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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 United States Special Operations Command **Date:** March 2024

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	1,718.232	150.711	156.097	197.767	-	197.767	156.925	173.447	138.960	157.267	Continuing	Continuing
S200: <i>Advanced Technology Development</i>	1,606.266	127.317	129.741	178.011	-	178.011	136.664	152.669	117.456	135.192	Continuing	Continuing
SF101: <i>Engineering Analysis</i>	111.966	23.394	26.356	19.756	-	19.756	20.261	20.778	21.504	22.075	Continuing	Continuing

A. Mission Description and Budget Item Justification

Advanced Technology Development (Project S200) conducts rapid prototyping and Advanced Technology Demonstrations (ATDs). ATDs provide a means for evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations forces (SOF) users. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. ATDs also address projects that are a result of unique joint special mission or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase. The ATD investment strategy is aligned to establish future SOF capability in support of Joint Warfighting Concepts. This project received Congressional Adds in FY 2023: identity threat mitigation and force protection initiative (\$17.000 million); C-130J autonomous capabilities (\$7.000 million); gesture control integration project (\$5.000 million); uncrewed aerial systems electronic deception (\$1.500 million); global data analytics and visualization (\$8.000 million); and Next Gen ISR SOF Enhancement (\$7.000 million).

Engineering Analysis (Project SF101) provides rapid response capability for the investigation, evaluation, and demonstration of technologies for SOF platform (ground, air, and maritime) and soldier system-unique requirements. Timely application of SO-peculiar technology is critical and necessary to meet requirements in such areas as: sensor integration; enhanced situational awareness; near-real-time intelligence to include data fusion; threat detection and avoidance; electronic support measures for threat geo-location and specific emitter identification; navigation; target detection; weapon performance integration; and future SOF platform and soldier system requirements. This project provides additional engineering analysis and testing required to transition items from national forces to theater forces.

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	148.062	156.097	155.005	-	155.005
Current President's Budget	150.711	156.097	197.767	-	197.767
Total Adjustments	2.649	0.000	42.762	-	42.762
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	8.309	-			
• SBIR/STTR Transfer	-5.660	-			
• Adjustments to Budget Year	-	-	42.762	-	42.762

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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S200: *Advanced Technology Development*

Congressional Add: *Identity Threat Mitigation and Force Protection Initiative*

Congressional Add: *C-130J Autonomous Capabilities*

Congressional Add: *Gesture Control Integration Project*

Congressional Add: *Unmanned Aerial Systems Electronic Deception*

Congressional Add: *Global Data Analytics and Visualization*

Congressional Add: *Next Gen ISR SOF Enhancement*

Congressional Add Subtotals for Project: S200

Congressional Add Totals for all Projects

	FY 2023	FY 2024
	15.593	-
	7.000	-
	5.000	-
	1.500	-
	8.000	-
	6.744	-
Congressional Add Subtotals for Project: S200	43.837	-
Congressional Add Totals for all Projects	43.837	-

Change Summary Explanation

Funding:

FY 2023: Net increase of \$2.649 million. Increase due to Congressional Add for funding for Next Generation ISR SOF enhancements reprogrammed from Warrior System, PE 1160431BB (\$7.000 million); increase for emerging Command requirements of (\$1.309 million). Decrease of \$5.660 million is due to a reprogramming of funds to the congressionally mandated Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) programs.

FY 2024: None.

FY 2025: Increase of \$42.762 million is due to Command driven modernization efforts to provide the Department of Defense with capabilities to win in future conflicts, including additional funds for the High Speed Vertical Takeoff and Landing (HSVTOL) engineering development effort initiated in FY 2024.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 United States Special Operations Command										Date: March 2024		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S200 / Advanced Technology Development			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S200: <i>Advanced Technology Development</i>	1,606.266	127.317	129.741	178.011	-	178.011	136.664	152.669	117.456	135.192	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations. It is a means for demonstrating and evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations Forces (SOF) users. This project integrates disruptive solutions and emerging technologies and then presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Evaluation results often facilitate the initiation of new programs and the insertion of appropriate technologies to acquisition programs. This project leverages key stakeholder relationships with the Department of Defense and government technology developers to address unique, joint special mission or area-specific needs for which a few rapid prototypes must be developed on a responsive basis, or of sufficient time sensitivity to accelerate prototyping efforts of a normal acquisition program in any phase.

