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

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0607136A / Blackhawk Product Improvement Program
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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	0.000	14.599	0.000	1.507	0.000	1.507	0.000	0.000	0.000	0.000	0.000	16.106
ES3: Blackhawk Product Improvement Program	-	14.599	-	1.507	-	1.507	-	-	-	-	0.000	16.106

A. Mission Description and Budget Item Justification

UH-60V:
The H-60L Digital Blackhawk, now designated as UH-60V, is designed to update the existing H-60L analog architecture to a digital infrastructure enabling the upgraded aircraft to have a similar Pilot-Vehicle Interface (PVI) to the H-60M. The program will address current capability gaps and meet operational requirements by employing an evolutionary acquisition approach to leverage mature technologies that have been successfully integrated on other military aircraft. The program will reduce obsolescence and increase commonality and interoperability by installing a digital cockpit, bussing and upgrading the communication/identification suite, improving navigation guidance, and integrating Aircraft Survivability Equipment (ASE), digital moving map, and Joint Variable Message Format (JVMF) messaging. Continuing funding will provide hardware and software development, training material development, as well as developmental and operational testing.

MEDEVAC (Medical Evacuation):

Independent of the UH-60V Program of Record and Acquisition Program Baseline (APB), incremental RDT&E funding was utilized to support integration of a MEDEVAC capability on UH-60V in FY 2019-2022 and planned in FY 2024 for Follow-On Test and Evaluation (FOT&E). In accordance with AR 40-60, Medical Materiel Acquisition Policy, the Army's Aeromedical Evacuation capability is funded by two portfolio managers, Program Executive Office for Aviation (PEOAVN) and the Medical Research Development Command, (MRDC). PEOAVN is responsible for the integration of MEDEVAC Mission Equipment Package (MEP) on the UH-60V. MRDC is responsible for recurring costs to procure kits and resource the installation of MEP kits on UH-60V MEDEVAC helicopters.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	14.773	0.000	0.000	-	0.000
Current President's Budget	14.599	0.000	1.507	-	1.507
Total Adjustments	-0.174	0.000	1.507	-	1.507
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.174	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	1.507	-	1.507

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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: ES3: *Blackhawk Product Improvement Program*

Congressional Add: *Blade Improvement Blackhawk*

Congressional Add Subtotals for Project: ES3

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	10.000	-
	10.000	-
	10.000	-

Change Summary Explanation

\$1.507M in FY24 will be required for a Full Operational Test and Evaluation (FOT&E) in order to evaluate the UH-60V MEDEVAC effectiveness, suitability, and survivability.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0607136A / <i>Blackhawk Product Improvement Program</i>				Project (Number/Name) ES3 / <i>Blackhawk Product Improvement Program</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
ES3: <i>Blackhawk Product Improvement Program</i>	-	14.599	-	1.507	-	1.507	-	-	-	-	0.000	16.106
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

UH-60V:

The H-60L Digital Blackhawk, now designated as UH-60V, is designed to update the existing H-60L analog architecture to a digital infrastructure enabling the upgraded aircraft to have a similar Pilot-Vehicle Interface (PVI) to the H-60M. The program will address current capability gaps and meet operational requirements by employing an evolutionary acquisition approach to leverage mature technologies that have been successfully integrated on other military aircraft. The program will reduce obsolescence and increase commonality and interoperability by installing a digital cockpit, bussing and upgrading the communication/identification suite, improving navigation guidance, and integrating Aircraft Survivability Equipment (ASE), digital moving map, and Joint Variable Message Format (JVMF) messaging. Continuing funding will provide hardware and software development, training material development, as well as developmental and operational testing.

MEDEVAC:

Independent of the UH-60V Program of Record and Acquisition Program Baseline (APB), incremental RDT&E funding was utilized to support integration of a MEDEVAC capability on UH-60V in FY 2019-2022 and planned in FY 2024 for Follow-On Test and Evaluation (FOT&E). In accordance with AR 40-60, Medical Materiel Acquisition Policy, the Army's Aeromedical Evacuation capability is funded by two portfolio managers, Program Executive Office for Aviation (PEOAVN) and the Medical Research Development Command, (MRDC). PEOAVN is responsible for the integration of MEDEVAC Mission Equipment Package (MEP) on the UH-60V. MRDC is responsible for recurring costs to procure kits and resource the installation of MEP kits on UH-60V MEDEVAC helicopters.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: MEDEVAC MEP Integration Product Development	2.886	-	-
Description: MEDEVAC MEP Integration Product Development.			
Title: MEDEVAC MEP Integration Support	0.388	-	-
Description: Support the HW and SW Design Activities with Airworthiness and Technical data division support.			
Title: MEDEVAC MEP Management Services	0.658	-	-
Description: Management Services includes all activities related to Government/Contractor Systems Engineering / Program Management (SEPM) to include the cost of Government and Contractor personnel supporting the H-60V MEDEVAC MEP Integration Program.			

