	0.090	11/00			
Systems Engineering	CPFF	ESC		0.314	[1]	0.355	11/99	0.369	11/00			
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				1.003		0.729		0.758		Cont	CONT	
Remarks: [1] Numerous delivery orders awarded throughout the fiscal year												
Development Support	CPFF	ESC		0.213	11/98	0.351	11/99	0.169	11/00			
Software Development	CPFF	ESC		0.130	12/98	0.288	11/99	0.218	11/00			
Training Development	CPFF	ESC		0.017	1/99	0.025	2/00	0.020	2/01			
Integrated Logistics Support	CPFF	ESC		0.024	11/98	0.025	2/00	0.017	2/01			
Configuration Management	CPFF	ESC		0.031	11/98	0.030	2/00	0.016	2/01			
Technical Data	CPFF	ESC		0.017	11/98	0.017	2/00	0.017	2/01			
GFE												
Subtotal Support				0.432		0.736		0.457		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z				TACTICAL AUTOMATED SECURITY SYSTEM (TASS)					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date (2)	2001 Cost	2001 Award Date (2)	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	AFMC	Eglin AFB		0.168	12/98	0.302	11/99	0.282	11/00			
Operational Test & Evaluation	AFTEC	Eglin AFB		0.080	12/98	0.150	11/99	0.020	11/00			
Tooling												
GPE												
Subtotal T&E				0.248		0.452		0.302		CONT	CONT	
Remarks												
Contractor Engineering Support	FFP/DO	ESC		0.377	[2]	0.305	11/00	0.214	11/01			
Government Engineering Support	MIPR	DOE SNL		0.046	1/99	0.149	11/00	0.051	11/01			
Program Management Support	PO	ESC		0.094	[2]	0.166	11/00	0.069	11/01			
Program Management Personnel												
Travel		ESC		0.030	[2]	0.023	11/00	0.024	11/01			
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.547		0.643		0.358		CONT	CONT	
Remarks [2] Various documents and award dates throughout the year												
Total Cost				2.230		2.560		1.875				
Remarks												

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Exhibit R-2a, RDT&E Project Justification								Date:	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z			WEAPONS STORAGE AREA (WSA) UPGRADES				
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
WSA	2.735	2.887	3.878	4.500	4.500	5.000	5.000	Continuing	Continuing
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> Develop and deploy equipment that will provide new capability or upgrade the existing WSA Security mission. This activity will be accomplished through the testing and employment of automatic access control and command and control of WSA intrusion detection and assessment equipment. Test and deploy (as appropriate) Commercial-Off-The-Shelf (COTS) products to provide new and/or improved detection, tracking, and assessment capabilities.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> • Awarded contract to develop new Advanced Exterior Sensor (AES) Data Processing Module and built prototype • Installed and tested Video Motion Detection and Video Storage System at operational locations • Tested new phenomenologies to perform wide area detection and tracking • Tested new access control system <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Continue installation and testing of COTS • Develop and test new 3-D video motion detection technology • Develop a new system architecture that takes advantage of advances in technology. Includes identifying system improvements and preparing a technology roadmap • Test new COTS equipment to determine if it can meet new requirements or replace aging equipment <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • Continue with the development of a new system architecture and roadmap. Conduct technology/concept demonstrations • Test new COTS equipment to determine if it can meet new requirements or replace aging equipment 									

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Exhibit R-2a, RDT&E Project Justification								Date: February 2000	
B. Other Program Funding Summary									
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>To Complete</u>	<u>Total Cost</u>
Procurement	4.900	3.500	7.300	13.581	14.137	14.047	14.743	TBD	TBD
C. Acquisition Strategy: Utilize existing DoD or DoE contract vehicles									
D. Schedule Profile:									
Fiscal Year actual and planned events:									
	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>						
- Initiate VMD Eval									
- Integrate VMD									
- COTS Evaluation									
- Develop New Sys Architecture									
- Conduct Technology/Concept Demo									
Acquisition Milestones									
Engineering Milestones									
T&E Milestones									
Contract Milestones									