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

	FY 2023	FY 2024	FY 2025
Title: SOF Special Technology Project	76.223	86.924	78.918
Description: This project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. This project will continue to exploit and integrate emerging technologies to enable SOF to conduct assigned military responsibilities and expand in support of integrated deterrence. Also funds technical field experimentation to equip the future SOF warfighter. Based upon agreed technology maturity metrics, transfers successful projects into programs of record, and conducts field experimentations at various venues to facilitate technology insertion.			
FY 2024 Plans: Continue the development and insertion of technology into existing programs. Technologies include but are not limited to: reduced signature profiles; next generation effects; assured communications; command and control systems; machine learning / artificial intelligence (ML/AI); sensors; information sources; emplacement and access; situational awareness tools; revolutionary materials; power and energy enablers; and technologies that reduce the load of the operator. Continue development of technologies supporting undersea, ground and air mobility. Evaluate and develop opportunities to leverage the electromagnetic spectrum to meet operational requirements. Continue the integration of critical technologies focused on providing the dismounted special operator with leap-ahead capabilities via innovative collaborative processes. Continue to develop sensors, surveillance, network and data management technology to provide tactically relevant situational awareness at the point of need. Continue effort for field prototype system incorporating technologies likely to transition to fielded systems. Based upon agreed technology maturity metrics, transfer successful projects into programs of record, and conduct field experimentations at various venues to facilitate			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 United States Special Operations Command		Date: March 2024
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S200 / <i>Advanced Technology Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
<p>technology insertion. Continue the United States Special Operations Command (USSOCOM) focus on modernization supporting advanced technology development.</p> <p>FY 2025 Plans: Continues the development and insertion of technology into existing programs. Technologies include but are not limited to: scalable and precision effects; command and control systems; capability specific machine learning/artificial intelligence algorithms; sensors; multi-domain emplacement and access; situational awareness tools; and technologies that reduce the load of the operator. Continues development of field prototypes incorporating technologies likely to transition to fielded systems, supporting the United States Special Operations Command focus on modernization.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Decrease of \$8.006 million is due to funding made available to support critical emergent command requirements.</p>			
<p>Title: USSOCOM Rapid Defense Experimentation Reserve (RDER) Projects</p> <p>Description: Funds USSOCOM RDER projects via SecDef process. USSOCOM RDER projects accelerate technology from prototypes to validated joint SOF and SOF/Conventional Forces military capabilities to support operations in highly contested environments. USSOCOM RDER projects are 12-24 month efforts focused on fast iterations of prototyping between technologists and warfighters through experimentation.</p> <p>FY 2024 Plans: Begin the USSOCOM Rapid Defense Experimentation Reserve development and experimentation efforts. Initiate SOF Targeting to prototype and experiment with Hostile Forces Tagging, Tracking, and Locating (HF-TTL) in this mission space for potential transition to the HF-TTL Program of Record (\$10 million).</p> <p>FY 2025 Plans: Continue USSOCOM Rapid Defense Experimentation Reserved development and experimentation efforts. Initiate Open Sensor Hub to demonstrate an open source, open standards framework for US/Partner Nation interoperability of sensors, platforms, control systems in an operationally relevant environment for potential transition to Mission Command Systems/Common Operational Picture (MCS/COP) Program of Record (\$10 million). Open Sensor Hub leverages commercial software developed through a USSOCOM Small Business Innovation Research project for intelligence surveillance and reconnaissance applications. Initiate Unmanned Maritime Deployment to demonstrate use of small, unmanned surface/undersea platforms with common/open architectures and flexible payloads to deliver disruptive capabilities and effects in near-term/future operations with a focus on littoral environments (\$9 million). Project will be US Navy led and transitioned but will prototype and experiment with joint warfighting capabilities among USSOCOM, US Navy and US Marine Corps. Funds will support the SOF-unique aspects of</p>	-	10.000	19.000

