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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

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 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	0.000	0.000	0.000	5.097	-	5.097	10.197	0.000	0.000	0.000	0.000	15.294
2940: <i>Future Vertical Lift (Maritime Strike)</i>	0.000	0.000	0.000	5.097	-	5.097	10.197	0.000	0.000	0.000	0.000	15.294

Note

This is a new Program Element (PE) in FY 2021.

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 (MQ-8C, MH-60S, and MH-60R) reach service-life limits beginning in the late 2020s. The FVL (MS) program will develop and field more capable, maintainable and reliable manned and unmanned 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 enable 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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.097	-	5.097
Total Adjustments	0.000	0.000	5.097	-	5.097
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	5.097	-	5.097

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Appropriation/Budget Activity
1319: *Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)*

R-1 Program Element (Number/Name)
PE 0604292N / *Future Vertical Lift (Maritime Strike)*

Change Summary Explanation

Technical: Not applicable.

Schedule: Added FVL (MS) Analysis of Alternatives (AoA) Study to assess the technical feasibility with the intent to develop the next generation of Naval rotary wing aircraft family of systems.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
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 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
2940: <i>Future Vertical Lift (Maritime Strike)</i>	0.000	0.000	0.000	5.097	-	5.097	10.197	0.000	0.000	0.000	0.000	15.294
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

This is a new Project Unit (PU) in FY 2021.

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 2030+ timeframe. Specific development activities required for FVL (MS) include: capability requirements definition, documentation, and validation; Analysis of Alternatives (AoA) planning and execution including AoA Study Guidance and Study Plan preparation); 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 Support 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 FVL, including open hardware and software reference and objective architectures definition, mission system interoperability, and shipboard compatibility. These activities will result in completion of all acquisition documentation required for Milestone-A in FY 2024. Follow-on activities support preparation and execution of efforts to develop common systems reference and objective open architectures, and eventual prototype aircraft flight demonstrations in support of the FVL Technology Maturation and Risk Reduction 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 30 year Aviation Plan.

FY 2021 budget request funds the initial support for FVL (MS) AoA to assess the technical feasibility, technical risk, and affordability of potential strategic solutions with the intent to develop the next generation of Naval rotary wing aircraft systems. Tasks to be performed include but are not limited to: AoA support, acquisition program management functions, establishment of the security environment, engineering modeling and analysis, TEMP development, system specification and Draft CDD development and design trade studies.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: FVL (MS) Requirements Definition and Acquisition Documentation	0.000	0.000	5.097	0.000	5.097
Articles:	-	-	-	-	-
FY 2020 Plans: N/A					
FY 2021 Base Plans:					

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Provide initial support for FVL (MS) AoA to assess the technical feasibility, technical risk, and affordability of potential strategic solutions with the intent to develop the next generation of Naval rotary wing aircraft systems. Tasks to be informed include: AoA support, acquisition program management functions, establishment of the security environment, engineering modeling and analysis, TEMP development, system specification and Draft CDD development, and design trade studies. Support for these efforts will come from government, industry, and academia.					
<i>FY 2021 OCO Plans:</i> N/A					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> FY 2021 increase of \$5.097M for FVL (MS) AoA that was not previously funded.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	5.097	0.000	5.097

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

N/A

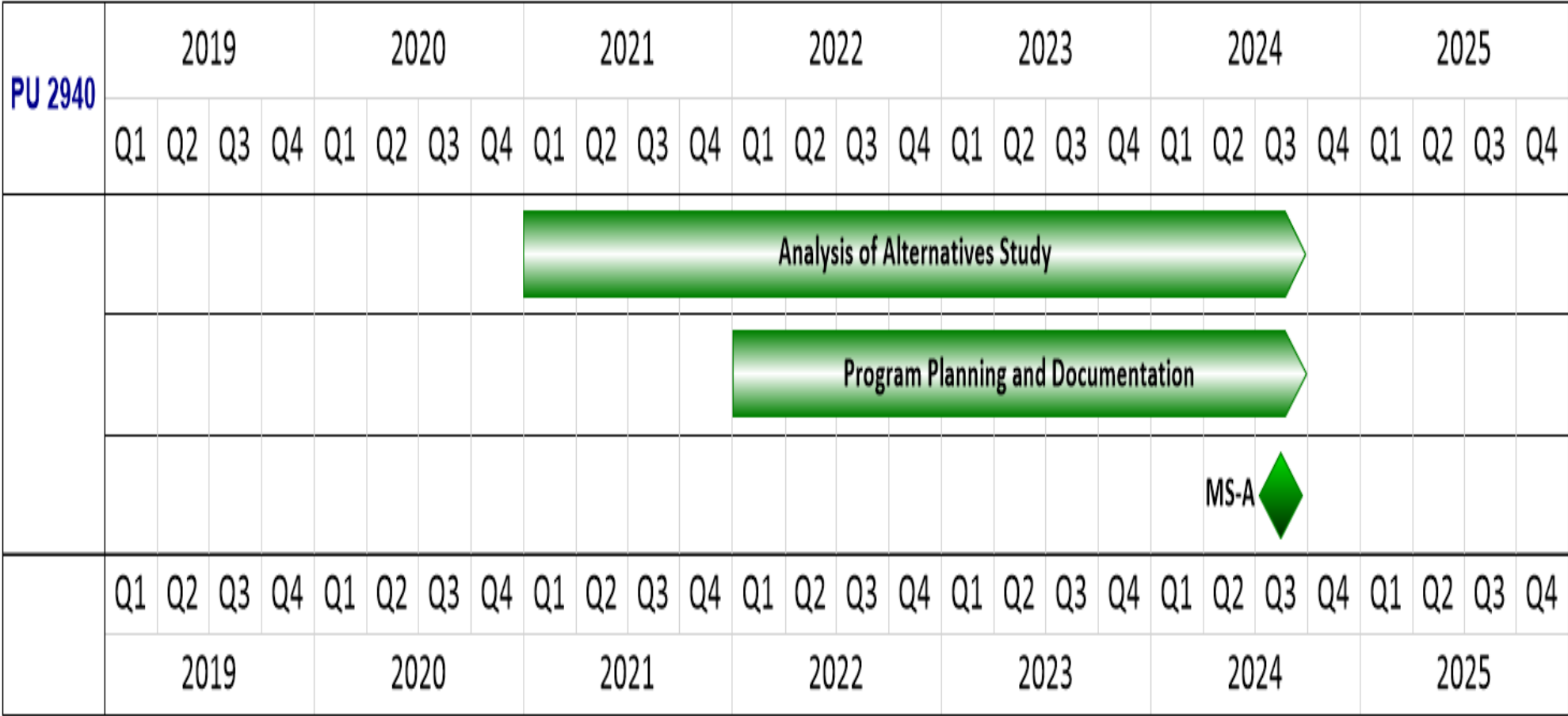
Remarks

D. Acquisition Strategy

Provide research and development support for pre-milestone A activities to enable replacement of the Navy H-60 and MQ-8 series helicopters, multi-mission helicopter capability, in the 2030+ timeframe.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy		Date: February 2020
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>



Snapshot Date: 1/9/2020

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy		Date: February 2020
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
Proj 2940				
Analysis of Alternatives	1	2021	3	2024
Program Planning and Documentation	1	2022	3	2024
MS-A	3	2024	3	2024