Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army												Date: May 2017
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0205402A *I Integrated Base Defense - Operational System Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
Total Program Element	-	10.324	3.450	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.774
EF2: *Integrated Base Defense*	-	10.324	3.450	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.774

Note

No FY 2018 funding request. PE0205402A has now been realigned into two separate PEs for Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E) and Integrated Ground Security, Surveillance and Response Capability (IGSSR-C). Beginning in FY 2017 Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E) funding is now under PE0605033A Project EQ3. Beginning in FY 2017 Integrated Ground Security, Surveillance and Response Capability (IGSSR-C) funding is now under PE0605029A Project EQ2.

A. Mission Description and Budget Item Justification

GBOSS-E: Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E) will replace the interim Persistent Surveillance System-Ground (PSS-G) Increment 1 towers with improved persistent surveillance capabilities and will provide network integration and better mobility utilizing modular configurations. GBOSS-E will replace obsolete, quick reaction capability (QRC) surveillance and force protections systems utilizing modular configurations: Medium variant (mid sensor height) for small to medium size base, and Heavy variant (high level sensor height) for large contingency base camps. GBOSS-E will operate in a stand-alone mode or as part of an integrated network utilizing government owned software, be easily operated and maintained, and be rugged enough to support employment in expeditionary operations worldwide.

IGSSR-C: The Integrated Ground Security, Surveillance and Response Capability (IGSSR-C) is an Automated Information System (AIS) program. IGSSR-C has a requirement to provide a layered approach to integrate sensors, sensor systems and unmanned systems with automated fusion capabilities. The system will provide a Force Protection (FP) Common Operational Picture (COP) capability for CONUS fixed, OCONUS semi-fixed or expeditionary elements in all Operating Environments (OE). This capability will enable rapid decision analysis, speed the response process as well as increase information dissemination horizontally and vertically along the chain of command and with outside supporting organizations. IGSSR-C is a software centric fusion engine that connects legacy and emerging FP systems, legacy Chemical, Biological, Radiological, and Nuclear (CBRN), unmanned systems, biometric identification and forensic data systems. The desired end state is to achieve interoperability and COP with current and emerging FP systems used by Joint Forces, Department of Defense (DoD) agencies and multi-national forces.

Integrated Base Defense (IBD): The purpose of IBD Kitting is to harvest and refurbish physical security and Force Protection (FP) Non-Standard Equipment (NS-E) and package them into integrated and interoperable IBD Capabilities. IBD provides integration of software and analytical capability to support the integration of systems in the field. IBD employs an enterprise approach to enable IBD capabilities across the operational spectrum by leveraging interoperability efforts in support of the Integrated Unit, Base and Installation Protection (IUBIP) framework. In support of JUONS 0540 to address the Vehicle Borne Improvised Explosive Device (VBIED) threat. Additional capabilities are being developed and integrated to the current Force Protection structure.

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army	Date: May 2017
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0205402A *I Integrated Base Defense - Operational System Dev*

B. Program Change Summary ($ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	10.750	0.000	0.000	-	0.000
Current President's Budget	10.324	3.450	0.000	-	0.000
Total Adjustments	-0.426	3.450	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.426	-			
• Adjustments to Budget Years	0.000	3.450	0.000	-	0.000

Change Summary Explanation

FY 2017 increase is in support of JUONS 0540 to address the Vehicle Borne Improvised Explosive Device (VBIED) threat. Additional capabilities are being developed and integrated to the current Force Protection structure.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army			Date: May 2017
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205402A / *Integrated Base Defense - Operational System Dev*	Project (Number/Name) EF2 / *Integrated Base Defense*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
EF2: *Integrated Base Defense*	-	10.324	3.450	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.774
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

No FY 2018 funding request. Beginning in FY 2017 Ground-Based Operational Surveillance System - Expeditionary (GBOSS-E) funding is now under PE0605033A Project EQ3. Beginning in FY 2017 Integrated Ground Security, Surveillance and Response Capability (IGSSR-C) funding is now under PE0605029A Project EQ2.

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No FY 2018 funding request.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: IBD Test and Evaluation	0.719	1.600	-

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Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0205402A / *Integrated Base Defense - Operational System Dev*	**Project (Number/Name)** EF2 / *Integrated Base Defense*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Description: Test and Evaluation of Integrated Base Defense Software Development Efforts in support if Integrated Base Defense Kitting. ***FY 2016 Accomplishments:*** Test and Evaluation of Integrated Base Defense Software Development Efforts in support if Integrated Base Defense Kitting. ***FY 2017 Plans:*** Test and Evaluation of Integrated Base Defense Software Development Efforts in support if Integrated Base Defense Kitting.			
Title: IBD Architecture and Software Development ***Description:*** Integrated Base Defense Architecture and Software Development ***FY 2016 Accomplishments:*** Integrated Base Defense Architecture and Software Development in support of Integrated Base Defense Kitting. ***FY 2017 Plans:*** Integrated Base Defense Architecture and Software Development in support of Integrated Base Defense Kitting.	0.590	1.000	-
Title: IBD Engineering and Management Services ***Description:*** Engineering and Managment Services in support of Integrated Base Defense Software Development Efforts for Integrated Base Defense Kitting. ***FY 2016 Accomplishments:*** Engineering and Management Services in Support of Integrated Base Defense Software Development and Initial Packaging Efforts for Integrated Base Defense Kitting. ***FY 2017 Plans:*** Engineering and Management Services in Support of Integrated Base Defense Software Development and Initial Packaging Efforts for Integrated Base Defense Kitting.	0.132	0.100	-
Title: IBD Design and Build ***FY 2017 Plans:*** Complete the build out of the third Intelligent Remote Imaging Spectrometer - Ground (IRIS-G) sensor system to be used under a UMR.	-	0.750	-
Title: G-BOSS(E) Design and Build	5.507	-	-

