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

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</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	-	77.027	83.329	64.076	-	64.076	52.728	56.332	56.876	57.513	Continuing	Continuing
CF3: <i>Integrated Soldier Systems (SL CFT)</i>	-	4.211	4.403	4.407	-	4.407	4.451	4.544	4.591	4.642	0.000	31.249
ES9: <i>Advanced Tactical Parachute System</i>	-	1.705	3.029	2.776	-	2.776	3.732	4.070	4.114	4.160	0.000	23.586
EW4: <i>Crew Served Weapons Engineering Development</i>	-	8.854	7.458	4.300	-	4.300	3.772	4.074	4.116	4.162	0.000	36.736
FF2: <i>Small Arms Fire Control</i>	-	6.752	8.179	10.050	-	10.050	4.966	4.971	5.025	5.081	0.000	45.024
FL8: <i>84mm MAAWS Ammunition</i>	-	5.893	-	-	-	-	-	-	-	-	0.000	5.893
FM4: <i>Next Generation Squad Weapons</i>	-	13.103	17.616	16.141	-	16.141	11.058	11.072	11.191	11.316	0.000	91.497
S58: <i>Soldier Enhancement Program</i>	-	13.522	10.182	4.897	-	4.897	5.094	5.101	5.105	5.162	0.000	49.063
S60: <i>Clothing & Equipment</i>	-	5.196	6.313	3.427	-	3.427	6.364	8.879	8.974	9.074	0.000	48.227
S61: <i>Acis Engineering Development</i>	-	2.418	9.927	3.788	-	3.788	0.466	0.466	0.471	0.477	Continuing	Continuing
S63: <i>Individual Weapons Engineering Development</i>	-	3.518	3.956	3.549	-	3.549	3.510	3.791	3.830	3.873	0.000	26.027
S70: <i>Personnel Recovery Support System (PRSS)</i>	-	3.018	2.963	2.591	-	2.591	0.605	0.652	0.659	0.667	Continuing	Continuing
VS5: <i>Soldier Protective Equipment</i>	-	8.837	9.303	8.150	-	8.150	8.710	8.712	8.800	8.899	0.000	61.411

A. Mission Description and Budget Item Justification

A portion of this funding line directly aligns to the Soldier Lethality Army Modernization Priority. This Program Element (PE) Engineering and Manufacturing Development (EMD) manages the Soldier as a system, with the goal of increasing Soldiers' combat effectiveness, increasing survivability, and improving the Soldiers' quality of life. It develops and tests prototypes of weapons, clothing, equipment, and other items useful to support the Soldier.

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<p>Project CF3 (Integrated Soldier Systems (SL CFT)) test, maintain and evolve a Soldier/squad equipment configuration baseline, the Architecture Assessment Tool and conduct configuration management at the system level. Physically integrate components, improve compatibility and interoperability across programs. Establish and maintain tools that provide Systems Engineering, Configuration Management and Evaluation in a virtual and physical environment. Conduct evaluations and integrate mission-specific equipment into the Adaptive Squad Architecture (ASA) with continued emphasis on development of ICDs, evaluations, and improved fidelity.</p> <p>Project ES9 (Advanced Tactical Parachute System) improves personnel parachute systems and associated equipment for low and high altitude operations to include canopy improvements based on integration of new technology with the goal of enhancing the insertion capability and safety of the airborne Soldier and increasing the performance, reliability, and durability of personnel airdrop equipment.</p> <p>Project EW4 (Crew Served Weapons Engineering Development) supports efforts to transition components or prototypes from Small Arms Improvement, Project S54, Program Element 0603827A, (Budget Activity 4) and other domestic and foreign sources of small arms weapons to demonstrate, test and evaluate capability near or at planned operational requirements.</p> <p>Project FF2 (Small Arms Fire Control) supports the development of an advanced fire control for the Next Generation Automatic Rifle (NGSW-AR) and Rifle (NGSW-R). The Next Generation Fire Control will increase the probability of hit and decrease the time to engage through a variable powered direct view optic with integrated range finder, ballistic calculator, and digital display capable of providing an adjusted aim point.</p> <p>Project FI2 (Lightweight 30mm Cannon) provides increased lethality modification to Product Directorate Counter-Rocket Artillery Mortars (PD C-RAM) under a JUONS. An upgraded medium caliber weapon will be developed, tested and evaluated for integration into a modified remote weapon station under an Urgent Materiel Release (UMR).</p> <p>Project FL8 (84mm MAAWS Ammunition) supports test, evaluation and quality up to seven types of 84 millimeter (mm) munitions for the U.S. Army use with the M3/M3A1 Multi-Role Anti-Personnel Weapon Systems (MAAWS).</p> <p>Project FM4 (Next Generation Squad Weapons) supports the rapid prototyping and development of a NGSW-AR, NGSW-R and common cartridge to provide capability improvements in accuracy, range and lethality, in order to maintain overmatch and meet future warfighter requirements.</p> <p>Project S58 (Soldier Enhancement Program) supports accelerated integration, modernization, and enhancement efforts of lighter, more lethal weapons, and improved Soldier items including lighter, more comfortable load-bearing equipment, field gear, survivability items, communications equipment, and navigational aids.</p> <p>Project S60 (Clothing & Equipment) supports pre-production development of state-of-the-art individual clothing and equipment to improve the survivability, mobility and sustainment affecting the quality of life of the individual Soldier.</p>		

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Project S61 (Acis Engineering Development) provides System Development programs with improved aircrew safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Future Vertical Lift (FVL) platforms.

Project S63 (Individual Weapons Engineering Development) demonstrates engineering development models or integrated commercial items designed to enhance lethality, target acquisition, fire control, training effectiveness, and reliability for small arms weapon systems and ammunition. Programs include Improved Weapons Coatings, Personal Defense Weapon, 30 Round 5.56mm Magazine, Modular Handgun System (MHS), Precision Sniper Rifle (PSR), Sub Compact, and Interim Combat Service Rifle (ICR).

Project S70 (Personnel Recovery Support System (PRSS)) provides system research, development and testing of the Personal Recovery Support System/Personnel Recovery Support Equipment supporting operations to report and locate isolated, missing, detained or captured Soldiers.

Project VS5 (Soldier Protective Equipment) supports engineering and manufacturing development of Individual Soldier Ballistic Protection equipment. It will leverage advancements in technology to continue incremental improvements to body armor (to include improved outer tactical vests, plate carriers, and helmets) and other personal protective equipment.

The total cost of the the Next Generation Squad Weapons Rapid Prototyping Middle Tier of Acquisition effort is \$156.83 million RDT&E from FY19 to FY23. The remainder of the Next Generation Squad Weapons Rapid Prototyping is fully funded across the Future Years Defense Program.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	79.339	66.529	58.051	-	58.051
Current President's Budget	77.027	83.329	64.076	-	64.076
Total Adjustments	-2.312	16.800	6.025	-	6.025
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.200			
• Congressional Rescissions	-	-			
• Congressional Adds	-	20.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.312	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	6.025	-	6.025

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

Project: EW4: *Crew Served Weapons Engineering Development*

Congressional Add: *Congressional Add: Cannon Life Extension Program*

	FY 2022		FY 2023
	1.500		1.500

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>
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<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>	FY 2022	FY 2023
Congressional Add: <i>Congressional Add: Turret Gunner Survivability and Simulation Environment</i>	5.000	-
Congressional Add: <i>Congressional Add: CROWS - Acoustic Hailing Device</i>	-	1.000
Congressional Add Subtotals for Project: EW4		
	6.500	2.500
Project: FM4: <i>Next Generation Squad Weapons</i>		
Congressional Add: <i>NGSW Commercial Magazine Testing</i>	-	5.000
Congressional Add Subtotals for Project: FM4		
	-	5.000
Project: S58: <i>Soldier Enhancement Program</i>		
Congressional Add: <i>Program increase - soldier enhancement program</i>	10.000	5.000
Congressional Add Subtotals for Project: S58		
	10.000	5.000
Congressional Add Totals for all Projects		
	16.500	12.500

Change Summary Explanation

Increase in FY 2024 funding request from Previous President's Budget to Current President's Budget to support Army investment in Soldier Enhancement Program and Acis Engineering Development.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) CF3 / <i>Integrated Soldier Systems (SL CFT)</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
CF3: <i>Integrated Soldier Systems (SL CFT)</i>	-	4.211	4.403	4.407	-	4.407	4.451	4.544	4.591	4.642	0.000	31.249
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Adaptive Squad Architecture (ASA), and Soldier Integration Facility (SIF) are efforts which will allow optimization of soldiers as Integrated Weapons Systems" and "Squad as an Integrated Combat Platform". The ASA focus will be the system-of-systems full virtual integration of all mission-specific equipment as well as full configuration management of the Configuration Database (CD), maintaining the Architecture Assessment Tool (AAT) and the development of Interface Control Documents (ICDs). The SIF focus is both team and squad level constructive and live experimentation to support ongoing optimization priorities. The ASA/SIF will develop a metric-based approach that will include virtual, constructive and live evaluations and tools across the Department of Defense (DoD), academia and industry which will be used for senior leaders to make deliberate decisions based on the analysis of Soldier/Squad performance. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy and is a priority of the Soldier Lethality Cross Functional Team.

