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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Army **Date:** February 2020

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	19.852	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.852
E79: <i>SMOKE/OBSCURANT SYSTEM</i>	-	19.852	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.852

Note

The Screening Obscuration Module (SOM) program will transition from Engineering and Manufacturing Development (EMD) to the Production and Deployment phase in Fiscal Year 2020.

A. Mission Description and Budget Item Justification

SOM will increase platform survivability and soldier protection levels of maneuver forces by degrading enemy forces ability to detect United States targets. The use of battlefield obscuration is a time-tested military tactic to protect personnel, vehicles, equipment, and structures from detection; and to screen the locations, activities, and actions of friendly forces. Commanders who employ obscuration enjoy greater tactical success, freedom of maneuver, and force protection. The SOM assists the Brigade Combat Team (BCT) in retaining freedom of maneuver, conducting breaching operations, breaking contact with the enemy during security operations, and deceiving the enemy of the BCT's intentions. The SOM accomplishes this by degrading enemy forces ability to detect U.S. targets in the visual and near infrared region of the electromagnetic spectrum. The SOM will provide a man portable mountable and dismountable medium area visual screening obscuration capability that can be applied to manned combat platforms and unmanned robotic systems. The individual Soldier or team will employ the SOM devices on open and complex terrain as part of cross-domain obscuration effects synchronized with land and air maneuver during cross-domain windows of advantage.

Chemical Biological Radiological and Nuclear (CBRN) Integrated Early Warning (IEW) requirements detailed in PACOM ONS 17-22580 (HQDA validated in Jan 2018). The capability developed in support of ONS 17-22580 will provide enhancements and integrated CBRN defense sensors to provide early warning of CBRN attacks and events, supplemented with decision support software. Increasing the level of confidence of information to the Commander, facilitating their ability to make critical time sensitive decisions with high confidence and low regret to mitigate and manage the impacts of CBRN hazards.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i>
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B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	20.674	0.000	0.000	-	0.000
Current President's Budget	19.852	0.000	0.000	-	0.000
Total Adjustments	-0.822	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.822	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Army										Date: February 2020		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i>					Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i>		
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
E79: <i>SMOKE/OBSCURANT SYSTEM</i>	-	19.852	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.852
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Screening Obscuration Module (SOM) will increase platform survivability and soldier protection levels of maneuver forces by degrading enemy forces' ability to detect United States targets. The use of battlefield obscuration is a time-tested military tactic to protect personnel, vehicles, equipment, and structures from detection and to screen the locations, activities, and actions of friendly forces. Commanders who employ obscuration achieve greater tactical success, freedom of maneuver, and force protection. The SOM assists the Brigade Combat Team (BCT) in retaining freedom of maneuver, conducting breaching operations, breaking contact with the enemy during security operations, and deceiving the enemy of the BCT's intentions. The SOM accomplishes this by degrading enemy forces' ability to detect U.S. targets in the visual and near infrared region of the electromagnetic spectrum. The SOM will provide a man-portable mountable and dismountable medium area visual screening obscuration capability that can be applied to manned combat platforms and unmanned robotic systems. The individual Soldier or team will employ the SOM devices on open and complex terrain as part of cross-domain obscuration effects synchronized with land and air maneuver during cross-domain windows of advantage.

Chemical Biological Radiological and Nuclear (CBRN) Integrated Early Warning (IEW) requirements detailed in PACOM ONS 17-22580 (HQDA validated in Jan 2018). The capability developed in support of ONS 17-22580 will provide enhancements and integrated CBRN defense sensors to provide early warning of CBRN attacks and events, supplemented with decision support software. As a result, the capability will increase the level of confidence of information to the Commander, facilitating his/her ability to make critical, time sensitive decisions with high confidence and low regret to mitigate and manage the impacts of CBRN hazards.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2019	FY 2020	FY 2021
Title: SOM: Product Development	5.078	-	-
Description: Provide Screening Obscuration Module (SOM) Development: Government and Contractor team will continue design and development of hardware in preparation for Government Development and User testing.			
Title: SOM: Test, Evaluation & Other Government Agencies (OGA's)	1.749	-	-
Description: Provide Test and Evaluation of SOM systems (Developmental and User testing to ensure effectiveness, suitability, survivability, and safety as a mounted and dismounted system).			
Title: SOM: Project Management	0.516	-	-
Description: Provide Project Management efforts.			
Title: CBRN IEW	12.235	-	-