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0205402A / *Integrated Base Defense - Operational System Dev*	**Project (Number/Name)** EF2 / *Integrated Base Defense*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Description: G-BOSS(E) design and builds prototype tower systems. ***FY 2016 Accomplishments:*** ompletes initial design and begins development of tower prototypes to support developmental testing activities			
Title: IGSSR-C Design and Development ***Description:*** IGSSR-C design efforts and integration activities. ***FY 2016 Accomplishments:*** Completes the initial Design and Development of the IGSSR-C Architecture, Software Framework and Core Capabilities and initiates IGSSR-C integration efforts.	3.376	-	-
Accomplishments/Planned Programs Subtotals	10.324	3.450	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• G-BOSS(E) (M90212): *G-BOSS(E) (M90212)*	-	26.572	-	-	-	3.668	3.668	3.668	3.668	Continuing	Continuing
• IGSSR-C (M90106): *IGSSR-C (M90106)*	-	-	-	-	-	1.249	4.684	2.955	5.664	Continuing	Continuing
• G-BOSS(E) (0605033A): *GOSS(E) (0605033A)*	-	5.032	5.207	-	5.207	3.529	-	-	-	0	13.768
• IGSSR-C (0605029A): *IGSSR-C (0605029A)*	-	4.980	4.418	-	4.418	1.324	-	-	-	0	10.722

Remarks

D. Acquisition Strategy

Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)) will replace the interim Persistent Surveillance System – Ground (PSS-G) Increment 1 towers with improved persistent surveillance capabilities along with network integration and better mobility utilizing modular configurations. The G-BOSS(E) Capability Design Document (CDD) was approved May 2014. In FY 2014, the Department of Defense (DoD) Physical Security Enterprise and Analysis Group (PSEAG) provided funds to conduct pre-milestone B activities. G-BOSS(E) received an approved Materiel Development Decision (MDD) from the Milestone Decision Authority (MDA) on 4 December 2015. Pending successful Milestone B decision in FY 2017, the existing United States Marine Corps (USMC) tower's design (Ground Based Operational Surveillance System) (GBOSS) will be leveraged and modified to meet the Army's G-BOSS(E) program requirements. The acquisition strategy for G-BOSS(E) was

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signed by the Milestone Decision Authority (MDA) on 11 December 2016, which approved plans to leverage the Naval Surface Warfare Center (NSWC) at Crane, Indiana and the Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, Virginia to provide system design, development, and integration support, as well as a Technical Data Package (TDP) to support future procurements. Milestone C is planned for FY 2020 to align G-BOSS(E), IGSSR-C, and Tactical Security System (TSS) in order to gain programmatic efficiencies.

The Integrated Ground Security, Surveillance and Response Capability (IGSSR-C) provides a layered approach to integrate sensors, sensor systems and unmanned systems. The IGSSR-C Capability Design Document (CDD) was approved September 2013. IGSSR-C is made up of a suite of software that achieves integration, fusion and interoperability in support of the Army Acquisition Executive's Common Operating Environment (COE) Command Post Compute Environment (CPCE) and Sensor CE efforts. In FY 2014, the Department of Defense (DoD) Physical Security Enterprise and Analysis Group (PSEAG) provided funds to conduct pre-milestone B activities. IGSSR-C received an approved Materiel Development Decision (MDD) from the Milestone Decision Authority (MDA) on 4 December 2015. The acquisition strategy for IGSSR-C was signed by the MDA on 5 December 2016, which approved plans to leverage the Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, Virginia to develop, integrate and test the Initial Capability (IC). No production activities are planned for FY 2017. Milestone C is planned for FY 2020 to align Ground-Based Operational Surveillance System (Expeditionary) (G-BOSS(E)), Tactical Security System (TSS) and Integrated Ground Security, Surveillance and Response Capability (IGSSR-C) in order to gain programmatic efficiencies.

The IBD acquisition strategy is to leverage existing IBD-related government organizations and to competitively award multiple contracts in support of IBD objectives for the development of holistic IBD architectures and products to support interoperability of fielded and emerging IBD-related systems.

FY17 funding supports IBD Kitting and JUONS 0540. Product Manager Force Protection Systems is overseeing the integration of both Commercial Off The Shelf and Government developed technologies that will address the identified capability gap to the existing Force Protection structure.

E. Performance Metrics

N/A