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

	FY 2022	FY 2023	FY 2024
<p>Title: Integrated Soldier Systems</p> <p>Description: Test, maintain and evolve a Soldier/squad equipment configuration baseline, the Architecture Assessment Tool and conduct configuration management at the system level. Physically integrate components, improve compatibility and interoperability across programs. Establish and maintain tools that provide Systems Engineering, Configuration Management and Evaluation in a virtual and physical environment. Conduct evaluations and integrate mission-specific equipment into the Adaptive Squad Architecture (ASA) with continued emphasis on development of ICDs, evaluations, and improved fidelity.</p> <p>FY 2023 Plans: Continue to develop and integrate mission-specific equipment with other combat platforms into initial version of ASA.</p> <p>FY 2024 Plans: Continue to develop and integrate mission-specific equipment with other combat platforms into initial version of ASA.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase between FY23 and FY24 due to anticipated changes in requirements. New mission support of Futures, AI/ML Learning and other integration activities.</p>	4.211	4.242	4.407
<p>Title: SBIR/STTR Transfer</p> <p>Description: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.</p> <p>FY 2023 Plans:</p>	-	0.161	-

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) CF3 / <i>Integrated Soldier Systems (SL CFT)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638			
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.			
Accomplishments/Planned Programs Subtotals	4.211	4.403	4.407

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>
• CF2: <i>Integrated Soldier Systems Prototyping (SL CFT)</i>	2.963	3.831	3.688	-	3.688	3.728	3.988	4.030	4.075	0.000	26.303

Remarks

D. Acquisition Strategy

PEO Soldier will utilize available Adaptive Squad Architecture (ASA) and tools plus exercise the SIF with Team level and Squad level experimentation to assess system-of-systems capabilities for evaluation and integration, using current Systems Engineering and Technical Assistance (SETA) contracts, Federally Funded Research and Development Center personnel (FFRDCs) as necessary, plus tools/deliverables built under project CF2. The ASA/SIF will develop a metric-based approach that will include virtual, constructive and live evaluations and tools across the Department of Defense (DoD), academia and industry which will be used for senior leaders to make deliberate decisions based on the analysis of Soldier/Squad performance. The PEO will utilize project CF3 to leverage any data, architectural products or designs from the IVAS program and other PEO-S and Soldier Lethality Cross Functional Team priorities.

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) CF3 / <i>Integrated Soldier Systems (SL CFT)</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
ASA Integration																												
Soldier Integration Facility Evaluations																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) CF3 / <i>Integrated Soldier Systems (SL CFT)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ASA Integration	2	2020	4	2028
Soldier Integration Facility Evaluations	2	2020	4	2028

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

Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) ES9 / Advanced Tactical Parachute System			
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
ES9: <i>Advanced Tactical Parachute System</i>	-	1.705	3.029	2.776	-	2.776	3.732	4.070	4.114	4.160	0.000	23.586
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding in this project supports the Army's Cross Functional Teams (CFT) initiatives. Advanced Tactical Parachute System funding improves Low Altitude and High Altitude personnel parachutes and associated equipment to include test and evaluation of items transitioning from Advanced Component Development and prototype (6.4) efforts, with the goal of enhancing the insertion capability and safety of the airborne Soldier and increasing the performance, reliability, and durability of personnel airdrop equipment. Funding also supports improvements and testing/evaluation of personnel parachute systems including integration and interface on the Soldier system. This project will continue to support cross-service initiatives to improve commonality.

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

	FY 2022	FY 2023	FY 2024
<p>Title: Advanced Tactical Parachute System</p> <p>Description: Advanced Tactical Parachute System funds improvements and testing/evaluation of personnel parachute systems. Project supports improved Low Altitude and High Altitude personnel parachute systems and associated equipment to include test and evaluation of items transitioning from Advance Component Development and prototype (6.4) efforts, with the goal of enhancing the insertion capability and safety of the airborne Soldier and increasing the performance, reliability, and durability of personnel airdrop equipment.</p> <p>FY 2023 Plans: Developmental Testing and Operational Testing (DT/OT) for Parachutist Emergency Release System (PERS). Conduct test and evaluation of T-11 modification to address cross corner inversion malfunctions. Enhance high and low altitude insertion capabilities and continue to support modernization initiatives to parachute systems and ancillary equipment.</p> <p>FY 2024 Plans: Continue Developmental Testing and Operational Testing (DT/OT) for Parachutist Emergency Release System (PERS). Continue with test and evaluation of T-11 modification to address cross corner inversion malfunctions. Continue enhancement of high and low altitude insertion capabilities and continue supporting modernization initiatives to parachute systems and ancillary equipment.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease reflects schedule extension of PERS testing.</p>	1.705	2.918	2.776
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC 638.</p>	-	0.111	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) ES9 / <i>Advanced Tactical Parachute System</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC 638.			
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC 638.			
Accomplishments/Planned Programs Subtotals	1.705	3.029	2.776

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>
• MA7801: <i>Advanced Tactical Parachute System</i>	34.959	42.444	39.279	-	39.279	36.044	33.201	33.218	33.247	0.000	252.392
• ET8: <i>Personnel Airdrop System Development</i>	1.113	1.853	2.208	-	2.208	0.932	2.311	2.336	2.363	Continuing	Continuing

Remarks

D. Acquisition Strategy

Acquisition strategies for these programs vary in methods, and range from: 1) Material Change programs that result in engineering changes to existing systems to; 2) Traditional development programs that include an Engineering and Manufacturing Development phase ranging in duration from 12 to 48 months, depending on the level of complexity and testing required.

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

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Product Development (\$ 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			
Dev Contracts	C/FFP	Various : Various	10.896	0.500		0.756		0.500		-		0.500	6.335	18.987	Continuing
Dev Sys Engineering Spt	MIPR	Various : Various	1.697	0.235		0.373		0.400		-		0.400	1.190	3.895	Continuing
Subtotal			12.593	0.735		1.129		0.900		-		0.900	7.525	22.882	N/A

Support (\$ 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			
Program Office Support Costs	MIPR	DEVCOM-SC : Natick, MA	2.945	0.203		0.323		0.350		-		0.350	0.491	4.312	Continuing
Subtotal			2.945	0.203		0.323		0.350		-		0.350	0.491	4.312	N/A

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			
DT/OT	MIPR	various : various	8.120	0.767		1.577		1.526		-		1.526	4.913	16.903	Continuing
Subtotal			8.120	0.767		1.577		1.526		-		1.526	4.913	16.903	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Cost Totals		23.658	1.705		3.029		2.776		-	2.776	12.929	44.097	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

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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
Enhanced Electronic Auto Activation Device (EEAAD) Dev																												
EEAAD Milestone C					▲ 1																							
Airborne Insertion Enhancements																												
PERS Development																												
PERS Milestone C													▲ 2															
Static Line Reserve Parachute Automatic Activation Devic...																												
Develop and Test Towed Jumper Detection System (TJDS)																												
Static Line Parachute System Enhancements																												
T-11 Cross Corner Inversion Modification																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) ES9 / <i>Advanced Tactical Parachute System</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Enhanced Electronic Auto Activation Device (EEAAD) Dev	1	2019	1	2023
EEAAD Milestone C	1	2023	1	2023
Airborne Insertion Enhancements	1	2019	4	2028
PERS Development	4	2021	1	2025
PERS Milestone C	1	2025	1	2025
Static Line Reserve Parachute Automatic Activation Device (SLRPAAD) Development	1	2025	4	2027
Develop and Test Towed Jumper Detection System (TJDS)	1	2025	4	2026
Static Line Parachute System Enhancements	1	2027	4	2028
T-11 Cross Corner Inversion Modification	1	2023	4	2026

Note

Note: High and Low Altitude Insertion Capabilities includes the following programs: Glide Augmentation, Situational Awareness Aids, High Altitude Combo Drops, GPS Denied Navaid, Glide Modulation, T-11 Main Improvements, Above 25K Operations and Low Observables.

Towed Jumper Detection System (TJDS) formerly known as Automatic Universal Static Line (AUSL).

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</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
EW4: <i>Crew Served Weapons Engineering Development</i>	-	8.854	7.458	4.300	-	4.300	3.772	4.074	4.116	4.162	0.000	36.736
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Crew Served Weapons Engineering and Manufacturing Development (EMD) program provides funds to transition components or prototypes from Budget Activity 4 (BA 4) Program Element (PE) 0603827A Soldier Systems - Advanced Development Project S54 Small Arms Improvement and other domestic and foreign sources of small arms weapon systems to demonstrate, test and evaluate capability near or at planned operational requirements. Crew Served Weapons systems include weapons ranging up to 40 millimeter in caliber and remote weapon stations. Current and future efforts focus on system improvements designed to enhance lethality, target acquisition, fire control, usability, training effectiveness and reliability of weapons to include ammunition when developing and/or evaluating standard, non-standard weapons and remote weapon station enhancements. Focus areas include system development, integration (to include human-systems), demonstration, test and evaluate components, prototypes and operational system prototypes of small arms weapon systems and/or enhancements. Benefits include continuous improvements to small arms weapon systems, fire control equipment, optics, gun barrels, ancillary equipment, training devices, component mounts, weapon mounts, and weapon/ammunition interface of current small arms fleet or new weapon systems.

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

	FY 2022	FY 2023	FY 2024
Title: Design and Development	1.223	3.542	3.165
Description: Design and development of Crew Served Weapons			
FY 2023 Plans: Will conduct weapons characterization and development for light and medium machine gun technologies and design upgrades. Will validate specification requirements, improve system performance, and increase barrel longevity with the M855A1 5.56mm ammunition. Mounted Machinegun Optic (MMO) will continue MMO pre-planned product improvement (PPPI) R&D efforts for integration with High Explosive Dual Purpose (HEDP) airburst programmer ammo. Adaptive Lubricious Coatings will develop manufacturing technology to support production of super hydrophobic and other coatings in support of preserving barrel, operating group and bolt life of crew served weapons while improving weapon readiness. Continue to assess and evaluate current manufacturing process studies and assessments to adapt the coating technology into weapon Original Equipment Manufacturer manufacturing processes.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>Advanced Combat Optics will continue engineering evaluations, verification and validation of weapon optics performance requirements, covert target isolation and hand-off.</p> <p>New Weapons and Enabling Technology Evaluations and Assessments will continue to explore new technologies and perform initial evaluations and assessments required to facilitate rapid acquisition of increased capabilities where applicable.</p> <p>Create a 6.8mm M240 Barrel Assembly compatible with XM1186 ammunition.</p> <p>FY 2024 Plans: Will conduct weapons characterization and development for light and medium machine gun technologies and design upgrades. Will validate specification requirements, improve system performance, and increase barrel longevity with the M855A1 5.56mm ammunition.</p> <p>Development activities will include integration of the planned XM101 40mm High Explosive Dual Purpose - Air Burst (HEDP-AB) programmer on the remote weapon station. Will also include hardware and software upgrades to the remote weapon station to enable future capabilities, such as kinetic engagement of unmanned aerial systems, improved target identification range, integration of emerging sensors and weapons, and networked communication between multiple systems and/or platforms.</p> <p>Adaptive Lubricious Coatings will develop manufacturing technology to support production of super hydrophobic and other coatings in support of preserving barrel, operating group and bolt life of crew served weapons while improving weapon readiness. Will perform test and evaluation on coated M240 machine guns to quantify performance gains, as well as mature application of coatings into weapon Original Equipment Manufacturer manufacturing processes.</p> <p>New Weapons and Enabling Technology Evaluations and Assessments will continue to explore new technologies and perform initial evaluations and assessments required to facilitate rapid acquisition of increased capabilities where applicable.</p> <p>Create a 6.8mm M240 Barrel Assembly compatible with XM1186 ammunition.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: With the completion of the MMO/HEDP Programmer effort in FY23, design and development requirements will be less in FY24.</p>				
<p>Title: Test and Evaluation</p> <p>Description: Test and evaluation of Crew Served Weapons</p> <p>FY 2023 Plans:</p>		1.131	1.235	1.135

