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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 United States Special Operations Command **Date:** March 2023

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	316.990	28.095	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S050: <i>Small Business Innovation Research</i>	297.846	24.631	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S051: <i>Small Business Technology Transfer</i>	19.144	3.464	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) implements 15 U.S.C Section 638 to maximize the creative innovative, entrepreneurial spirit of small businesses to solve technological problems. The goals of the Small Business Innovation Research (SBIR) program are to stimulate technological innovation, increase private sector commercialization of federal research and development (R&D), increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation. Leveraging the innovation of small business concerns is an important contributor to the development of the cutting-edge technologies that will generate decisive and sustained U.S. military advantages by increasing the readiness, modernization, and lethality of the United States Special Operations Command (USSOCOM). This program supports high priority projects within the USSOCOM Components, their missions, and the Warfighter. The goal of the Small Business Technology Transfer (STTR) program is to stimulate a partnership of ideas between small business concerns (SBCs) and research institutions through the USSOCOM funded research or research and development (R/R&D). By providing awards to SBCs or cooperative R/R&D efforts with research institutions, the USSOCOM supports innovation and economic growth to generate decisive and sustained U.S. military advantages. This program supports high priority projects within the USSOCOM Components, their missions, and the Warfighter.

B. Program Change Summary (\$ in Millions)

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	28.095	0.000	0.000	-	0.000
Total Adjustments	28.095	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	28.095	-			

Change Summary Explanation

Funding:

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>

FY 2022: Net increase of \$28.095 million is due to reprogrammings from various program elements for the congressionally mandated SBIR (\$24.631 million) and STTR (\$3.464 million) programs.

FY 2023: None.

FY 2024: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 United States Special Operations Command										Date: March 2023		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>				Project (Number/Name) S050 / <i>Small Business Innovation Research</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
S050: <i>Small Business Innovation Research</i>	297.846	24.631	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The goals of the Small Business Innovation Research (SBIR) program are to stimulate technological innovation, increase private sector commercialization of federal research and development (R&D), increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation. Leveraging the innovation of small business concerns is an important contributor to the development of the cutting-edge technologies that will generate decisive and sustained U.S. military advantages by increasing the readiness, modernization, and lethality of the United States Special Operations Command (USSOCOM). This program supports high priority projects within the USSOCOM Components, their missions, and the Warfighter.

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

	FY 2022	FY 2023	FY 2024
Title: Small Business Innovation Research (SBIR)	24.631	0.000	0.000
FY 2023 Plans:			
<ul style="list-style-type: none"> • Biotechnology Space (estimated funding, \$4.166 million): In field medical improvements; and combat divers' breathing improvements. • Control and Communications (estimated funding, \$4.204 million): Small tactical ultra-secure communication; low orbital satcom commercial mobile communications, command, and control for common operating picture. • Artificial Intelligence & Machine Learning (estimated funding, \$3.000 million): Monitor and measure development; data analytics; and modeling and simulation. • Advanced Small Arms Ammunition and Precision Strike (estimated funding, \$9.000 million): Improvements to Special Operations Forces (SOF) specific precision strike munitions; Sniper heads up display; and small Unmanned Aerial System (UAS) munition. • Directed energy (estimated funding, \$3.000 million): Hi energy density battery. 			
FY 2024 Plans:			
<ul style="list-style-type: none"> • Biotechnology (estimated funding, \$1.500 million): Concentrated Atropine Sulfate Formulations; Canine In-Ear Hearing Protection. • Control and Communications (estimated funding, \$6.100 million): Privacy Enhancing Technology; Low Size, Weight, and Power Ultra-Secure Communication Systems; Track Correlation/Data Deduplication for SOF Mission Command; Low/No Code Data Manipulation and Discovery for SOF. • Artificial Intelligence (AI) and Machine Learning (M/L) (estimated funding, \$7.700 million): Human Machine Teaming for Reduction of Operator Cognitive Load; Neuromorphic M/L for Fault Management for Space Vehicle Applications; Real Time 			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 United States Special Operations Command		Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>	Project (Number/Name) S050 / <i>Small Business Innovation Research</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Operations AI and Aviation M/L Applications; Human Machine Teaming for Reduction of Operator Cognitive Load; AI Driven Voice Control at the Edge. • Small Arms Ammunition and Precision Strike (estimated funding, \$5.600 million): Next Generation Tactical Operations Center; Directional Laser Detection System; Positioning, Navigation and Timing for Target Acquisition; Stand-Off Precision Guided Weapon Programs Cruise Missile – Contested Environment; Small UAS Munition Teaming for Advanced Precision Strike. • Directed energy (estimated funding, \$3.014 million): CO2 Scrubber; Electronic Embedded Glass; Optically Transparent Tapered Resistive Films.			
Accomplishments/Planned Programs Subtotals	24.631	0.000	0.000

