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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	8.213	9.524	22.163	-	22.163	18.566	3.563	3.564	3.598	0.000	69.191
BX8: <i>Cold Weather All-Terrain Vehicle (CATV)</i>	-	6.665	1.825	-	-	-	-	-	-	-	0.000	8.490
H07: <i>Family Of Med Tac Veh</i>	-	1.548	7.699	22.163	-	22.163	18.566	3.563	3.564	3.598	0.000	60.701

A. Mission Description and Budget Item Justification

This Program Element (PE) supports continued modernization of the Army's Medium Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: Predictive Logistics, vetronics, vehicle electrification and other climate change initiatives, Victory Architecture, autonomous operations and other emerging technologies. Furthermore, the PE supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.

The Family of Medium Tactical Vehicles (FMTV) includes Cargo, Tractor, Load Handling System (LHS), Wrecker, Expandable Van, Shop Van, and Dump variants with payloads ranging from 3-tons to 10-tons and associated companion trailers. FMTV trucks perform over 55 percent of the Army's local haul, line haul, and unit resupply missions. It operates throughout theater as multi-purpose transportation vehicles in combat, combat support, and combat service support units.

Funding from this Program Element will be used to support the continued evolution of the future FMTV fleet as well as tech insertion opportunities to keep the current FMTV fleet relevant on today's battlefield. This includes upgrades in survivability and crew protection, improved safety by leveraging advancements in commercial active safety technologies, modernizing the aging Low Velocity Air Drop (LVAD) fleet of vehicles, improved utilization through modularity, integration of advanced high efficiency powertrains and fuel saving technologies, and insertion of autonomous vehicle capabilities that will change the way transportation missions are conducted around the world.

FY 2023 Project H07 Base funds in the amount of \$18.5 million will be used for Climate Initiatives, Improved Vehicle Safety Technologies, and implementation of Predictive Logistics (PL).

FY 2023 Project H07 Base funds in the amount of \$3.663 million will be used to conduct Production Verification Testing (PVT) of the FMTVA2 based LVAD, Live Fire Test Assets, and Live Fire Testing. The three FMTV LVAD models (M1081, M1093, M1094) ended production in 2009 and represent the oldest vehicles in the FMTV fleet. These vehicles suffer from poor readiness due to maintenance and supply issues as many parts have gone obsolete. Updates to the LVAD fleet are needed to modernize the fleet.

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B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	8.213	11.374	0.000	-	0.000
Current President's Budget	8.213	9.524	22.163	-	22.163
Total Adjustments	0.000	-1.850	22.163	-	22.163
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.850			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	22.163	-	22.163

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>				Project (Number/Name) BX8 / <i>Cold Weather All-Terrain Vehicle (CATV)</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
BX8: <i>Cold Weather All-Terrain Vehicle (CATV)</i>	-	6.665	1.825	-	-	-	-	-	-	-	0.000	8.490
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Cold-weather All-Terrain Vehicle (CATV) is a tracked vehicle that will provide transportation for up to a 10-Soldier element, emergency medical evacuation, command and control capability, and general cargo transportation on- and off-road in an Arctic environment under a wide range of otherwise impassable terrain, to include frozen ice, and extreme cold weather conditions to support year-round training as well as to conduct Homeland Defense (HD), Homeland Security (HS), and Defense support of Civil Authorities (DSCA) mission. The CATV will employ two carrier variants: General-purpose carrier variant capable of providing transport for not less than 9 Soldiers, plus the driver within a cab/enclosure (10 Soldiers) with equipment and supplies to sustain three days of combat operations. The General Purpose variant will be reconfigurable to a casualty evacuation (CASEVAC) variant capable of transporting medical equipment, two caregivers, and not less than two litter patients or four ambulatory patients in addition to the driver within a cab/enclosure. The General Purpose variant will also be reconfigurable to a Command and Control (C2) variant providing the space weight and power to hosting standard Joint communications and common operating picture (COP) platforms. The C2 and COP equipment should be able to be used enroute or with minimal setup upon halt by six Soldiers in addition to the driver within a cab/enclosure. Cargo/flatbed capable of carrying outsized equipment and cargo. The cargo variant should allow for loading cargo with a forklift from either side (i.e. dropside or flatbed configuration) and have a cab/enclosure for two Soldiers (driver and vehicle commander).

