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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 0207417F / <i>Airborne Warning and Control System (AWACS)</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	-	11.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.191
67411L: <i>Airborne Warning & Control System (AWACS)</i>	-	11.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.191
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Mission: E-3 Airborne Warning and Control System (AWACS) is the premier airborne platform providing Battle Management Command and Control (BMC2) for Commander In Chief and combatant commander tasking in joint, allied, and coalition operations, humanitarian relief, and homeland defense. AWACS provides a real-time picture of friendly, neutral, and hostile air activity. Its capabilities include: All-altitude/all-weather surveillance of the battle space; early warning of enemy actions; a real-time ability to find, fix, track, and assess airborne or maritime threats; and detection, location, and identification of electronic emitters.

Major efforts for the AWACS program include:

1. E-3 Training, Support, and Infrastructure (TSI): The TSI program provides continuing lab operations and maintenance support for AWACS modernization and enhancement across the enterprise. TSI will implement realignment of management responsibility of the AWACS Integration and Test Support (AITS) labs to allow for continuing Foreign Military Sales (FMS) E-3 AWACS program test requirements and for US and FMS E-3 Sustainment requirements. Continuing activities include managing the AWACS Development Test and Evaluation (DT&E) infrastructure and tracking and monitoring the AWACS support equipment and program Government Furnished Property. TSI will continue to manage the cost, schedule, and performance contract of the AITS lab until the FMS office completes its transfer plan. Currently the overall DT&E test infrastructure supports earlier versions of AWACS aircraft during system and sub-system testing in Seattle, WA and Oklahoma City, OK, along with Third Party Integration support from The Boeing Company to AWACS customers in the System AITS labs. TSI does provide support to multiple Foreign Military Sales (FMS) projects on a maintenance fee basis to projects for France, Saudi Arabia and Japan efforts. Key programs include contractual management of the AWACS Avionics Integration Laboratory (AIL) integrated with the Block 40/45 Functional Group configured lab. These labs provide US, FMS, and Direct Commercial Sales customers with a configured development and qualification system and subsystem environment supporting all AWACS system.

2. E-3 Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR): C2ISR system improvements investigate and develop future capabilities of the AWACS weapon system. These efforts also include, but are not limited to, investigation, analysis, and development to ensure that AWACS successfully integrates with joint and coalition forces in a net-centric environment. C2ISR primarily supports pre-systems acquisition in the areas of materiel solution analysis and technology development. This is accomplished by prototyping and demonstrating capabilities required by the warfighter but also includes developing an E-3 Modernization & Sustainment Roadmap that projects user capability needs, as well as materiel solutions for the user needs. C2ISR also supports an analytical comparison of the operational effectiveness, suitability, life-cycle cost and system capabilities of alternative materiel solutions beyond the current AWACS that satisfy an established capability need identified in an Initial Capabilities Document (ICD), Rapid Prototyping Requirements Document (RPRD), or Rapid Fielding Requirements Document (RFRD).

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3. E-3 Communication Network Upgrade (CNU): CNU will provide a Link 16 capability with high-jam-resistance, high-speed, crypto-secure computer-to-computer connectivity in support of every type of military platform from airborne assets to submarines. The current 20-year-old Class 2 terminal has sustainability/Diminishing Manufacturing Source (DMS) issues and does not support mandated Crypto Mod (CM) & Freq. Remap (FR). CNU resolves DMS issues, provides CM & FR, Link 16 enhancements & growth for Next Gen Tactical Data Link (TDL). CNU capabilities will be delivered in two phases, comprised of three Minimum Viable Product (MVP) efforts. Phase I: MVP1 (Crypto) will provide Enhanced Link 16 Crypto and Frequency Mapping, and MVP2 will provide High Powered Amplification of Communications (HPAs). Phase II: MVP3 (Link 16 Advanced Capabilities) will provide Link 16 advanced communications throughput via ethernet connection.

