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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 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604292N / <i>FUTURE VERTICAL LIFT (MARITIME STRIKE)</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	13.307	5.048	2.100	4.796	-	4.796	10.186	10.331	10.519	10.737	Continuing	Continuing
2940: <i>Future Vertical Lift (Maritime Strike)</i>	13.307	5.048	2.100	4.796	-	4.796	10.186	10.331	10.519	10.737	Continuing	Continuing

A. Mission Description and Budget Item Justification

Future Vertical Lift (Maritime Strike) (FVL (MS)) directs a Naval Aviation initiative to close key warfighting gaps and recapitalize capabilities lost when legacy rotary wing platforms (MH-60R, MH-60S, and MQ-8C) reach service-life limits beginning in the mid 2030s. The FVL (MS) program will develop and field more capable, maintainable and reliable crewed and uncrewed rotorcraft systems to meet the needs of the Navy. FVL (MS) will be a key component of Distributed Maritime Operations (DMO) which will add warfighting capabilities in long-range Intelligence, Surveillance, Reconnaissance, and Targeting (ISR&T), Surface Warfare, Undersea Warfare (Anti-Submarine Warfare and Mine Warfare), Air Warfare, Electronic Warfare, Naval Special Warfare, Personnel Recovery, Patient Movement, Humanitarian Assistance/Disaster Relief and Combat Logistics. The activities conducted under this program will contribute to the acquisition documentation required to support a Milestone A (MS-A) decision and Technology Maturation and Risk Reduction (TMRR) key activities. These efforts will enable timely development of a system that provides best value and capability to the warfighter while maintaining effective and efficient war fighting capability in support of the Navy's 30-year Aviation Plan.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	5.103	2.100	0.000	-	0.000
Current President's Budget	5.048	2.100	4.796	-	4.796
Total Adjustments	-0.055	0.000	4.796	-	4.796
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.055	0.000			
• Program Adjustments	0.000	0.000	4.808	-	4.808
• Rate/Misc Adjustments	0.000	0.000	-0.012	-	-0.012

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Change Summary Explanation

Cost: FY 2025 funding request is increased since the previous President's Budget submission, \$4.796 million for Future Vertical Lift (Maritime Strike) pre-Milestone A activities in preparation for a Milestone A (MS-A) decision.

Technical: Not applicable.

Schedule: Milestone A moves from 4Q FY 2024 to 4Q FY 2026.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604292N / <i>FUTURE VERTICAL LIFT (MARITIME STRIKE)</i>				Project (Number/Name) 2940 / <i>Future Vertical Lift (Maritime Strike)</i>			
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
2940: <i>Future Vertical Lift (Maritime Strike)</i>	13.307	5.048	2.100	4.796	-	4.796	10.186	10.331	10.519	10.737	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Future Vertical Lift (Maritime Strike) (FVL (MS)) project directs developmental activities in support of the replacement of the current inventory of Navy helicopters in the 2040+ timeframe. Specific development activities required for FVL (MS) may include: capability requirements definition, documentation, and validation; completion of affordability studies; establishment of the appropriate security environment (e.g. computers, facilities, and administration); production of an Acquisition Strategy (AS), Life Cycle Cost Estimate (LCCE), Life Cycle Sustainment Plan (LCSP), Systems Engineering Plan (SEP), and Draft Capability Development Document (CDD); Request for Proposal (RFP) development: acquisition documentation; risk reduction initiatives; design trade studies; and support to joint vertical lift initiatives, including open hardware and software reference and objective architectures definition, mission system interoperability, and shipboard compatibility. Follow-on activities support preparation and execution of efforts to develop Modular Open Systems Approach (MOSA) common systems reference and objective open architectures, and eventual prototype aircraft flight demonstrations in support of the vertical lift Technology Maturation and Risk Reduction (TMRR) acquisition phase. Activities and technologies developed also have the potential to be leveraged for sustainment of legacy Navy helicopters. These efforts will enable timely development of a system that provides best value and capability to the Joint Warfighter while maintaining effective and efficient war fighting capability in support of the Navy's 15-year Aviation Plan and 30-year Shipbuilding Plan.