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>New Weapons and Enabling Technology Evaluations and Assessments will continue to test and evaluate new technology that can lead to enhancements of current and legacy weapon systems or create new weapon systems, as well as advanced combat optics and improvement of small arms munitions.</p> <p>Evaluate suitability of the XM250 for the current M240-series medium machine gun role.</p> <p>FY 2024 Plans: Will conduct testing to support validation of the M249 SAW upgrades and barrel life specification requirements. Will also continue to test and evaluate technologies and improvements, to include the lightweight M2A1, remote weapon station enhancements, and other required testing.</p> <p>Evaluate suitability of the XM250 for the current M240-series medium machine gun role.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Test requirements in FY24 are planned to be less than FY23.</p>			
<p>Title: SBIR/STTR Transfer</p> <p>Description: SBIR/STTR Transfer in accordance with Title 15 USC §638.</p> <p>FY 2023 Plans: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: SBIR/STTR Transfer in accordance with Title 15 USC §638.</p>	-	0.181	-
Accomplishments/Planned Programs Subtotals	2.354	4.958	4.300

	FY 2022	FY 2023
<p>Congressional Add: Congressional Add: Cannon Life Extension Program</p> <p>FY 2022 Accomplishments: Will continue to advance and optimize the explosive bonding process of tantalum-tungsten alloy liners to create improved, longer life small and medium caliber barrels. Will continue to investigate alternative rifling methods (i.e. pressure form, roller form, waterjet) for tantalum lined barrels and develop manufacturing technologies that enable the affordable production and sustainment of future weapon systems.</p> <p>FY 2023 Plans: Will continue to advance and optimize the explosive bonding process of tantalum-tungsten alloy liners to create improved, longer life small and medium caliber barrels. Will continue to investigate alternative</p>	1.500	1.500

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</i>

	FY 2022	FY 2023
rifling methods (i.e. pressure form, roller form, waterjet) for tantalum lined barrels and develop manufacturing technologies that enable the affordable production and sustainment of future weapon systems. Will manufacture fully lined .50 Caliber MG barrels utilizing explosive bonding process for production qualification testing		
Congressional Add: Congressional Add: Turret Gunner Survivability and Simulation Environment	5.000	-
FY 2022 Accomplishments: Continue to develop smart, full-scale, virtual and augmented reality simulation environments for next-generation of Gunner protection kits that will significantly enhance the operational evaluation of turret designs in a secure, immersive, navigable, and interactive arena. Continue to develop and install simulation environments that will lead to advanced and affordable engineered solutions while accelerating the development lifecycle through reduced design iterations and physical prototyping.		
Congressional Add: Congressional Add: CROWS - Acoustic Hailing Device	-	1.000
FY 2023 Plans: Will modify the Genasys LRAD 450XL Acoustic Hailing Device (AHD) for compatibility with the Common Remotely Operated Weapon Station (CROWS) Technology Refresh (TR) platform. Integrate the AHD onto the CROWS TR platform for a technology demonstration and follow-on testing. Develop technical data package.		
Congressional Adds Subtotals	6.500	2.500

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

Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To	
			Base	OCO	Total					Complete	Total Cost
• S54: <i>Small Arms Improvement</i>	10.659	9.248	9.094	-	9.094	9.183	9.184	9.281	9.384	0.000	66.033
• FL8: <i>84mm MAAWS Ammunition</i>	5.893	-	0.000	-	0.000	-	-	-	-	0.000	5.893
• FM4: <i>Next Generation Squad Weapons</i>	13.103	17.616	16.141	-	16.141	11.058	11.072	11.191	11.316	0.000	91.497
• GZ1500: <i>Sniper Rifles Modifications</i>	0.080	-	0.000	-	0.000	-	0.019	0.019	0.019	Continuing	Continuing
• GB3000: <i>MK-19 Grenade Machine Gun MODS</i>	35.121	-	0.000	-	0.000	-	-	-	-	0.000	35.121
• GB4000: <i>M2 50 Cal Machine Gun MODS</i>	7.076	3.000	0.000	-	0.000	-	-	-	-	0.000	10.076

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</i>

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

Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To	
			Base	OCO	Total					Complete	Total Cost
• GL3200: <i>Items Less Than \$5.0m (WOCV-WTCV)</i>	13.826	2.138	1.148	-	1.148	1.055	2.237	2.241	2.243	Continuing	Continuing
• G13000: <i>M240 Medium Machine Gun (7.62mm)</i>	11.017	10.500	0.425	-	0.425	0.426	0.313	0.314	-	Continuing	Continuing
• G01506: <i>Precision Sniper Rifle</i>	9.505	6.436	5.248	-	5.248	6.049	6.109	6.115	6.121	Continuing	Continuing
• G13101: <i>MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON SYSTEM</i>	31.623	26.627	0.000	-	0.000	-	-	-	-	Continuing	Continuing

Remarks

In support of Small Arms Requirements, components or prototypes developed in BA 4 PE 0603827A Soldier Systems - Advanced Development Project S54 Small Arms Improvement transition to BA 5 PE 0604601A Infantry Support Weapons Project EW4 Crew Served Weapons Engineering Development to conduct engineering and manufacturing development. Once the component, prototype or operational prototype achieves Milestone C and type classification the item transitions to small arms weapon systems production or modification programs.

D. Acquisition Strategy

Primary strategy is to mature and finalize design efforts, award Research, Development, Test and Evaluation (RDT&E), contracts, and/or Department of Defense Ordnance Technology Consortium (DOTC) and other OTA type hardware contracts. Test and evaluate systems that result in type classification, material release, and follow-on production contract awards.

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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 / 5				PE 0604601A / Infantry Support Weapons				EW4 / Crew Served Weapons Engineering Development							
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
Program Management	Allot	PM Soldier Weapons, : Picatinny Arsenal	1.766	0.400	Mar 2022	0.205	Mar 2023	0.205	Nov 2023	-		0.205	Continuing	Continuing	Continuing
Travel	MIPR	PM Soldier Weapons, : Picatinny Arsenal	0.377	0.010	Mar 2022	0.020	Mar 2023	0.020	Mar 2023	-		0.020	Continuing	Continuing	Continuing
Subtotal			2.143	0.410		0.225		0.225		-		0.225	Continuing	Continuing	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
Fabrication	Various	Various : Multiple Contractors	11.523	0.189	Mar 2022	0.207	Mar 2023	0.300	Mar 2023	-		0.300	Continuing	Continuing	Continuing
Hardware Development	MIPR	Army Research Development Engineers Centers : Multiple	21.493	5.327	Mar 2022	4.495	Mar 2023	2.230	Mar 2023	-		2.230	Continuing	Continuing	Continuing
Subtotal			33.016	5.516		4.702		2.530		-		2.530	Continuing	Continuing	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
Engineering	MIPR	Army Research Development Engineering Centers : Multiple	9.974	1.867	Mar 2022	0.772	Mar 2023	0.259	Mar 2023	-		0.259	Continuing	Continuing	Continuing
Logistics	MIPR	Tank & Automotive Command (TACOM), : Warren	0.730	0.050	Mar 2022	0.080	Mar 2023	0.065	Mar 2023	-		0.065	Continuing	Continuing	Continuing