4. E-3 AWACS Communications Integration Program (ACIP): ACIP will provide Mobile User Objective System (MUOS) and Second-Generation Anti-Jam Tactical UHF Radio for NATO (SATURN) capability by replacing the existing Have Quick II and Demand Assigned Multiple Access (DAMA) SATCOM radios with new radios capable of communicating via multiple waveforms as a combined integration program on AWACS. Provides continued compatibility with US and Allied forces using frequency hopping UHF in support of airborne AMTI & BMC2 to CCMDs for Joint, Allied & Coalition operations by maintaining compatibility with CAF/Sister service C2 nodes and theater assets.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program's funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F.

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.

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	11.598	0.000	0.000	0.000	0.000
Current President's Budget	11.191	0.000	0.000	0.000	0.000
Total Adjustments	-0.407	0.000	0.000	0.000	0.000
• 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	-0.407	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

Change Summary Explanation

FY2023 Congressional Directed Reduction against CNU -\$1.000M; Congressional Directed Transfer -\$226.776M from PE 0207417F to 0604007F

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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 0207417F / <i>Airborne Warning and Control System (AWACS)</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>Title: E-3 Training, Support and Infrastructure (TSI)</p> <p>Description: Training, Support, and Infrastructure (TSI):- The TSI program provides continuing lab operations and maintenance support for AWACS modernization and enhancement across the enterprise. TSI will implement realignment of management responsibility of the AWACS Integration and Test Support (AITS) labs to allow for continuing Foreign Military Sales (FMS) E-3 AWACS program test requirements and for US and FMS E-3 Sustainment requirements. Continuing activities include managing the AWACS Development Test and Evaluation (DT&E) infrastructure and tracking and monitoring the AWACS support equipment and program Government Furnished Property. TSI will continue to manage the cost, schedule, and performance contract of the AITS lab until EOY 2024, at which time a full transition of the AITS lab to FMS will be complete. Currently the overall DT&E test infrastructure supports earlier versions of AWACS aircraft during system and sub-system testing in Seattle, WA, and Oklahoma City, OK, along with Third Party Integration support from The Boeing Company to AWACS customers in the System AITS labs. TSI does provide support to multiple Foreign Military Sales (FMS) projects on a maintenance fee basis to projects for France, Saudi Arabia and Japan efforts. Key programs include contractual management of the AWACS Avionics Integration Laboratory (AIL) integrated with the Block 40/45 Functional Group configured lab. These labs provide US, FMS, and Direct Commercial Sales customers with a configured development and qualification system and subsystem environment supporting all AWACS system.</p> <p>FY 2024 Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: N/A</p>		1.413	0.000	-
<p>Title: E-3 Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR)</p> <p>Description: Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR): Investigate and develops future capabilities of the AWACS weapon system to include but are not limited to investigation, analysis, and development to ensure that AWACS successfully integrates with joint and coalition forces in a net-centric environment. Primarily supports pre-systems acquisition in the areas of materiel solution analysis and technology development (i.e., risk reduction activities).</p> <p>FY 2024 Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement:</p>		0.000	0.000	-

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
N/A			
Title: E-3 Communication Network Upgrade (CNU) Description: Communication Network Upgrade (CNU): Provides a Link 16 capability with high-jam-resistance, high-speed, crypto-secure computer-to-computer connectivity in support of every type of military platform from from airborne assets to submarines. FY 2024 Plans: N/A FY 2024 to FY 2025 Increase/Decrease Statement: N/A	1.000	0.000	-
Title: E-3 AWACS Communications Integration Program (ACIP) Description: AWACS Communications Integration Program (ACIP) Development: Provides Mobile User Objective System (MUOS) and Second Generation Anti-Jam Tactical UHF Radio for NATO (SATURN) capability by replacing the existing Have Quick II and DAMA SATCOM radios with new radios capable of communicating via multiple waveforms as a combined integration program on AWACS. FY 2024 Plans: N/A FY 2024 to FY 2025 Increase/Decrease Statement: N/A	8.778	0.000	-
Accomplishments/Planned Programs Subtotals	11.191	0.000	-

