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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605180N / TACAMO MODERNIZATION
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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	48.644	484.198	213.743	775.316	-	775.316	778.716	737.143	591.396	461.015	Continuing	Continuing
3259: <i>TACAMO Recap</i>	48.644	484.198	213.743	775.316	-	775.316	778.716	737.143	591.396	461.015	Continuing	Continuing

A. Mission Description and Budget Item Justification

The E-6 Take Charge and Move Out (TACAMO) Recapitalization Program (E-XX) provides for air vehicle replacement and mission systems modernization to augment and eventually replace the aging E-6B aircraft for the TACAMO mission. The TACAMO mission provides an airborne capability for survivable, endurable and reliable airborne command, control and communications between the United States (U.S.) National Command Authority (NCA) and the U.S. strategic forces. This mission is critical in the deterrence and management of a nuclear conflict. A dedicated communications platform, TACAMO aircraft features the ability to communicate on virtually every radio frequency band from very low frequency (VLF) up through advanced extremely high frequency (AEHF) using a variety of modulations, encryptions and networks, minimizing the likelihood an emergency message being jammed by an enemy. Continued effort is needed to perform modeling and simulation, requirements refinement, contract development, technical evaluations and non-recurring engineering. Funding is for requirements development, modernization of mission systems, reducing integration risk on aircraft, increasing reliability and maintainability, cyber resilience, procurement of test assets, secure program facilities and Engineering & Manufacturing Development (EMD) contract development for Milestone B (MSB) program initiation decision. EMD competitive contract scheduled to award 1QFY2025.

B. Program Change Summary (\$ in Millions)

	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>
Previous President's Budget	502.493	213.743	797.539	-	797.539
Current President's Budget	484.198	213.743	775.316	-	775.316
Total Adjustments	-18.295	0.000	-22.223	-	-22.223
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-18.295	0.000			
• Program Adjustments	0.000	0.000	-20.511	-	-20.511
• Rate/Misc Adjustments	0.000	0.000	-1.712	-	-1.712

Change Summary Explanation

FY 2025 has been reduced since the previous President's budget submission for the following Program Adjustment:
 Reduction includes \$17.4M to align with component cost estimate and \$4.8M in miscellaneous rate adjustments.