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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 / 5				PE 0604601A / Infantry Support Weapons				EW4 / Crew Served Weapons Engineering Development							
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
Human Research and Engineering	MIPR	Army Research Laboratory, : Aberdeen Proving Ground	0.873	0.050	Mar 2022	0.125	Mar 2023	0.100	Mar 2023	-		0.100	Continuing	Continuing	Continuing
Subtotal			11.577	1.967		0.977		0.424		-		0.424	Continuing	Continuing	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
Developmental Testing	MIPR	Army Developmental Test Command, : Aberdeen Proving Ground	7.168	0.455	Mar 2022	0.717	Mar 2023	0.607	Mar 2023	-		0.607	Continuing	Continuing	Continuing
Operational Testing	MIPR	Army Test and Evaluation Command, : Aberdeen Proving Ground	3.659	0.456	Mar 2022	0.782	Mar 2023	0.407	Mar 2023	-		0.407	Continuing	Continuing	Continuing
Validation Testing	MIPR	Army Test and Evaluation Centers, : Multiple	0.808	0.050	Mar 2022	0.055	Mar 2023	0.107	Mar 2023	-		0.107	Continuing	Continuing	Continuing
Subtotal			11.635	0.961		1.554		1.121		-		1.121	Continuing	Continuing	N/A
Project Cost Totals			58.371	8.854		7.458		4.300		-		4.300	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</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
DESIGN AND DEVELOPMENT																												
M3/M3E1 Multi-Role Anti-Armor Anti-Personnel Weapon Syst																												
Mounted Machinegun Optic (MMO)																												
Design Upgrade validation for light and medium MGs																												
Enhancements for Remote Weapon Station																												
Weapon Enhancements for Improved Ammunition																												
Advanced Combat Optics																												
New Weapons and Enabling Technology Evaluations and Asse...																												
TEST AND EVALUATION																												
Test and Evaluation of new technology																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) EW4 / <i>Crew Served Weapons Engineering Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DESIGN AND DEVELOPMENT	1	2020	4	2028
M3/M3E1 Multi-Role Anti-Armor Anti-Personnel Weapon System (MAAWS)	1	2017	4	2022
Mounted Machinegun Optic (MMO)	1	2020	4	2023
Design Upgrade validation for light and medium MGs	1	2024	4	2025
Enhancements for Remote Weapon Station	1	2024	4	2028
Weapon Enhancements for Improved Ammunition	1	2025	4	2028
Advanced Combat Optics	1	2023	4	2028
New Weapons and Enabling Technology Evaluations and Assessments	1	2023	4	2028
TEST AND EVALUATION	1	2020	4	2028
Test and Evaluation of new technology	1	2021	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) FF2 / <i>Small Arms Fire Control</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
FF2: <i>Small Arms Fire Control</i>	-	6.752	8.179	10.050	-	10.050	4.966	4.971	5.025	5.081	0.000	45.024
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The M157 Next Generation Squad Weapon - Fire Control (NGSW-FC) is an advanced fire control device to support the Next Generation Squad Weapons. NGSWFC increases the probability of hit and decreases the time to engage through a variable powered direct view optic with integrated range finder, ballistic calculator, and digital display capable of providing an adjusted aim point. The M157 NGSW-FC will utilize open architecture to deliver the initial increased core capability followed by increasing increments of capability/enhancements over time as technology matures and evolves

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

	FY 2022	FY 2023	FY 2024
Title: Design, Develop and Fabricate	3.189	5.281	6.790
Description: Includes contract awards for improvements of all Fire Control configurations, enhancements, and hand held devices.			
FY 2023 Plans: Complete integration and testing of mature capabilities with prototype design transitioning to production. Continue to conduct development and improvement efforts with the selected NGSW Fire Control. Efforts with the selected vendor will include: prototype development on target tracking/recognition, target data transfer, integrated advanced multispectral camera-based capabilities; increased Rapid Target Acquisition capability through networked integration with IVAS, ENGV-B, and FWS-I; aim error reduction technologies progressing toward Generation 4 Fire Control, including advanced stabilization and trigger interrupt solutions; continued optimization of system size, weight, and power, to reduce soldier load.			
FY 2024 Plans: Continue to conduct development and improvement efforts with the selected NGSW Fire Control. Efforts with Vortex Optics will include: prototype development on target tracking/recognition, target data transfer, integrated advanced multispectral camera-based capabilities; increased Rapid Target Acquisition capability through networked integration with IVAS, ENGV-B, and FWS-I; aim error reduction technologies progressing toward Generation 4 Fire Control, including advanced stabilization and trigger interrupt solutions; incorporation of Gradient Index (GRIN) lens technology to reduce weight, incorporation of specialized surface treatment to increase performance in cold temperatures and reduce overall system signature; and continued optimization of system size, weight, and power, to reduce soldier load.			
FY 2023 to FY 2024 Increase/Decrease Statement: Increase in cost due to procurement of prototype systems supporting signature and weight reduction technologies, and initiation of prototype activities for GEN 4 fire control systems.			
Title: Engineering Support	1.354	1.150	1.600

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FF2 / <i>Small Arms Fire Control</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>Description: Government engineering support, providing oversight of design development and contractor performance.</p> <p>FY 2023 Plans: Will continue to provide government engineering support at laboratories and engineering centers; providing design, limited testing and oversight of development and contractor performance.</p> <p>FY 2024 Plans: Will continue to provide government engineering support at laboratories and engineering centers; providing design, limited testing and oversight of development and contractor performance.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to government engineering requirements to support additional prototyping efforts for GEN 4 fire control systems.</p>				
<p>Title: Test and Evaluation</p> <p>Description: Government testing and evaluation of prototypes, articles and improvements. Includes Soldier Touch Point evaluations.</p> <p>FY 2023 Plans: Will continue Operational Testing to determine the Fire Control Systems' ability to accomplish its designed mission when used by representative personnel as well as to ensure the system can be placed and sustained satisfactorily in the field. Continuing to test and evaluate proposed improvements and capability upgrades. Prototypes will undergo technical testing and soldier touch point user evaluations.</p> <p>FY 2024 Plans: Will continue Operational Testing to test and evaluate proposed improvements, integration, cyber, natural environments, and capability upgrades resulting from iterative prototyping. Prototypes will undergo technical testing and soldier touch point user evaluations.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in testing cost due to Operational Test activities in early FY24.</p>		1.746	1.178	1.310
<p>Title: Program Management</p> <p>Description: Program management office non-labor activities, to include travel and other indirect costs.</p> <p>FY 2023 Plans:</p>		0.463	0.271	0.350

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FF2 / <i>Small Arms Fire Control</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Will continue to provide for administrative costs incurred by the Program Management office, to include travel, contractor service support, and other requirements to support the program.</p> <p>FY 2024 Plans: Will continue to provide for administrative costs incurred by the Program Management office, to include travel, contractor service support, and other requirements to support the program.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due additional activities for supplies, travel, transportation and contract service requirements supporting GEN 4 fire control systems.</p>			
<p>Title: SBIR/STTR</p> <p>Description: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.</p> <p>FY 2023 Plans: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.</p>	-	0.299	-
Accomplishments/Planned Programs Subtotals	6.752	8.179	10.050

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• S54: <i>Small Arms Improvement</i>	10.659	9.248	9.094	-	9.094	9.183	9.184	9.281	9.384	0.000	66.033
• G14513: <i>Next Generation Squad Weapon - Fire Control</i>	72.595	111.387	186.759	-	186.759	269.903	175.313	175.513	160.536	Continuing	Continuing

Remarks

D. Acquisition Strategy
The NGSW-FC program is a Middle Tier Acquisition (MTA) program utilizing Rapid Prototyping authority under Section 804 of the FY 2016 National Defense Authorization Act (NDAA). A full and open competition selected two vendors for fixed amount Other Transaction Authority (OTA) awards to mature and finalize system designs and conduct test and evaluation. Following successful completion of the initial prototyping effort and approval of MTA - Rapid Fielding authority, the Government awarded a follow-on production Other Transaction Agreement (OTA) for the M157 NGSW-FC without further competition. RDT&E efforts will continue to develop new capabilities and transition them into production.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FF2 / <i>Small Arms Fire Control</i>
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Product Development (\$ 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			
Next Generation Squad Weapons- Fire Control OTA	C/FFP	Vortex Optics : Barneveld WI 53507-9412	-	3.189	Feb 2023	5.580	Feb 2023	6.790	Feb 2024	-		6.790	Continuing	Continuing	-
Subtotal			-	3.189		5.580		6.790		-		6.790	Continuing	Continuing	N/A

Support (\$ 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			
Engineering Support	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	5.918	1.354	Feb 2022	1.150	Nov 2022	1.600	Nov 2023	-		1.600	Continuing	Continuing	-
Program Management	Allot	Project Manager Soldier Lethality (PMSL) : Picatinny Arsenal, NJ	0.492	0.463	Nov 2021	0.271	Nov 2022	0.350	Nov 2023	-		0.350	Continuing	Continuing	-
Subtotal			6.410	1.817		1.421		1.950		-		1.950	Continuing	Continuing	N/A

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			
Test and Evaluation	MIPR	Aberdeen Testing Center : Aberdeen Proving Ground, MD	5.073	1.500	Jun 2022	1.100	Mar 2023	0.786		-		0.786	Continuing	Continuing	-
Test and Evaluation	MIPR	DEVCOM Data Analysis Center (DAC) : Aberdeen Proving Ground, MD	-	0.246	Jul 2022	0.078	Apr 2023	0.524	Jan 2024	-		0.524	0.000	0.848	-
Subtotal			5.073	1.746		1.178		1.310		-		1.310	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FF2 / <i>Small Arms Fire Control</i>
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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
Iterative Prototyping - Fire Control Enhancements																												
OTA Award- Vortex Optics	▲ 1																											
Contractor Design and Prototype Fabrication																												
Test and Evaluation - IR Excursion and Integration			■																									
Task Order- Improvements FY22				▲ 2																								
Limited User Testing (LUT)								■																				
Task Order - Improvements FY23					▲ 3																							
Task Order - Improvements FY24									▲ 4																			
Task Order - Improvements FY25											▲ 5																	
Task Order - Improvements FY26														▲ 6														
Task Order - Improvements FY27																			▲ 7									
Test and Evaluation - Improvements																												
Test and Evaluation CPVA								■																				

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FF2 / <i>Small Arms Fire Control</i>
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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				
Test and Evaluation Natural Environments																																
Test and Evaluation (IOT&E)																																
Test and Evaluation AA																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FF2 / <i>Small Arms Fire Control</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Rapid Prototyping - Fire Control	1	2019	4	2021
Prototype Opportunity Notice	3	2019	3	2019
Other Transaction Agreement (OTA) Award - Rapid Prototyping	3	2020	3	2020
L3 Harris - Contractor Design and Prototype Fabrication	3	2020	4	2021
Vortex Optics- Contractor Design and Prototype Fabrication	3	2020	4	2021
Prototype Testing and Evaluation	1	2021	3	2021
Production Decision - NGFC	4	2021	4	2021
Iterative Prototyping - Fire Control Enhancements	1	2021	4	2028
OTA Award- Vortex Optics	2	2022	2	2022
Contractor Design and Prototype Fabrication	1	2022	4	2028
Test and Evaluation - IR Excursion and Integration	3	2022	3	2022
Task Order- Improvements FY22	4	2022	4	2022
Limited User Testing (LUT)	4	2023	1	2024
Task Order - Improvements FY23	2	2023	2	2023
Task Order - Improvements FY24	2	2024	2	2024
Task Order - Improvements FY25	2	2025	2	2025
Task Order - Improvements FY26	2	2026	2	2026
Task Order - Improvements FY27	2	2027	2	2027
Test and Evaluation - Improvements	4	2022	4	2028
Test and Evaluation CPVA	1	2024	1	2024
Test and Evaluation Natural Environments	2	2024	4	2024
Test and Evaluation (IOT&E)	1	2025	1	2026
Test and Evaluation AA	1	2025	1	2025

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

Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FL8 / 84mm MAAWS Ammunition			
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
FL8: 84mm MAAWS Ammunition	-	5.893	-	-	-	-	-	-	-	-	0.000	5.893
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project FL8 84mm MAAWS Ammunition will test, evaluate and qualify up to seven types of 84 millimeters (mm) munitions for United States (U.S.) Army use with the M3/M3A1 Multi-Role Anti-Armor Anti-Personnel Weapon Systems (MAAWS). In addition to type classifying existing rounds, funds will also provide for the evaluation and qualification of the new High Explosive Programmable Airbursting Round. These rounds will provide improved lethality and a higher probability of hit in defilade positions for close combat forces against varying target sets and increased ranges in support of Infantry Squad formations. The M3/M3A1 was a HQDA G8 directed requirement scheduled for Type Classification 4th Quarter (Q) Fiscal Year (FY) 2022.

