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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 0604429F / <i>Airborne Electronic Attack</i>
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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	-	5.948	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.948
655192: <i>Network & Sys -of-Sys Dev</i>	-	5.948	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.948
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Airborne Electronic Attack (AEA) System of Systems (SoS) project concentrates on the overall systems engineering, modeling and simulation, architecture and network requirements development, effectiveness assessment and requirements allocation to components and component systems of the emerging Electromagnetic Spectrum (EMS) Superiority Enterprise family. Funding supports establishment and use of virtual test capabilities for system of systems effectiveness testing/evaluation for EMS Superiority, instantiating updated Defense Planning Guidance (DPG) scenarios into digital representations suitable for supporting modeling and simulation, conducting studies and technology risk mitigation demonstrations for potential EMS Superiority components and EMS Battle Management, development planning, planning for and supporting OSD or AF directed analysis of alternatives (including working group support), and the development and maintenance of the Air Force electronic warfare capability investment strategy. These efforts are important in the development of EMS defense and attack capabilities to support Air Force and joint operations in in line with the National Defense Strategy. This project will address and resolve AF gaps/opportunities across the EW/EMS Superiority Enterprise.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver AEA SoS and EMS Superiority Enterprise capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605831F.

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 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>
Previous President's Budget	6.153	0.002	0.000	0.000	0.000
Current President's Budget	5.948	0.000	0.000	0.000	0.000
Total Adjustments	-0.205	-0.002	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	0.000	0.000			
• SBIR/STTR Transfer	-0.205	0.000			
• Other Adjustments	0.000	-0.002	0.000	0.000	0.000

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<u>Change Summary Explanation</u> No significant changes				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2019	FY 2020	FY 2021
Title: AEA System Engineering Studies & Technology Transition		2.534	0.000	0.000
Description: Apply systems engineering rigor to analyze and recommend improvements/changes to Air Force Airborne Electronic Attack (AEA) System of Systems (SoS) and Electronic Warfare (EW)/Electromagnetic Spectrum (EMS) Superiority requirements, designs, and operational concepts. Assess operational effectiveness of multiple EMS Superiority systems in both offensive and defensive roles.				
FY 2020 Plans: N/A				
FY 2021 Plans: N/A				
FY 2020 to FY 2021 Increase/Decrease Statement: N/A				
Title: AEA Capability Planning		3.414	0.000	0.000
Description: Provide capability planning to the Air Force Electronic Warfare (EW), Airborne Electronic Attack (AEA) System of Systems (SoS) and emerging EW/EMS Superiority portfolio and conduct constructive and virtual modeling and simulation and analysis management.				
FY 2020 Plans: N/A				
FY 2021 Plans: N/A				
FY 2020 to FY 2021 Increase/Decrease Statement: N/A				
Accomplishments/Planned Programs Subtotals		5.948	0.000	0.000
D. Other Program Funding Summary (\$ in Millions) N/A				

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Appropriation/Budget Activity
3600: *Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)*

R-1 Program Element (Number/Name)
PE 0604429F / *Airborne Electronic Attack*

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

Remarks

E. Acquisition Strategy

FY19 plans to use funds on multiple existing IDIQ contracts.

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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 0604429F / Airborne Electronic Attack	Project (Number/Name) 655192 / Network & Sys -of-Sys Dev
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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			
Product Development	C/CPAF	Not specified. : TBD	-	-		-		-		-		-	0.000	0.000	-
AEA system of systems engineering	C/CPFF	Various : Various	-	2.434	Dec 2018	0.000		-		-		-	0.000	2.434	-
AF EW Capability/ Development Planning	MIPR	Various : Various	-	3.114	Dec 2018	-		-		-		-	0.000	3.114	-
Subtotal			-	5.548		0.000		-		-		-	0.000	5.548	N/A

Remarks
Includes system of systems engineering; architecture development; network requirements planning; requirements refinement and development; EW assessments, including Air Force Electronic Warfare Capability Investment Strategy (AFEWCIS) roadmap development, maintenance & assessments; technology risk mitigation, DoD scenario initiation & distribution; conduct of Joint AoA (working group support and organic civilian salaries); engineering and test planning; capability planning for AF EW portfolio; conduct of constructive/virtual modeling simulation and analysis.

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			
Management Services	C/CPAF	Not specified. : TBD	-	-		-		-		-		-	0.000	0.000	-
Mission Support	Various	Various : Various	-	0.400	Dec 2018	-		-		-		-	0.000	0.400	-
Subtotal			-	0.400		-		-		-		-	0.000	0.400	N/A

Remarks
Element includes miscellaneous support to projects. Costs include travel and unique security expenses.

	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	-	5.948	0.000	-	-	-	0.000	5.948	N/A

Remarks

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

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	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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

<i>Airborne Electronic Attack</i>																												
DoD Planning Scenarios Suppressor updates																												
Support EW Assessments																												
AEA SoS Suppressor Improvements																												
AF EW Investment Strategy																												
Conduct Joint AEA Development and Planning																												

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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Airborne Electronic Attack</i>				
DoD Planning Scenarios Suppressor updates	1	2019	4	2019
Support EW Assessments	1	2019	2	2020
AEA SoS Suppressor Improvements	1	2019	4	2019
AF EW Investment Strategy	1	2019	4	2019
Conduct Joint AEA Development and Planning	1	2019	4	2019