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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605602A / <i>Army Technical Test Instrumentation and Targets</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	-	72.760	42.220	75.591	-	75.591	66.082	59.070	54.930	56.754	0.000	427.407
FJ3: <i>Technical Test Instrumentation & Targets</i>	-	72.760	42.220	75.591	-	75.591	66.082	59.070	54.930	56.754	0.000	427.407

A. Mission Description and Budget Item Justification

This funding line supports test and evaluation (T&E) of Army Modernization Priority Programs.

This Program Element (PE) provides critical front-end investments for development of: new test methodologies and standards; advanced test technology concepts; future T&E; advanced modeling, simulation and instrumentation prototypes; and full-scale development of T&E capabilities for the United States (U.S) Army Test and Evaluation Command (ATEC), which includes the Operational Test Command (OTC) at Ft Hood, Texas; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; White Sands Test Center (WSTC) at White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Yuma Test Center (YTC) at Yuma Proving Grounds (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska and the Tropics Regions Test Center (TRTC), at various locations); and Redstone Test Center (RTC), Redstone Arsenal, Alabama. OTC consists of four forward Test Directorates (Airborne and Special Operations Test Directorate, Fort Bragg, North Carolina; Air and Missile Defense Test Directorate, Fort Bliss, Texas; Fires Test Directorate, Fort Sill, Oklahoma; and the Intelligence Electronic Warfare Test Directorate, Fort Huachuca, Arizona) together with four other Test Directorates (Aviation; Maneuver; Mission Command; Maneuver Support and Sustainment) at Ft Hood, Texas. These T&E capabilities are required to support T&E requirements of Army signature modernization efforts to support development of Multi-Domain Operations (MDO)-capable Forces. These activities enable Army Futures Command (AFC) signature modernization efforts readiness and support the development and fielding cycle of all Army acquisition programs including rapid fielding initiatives and programs of record. Sustainment funding maintains existing T&E capabilities at all locations by replacing unreliable, uneconomical, obsolete, and irreparable instrumentation, as well as incremental upgrades of hardware and software for modeling, simulation, and instrumentation systems to assure adequate test data collection capabilities. This data supports acquisition milestone decisions for all test mission areas throughout the Army including programs such as the 105-mm Mobile Howitzer, 30mm/40mm ammunition, Active Protection System (APS), AH-64 Block III, APR-39C(V)1 Radar, Armored Multi-Purpose Vehicle (AMPV), Army Integrated Air-Missile Defense (AIAMD), Lower Tier Air and Missile Defense Sensor (LTAMDS), Army Tactical Missile System (ATACMS), CH-47F Chinook, Command Post Computing Environment (CPCE), Common Infrared Counter Measures (CIRCM), Counter Small Unmanned Aerial System (c-SUAS), Counter Rocket Artillery Mortar (C-RAM), Dismounted Assured PNT System (DAPS), Distributed Common Ground System - Army (DCGS-A), Capability Drop 2, Tactical Intelligence Targeting Access Node (TITAN), Precision Strike Missile (PrSM). Enhanced Night Vision Goggle- Binocular (ENVG-B), Expedient Leader Follower, Extended Range Cannon Artillery (ERCA), Family of Medium Tactical Vehicles (FMTV), Guided Multiple Launch Rocket System (GMLRS), Integrated Tactical Network (ITN), Javelin, Joint Air-to- Ground Missile (JAGM) for US Navy, Joint Assault Bridge (JAB), Joint Light Tactical Vehicle (JLTV), Leader Radio, M109A7 Paladin/M992A3, M1A2 Abrams, M-2/3 Bradley Expedited Active Protection System (ExAPS), M-2/3 Bradley Fist, M776 Chrome Tube, M777 Long Range Cannon, Maneuver Short Range Air Defense (M-SHORAD), ManPack (MP), Mounted Assured PNT System (MAPS), M10 Booker Combat Vehicle (BCV), Optionally Manned Fighting Vehicle, Patriot 3 (PAC-3), Precision Guidance Kit (PGK), Precision Strike Missile (PrSM), Robotic Combat Vehicle (RCV), Shadow Tactical Unmanned Aircraft System (TUAS), Stinger Shelf life Extension Program (SLEP), Stryker, Systems for Assured Position, Navigation and Timing (PNT), Terminal High-Altitude Area Defense (THAAD), UH-60M Black Hawk, and XM113. Also supports AFC and Army Signature Modernization efforts to include Project Convergence and PNT Assessment Exercise (PNTAX).

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B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	67.962	42.220	43.439	-	43.439
Current President's Budget	72.760	42.220	75.591	-	75.591
Total Adjustments	4.798	0.000	32.152	-	32.152
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	6.051	-			
• SBIR/STTR Transfer	-1.253	-			
• Adjustments to Budget Years	-	-	32.152	-	32.152

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

Project: FJ3: *Technical Test Instrumentation & Targets*

Congressional Add: *Rapid Assurance Modernization Program - Test (RAMP-T)*

	FY 2023	FY 2024
	30.000	-
Congressional Add Subtotals for Project: FJ3	30.000	-
Congressional Add Totals for all Projects	30.000	-

Change Summary Explanation

Increased funding to support ATEC Test Capability Investments and ATEC Enterprise Test Data and Network Interoperability to Support Multi-Domain Environment (MDO).

