Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army											Date: March 2024	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603464A *I Long Range Precision Fires Advanced Technology*							
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	-	225.921	153.024	164.943	-	164.943	139.503	100.485	81.874	73.862	0.000	939.612
AE8: *Land-Based Anti-Ship Missile (LBASM) Advanced Tech*	-	11.826	-	-	-	-	-	-	-	-	0.000	11.826
AF2: *Long Range Maneuverable Fires (LRMF) Advanced Tech*	-	30.663	62.661	88.512	-	88.512	76.455	-	2.021	12.209	0.000	272.521
AG3: *Extended Range Cannon Artillery (ERCA) Adv Tech*	-	3.232	-	-	-	-	-	-	-	-	0.000	3.232
AG5: *Extended Range Artillery Munition Suite Adv Tech*	-	26.915	23.484	-	-	-	-	-	-	-	0.000	50.399
AG7: *Energetic Materials and Adv Processing Adv Tech*	-	1.908	-	-	-	-	-	-	-	-	0.000	1.908
BO8: *Long Range Precision Fires Advanced Tech (CA)*	-	102.000	-	-	-	-	-	-	-	-	0.000	102.000
BY2: *Advanced Hypersonic Technology*	-	35.184	64.136	43.241	-	43.241	19.748	32.419	31.024	28.429	0.000	254.181
CE9: *Armaments Advanced Technology*	-	-	-	5.326	-	5.326	7.999	13.371	13.796	10.541	0.000	51.033
CZ8: *PrSM Modular Payload Advanced Development*	-	14.193	2.743	27.864	-	27.864	35.301	54.695	35.033	22.683	0.000	192.512

Note

Armaments Advanced Technology is a new start within the Long Range Precision Fires Advanced Technology program in FY 2025.

A. Mission Description and Budget Item Justification

This Program Element (PE) matures and demonstrates Long Range Precision Fires (LRPF) technologies to destroy, neutralize, or suppress the enemy by cannon artillery and missile fire and enable integration of fire support assets into combined arms operations. Major Focus Areas for LRPF Science and Technology include: Missiles, Cannon Artillery, and Supporting LRPF Technologies covering Strategic, Operational and Tactical Lines of Effort. LRPF Missiles Advanced Development matures and demonstrates a broad range of Missile technologies to enhance Army integrated LRPF capabilities at extended range. Cannon Artillery Advanced Development matures and demonstrates critical technologies to increase range, precision, and both point and area effects for cannon artillery. Supporting LRPF

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603464A *I Long Range Precision Fires Advanced Technology*

Technologies Advanced Development matures and demonstrates a broad range of component technologies to address weapon cost drivers and enhance performance of future LRPF munitions and systems.

Research in this Program Element (PE) complements PE 0602147A Long Range Precision Fires Technology.

This PE is directly aligned to the Army Long Range Precision Fires (LRPF) Modernization Priority.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	202.830	153.024	127.982	-	127.982
Current President's Budget	225.921	153.024	164.943	-	164.943
Total Adjustments	23.091	0.000	36.961	-	36.961
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	26.169	-			
• SBIR/STTR Transfer	-3.078	-			
• Adjustments to Budget Years	-	-	36.961	-	36.961

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: BO8: *Long Range Precision Fires Advanced Tech (CA)*		
Congressional Add: *Program Increase - Hypervelocity Projectile Extended Range*	25.000	-
Congressional Add: *Program Increase - Maneuvering Submunitions for Precision Strike Missile*	9.000	-
Congressional Add: *Program Increase - AFT COMBUSTOR RAMJET PROPULSION*	10.000	-
Congressional Add: *Program Increase - DEVELOPMENT AND TESTING OF PROPELLANTS USING ADVANCED MANUFACTURING*	5.000	-
Congressional Add: *Program Increase - HYPERSONIC AND STRATEGIC MATERIALS AND STRUCTURES*	8.000	-
Congressional Add: *Program Increase - HYPERSONIC METAL ALLOYS*	2.000	-
Congressional Add: *Program Increase - MISSILE MULTI AGENT EXTENSIBLE ENGAGEMENT SERVICES*	15.000	-
Congressional Add: *Program Increase - SUPER RAMJET ARTILLERY MISSION*	8.000	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603464A *I Long Range Precision Fires Advanced Technology*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Congressional Add: *Program Increase - XM1155 GUIDED FLIGHT PROJECTILE*	20.000	-
Congressional Add Subtotals for Project: BO8	102.000	-
Congressional Add Totals for all Projects	102.000	-

Change Summary Explanation

Increase in FY25 funding was realigned from PE 0603465 Future Vertical Lift, PE 0602002 Army Agile Innovation and Development, PE 0603041 All Domain Convergence and PE 0205778A Guided Multiple-Launch Rocket System (GMLRS).