FY 2022 funding in the amount of \$6.639 million was used to complete type classification efforts for the new programmable round.

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

	FY 2022	FY 2023	FY 2024
Title: Engineering Support	1.847	-	-
Description: Government engineering support, providing oversight of design development and contractor performance.			
Title: Test and Evaluation	2.692	-	-
Description: Funds will support the following efforts:			
Title: Program Management	0.645	-	-
Description: Funds will support the following efforts:			
Title: TC-STD Efforts	0.709	-	-
Description: Type Classification efforts for Full Material Release of the programmable round.			
Accomplishments/Planned Programs Subtotals			
	5.893	-	-

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
• EW4: Crew Served Weapons Engineering Development	8.854	7.458	4.300	-	4.300	3.772	4.074	4.116	4.162	0.000	36.736

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FL8 / <i>84mm MAAWS Ammunition</i>
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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>
• G13101: <i>MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON SYSTEM</i>	31.623	26.627	0.000	-	0.000	-	-	-	-	Continuing	Continuing
• OMA - 137010000: <i>RESET</i>	0.707	0.735	0.000	-	0.000	0.728	0.735	-	-	0.000	2.905

Remarks

D. Acquisition Strategy

Used Other Transaction Authority (OTA) via the DoD Ordnance Technology Consortium (DOTC) to obtain commercially available 84mm ammunition for test and evaluation purposes.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FL8 / <i>84mm MAAWS Ammunition</i>
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Management Services (\$ 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			
Program Management	MIPR	PMSW : Picatinny Arsenal, NJ	0.702	0.645	Oct 2021	-		-		-		-	0.000	1.347	-
Subtotal			0.702	0.645		-		-		-		-	0.000	1.347	N/A

Support (\$ 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			
Engineering Support	MIPR	CCDC : Picatinny Arsenal, NJ	0.630	1.735	Mar 2022	-		-		-		-	0.000	2.365	-
TC-STD Efforts	MIPR	CCDC : Picatinny Arsenal, New Jersey	-	0.821	Apr 2022	-		-		-		-	0.000	0.821	-
Subtotal			0.630	2.556		-		-		-		-	0.000	3.186	N/A

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			
Test & Evaluation	MIPR	A TEC : Aberdeen, MD	1.282	2.692	Apr 2022	-		-		-		-	0.000	3.974	-
Subtotal			1.282	2.692		-		-		-		-	0.000	3.974	N/A

			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			2.614	5.893	-	-	-	-	0.000	8.507	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FL8 / <i>84mm MAAWS Ammunition</i>
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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
Developmental & Operational Testing																												
MS-C & TC-STD	1																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FL8 / <i>84mm MAAWS Ammunition</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Matériel Development Decision	4	2019	4	2019
DOTC Contract Award	1	2020	1	2020
Critical Design Review	2	2020	2	2020
Prototype Delivery	1	2021	1	2021
Developmental & Operational Testing	4	2020	3	2022
MS-C & TC-STD	3	2022	3	2022

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</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
FM4: <i>Next Generation Squad Weapons</i>	-	13.103	17.616	16.141	-	16.141	11.058	11.072	11.191	11.316	0.000	91.497
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Next Generation Squad Weapons (NGSW) program will develop weapon systems and common 6.8mm cartridge to maintain overmatch and meet future force warfighter needs.

The M7 Rifle is the planned replacement for the M4A1 Carbine in the close combat force and select support units. The M7 Rifle will provide capability improvements in accuracy, range, and lethality.

The M250 Automatic Rifle is the planned replacement for the M249 Squad Automatic Weapon (SAW) in the close combat force and select support units. The M250 Rifle combines the firepower and range of a machine gun with the precision and ergonomics of a carbine, yielding capability improvements in accuracy, range, and lethality.

The M7 Rifle and M250 Automatic Rifle will use a common 6.8mm cartridge in a variety of ammunition types including but not limited to general purpose (GP), special purpose (SP), reduced range, and blank.

Development efforts for additional NGSW variants may follow to replace other legacy systems or provide additional enhanced capabilities.

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

	FY 2022	FY 2023	FY 2024
Title: Contractor Design and Improvements	9.048	6.964	7.750
Description: Contractor design, development and improvements.			
FY 2023 Plans: Will continue prototyping with the selected Next Generation Squad Weapon rifle and automatic rifle. Efforts with the selected vendor will include: continued improvements in the reliability of the weapons, as well as system reliability in extreme environmental conditions; improved dispersion and accuracy, including changes to the weapon designs to integrate modifications to the 6.8mm projectile and cartridge design and reduce weapon recoil; continue rapid prototyping and development of powered rail and intra-Soldier wireless data transfer solutions in order to improve the interface between the weapons and the Next Generation Squad Weapon Fire Control, as well as other optics and enablers; enhanced barrel technologies and improved barrel manufacturing techniques. Will purchase additional weapons to support integration, developmental and operational testing, as well as user evaluations.			
FY 2024 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>Will continue improvements on the NGSW weapons to enhance system performance. Efforts will include: weapon system reliability and dispersion; reduction in recoil forces and total system weight, integration of new 6.8mm ammunition types and projectile development; continued development and integration of the powered rail, battery, and intra-Soldier wireless data transfer solutions to improve the interface with the Next Generation Squad Weapons Fire Control, as well as other optics, enablers and Soldier equipment. Will purchase additional test articles to support integration, testing and user evaluations.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase in planned funding due to requirements for improvements and integration, as well as increased requirements for testing efforts.</p>				
<p>Title: Engineering Support</p> <p>Description: Government engineering support, providing oversight of design, development and contractor performance.</p> <p>FY 2023 Plans: Will continue government engineering support to provide design, limited testing and oversight of development and contractor performance for capability enhancement and design improvements.</p> <p>FY 2024 Plans: Will continue government-engineering support to provide design, limited testing, and oversight of development and contractor performance for capability enhancements and design improvements.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to requirements for government engineering efforts to support improvements, integration, and testing.</p>		1.486	1.131	1.300
<p>Title: Test and Evaluation</p> <p>Description: Testing and evaluation at government ranges and facilities.</p> <p>FY 2023 Plans: Will conduct Production Qualification Testing (PQT), maintainability testing, integration testing with other enablers, Limited User Testing (LUT) and Limited Lethality Assessment (LLA) of production representative weapons. Will also conduct testing at government ranges and facilities of vendor hardware.</p> <p>FY 2024 Plans: Will conduct Natural Environment Testing in Arctic, Hot and Tropic Environments, will begin preparation and support of Live Fire Test and Evaluations, will begin preparation and coordination for Initial Operational Test and Evaluation of production</p>		1.550	3.543	6.571

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
representative weapons, and other operational and technical testing requirements. Will continue testing vendor hardware at Government facilities to assess potential system enhancements, integration with other enablers and continue user evaluations. FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase due to operational testing activities planned for FY24.				
Title: Program Management Description: Program management office and oversight of government and contractor efforts. FY 2023 Plans: Program management office will continue to provide oversight of contract actions, engineering support and test activities. FY 2024 Plans: Program management office will continue to provide oversight of contract actions, engineering support and test activities. FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase for additional supplies, travel, transportation and contractor service costs.		1.019	0.518	0.520
Title: SBIR/STTR Description: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638. FY 2023 Plans: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638. FY 2023 to FY 2024 Increase/Decrease Statement: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638.		-	0.460	-
Accomplishments/Planned Programs Subtotals		13.103	12.616	16.141
		FY 2022	FY 2023	
Congressional Add: NGSW Commercial Magazine Testing FY 2023 Plans: Purchase of commercially available magazines, weapons, ammunition, and required spare parts to conduct test and evaluation for use with the M7 Rifle. The magazines will be evaluated for system level performance and compatibility using the current magazine as a baseline to achieve system requirements outlined in the NGSW Tiered Capabilities Matrix.		-	5.000	
Congressional Adds Subtotals		-	5.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To	
			Base	OCO	Total					Complete	Total Cost
• S54: <i>Small Arms Improvement</i>	10.659	9.248	9.094	-	9.094	9.183	9.184	9.281	9.384	0.000	66.033
• EW4: <i>Crew Served Weapons Engineering Development</i>	8.854	7.458	4.300	-	4.300	3.772	4.074	4.116	4.162	0.000	36.736
• S63: <i>Individual Weapons Engineering Development</i>	3.518	3.956	3.549	-	3.549	3.510	3.791	3.830	3.873	0.000	26.027
• FL4: <i>Small Caliber Ammo for Next Gen Squad Weapons</i>	27.336	25.558	11.809	-	11.809	11.931	11.945	12.073	12.208	0.000	112.860
• G14511: <i>Next Generation Squad Weapon-Automatic Rifle</i>	3.630	10.161	18.665	-	18.665	23.674	14.156	16.189	14.185	Continuing	Continuing
• G14512: <i>NEXT GENERATION SQUAD WEAPON-RIFLE</i>	20.862	45.075	87.426	-	87.426	103.505	61.923	65.020	62.054	Continuing	Continuing
• E06001: <i>NEXT GENERATION SQUAD WEAPON AMMUNITION</i>	71.234	96.496	191.244	-	191.244	205.478	335.659	335.650	335.650	0.000	1,571.411