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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development	Project (Number/Name) S200 / Advanced Technology Development		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>prototyping and experimentation. Open Sensor Hub and Unmanned Maritime Deployment projects were approved and budgeted as FY 2025 RDER projects in 1QFY24.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase of \$9.000 million is due to USSOCOM Rapid Defense Experimentation Reserve development efforts as stated in the RDER FY 2025 Base Plans.</p>				
<p>Title: High Speed Vertical Takeoff and Landing (HSVTOL)</p> <p>Description: In conjunction with Defense Advanced Research Projects Agency, the HSVTOL supports the development and demonstration of agile and responsive air mobility capabilities to support runway independent operations, increased speed of maneuverability, and to provide the ability to penetrate anti-access (A2)/anti-denial (AD) environments.</p> <p>FY 2024 Plans: Begin efforts focused on early engineering activities for a HSVTOL demonstration platform and risk reduction of critical technologies such as materials, propulsion and flight controls.</p> <p>FY 2025 Plans: Continues efforts focused on engineering activities geared towards design activities for the HSVTOL demonstration platform. This includes preliminary and detailed design, development, analysis, modeling and simulation, and system / subsystem verification of various engineering disciplines such as avionics, electrical, structural, propulsion, aerodynamics, and survivability, amongst other engineering disciplines.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase of \$47.150 million funds competitive down-selected vendors to mature their conceptual designs, accelerate preliminary design activities and develop enabling HSVTOL technologies. Supports another down-select in FY25 for advancing to detailed design. Supports planned initial demonstration of next-generation VTOL capabilities required to close requirement gaps in an A2AD penetration and contested logistics.</p>		-	25.000	72.150
<p>Title: Classified Sub-Project</p> <p>Description: Classified Sub-Project (provided under separate cover).</p> <p>FY 2024 Plans: Details provided under separate cover.</p> <p>FY 2025 Plans:</p>		7.257	7.817	7.943

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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development	Project (Number/Name) S200 / Advanced Technology Development

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Details provided under separate cover.			
FY 2024 to FY 2025 Increase/Decrease Statement: Details for increase of \$0.126 million provided under separate cover. Sub-project is reported in accordance with Title 10, United States Code, Section 119(a)(1), in the Special Access Program Annual Report to Congress.			
Accomplishments/Planned Programs Subtotals	83.480	129.741	178.011

	FY 2023	FY 2024
Congressional Add: Identity Threat Mitigation and Force Protection Initiative FY 2023 Accomplishments: This effort funded the continued development of Identity Threat Mitigation Systems for integration into the SOF Digital Ecosystem. Capabilities developed under this effort provided enhanced identity protection and monitoring capabilities, incorporated new data sources, and enhanced data fusion and display methods. Software-intensive Identity Threat Mitigation systems managed in accordance with agile methodologies and best practices.	15.593	-
Congressional Add: C-130J Autonomous Capabilities FY 2023 Accomplishments: This effort funded the development, integration and demonstration of automation and reduced flight deck crew workload on a C-130J platform. Capabilities developed under this effort provided elevated mission capabilities, extended operational time of the aircraft, increased safety for flight crews, and significantly cut down on costs by reducing aircrew.	7.000	-
Congressional Add: Gesture Control Integration Project FY 2023 Accomplishments: This effort funded the development of wearable gesture control technology that is agnostic to drone hardware, enhanced interoperability, and compressed the sensor-to-shooter workflow in a “mosaic warfare” environment.	5.000	-
Congressional Add: Unmanned Aerial Systems Electronic Deception FY 2023 Accomplishments: This effort funded the fabrication of initial small unmanned aerial systems (sUAS) prototypes based on design work completed under an FY 2022 plus-up. The sUAS is a purpose-built, Government-owned uncrewed platform with the payload, range, speed and survivability required by the USSOCOM operators to complete their mission.	1.500	-
Congressional Add: Global Data Analytics and Visualization	8.000	-

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	FY 2023	FY 2024
FY 2023 Accomplishments: This effort funded the integration of university-led supply chain analytics with open source, commercial, government and local contributor data to provide a supply-chain decision support capability at the tactical and operational level.		
Congressional Add: Next Gen ISR SOF Enhancement FY 2023 Accomplishments: This effort funded the development for an ability to utilize gesture control for much of the situational awareness and robotic programs for SOF. The effort will introduce the potential to integrate humans and machines and the interoperability of the systems, human-machine, and supports increased speed in command, control, communications, and information throughput with systems/networks of platforms, payloads, sensors, and data.	6.744	-
Congressional Adds Subtotals	43.837	-

