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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 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604618F <i>I Joint Direct Attack Munition</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	0.000	6.555	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.555
653891: <i>JDAM M-Code Integration</i>	0.000	6.555	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.555
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2021 PE 0604618F, JDAM M-Code Integration was completed.

A. Mission Description and Budget Item Justification

Military Code (M-Code) receivers with Enhanced Anti-Jam (EAJ) will be developed and integrated in order to provide advanced Positioning, Navigation, and Timing (PNT) capabilities to allow operations in anti-access/area denial (A2/AD) environments. M-Code and EAJ also provide increased accuracy, better signal acquisition, and advanced security.

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 0605831F. In FY21 \$0M was expended for civilian pay expenses in this program element, and in FY22 \$0M is forecasted for civilian pay expenses in this program element.

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)	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023 Base</u>	<u>FY 2023 OCO</u>	<u>FY 2023 Total</u>
Previous President's Budget	6.806	0.000	0.000	0.000	0.000
Current President's Budget	6.555	0.000	0.000	0.000	0.000
Total Adjustments	-0.251	0.000	0.000	0.000	0.000
• 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	-0.006	0.000			
• SBIR/STTR Transfer	-0.245	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

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Change Summary Explanation

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: M-Code/Enhanced Anti-Jam (EAJ)	6.555	0.000	0.000
Description: Develop and integrate M-Code receivers with EAJ to provide advanced Positioning, Navigation, and Timing (PNT) capabilities, providing the capability to operate in adversarial anti-access/area denial (A2/AD) environments. M-Code receivers with EAJ also provides increased accuracy, better signal acquisition, and advanced security.			
FY 2022 Plans: N/A			
FY 2023 Plans: N/A			
Accomplishments/Planned Programs Subtotals	6.555	0.000	0.000

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>
• RDTE 04 0604201F: <i>PNT Resiliency</i>	-	39.742	12.010	-	12.010	-	-	-	-	0.000	51.752

Remarks

E. Acquisition Strategy

M-Code/EAJ effort uses a Family of Systems approach where the three prime weapons contractors develop receivers capable of operating in any of their AF weapons. The receivers are based on a common, internally-developed Interface Requirements Specification, Technical Requirements Document, and threat scenario. This approach uses a combination of contract types based on acquisition phase (Technology Maturation and Risk Reduction, Development, Production) and risk. The Weapons System Program Offices share a common development program element to allow flexibility in funding and planning, switching to individual PEs for receiver integration, operational testing, and production. The M-Code/EAJ Weapons Receiver Development effort leverages technology currently under development by the Global Positioning System (GPS)-D Military GPS User Equipment (MGUE) program and will provide the warfighter with unmatched capability to operate in future A2/AD environments.

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

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604618F / <i>Joint Direct Attack Munition</i>	Project (Number/Name) 653891 / <i>JDAM M-Code Integration</i>
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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

M-Code/EAJ Receivers	
M-Code/EAJ Test and Evaluation	[REDACTED]

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

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604618F / <i>Joint Direct Attack Munition</i>	Project (Number/Name) 653891 / <i>JDAM M-Code Integration</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>M-Code/EAJ Receivers</i>				
M-Code/EAJ Test and Evaluation	3	2021	3	2022