

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2024 Navy **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>
--	---

COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	75.888	28.842	37.939	36.027	-	36.027	42.032	44.275	45.405	47.503	Continuing	Continuing
3368: <i>P-8 Improvements</i>	75.888	28.842	37.939	36.027	-	36.027	42.032	44.275	45.405	47.503	Continuing	Continuing

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** 334

**A. Mission Description and Budget Item Justification**

The P-8A Multi-mission Maritime Aircraft (MMA) program was initiated in response to the Joint Requirements Oversight Council (JROC) validated Mission Needs Statement, "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the P-8A Capability Production Document #791-88-09, validated and approved on 22 June 2009. A successful Critical Design Review was completed in June 2007. In August 2007 the Design Readiness Review was conducted and resulted in approval to obligate funding for the fabrication of the Stage II flight test aircraft. The first flight of P-8A occurred on 25 Apr 2009. Milestone C was successfully completed on 11 August 2010. The program completed Initial Operational Test and Evaluation (IOT&E) in March 2013 and achieved Initial Operational Capability (IOC) in November 2013. The Acquisition Decision Memorandum approved entry into Full Rate Production on January 3, 2014.

During the initial Systems Development and Demonstration (SDD) phase (PE 0605500N PU 2696), which completed in 2020, the program performed the system detailed design, develop and produce Systems Integration Labs, developed and built ground and flight test articles, and conducted ground and flight tests to successfully achieve program milestones. Ground testing included the conduct of static testing, fatigue testing and Live Fire Test and Evaluation. Additionally, six flight test aircraft were built, and grouped into two stages based on which phase of the test program the aircraft supported. SDD Stage I flight test aircraft (FY06/Qty-3) supported Integrated Test and Evaluation (IT&E). SDD Stage II flight test aircraft (FY09/Qty-3) supported the completion of IT&E and IOT&E after being updated to the production configuration. The SDD contract included the development and initial building of training devices to support IOT&E, all activities necessary to facilitate an efficient transition of the fleet to achieve the P-8A IOC in CY13, and the engineering and verification of corrected deficiencies identified in testing and Fleet operational use. P-8A entered Production and Deployment phase in the 4th quarter of FY10 and entered Full Rate Production in 2nd quarter of FY14.

P-8A MMA program follow-on SDD activities (PU 3368) include Assured Maritime Dominance Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), and Intelligence, Surveillance, and Reconnaissance (ISR) activities implemented as a sequence of Rapid Capability Insertions (RCI) and rapid development efforts to respond to evolving threats and adversary capabilities, which will retain cost effectiveness for winning major combat operations. In order to pace the threat, these efforts will incorporate incremental software and/or hardware improvements that increase/exceed the current performance envelope, to include reliability/maintainability improvements, obsolescence, periodic technology insertion, urgent operational needs, correction of deficiencies and flight safety issues, to existing sensor capabilities, communications systems, mission systems, airframe and engine component systems, weapons capabilities, training systems and Tactical Operations Center (TOC) / Tacmobile support to build on the initial P-8A SDD (PU 2696) capability baseline. These planned and emergent requirements will be prioritized through either the Navy Integration and interoperability (I&I) aligned Capability Prioritization Process (CPP), P-8A Tier 3 Capability Roadmap and/or through Fleet identification of an Urgent Operational Need. The CPP process is supported by detailed analysis and the maturations of developing technologies.

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
---	-------------------------

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>
--	---

Budget Activity 5.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	27.279	37.939	38.661	-	38.661
Current President's Budget	28.842	37.939	36.027	-	36.027
Total Adjustments	1.563	0.000	-2.634	-	-2.634
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.217	0.000			
• SBIR/STTR Transfer	-0.654	0.000			
• Program Adjustments	0.000	0.000	-2.790	-	-2.790
• Rate/Misc Adjustments	0.000	0.000	0.156	-	0.156

**Change Summary Explanation**

FY24 reduction since the previous President's Budget Submission is to fund other higher priorities within the department, as well as to account for working capital fund rate adjustments.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>				<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3368: <i>P-8 Improvements</i>	75.888	28.842	37.939	36.027	-	36.027	42.032	44.275	45.405	47.503	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 334												