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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607136A / <i>Blackhawk Product Improvement Program</i>	Project (Number/Name) ES3 / <i>Blackhawk Product Improvement Program</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Title: MEDEVAC Test & Evaluation</p> <p>Description: The Utility Helicopter Project Office (UHPO) is responsible for day-to-day test management activities to include the execution of all developmental tests for the UH-60V MEDEVAC program. As part of this responsibility, UHPO manages the Test and Evaluation Working Group with a UH-60V MEDEVAC Test lead. He/she ensures the test agencies are coordinated, test plans are created, instrumentation is developed and installed, and airworthiness approvals are obtained. He/she tracks status of the testing throughout the program, assists in resolving issues, and coordinates approval of the test data and test reports. For this effort, the UHPO will manage system-level testing necessary to receive a fielding Airworthiness Release (AWR), including Electromagnetic Compatibility (EMC), Noise Floor, Electromagnetic Vulnerability (EMV), and ground system checkouts and flight testing of the MEDEVAC MEP.</p> <p>FY 2024 Plans: FOT&E is required to evaluate the UH-60V MEDEVAC effectiveness, suitability, and survivability.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: \$1.507M will be utilized in FY24 for FOT&E.</p>	0.667	-	1.507
Accomplishments/Planned Programs Subtotals	4.599	-	1.507

	FY 2022	FY 2023
<p>Congressional Add: Blade Improvement Blackhawk</p> <p>FY 2022 Accomplishments: Congressional add in FY22; contract award in Q3 FY23 to conduct development and qualification of blade improvements.</p>	10.000	-
Congressional Adds Subtotals	10.000	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• A05009: <i>UH-60 Black Hawk L and V Models</i>	166.205	178.658	153.196	-	153.196	157.352	202.776	202.836	202.422	0.000	1,263.445
• Q13015: <i>MEDICAL EVACUATION</i>	12.314	32.164	7.618	-	7.618	8.774	6.201	6.127	7.893	0.000	81.091

Remarks
Q13015000 MEDICAL EVACUATION provides procurement funding for MEDEVAC MEP capability on UH-60 helicopters. Per requirements, starting in FY 2022, Q13015000 will resource procurement of MEDEVAC MEP kits and installations at a rate of 15 aircraft per year through FY 2034, which is the estimated year for the

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607136A / <i>Blackhawk Product Improvement Program</i>	Project (Number/Name) ES3 / <i>Blackhawk Product Improvement Program</i>

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Army's Acquisition Objective (AAO) of 200 UH-60V MEDEVAC is reached. Figures shown above reflect the full FL8D/Q13015000/OPA/MEDICAL EVACUATION funding line, which includes the production kits and MEP installation costs at Corpus Christy Army Depot (CCAD) as well as other non-MEDEVAC funding requirements. UH-60V MEDEVAC MEP Q13015000 OPA requirements are \$6.4 million in FY 2022, \$7.1 million in FY 2023, \$7.8 million in FY 2024, \$8.1 million FY 2025 and \$8.6 million FY2026. Total MEDEVAC MEP requirement in Q1301500 through FY 2034 is \$88.1M.											

D. Acquisition Strategy

The UH-60V program plans to leverage various test agencies, to design, integrate and build three production representative aircraft. The Government owned Government Operated (GOGO) facility uses a cost-plus contract vehicle and conducted full and open competition for the selection of the avionics solution provider.

