Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605035A *I Common Infrared Countermeasures (CIRCM)*

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	-	9.602	11.509	11.691	-	11.691	11.360	12.052	12.292	12.415	0.000	80.921
EB4: *CIRCM*	-	9.602	11.509	11.691	-	11.691	11.360	12.052	12.292	12.415	0.000	80.921

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Modernization Priorities in support of the Aircraft Survivability Equipment (ASE) program. The Common Infrared Countermeasure (CIRCM) budget line includes funding to support the development and integration of Aircraft Survivability Equipment (ASE) products onto rotary wing and fixed wing aircraft.

CIRCM (EB4)
CIRCM is the next generation lightweight, laser-based Infrared Countermeasure (IRCM) component that will interface with the Army's Common Missile Warning System (CMWS), Limited Interim Missile Warning System (LIMWS), Advanced Threat Warner (ATW), and future Improved Threat Detection System (ITDS) to defeat current and emerging missile threats that use multispectral technology for rotary-wing, tilt-rotor and small fixed-wing aircraft across the DoD. CIRCM receives an angular bearing hand-off from the MWS, employs a pointing and tracking system which acquires the handed-over threat and tracks the incoming missile during and after motor burnout. CIRCM jams the missile by using modulated laser energy in the missile seeker band, thus degrading the tracking capability of the missile and causing it to miss the aircraft. CIRCM is utilizing Open Systems Architecture which allows flexibility with software and hardware refreshes. Tech insertions, when coupled with future threat acquisition and integration, will ensure CIRCM performance to keep pace with future threats. CIRCM is part of the suite of ASE Mission Equipment for the Future Vertical Lift (FVL) platform.

The CIRCM A-Kit includes mounting hardware, wiring harnesses, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type. The CIRCM B-Kit is the mission kit (laser, pointer tracker, and controller) required to achieve near spherical coverage for an aircraft.

JUONS SO-0010 and CIRCM QRC
As a part of Phase 2a of the JUONS (SO-0010) program, the Army integrated the Department of the Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) system onto the Army and Special Operations Aircraft platforms. Due to a number of challenges, circumstances, and variables, the Army updated the ATW/CIRCM QRC and Limited Interim Missile Warning System (LIMWS) Directed Requirements (dated November 16, 2018). The updated requirements extend the utilization of ATW DoN LAIRCM on conventional Army aircraft and cancel the need for the ATW/CIRCM QRC system for the conventional Army. (It should be noted that the updated requirement maintains the need for ATW/CIRCM on the Special Operations Aircraft. Sustainment of ATW on Special Operations Aircraft were transferred to Special Operations Aircraft budget line in FY23). As a result, the Army did not acquire the ATW sensors for use in Phase 3 of the JUONS effort. Instead, the Army accelerated the procurement of the CIRCM QRC systems for use with the currently fielded CMWS in preparation for transition to the LIMWS system. As of FY25, the ATW and JUONS RDT&E efforts have been completed and aircraft deployed with JUONS have been de-modified.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605035A *I Common Infrared Countermeasures (CIRCM)*

Fiscal Year (FY) 2025 Base Research, Development, Test, and Evaluation (RDTE) funding in the amount of $11.668 million will fund A-Kit development, integration and test activities on multi-variant platforms as well as threat and vulnerability analysis.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	11.523	11.509	5.679	-	5.679
Current President's Budget	9.602	11.509	11.691	-	11.691
Total Adjustments	-1.921	0.000	6.012	-	6.012
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.500	-			
• SBIR/STTR Transfer	-0.421	-			
• Adjustments to Budget Years	-	-	6.012	-	6.012

Change Summary Explanation

Increase due to resourcing the program's Full Rate Production (FRP) Army Cost Position (ACP).

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army											Date: March 2024	
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605035A / *Common Infrared Countermeasures (CIRCM)*				Project (Number/Name) EB4 / *CIRCM*			
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**
EB4: *CIRCM*	-	9.602	11.509	11.691	-	11.691	11.360	12.052	12.292	12.415	0.000	80.921
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Modernization Priorities in support of Future Vertical Lift (FVL) platforms.

The Common Infrared Countermeasure (CIRCM) budget line funding supports continuing A-Kit development, model based systems engineering, and integration activities for rotary wing and fixed wing aircraft.