Testing in ECW is necessary to prove the adequacy to the requirements with timing necessary to support planned Field Unit Equipped (FUE) in FY23. FUE is needed as soon as possible to replace the current capability that is reaching the end of life due to obsolescence

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

	FY 2021	FY 2022	FY 2023
Title: CATV Prototype	5.785	-	-
Description: Funding provided for the procurement of the CATV Prototypes.			
Title: CATV Systems Engineering/Management Support	0.064	-	-
Description: Funding provided for Matrix personnel and Program Management (PM) support of the CATV program.			
Title: CATV Test and Evaluation	0.816	1.759	-
Description: Funding provided for endurance, performance, transportability testing and production verification testing for CATV.			
FY 2022 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>	Project (Number/Name) BX8 / <i>Cold Weather All-Terrain Vehicle (CATV)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Funding provided for endurance, performance, and sling load testing on down selected prototype variants for CATV.			
<i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> Funds decreased because there are no Cold Weather All-Terrain Vehicle (CATV) Test and Evaluation actions in this project in FY2023.			
<i>Title:</i> SBIR/STTR Transfer	-	0.066	-
<i>FY 2022 Plans:</i> Funding transferred in accordance with Title 15 USC ?638			
<i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	6.665	1.825	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• D15620: <i>Family of Cold Weather All-Terrain Vehicle (CATV)</i>	9.249	16.450	23.772	-	23.772	29.335	40.580	40.619	40.555	0.000	200.560

Remarks

D. Acquisition Strategy

The Acquisition Strategy supports a two-step acquisition approach with an OTA based Prototype contract in 2QFY21 to two vendors for the prototype phase and a down select to one vendor on a Production contract in 3QFY22 that will support the production phase. The Army Procurement Objective (APO) is 110 Cold-weather All-Terrain Vehicles (CATV).

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army												Date: April 2022				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 5				PE 0604604A / Medium Tactical Vehicles				BX8 / Cold Weather All-Terrain Vehicle (CATV)								
Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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	
SBIR/STTR Transfer	TBD	various : various	-	-		0.066		-		-		-	Continuing	Continuing	Continuing	
Subtotal			-	-		0.066		-		-		-	Continuing	Continuing	N/A	
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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	
CATV Prototypes	C/CS	Oshkosh Defense and BAE : Oshkosh, WI & York, PA	-	5.785	Mar 2021	-		-		-		-	0.000	5.785	-	
Subtotal			-	5.785		-		-		-		-	0.000	5.785	N/A	
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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	
CATV Engineering and Management Support	Various	Various : Various	-	0.064	Dec 2020	-		-		-		-	0.000	0.064	-	
Subtotal			-	0.064		-		-		-		-	0.000	0.064	N/A	
Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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	
CATV Test and Evaluation	MIPR	Various : Various	-	0.816	Jun 2021	1.759	Mar 2022	-		-		-	0.000	2.575	-	
Subtotal			-	0.816		1.759		-		-		-	0.000	2.575	N/A	
Project Cost Totals			-	6.665		1.825		-		-		-	Continuing	Continuing	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army							Date: April 2022			
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>			Project (Number/Name) BX8 / <i>Cold Weather All-Terrain Vehicle (CATV)</i>				
	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>	Project (Number/Name) BX8 / <i>Cold Weather All-Terrain Vehicle (CATV)</i>

Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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
CATV OTA Prototype Contract Award	1																											
CATV Endurance/Performance/Production Verification Testing																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>	Project (Number/Name) BX8 / <i>Cold Weather All-Terrain Vehicle (CATV)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CATV OTA Prototype Contract Award	2	2021	2	2021
CATV Endurance/Performance/Production Verification Testing	3	2021	2	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>				Project (Number/Name) H07 / <i>Family Of Med Tac Veh</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
H07: <i>Family Of Med Tac Veh</i>	-	1.548	7.699	22.163	-	22.163	18.566	3.563	3.564	3.598	0.000	60.701
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The FMTVA2 production and ECP modernization effort restores vehicle performance that was lost due to the addition of armor protection kits as the threat to tactical vehicles and the FMTV has increased. The FMTVA2 also addresses Space, Weight, Power, and Cooling (SWaP-C) constraints from having to host an increasing amount of C4ISR and Counter-IED equipment. PD MTV is executing the FMTVA2 effort documented in a signed Acquisition Decision Memorandum by the AAE on 16 November 2015.

This Project also supports development of Climate Change initiatives such as Vehicle Electrification and other climate change related technologies for the tactical vehicle fleet.

The FMTVA1P2 ended production in 2021 and represents the highest density FMTV model with over 40,000 vehicles fielded to date. The FMTVA1P2 will remain in the tactical vehicle fleet until 2040 and beyond. To ensure supportability of the FMTVA1P2 through FY 2040 and beyond, the PD MTV, as lifecycle managers for the system, shall address potential obsolescence issues with the powertrain and Material Handling Equipment used on the FMTV.

Increasing survivability and crew protection of the FMTVA1P2 comes at the expense of decreased vehicle mobility and performance in soft soil and winter environments. The A1P2 is being asked to carry more weight than what it was originally designed for. Low risk, highly commercial improvements to the A1P2 driveline, suspension, and tires can be made to minimize the loss in mobility performance.

