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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 0207146F / F-15EX
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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	-	91.178	100.006	56.228	0.000	56.228	0.000	0.000	0.000	0.000	0.000	247.412
670131: <i>F-15EX</i>	-	91.178	100.006	56.228	0.000	56.228	0.000	0.000	0.000	0.000	0.000	247.412
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The F-15EX is based on the 2-seat F-15QA (Qatar) configuration upgraded with USAF-only capabilities, including the Eagle Passive Active Warning and Survivability System (EPAWSS) and the F-15 Operational Flight Program (OFP) software. With two seats, it is multirole-capable and operable by one or two aircrew. F-15EX logistics, maintenance, and training will heavily leverage the existing F-15 infrastructure. Initially, F-15EX will replace F-15C and F-15D aircraft which were first produced in 1979, many of which are beyond their service life and have serious structures risks, wire chafing issues, and obsolete parts. As the replacement for the F-15C and F-15D, the F-15EX will be used predominantly in defensive and offensive counter-air missions.

The FY 2025 funding request for RDT&E supports continuing incremental funding of development activities started in prior years as well as completion of Follow-On Operational Test & Evaluation (FOT&E) test events.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2023, \$9.485M was expended for civilian pay expenses in this program element, and in FY 2024, \$13.324M is forecasted for civilian pay expenses in this program element.

FY 2020 Prior Years RDT&E funding of \$385.0M was executed in PE 0207134F (F-15E Squadrons) and is not included in this exhibit. FY 2020 RDT&E funded two F-15EX test aircraft. In FY 2021, F-15EX RDT&E efforts were continued in PE 0207146F (F-15EX).

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	83.830	100.006	56.129	0.000	56.129
Current President's Budget	91.178	100.006	56.228	0.000	56.228
Total Adjustments	7.348	0.000	0.099	0.000	0.099
• 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	9.999	0.000			
• SBIR/STTR Transfer	-2.651	0.000			
• Other Adjustments	0.000	0.000	0.099	0.000	0.099

Change Summary Explanation

FY 2023 reduction of -\$2.651M for Small Business Innovative Research (SBIR) and increase of \$9.999M for Automatic Ground Collision Avoidance System (AGCAS) Below Threshold Reprogramming (BTR).

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
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Title: F-15EX	91.178	100.006	56.228
Description: F-15EX will refresh the F-15C and F-15D fleet with new aircraft based on the F-15QA Foreign Military Sales (FMS) configuration being sold to Qatar. The program also incorporates USAF-only capabilities, including the Eagle Passive Active Warning and Survivability System (EPAWSS), the F-15 Operational Flight Program (OFF) software, and other mandates (such as, but not limited to, Global Positioning System (GPS) M-Code, Multi-Functional Information Distribution System-Joint Tactical Radio System (MIDS-JTRS), Mobile User Objective System (MUOS)/Second Generation Anti-jam Tactical UHF Radio for NATO (SATURN), and Mode V Identification Friend or Foe (IFF)).			
FY 2024 Plans: Continue aircraft test activities for military flight release of integrated weapons and cybersecurity test events. Continue non-recurring engineering (NRE) and integration development efforts, including continued incremental funding for the Automatic Ground Collision Avoidance System (AGCAS) and Flight Control Computer (FCC) development. Continue software development integration efforts, including merging F-15EX-unique software into the common F-15 OFF. Continue upgrading existing F-15 training systems and systems integration labs for F-15EX unique capabilities. Continue other non-recurring engineering activities to reduce integration risks and pursue technology insertion opportunities. Provide program support to manage and execute F-15EX efforts.			
FY 2025 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Conduct Follow-On Operational Test & Evaluation (FOT&E) on new capabilities fielding on Lot 2 and Lot 3 F-15EX aircraft (including, but not limited to, MUOS/SATURN, DTM II, and Anti-jam GPS). Continue cybersecurity test events. Continue non-recurring engineering (NRE) and integration development efforts, including continued incremental funding for the Automatic Ground Collision Avoidance System (AGCAS) and Flight Control Computer (FCC) development. Continue software development integration efforts, including merging F-15EX-unique software into the common F-15 OFP. Continue upgrading existing F-15 training systems and systems integration labs for F-15EX-unique capabilities. Provide program support to manage and execute F-15EX efforts. FY 2024 to FY 2025 Increase/Decrease Statement: Funding decreased due to fewer requirements in F-15EX development, Direct Cite Authority (DCA), and Program Management and Administration.			
Accomplishments/Planned Programs Subtotals	91.178	100.006	56.228