Schedule: The R4 schedule has been updated to reflect the current program schedule.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605180N / TACAMO MODERNIZATI ON				Project (Number/Name) 3259 / TACAMO Recap			
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
3259: TACAMO Recap	48.644	484.198	213.743	775.316	-	775.316	778.716	737.143	591.396	461.015	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The E-6 Take Charge and Move Out (TACAMO) Recapitalization Program (E-XX) provides for air vehicle replacement and mission systems modernization to augment and eventually replace the aging E-6B aircraft for the TACAMO mission. The TACAMO mission provides an airborne capability for survivable, enduring and reliable airborne command, control and communications between the United States (U.S.) National Command Authority (NCA) and the U.S. strategic forces. This mission is critical in the deterrence and management of a nuclear conflict. A dedicated communications platform, TACAMO aircraft features the ability to communicate on virtually every radio frequency band from very low frequency (VLF) up through advanced extremely high frequency (AEHF) using a variety of modulations, encryptions and networks, minimizing the likelihood an emergency message being jammed by an enemy. Continued effort is needed to perform modeling and simulation, requirements refinement, contract development, technical evaluations and non-recurring engineering. Funding is for requirements development, modernization of mission systems, reducing integration risk on aircraft, increasing reliability and maintainability, cyber resilience, procurement of test assets, secure program facilities and Engineering & Manufacturing Development (EMD) contract development for Milestone B (MSB) program initiation decision. EMD competitive contract scheduled to award 1QFY2025.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Product Development	431.782	160.174	702.755	0.000	702.755
Articles:	3	-	-	-	-
FY 2024 Plans: FY 2024 will continue funding for VLF development, airframe modification, engineering contracts, and EMD contract development.					
Airframe HW Development is for additional initial spares for test assets procured in FY2023.					
Air Vehicle Integration comprises non-recurring engineering (NRE) to continue the development and testing necessary for design changes and modifications to the C-130J-30 baseline configuration and the test aircraft. This includes power generation systems, cooling, flight deck avionics, Electric Magnetic Pulse (EMP) hardening, cyber hardening, and structural modifications to support integration of E-XX mission system equipment.					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p>Very Low Frequency (VLF) Hardware Development includes modernization of legacy E-6B High Power Transmit System power amplifier and trailing wire antenna assemble hardware for increased performance, reliability and maintainability, reduced weight and volume, and lower life cycle costs.</p> <p>FY 2025 Base Plans: FY 2025 funding provided to support full year of Engineering and Manufacturing Development (EMD) contract after award in the first quarter of FY 2025 to include Government Furnished Equipment (GFE).</p> <p>Air Vehicle Integration comprises non-recurring engineering (NRE) to continue the development and testing necessary for design changes and modifications to the C-130J-30 baseline configuration and the test aircraft. This includes power generation systems, cooling, flight deck avionics, Electric Magnetic Pulse (EMP) hardening, cyber hardening, and structural modifications to support integration of E-XX mission system equipment.</p> <p>Very Low Frequency (VLF) Hardware Development includes modernization of legacy E-6B High Power Transmit System power amplifier and trailing wire antenna assemble hardware for increased performance, reliability and maintainability, reduced weight and volume, and lower life cycle costs and structural modifications to support integration of E-XX mission systems equipment.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: FY 2025 increased for the award of the Engineering Manufacturing and Development (EMD) contract in 1st quarter FY 2025. This increase also includes estimated 3.5% SBIR tax of \$27.1M.</p> <p>Schedule: The R4 schedule has been updated to reflect the current program schedule.</p>					
<p>Title: Program Management and Support</p> <p align="right">Articles:</p> <p>FY 2024 Plans: Funding provided to support the need for technical expertise and support for development efforts of mission systems, VLF system modernization, airframe modification design, mission systems integration, program</p>	52.416	53.569	72.561	0.000	72.561
	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p>management, engineering, test, training, and logistics tasks for E-XX technical and programmatic reviews in preparation for Preliminary Design Review (PDR) and Critical Design Review (CDR).</p> <p>FY 2025 Base Plans: FY25 supports the first year of the EMD contract. Funding is needed for technical expertise and support for development efforts of mission systems, VLF system modernization, airframe modification design, mission systems integration, program management, engineering, test, training, and logistics tasks for E-XX technical and programmatic reviews in preparation for Preliminary Design Review (PDR) and Critical Design Review (CDR).</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: FY 2025 increased for the award of the Engineering Manufacturing and Development (EMD) contract in 1st quarter FY 2025.</p>					
Accomplishments/Planned Programs Subtotals	484.198	213.743	775.316	0.000	775.316

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

N/A

Remarks

D. Acquisition Strategy

Research, Development, Test & Evaluation, Navy (RDT&E N) Project Unit 3259 funds E-XX Program requirements for analyses, requirements development, test asset procurement (C-130J-30 aircraft), Airframe/VLF NRE contracts, and EMD contract. The mission concept of operations, system capability requirements, and material solution will continue design maturation per the acquisition strategy and the continued program life cycle cost estimates in support of program milestone decision reviews. Execution of NRE contracts for Airframe and VLF continue. EMD Mission Systems Integration awards in first quarter FY 2025 with Preliminary Design Review (PDR) and Critical Design Review (CDR) soon after award.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

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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			
Primary HW Development - Airframe	C/FPIF	Lockheed Martin : Marietta, GA	0.000	343.287	Mar 2023	12.215	Jan 2024	0.000	Jan 2025	-		0.000	Continuing	Continuing	Continuing
Primary HW Development - Air Vehicle Integration	C/CPFF	Lockheed Martin : Marietta, GA	11.796	49.146	Mar 2023	76.732	Nov 2023	15.225	Nov 2024	-		15.225	Continuing	Continuing	Continuing
Primary HW Development - VLF	C/CPFF	Collins Aerospace : Richardson, TX	9.287	39.349	Nov 2022	71.227	Nov 2023	15.240	Nov 2024	-		15.240	Continuing	Continuing	Continuing
Primary HW Development - EMD	C/CPIF	TBD : TBD	0.000	0.000		0.000		659.963	Nov 2024	-		659.963	Continuing	Continuing	Continuing
GFE	Various	Various : Various	0.000	0.000		0.000		12.327	Dec 2024	-		12.327	Continuing	Continuing	Continuing
Subtotal			21.083	431.782		160.174		702.755		-		702.755	Continuing	Continuing	N/A