FY 2023 Project H07 Base funds in the amount of \$2.800 million will be used for development and integration of Improved Vehicle Safety Technologies, including active safety technologies such as front collision warning, collision mitigation, lane keeping assist, adaptive cruise control, and 360 deg situational awareness.

FY2023 Project H07 Base funds in the amount of \$15.000 million will be used to support the development and testing of the vehicle electrification and of other climate change related technologies for the Tactical Wheeled Vehicle Fleet.

FY2023 Project H07 Base funds in the amount of \$0.700 million will be used to develop Predictive Logistics capability that analyzes vehicle condition data and uses it to predict impending component failure and reduce unnecessary services resulting in increased readiness and reduced maintenance cost.

FY 2023 Project H07 Base funds in the amount of \$3.663 million will be used for the FMTV Low-velocity Air Drop (LVAD) Next Generation STS Work Directive, prototype LVAD conversion kits and procurement of test assets to support Live Fire and airdrop certification.

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>	Project (Number/Name) H07 / <i>Family Of Med Tac Veh</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Title: FMTVA2 Production and ECP Modernization Effort</p> <p>Description: Funding used to support the continued evolution of the future FMTV fleet as well as tech insertion opportunities to keep the current FMTV fleet relevant on today's battlefield. The FMTVA2 production and ECP modernization effort restores vehicle performance that was lost due to the addition of armor protection kits as the threat to tactical vehicles and the FMTV has increased. Live Fire test assets are needed to support Live Fire Testing required per Chapter 139, Title 10 USC. Operational Testing required per Chapter 141, Title 10 USC.</p> <p>FY 2022 Plans: FY 2022 planned projects are Improved Vehicle Safety Technologies and FMTVA2 Operational Testing and Adversarial Assessment.</p> <p>FY 2023 Plans: FY 2023 will continue to fund the development of Improved Vehicle Safety Technologies and implementation of Predictive Logistics</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: FY 2023 increase due to ramping up development of the Vehicle Safety Technology efforts and the start of the implementation of the Predictive Logistics</p>		1.548	2.300	3.500
<p>Title: FMTV LVAD Next Generation Model</p> <p>Description: Updates to the FMTV Low Velocity Air Drop (LVAD) are needed to address obsolescence issues and to modernize the fleet.</p> <p>FY 2022 Plans: FY 2022 budget activities include the LVAD STS Work Directive, conversion of nine prototype test assets (M1081 and M1093), production of four Live Fire trucks along with Live Fire testing.</p> <p>FY 2023 Plans: FY 2023 budget activities include the LVAD STS Work Directive, conversion of nine prototype test assets (M1081 and M1093), production of four Live Fire trucks along with Live Fire testing.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: FY 2023 decrease reflects completion of prototype build and transition to test.</p>		-	5.118	3.663
<p>Title: Climate Change Initiatives</p> <p>FY 2023 Plans:</p>		-	-	15.000

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
FY2023 Project H07 Base funds in the amount of \$15.000 million will be used to support climate change initiatives by funding the development, test and integration of climate change technologies such as Tactical Vehicle Electrification kit, On Board Vehicle Power, and other technologies for the Tactical Wheeled Vehicle fleet associated with combatting climate change			
<i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> FY 2023 funding increase is the result of the development, test, and integration of vehicle electrification and related technologies in support of the new climate change initiatives			
<i>Title:</i> SBIR/STTR Transfer	-	0.281	-
<i>FY 2022 Plans:</i> Funding transferred in accordance with Title 15 USC ?638			
<i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC ?638			
Accomplishments/Planned Programs Subtotals	1.548	7.699	22.163

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• D15500: <i>Family Of Medium Tactical Veh (FMTV)</i>	184.508	61.885	74.086	-	74.086	90.244	91.842	90.256	90.113	0.000	682.934
• D04016: <i>MEDIUM TACTICAL VEHICLE PROTECTION KITS</i>	34.293	11.709	0.000	-	0.000	-	-	-	-	0.000	46.002

Remarks

D. Acquisition Strategy

The strategy for the FMTVA2 Production and ECP Modernization Effort led to award of a Firm-Fixed Price Requirements contract that will have a base award of five years (two years for vehicle testing and three production years) with two, one-year option production periods and to conduct FMTVA2 Live Fire and Operational Testing. These efforts will utilize Government test facilities.

The strategy for the Next Generation FMTV LVAD Model Configuration is to address obsolescence issues and bring the configuration up to today's standards. This effort will utilize a System Technical Support (STS) contract with the current FMTV Original Equipment Manufacturer (OEM).

