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

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0607145A / <i>Apache Future Development</i>
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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	9.700	25.074	10.547	0.000	10.547	0.000	0.000	0.000	0.000	0.000	45.321
FD5: <i>Apache Product Improvement</i>	-	9.700	25.074	10.547	-	10.547	-	-	-	-	0.000	45.321

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

The Apache Capabilities Enhancements (ACE) prioritizes, informs, influences, matures, tracks, statuses, and packages technologies and/or material solutions to address known capability gaps, identified during real-world combat missions and associated with current/emerging threats; for transition to Apache development for integration and implementation to the AH-64E fleet to increase combat capability.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	10.067	10.074	10.770	-	10.770
Current President's Budget	9.700	25.074	10.547	-	10.547
Total Adjustments	-0.367	15.000	-0.223	-	-0.223
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	15.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.367	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.223	-	-0.223

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

**Project:** FD5: *Apache Product Improvement*

Congressional Add: *Modernization Efforts*

Congressional Add: *Strap Down Pilotage*

	<b>FY 2022</b>	<b>FY 2023</b>
	-	10.000
	-	5.000
Congressional Add Subtotals for Project: FD5	-	15.000
Congressional Add Totals for all Projects	-	15.000

**Change Summary Explanation**

Decreased funding to support higher Army priorities.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Army										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 2040 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607145A / Apache Future Development				<b>Project (Number/Name)</b> FD5 / Apache Product Improvement			
<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>
FD5: Apache Product Improvement	-	9.700	25.074	10.547	-	10.547	-	-	-	-	0.000	45.321
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Apache Capabilities Enhancements (ACE) prioritizes, informs, influences, matures, tracks, statuses, and packages technologies and/or material solutions to address known capability gaps, identified during real-world combat missions and associated with current/emerging threats; for transition to Apache development for integration and implementation to the AH-64E fleet to increase combat capability.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<b>Title:</b> Apache Improved Tail Rotor Drive System (ITRDS)	9.700	9.706	10.547
<b>Description:</b> Increase performance/safety as well as reducing logistics footprint of current Tail Rotor Drive System			
<b>FY 2023 Plans:</b> Apache Project Management Office (PMO) will continue a 60-month phased approach to develop an Improved Tail Rotor Drive System (ITRDS) for the AH-64 platform. The end state objective of this program is to qualify the ITRDS component installation onto the AH-64 platform providing the capability of increased performance to meet reliability and maintainability improvements in the current fleet as well as meet objective future performance capabilities. Activities throughout Phase I will include Airworthiness Qualification Specification (AQS) development, trade study analysis and design review level of effort (LOE) resulting in the successful completion of Preliminary Design Review (PDR) milestone.			
<b>FY 2024 Plans:</b> Apache Project Management Office (PMO) will continue to execute design level reviews, component drawing development and reliability/maintainability risk mitigation assessments and technical development analysis. The Critical Design Review (CDR) will serve as the end cap milestone for Phase II, locking down the Improved Tail Rotor Drive System (ITRDS) design. Once completed, Phase III will continue pre-qualification and risk reduction efforts to mature the approved system design from CDR. Concurrently, component fabrication and prototyping efforts for the design will commence.			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The increase in funding for Project FD5 Apache Product Improvement from FY23 to FY24 results from fiscal year rate escalations and programmatic advancement throughout the phased scope of the Improved Tail Rotor Drive System (ITRDS) program.			
<b>Title:</b> Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR)	-	0.368	-

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

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607145A / Apache Future Development	<b>Project (Number/Name)</b> FD5 / Apache Product Improvement
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2022	FY 2023	FY 2024
<b>Description:</b> Funding transferred in accordance with Title 15 USC §638			
<b>FY 2023 Plans:</b> FY23 SBIR/STTR: Funding transferred in accordance with Title 15 USC §638			
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> FY23 SBIR/STTR: Funding transferred in accordance with Title 15 USC §638			
<b>Accomplishments/Planned Programs Subtotals</b>	9.700	10.074	10.547

	FY 2022	FY 2023
<b>Congressional Add:</b> Modernization Efforts	-	10.000
<b>FY 2023 Plans:</b> The Congressional Add will provide the ability to execute various component level analysis in accordance with Aeronautical Design Standard (ADS) 50 to bolster qualification testing level of effort (LOE) for the Improved Tail Rotor Drive System (ITRDS). ITRDS component level testing will also be performed in preparation for component and bench level qualification.		
<b>Congressional Add:</b> Strap Down Pilotage	-	5.000
<b>FY 2023 Plans:</b> For the development and demonstration of a prototype Strap Down (Staring) Pilotage test article to evaluate options for a next generation pilotage system.		
<b>Congressional Adds Subtotals</b>	-	15.000

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
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
• A05111: AH-64 Apache Block IIIA Reman	646.366	693.879	828.938	-	828.938	572.538	1.795	1.650	1.647	5,763.012	8,509.825
• A05133: AH-64 Apache Block IIIB New Build	-	-	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• AA6605: AH-64 MODS	118.560	85.840	113.127	-	113.127	46.724	96.740	95.879	70.368	Continuing	Continuing

**Remarks**

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**D. Acquisition Strategy**

The NRE will encompass subsystem integration and will utilize existing test aircraft, incorporate the technical insertions, and initiate appropriate qualification and operational flight-testing. FY 2020 - FY 2023, the Apache Capabilities Enhancements (ACE) delivers required capability enhancements supported by Apache's Modernization Strategy to ensure AH-64E maintains relevance and dominance throughout its expected service life.



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Army</b>			<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607145A / Apache Future Development	<b>Project (Number/Name)</b> FD5 / Apache Product Improvement	

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
ITRDS Activities																												
Contract Award for SPIKE NLOS																												
Strap Down Pilotage																												
Crossbow																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Army		<b>Date:</b> March 2023
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ITRDS Activities	4	2022	4	2027
Contract Award for SPIKE NLOS	3	2021	2	2024
Strap Down Pilotage	3	2023	3	2025
Crossbow	3	2021	4	2023