Remarks

FY25 Air Vehicle Integration includes non-recurring engineering (NRE) to continue the development and testing necessary for design changes and modifications to the C-130J-30 baseline configuration and the test aircraft. This includes power generation systems, cooling, flight deck avionics, Electric Magnetic Pulse (EMP) hardening, cyber hardening, and structural modifications to support integration of E-XX mission system equipment. Decrease reflects Air Vehicle Integration responsibility moving to EMD.

FY 2025 Very Low Frequency (VLF) Hardware Development includes modernization of legacy E-6B High Power Transmit System power amplifier and trailing wire antenna assemblies hardware for increased performance, reliability and maintainability, reduced weight and volume, and lower life cycle costs. Decrease reflects VLF Integration responsibility moving to EMD.

FY 2025 EMD Hardware Development funds efforts for the design, architecture, and integration of a cyber-resilient communications systems to transform a modified C-130J-30 into E-XX through an Engineering & Manufacturing Development Contract (EMD) awarded in first quarter 2025. Included in these efforts are Government and Contractor Systems Integration Laboratories, Contractor System Test Integration Laboratory, Government Furnished Property (National Security Association approved encryption devices, Ultra High Frequency modems), High Frequency and the Advanced Extremely High Frequency solutions, Top Secret network development and building required infrastructure includes power generation systems, cooling, flight deck avionics, Electric Magnetic Pulse (EMP) hardening, cyber hardening, and structural modifications to support integration of E-XX mission system equipment. Contract is competitive. This also includes estimated 3.5% SBIR tax of \$27.1M.

FY25 Government Furnished Equipment to be provided for the EMD contract.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

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Support (\$ 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			
Development Support	WR	NAWCAD : Patuxent River	1.687	11.145	Nov 2022	11.390	Nov 2023	5.663	Nov 2024	-		5.663	Continuing	Continuing	Continuing
Development Support	Various	Various : Various	4.920	8.648	Nov 2022	8.838	Nov 2023	5.810	Nov 2024	-		5.810	Continuing	Continuing	Continuing
Integrated Logistics Support	WR	NAWCAD : Patuxent River	2.063	4.411	Nov 2022	4.508	Nov 2023	8.358	Nov 2024	-		8.358	Continuing	Continuing	Continuing
Integrated Logistics Support CSS	Various	Various : Various	0.520	2.372	Nov 2022	2.424	Nov 2023	2.470	Nov 2024	-		2.470	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWCAD : Patuxent River, MD	10.408	12.942	Nov 2022	13.227	Nov 2023	19.316	Nov 2024	-		19.316	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWCAD : Orlando, Florida	0.794	0.801	Nov 2022	0.819	Nov 2023	1.998	Nov 2024	-		1.998	Continuing	Continuing	Continuing
Contractor Engineering Support	Various	Various : Various	0.253	1.139	Nov 2022	1.164	Nov 2023	3.872	Nov 2024	-		3.872	Continuing	Continuing	Continuing
Subtotal			20.645	41.458		42.370		47.487		-		47.487	Continuing	Continuing	N/A

Remarks
Increase in funding is necessary to support EMD contract award scheduled for first quarter FY 2025.