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) AE8 / *Land-Based Anti-Ship Missile (LBASM) Advanced Tech*	

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
AE8: *Land-Based Anti-Ship Missile (LBASM) Advanced Tech*	-	11.826	-	-	-	-	-	-	-	-	0.000	11.826
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities by maturing and demonstrating critical technologies to detect, engage, and defeat moving land or maritime surface targets under all conditions.

Research in this Project complements Program Element (PE) 0602147A (Long Range Precision Fires Technology).

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Land Based Anti-Ship Missile (LBASM) Advanced Technology	11.826	-	-
Description: Matures and demonstrates technologies that enable high-mobility artillery rocket system (HIMARS) and multiple-launch rocket system (MLRS) rocket/missile artillery systems to destroy enemy air defenses in the land and the maritime domains.			
Accomplishments/Planned Programs Subtotals	11.826	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) AF2 / *Long Range Maneuverable Fires (LRMF) Advanced Tech*	

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
AF2: *Long Range Maneuverable Fires (LRMF) Advanced Tech*	-	30.663	62.661	88.512	-	88.512	76.455	-	2.021	12.209	0.000	272.521
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities by developing, maturing and demonstrating next generation Multi-Domain Operations extended range weapon system technology for Precision Strike Missile to increase survivability, penetration, and range in complex Anti Access/Area Denial (A2/AD) and denied environments. This Project also includes both the maturation and demonstration of advanced extended range missile technology and autonomous, unmanned launcher technology. The combination of these technologies offers the potential to dramatically increase force projection through increases in range, firepower, and magazine depth.

Work in this Project complements Program Element (PE) 0602147A (Long Range Precision Fires Technology) / Project AF1 (Long Range Maneuverable Fires (LRMF) Technology).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the Aviation & Missile Center (AvMC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Long Range Maneuverable Fires (LRMF) Advanced Tech	30.663	62.661	88.512
Description: Matures and demonstrates next generation Multi-Domain Operations extended range weapon system technology for Precision Strike Missile to increase survivability, penetration, and range in complex A2/AD and denied environments. Includes maturation and demonstration of advanced extended range missile technology and autonomous, unmanned launcher technology.			
FY 2024 Plans: Will mature system detailed design that integrates combined cycle extended range missile propulsion engine and other critical component technologies such as navigation, guidance and control subsystems and perform subsystem and system level testing through laboratory, wind tunnel, and field tests. Mature development of modeling and simulation and hardware in the loop (HWIL) capability for evaluation of component design and system performance predictions. Will complete system level integration and test of an autonomous unmanned launcher and conduct field demonstrations of vehicle autonomy and remote launch pod control and munition live fire.			
FY 2025 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603464A / *Long Range Precision Fires Advanced Technology*	**Project (Number/Name)** AF2 / *Long Range Maneuverable Fires (LRMF) Advanced Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Will conduct a series of integrated booster and ramjet demonstrations of propulsion engine concepts to validate performance of the air-breathing propulsion for long range fires; optimizes and matures models to simulate integrated objective system performance; matures seeker/sensor integration for optimal performance and precision; improves survivability by exploiting intel-based red-force models and analysis. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase due to development, demonstrations and validations of prime contractor integrated propulsion hardware in FY 2025.			
Accomplishments/Planned Programs Subtotals	30.663	62.661	88.512

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) AG3 / *Extended Range Cannon Artillery (ERCA) Adv Tech*	

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
AG3: *Extended Range Cannon Artillery (ERCA) Adv Tech*	-	3.232	-	-	-	-	-	-	-	-	0.000	3.232
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires (LRPF) Modernization Priority capabilities. This Project matures and demonstrates artillery technologies including light weight cannon and mount structures, high efficiency recoil cylinders, common lower power fire control hardware, improved fire control software, and improved sensor to shooter communications which will increase range and accuracy without an increase in platform weight. This Project also develops a collaborative environment with analytic capabilities to support Fires and Intel Soldiers.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the Armaments Center.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Synchronized High Op-Tempo (SHOT) Targeting for LRPF ***Description:*** This effort develops a collaborative environment with analytic capabilities to support Fires and Intel Soldiers in organizing planning products, and analytics that automate data discovery and development of targets and streamlining workflows that support Course of Action development.	3.232	-	-
Accomplishments/Planned Programs Subtotals	3.232	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) AG5 / *Extended Range Artillery Munition Suite Adv Tech*	

