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

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605205A / Small Unmanned Aerial Vehicle (SUAV) (6.5)
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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	-	0.000	0.000	5.999	-	5.999	2.407	6.382	9.009	3.018	Continuing	Continuing
BR7: Small Unmanned Aircraft System (6.5)	-	0.000	0.000	5.999	-	5.999	2.407	6.382	9.009	3.018	Continuing	Continuing

Note

Funding has transitioned to Budget Activity (BA) 5 Program Element (PE) 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in Fiscal Year (FY) 2021.

A. Mission Description and Budget Item Justification

The Rucksack Portable Unmanned Aircraft System (RPUAS) Family of Small Unmanned Aircraft System (FoSUAS) provides battalion and below ground maneuver elements with critical situational awareness and enhanced force protection. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the FoSUAS products.

The RPUAS FoSUAS provides the battalion and below ground maneuver elements with an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. The RPUAS FoSUAS includes a combination of three separate hand-launched mission specific configurable aircraft that do not require an improved launch/recovery. The three separate mission specific configurable Unmanned Aircraft (UA) are the Short Range Reconnaissance (SRR), the Medium Range Reconnaissance (MRR), and the Long Range Reconnaissance (LRR). In addition to the aircraft, the system contains ground control equipment, which includes an interoperable handheld ground control station (H-GCS) which incorporates the Tactical Open Government Owned Architecture (TOGA). FoSUAS will utilize existing RQ-11 in a system of systems fielding concept, with Short Range Reconnaissance (SRR) and Long Range Reconnaissance (LRR) options under development.

Justification: FY 2021 Research, Development, Test, and Evaluation (RDTE) Base funding of \$5.999 million for Program Management Engineering support and to meet Capabilities Production Document (CPD) Increment II Block II related requirements. Specifically, to conduct SRR Tranche II system development, integration, testing and evaluation.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</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	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.999	-	5.999
Total Adjustments	0.000	0.000	5.999	-	5.999
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	5.999	-	5.999

Change Summary Explanation

Funding has transitioned to Budget Activity (BA) 5 Program Element (PE) 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in Fiscal Year (FY) 2021.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Army										Date: February 2020		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>				Project (Number/Name) BR7 / <i>Small Unmanned Aircraft System (6.5)</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
BR7: <i>Small Unmanned Aircraft System (6.5)</i>	-	0.000	0.000	5.999	-	5.999	2.407	6.382	9.009	3.018	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Funding has transitioned to Budget Activity (BA) 5 Program Element (PE) 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) Project BR7 Small Unmanned Aircraft System (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in Fiscal Year (FY) 2021.

A. Mission Description and Budget Item Justification

The Rucksack Portable Unmanned Aircraft System (RPUAS) Family of Small Unmanned Aircraft System (FoSUAS) provides battalion and below ground maneuver elements with critical situational awareness and enhanced force protection. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the FoSUAS products.

The RPUAS FoSUAS provides the battalion and below ground maneuver elements with an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. The RPUAS FoSUAS includes a combination of three separate hand-launched mission specific configurable aircraft that do not require an improved launch/recovery. The three separate mission specific configurable Unmanned Aircraft (UA) are the Short Range Reconnaissance (SRR), the Medium Range Reconnaissance (MRR), and the Long Range Reconnaissance (LRR). In addition to the aircraft, the system contains ground control equipment, which includes an interoperable handheld ground control station (H-GCS) which incorporates the Tactical Open Government Owned Architecture (TOGA). FoSUAS will utilize existing RQ-11 in a system of systems fielding concept, with SRR and LRR options under development.

Justification: FY 2021 Research, Development, Test, and Evaluation (RDT&E) Base funding of \$5.999 million for Program Management Engineering support and to meet Capabilities Production Document (CPD) Increment II Block II related requirements. Specifically, to conduct SRR Tranche II system development, integration, testing and evaluation.

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

	FY 2019	FY 2020	FY 2021
Title: Systems Engineering Program Management	-	-	0.603
Description: Systems Engineering Program Management support for LRR and SRR development and demonstration efforts.			
FY 2021 Plans:			

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>	Project (Number/Name) BR7 / <i>Small Unmanned Aircraft System (6.5)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Systems Engineering and Program Management support for SRR and LRR development and demonstration efforts. FY 2020 to FY 2021 Increase/Decrease Statement: Funding has transitioned to BA 5 PE 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) Project BR7 Small Unmanned Aircraft System (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in FY 2021.			
Title: System Development and Integration Description: SRR Development Engineering efforts and development for LRR component technology. FY 2021 Plans: Efforts to conduct SRR development and integration to support CPD requirements. Also, component development for LRR. FY 2020 to FY 2021 Increase/Decrease Statement: Funding has transitioned to BA 5 PE 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) Project BR7 Small Unmanned Aircraft System (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in FY 2021.	-	-	3.972
Title: Developmental Test and Evaluation Description: Test and Evaluation efforts for SRR and LRR Development. FY 2021 Plans: Efforts to conduct testing and evaluation of mature SRR prototype system. Also, LRR component technology. FY 2020 to FY 2021 Increase/Decrease Statement: Funding has transitioned to BA 5 PE 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) Project BR7 Small Unmanned Aircraft System (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in FY 2021.	-	-	1.424
Accomplishments/Planned Programs Subtotals	-	-	5.999

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• A00010: RQ-11 (RAVEN)	46.438	21.420	20.851	-	20.851	16.397	16.581	21.342	21.560	Continuing	Continuing
• BR6: Small Unmanned Aircraft System (6.4)	-	-	1.378	-	1.378	1.387	1.392	1.753	1.786	0.000	7.696
• RA7: RQ-11 Raven (MIP)	6.180	3.218	0.000	-	0.000	-	-	-	-	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>	Project (Number/Name) BR7 / <i>Small Unmanned Aircraft System (6.5)</i>

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											
Funding has transitioned to BA 5 PE 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) Project BR7 Small Unmanned Aircraft System (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in FY 2021.											