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							WEAPONS STORAGE AREA (WSA)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date (1)	2001 Cost	2001 Award Date (1)	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPFF	ESC Hanscom		0.435	2/99	0.226	12/99	0.276	1/01			
Ancillary Hardware Development	CPFF	ESC		0.120	2/99	0.068	12/99	0.062	1/01			
Systems Engineering	CPFF	ESC		0.431	[1]	0.523	12/99	0.609	1/01			
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				0.986		0.817		0.947		CONT	CONT	
Remarks: [1] Numerous delivery orders awarded throughout the fiscal year												
Development Support	CPFF	ESC		0.331	11/98	0.266	11/99	0.300	11/00			
Software Development	CPFF	ESC		0.187	12/98	0.205	12/99	0.205	11/00			
Training Development	CPFF	ESC		0.027	1/99	0.028	2/00	0.060	11/00			
Integrated Logistics Support	CPFF	ESC		0.036	11/98	0.028	11/99	0.050	11/00			
Configuration Management	CPFF	ESC		0.049	11/98	0.035	11/99	0.037	11/00			
Technical Data	CPFF	ESC		0.017	11/98	0.014	11/99	0.050	11/00			
GFE												
Subtotal Support				0.647		0.576		0.702		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							WEAPONS STORAGE AREA (WSA)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	AFMC	Eglin AFB	0.238	12/98	0.227	12/99	0.266	12/00				
Operational Test & Evaluation	AFTEC	Eglin AFB	0.165	12/98	0.138	12/99	0.216	12/00				
Tooling												
GFE												
Subtotal T&E			0.403			0.365		0.482		CONT	CONT	
Remarks												
Contractor Engineering Support	FFP/DO	ESC	0.228	[2]	0.424	1/00	0.685	1/01				
Government Engineering Support	MIPR	DOE SNL	0.284	1/99	0.557	1/00	0.706	1/01				
Program Management Support	PO	ESC	0.165	[2]	0.103	1/00	0.280	1/01				
Program Management Personnel												
Travel		ESC	0.022	[2]	0.045	1/00	0.076	1/01				
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management			0.699		1.129		1.747			CONT	CONT	
Remarks [2] Various documents and award dates throughout the year												
Total Cost			2.735		2.887		3.878					
Remarks												

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Exhibit R-2a, RDT&E Project Justification								Date: February 2000	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z			MOBILE DETECTION ASSESSMENT RESPONSE SYSTEM - EXTERIOR (MDARS-E)				
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
MDARS-E	5.500	4.890	5.590	0.000	0.000	0.000	0.000	0.000	43.871
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> The Mobile Detection Assessment Response System - Exterior (MDARS-E) will provide unmanned roving security patrols among the buildings and around the perimeter of large fixed installations, including warehouses, large storage facilities and ammunition facilities. In addition to security, the system will also support inventories and track movement or disturbance of critical inventory items.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> • Conducted final demonstration of Broad Area Announcement (BAA) contract MDARS-E system capabilities • Prepared Test Technical Feasibility Test (TFT) Plans/Test Procedures • Conducted Developmental Testing <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Conduct Technical Feasibility Testing (TFT) • Conduct System Functional Review • Conduct Milestone I/II In-Process Review <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • Prepare/Release EMD Request for Proposal (RFP) • Conduct EMD source selection • Prepare/Award EMD contract 									

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Exhibit R-2a, RDT&E Project Justification		Date: February 2000		
B. Other Program Funding Summary				
C. Acquisition Strategy				
D. Schedule Profile:				
Fiscal Year actual and planned events:				
	FY1999	FY2000	FY2001	
Acquisition Milestones				
MDARS-E		MSI/II		
Engineering Milestones				
T&E Milestones				
MDARS-E		TFT		
Contract Milestones				
MDARS-E			EMD	