Remarks

D. Acquisition Strategy

The NGSW program is a Middle Tier Acquisition (MTA) program utilizing Rapid Prototyping authority under Section 804 of the FY 2016 National Defense Authorization Act (NDAA). A full and open competition selected three vendors for fixed amount Other Transaction Authority (OTA) awards to mature and finalize system designs and conduct test and evaluation. Following successful completion of the prototyping effort, and approval of Rapid Fielding Authority, the Government awarded a follow-on contract to SIG Sauer Inc. for production and continued improvements of the M7 Rifle, the M250 Automatic Rifle, and 6.8mm common ammunition.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>
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Management Services (\$ 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			
Program Management	Allot	PM Soldier Lethality (PMSL) : Picatinny Arsenal, NJ	1.555	1.019	Oct 2021	0.518	Oct 2022	0.520	Oct 2023	-		0.520	0.000	3.612	-
Subtotal			1.555	1.019		0.518		0.520		-		0.520	0.000	3.612	N/A

Product Development (\$ 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			
Reduced Range Cartridge Development and Integration	C/FFP	SIG Sauer Inc. : Newington, NH	7.799	-		-		-		-		-	0.000	7.799	-
Design Improvements	C/FFP	SIG Sauer, Inc. : Newington, NH	-	9.048	Apr 2022	7.424	Jun 2023	7.750	Feb 2024	-		7.750	0.000	24.222	-
Commercial Magazine Testing (Congressional Add)	Allot	PM Soldier Lethality : Picatinny Arsenal, NJ	-	-		5.000	Mar 2023	-		-		-	0.000	5.000	-
Subtotal			7.799	9.048		12.424		7.750		-		7.750	0.000	37.021	N/A

Support (\$ 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			
Engineering Support	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	8.594	1.486	Feb 2022	1.131	Nov 2022	1.300	Nov 2023	-		1.300	0.000	12.511	-
Subtotal			8.594	1.486		1.131		1.300		-		1.300	0.000	12.511	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>
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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
SIG Sauer - Production Down-Selection		▲1																										
Production Qualification Testing (PQT)							■																					
Limited Lethality Assessments (LLA)							■																					
Test and Evaluation - Limited User Testing (LUT)								■																				
Natural Environmental Tests									■	■	■	■																
Test and Evaluation - LFT&E											■	■																
Test and Evaluation - IOT&E												■																
Product Improvements																												
Task Order - Iterative Prototyping		▲2																										
Task Order and Product Improvements																												
Task Order - Product Improvement FY23							▲3																					
Task Order - Product Improvement FY24											▲4																	
Task Order - Product Improvement FY25															▲5													

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>
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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
Task Order - Product Improvement FY26																	6 ▲											
Task Order - Product Improvement FY27																	7 ▲											
Task Order - Product Improvement FY28																	8 ▲											
Test and Evaluation - Product Improvements																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Rapid Prototyping - Rifle / AR / Common Cartridge	4	2019	4	2021
Prototype Opportunity Notice	2	2019	2	2019
Other Transaction Agreements (OTA) Award - Rapid Prototyping	4	2019	4	2019
Sig Sauer Inc.- Contractor Design and Prototype Fabrication	4	2019	4	2021
General Dynamics- OTS Inc- Contractor Design and Prototype Fabrication	4	2019	4	2021
AAJ CorpTextron Systems - Contractor Design and Prototype Fabrication	4	2019	4	2021
SIG Sauer - Production Down-Selection	3	2022	3	2022
Prototype Testing (Phase I) - Test and Evaluation	3	2020	4	2020
Prototype Testing (Phase II) - Test and Evaluation	2	2021	4	2021
Production Qualification Testing (PQT)	3	2023	4	2023
Limited Lethality Assessments (LLA)	3	2023	4	2023
Test and Evaluation - Limited User Testing (LUT)	4	2023	1	2024
Natural Environmental Tests	2	2024	4	2024
Test and Evaluation - LFT&E	3	2024	1	2025
Test and Evaluation - IOT&E	1	2025	1	2025
Product Improvements	1	2022	4	2025
Task Order - Iterative Prototyping	3	2022	3	2022
Task Order and Product Improvements	3	2022	4	2028
Task Order - Product Improvement FY23	3	2023	3	2023
Task Order - Product Improvement FY24	3	2024	3	2024
Task Order - Product Improvement FY25	2	2025	2	2025
Task Order - Product Improvement FY26	2	2026	2	2026
Task Order - Product Improvement FY27	2	2027	2	2027

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) FM4 / <i>Next Generation Squad Weapons</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Task Order - Product Improvement FY28	2	2028	2	2028
Test and Evaluation - Product Improvements	3	2022	4	2028

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</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
<i>S58: Soldier Enhancement Program</i>	-	13.522	10.182	4.897	-	4.897	5.094	5.101	5.105	5.162	0.000	49.063
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Soldier Enhancement Program (SEP) was established by the National Defense Authorization Act for Fiscal Years 1990 to provide a rapid approach to evaluate Commercial off-the-shelf (COTS), Government off-the shelf (GOTS), or Non-Developmental Items (NDI) capabilities to increase the combat effectiveness of the Soldier. Using a "buy, try and decide" methodology, SEP provides significant savings and acceleration in the evaluation of leading edge Soldier capabilities in order to provide combat overmatch. The SEP tri-chair leadership consists of the Director, Maneuver Capabilities Development and Integration Directorate (MCDID), The Infantry Commandant, and Program Executive Office (PEO) Soldier. Proposals are submitted by Soldiers and industry at any time, are reviewed monthly and new starts are approved semi-annually by the SEP Council of Colonels (CoC). Approved proposals are validated by the Director, Maneuver Capability Development and Integration Directorate (MCDID). Validated SEP initiatives are procured and evaluated by Soldiers for feasibility and suitability. Based on the evaluation findings, the SEP CoC provides one or more of the following courses of action: (1) inform deliberate or urgent/emerging requirements generation, (2) initiate a new Program of Record (POR) or improve an existing POR, (3) provide a national stock number (NSN) for unit procurement or (4) the item did not meet objectives and no further action is necessary. The funding supports SEP evaluation preparation, conducting evaluations, and documenting results. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy and is a priority of the Army Futures Command (AFC).

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

	FY 2022	FY 2023	FY 2024
<p>Title: Evaluate COTS/GOTS/NDI equipment that have the potential to enhance Soldier combat effectiveness.</p> <p>FY 2023 Plans: Funding will support evaluation of approximately 15 SEP Council of Colonels approved and validated initiatives to enhance Soldier combat effectiveness. Product evaluations will include safety testing, collection and analysis of Soldier feedback/results and documentation of results.</p> <p>FY 2024 Plans: Funding will support evaluation of 15 SEP Council of Colonels approved and validated initiatives. Evaluations will include safety testing, collection, and analysis of user feedback and documentation of results.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreases between FY23 and FY24 due to anticipated changes in requirements.</p>	3.522	4.992	4.897
<p>Title: SBIR/STTR Transfer</p> <p>FY 2023 Plans:</p>	-	0.190	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638			
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> FY 2023 (Current year) and FY 2024 (Budget Year One) values differ due to overall funding differences. Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals	3.522	5.182	4.897

	FY 2022	FY 2023
<i>Congressional Add:</i> Program increase - soldier enhancement program	10.000	5.000
<i>FY 2022 Accomplishments:</i> Funding will support evaluation of SEP Council of Colonels approved and validated initiatives. Evaluations will include safety testing, collection, and analysis of user feedback and documentation of results.		
<i>FY 2023 Plans:</i> \$5,000,000 was a Congressional Add for FY23 and will support evaluation of approximately 15 SEP Council of Colonels approved and validated initiatives to enhance Soldier combat effectiveness. Product evaluations will include safety testing, collection and analysis of Soldier feedback/results and documentation of results.		
Congressional Adds Subtotals	10.000	5.000

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
• MA6800: <i>Soldier Enhancement</i>	1.286	-	0.000	-	0.000	-	-	-	-	0.000	1.286

Remarks

Other

D. Acquisition Strategy

SEP focuses on COTS/GOTS/NDI initiatives submitted by Soldiers and industry. SEP proposals are reviewed monthly and approved semi-annually. The funding supports procuring SEP COTS/GOTS/NDI items in quantities sufficient for Soldier evaluation, conducting product evaluations which includes safety testing, data collection, analysis of Soldier feedback/results and documenting results. Product Managers responsible for the portfolio in which the SEP initiative falls into develops the procurement and evaluation strategy and procures the items using a variety of means from Government purchase card to full contracts. Soldier's evaluations are performed by various means from Battle Lab surveys to full scale Army Test and Evaluation testing depending on the item.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>
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Management Services (\$ 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			
Various	MIPR	PEO SOLDIER : Ft. Belvoir, VA	15.186	0.370		0.373	Aug 2023	0.373	Aug 2024	-		0.373	0.000	16.302	-
Subtotal			15.186	0.370		0.373		0.373		-		0.373	0.000	16.302	N/A

Remarks
Systems Engineering and Program Management includes engineering support, conducting technical evaluations, market research and program reviews.

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			
SEP Evaluations	MIPR	Various : Various	66.172	13.152	May 2022	9.809	May 2023	4.524	May 2024	-		4.524	0.000	93.657	-
Subtotal			66.172	13.152		9.809		4.524		-		4.524	0.000	93.657	N/A

Remarks
Testing costs vary annually depending on number and type of items being evaluated.