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
AG5: *Extended Range Artillery Munition Suite Adv Tech*	-	26.915	23.484	-	-	-	-	-	-	-	0.000	50.399
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In Fiscal Year (FY) 2025, this Project is terminated.

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities. This Project matures and demonstrates extended range artillery technologies including advanced projectile propulsion and guidance technologies to increase range and accuracy.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the Armaments Center.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Extended Range Artillery Munition Suite Advanced Technology	25.113	20.272	-
Description: Matures and optimizes long range unitary artillery projectile systems in the areas of range, precision, counter-measure, and payload technologies. ***FY 2024 Plans:*** Will demonstrate advanced range extension through in flight propulsion systems, optimized aeroballistic airframe geometries and precision technologies. Will optimize airframe architectures for integration of components to enable target seeking missions. Will demonstrate extended range munition concepts for conventional coordinate- seeking and cargo munitions. Will optimize payload integration for extended range gun-launched airframes to include sub-munition dispensing techniques and survivability. Will optimize extended range projectile airframes to maximize range and effectiveness across current and developmental weapon platforms and propelling charge systems. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decrease reflects planned life cycle conclusion of this effort.			
Title: Optionally Manned Artillery Advanced Technology	1.802	3.212	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603464A / *Long Range Precision Fires Advanced Technology*	**Project (Number/Name)** AG5 / *Extended Range Artillery Munition Suite Adv Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Description: Develop automated cannon artillery solutions for fuze-setting, firing, as well as rearming to exponentially increase rate of fire and out-pace future near-peer, high operational-tempo (OPTEMPO) engagements, and reduce Soldier burden. ***FY 2024 Plans:*** Will demonstrate technologies to improve the rate of fire of artillery systems including automated fuze setting, automated re-arm and re-supply, and fire control and diagnostics. Will validate modeling and simulation concepts that will increase the speed and performance of cannon artillery systems. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** In Fiscal Year (FY) 2025, this Project is terminated.			
Accomplishments/Planned Programs Subtotals	26.915	23.484	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) AG7 / *Energetic Materials and Adv Processing Adv Tech*	

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
AG7: *Energetic Materials and Adv Processing Adv Tech*	-	1.908	-	-	-	-	-	-	-	-	0.000	1.908
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities. This Project matures and demonstrates the performance of energetic materials ranging from medium caliber through large caliber weapons.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Scale-up of Insensitive Energetic Materials ***Description:*** This effort matures and demonstrates the performance and insensitivity of energetic materials ranging from 25mm medium caliber (direct fire) through 155mm large caliber (indirect fire) weapons.	1.908	-	-
Accomplishments/Planned Programs Subtotals	1.908	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) BO8 / *Long Range Precision Fires Advanced Tech (CA)*	

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
BO8: *Long Range Precision Fires Advanced Tech (CA)*	-	102.000	-	-	-	-	-	-	-	-	0.000	102.000
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Congressional Interest Item funding provided for Long Range Precision Advanced Technology.