FY 2025 budget funds FVL (MS) pre-Milestone A activities to include analyses, studies and development of acquisition documentation. Tasks to be performed may include acquisition program management functions, engineering modeling and analysis, conceptual design trade studies, and other related follow on activities.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: FVL (MS) Requirements Definition and Acquisition Documentation	5.048	2.100	4.796	0.000	4.796
Articles:	-	-	-	-	-
FY 2024 Plans:					
Post-AoA follow-on activities to include analyses, studies and production of acquisition documentation. Tasks to be performed may include post-AoA support, acquisition program management functions, engineering modeling and analysis, system specification and Draft CDD development, design trade studies, virtual simulation, conceptual design of Air Vehicle, Avionics, Propulsion and Dynamics, Communications and Navigation, Weapons and Fire Control, Human Systems Integration, Survivability and Vulnerability, Missions and Missions Systems Management, Reliability and Maintainability, Training, Logistics, Sensor, Pilotage and Targeting Systems, VMS/Flight Control, Software/Hardware architecture and other related follow on activities. Support					

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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>for these efforts will come from government, industry and academia such as Naval Research Labs, DARPA, Georgia Tech Research Institute, John Hopkins APL, Penn State University Applied Research Lab, and various industry partners. Production of MS-A supporting documents may include but are not limited to: an Acquisition Strategy (AS), Life Cycle Cost Estimate (LCCE), Life Cycle Sustainment Plan (LCSP) and Systems Engineering Plan (SEP).</p> <p>FY 2025 Base Plans: Continuation of pre-Milestone A activities to include analyses, studies and production of acquisition documentation. Tasks to be performed may include acquisition program management functions, engineering modeling and analysis, system specification and Draft CDD development, design trade studies, virtual simulation, conceptual design of Air Vehicle, Avionics, Propulsion and Dynamics, Communications and Navigation, Weapons and Fire Control, Human Systems Integration, Survivability and Vulnerability, Missions and Missions Systems Management, Reliability and Maintainability, Training, Logistics, Sensor, Pilotage and Targeting Systems, VMS/Flight Control, Software/Hardware architecture and other related follow on activities. Support for these efforts will come from Government, industry and academia such as Naval Research Labs, DARPA, Georgia Tech Research Institute, John Hopkins APL, Penn State University Applied Research Lab, RAND Corp, and various industry partners. Final production of MS-A supporting documents may include but are not limited to: an Acquisition Strategy (AS), Capabilities Development Document (CDD), Life Cycle Cost Estimate (LCCE), Life Cycle Sustainment Plan (LCSP) and Systems Engineering Plan (SEP).</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase from FY 2024 to FY 2025 reflects the completion of the Gate 2 review and the final development of Milestone A documentation such as the acquisition strategy and CDD, progressing towards a Milestone A program entry.</p>					
Accomplishments/Planned Programs Subtotals	5.048	2.100	4.796	0.000	4.796

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

N/A

Remarks

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Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604292N / <i>FUTURE VERTICAL LIFT (MARITIME STRIKE)</i>	Project (Number/Name) 2940 / <i>Future Vertical Lift (Maritime Strike)</i>