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			
Developmental Test & Evaluation (DT&E)	WR	NAWCAD : Pax River, MD.	1.545	2.086	Nov 2022	2.132	Nov 2023	10.055	Nov 2024	-		10.055	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	COMOPTEVFOR : Norfolk, VA	0.117	0.314	Nov 2022	0.321	Nov 2023	0.987	Nov 2024	-		0.987	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NAWCWD : China Lake, CA	0.174	0.265	Nov 2023	0.271	Nov 2023	0.276	Nov 2024	-		0.276	Continuing	Continuing	Continuing
Subtotal			1.836	2.665		2.724		11.318		-		11.318	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605180N / TACAMO MODERNIZATI ON	Project (Number/Name) 3259 / TACAMO Recap
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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			

Remarks
Increase Test and Evaluation (T&E) funding is necessary to support EMD contract award scheduled for first quarter of FY 2025 and to support System Readiness Review 2 preparation, planning for System Integration Laboratory testing, and supporting training the tester development.

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			
Government Engineering Support	WR	NAWCAD : Patuxent River, MD	0.835	2.500	Nov 2022	2.555	Nov 2023	2.267	Nov 2024	-		2.267	Continuing	Continuing	Continuing
Program Management Support	WR	NAWCAD : Patuxent River, MD	2.209	3.538	Nov 2022	3.616	Nov 2023	6.644	Nov 2024	-		6.644	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	TBD : Patuxent River, MD	1.994	2.062	Nov 2022	2.107	Nov 2023	4.645	Nov 2024	-		4.645	Continuing	Continuing	Continuing
Travel	Various	Various : Various	0.042	0.193	Oct 2022	0.197	Oct 2023	0.200	Oct 2024	-		0.200	Continuing	Continuing	Continuing
Subtotal			5.080	8.293		8.475		13.756		-		13.756	Continuing	Continuing	N/A

Remarks
Increase in Program Management funding is necessary to support major EMD contract award scheduled for first quarter FY 2025.

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	48.644	484.198	213.743	775.316	-	775.316	Continuing	Continuing	N/A

Remarks

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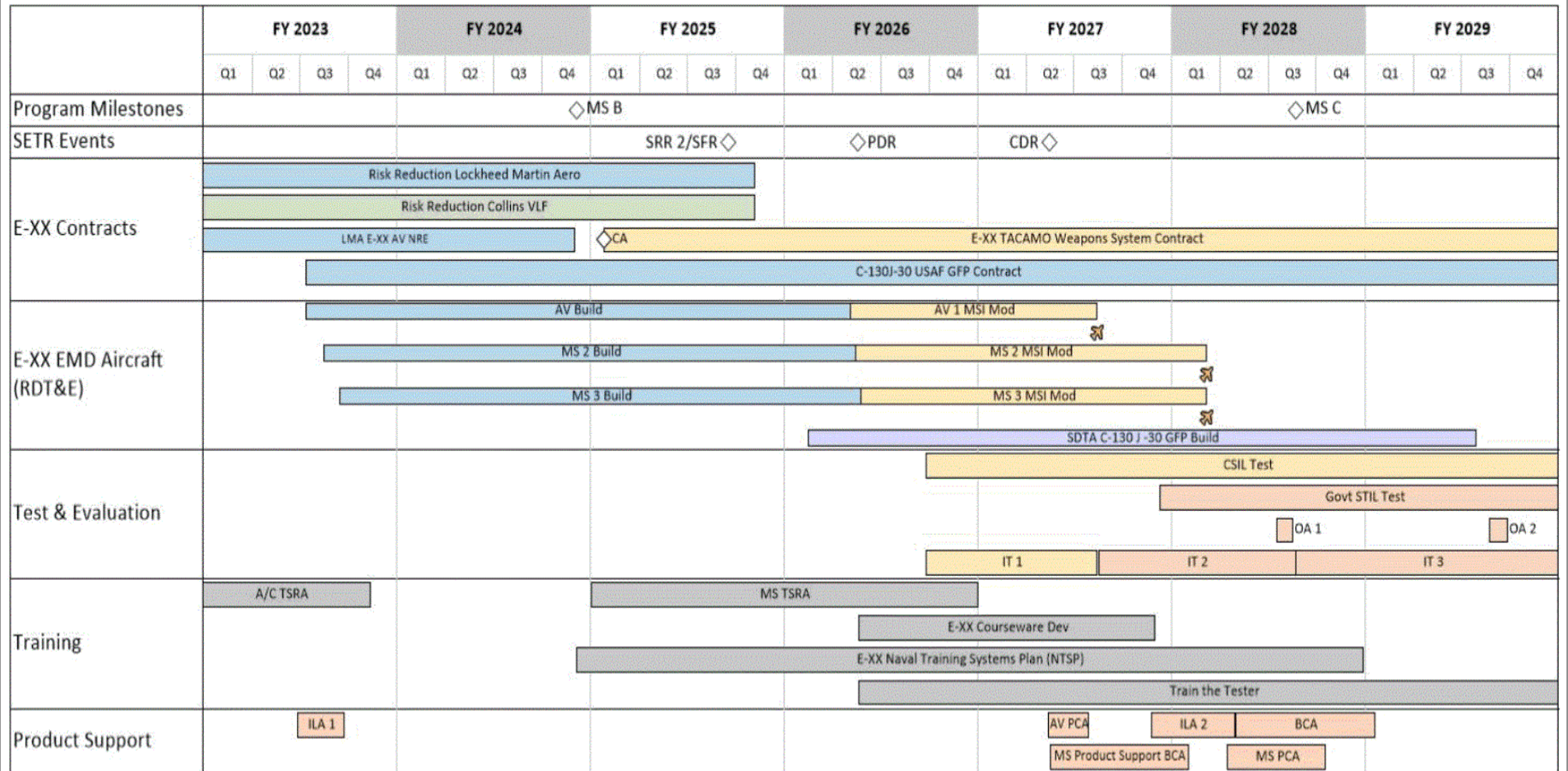
Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy

