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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force **Date:** March 2024

Appropriation/Budget Activity 3620F: <i>Research, Development, Test & Evaluation, Space Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 1203622SF / <i>Space Warfighting Analysis</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	-	42.300	95.541	121.409	0.000	121.409	119.523	123.395	127.597	130.137	Continuing	Continuing
646021: <i>Space Warfighting Analysis Center (SWAC)</i>	-	42.300	95.541	121.409	0.000	121.409	119.523	123.395	127.597	130.137	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This request funds increased scope towards capability area analyses and integration, modeling, wargaming, and experimentation to create operational concepts and force design guidance for existing and emerging USSF missions. Capability Area design analyses identify the integrated suite of operational capabilities that fulfills USSF imperatives to preserve the United States' freedom of action in space; enables Joint Force lethality and effectiveness; and provides the Service options for developing capabilities operating in, from, and to space. These analyses efforts team with relevant stakeholders across the National Security Space enterprise from an independent perspective and will provide analytic insight to the Service to inform and/or validate solutions to operational needs and provide a basis for future capability development programs. USSF force design analyses are organized into three main focus areas: Multi-Domain Sensing, Spectrum Warfare, and Force Design Integration which are aligned to USSF priorities, and follow a disciplined approach to discover, analyze, and validate concepts and the associated family of systems required to satisfy current/future mission needs while including comprehensive threat analysis. The resulting force design products will help define and inform future USSF mission requirements, capabilities/architectures, priorities, funding needs, and interface standards.

This program element may include necessary emergent/unanticipated civilian pay expenses required to manage and execute the force design mission assigned to the SWAC and/or deliver products for evolving weapon system capabilities.

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	42.300	95.541	116.317	0.000	116.317
Current President's Budget	42.300	95.541	121.409	0.000	121.409
Total Adjustments	0.000	0.000	5.092	0.000	5.092
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	5.092	0.000	5.092

Change Summary Explanation

FY 2025: +\$5.092M; realignment of civilian pay from BA06 to consolidate all funds under the same budget activity.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
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Title: Space Warfighting Analysis Center (SWAC)	42.300	95.541	121.409
Description: Space Warfighting Analysis Center is the foundational element to develop and provide authoritative Force Design recommendations for the United States Space Force (USSF).			
FY 2024 Plans: Expand research studies, system design analysis, and wargaming integration prototyping demonstrations across a variety of domains and mission areas to inform USSF force designs. The Multi-Domain Sensing Program focus areas are: Moving Target Indicator (MTI), Missile Warning, Tracking, and Defense (MWTDD), and Kill Chain Analysis. MTI will analyze merging multiple sensing phenomenologies to directly support joint warfighter needs. MWTDD will analyze the performance characteristics of current and planned Missile Warning systems in expanded armed conflict scenarios. Kill Chain Analysis will investigate requirements and alternatives to support joint warfighting needs. The Spectrum Warfare Program focus areas are: Space Data Network, Ground Data Network, Position, Timing, and Navigation and Force Design Validation. Space Data Network analyses will focus on broadband, narrowband, and space to space cross link to assess kill chains, commercial services, and hybrid electromagnetic compatibility network studies. Ground Data Network will study Ground Entry Point architecture for space network and Data Transmit and Receive Network support of high-altitude mesh. Positioning, Timing, and Navigation will seek to define baseline architecture for ground, space and communications and evaluate User Equipment coupling between communications and Positioning, Timing, and Navigation receivers. Validation efforts will focus on collaborating with the community on prototypes and experiments for Space Warfighting Analysis Center Force Design key questions. The Force Design Integration Office will			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>continue to lead joint and analytic integration and Force Design conference activities. Funds will also enable execution of mission support areas that are required for daily operations.</p> <p>FY 2025 Plans: Expand research studies, system design analysis, and wargaming integration prototyping demonstrations across a variety of domains and mission areas to inform USSF force designs. The Multi-Domain Sensing Program will update MTI analysis findings and initiate an MTI ground system study; expand the Kill Chain analysis to address additional joint needs; assess emerging MWTD targets, threats, and enhanced sensing concepts; and begin a Space Based Environmental Monitoring Force Design study. The Spectrum Warfare focus areas will continue developing the Government Reference Architectures and Capability Area designs for Broadband, Narrowband, and Space to Space Force Designs, and will work on moving into space-based Position, Navigation, and Timing (PNT) Force Designs with deeper inclusion into kill-webs. Additionally, Spectrum Warfare will continue to study Ground Entry Point architecture for space network and Data Transmit and Receive Network support of high-altitude mesh for Ground Data Network Force Designs, and begin developing a blueprint and Force Designing for Nuclear Command, Control, and Communications. The Joint Sensitive Space Staff (JS3) will continue to conduct modeling, simulation and analysis of satellite signatures to include sensing, communications and offensive and defensive space operations. The JS3 will also analyze thresholds of detectability and provide concept of operations and tactics recommendations to inform future capabilities. Funds will also enable execution of mission support areas that are required for daily operations.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: The funding increase enables ongoing analyses to continue towards validation stages and provides the ability to scale operations to meet increasing demands of the USSF, DoD partners and allies.</p>				
Accomplishments/Planned Programs Subtotals		42.300	95.541	121.409
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
N/A				
E. Acquisition Strategy				
SWAC collaborates with stakeholders and mission partners to access appropriate and existing contract vehicles to focus resources on USSF mission priorities.				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force												Date: March 2024			
Appropriation/Budget Activity 3620F / 4					R-1 Program Element (Number/Name) PE 1203622SF / <i>Space Warfighting Analysis</i>					Project (Number/Name) 646021 / <i>Space Warfighting Analysis Center (SWAC)</i>					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Space Warfighting Analysis Center (SWAC)	Various	Various - TBD : TBD : TBD	-	42.300	Dec 2023	95.541	Sep 2024	121.409	Sep 2025	-		121.409	Continuing	Continuing	-
Subtotal			-	42.300		95.541		121.409		-		121.409	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	42.300		95.541		121.409		-		121.409	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	R-1 Program Element (Number/Name) PE 1203622SF / <i>Space Warfighting Analysis</i>	Project (Number/Name) 646021 / <i>Space Warfighting Analysis Center (SWAC)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Space Warfighting Analysis Center (SWAC)				
Multi-Domain Sensing Program (MDSP) - Missile Warning/Missile Tracking (MW/MT)	1	2023	4	2029
MDSP - Kill Chain Analysis	1	2023	4	2029
MDSP - Moving Target Indicators	1	2023	4	2029
MDSP - Space Based Environmental Monitoring	1	2025	4	2029
Spectrum Warfare Program (SWP) - Space Data Network	1	2023	4	2029
SWP - Navigation Warfare and Position, Navigation & Timing (PNT)	1	2023	4	2028
SWP - Ground Data Network	1	2024	4	2028
SWP - Space Logistics (may include launch and on-orbit servicing)	1	2025	4	2029
Force Design Integration (FDI) - Concepts & Wargaming	1	2023	4	2029
FDI - Programming, Planning and Cost Analysis	1	2023	4	2029
FDI - Chief of Space Operations' Force Design Guidance, Capability Area Designs, and Force Design Conferences	1	2023	4	2029