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							MOBILE DETECTION ASSESSMENT RESPONSE SYS - EXTERIOR (MDARS-E)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development				1.509		2.600		2.661				
Ancillary Hardware Development												
Systems Engineering				0.500		0.600		0.606				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				2.009	2/3Q	3.200	2/3Q	3.267	2/3Q	CONT	CONT	
Remarks:												
Development Support				0.611		0.505		0.528				
Software Development				0.680		0.545		0.423				
Training Development								0.051				
Integrated Logistics Support				0.500		0.090		0.180				
Configuration Management				0.031		0.023		0.045				
Technical Data				0.464		0.337		0.513				
GFE												
Subtotal Support				2.286	2/3Q	1.500	2/3Q	1.740	2/3Q	CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)									Date: February 2000				
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z						MOBILE DETECTION ASSESSMENT RESPONSE SYSTEM - EXTERIOR (MDARS-E)				
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation				0.415		0.100		0.241					
Operational Test & Evaluation								0.161					
Tooling													
GFE													
Subtotal T&E				0.415	2/3Q	0.100		0.402	2/3Q	CONT	CONT		
Remarks													
Contractor Engineering Support				0.300									
Government Engineering Support				0.100				0.092					
Program Management Support				0.006		0.006		0.007					
Program Management Personnel				0.272		0.072		0.068					
Travel				0.112		0.012		0.014					
Labor (Research Personnel)													
Miscellaneous													
Subtotal Management				0.790	2/3Q	0.090	2/3Q	0.181	2/3Q	CONT	CONT		
Remarks													
Total Cost				5.500		4.890		5.590					
Remarks													

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Exhibit R-2a, RDT&E Project Justification								Date:	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z			WATERSIDE SECURITY SYSTEM (WSS)				
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
WSS	3.330	2.650	2.000	2.500	3.000	3.000	3.000	Continuing	Continuing
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> The Space and Naval Warfare Center (SPAWARCEN), San Diego, is the Center of Excellence for waterfront security. Responsibilities include fixed and transportable waterside security systems, swimmer detection sonars, and Commercial-Off-The-Shelf (COTS) equipment test and evaluation, which focuses on waterfront force protection.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> • Supported/installed WSS hardware at field sites • Tested Intrusion Detection Distributed Array at Submarine Base (SUBASE) Kings Bay, GA • Conducted Market Surveys and Investigations of barriers and swimmer nets • Investigated Commercial-Off-The-Shelf (COTS) detection, delay and assessment technologies • Merged program management of Shipboard Physical Security (SPS) program with Waterside Security System • Established a test and integration facility at 5000 Mike Pier, SUBASE San Diego <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Manage the Waterside Security System and Shipboard Physical Security programs • Evaluate, test and integrate COTS technology, e.g. barriers, underwater cameras, digital security technology • Use "state of the art" information technology to deliver information to the user community <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • Evaluate and test COTS technologies for the waterfront environment • Test and integrate WSS, which includes barriers and underwater assessment of potential targets • Complete the development of a transportable WSS • Manage the Waterside Security System and Shipboard Physical Security programs • Support installed WSS hardware at field sites • Upgrade the WQX-2 Sonar using current computer chip processing capabilities 									

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Exhibit R-2a, RDT&E Project Justification	Date: February 2000		
B. Other Program Funding Summary			
C. Acquisition Strategy			
D. Schedule Profile:			
Fiscal Year actual and planned events:			
	FY1999	FY2000	FY2001
Acquisition Milestones			
Engineering Milestones			
T&E Milestones			
Contract Milestones			

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							WATERSIDE SECURITY SYSTEM (WSS)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development				0.550		0.400		0.353				
Ancillary Hardware Development												
Systems Engineering				0.272		0.172		0.147				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				0.822		0.572		0.500		CONT	CONT	
Remarks:												
Development Support				0.048		0.048		0.029				
Software Development				0.116		0.116		0.086				
Quality Insurance				0.020		0.020		0.014				
Integrated Logistics Support				0.084		0.060		0.046				
Configuration Management				0.094		0.094		0.070				
Technical Data				0.046		0.046		0.057				
RAM				0.052		0.052		0.046				
Subtotal Support				0.460		0.436		0.348		CONT	CONT	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4				PROGRAM ELEMENT PE 0603228D8Z						WATERSIDE SECURITY SYSTEM (WSS)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				0.936		0.730		0.477				
Operational Test & Evaluation				0.330		0.230		0.236				
Tooling												
GFE												
Subtotal T&E				1.266		0.960		0.713		CONT	CONT	
Remarks												
Contractor Engineering Support				0.501		0.401		0.353				
Government Engineering Support												
Program Management Support				0.281		0.281		0.086				
Program Management Personnel												
Travel												
Labor (Research Personnel)												
Miscellaneous												
Subtotal Management				0.782		0.682		0.439		CONT	CONT	
Remarks												
Total Cost				3.330		2.650		2.000				
Remarks												