**A. Mission Description and Budget Item Justification**

The P-8A MMA program's Assured Maritime Dominance Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), and Intelligence, Surveillance, and Reconnaissance (ISR) activities include a sequence of Rapid Capability Insertions (RCI) and rapid development efforts to respond to evolving threats and adversary capabilities, which will retain cost effectiveness for winning major combat operations. In order to pace the threat, these efforts will incorporate incremental software and/or hardware improvements that increase/exceed the current performance envelope, to include reliability/maintainability improvements, obsolescence, periodic technology insertion, urgent operational needs, correction of deficiencies and flight safety issues, to existing sensor capabilities, communications systems, mission systems, airframe and engine component systems, weapons capabilities, training systems and Tactical Operations Center (TOC) /Tacomobile support to build on the P-8A capability baseline. These planned and emergent requirements will be prioritized through either the Navy Integration and interoperability (I&I) aligned Capability Prioritization Process (CPP), P-8A Tier 3 Capability Roadmap and/or through Fleet identification of an Urgent Operational Need. The CPP process is supported by detailed analysis and the maturations of developing technologies.

Assured Maritime Dominance activities include principal mission lethality, survivability against kinetic and non-kinetic threats, and capability persistence in high-level threat environments. Rapid Development efforts increase lethality through optimization of kill-chain software systems, employment of LRASM, and other weapon systems and Airborne Weapon Simulator capabilities. RCI4 capabilities include kill-chain/gap analysis, ASW Enhancements, common weapons synchronization, and Airborne Weapon Simulator continuation. RCI5 capabilities increase P-8A survivability through Radio Frequency Counter Measure (RFCM)/Advanced Survivability Pod (ASP) Certification, P-8A Survivability Assurance and distributed sensor network improvements.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Perform technology demonstrations and analyses of proposed new capabilities	22.749	33.476	31.429	0.000	31.429
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Continue to develop RCI packages and rapid/urgent development efforts to incrementally incorporate software and hardware capability improvements, building on the P-8A Baseline to ensure ongoing relevance of the P-8A capability. Continue LRASM efforts to include analysis of airworthiness data to support fleet flight clearance, software development and platform integration efforts, commence flight test for integrated LRASM capabilities, and support test planning for LRASM OT&E. Continue RCI-4 efforts for SRL improvements and ASW Enhancements. Complete RCI-5 analysis for survivability improvements/kill chain gap analysis.					

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircr aft (MMA) (P-8A)</i>		<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
Commence RCI-5 development efforts for analysis and hardware/software integration of preferred survivability solution onto the P-8A weapons system. Perform early activities in support of planned ASW improvements to support theater ASW common operational picture enhancements.					
<b>FY 2024 Base Plans:</b> Continue to develop RCI packages and rapid/urgent development efforts to incrementally incorporate software and hardware capability improvements, building on the P-8A Baseline to ensure ongoing relevance of the P-8A capability. Continue LRASM efforts to include analysis of airworthiness data to support fleet flight clearance, software development and platform integration efforts, continue flight test for integrated LRASM capabilities, and complete test planning for LRASM OT&E. Continue RCI-4 efforts for ASW enhancements. Complete RCI-5 analysis for survivability improvements (RFCM)/kill chain gap analysis. Continue RCI-5 development efforts for analysis and hardware/software integration of preferred survivability solution onto the P-8A weapons system.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The decrease of \$2.047 Million from FY 2023 to FY 2024 is associated with re-routing of funds to support funding of higher priority Navy requirements.					
<b>Title:</b> Conduct technical, cost, risk, test, and logistics analysis of proposed technologies					
<b>Articles:</b>					
	6.093	4.463	4.598	0.000	4.598
	-	-	-	-	-
<b>FY 2023 Plans:</b> Conduct technical, cost, risk and logistics analysis of proposed technologies. Evaluate system requirements through cost/performance trade-off analysis. Continue technical execution of LRASM government-led flight test and post-test analysis.					
<b>FY 2024 Base Plans:</b> Conduct technical, cost, risk and logistics analysis of proposed technologies. Evaluate system requirements through cost/performance trade-off analysis. Continue technical execution of LRASM government-led flight test and post-test analysis. Begin technical execution of RCI-4 and continue execution of RCI-5.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>					

