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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

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 0401130F / <i>C-17 Aircraft (IF)</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	11.653	16.360	25.387	0.000	25.387	0.000	0.000	0.000	0.000	0.000	53.400
672569: <i>C-17A Aircraft</i>	-	11.653	16.360	25.387	0.000	25.387	0.000	0.000	0.000	0.000	0.000	53.400
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national security strategy and constitutes the most responsive means of meeting mobility requirements. Specific tasks associated with the airlift mission include deployment, employment, sustaining support, retrograde, and combat redeployment. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during air/land operations. The C-17 will perform its airlift mission well into this century.

C-17 Research, Development, Test & Evaluation (RDT&E) funding efforts support, but are not limited to: Aircraft performance improvements, aircraft mission execution and airspace access mandates (i.e., Communications/Navigation Improvements); flight test activities and facilities; development of solutions for obsolescence and safety of flight issues; systems engineering/program support; support for avionics laboratories; software development, test and integration; block development/change management; developments of solutions for needed upgrades to combat obsolescence and safety of flight issues; and proposal preparation for new projects. In FY23, funding efforts will include Roll-On Conference Capsule (ROCC) and Beyond Line of Sight (BLOS).

This funding includes Rapid Global Mobility (RGM) platform-related rapid capability development process activities including early planning, analysis and systems engineering activities which provide linkages between operational needs, system performance requirements, technology needs and opportunities, potential lifecycle costs and enabling the technical foundation for material development.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver C-17 weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2021 \$0.683 million was expended for civilian pay expenses in this program element, and in FY 2022 \$0.695 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 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	9.935	16.360	0.000	0.000	0.000
Current President's Budget	11.653	16.360	25.387	0.000	25.387
Total Adjustments	1.718	0.000	25.387	0.000	25.387
• Congressional General Reductions	-0.018	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	1.940	0.000			
• SBIR/STTR Transfer	-0.260	0.000			
• Other Adjustments	0.056	0.000	25.387	0.000	25.387

Change Summary Explanation

FY 2021 funding was increased by a net total of \$1.718 million which included a \$1.940 million Below Threshold Reprogramming increase for BLOS efforts and a decrease of \$0.260 million for Small Business Innovation Research.

The FY 2022 President's Budget submittal did not reflect FY 2023 through FY 2026 funding. Therefore, an explanation of the change between the two budget positions for FY2023 cannot be made in a relevant manner.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Title: Beyond Line of Sight (BLOS)	10.327	15.434	23.721
Description: Beyond Line-Of-Sight (BLOS) modernization modification is a development, integration, and retrofit program for C-17 communications. BLOS modifies and improves hardware and software for voice and data communications on the C-17. The program will modify both integrated aircraft avionics as well as back-end mission communications and could utilize both military and commercial satellite systems to extend communication ranges. The current efforts include but are not limited to Aero-I/Aero-H modernizations and Comm Mod. It includes support for on-going flight test, software labs, and system engineering.			
FY 2022 Plans: BLOS effort continues with major design milestones occurring for efforts related to Test & Evaluation, Lab H/W & S/W Qualification.			
FY 2023 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
BLOS program efforts continue with Test & Evaluation activities and certification efforts, as well as TO verification and training, aircraft cyber assessments and quick reaction support/test activities. FY 2022 to FY 2023 Increase/Decrease Statement: Funding increase due ramp-up in flight test, software labs, system engineering and engineering/acquisition studies not related to requirements generation.			
Title: Roll-On Conference Capsule (ROCC) Description: ROCC is a program to replace current Silver Bullet Capsules and includes development/design. Effort will allow US Government senior leaders and staff to work, communicate, and rest in airworthy capsules during long range missions into threat areas, with the protection of the C-17A Globemaster III's defensive systems capability. Specifically, the development phase of the ROCC, (formerly referred to as the Silver Bullet Replacement (SBR) program) will require non-recurring engineering, manufacture of the first article and testing. Support for flight test, software labs, system engineering, program management and engineering/acquisition studies not related to requirements generation are included in the overall cost. FY 2022 Plans: Continuation of ROCC development efforts to include flight test, software labs, system engineering, program management and engineering/acquisition studies support. FY 2023 Plans: Continuation of ROCC development efforts to include mitigation actions for head injury risk and seat structure risk, integration test, software labs, system engineering, and certification activities. FY 2022 to FY 2023 Increase/Decrease Statement: Funding increase due to ramp-up in final development efforts and performance verification efforts.	1.326	0.926	1.666
Accomplishments/Planned Programs Subtotals	11.653	16.360	25.387

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF 05 Line Item C01700: C-17A	44.798	59.570	152.009	-	152.009	141.563	90.318	123.135	144.831	0.000	756.224
• APAF 07 Line Item C01700: C-17A	0.000	0.000	-	-	-	-	-	-	-	0.000	0.000
• APAF 06 Line Item 000999: <i>Initial Spares/Repair Parts</i>	47.774	21.090	10.707	-	10.707	19.620	31.092	31.603	32.288	0.000	194.174

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

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF 03 Line Item 834070: <i>Mobility Command and Control</i>	-	-	-	-	-	-	-	-	-	0.000	0.000

Remarks

E. Acquisition Strategy

The C-17 Acquisition Strategy is based on several separate contracts to support the entire scope of the C-17 weapon system. Globemaster Operational Enhancement (GLOBE) is an indefinite delivery, indefinite quantity (IDIQ) contract used to purchase services and research articles (through delivery orders) to support all RDT&E with our prime contractor. In addition, purchase orders are used to support flight test activities within the projects at Edwards AFB. Additional contract vehicles could be utilized as required.

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401130F / C-17 Aircraft (IF)	Project (Number/Name) 672569 / C-17A Aircraft
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FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
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

C-17	
Beyond Line of Sight (BLOS) (ACAT III)	
Roll-On Conference Capsules (ROCC) (ACAT III)	

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401130F / C-17 Aircraft (IF)	Project (Number/Name) 672569 / C-17A Aircraft
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
C-17				
Beyond Line of Sight (BLOS) (ACAT III)	1	2021	3	2023
Roll-On Conference Capsules (ROCC) (ACAT III)	1	2021	2	2023