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Exhibit R-2a, RDT&E Project Justification								Date: February 2000	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDTE&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z			EXPLOSIVE DETECTION EQUIPMENT (EDE)				
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
EDE	0.488	2.060	2.150	3.000	3.000	3.000	2.768	Continuing	Continuing
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> Evaluate and test promising Commercial-Off-The-Shelf technologies.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> • Developed guidance for selecting EDE for differing operational environments • Finalized and submitted Operational Requirements Document for formal staffing • Identified promising technologies unique to EDE • Published a Commercial Off-The-Shelf (COTS) EDE catalog, established a web site and produced a newsletter "Tech News and Talk" <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> • Transition a highly sensitive and robust detection system for finding explosives in air and water • Conduct product evaluations, as necessary • Evaluate remote explosive detection equipment • Conduct an Explosive Detection Symposium • Demonstrate a large x-ray system, the American Science & Engineering (AS&E) MTXR-WE, at an operational naval activity in SWA <p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none"> • Demonstrate the feasibility, i.e. proof of concept, of an Ultra Violet Fluorescence Explosive Detection System • Continue product evaluations • Publish technical data sheets, guides and information relating to explosive detection equipment 									

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Exhibit R-2a, RDT&E Project Justification	Date: February 2000																				
<p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy</p> <p>D. Schedule Profile: Fiscal Year actual and planned events:</p> <table><thead><tr><th></th><th>FY1999</th><th>FY2000</th><th>FY2001</th></tr></thead><tbody><tr><td>Acquisition Milestones</td><td></td><td></td><td></td></tr><tr><td>Engineering Milestones</td><td></td><td></td><td></td></tr><tr><td>T&E Milestones</td><td></td><td></td><td></td></tr><tr><td>Contract Milestones</td><td></td><td></td><td></td></tr></tbody></table>			FY1999	FY2000	FY2001	Acquisition Milestones				Engineering Milestones				T&E Milestones				Contract Milestones			
	FY1999	FY2000	FY2001																		
Acquisition Milestones																					
Engineering Milestones																					
T&E Milestones																					
Contract Milestones																					

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							EXPLOSIVE DETECTION EQUIPMENT (EDE)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development				0.030								
Ancillary Hardware Development												
Systems Engineering				0.010								
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				0.040						CONT	CONT	
Remarks:												
Development Support				0.020								
Software Development												
Quality Insurance				0.015								
Integrated Logistics Support				0.010		0.591		0.611				
Configuration Management				0.010								
Technical Data				0.015								
RAM				0.010								
Subtotal Support				0.080		0.591		0.611		CONT	CONT	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							EXPLOSIVE DETECTION EQUIPMENT (EDE)		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				0.050		0.354		0.354				
Operational Test & Evaluation				0.070		0.187		0.187				
Tooling												
GFE												
Subtotal T&E				0.120		0.541		0.541		CONT	CONT	
Remarks												
Contractor Engineering Support				0.118		0.622		0.692				
Government Engineering Support												
Program Management Support				0.060		0.155		0.155				
Program Management Personnel												
Travel				0.040		0.094		0.094				
Labor (Research Personnel)												
Miscellaneous				0.030		0.057		0.057				
Subtotal Management				0.248		0.928		0.998		CONT	CONT	
Remarks												
Total Cost				0.488		2.060		2.150				
Remarks												