CIRCM (EB4)
CIRCM is the next generation lightweight, laser-based Infrared Countermeasure (IRCM) component that will interface with the Army's Common Missile Warning System (CMWS), Limited Interim Missile Warning System (LIMWS), Advanced Threat Warner (ATW), and future Improved Threat Detection System (ITDS) system to defeat current and emerging missile threats that use multispectral technology for rotary-wing, tilt-rotor and small fixed-wing aircraft across the Department of Defense (DoD). CIRCM receives an angular bearing hand-off from the Missile Warning System (MWS), employs a pointing and tracking system which acquires the handed-over threat and tracks the incoming missile during and after motor burnout. CIRCM jams the missile by using modulated laser energy in the missile seeker band, thus degrading the tracking capability of the missile and causing it to miss the aircraft. CIRCM is utilizing Open Systems Architecture which allows flexibility with software and hardware refreshes. Tech insertions, when coupled with future threat acquisition and integration, will ensure CIRCM performance to keep pace with future threats. CIRCM is part of the suite of Aircraft Survivability Equipment (ASE) Mission Equipment for the FVL platform.

The CIRCM A-Kit includes mounting hardware, wiring harnesses, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type. The CIRCM B-Kit is the mission kit (laser, pointer tracker, and controller) required to achieve near spherical coverage for an aircraft.

Joint Urgent Operational Needs Statement (JUONS) SO-0010 and CIRCM Quick Reaction Capability (QRC)
As a part of Phase 2a of the JUONS (SO-0010) program, the Army integrated the Department of Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) system onto the Army and Special Operations Aircraft (SOA) platforms. Due to a number of challenges, circumstances, and variables, the Army updated the ATW/CIRCM QRC and Limited Interim Missile Warning System (LIMWS) Directed Requirements (dated November 16, 2018). The updated requirements extend the utilization of ATW DoN LAIRCM on conventional Army aircraft and cancel the need for the ATW/CIRCM QRC system for the conventional Army. (It should be noted that the updated requirement maintains the need for ATW/CIRCM on the Special Operations Aircraft. Sustainment of ATW on Special Operations Aircraft were transferred to Special Operations Aircraft budget line in FY23). As a result, the Army did not acquire the ATW sensors for use in Phase 3 of the JUONS effort. Instead, the Army accelerated the procurement of the CIRCM QRC systems for use with the currently fielded CMWS in preparation for transition to the LIMWS system. As of FY25, the ATW and JUONS RDT&E efforts have been completed and aircraft deployed with JUONS have been de-modified.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Common Infrared Countermeasures (CIRCM)*	**Project (Number/Name)** EB4 / *CIRCM*

FY 2025 Base Research, Development, Test, and Evaluation (RDTE) funding in the amount of $11.691 million will fund A-Kit development, integration and test activities on multi-variant platforms as well as threat and vulnerability analysis.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: CIRCM Product Development ***Description:*** CIRCM product development, support costs, & management services ***FY 2024 Plans:*** FY 2024 RDTE Base funding supports continuing A-Kit development, model based systems engineering, and integration activities for CH-47F. Additionally, funding supports preliminary analysis for integration of ASE systems on FVL FARA and FLRAA platforms. ***FY 2025 Plans:*** FY 2025 RDTE Base funding supports continuing A-Kit development, model-based systems engineering, integration activities for multiple platform variants, and additional B-Kit test Line Replaceable Units (LRU) to support development/testing activities. Additionally, funding supports preliminary analysis for integration of ASE systems on FVL platforms. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding change is consistent with the planned lifecycle of this effort	4.570	5.956	5.831
Title: CIRCM Test & Evaluation (T&E) ***Description:*** CIRCM T&E activities ***FY 2024 Plans:*** FY 2024 RDTE Base funding supports A-Kit Integration testing for the continued work on CH-47F, as well as jamcode and software improvement testing. Supports continuing Threat & Vulnerability Analysis. ***FY 2025 Plans:*** FY 2025 RDTE Base funding supports A-Kit Integration testing for the continued work on multiple platforms, as well as jamcode and software improvement testing. Supports continuing Threat & Vulnerability Analysis. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding change is consistent with the planned lifecycle of this effort	5.032	5.553	5.860
Accomplishments/Planned Programs Subtotals	9.602	11.509	11.691

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Common Infrared Countermeasures (CIRCM)*	**Project (Number/Name)** EB4 / *CIRCM*