**UNCLASSIFIED**

**Exhibit R-2A, RDT&E Project Justification:** PB 2024 Navy **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircr aft (MMA) (P-8A)</i>	<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>
--	--	--

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
The increase of \$0.135 Million from FY 2023 to FY 2024 is associated with commencement of RCI-4 activities and personnel support to oversee execution of RCI-5 technical requirements.					
<b>Accomplishments/Planned Programs Subtotals</b>	28.842	37.939	36.027	0.000	36.027

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APN/0586: <i>P-8 Series</i>	115.940	241.987	316.168	-	316.168	373.473	320.378	378.212	439.534	2,891.385	5,392.973

**Remarks**

Procurement dollars reflected in Other Program Funding Summary reflects the total of that BLI. Only a portion of the funds are associated with PU 3368.

**D. Acquisition Strategy**

The P-8A acquisition strategy is designed to deliver the required capabilities while introducing additional competition throughout the program. Government Lead Capability Integrator (LCI) control over the designs and information promote cost-effectiveness, rapid capability fielding, and reduced acquisition and life-cycle costs. Additionally, technologies for P-8 modernization improvements are compartmentalized and delivered independently of one another as a series of ECPs, without risk to the overall program schedule or procurement cost. This tailoring approach is effective in accommodating an emergent Fleet requirement and serve as an example that the flexibility inherent in this ECP-based Acquisition Strategy is responsive to Fleet customer concerns.

The P-8A Acquisition Strategy (AS), first approved by the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) at Milestone B in 2004, establishes the strategy to deliver full P-8A capability via three increments (then Block 1, Spiral 1 and Spiral 2 and now called Increments 1, 2, and 3). Increment 1 (Block 1) provided persistent ASW, ASuW, and ISR. Increment 2 (Spiral 1) provided improved ASW capabilities via multiple ECPs. On 4 April 2016, the MDA (USD AT&L) approved the incorporation of Increment 3 (Spiral 2 - under PE 0605504N) communications, Combat Systems Architecture, ASW Signals Intelligence, ASuW Net Enabled Weapon, Wideband SATCOM, Higher than Secret security enclave and Enhanced Multi-static Active Coherent (MAC-E) as ECPs (ECP 4-7) within the existing P-8A program as defined in the approved AS. RCI, rapid development, and future emergent capabilities will continue to be developed in an evolutionary manner similar to Increments 1-3 ECPs. Work is not initiated under this incremental acquisition process until the capabilities are first approved in P-8A Joint Capabilities Integration and Development System (JCIDS) documentation or the Navy's I&I CPP, approval obtained through an OPNAV Configuration Steering Board (CSB) and the phase of work approved by the Milestone Decision Authority (MDA). On 10 May 2016, P-8A was redesignated an ACAT 1C program and the MDA assigned to the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN (RDA)).

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>	<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>
--	---	--

<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Primary HW/SW Dev - P-8 Improvements/Increased Capability	Various	Various : Various	3.517	2.000	Mar 2022	4.150	Feb 2023	0.000		-		0.000	0.000	9.667	-
Primary HW/SW Dev - ASW Enhancements	Various	Various : Various	6.123	1.217	Feb 2022	1.301	Feb 2023	0.591	Feb 2024	-		0.591	0.000	9.232	-
Primary SW Dev - LRASM	Various	Boeing : Seattle, WA	17.582	12.682	Dec 2021	9.461	Dec 2022	15.199	Dec 2023	-		15.199	30.923	85.847	-
Primary HW/SW Dev - RCI	Various	Various : Various	4.000	4.451	Dec 2021	16.011	Dec 2022	13.236	Dec 2023	-		13.236	Continuing	Continuing	Continuing
Sys Eng - Gov	WR	NAWCAD : Pax River, MD	7.692	2.399	Nov 2021	2.553	Nov 2022	2.403	Nov 2023	-		2.403	Continuing	Continuing	Continuing
Prior Year Prd Dev costs no longer funded in the FYDP	Various	Various : Various	31.742	0.000		0.000		0.000		-		0.000	0.000	31.742	-
<b>Subtotal</b>			70.656	22.749		33.476		31.429		-		31.429	Continuing	Continuing	N/A

