

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401319F / VC-25B
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------

COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	1,026.868	713.633	757.923	800.889	0.000	800.889	584.585	513.587	308.076	16.149	0.000	4,721.710
655250: VC-25B	1,026.868	713.633	757.923	800.889	0.000	800.889	584.585	513.587	308.076	16.149	0.000	4,721.710
Quantity of RDT&E Articles	2	-	-	-	-	-	-	-	-	-	-	-

Program MDAP/MAIS Code: 425

Note

FY10-14 Prior Years Funding \$27.29M was executed in PE 0401314F, BPAC 675355

A. Mission Description and Budget Item Justification

The VC-25B Program, formerly known as the Presidential Aircraft Recapitalization (PAR) Program, will replace the Presidential VC-25A fleet which faces capability gaps, rising maintenance costs, and parts obsolescence as it ages beyond 30 years. The VC-25B Program Office will deliver a new fleet of aircraft to meet the requirements for the President to execute the duties of Head of State, Chief Executive, and Commander-in-Chief. The VC-25B Program will uniquely modify two Boeing 747-8 commercial aircraft to provide the President, staff, and guests with safe and reliable air transportation with the equivalent level of communications capability and security available in the White House. The modifications to the 747-8 aircraft will include an electrical power upgrade with dual Auxiliary Power Units that are usable in flight, a mission communication system, a work and rest environment, an executive interior, military avionics, a self-defense system, autonomous enplaning and deplaning, and autonomous baggage loading. No significant changes to the existing VC-25A Concept of Operations or Concept of Employment are expected.

In August 2012, the Defense Acquisition Executive (DAE), as the VC-25B Milestone Decision Authority, approved the Materiel Development Decision. The Capability Development Document (CDD) was validated by the Joint Requirements Oversight Council in November 2014. In January 2015, the Secretary of the Air Force's Determination and Findings designated the Boeing 747-8 aircraft as the airframe platform, and the DAE's Acquisition Decision Memorandum authorized Pre-Milestone B (Pre-MS B) contracts aimed at improving affordability and reducing program execution risk. In February 2015, the Assistant Secretary of the Air Force for Acquisition approved a Justification and Approval designating Boeing as the sole source for Pre-MS B activities; and Post-MS B design, integration, modification, and test activities. The DAE approved the initial acquisition strategy in September 2015. MS B certification occurred in September 2016. In March 2017, the White House reaffirmed the minimum set of requirements necessary to meet Presidential mission needs; these requirements are codified in the March 2017 CDD. The DAE approved the updated acquisition strategy and the Acquisition Program Baseline (APB) in December 2018.

This budget supports Post-MS B design, integration, modification, and test of two aircraft to make them Presidential mission ready. In FY19, the program completed Preliminary Design (PD) and continued the Engineering and Manufacturing Development (EMD) initial activities including design and integration. In FY20 and FY21, the program will continue EMD activities to include design, integration, modification, and test, as well as begin Product Support (PS) activities.

Funds may be used to lease test equipment, as well as address emerging and short-notice Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
----------------------------------------------------------------------------	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401319F / VC-25B
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------

This program element may include necessary civilian pay expenses required to manage, execute, and deliver the VC-25B system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F.

This program is in Budget Activity 5, System Development an Demonstration (SDD); however, it will not enter full rate production as stated below.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	657.932	757.923	718.324	0.000	718.324
Current President's Budget	713.633	757.923	800.889	0.000	800.889
Total Adjustments	55.701	0.000	82.565	0.000	82.565
• 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	79.300	0.000			
• SBIR/STTR Transfer	-23.599	0.000			
• Other Adjustments	0.000	0.000	82.565	0.000	82.565

Change Summary Explanation

The VC-25B program received FY19 reprogramming funds in the amount of \$79.3M to support the budget with the APB. An additional \$40M of reprogramming was approved in December 2019 and is not reflected in the FY19 totals throughout this document.

FY19 funding was reduced by \$23.599M due to Small Business Innovative Research (SBIR) transfer.

FY21 additional funding adjusts program phasing to align to program execution. The total cost of the program as documented in the APB remains unchanged.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Title: VC-25B EMD, Product Support, & Program Management Administration (PMA)	712.402	755.388	795.669
Description: Execute EMD activities and accomplish PMA to support the Program Office. FY21 will continue EMD activities such as the management, detailed design, integration, modification, test/verification, certification, and product support to deliver two Presidential mission-ready VC-25B Aircraft and utilize modeling and simulation, system integration labs (SILs), and mockups to assist in design, modification, and test events.			