A. Mission Description and Budget Item Justification

Congressional Interest Item funding provided for Long Range Precision Advanced Technology.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
Congressional Add: Program Increase - Hypervelocity Projectile Extended Range ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for Hypervelocity Projectile Extended Range	25.000	-
Congressional Add: Program Increase - Maneuvering Submunitions for Precision Strike Missile ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for Maneuvering Submunitions for Precision Strike Missile	9.000	-
Congressional Add: Program Increase - AFT COMBUSTOR RAMJET PROPULSION ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for AFT COMBUSTOR RAMJET PROPULSION	10.000	-
Congressional Add: Program Increase - DEVELOPMENT AND TESTING OF PROPELLANTS USING ADVANCED MANUFACTURING ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for DEVELOPMENT AND TESTING OF PROPELLANTS USING ADVANCED MANUFACTURING	5.000	-
Congressional Add: Program Increase - HYPERSONIC AND STRATEGIC MATERIALS AND STRUCTURES	8.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603464A / *Long Range Precision Fires Advanced Technology*	**Project (Number/Name)** BO8 / *Long Range Precision Fires Advanced Tech (CA)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
FY 2023 Accomplishments: Congressional Interest Item funding provided for HYPERSONIC AND STRATEGIC MATERIALS AND STRUCTURES		
Congressional Add: Program Increase - HYPERSONIC METAL ALLOYS ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for Hypersonic Metal Alloys	2.000	-
Congressional Add: Program Increase - MISSILE MULTI AGENT EXTENSIBLE ENGAGEMENT SERVICES ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for MISSILE MULTI AGENT EXTENSIBLE ENGAGEMENT SERVICES	15.000	-
Congressional Add: Program Increase - SUPER RAMJET ARTILLERY MISSION ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for SUPER RAMJET ARTILLERY MISSION	8.000	-
Congressional Add: Program Increase - XM1155 GUIDED FLIGHT PROJECTILE ***FY 2023 Accomplishments:*** Congressional Interest Item funding provided for XM1155 GUIDED FLIGHT PROJECTILE	20.000	-
Congressional Adds Subtotals	102.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) BY2 / *Advanced Hypersonic Technology*	

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
BY2: *Advanced Hypersonic Technology*	-	35.184	64.136	43.241	-	43.241	19.748	32.419	31.024	28.429	0.000	254.181
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Hypersonic Precision Fires Modernization Priority capabilities by developing and maturing critical technologies for strategic missiles. Technology development includes critical technologies to improve strategic missile components such as advanced structures and materials, thermal protection systems, navigation systems, data links, and seekers/terminal sensors.

The cited research is consistent with Under Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the Aviation & Missile Center (AvMC) in coordination with the United States Army Rapid Capabilities and Critical Technologies Office (RCCTO).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Hypersonics Advanced Technology	35.184	64.136	43.241
Description: This effort matures and demonstrates new subsystems and components of a hypersonic weapon delivery system to defeat Anti Access/Area Denial (A2/AD) capabilities, suppress adversary Long Range Fires, and engage other payoff/ time critical targets.			
FY 2024 Plans: Will complete development and transition of 2D/3D carbon-carbon thermal protection materials and material processing techniques and standards to design agent and industry partners in support of critical material decisions for the Common Hypersonic Glide Body (CHGB). Will demonstrate guidance, navigation and control technology to reduce both size, weight, and power (SWAP) packaging and reliance on GPS for navigation accuracy in contested environments. Will mature and demonstrate seeker and terminal sensor component technologies to include seeker window, antenna, and transceiver for hypersonic weapon applications.			
FY 2025 Plans: Will develop and mature advanced modeling and simulation capability for determining system definition concepts and identification of critical technology performance requirements for future high speed vehicle applications; mature emerging technologies in the development of next generation high temperature materials and aerothermal structures for high speed vehicle applications;			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603464A / *Long Range Precision Fires Advanced Technology*	**Project (Number/Name)** BY2 / *Advanced Hypersonic Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
mature guidance, navigation and control technology to reduce both size, weight, and power (SWAP) packaging and reduce reliance on GPS for navigation accuracy in contested environments; mature terminal sensor component technologies to include, but not limited to Infrared/Radio Frequency (IR/RF) transparent windows, antennas, and transceivers for high speed vehicle applications; mature emerging propulsion and warhead technologies with greater performance to size/weight ratios. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decrease in Fiscal Year (FY) 2025 due to completing characterization of 2DCC/3DCC materials for process model development and demonstrating navigation technology on a sounding rocket to simulate a hypersonic flight environment in Fiscal Year (FY) 2024.			
Accomplishments/Planned Programs Subtotals	35.184	64.136	43.241

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) CE9 / *Armaments Advanced Technology*	

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
CE9: *Armaments Advanced Technology*	-	-	-	5.326	-	5.326	7.999	13.371	13.796	10.541	0.000	51.033
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Armaments Advanced Technology is a new start within the Long Range Precision Fires Advanced Technology program in FY 2025.

A. Mission Description and Budget Item Justification

Improve defeat of imprecisely located and relocated/moving targets by leveraging and advancing component technologies in armament technologies (multi-mode g-hardened seekers for cross spectrum targeting, advanced guidance, navigation, and control (GNC) and in-flight update technologies).