**Remarks**  
RCI-5 (RFCM) contract award occurs in FY 2023 to begin hardware and software development.

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Developmental Test & Evaluation (DT&E)	WR	NAWCAD : Pax River, MD	0.000	5.359	Jan 2022	3.817	Dec 2022	4.008	Dec 2023	-		4.008	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	5.359		3.817		4.008		-		4.008	Continuing	Continuing	N/A

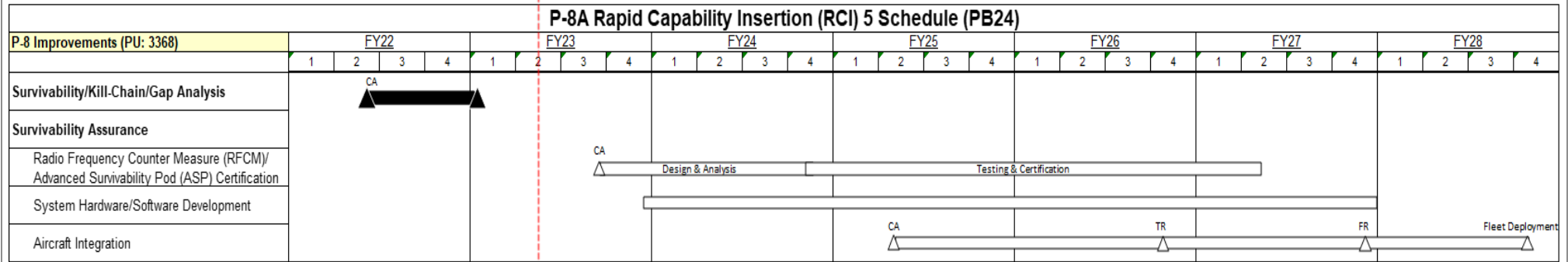
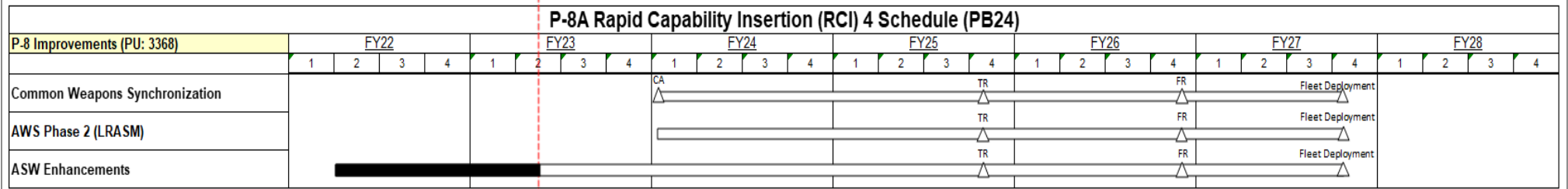
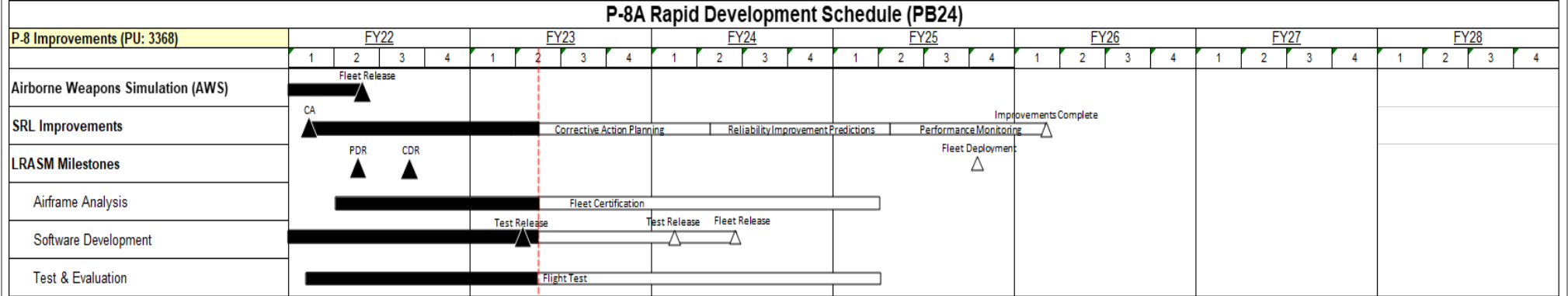
**Remarks**  
Technical execution of LRASM government-led flight test and post-test analysis.