D. Other Program Funding Summary (\$ in Millions)	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
• APAF 05 Line Item E00300: <i>E-3</i>	29.187	0.552	67.386	-	67.386	16.535	0.000	0.000	-	0.000	113.660
• APAF 05 0207417F: <i>Airborne Warning and Control System (AWACS)</i>	-	-	-	-	-	-	-	-	-	0.000	0.000
• APAF 06 Line Item 000999: <i>Initial Spares/Repair Parts</i>	-	-	-	-	-	-	-	-	-	0.000	0.000

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

E. Acquisition Strategy

The modernization of the AWACS weapon system consists of multiple capability upgrades that are developed and fielded on competitive and sole source contracts. Full and open competition is explored for all new efforts where market research indicates opportunities exist.

E-3 Material Leaders are the Milestone Decision Authority (MDA) for AWACS Programs, with the exception of the E-3 Block 40/45 Upgrade. The E-3 Block 40/45 Upgrade MDA is the Secretary of the Air Force, with authority delegated to the Assistant Secretary of the Air Force (Acquisition, Technology, and Logistics). Of note, E-3 Block 40/45 Upgrade has completed development activities, so it has no RDT&E funding and therefore not referenced in this document. The Decision Authority for current AWACS Middle Tier of Acquisition (MTA) and ACAT III programs is delegated to the E-3 Material Leaders. Air Force Life Cycle Management Center (AFLCMC) is the contracting authority for the AWACS portfolio and provides contracts, legal, and comptroller Support.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force **Date:** March 2024

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207417F / Airborne Warning and Control System (AWACS)	Project (Number/Name) 67411L / Airborne Warning & Control System (AWACS)
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Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
E-3 Communication Network Upgrade (CNU) Software Development	Various	76 SWES : Tinker AFB, OK	-	0.980	Oct 2023	-		-		-		-	0.000	0.980	-
ACIP Rapid Prototyping Alpha Phase	SS/CPFF	BAH : Lexington, MA	-	2.007	Jun 2024	-		-		-		-	0.000	2.007	-
ACIP Rapid Prototyping Gov't Furnished Equipment (GFE)	MIPR	Various : TBD	-	0.014	Jun 2023	-		-		-		-	0.000	0.014	-
ACIP Rapid Prototyping Risk Reduction Studies and Analysis	MIPR	Various : TBD	-	1.039	Aug 2023	-		-		-		-	0.000	1.039	-
ACIP Software Development	Various	76 SWES : Tinker AFB, OK	-	2.712		-		-		-		-	0.000	2.712	-
Subtotal			-	6.752		-		-		-		-	0.000	6.752	N/A

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
ACIP Test	Various	Not specified. : TBD	-	2.000	Dec 2023	-		-		-		-	0.000	2.000	-
E-3 Training, Support & Infrastructure (TSI) Systems AITS II	C/Various	Boeing : Oklahoma City, OK	-	1.413	Dec 2023	-		-		-		-	0.000	1.413	-
Subtotal			-	3.413		-		-		-		-	0.000	3.413	N/A

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
(U) Program Management Administration (PMA)	Various	AWACS Program Office : Hanscom AFB, MA	-	1.026	Dec 2023	-		-		-		-	0.000	1.026	-

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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 0207417F / Airborne Warning and Control System (AWACS)	Project (Number/Name) 67411L / Airborne Warning & Control System (AWACS)	

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

AWACS PE 0207417F	
TSI	
CNU Development	
ACIP Prototyping	

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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 0207417F / Airborne Warning and Control System (AWACS)	Project (Number/Name) 67411L / Airborne Warning & Control System (AWACS)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
AWACS PE 0207417F				
TSI	1	2023	1	2025
CNU Development	1	2023	4	2025
ACIP Prototyping	1	2023	3	2025