D. Acquisition Strategy

The Analysis of Alternatives (AoA) was initiated in 2QFY2022 to begin the assessment of the technical feasibility, operational feasibility, technical risk, and affordability of potential materiel and non-materiel solutions. The AoA was completed in 1QFY2023 resulting in a recommendation for pre-Milestone A efforts and a Milestone A entry. Limited pre-Milestone A efforts began in FY 2024. In FY 2025, the finalization of the program planning and Milestone A acquisition documentation efforts will occur.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
1319 / 4				PE 0604292N / FUTURE VERTICAL LIFT (MARITIME STRIKE)					2940 / Future Vertical Lift (Maritime Strike)						
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sensor Risk Reduction CCI	C/CPFF	Various : Various	0.000	0.000		0.000		1.500	Mar 2025	-		1.500	Continuing	Continuing	Continuing
Prior year Prod Dev no longer funded in FYDP	Various	Various : Various	2.527	0.000		0.000		0.000		-		0.000	0.000	2.527	-
Subtotal			2.527	0.000		0.000		1.500		-		1.500	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWC AD : Patuxent River, MD	6.222	2.536	Jan 2023	1.261	Nov 2023	1.881	Nov 2024	-		1.881	Continuing	Continuing	Continuing
Trade Studies/ Requirements Analysis	Various	Various : Various	1.045	1.323	Nov 2022	0.412	Dec 2023	0.441	Dec 2024	-		0.441	Continuing	Continuing	Continuing
Architecture Framework Analysis	Various	Various : Various	0.704	0.687	Mar 2023	0.206	Dec 2023	0.470	Dec 2024	-		0.470	Continuing	Continuing	Continuing
Prior year Support no longer funded in FYDP	Various	Various : Various	1.825	0.000		0.000		0.000		-		0.000	0.000	1.825	-
Subtotal			9.796	4.546		1.879		2.792		-		2.792	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NAWC AD : Patuxent River, MD	0.984	0.491	Nov 2022	0.213	Nov 2023	0.486	Nov 2024	-		0.486	Continuing	Continuing	Continuing
Travel	Various	Various : Various	0.000	0.011	Oct 2022	0.008	Oct 2023	0.018	Oct 2024	-		0.018	Continuing	Continuing	Continuing
Subtotal			0.984	0.502		0.221		0.504		-		0.504	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
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	CY	2023				2024				2025				2026				2027				2028				2029							
	FY	FY23				FY24				FY25				FY26				FY27				FY28				FY29							
	QTR	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Milestones/ Acquisition Documentation		<div style="border: 1px solid black; padding: 2px;">AoA</div> <div style="display: flex; justify-content: space-around; align-items: center;"> ◆ <div style="border: 1px solid black; padding: 2px;">CAPE Sufficiency</div> </div>				<div style="display: flex; justify-content: space-around; align-items: center;"> ◆ <div style="border: 1px solid black; padding: 2px;">Gate 2</div> </div>												<div style="display: flex; justify-content: space-around; align-items: center;"> ★ <div style="border: 1px solid black; padding: 2px;">MS-A RFP</div> ◆ </div>				<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">Competition/ TMRR Down-Select</div> ◆ <div style="border: 1px solid black; padding: 2px;">Contract Award</div> </div>											
Concept Development/ Technology Maturation										<div style="border: 1px solid black; padding: 2px; text-align: center;">Sensor Risk Reduction/Demonstration</div>																							
						<div style="border: 1px solid black; padding: 2px; text-align: center;">Modular Open Systems Approach Integration/Demonstration</div>																											
Technical Maturation/ Risk Reduction																						<div style="border: 1px solid black; padding: 2px; text-align: center;">TMRR Execution</div>											

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604292N / <i>FUTURE VERTICAL LIFT (MARITIME STRIKE)</i>	Project (Number/Name) 2940 / <i>Future Vertical Lift (Maritime Strike)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Future Vertical Lift (Maritime Strike)</i>				
Milestones/Acquisition Documentation: Analysis of Alternatives: Analysis of Alternatives	1	2023	1	2023
Milestones/Acquisition Documentation: CAPE Sufficiency: CAPE Sufficiency	3	2023	3	2023
Milestones/Acquisition Documentation: Gate 2: Gate 2	2	2024	2	2024
Milestones/Acquisition Documentation: MS-A Program Planning and Documentation: MS-A Program Planning and Documentation	1	2023	3	2026
Milestones/Acquisition Documentation: MS-A: MS-A	4	2026	4	2026
Milestones/Acquisition Documentation: RFP: RFP	4	2026	4	2026
Milestones/Acquisition Documentation: Competition/TMRR Down-Select: Competition/TMRR Down-Select	4	2026	3	2027
Milestones/Acquisition Documentation: Contract Award: Contract Award	4	2024	4	2024
Concept Development/Technology Maturation: Modular Open Systems Approach Integration/Demonstration: Modular Open Systems Approach Integration/Demonstration	1	2024	2	2026
Concept Development/Technology Maturation: Sensor Risk Reduction/Demonstration: Sensor Risk Reduction/Demonstration	2	2025	2	2027
Technical Maturation/Risk Reduction: TMRR Exection: TMRR Exection	4	2027	4	2029