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Exhibit R-2a, RDT&E Project Justification								Date: February 2000	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT			PROJECT NAME AND NUMBER				
RDT&E, DEFENSE WIDE, BUDGET ACTIVITY 4		PE 0603228D8Z			TECHNOLOGY BASE				
Cost (\$ in Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY2005	Cost to Complete	Total Cost
Technology Base	2.800	3.000	3.000	4.384	4.000	4.000	3.500	Continuing	Continuing
RDT&E Articles Qty									
<p>A. <u>Mission Description and Budget Item Justification.</u> The Defense Threat Reduction Agency (DTRA) is responsible for coordinating technology base efforts that feed into the advanced development projects within the Physical Security Equipment (PSE) Program. DTRA performs the exploratory development on technologies that are nominated and prioritized by the Physical Security Equipment Action Group (PSEAG). This annual process determines which technologies have potential to meet Service interests in fulfilling eventual Joint Service and Service-unique requirements.</p> <p>(U) <u>FY 1999 Accomplishments</u></p> <ul style="list-style-type: none"> Completed and demonstrated prototype hardware for the Sonic Denial, Exterior Passive Millimeter Wave Sensor, and the Intrusion Detection Distributed Array Sonar projects Continued work on the improved laser diode, miniaturized radio frequency tag, security vehicle with acoustic guidance, photoneutron probe for the detection of explosives, tactical security sensor internetting system, an advanced user interface system, and an acoustic detection and classification sensor. <p>(U) <u>FY 2000 Plans</u></p> <ul style="list-style-type: none"> Complete and demonstrate prototype hardware for the improved laser diode, miniaturized radio frequency tags, acoustic detection and classification sensor, nuclear quadrupole resonance sensor, photoneutron probe for the detection of explosives, tactical security sensor internetting system, an advanced user interface system, and an acoustic detection and classification sensor Continue the detection on the move (exterior) project, security vehicle with acoustic detection, and the weather vulnerability assessment tool projects Initiate new projects for a target classification sensor, vulnerability of microwave and infrared sensors evaluation, a compact high performance video motion detector and a micro electromechanical sensor 									

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Exhibit R-2a, RDT&E Project Justification	Date: February 2000																				
<p>(U) <u>FY 2001 Plans</u></p> <ul style="list-style-type: none">• Continue the detection on the move (exterior) project, the security vehicle with acoustic detection, the target classification sensor, vulnerability of microwave and infrared sensors evaluation, a compact high performance video motion detector and a micro electromechanical sensor.• Complete and demonstrate the weather vulnerability assessment tool project.• Initiate new projects as agreed upon with the Service sponsors. <p>B. Other Program Funding Summary</p> <p>C. Acquisition Strategy</p> <p>D. Schedule Profile: Fiscal Year actual and planned events:</p> <table><thead><tr><th></th><th>FY1999</th><th>FY2000</th><th>FY2001</th></tr></thead><tbody><tr><td>Acquisition Milestones</td><td></td><td></td><td></td></tr><tr><td>Engineering Milestones</td><td></td><td></td><td></td></tr><tr><td>T&E Milestones</td><td></td><td></td><td></td></tr><tr><td>Contract Milestones</td><td></td><td></td><td></td></tr></tbody></table>			FY1999	FY2000	FY2001	Acquisition Milestones				Engineering Milestones				T&E Milestones				Contract Milestones			
	FY1999	FY2000	FY2001																		
Acquisition Milestones																					
Engineering Milestones																					
T&E Milestones																					
Contract Milestones																					

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Exhibit R-3 Cost Analysis (page 1)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4			PROGRAM ELEMENT PE 0603228D8Z							TECHNOLOGY BASE		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development												
Ancillary Hardware Development												
Systems Engineering				0.424		0.424		0.424				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				0.424		0.424		0.424		CONT	CONT	
Remarks:												
Development Support				0.070		0.070		0.070				
Software Development												
Quality Insurance												
Integrated Logistics Support				0.025		0.025		0.025				
Configuration Management				0.037		0.037		0.037				
Technical Data				0.050		0.050		0.050				
RAM				0.070		0.070		0.070				
Subtotal Support				0.252		0.252		0.252		CONT	CONT	
Remarks												

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Exhibit R-3 Cost Analysis (page 2)										Date: February 2000		
RDT&E, DEFENSE-WIDE, BUDGET ACTIVITY 4				PROGRAM ELEMENT PE 0603228D8Z						TECHNOLOGY BASE		
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total 1998 Cost	1999 Cost	1999 Award Date	2000 Cost	2000 Award Date	2001 Cost	2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation				0.600		0.700		0.700				
Operational Test & Evaluation				0.500		0.600		0.600				
Tooling												
GFE												
Subtotal T&E				1.100		1.300		1.300		CONT	CONT	
Remarks												
Contractor Engineering Support				0.300		0.300		0.300				
Government Engineering Support				0.100		0.100		0.100				
Program Management Support				0.100		0.100		0.100				
Program Management Personnel												
Travel				0.074		0.074		0.074				
Labor (Research Personnel)				0.450		0.450		0.450				
Miscellaneous												
Subtotal Management				1.024		1.024		1.024		CONT	CONT	
Remarks												
Total Cost				2.800		3.000		3.000				
Remarks												

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