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

N/A

Remarks

D. Acquisition Strategy

SBIR is a three-phase program that provides early-stage R&D to small companies. Eligible projects must fulfill an R&D need identified by the Department of Defense and have the potential to be developed into a product or service for commercial or defense markets. SBIR is designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 United States Special Operations Command **Date:** March 2023

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>	Project (Number/Name) S050 / <i>Small Business Innovation Research</i>
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Small Business Innovation Research (SBIR) Phase I < \$150K	C/Various	Various : Various	47.572	3.750	Nov 2021	-		-		-		-	Continuing	Continuing	-
SBIR Phase II >\$750K	C/Various	Various : Various	51.763	20.881	Nov 2021	-		-		-		-	Continuing	Continuing	-
Prior Year Funding	C/Various	Various : Various	198.511	-		-		-		-		-	Continuing	Continuing	-
Subtotal			297.846	24.631		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	297.846	24.631	-	-	-	-	Continuing	Continuing	N/A

Remarks
Due to multiple awards, the dates listed above reflect the first Phase I and II efforts awarded.

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 United States Special Operations Command			Date: March 2023		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>		Project (Number/Name) S050 / <i>Small Business Innovation Research</i>	

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028							
	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				
<i>Small Business Innovative Research (SBIR)</i>																																
Phase I Efforts	██████████																															
Phase II Efforts	██████████																															

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 United States Special Operations Command		Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovation Research/Small Bus Tech Transfer</i>	Project (Number/Name) S050 / <i>Small Business Innovation Research</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Small Business Innovative Research (SBIR)</i>				
Phase I Efforts	1	2022	4	2022
Phase II Efforts	1	2022	4	2022

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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
S051: <i>Small Business Technology Transfer</i>	19.144	3.464	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The goals of the Small Business Technology Transfer (STTR) program is to stimulate a partnership of ideas between small business concerns (SBCs) and research institutions through the United States Special Operations Command (USSOCOM) funded research or research and development (R/R&D). By providing awards to SBCs or cooperative R/R&D efforts with research institutions, USSOCOM supports innovation and economic growth to generate decisive and sustained U.S. military advantages. This program supports high priority projects within the USSOCOM Components, their missions, and the Warfighter.

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

	FY 2022	FY 2023	FY 2024
Title: Small Business Technology Transfer (STTR)	3.464	0.000	0.000
FY 2023 Plans: • A series of feasibility and initial research into the following focus areas (estimated funding, \$3.287 million): Next Gen Effects; Network & Data management; Biotechnologies & Human Interface; Next Generation Mobility; Next Generation Intelligence, Surveillance, and Reconnaissance (ISR) & Situational Awareness (SA); and Hyper Enabled Operator (HEO).			
FY 2024 Plans: • A series of feasibility and initial research into the following focus areas (estimated funding, \$3.363 million): Next Gen Effects; Network & Data management; Biotechnologies & Human Interface; Next Generation Mobility; Next Generation ISR & SA; and HEO.			
Accomplishments/Planned Programs Subtotals	3.464	0.000	0.000

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

N/A

Remarks

D. Acquisition Strategy

The STTR program provides early-stage R&D funding directly to small companies working cooperatively with researchers at universities and other research institutions. The STTR is also a three-phased program designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D, and foster participation by minority and disadvantaged firms in technological innovation.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 United States Special Operations Command **Date:** March 2023

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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Small Business Technology Transfer (STTR) Phase I <\$150K	C/FFP	Various Vendors : Various Locations	6.600	1.800	Nov 2021	-		-		-		-	Continuing	Continuing	-
STTR Phase II >\$750K	C/Various	Various Vendors : Various Locations	7.421	1.664	Nov 2021	-		-		-		-	Continuing	Continuing	-
Prior Year Funding	C/Various	Various : Various	5.123	-		-		-		-		-	0.000	5.123	-
Subtotal			19.144	3.464		-		-		-		-	Continuing	Continuing	N/A

Remarks
Due to multiple awards, the dates listed above reflect the last Phase I and II awarded.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	19.144	3.464	-	-	-	-	Continuing	Continuing	N/A

Remarks
Due to multiple awards, the dates listed above reflect the first Phase I and II efforts awarded.

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 United States Special Operations Command			Date: March 2023
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

<i>Small Business Technology Transfer (STTR)</i>	
Phase I Efforts	
Phase II Efforts	

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 United States Special Operations Command		Date: March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Small Business Technology Transfer (STTR)</i>				
Phase I Efforts	1	2022	4	2022
Phase II Efforts	1	2022	4	2022