The strategy to develop, integrate, and test Improved Vehicle Safety Technologies is to leverage active safety capabilities developed commercially and adapt for military use on the FMTV. The development and integration will be conducted either via STS Task Order with the vehicle OEM or an Other Transaction Authority (OTA) with

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
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industry.

The FMTV program will continually monitor emerging technologies and capabilities and leverage existing partnerships within the science and technology centers as well as through industry market research and partnerships in order to support the Army's climate change strategy . The anticipated outcomes of these efforts are fully validated Engineering Change Proposals that can be applied to the current and future FMTV fleet

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Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
SBIR/STTR	TBD	VARIOUS : VARIOUS	-	-		0.281		-		-		-	Continuing	Continuing	Continuing
Subtotal			-	-		0.281		-		-		-	Continuing	Continuing	N/A

Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
FMTV LVAD Next Generation Development / Prototypes	SS/CPFF	Oshkosh Defense : Oshkosh, WI	0.750	-		3.991	Jun 2022	-		-		-	0.000	4.741	-
Improved Vehicle Safety Technologies	MIPR	ATEC : ABERDEEN PROVING GROUNDS, MD	2.700	-		-		2.800	Mar 2023	-		2.800	0.000	5.500	-
Climate Change initiatives	TBD	tbd : tbd	-	-		-		15.000	Mar 2023	-		15.000	0.000	15.000	-
Implementation of Predictive logistics	TBD	tbd : tbd	-	-		0.300	Jun 2022	0.700	Mar 2023	-		0.700	0.000	1.000	-
Subtotal			3.450	-		4.291		18.500		-		18.500	0.000	26.241	N/A

Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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			
FMTVA2 Operational Testing	MIPR	OTC : TBD	-	-		2.000	Nov 2022	-		-		-	0.000	2.000	-
FMTV LVAD Prototypes	SS/CPFF	Oshkosh Defense : Oshkosh, WI	-	1.548	Mar 2021	-		-		-		-	0.000	1.548	-
FMTV LVAD Test Assets	SS/FFP	Oshkosh Defense : Oshkosh, WI	-	-		0.365	Jun 2022	-		-		-	0.000	0.365	-
FMTV LVAD Live Fire Testing	MIPR	Army Test Center (ATC) : Aberdeen Proving Grounds, MD	-	-		0.477	Jun 2022	0.400	Nov 2022	-		0.400	0.000	0.877	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604604A / <i>Medium Tactical Vehicles</i>	Project (Number/Name) H07 / <i>Family Of Med Tac Veh</i>
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Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	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
FMTVA2																												
FMTVA2 Delivery Order 2 (DO2)					1 DO2																							
FMTVA2 Production Validation Testing (PVT)	PVT																											
FMTVA2 Delivery Order 3 (DO3)					2 DO3																							
FMTVA2 Operational Testing (OT)									OT																			
FMTVA2 Type Classification and Material Release (TC/MR)													3 TC/MR															
FMTVA2 First Unit Equipped (FUE)													4 FUE															
FMTV LVAD NEXT GENERATION MODEL																												
FMTV LVAD Next Generation Model Analysis					LVAD Feasibility Study																							
FMTV LVAD Live Fire Test									LVAD LF																			
FMTV LVAD Air Drop Performance Testing									LVAD PVT																			
Improved Vehicle Safety Development Integration Testing													Vehicle Safety Test															
Climate Change Initiatives													Development of Vehicle Electrification and related technologies															

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army **Date:** April 2022

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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FMTVA2	1	2019	4	2024
FMTVA2 Contract Award/Delivery Order 1	2	2018	2	2018
FMTVA2 Allocated Baseline Review (ABR)	3	2018	3	2018
FMTVA2 Product Baseline Review (PBR)	4	2018	4	2018
FMTVA2 Delivery Order 2 (DO2)	4	2021	4	2021
FMTVA2 Production Validation Testing (PVT)	3	2019	4	2021
FMTVA2 Live Fire Test & Evaluation (LFT&E)	3	2019	4	2019
FMTVA2 Delivery Order 3 (DO3)	4	2021	4	2021
FMTVA2 Operational Testing (OT)	4	2022	2	2023
FMTVA2 Type Classification and Material Release (TC/MR)	4	2023	4	2023
FMTVA2 First Unit Equipped (FUE)	4	2023	4	2023
FMTVA1P2	1	2019	4	2019
FMTVA1P2 FY 2018 Vehicle Delivery	4	2018	4	2019
FMTV LVAD NEXT GENERATION MODEL	3	2020	2	2025
FMTV LVAD Next Generation Model Analysis	4	2021	4	2024
FMTV LVAD Live Fire Test	3	2022	1	2023
FMTV LVAD Air Drop Performance Testing	3	2022	2	2024
Improved Vehicle Safety Development Integration Testing	3	2023	4	2025
Climate Change Initiatives	2	2023	4	2025