Work in this Project complements PE 0602141A / Lethality Technology / Project AH9 (Advanced Warheads Technology) and PE 0602147A (Long Range Precision Fires Technology) / Project AG4 (Extended Range Artillery Munition Suite Technology) and Project BN5 (Fuze and Power for Munitions).

The cited research is consistent with the Assistant Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the Armaments Center (AC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Strategic Armaments Advanced Tech	-	-	5.326
Description: This effort provides performance enhancements for Long Range Fires by developing and integrating cannon artillery automation and rearm, enhanced lethality, munition survivability, precision, and munition collaborations technologies to maximize effects.			
FY 2025 Plans: Will optimize advanced targeting capabilities, multi-modal navigation, kinematic maneuver authority, course correction, collaborative and in-flight targeting, and terminal engagement mechanisms and technologies for artillery systems; mature energetics, warheads, fuzing, and precision component technologies into artillery munitions and submunitions to provide lethal and non-lethal enhanced tactical fires effects for multi-domain operations.			
FY 2024 to FY 2025 Increase/Decrease Statement: This effort is a new start in FY 2025.			
Accomplishments/Planned Programs Subtotals	-	-	5.326

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603464A / *Long Range Precision Fires Advanced Technology*	**Project (Number/Name)** CE9 / *Armaments Advanced Technology*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A / *Long Range Precision Fires Advanced Technology*	Project (Number/Name) CZ8 / *PrSM Modular Payload Advanced Development*	

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
CZ8: *PrSM Modular Payload Advanced Development*	-	14.193	2.743	27.864	-	27.864	35.301	54.695	35.033	22.683	0.000	192.512
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities by maturing and demonstrating critical technologies for autonomous, Cluster Munition policy compliant, enhanced lethality payloads deployed from Precision Strike Missile to autonomously and cooperatively find and engage the full spectrum of deep moved, moving, dispersed, and poorly located targets in areas with contested access at extended ranges.

Work in this Project complements Program Element (PE) 0602147A (Long Range Precision Fires Technology).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the Aviation & Missile Center (AvMC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Precision Strike Missile (PrSM) Advanced Development/PrSM Modular Payload	14.193	2.743	2.814
Description: Mature and demonstrate critical technologies for the delivery of distributed and enhanced lethality capabilities via extended range missiles. Technology examples include: sensor and associated signal processing technologies for target acquisition, identification, and engagement; datalink and communications technologies to transmit targetable data; compact propulsion technologies to enable dwell time on station; payload dispensing technologies for deploying these payloads from high speed long range missiles; and advanced extended range missile propulsion and guidance technologies.			
FY 2024 Plans: Will continue to mature critical component technologies and integrate payload enhanced lethality models and autonomy algorithms in high fidelity simulation to optimize missile terminal engagement performance.			
FY 2025 Plans: Will optimize components for modular payloads such as submunition guidance, six-degree of freedom model development, sensor packaging and algorithms, warhead performance, and airframe design; conduct wind tunnel demonstrations to optimize aerodynamic design; perform quantitative analysis on six-degree-of-freedom simulations against scenario specific vignettes.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Funding increase is an economic adjustment.			
Title: Sensor Fuzed Weapon Development ***Description:*** This Project matures and demonstrates a sensor fuzed weapon (SFW) prototype to validate a capability to engage armored and mechanized forces utilizing the Extended Range Guided Multiple Launch Rocket System (ER GMLRS) as the delivery vehicle. The SFW prototype will consist of a munition dispenser containing multiple submunitions. The project will optimize the SFW submunitions to independently acquire, identify, and engage these targets. In order to support an accelerated demonstration schedule, initial efforts will be focused on demonstration of SFW on a standard range GMLRS. ***FY 2025 Plans:*** Will optimize the SFW payload munition design and conduct a Design Review; mature critical dispense mechanism and submunition component hardware and software,and perform subsystem testing to support integration of the SFW payload into a GMLRS form-factor. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding realigned from Program Element (PE) 0205778A (Guided Multiple-Launch Rocket System (GMLRS)) / Project EG3 (Guided MLRS) to develop an Extended Range Guided Multiple Launch Rocket System Sensor Fuzed Weapon (ER-GMLRS-SFW) capability.	-	-	25.050
Accomplishments/Planned Programs Subtotals	14.193	2.743	27.864

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A