Project Cost Totals	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
	81.358	13.522	10.182	4.897	-	4.897	0.000	109.959	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>
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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
Evaluate Initiatives 3QFY21-1QFY22																												
SEP Council of Colonels approve/prioritization process F...	▲1																											
Evaluate Initiatives 1-3QFY22																												
SEP Council of Colonels approve/prioritization process F...					▲2																							
Evaluate Initiatives 3QFY22-1QFY23																												
SEP Council of Colonels approve/prioritization process F...									▲3																			
Evaluate Initiatives 1-3QFY23																												
SEP Council of Colonels approve/prioritization process F...													▲4															
Evaluate Initiatives 3QFY23-1QFY24																												
SEP Council of Colonels approve/prioritization process F...																	▲5											
Evaluate Initiatives 1-3QFY24																												
SEP Council of Colonels approve/prioritization process F...																					▲6							
Evaluate Initiatives 3QFY24-1QFY25																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>
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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
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 2QFY25-3QFY25													Evaluate Approved Initiatives															
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 4QFY25-1QFY26													Evaluate Approved Initiatives															
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 2QFY26-3QFY26													Evaluate Approved Initiatives															
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 4QFY26-1QFY27													Evaluate Approved Initiatives															
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 2QFY27-3QFY27													Evaluate Approved Initiatives															
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 4QFY27-1QFY28													Evaluate Approved Initiatives															
SEP Council of Colonels approve/prioritization process F...													Approval/prioritization of SEP Proposal															
Evaluate Initiatives 2QFY28-3QFY28													Evaluate Approved Initiatives															

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>
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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
Evaluate Initiatives 2QFY28-3QFY28																												
SEP Council of Colonels approve/prioritization process F...																												
Evaluate Initiatives 4QFY28-1QFY29																												

[Redacted]

Evaluate Approved In

[Redacted]

Approve

[Redacted]

Evaluate

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
SEP Council of Colonels approve/prioritization process FY21.2	2	2021	2	2021
Evaluate Initiatives 2-4QFY21	2	2021	4	2021
SEP Council of Colonels approve/prioritization process FY21.3	3	2021	3	2021
Evaluate Initiatives 3QFY21-1QFY22	3	2021	1	2023
SEP Council of Colonels approve/prioritization process FY22.1	1	2022	1	2022
Evaluate Initiatives 1-3QFY22	1	2022	3	2022
SEP Council of Colonels approve/prioritization process FY22.2	3	2022	3	2022
Evaluate Initiatives 3QFY22-1QFY23	3	2022	1	2023
SEP Council of Colonels approve/prioritization process FY23.1	1	2023	1	2023
Evaluate Initiatives 1-3QFY23	1	2023	3	2023
SEP Council of Colonels approve/prioritization process FY23.2	3	2023	3	2023
Evaluate Initiatives 3QFY23-1QFY24	3	2023	1	2024
SEP Council of Colonels approve/prioritization process FY24.1	1	2024	1	2024
Evaluate Initiatives 1-3QFY24	1	2024	3	2024
SEP Council of Colonels approve/prioritization process FY24.2	3	2024	3	2024
Evaluate Initiatives 3QFY24-1QFY25	3	2024	1	2025
SEP Council of Colonels approve/prioritization process FY25.1	1	2025	1	2025
Evaluate Initiatives 2QFY25-3QFY25	1	2025	3	2025
SEP Council of Colonels approve/prioritization process FY25.2	3	2025	3	2025
Evaluate Initiatives 4QFY25-1QFY26	3	2025	1	2026
SEP Council of Colonels approve/prioritization process FY26.1	1	2026	1	2026
Evaluate Initiatives 2QFY26-3QFY26	1	2026	3	2026
SEP Council of Colonels approve/prioritization process FY26.2	3	2026	3	2026

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S58 / <i>Soldier Enhancement Program</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Evaluate Initiatives 4QFY26-1QFY27	3	2026	1	2027
SEP Council of Colonels approve/prioritization process FY27.1	1	2027	1	2027
Evaluate Initiatives 2QFY27-3QFY27	1	2027	3	2027
SEP Council of Colonels approve/prioritization process FY27.2	3	2027	3	2027
Evaluate Initiatives 4QFY27-1QFY28	3	2027	1	2028
SEP Council of Colonels approve/prioritization process FY28.1	1	2028	1	2028
Evaluate Initiatives 2QFY28-3QFY28	1	2028	3	2028
SEP Council of Colonels approve/prioritization process FY28.2	3	2028	3	2028
Evaluate Initiatives 4QFY28-1QFY29	3	2028	1	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) S60 / <i>Clothing & Equipment</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
S60: <i>Clothing & Equipment</i>	-	5.196	6.313	3.427	-	3.427	6.364	8.879	8.974	9.074	0.000	48.227
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding in this effort supports the Army's Cross Functional Teams (CFT) initiatives. It supports engineering and manufacturing development tasks related to clothing and individual equipment with the goal of enhancing the lethality, survivability, and mobility as well as the quality of life of the Warfighter. It funds formal Developmental Testing/Operational Testing (DT/OT) of preproduction and prototypes leveraging technological advancements. Those advancements focus on materials, fabrication techniques, moisture management, flame resistance, vector protection, extreme environmental protection and camouflage. This effort also funds evaluations of Organizational Clothing and Individual Equipment (OCIE) appropriate for use in extreme or multi-climate environments focusing on arctic and jungle. Funding to support test and evaluation of both tactical and non-tactical clothing and individual equipment development and enhancement resulting in the Soldier as an integrated system. This effort will transition capabilities from our Science and Technology partners to increase performance and safety of Warfighter clothing and equipment. PM SCIE will continue to support multi-service commonality initiatives through technology that enables combat operations in a gender integrated fighting force.

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

	FY 2022	FY 2023	FY 2024
Title: Soldier Uniforms and Clothing	2.529	3.253	1.723
Description: Evaluate superior and sustainable integrated clothing and footwear for the Soldier in a rapidly changing global environment.			
FY 2023 Plans: Perform technical testing, user evaluations, and qualify new fabrics with improved vector protections. Supports opportunities for commonality in OCIE across all Services (Army, Navy, Air Force, Marines and Coast Guard) and further supports the domestic Clothing and Textile Industrial Base. Evaluation of Flame Resistant (FR) printing inks and other technologies to greatly reduce the cost of FR clothing. Long term evaluation study for Army Green Service Uniform and user evaluation for Maternity Army Green Service Uniform in conjunction with Defense Logistics Agency Maternity Pilot Program. Continued development of Improved Combat Vehicle Crewman Uniform to include female and male variant patterns. Annual evaluation of domestic material solution submissions to support the Athletic Footwear program providing Soldiers a greater variety of athletic footwear from which to choose. Continue Clothing Bag Upgrades and Evaluations as directed by the Army Uniform Board. Conduct ensemble level evaluations of novel materials and fabrics in clothing, footwear and equipment in all climates.			
FY 2024 Plans: Perform technical testing, user evaluations, and qualify new fabrics with vector protection and FR protection for combat clothing and Cold Weather/Extreme Cold Weather Clothing. Supports opportunities for commonality in OCIE across all Services (Army, Navy, Air Force, Marines and Coast Guard) and further supports the domestic Clothing and Textile Industrial Base. Long term evaluation study for Army Green Service Uniform. Continued development of Improved Combat Vehicle Crewman Uniform to			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S60 / <i>Clothing & Equipment</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>include female and male variant patterns. Annual evaluation of domestic material solution submissions to support the Athletic Footwear program. Evaluate domestic materiel solution to support extreme cold weather footwear capability gap. Continue Clothing Bag Upgrades and Evaluations as directed by the Army Uniform Board. Procure test assets and perform DT/OT on uniforms produced with improved Identification Friend or Foe (IFF) capability, microwave protective materials to defeat emerging threats and on uniforms designed to mitigate Ground Surveillance Radar (GSR) detection. Conduct ensemble level evaluations of novel materials and fabrics in clothing, footwear and equipment in all climates.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in funding from FY23 to FY24 due to anticipated transitions to sustainment.</p>				
<p>Title: Individual Equipment</p> <p>Description: Develop and provide superior and sustainable integrated individual equipment for the Soldier in a rapidly changing global environment.</p> <p>FY 2023 Plans: Explore solutions for Water Treatment Devices for Toxic Industrial Chemicals and Toxic Industrial Materials (TICs/TIMs) and desalinization. Continue to develop the Welding Individual Protection System (WIPS) ensemble to provide welders with Occupational Safety Health Act (OSHA) compliant Personal Protective Equipment (PPE). Supports opportunities for commonality in OCIE across all Services (Army, Navy, Air Force, Marines and Coast Guard) and further supports the domestic Clothing and Textile Industrial Base. Procure and test quick reaction camouflage to reduce thermal signature and to enhance individual equipment camouflage. Procure test assets and perform DT/OT on multi-purpose and specialized load carriage equipment.</p> <p>FY 2024 Plans: Procure test assets and perform Developmental Tests/Operational Tests (DT/OT) as required for Water Treatment Devices for desalinization. Continue to develop the Welding Individual Protection System (WIPS) ensemble to provide welders with Occupational Safety Health Act (OSHA) compliant Personal Protective Equipment (PPE). Supports opportunities for commonality in OCIE across all Services (Army, Navy, Air Force, Marines and Coast Guard) and further supports the domestic Clothing and Textile Industrial Base. Procure and test quick reaction camouflage to reduce thermal signature and to enhance individual equipment camouflage. Procure test assets and perform DT/OT on multi-purpose and specialized load carriage equipment, sleeping mats, and individual shelters. Product office will be conducting testing on items appropriate for use in extreme or multi-climate environments focusing on arctic mobility equipment.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease in funding from FY23 to FY24 due to changes in anticipated requirements.</p>		2.470	2.830	1.704
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC 638</p>		0.197	0.230	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S60 / <i>Clothing & Equipment</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<i>FY 2023 Plans:</i> Funding transferred in accordance with Title 15 USC 638			
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC 638			
Accomplishments/Planned Programs Subtotals	5.196	6.313	3.427

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>
• S53: <i>Clothing And Equipment</i>	6.431	3.078	4.700	-	4.700	8.150	8.790	8.884	8.982	Continuing	Continuing
• OMA - CFF OMA 121018: SCIE OMA 121018	-	-	-	-	-	-	-	-	-		

Remarks

D. Acquisition Strategy
 Acquisition strategies for these programs vary in methods, and range from: 1) Materiel Change Proposals that result in engineering changes to existing systems to; 2) Traditional development programs that include an Engineering and Manufacturing Development phase ranging in duration from 12 to 48 months, depending on the level of complexity and testing required.

