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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 0207163F / <i>Advanced Medium Range Air-to-Air Missile (AMRAAM)</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	809.391	36.055	53.679	53.593	0.000	53.593	51.994	53.062	54.982	56.069	374.952	1,543.777
673777: <i>AMRAAM</i>	809.391	36.055	53.679	53.593	0.000	53.593	51.994	53.062	54.982	56.069	374.952	1,543.777
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Program MDAP/MAIS Code: 185

A. Mission Description and Budget Item Justification

The Advanced Medium Range Air-to-Air Missile (AMRAAM) is a joint Air Force/Navy, Acquisition Category 1C program with Air Force as lead service. AMRAAM is the premier all-weather, all-environment, radar guided missile with improved capabilities against very low and high-altitude targets in an electronic attack environment. The current AMRAAM variant, the AIM-120D, delivers improved performance via Global Positioning System (GPS) aided navigation; two way datalink capability for enhanced aircrew survivability and improved network compatibility; and incorporates new guidance software that improves kinematic performance and weapon effectiveness.

This Air Force/Navy program is structured in response to the Joint Service Operational Requirement Document and Mission Element Need Statement to develop an air superiority air-to-air missile with significant improvements in operational utility and combat effectiveness. The development program enhances AMRAAM capability and operational flexibility against current and projected threats, incorporates high payoff technology development, performs risk reduction activities, and investigates new variants and/or alternate missions that may use AMRAAM attributes. To maximize effectiveness of existing inventory and address findings from the field, the Navy and Air Force also develop, test, and field improvements via software upgrades into fielded missiles and/or hardware upgrades inserted into the production line.

This program supports the integration of the Advanced Medium Range Air-to-Air Missile (AMRAAM) into Air Force aircraft with analysis of Air Force unique applications, aircraft missile integration tasks, product improvement efforts including missile software upgrade development and procurement of hardware to support Air Force test and evaluation tasks.

Leverages Digital acquisition tenets of open, agile and digital. This may include providing funds to prime contractors; program office contract support; facility, security and IT upgrades; common component development with other weapon systems to reduce redundant costs.

The FY 2025 funding request was reduced by \$0.542 million to account for the availability of prior year execution balances.

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, or 0606398F. In FY 2023, \$0.00 were expended for civilian pay expenses in this program element and in FY 2024, \$0.00 are forecasted for civilian pay expenses in this program element.

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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	52.704	53.679	54.041	0.000	54.041
Current President's Budget	36.055	53.679	53.593	0.000	53.593
Total Adjustments	-16.649	0.000	-0.448	0.000	-0.448
• 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	-15.009	0.000			
• SBIR/STTR Transfer	-1.640	0.000			
• Other Adjustments	0.000	0.000	-0.448	0.000	-0.448

Change Summary Explanation

FY 2023 - adjustments include -8.640M on FY23-29PA reprogramming; Below threshold reprogrammings (BTR) of -5M for AIM-9X and -1.359M for Future Advanced Weapon Analysis & Prog (FAWAP) along with minor Unfunded adjustments; -1.640M for Small Business Innovative Research (SBIR)
 FY 2025 - funding request was reduced by -0.542 million to account for the availability of prior year execution balances and inflation adjustments