Date: March 2024

Appropriation/Budget Activity
1319 / 5

R-1 Program Element (Number/Name)
PE 0605180N / TACAMO MODERNIZATI
ON

Project (Number/Name)
3259 / TACAMO Recap



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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605180N / TACAMO MODERNIZATI ON	Project (Number/Name) 3259 / TACAMO Recap

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3259				
Acquisition Milestones & Program Management: Milestone B	4	2024	4	2024
Acquisition Milestones & Program Management: Milestone C	3	2028	3	2028
Engineering: System Requirements Review 2/System Function Review	3	2025	3	2025
Engineering: Preliminary Design Review (PDR) (date: Controlled Unclassified Information)	2	2026	2	2026
Engineering: Critical Design Review (CDR) (date: Controlled Unclassified Information)	2	2027	2	2027
Contracts: E-XX TACAMO Weapon System Contract (EMD)	1	2025	4	2029
Contracts: Very Low Frequency Non-Recurring Engineering	1	2023	4	2025
Contracts: LMA Air Vehicle Non-Recurring Engineering	1	2023	4	2025
Contracts: LMA Test A/C build C-130J (x3)	3	2023	3	2026
Contracts: SDTA A/C C-130J (x3)	1	2026	3	2029
Test & Evaluation: CSIL Test	3	2026	2	2029
Test & Evaluation: Government STIL Test	4	2027	4	2029
Test & Evaluation: Operational Assessment 1 (OA1)	4	2028	4	2028
Test & Evaluation: Operational Assessment 2 (OA2)	4	2029	4	2029
Test & Evaluation: Integrated Test 1	3	2026	4	2027
Test & Evaluation: Integrated Test 2	4	2027	4	2028
Test & Evaluation: Integrated Test 3	4	2028	4	2029
Training: A/C TSRA	1	2023	4	2023
Training: MS TSRA	4	2023	3	2025
Training: Naval Training Systems Plan (NTSP)	4	2024	4	2028

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605180N / TACAMO MODERNIZATI ON	Project (Number/Name) 3259 / TACAMO Recap
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Training: Courseware Development	2	2026	1	2028
Training: Train the Tester	2	2026	4	2029
Product Support: Integrated Logistics Assessment-1	2	2023	3	2023
Product Support: Mission System Product Support BCA	2	2027	1	2028
Product Support: Air Vehicle Physical Configuration Audit (PCA)	3	2027	3	2027
Product Support: Mission System PCA	3	2028	1	2029
Product Support: Integrated Logistics Assessment-2	1	2028	3	2028
Product Support: E-XX Baseline Configuration Audit (BCA)	3	2028	2	2029