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Description: CBRN Theater Chemical and Biological Defense efforts.			
Title: SOM Support Costs	0.274	-	-
Accomplishments/Planned Programs Subtotals	19.852	-	-

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

N/A

Remarks

SSN MX0600

D. Acquisition Strategy

Acquisition Strategy:

Screening Obscuration Module (SOM): The SOM acquisition strategy is a single-step System Integration and Development (SID) phase leading to a Milestone C production decision. A Full and Open Cost Plus Incentive Fee competitive contract was awarded and will be used to develop the SOM during the SID phase. Fixed Price Incentive (Successive Targets) options for production were included in the contract. The acquisition strategy includes system development and demonstration, full system integration, design for producibility and demonstration of interoperability, safety, military utility and reliability.

CBRN IEW: The \$12.2 million in FY 2019, will address this rapid capability development, cyber security, qualification and performance test and evaluation (T&E) efforts. This funding will yield a Capability and Limitation Report in 1Q FY 2020 to support the deployment of the Full Operational Capability (FOC) in 2Q FY 2020

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army **Date:** February 2020

Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i>	Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i>
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Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOM-Project Management Personnel	MIPR	JPM NBC CA : Edgewood, MD	8.796	0.532	Nov 2018	-		-		-		-	Continuing	Continuing	Continuing
JUONS CC-0557 Project Management Personnel	Various	JPM Guardian : Edgewood, MD	0.674	-		-		-		-		-	0.000	0.674	-
CBRN IEW	TBD	JPEO-CBRND : APG	-	1.000	Feb 2019	-		-		-		-	0.000	1.000	-
Subtotal			9.470	1.532		-		-		-		-	Continuing	Continuing	N/A

Remarks
For Project Management Personnel, FY18 decrease in personnel management from PB19 is due to the reduction in planned engineering effort based on successful Developmental Test in 2QFY18.

Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOM Product Development	C/CPIF	L3 : Melbourne, FL	32.579	5.078	Feb 2019	-		-		-		-	Continuing	Continuing	Continuing
CBRN IEW	C/Various	Vectrus : Reston, VA	-	6.750	Mar 2019	-		-		-		-	0.000	6.750	-
JUONS CC-0557 - Product Development	Option/T&M	AMRDEC : Huntsville, AL	1.396	-		-		-		-		-	0.000	1.396	-
CBRN IEW	MIPR	ECBC : APG	-	2.212	Feb 2019	-		-		-		-	0.000	2.212	-
Subtotal			33.975	14.040		-		-		-		-	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOM Support Costs	MIPR	CCDC-CBD : APG, MD	-	0.319		-		-		-		-	0.000	0.319	-
Subtotal			-	0.319		-		-		-		-	0.000	0.319	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army **Date:** February 2020

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Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOM Test, Evaluation & OGA's	MIPR	Various OGA : Various	3.759	1.749	Nov 2018	-		-		-		-	Continuing	Continuing	Continuing
CBRN IEW	MIPR	Various OGAs : Various	-	2.212	Jan 2019	-		-		-		-	0.000	2.212	-
Subtotal			3.759	3.961		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	47.204	19.852	0.000	-	-	-	Continuing	Continuing	N/A

Remarks
 FY19 budget control is incorrect. JPEO-CBRND received a total of \$19.851M in PE 603627A. \$12.174M for ATP IEW Requirement. \$7.677M for the base program SOM

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i>	Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i>

Event Name	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
SOM Design and Fabrication	█																											
SOM Developmental Testing #2					█																							
SOM User Testing					█																							
SOM MS C					▲ 1																							
SOM Production Award					▲ 2																							
SOM Production									█																			
SOM FAT									█																			
JUONS CC-0557 Development/Demonstration	█																											
CBRN IEW	█																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603627A / <i>Smoke, Obscurant and Target Defeating Sys-Adv Dev</i>	Project (Number/Name) E79 / <i>SMOKE/OBSCURANT SYSTEM</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
SOM Design and Fabrication	4	2016	2	2019
SOM Developmental Testing #1	2	2018	4	2018
SOM Developmental Testing #2	2	2019	2	2020
SOM User Testing	1	2020	1	2020
SOM MS C	3	2020	3	2020
SOM Production Award	3	2020	3	2020
SOM Production	1	2021	4	2021
SOM FAT	1	2021	1	2021
JUONS CC-0557 Development/Demonstration	2	2017	2	2019
CBRN IEW	1	2019	4	2019