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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207412F <i>I Control and Reporting Center (CRC)</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	-	6.409	17.498	18.473	0.000	18.473	18.398	18.776	19.456	19.840	Continuing	Continuing
67485L: <i>CRC Modernization</i>	-	6.409	17.498	18.473	0.000	18.473	18.398	18.776	19.456	19.840	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Control and Reporting Center (CRC) is a mobile, ground-based theater air control system (TACS) surveillance and battle management command and control (BMC2) element. It is a customizable, modular, transportable, and persistent weapon system employed at the tactical level to provide direct command and control to all air assets in an assigned Area of Responsibility (AOR) and to report back to the Joint Force Air Combat Commander (JFACC). The CRC is a family of systems which include: AN/TYQ-23A(V)1 Tactical Air Operations Module (TAOM), AN/TSC-250 Communication Data Link System (CDLS), AN/TRC-213/214 Remote Radio Secure Voice System (RRSVS), and CRC's organic sensor, AN/TPS-75. CRC is part of the Air Force's Advanced Battle Management System (ABMS) initiative, to which CRC will provide modular capability to support tactical C2. CRC Modernization consolidates previous upgrade efforts into a coordinated initiative focused on upgrading of BMC2, sensors, and communications. CRC aligns with the Advanced Battle Management System (ABMS) PE 0604003F by integrating with the Distributable Battle Management Node (DBMN) and Cloud-Based Command and Control (CBC2) programs to provide modular capability to support tactical C2, meeting the requirements for Tactical Operations Center - Light and Medium (TOC-L and TOC-M) concepts while minimizing duplication of effort. The organic software development efforts rely on having a steady stream of RDT&E funding throughout the FYDP.

In FY2025, CRC Modernization efforts include, but are not limited to: integration of the Link-22 capability, pursuant to the Link 11 sunset, continued development and testing of a block upgrade for the AN/TRC-213/214 RRSVS, Next Generation CRC weapon system (TOC-L/TOC-M) prototyping support, architecture upgrades to the AN/TYQ-23A(V)1 Tactical Air Operations Module to support evolution into future ABMS construct, continuous software development/integration/deployment using Agile software development methods, security and operations (DevSecOps), TPY-4 Deployable Radar (formerly 3DELRR) Integration, integration and test of the Supplemental Tactical Sensing Capability (STSC), active and passive 3rd party sensor integration, accredited structures and storage solutions in pursuit of Open System Architecture (OSA) advancements. Additionally, CRC modifications required to keep the system in compliance with DoD directives, changes in the underlying IT/ Cyber Security environment and any other emerging requirements, and to remain interoperable, certified, supportable, and compliant through the development, integration, testing, fielding, training and related equipment of new CRC capabilities.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605832F, 0605833F, 0605898F, 0606398F. In FY2023, \$1.590 million was expended for civilian pay expenses in this program element, and in FY2024 \$2.100 million is forecasted for civilian pay expenses in this program element.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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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	6.615	17.498	18.440	0.000	18.440
Current President's Budget	6.409	17.498	18.473	0.000	18.473
Total Adjustments	-0.206	0.000	0.033	0.000	0.033
• 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	-0.206	0.000			
• Other Adjustments	0.000	0.000	0.033	0.000	0.033

Change Summary Explanation

N/A

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
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Title: CRC Modernization	6.409	17.498	18.473
<p>Description: - CRC Modernization consolidates previous upgrade efforts into a coordinated initiative focused on upgrading of BMC2, sensors, and communications systems for the current weapon system while designing in modularity that will seamlessly integrate with Tactical Operations Center-Light and Medium (TOC-L and TOC-M).</p> <p>- CRC Modernization: Organic system software development and upgrades in collaboration with ABMS Software factories, Hardware upgrades and virtualization, JWICS integration, Moving Target Indicator (MTI) tracker integration, Multi-Level Security/ Cross Domain Solution (MLS/CDS) Implementation, L/V/C Operations capability.</p>			
FY 2024 Plans:			
<ul style="list-style-type: none"> - Continue CRC Organic SW Development and architectural upgrades - Continue hardware architecture modernization - Continue software development/integration/deployment using Agile DevSecOps development - Continue prototyping, testing and cyber hardening of communication capabilities - Continue solutions in pursuit of emerging technology 			
FY 2025 Plans:			
<ul style="list-style-type: none"> - Integrate Link-22, 3DELLR, and the RRSVS architectural upgrade capabilities - Begin interoperability efforts with TOC-L and TOC-M 			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
- Integrate and test Supplemental Tactical Sensing Capability (STCS)			
<i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> - Funding increased due to ramping up multiple integration efforts to ensure new components of the CRC system of systems can smoothly operate as a single integrated weapon system. These integration efforts include RRSVS upgrade developments to integrate with TOC-L, Link-22 datalink, 3DELRR, and Link Monitor and Management Tool (LMMT) integration.			
Accomplishments/Planned Programs Subtotals	6.409	17.498	18.473

D. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• OPAF 03 833040: <i>Theater Air Control Sys Improvemen</i>	13.986	0.000	73.412	-	73.412	60.894	38.333	39.146	39.920	0.000	265.691

Remarks

E. Acquisition Strategy
- The CRC Capability Roadmap provides for the modernization of the CRC family of systems and will be programmed into phased updates through 2037 to further advance current and future battlespace awareness and tactical battle management command and control capabilities. A variety of contract and organic vehicles will be used depending on type of effort and skills required. The Milestone Decision Authority is the Air Force Program Executive Office for Digital (AFPEO Digital) and the Air Force Life Cycle Management Center (AFLCMC) as the Contracting Authority.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 0207412F / Control and Reporting Center (CRC)				67485L / CRC Modernization							
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
CRC Modernization	C/FP	Not specified. : TBD	-	-		1.000	Jan 2024	2.900	Jan 2025	-		2.900	Continuing	Continuing	-
CRC 520th Organic Software Development	C/FP	520 SWEG : Hill AFB	-	3.548	Jan 2023	3.300	Mar 2024	3.634	Mar 2025	-		3.634	Continuing	Continuing	-
RRSVS Architectural Upgrade	C/CPFF	Not specified. : TBD	-	-		4.800	Feb 2024	3.900	Feb 2025	-		3.900	Continuing	Continuing	-
MUOS Simulator (Test/Lab)	C/FFP	Not specified. : TBD	-	-		2.100	Feb 2024	-		-		-	Continuing	Continuing	-
Link-22	C/CPFF	Not specified. : TBD	-	-		-		2.000	Feb 2025	-		2.000	Continuing	Continuing	-
Subtotal			-	3.548		11.200		12.434		-		12.434	Continuing	Continuing	N/A
Support (\$ 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
CRC Modernization Direct Cite Authority - Additional 12 Civilian Positions	RO	Various : Hill AFB, UT	-	1.736	Oct 2022	2.100	Oct 2023	2.284	Oct 2024	-		2.284	Continuing	Continuing	-
Subtotal			-	1.736		2.100		2.284		-		2.284	Continuing	Continuing	N/A
Test and Evaluation (\$ 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
CRC Modernization Test Support	Various	Various : Various	-	0.125	Nov 2022	0.398	May 2024	0.050	May 2025	-		0.050	Continuing	Continuing	-
Subtotal			-	0.125		0.398		0.050		-		0.050	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207412F / <i>Control and Reporting Center (CRC)</i>	Project (Number/Name) 67485L / <i>CRC Modernization</i>

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
CRC Modernization																												
Integration and Testing																												
CRC Organic Software																												
Design, Development, Integration, and Test																												
RRSVS Architectural Upgrade																												
Design, Development, Integration, and Test																												
MUOS Simulator (Test/Lab)																												
Design, Development, Integration, and Test																												
Link-22																												
Design, Development, Integration, and Test																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207412F / <i>Control and Reporting Center (CRC)</i>	Project (Number/Name) 67485L / <i>CRC Modernization</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>CRC Modernization</i>				
Integration and Testing	2	2024	4	2026
<i>CRC Organic Software</i>				
Design, Development, Integration, and Test	1	2023	4	2027
<i>RRSVS Architectural Upgrade</i>				
Design, Development, Integration, and Test	2	2024	4	2025
<i>MUOS Simulator (Test/Lab)</i>				
Design, Development, Integration, and Test	2	2024	2	2025
<i>Link-22</i>				
Design, Development, Integration, and Test	2	2025	4	2026