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

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2025 United States Special Operations Command **Date:** March 2024

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development	Project (Number/Name) SF101 / Engineering Analysis
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
SF101: <i>Engineering Analysis</i>	111.966	23.394	26.356	19.756	-	19.756	20.261	20.778	21.504	22.075	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides a rapid response capability to support Special Operations Forces (SOF) programs and capabilities across the enterprise. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies, analysis of alternatives, pre-developmental risk reduction studies, and engineering analyses. This project provides the engineering required to improve the design and performance integrity of the SOF equipment and software and to integrate disruptive “off-the-shelf” technologies to meet current and emergent capability gaps. This project also conducts risk reduction studies, analyses, and demonstrations to support emerging, time-critical equipment, weapons, and sensor enhancements.

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

	FY 2023	FY 2024	FY 2025
<p>Title: National to Theater Engineering Analysis</p> <p>Description: Provides additional engineering analysis and testing required to transition items from national forces to theater forces.</p> <p>FY 2024 Plans: Continue additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.</p> <p>FY 2025 Plans: Continues additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase of \$0.049 million supports additional testing and evaluation required on various equipment items.</p>	2.280	2.431	2.480
<p>Title: Engineering Analysis</p> <p>Description: Funding supports the development of rapid response capabilities to support SOF platform and soldier systems. Supports technology development to correct system deficiencies, improve platform asset life, and enhance mission capabilities. Supports engineering assessments and evaluation of technology feasibility, producibility, and integration into SOF specific equipment. Supports engineering analysis activities to address platform survivability such as signature management, situational awareness, and versatile mission equipment (payloads, communications, and weapons) to achieve SOF mission objectives. Prioritizes insertion of emergent technology into programs of record in a timely manner.</p>	17.400	19.925	13.276

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
<p><i>FY 2024 Plans:</i> Continue to assess concepts and prototypes that provide increased capability of SOF mobility platforms to include improvements to meet emerging threats. Assess and evaluate advanced methods to deliver next generation effects. Identify, assess, and evaluate improved network and data management systems that incorporate significant improvements to operate in contested environments, systems that improve situational awareness on the battlefield, and disruptive technologies to enable Intelligence, Surveillance, and Reconnaissance (ISR) in future environments. Continue to assess materials, concepts, and prototypes to increase operator effectiveness and situational awareness in all environments. Continue engineering analysis activities to improve SOF platform mission survivability. Activities include signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications, and weapons) to improve SOF survivability in less than permissive operating environments.</p> <p><i>FY 2025 Plans:</i> Continue to assess concepts and prototypes that provide increased capability of SOF mobility platforms to include improvements to meet emerging threats. Assesses and evaluates advanced methods to deliver scalable and precision effects. Identifies, assess, and evaluates improved network and data management systems that incorporate significant improvements to operate in contested environments, systems that improve situational awareness on the battlefield, and disruptive technologies to enable ISR in future environments. Continues to assess materials, concepts, and prototypes to increase operator effectiveness and situational awareness in all environments. Continues engineering analysis activities to improve SOF platform mission survivability. Activities include signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications, and weapons) to improve SOF survivability in less than permissive operating environments.</p> <p><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Decrease of \$6.649 million is due to funding made available to support critical emergent command requirements.</p>			
<p><i>Title:</i> Experimentation Force</p> <p><i>Description:</i> Funding supports the integration of technology with operational vignette-based experiments designed to stimulate innovative applications across all domains addressing SOF specific modernization needs.</p> <p><i>FY 2024 Plans:</i> Continue the development of innovative concepts, conducts experimentation to develop hyper-enabled teams capable of conducting globally integrated special operations across all domains.</p> <p><i>FY 2025 Plans:</i> Continue the development of innovative concepts, conducts experimentation to develop hyper-enabled teams capable of</p>	3.714	4.000	4.000

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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
conducting globally integrated special operations across all domains and identifies opportunities to insert technology to mitigate SOF specific operational capability gaps.			
Accomplishments/Planned Programs Subtotals	23.394	26.356	19.756

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

N/A

Remarks

D. Acquisition Strategy

N/A