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0605205A / Small Unmanned Aerial Vehicle (SUAV) (6.5)				BR7 / Small Unmanned Aircraft System (6.5)							
Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering Program Management (SEPM)	TBD	To Be Determined : To Be Determined	-	-		-		0.603		-		0.603	Continuing	Continuing	Continuing
Subtotal			-	-		-		0.603		-		0.603	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Engineering	TBD	To Be Determined : To Be Determined	-	-		-		3.972	Apr 2021	-		3.972	Continuing	Continuing	Continuing
Subtotal			-	-		-		3.972		-		3.972	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	TBD	To Be Determined : To Be Determined	-	-		-		1.424	Jul 2021	-		1.424	Continuing	Continuing	Continuing
Subtotal			-	-		-		1.424		-		1.424	Continuing	Continuing	N/A
Project Cost Totals			-	-		0.000		5.999		-		5.999	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>	Project (Number/Name) BR7 / <i>Small Unmanned Aircraft System (6.5)</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									
Systems Engineering Program Management (SEPM)	[Redacted]																																				
SRR Tranche I Other Transactional Agreements (OTA) Award	1 ▲ SRR Tranche I OTA	[Redacted]																																			
SRR Tranche I Prototyping	[Redacted]				[Redacted]																																
Test and Evaluation	[Redacted]																																				
SRR/(HGCS) Integration	[Redacted]																																				
SRR Tranche I End User Assessment	[Redacted]				2 ▲ SRR Tranche II EUA	[Redacted]																															
SRR Tranche I Full Rate Production (FRP) Decision	[Redacted]				3 ▲ SRR Tranche I MS-C FRP	[Redacted]																															
SRR Tranche II OTA Award	[Redacted]				[Redacted]				4 ▲ SRR Tranche I OTA	[Redacted]																											
SRR Tranche II Prototyping	[Redacted]				[Redacted]				[Redacted]				5 ▲ SRR Tranche II Prototypes	[Redacted]																							
SRR Tranche II End User Assessment	[Redacted]				[Redacted]				[Redacted]				[Redacted]				6 ▲ SRR Tranche II EUA	[Redacted]																			
SRR Tranche II FRP Decision	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				6 ▲ SRR Tranche I FRP	[Redacted]															
SRR Tranche III	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]				6 ▲ SRR Tranche III	[Redacted]											
LRR OTA Award (Component)	[Redacted]				[Redacted]				[Redacted]				LRR OTA	[Redacted]																							

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>	Project (Number/Name) BR7 / <i>Small Unmanned Aircraft System (6.5)</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
LRR Prototyping (System)													LRR Prototypes															
LRR/HGCS Integration													LRR/HGCS Int															
LRR End User Assessment																					7 LRR EUA							
LRR FRP Decision																					8 LRR MS-C FRP							

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Army		Date: February 2020
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605205A / <i>Small Unmanned Aerial Vehicle (SUAV) (6.5)</i>	Project (Number/Name) BR7 / <i>Small Unmanned Aircraft System (6.5)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Tactical Open Government Owned Architecture Development	4	2014	4	2014
Tactical Open Government Architecture Test Event 2	3	2015	3	2015
Systems Engineering Program Management (SEPM)	2	2018	4	2024
SRR Tranche I Other Transactional Agreements (OTA) Award	3	2019	3	2019
SRR Tranche I Prototyping	3	2019	4	2020
Test and Evaluation	4	2018	4	2024
SRR/(HGCS) Integration	2	2018	4	2020
SRR Tranche I End User Assessment	3	2020	3	2020
SRR Tranche I Full Rate Production (FRP) Decision	4	2020	4	2020
SRR Tranche II OTA Award	3	2021	3	2021
SRR Tranche II Prototyping	3	2021	3	2022
SRR Tranche II End User Assessment	2	2022	2	2022
SRR Tranche II FRP Decision	3	2022	3	2022
SRR Tranche III	3	2022	3	2024
LRR OTA Award (Component)	3	2021	3	2022
LRR Prototyping (System)	3	2022	2	2024
LRR/HGCS Integration	3	2021	2	2024
LRR End User Assessment	3	2024	3	2024
LRR FRP Decision	2	2025	2	2025

Note

Schedule events shown prior to Fiscal Year (FY) 2021 are for informational purposes only. Funding has transitioned to Budget Activity (BA) 5 Program Element (PE) 0605205A Small Unmanned Aerial Vehicle (SUAV) (6.5) Project BR7 Small Unmanned Aircraft System (6.5) from BA 7 PE 0305232A RQ-11 UAV Project RA7 RQ-11 Raven (MIP) starting in Fiscal Year (FY) 2021.