**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>	<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>
--	---	--



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2024 Navy</b>		<b>Date: March 2023</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>	<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>P-8 Improvements</i></b>				
Rapid Development: Airborne Weapons Simulator: Fleet Release	1	2022	2	2022
Rapid Development: SRL Improvements: Contract Award	1	2022	1	2022
Rapid Development: SRL Improvements: Development	1	2022	1	2025
Rapid Development: SRL Improvements: Improvements Complete	1	2026	1	2026
Rapid Development: LRASM: Fleet Certification	2	2022	2	2025
Rapid Development: LRASM: Software Development	1	2022	2	2024
Rapid Development: LRASM: Test Release.1	2	2023	2	2023
Rapid Development: LRASM: Test Release.2	1	2024	1	2024
Rapid Development: LRASM: Fleet Release	2	2024	2	2024
Rapid Development: LRASM: Flight Test	1	2022	1	2025
Rapid Development: LRASM: Fleet Deployment	4	2025	4	2025
RCI4: Common Weapons Synchronization: Contract Award	1	2024	1	2024
RCI4: Common Weapons Synchronization: Development	1	2024	4	2027
RCI4: Common Weapons Synchronization: Test Release	4	2025	4	2025
RCI4: Common Weapons Synchronization: Fleet Release	4	2026	4	2026
RCI4: Common Weapons Synchronization: Fleet Deployment	4	2027	4	2027
RCI4: ASW Phase 2: Development	1	2024	4	2027
RCI4: ASW Phase 2: Test Release	4	2025	4	2025
RCI4: ASW Phase 2: Fleet Release	4	2026	4	2026
RCI4: ASW Phase 2: Fleet Deployment	4	2027	4	2027
RCI4: ASW Enhancements: Development	2	2022	4	2027

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605500N / <i>Multi-Mission Maritime Aircraft (MMA) (P-8A)</i>	<b>Project (Number/Name)</b> 3368 / <i>P-8 Improvements</i>
--	---	--

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
RCI4: ASW Enhancements: Test Release	4	2025	4	2025
RCI4: ASW Enhancements: Fleet Release	4	2026	4	2026
RCI4: ASW Enhancements: Fleet Deployment	4	2027	4	2027
RCI5: Radio Frequency Counter Measure (RFCM)/Advanced Survivability Pod (ASP) Certification: Contract Award	2	2022	2	2022
RCI5: Radio Frequency Counter Measure (RFCM)/Advanced Survivability Pod (ASP) Certification: Analysis	2	2022	1	2023
RCI5: Survivability Assurance: Contract Award	3	2023	3	2023
RCI5: Survivability Assurance: Design & Analysis	3	2023	3	2024
RCI5: Survivability Assurance: Testing & Certification	4	2024	2	2027
RCI5: Survivability Assurance: Hardware & Software Development	3	2023	4	2027
RCI5: Survivability Assurance: Aircraft Integration Contract Award	2	2025	2	2025
RCI5: Survivability Assurance: Aircraft Integration	2	2025	4	2028
RCI5: Survivability Assurance: Test Release	4	2026	4	2026
RCI5: Survivability Assurance: Fleet Release	4	2027	4	2027
RCI5: Survivability Assurance: Fleet Deployment	4	2028	4	2028