Independent of the UH-60V Program of Record and Acquisition Program Baseline (APB), the MEDEVAC MEP program plans to utilize the U. S. Army Development Command (DEVCOM) Aviation and Missile Center (AVMC) and Prototype Integration Facility (PIF) to design and integrate MEDEVAC capability into the UH-60V. By leveraging the same GOGO facility utilized by the UH-60V program, efficient design, software development, integration, and testing will occur by eliminating redundant tasks and employing experienced government resources already in possession of pertinent UH-60V technical data required to support the MEDEVAC MEP nonrecurring engineering (NRE) effort. Prototype, validation, and verification of technical publications, as well as airworthiness testing, will be accomplished following completion of the UH-60V Initial Operation Test and Evaluation (IOT&E), at which time one UH-60V Engineering Development Model (EDM) and two Low-Rate Initial Production (LRIP) aircraft will be allocated to the MEDEVAC MEP program. Following completion of MEDEVAC MEP NRE, technical products will feed production and fielding contracts, which will be resourced by the U.S. Army Medical Department, AMEDD. Procurement funding is programmed on Q13015000 MEDICAL EVACUATION.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0607136A / Blackhawk Product Improvement Program				ES3 / Blackhawk Product Improvement Program							
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MEDEVAC MEP Management Services	TBD	TBD : TBD	-	0.658	Apr 2022	-		-		-		-	0.000	0.658	-
Subtotal			-	0.658		-		-		-		-	0.000	0.658	N/A
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MEDEVAC MEP Product Development and Integration	C/CPFF	DEVCOM AvMC, PIF : Redstone Arsenal AL	20.356	2.886	Apr 2022	-		-		-		-	0.000	23.242	-
Blade Improvement	Various	96th Test Wing : Eglin AFB, Florida	-	10.000		-		-		-		-	0.000	10.000	-
Subtotal			20.356	12.886		-		-		-		-	0.000	33.242	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MEDEVAC MEP Integration Support	MIPR	Various : Redstone Arsenal AL	1.296	0.388	Oct 2021	-		-		-		-	0.000	1.684	-
Subtotal			1.296	0.388		-		-		-		-	0.000	1.684	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MEDEVAC Test and Evaluation	MIPR	Redstone Test Center : Redstone Arsenal, AL	0.747	0.667	Oct 2021	-		1.507	Dec 2023	-		1.507	0.000	2.921	-
Subtotal			0.747	0.667		-		1.507		-		1.507	0.000	2.921	N/A

UNCLASSIFIED

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

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Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Government Support

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	22.399	14.599	-	1.507	-	1.507	0.000	38.505	N/A

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607136A / <i>Blackhawk Product Improvement Program</i>	Project (Number/Name) ES3 / <i>Blackhawk Product Improvement Program</i>

Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
UH-60V Test and Evaluation (RDTE)	[Redacted]				[Redacted]																							
	Test and Evaluation																											
MEDEVAC MEP Integration Management Services (RDTE)	[Redacted]				[Redacted]																							
	MEDEVAC MEP Integration Management Services																											
MEDEVAC MEP Product Development and Integration (RDTE)	[Redacted]				[Redacted]																							
	MEDEVAC MEP Product Development and Integration																											
MEDEVAC MEP Integration Support (RDTE)	[Redacted]				[Redacted]																							
	MEDEVAC MEP Integration Support																											
MEDEVAC MEP Integration Test and Evaluation (RDTE)	[Redacted]				[Redacted]				[Redacted]																			
	MEDEVAC MEP Integration Test and Evaluation																											
Blade Improvement Blackhawk (RDTE)	[Redacted]				[Redacted]				[Redacted]																			
					Blade Improvement Blackhawk (Product Development)																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607136A / <i>Blackhawk Product Improvement Program</i>	Project (Number/Name) ES3 / <i>Blackhawk Product Improvement Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
UH-60V Development (Research, Development, Test, and Evaluation (RDTE))	4	2014	4	2020
UH-60V Management Services (RDTE)	1	2014	4	2020
UH-60V Support (RDTE)	1	2014	4	2021
UH-60V Test and Evaluation (RDTE)	4	2015	4	2022
MEDEVAC MEP Integration Management Services (RDTE)	1	2019	4	2023
MEDEVAC MEP Product Development and Integration (RDTE)	1	2019	4	2023
MEDEVAC MEP Integration Support (RDTE)	4	2019	4	2023
MEDEVAC MEP Integration Test and Evaluation (RDTE)	2	2021	4	2024
Satellite Communications Integration Development	4	2020	4	2021
Blade Improvement Blackhawk (RDTE)	3	2023	3	2024