C. 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
• AZ3537: *Common Infrared Countermeasures (CIRCM)*	272.262	261.384	257.854	-	257.854	251.838	251.605	251.155	253.671	2,075.106	3,874.875

Remarks

D. Acquisition Strategy

The December 28, 2011, Defense Acquisition Executive (DAE) Acquisition Decision Memorandum (ADM) authorized entry into the Technology Maturation and Risk Reduction (TMRR) phase, designated the program a pre-Major Defense Acquisition Program (MDAP), and approved the updated exit criteria. The August 25, 2015, DAE ADM authorized entry into the Engineering and Manufacturing Development (EMD) phase and designated the program as a MDAP. The EMD contract was awarded to Northrop Grumman Systems Corporation (NGSC) on August 28, 2015. The EMD contract includes priced options for Other Platform A-Kit Development, A-Kit Engineering Support, Low Rate Initial Production (LRIP) 1 and 2 Prototypes (Hardware and Installs), LRIP 1 and 2 Engineering and Test Support, Software Technical Data Package (TDP), Navy funded requirements, and Defense Exportability Features (DEF). CIRCM MS C was approved September 14, 2018, the LRIP and Engineering Support options were exercised and the program entered the Production & Deployment phase with First Unit Equipped (FUE) achieved in the second quarter of FY 2020. During the Milestone C approval process, the Chief of Staff of the Army directed funding be increased beginning in FY 2020 to accelerate CIRCM production, Initial Operational Test (IOT) and to field one Combat Aviation Brigade (CAB) per year. A Full Rate Production (FRP) Decision was approved April 13, 2021 and a five year Indefinite Delivery Indefinite Quantity (IDIQ) contract was awarded to NGSC on April 30, 2021 for up to 596 B-Kits with options for Engineering Services, Repairs, and Contractor Logistics Support services. The program met the Initial Operational Capability (IOC) threshold date of September 2022. The program plans to award a new five year IDIQ contract to continue B-Kit production in FY26.

Due to the urgency of addressing the Size, Weight, Power, and Cooling (SWaP-C) issues related to the Phase 2a JUONS SO-0010 DoN LAIRCM initial materiel solution, the Army approved a Directed Requirement for the Phase 3 ATW/CIRCM QRC (requirement updated in November 2018). The updated requirements extend the utilization of ATW DoN LAIRCM on conventional Army aircraft and cancel the need for the ATW/CIRCM QRC system for the conventional Army. (It should be noted that the updated requirement maintains the need for ATW/CIRCM on the Special Operations Aircraft. Sustainment of ATW on Special Operations Aircraft will transfer to Special Operations Aircraft budget line in FY23). As a result, the Army will no longer acquire the ATW sensors for use in Phase 3 of the JUONS effort. Instead, the Army accelerated the procurement of the CIRCM QRC systems for use with the currently fielded CMWS in preparation for transition to the LIMWS system.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Common Infrared Countermeasures (CIRCM)*	Project (Number/Name) EB4 / *CIRCM*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering Program Management	Various	Various : -	34.522	1.300	Nov 2022	1.032	Nov 2023	1.070	Nov 2024	-		1.070	Continuing	Continuing	Continuing
		Subtotal	34.522	1.300		1.032		1.070		-		1.070	Continuing	Continuing	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Non-recurring Engineering (NRE) - Multi Platform A-Kit Development & Integration	C/CPFF	Various : -	111.776	3.091	Jun 2023	3.184	Jun 2024	2.590	Jun 2025	-		2.590	Continuing	Continuing	Continuing
Other - Threat Management	Various	Various : -	38.730	0.600		1.740		2.171		-		2.171	Continuing	Continuing	Continuing
		Subtotal	150.506	3.691		4.924		4.761		-		4.761	Continuing	Continuing	N/A