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
• APAF F015EX: <i>F-15EX</i>	2,735.768	2,898.039	1,808.472	-	1,808.472	60.714	-	-	-	0.000	7,502.993
• APAF 07 000075: <i>Other Production Charges</i>	-	-	40.084	-	40.084	-	-	-	-	0.000	40.084

Remarks

E. Acquisition Strategy

The Air Force initiated the F-15EX program under the Middle Tier of Acquisition Pathway to rapidly field aircraft, meeting the urgent requirement to recapitalize the divesting F-15C and F-15D fleet. In September 2022, the F-15EX program transitioned to a Major Capability Acquisition Pathway program to enable procurement of Lots 3 and beyond. As part of this transition, all assets and activities transitioned to the new Major Capability Acquisition program.

The aircraft and engine acquisitions utilize delivery order contracts with annual procurement orders; the Air Force provides F110-GE-129 General Electric Engines, APG-82 Raytheon Radars, and many Avionics Line Replaceable Units (LRUs) to the prime contractor as government furnished equipment. RDT&E efforts are primarily contracted through those same delivery order contracts.

The F-15EX design is based on the F-15QA (Qatar) configuration upgraded with USAF-only capabilities like the Eagle Passive Active Warning and Survivability System (EPAWSS) and the F-15 Operational Flight Program (OFP) software. To rapidly field the F-15EX, the USAF is focusing engineering activities on integrating existing systems and ramping up the production line capacity. Finally, logistics, maintenance, and training activities will heavily leverage the existing F-15 infrastructure.

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Appropriation/Budget Activity
3600: *Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development*

R-1 Program Element (Number/Name)
PE 0207146F / *F-15EX*

To rapidly field the F-15EX, the Air Force based its design on the F-15QA (Qatar) configuration, upgrading it with USAF-only capabilities. Thus, the Air Force is focusing engineering activities on integrating existing systems and ramping up the production line capacity. Finally, logistics, maintenance, and training activities will heavily leverage the existing F-15 infrastructure.

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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 0207146F / F-15EX				670131 / F-15EX								
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	
F-15EX Development	Various	Boeing : St Louis, MO	-	65.760	Mar 2023	63.022	Dec 2023	31.311	Dec 2024	-		31.311	0.000	160.093	-	
Subtotal			-	65.760		63.022		31.311		-		31.311	0.000	160.093	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	
Direct Cite Authority Civilian Pay	Various	AFLCMC CIV PAY : WPAFB & Robins AFBs	-	9.485	Oct 2022	13.324	Oct 2023	6.500	Oct 2024	-		6.500	0.000	29.309	-	
Subtotal			-	9.485		13.324		6.500		-		6.500	0.000	29.309	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	
Government Flight Test	Various	Various : Various	-	3.502	Mar 2023	6.304	Jan 2024	8.571	Nov 2024	-		8.571	0.000	18.377	-	
Subtotal			-	3.502		6.304		8.571		-		8.571	0.000	18.377	N/A	
Management Services (\$ 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	
Program Management Administration	Various	Various : Various	-	12.431	Feb 2023	17.356	Jan 2024	9.846	Nov 2024	-		9.846	0.000	39.633	-	
Subtotal			-	12.431		17.356		9.846		-		9.846	0.000	39.633	N/A	
Project Cost Totals			-	91.178		100.006		56.228		-		56.228	0.000	247.412	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force	Date: March 2024
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207146F / F-15EX	Project (Number/Name) 670131 / F-15EX
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		Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks
 FINANCIAL PERFORMANCE: F-15 EX is evaluated against traditional Research and Development (R&D) program expenditure benchmarks. Unlike many traditional R&D programs, however, the F-15 EX Development contract is a Fixed Price contract with progress payments. Twenty percent of incurred costs are withheld until the end of the contract, when they are liquidated. Mandatory funding obligations and progress payment withholds will cause the program to lag traditional expenditure benchmarks, painting an inaccurate portrait of overall program health.

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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 0207146F / <i>F-15EX</i>	Project (Number/Name) 670131 / <i>F-15EX</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>F-15EX</i>				
F-15EX Non-Recurring Engineering (NRE) and Integration	1	2023	4	2025
F-15EX Initial Operational Test & Evaluation (IOT&E)	1	2023	4	2023
F-15EX Full Rate Production Decision (FRPD)	3	2024	3	2024
F-15EX Required Assets Available (RAA) for Initial Operating Capability (IOC)	3	2024	3	2024
F-15EX Follow-on Operational Test & Evaluation (FOT&E)	2	2025	3	2025