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: System Improvement Program (SIP)	12.547	28.998	31.578
Description: Continuation of System Improvement Program (SIP) / Risk Reduction (RR) efforts for the AMRAAM weapons system. These include systems engineering, program management, missile software and/or hardware upgrades to increase capability, survivability, lethality, as well as aircraft Operational Flight Program (OFP) updates on a recurring basis. SIP-3F will host AIM-120D SIP-3 software on AIM-120D3 hardware. AIM-120D3 SIP 4 will exploit new Form, Fit, Function (F3R) hardware to maximize missile performance. AIM-120D SIP 3 Tape 2 will address newly matured capabilities, emerging threats, and Operational Test (OT) deficiencies. AIM-120D3 SIP-5 will increase heart of the envelope performance and address an expanded threat space. Candidate Selection Process (CSP) analyzes warfighter priority deficiencies and enhancements to feed risk reduction efforts and future SIP efforts.			
FY 2024 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>Continue CSP. Continue SIP-4 software development. Complete SIP-3 Tape 2 software development with Minimum Viability Capability Release (MVCR) and enter integrated test.</p> <p>FY 2025 Plans: Continue CSP. Complete SIP-4 software development with MVCR and enter integrated test. Field SIP-3 Tape 2 software. Begin SIP-5 software development.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Cost increase from FY 2024 to FY 2025 due to correction of SIP contractual Test & Fielding activities previously being accounted for in the Test and Evaluation Major Thrust.</p>				
<p>Title: Test and Evaluation</p> <p>Description: Provides support to flight test efforts; develops test resources and equipment necessary to complete test events; provides contractor field team support personnel and services.</p> <p>FY 2024 Plans: Continue to develop and procure test resources required to meet test requirements and provide support personnel to complete AIM-120 test events.</p> <p>FY 2025 Plans: Continue to develop and procure test resources required to meet test requirements and provide support personnel to complete AIM-120 test events.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Cost decrease from FY 2024 to FY 2025 due to correction of SIP contractual Test & Fielding activities previously being accounted for in the Test and Evaluation Major Thrust.</p>		19.258	20.347	17.673
<p>Title: Aircraft Integration</p> <p>Description: Supports the integration of AIM-120 on multiple aircraft platforms as AIM-120 software/hardware is updated and as aircraft OFPs are updated.</p> <p>FY 2024 Plans: Continue integration and testing of AIM-120 on multiple aircraft platforms.</p> <p>FY 2025 Plans: Continue integration and testing of AIM-120 on multiple aircraft platforms.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement:</p>		4.250	4.334	4.342

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Cost increase from FY 2024 to FY 2025 due to inflation. Requirements remain unchanged.			
Accomplishments/Planned Programs Subtotals	36.055	53.679	53.593

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
• MPAF 02 Line Item MAMRA0: <i>Missile Procurement, Air Force</i>	371.104	701.459	446.257	-	446.257	666.014	115.480	39.889	0.000	0.000	2,340.203
• MPAF 04 Line Item 000999: <i>Initial Spares/Repair Parts</i>	3.165	2.286	2.331	-	2.331	2.359	2.400	2.451	2.499	6.080	23.571
• MPAF 04 Line Item 000999 <i>Replen: Replen Spares/Repair Parts</i>	0.925	0.950	0.971	-	0.971	0.981	0.998	1.020	1.040	0.000	6.885
• MPAF 02 Line Item 2206: <i>Weapons Procurement, Navy</i>	335.900	439.153	279.715	-	279.715	69.591	69.699	17.109	17.468	0.000	1,228.635

Remarks

E. Acquisition Strategy
AMRAAM Acquisition Strategy Report (ASR) was updated on 16 May 2018.

System Improvement Program (SIP) development efforts continually mature capabilities through software and/or hardware upgrades to maximize missile performance to address current and emerging threats. These missile performance improvements are incrementally fielded ensuring inventory viability into the future. SIP development contracts are cost type contract efforts.

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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 0207163F / <i>Advanced Medium Range Air-to-Air Missile (AMRAAM)</i>	Project (Number/Name) 673777 / <i>AMRAAM</i>
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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			
Electronic Protection Improvement Program (EPIP)	Various	Raytheon : Tucson, AZ	86.959	-		-		-		-		-	0.000	86.959	86.959
F-22 Aircraft Integration	MIPR	Wright-Patterson AFB : Dayton, OH	114.890	-		-		-		-		-	0.000	114.890	114.890
System Improvement Program (SIP)	Various	Raytheon : Tucson, AZ	276.427	8.297	Jun 2023	25.610	Jun 2024	28.090	Jun 2025	-		28.090	271.480	609.904	626.987
Aircraft Integration Support	SS/CPFF	Raytheon : Tucson, AZ	26.626	4.250	May 2023	4.335	May 2024	4.342	May 2025	-		4.342	59.792	99.345	99.345
Subtotal			504.902	12.547		29.945		32.432		-		32.432	331.272	911.098	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			
Government Test	Various	Various : Various	106.030	6.048	Jan 2023	6.878	Jan 2024	7.172	Jan 2025	-		7.172	81.611	207.739	24.552
Test Support	SS/CPFF	Raytheon : Various	171.428	13.210	Jan 2023	13.469	Jan 2024	10.501	Jan 2025	-		10.501	131.140	339.748	339.748
Subtotal			277.458	19.258		20.347		17.673		-		17.673	212.751	547.487	N/A