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
----------------------------------------------------------------------------	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401319F / VC-25B
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>FY 2020 Plans: Funds in FY 2020 were used to continue EMD activities, begin aircraft modification, begin product support activities, and support PMA.</p> <p>FY 2021 Plans: Funds in FY 2021 will continue EMD activities, aircraft modification, product support activities, as well as support PMA.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: The overall net increase in funding is due to the transition from design activities to the procurement of material for modification of the platform, as well as an increase in product support activities to support fielding in 2024.</p>			
<p>Title: VC-25B Government Test</p> <p>Description: Government test activities to prepare for, oversee, and conduct test events.</p> <p>FY 2020 Plans: Funds in FY 2020 were used to conduct test planning with Joint Interoperability Test Command (JITC), Lead Developmental Test and Evaluation Organization (LDTO), and Facilities/Ranges; as well as participate in working groups and reviews.</p> <p>FY 2021 Plans: Funds in FY 2021 will be used to continue test planning with participating test organizations and contractors and to participate in verification testing in SILs, contractor facilities and government facilities, as well as aircraft functional checkout.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: The increase in funding is due to planned growth in the level of effort required for test plan development, test execution in SILs, test execution at contractor facilities, and aircraft functional checkout.</p>	1.231	2.535	5.220
Accomplishments/Planned Programs Subtotals	713.633	757.923	800.889

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• MILCON PE 0401319F: <i>PAR Facilities</i>	166.116	86.000	-	-	-	-	-	-	-	0.000	252.116
• OPAF 03 Lineitem 843050: <i>PAR Mechanized Material Handling Equip</i>	38.590	-	-	-	-	-	-	-	-	0.000	38.590

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
----------------------------------------------------------------------------	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401319F / VC-25B
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------

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

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• OPAF 03 Lineitem 8347240: <i>PAR CCTV/Audiovisual Equipment</i>	3.005	-	-	-	-	-	-	-	-	0.000	3.005
• OPAF 03 Lineitem 837300: <i>PAR Base Comm Infrastructure</i>	-	4.010	-	-	-	-	-	-	-	0.000	4.010
• OPAF 02 823990: <i>Special Purpose Vehicles</i>	-	-	0.499	-	0.499	2.598	1.697	-	-	0.000	4.794
• O&M O&M: PE 0401319F: <i>PAR Furnishings and Equipment</i>	-	-	1.951	-	1.951	-	-	-	-	0.000	1.951

Remarks

E. Acquisition Strategy

The Defense Acquisition Executive (DAE), as the VC-25B Milestone Decision Authority, approved the initial VC-25B Acquisition Strategy in September 2015. The DAE approved the updated VC-25B Acquisition Strategy and set the APB in December 2018. The VC-25B Program will integrate technologically mature subsystems into two Government furnished, commercial Boeing 747-8 aircraft. The VC-25B Program will design, integrate, modify, and test two aircraft to make them Presidential mission ready. Boeing is the prime integrator for VC-25B development activities. The VC-25B Program has a single sole-source firm-fixed-price contract with multiple major contract modifications. Modifications include risk reduction activities, 747-8 commercial aircraft purchase, Preliminary Design (PD), Engineering and Manufacturing Development (EMD), and Product Support. The contract for risk reduction activities was awarded in January 2016. The contract modification to purchase two commercial aircraft was awarded in August 2017. The contract modification for PD was awarded in September 2017. The contract modification for EMD was awarded in July 2018. The initial contract modification for Product Support activities is expected to award in the 4th quarter of 2020.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401319F / VC-25B	Project (Number/Name) 655250 / VC-25B
--------------------------------------------------	------------------------------------------------------------------	-------------------------------------------------

Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
VC-25B Contract Activities	SS/FFP	The Boeing Company : Various	1,004.635	698.439	Oct 2018	740.364	Oct 2019	781.487	Oct 2020	-		781.487	1,287.486	4,512.411	-
Subtotal			1,004.635	698.439		740.364		781.487		-		781.487	1,287.486	4,512.411	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
VC-25B Developmental Test and Evaluation	MIPR	412 TW, JITC : Various	1.604	1.231	Dec 2018	2.535	Dec 2019	5.224	Dec 2020	-		5.224	56.849	67.443	-
Subtotal			1.604	1.231		2.535		5.224		-		5.224	56.849	67.443	N/A

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
VC-25B PMA Other Government Costs	Various	AFLCMC/WV : WPAFB, OH	7.997	10.010	Nov 2018	10.841	Nov 2019	9.881	Nov 2020	-		9.881	62.045	100.774	-
VC-25B PMA Contract Services	C/T&M	AFLCMC/WL : WPAFB, OH	12.632	3.953	Feb 2019	4.183	Feb 2020	4.297	Feb 2021	-		4.297	16.028	41.093	-
Subtotal			20.629	13.963		15.024		14.178		-		14.178	78.073	141.867	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		1,026.868	713.633	757.923	800.889	-	800.889	1,422.408	4,721.721	N/A

Remarks
 FY 2010-2014 RDT&E Funding (\$27.3M) was executed in PE 0401314F, Project 675355, BA07.

 The total program cost shown above does not reflect an approved FY19 Above Threshold Reprogramming (ATR) of \$40M.

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401319F / VC-25B	Project (Number/Name) 655250 / VC-25B
--------------------------------------------------	------------------------------------------------------------------	-------------------------------------------------

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
VC-25B				
PD	1	2019	1	2019
PDR	1	2019	1	2019
EMD	1	2019	2	2025
In-Progress Review, FY19	1	2019	1	2019
CDR	2	2020	2	2020
Aircraft Modification	2	2020	2	2024
Product Support Activities	4	2020	2	2025
Developmental Test (DT)	1	2022	4	2023
Familiarization and Operational Test (FAM/OT)	3	2024	4	2024
Required Assets Available (RAA) for Initial Operational Capability (IOC)	4	2024	4	2024
RAA for Full Operational Capability (FOC)	2	2025	2	2025