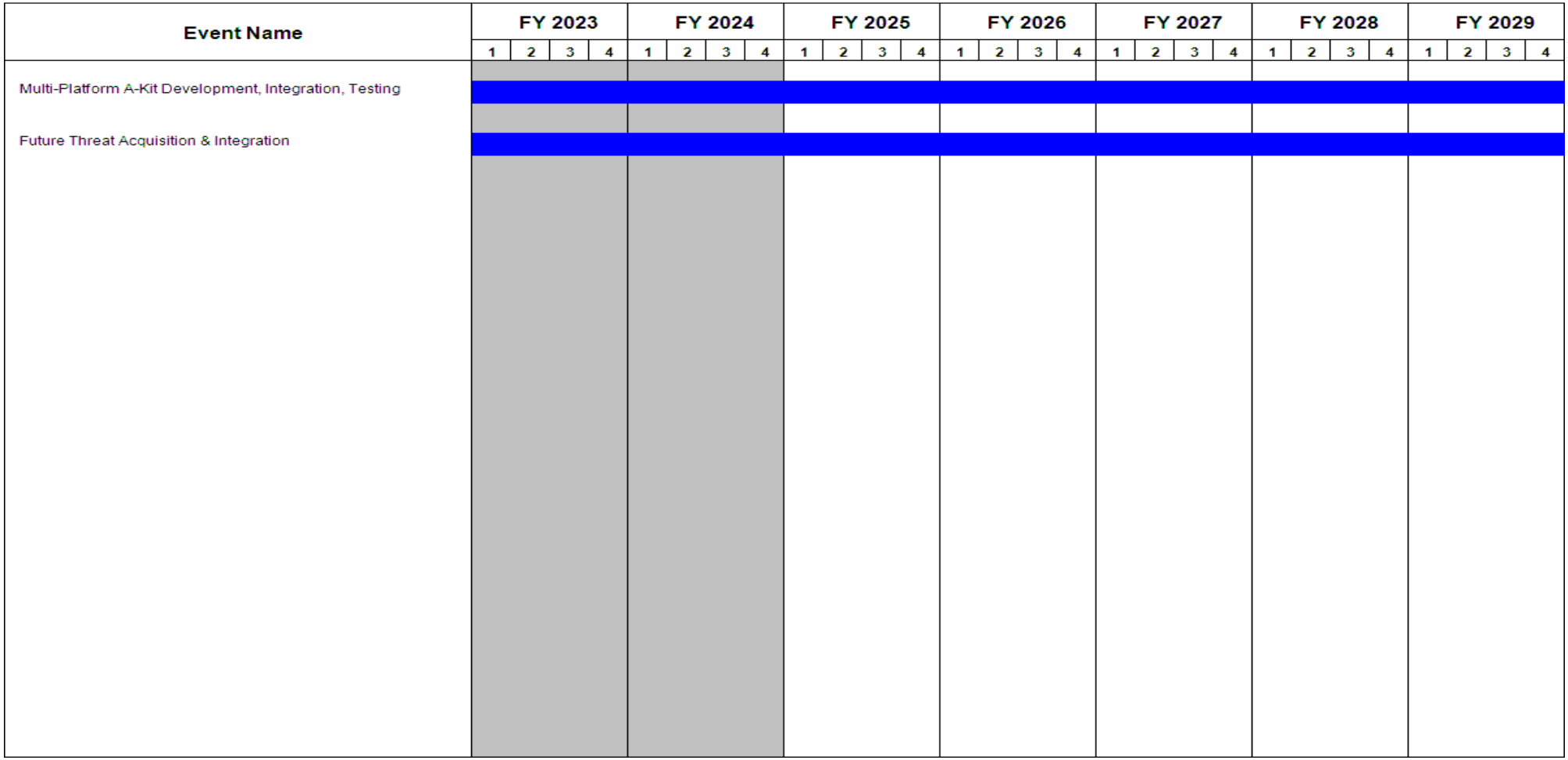
Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government System Test and Evaluation	Various	Various : -	155.391	3.611	Apr 2023	5.553	Apr 2024	5.860	Apr 2025	-		5.860	Continuing	Continuing	Continuing
Other Testing - Test Support	Various	Various : -	38.682	1.000		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	194.073	4.611		5.553		5.860		-		5.860	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	379.101	9.602		11.509		11.691		-		11.691	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Common Infrared Countermeasures (CIRCM)*	**Project (Number/Name)** EB4 / *CIRCM*



Note

none

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Common Infrared Countermeasures (CIRCM)*	**Project (Number/Name)** EB4 / *CIRCM*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Multi-Platform A-Kit Development, Integration, Testing	1	2015	4	2031
Engineering & Manufacturing Development (EMD) Phase	4	2015	4	2018
Developmental Test Activity	1	2016	4	2018
Prototyping	1	2016	1	2018
Reliability Demonstration Test (RDT)	2	2018	4	2018
Initial Operational Test and Evaluation (IOT&E)	3	2019	1	2020
Future Threat Acquisition & Integration	1	2020	4	2050