Remarks
 Total Cost amount consists of test cost other government agencies and small contracts not associated with the prime vendor, Raytheon. Test cost for manpower at Test Wing. Small various contracts such as Dept of Energy, MANTRAC, SURVICE, and DOTC.
 The Target Value of Contract amount consists of the small various contracts such as Dept of Energy, MANTRAC, SURVICE, and DOTC. This amount does not include the various costs sent to Test Wing for government test.

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			
Program Management Administration	Various	Various : Various	27.031	4.250	Jan 2023	3.387	Jan 2024	3.488	Jan 2025	-		3.488	46.599	84.755	0.000
Subtotal			27.031	4.250		3.387		3.488		-		3.488	46.599	84.755	N/A

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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 0207163F / <i>Advanced Medium Range Air-to-Air Missile (AMRAAM)</i>	Project (Number/Name) 673777 / AMRAAM

	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				
AMRAAM Development Program																																
AIM-120C CET IOC	■																															
AIM-120D SIP-3 Tape 2 Development	■																															
AIM-120D SIP-3 Tape 2 Test									■																							
AIM-120D SIP-3 Tape 2 FCA													■																			
AIM-120D SIP-3 Tape 2 IOC													■																			
AIM-120D3 SIP-3F FCA	■																															
AIM-120D3 SIP-3F IOC					■																											
AIM-120D3 SIP-4 Development	■																															
AIM-120D3 SIP-4 Test									■																							
AIM-120D3 SIP-4 FCA													■																			
AIM-120D3 SIP-4 IOC													■																			
AIM-120D3 SIP-5 Development									■																							
AIM-120D3 SIP-5 Test													■																			
AIM-120D3 SIP-5 FCA																	■															
AIM-120D3 SIP-5 IOC																					■											
AIM-120D3 SIP-6 Development																	■															

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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 0207163F / <i>Advanced Medium Range Air-to-Air Missile (AMRAAM)</i>	Project (Number/Name) 673777 / AMRAAM

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
AMRAAM Development Program				
AIM-120C CET IOC	1	2023	1	2023
AIM-120D SIP-3 Tape 2 Development	1	2023	2	2025
AIM-120D SIP-3 Tape 2 Test	4	2024	2	2025
AIM-120D SIP-3 Tape 2 FCA	1	2025	1	2025
AIM-120D SIP-3 Tape 2 IOC	2	2025	2	2025
AIM-120D3 SIP-3F FCA	2	2023	2	2023
AIM-120D3 SIP-3F IOC	1	2024	1	2024
AIM-120D3 SIP-4 Development	1	2023	1	2026
AIM-120D3 SIP-4 Test	1	2025	1	2026
AIM-120D3 SIP-4 FCA	4	2025	4	2025
AIM-120D3 SIP-4 IOC	1	2026	1	2026
AIM-120D3 SIP-5 Development	1	2025	3	2028
AIM-120D3 SIP-5 Test	3	2027	3	2028
AIM-120D3 SIP-5 FCA	1	2028	1	2028
AIM-120D3 SIP-5 IOC	3	2028	3	2028
AIM-120D3 SIP-6 Development	3	2027	4	2029

Note

Actual Dates:

AIM-120-D SIP-3 Tape 2 began 15 Sep 2022.

AIM-120-D3 SIP-4 Development began 01 Oct 2021.