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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
FJ3: Technical Test Instrumentation & Targets	-	72.760	42.220	75.591	-	75.591	66.082	59.070	54.930	56.754	0.000	427.407
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project provides critical front-end investments for development of new test methodologies and standards; advanced test technology concepts; future test capabilities; advanced development of modeling, simulation, and instrumentation prototypes; advanced instrumentation prototypes; and the full-scale development of T&E capabilities for the United States (U.S) Army Test and Evaluation Command (ATEC). ATEC employs modeling, simulation, and instrumentation to provide a realistic multi-domain operational (MDO) test environment with modern threat effects, conduct test monitoring and control, and perform data analysis to enable essential transformation and support the Joint Force through development of MDO-capable forces. ATEC investments include organically developed capabilities as well as adaptation of T&E capabilities developed by others (e.g., government, academia) or commercial-off-the-shelf products. These T&E capabilities are located at, and managed by, ATEC T&E activities (excluding West Desert Test Center) and employed at ATEC ranges and other designated test locations across the country. Maintaining and modernizing ATEC T&E capabilities is critical to enable signature modernization efforts readiness and support the development and fielding cycle of all Army acquisition programs including rapid fielding initiatives and programs of record.

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

	FY 2023	FY 2024	FY 2025
Title: Technical Test Instrumentation & Targets	42.628	42.220	75.591
<p>Description: Develops, acquires, and upgrades critical T&E technology and instrumentation to successfully develop, test, and evaluate Army weapons and equipment. Provides hardware/software and communication to create realistic relevant test environments, real-time range operations for monitoring participants, and data support systems for full integration. Provides the necessary live, virtual and constructive environment, hardware-in-the-loop capabilities, and modeling and simulation needed for testing Army materiel solutions. Acquires instrumentation to measure performance of Command, Control, Communication, Computers, Cyber (C5) systems; performance and reliability, availability, and maintainability (RAM) data collection on tracked and wheeled vehicles; ballistic transducers for measuring chamber pressures during ammunition and barrel tests; supports development of common data collection instrumentation and data management systems used in testing across all test commodity areas and lifecycles; continues replacement and upgrade of range control instrumentation, radar, optics and telemetry used in missile testing; acquires data recorders, signal conditioning equipment, data processing equipment and other instrumentation for various aircraft tests; upgrades natural environments test instrumentation used for testing weapon systems, vehicles, munitions and support equipment in extreme hot desert environments as well as extreme cold conditions; continues upgrade of survivability/vulnerability test capabilities in support of live fire testing; upgrades and replaces mobile range communications equipment and digital end devices; and improves test efficiency through the use of smart devices as data collectors.</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>FY 2024 Plans: ATEC test centers will continue to provide, acquire, and upgrade instrumentation for C4ISR, RAM, automotive, ballistics, missile, aviation and environmental testing across all test commodity areas and enhance/expand the use of common data collectors, smart devices, and enterprise data management tools. Examples include Aberdeen Test Center (ATC) Crew Survivability Instrumentation during Live Fire Test and Evaluation (LFT&E) to support NGCV; Electronic Proving Ground (EPG) Phoenix Architecture project for support to C4 network systems; Yuma Proving Ground (YPG) Long Range Precision Fires (LRPF) test support equipment; White Sands Missile Range (WSMR) Directed Energy Laser test modernization, and Redstone Test Center's (RTC) Modular Open System Architecture (MOSA) for supporting Future Vertical Lift (FVL) testing.</p> <p>Funds will help develop, acquire, and upgrade critical Meteorological test technology and instrumentation. Will provide the necessary test instrumentation, computer and communications systems, data collection, analysis and reporting equipment, and other special test capabilities to successfully develop and test Army weapons and equipment.</p> <p>FY 2025 Plans: ATEC test centers will continue to provide, acquire, and upgrade instrumentation for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), RAM, automotive, ballistics, missile, aviation and environmental testing across all test commodity areas and enhance/expand the use of common data collectors, smart devices, and enterprise data management tools. Examples include Aberdeen Test Center (ATC) Advanced Ballistics Instrumentation Measurements to support Rapid Capabilities and Critical Technologies Office (RCCTO); Electronic Proving Ground (EPG) Testing Re-Architected for Distributed Environments (TRADE) for support to C4 network systems; Yuma Proving Ground (YPG) Telecommunications Modernization; White Sands Missile Range (WSMR) Directed Energy Laser test modernization, and Redstone Test Center's (RTC) Pulsed Ultra High Frequency (PUHF) Amplifier System for supporting Future Vertical Lift (FVL) testing.</p> <p>Funds will help develop, acquire, and upgrade critical Meteorological test technology and instrumentation. Will provide the necessary test instrumentation, computer and communications systems, data collection, analysis and reporting equipment, and other special test capabilities to successfully develop and test Army weapons and equipment.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: increase in funding is a response to economic assumption for non-pay and non-fuel purchases and funding increase for investment in operational test and evaluation (T&E) capabilities supporting Army modernization. These T&E capability investments are required to evaluate systems in a contested Multi-Domain Operations (MDO) Environment.</p>				
Title: Army Enterprise Business Systems (EBS) Consolidation - Test Data Management System (TDMS)		0.132	-	-

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Description: The Army consolidated Enterprise Business Systems (EBS) under the Acquisition Domain. The consolidation resulted in the transfer of funding \$137K in support of the Test Data Management System (TDMS). TDMS is the system by the White Sands Missile Range to manage test data and perform program management of all missions performed on the range.			
Accomplishments/Planned Programs Subtotals	42.760	42.220	75.591

	FY 2023	FY 2024
Congressional Add: Rapid Assurance Modernization Program - Test (RAMP-T)	30.000	-
FY 2023 Accomplishments: Congressional Add for RAMP-T.		
Congressional Adds Subtotals	30.000	-

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

Remarks

D. Acquisition Strategy
N/A