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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 / 5				PE 0604601A / Infantry Support Weapons				S60 / Clothing & Equipment								
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	
Program Management Support	Allot	PM SCIE : Ft Belvoir	12.703	0.759		0.598		0.377		-		0.377	Continuing	Continuing	Continuing	
Subtotal			12.703	0.759		0.598		0.377		-		0.377	Continuing	Continuing	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	
Engineering Support	Various	NSRDEC : Natick, MA	17.924	0.623		0.845		0.496		-		0.496	Continuing	Continuing	Continuing	
Development Contracts	Various	Various : Various	56.541	1.881		1.574		0.891		-		0.891	Continuing	Continuing	Continuing	
Subtotal			74.465	2.504		2.419		1.387		-		1.387	Continuing	Continuing	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	
Program Office Support Costs	Various	Natick, MA : Natick, MA	19.416	0.489		1.448		0.787		-		0.787	Continuing	Continuing	Continuing	
Subtotal			19.416	0.489		1.448		0.787		-		0.787	Continuing	Continuing	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	
Developmental Testing	MIPR	Various : Various	34.938	1.444		1.848		0.876		-		0.876	Continuing	Continuing	Continuing	
Subtotal			34.938	1.444		1.848		0.876		-		0.876	Continuing	Continuing	N/A	
Project Cost Totals			141.522	5.196		6.313		3.427		-		3.427	Continuing	Continuing	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S60 / <i>Clothing & Equipment</i>
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	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S60 / <i>Clothing & Equipment</i>
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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
UNIFORM CLOTHING & FOOTWEAR																												
Enhanced Uniform Upgrades																												
Clothing Bag Upgrades and Evaluations																												
Spectral Mitigation																												
Cold Weather/Extreme Cold Weather Clothing and Footwear ...																												
Athletic Footwear																												
INDIVIDUAL EQUIPMENT																												
Improved Hydration																												
Evaluation of Cold Weather Mobility items																												
Welding Individual Protection System (WIPS)																												
Individual Shelter																												
Sleeping Mats																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S60 / <i>Clothing & Equipment</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
UNIFORM CLOTHING & FOOTWEAR	1	2011	4	2028
Enhanced Uniform Upgrades	3	2009	4	2028
Clothing Bag Upgrades and Evaluations	1	2013	4	2028
Spectral Mitigation	1	2020	4	2029
Cold Weather/Extreme Cold Weather Clothing and Footwear Improvement	1	2023	4	2026
Athletic Footwear	1	2021	4	2024
INDIVIDUAL EQUIPMENT	2	2008	4	2027
Improved Hydration	2	2021	4	2029
Evaluation of Cold Weather Mobility items	1	2024	4	2025
Welding Individual Protection System (WIPS)	1	2022	4	2025
Individual Shelter	1	2023	4	2024
Sleeping Mats	1	2023	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) S61 / <i>Acis Engineering Development</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
S61: <i>Acis Engineering Development</i>	-	2.418	9.927	3.788	-	3.788	0.466	0.466	0.471	0.477	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project conducts development, integration, qualification and upgrade activities in support of the Air Soldier System (Air SS) and Aviation operational needs codified in the COE requirements document. The Air SS is Army aircrew survival and mission equipment that improves safety, survivability, and mission performance. The Air SS addresses capability gaps identified during combat operations as well as emerging challenges to Army aircrew safety and performance caused by the bulk and weight of body-worn equipment, limited Situational Awareness (SA), lack of protection from emerging threats, and a lack functionally integrated mission electronics and protective/survival equipment. Air SS delivers improved aircrew survivability, SA, interoperability, and mission performance.

The Air SS provides enhanced mission planning and execution through the introduction of upgraded hardware and software components allowing for improved connectivity between aircrew members, other aircraft, and ground assets. Capabilities further improve terrain mapping, threat, and obstacle avoidance information through improved heads-up display (HUD) technologies which also align to needs of the Future Long Range Assault Aircraft (FLRAA) and Future Attack and Reconnaissance Aircraft (FARA). Additional effort is focused on a digital replacement for paper-based DoD Flight Information Publications, and the Aircrew Combat Equipment, a replacement for the legacy survival vest with integral Modular Scalable Vest body armor. These enhanced capabilities support both the enduring fleet and future fleet.

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

	FY 2022	FY 2023	FY 2024
Title: Air Soldier System	2.418	2.338	3.788
<p>Description: This project conducts development, integration and qualification activities in support of the Air Soldier System (Air SS) program. The Air SS addresses capability gaps identified during previous combat operations. This includes crew station compatibility challenges caused by the burden of excessive equipment bulk and weight; impacts to safety resulting from excessive pilot workload and limited aircrew situational awareness (SA); and inadequate aircrew protection from environmental extremes, hostile threats, and induced threats resulting from aircraft mishaps or crashes.</p> <p>FY 2023 Plans: Specific activities planned for FY 23 will focus on the transition of several Small Business Innovative Research (SBIR) initiatives associated with the Air SS integrated soldier power and personal area network capabilities. These activities include, but are not limited to an obsolescence replacement for the Encrypted Aircraft Wireless Intercom System (EAWIS) leveraging Voice over Internet Protocol (VoIP) or ultra-wideband (UWB) technologies, high density/lightweight power storage devices, miniaturization and integration of the personal helicopter oxygen delivery system, and expansion of universal soldier power to head (or helmet) worn devices reducing head borne weight and further reducing the need for device specific batteries.</p> <p>FY 2024 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S61 / <i>Acis Engineering Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>The Program will focus on supporting Army aircrew Nett Warrior-Aviation hardware and software changes and the integration and test of deferred Nett Warrior-Aviation Common Operating Environment requirements. Continue support for the execution of Pre-Planned Product Improvements (P3I) capability demonstrations in conjunction with upcoming field training exercises and key Army demonstration and experimentation events focused on Air Soldier System capabilities intended to enhance Air Ground Operations in support of Multi-Domain Operations initiatives.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase from FY 2023 to FY 2024 due to anticipated changes in requirements.</p>			
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC 638</p> <p>FY 2023 Plans: Funding transferred in accordance with Title 15 USC 638</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC 638</p>	-	0.089	-
<p>Title: Congressional Add for TACPAN</p> <p>FY 2023 Plans: This effort will further develop Soldier worn power distribution and component management for both air and ground operations. This effort will further mature TacPAN technology to integrate into combat uniforms, body armor and Aviation Soldier ensemble, along with organizational clothing & individual equipment (OCIE). The system and subsystem prototype demonstrators are TacPAN integrated body armor, heated apparel, data and power distribution, and aviation specific subsystem Soldier touch points, flight safety, and developmental testing.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Program received FY23 congressional add for TACPAN.</p>	-	7.500	-
Accomplishments/Planned Programs Subtotals	2.418	9.927	3.788

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
• AZ3110: <i>Aircrew Integrated Systems</i>	41.425	25.773	22.097	-	22.097	8.927	13.798	13.844	13.825	0.000	139.689

Remarks

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S61 / <i>Acis Engineering Development</i>
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D. Acquisition Strategy

Air Soldier System Milestone C was conducted in April 2019 for initial capabilities to include: Aircraft-mounted hardware and helmet worn displays that provide integrated helmet capabilities and increase aircrew situational awareness; and, Protective and Survival Soldier Kit items that reduce equipment weight and bulk and improve aircrew mission effectiveness and survivability. Air SS capabilities are being phased into production over time. Efforts for the Air SS program include development, integration, test, and airworthiness qualification of aviator flight display symbology technologies that will increase crew member situational awareness, and aircrew protective and survival equipment that reduces bulk and weight and improves crew station compatibility and mission effectiveness. Air SS includes improvements to the current flight helmet; improvements to the survival gear carriage system; lightweight body armor; environmental protective clothing and personal survival equipment; and a day/night helmet-mounted flight symbology display for Rotary Wing platform aviators. Efforts continue to develop deferred capabilities as defined within the Capability Development Document (CDD) to include Large Scale Combat Operations (LSCO) enablers and modernization initiatives for protection and situational awareness. These efforts migrate from program/platform-unique hardware and software solutions to common integrated air/ground solutions that align with Network, Soldier Lethality, and FVL modernization priorities

Development efforts are conducted using a mix of both Cost and Firm Fixed Price Contracts with industry utilizing full and open competition. Each development effort is individually evaluated and the appropriate contract type is selected in order to appropriately share risk between industry and the government. Risk reduction, developmental, and operational testing are also conducted.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S61 / <i>Acis Engineering Development</i>
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Management Services (\$ 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			
PM Administration	Allot	Various Government : Huntsville, Alabama	4.409	0.050		0.059		0.181		-		0.181	Continuing	Continuing	Continuing
Subtotal			4.409	0.050		0.059		0.181		-		0.181	Continuing	Continuing	N/A

Product Development (\$ 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			
Air Warrior and Air Soldier System Development	C/CPFF	Various Government : Various Locations	65.363	2.033		1.938		2.880		-		2.880	Continuing	Continuing	Continuing
TACPAN Congressional Add	TBD	TBD : TBD	-	-		7.598		-		-		-	0.000	7.598	-
Subtotal			65.363	2.033		9.536		2.880		-		2.880	Continuing	Continuing	N/A

Support (\$ 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			
Matrix Support	RO	Various Government : Various Locations	4.532	0.055		0.054		0.582		-		0.582	Continuing	Continuing	Continuing
Subtotal			4.532	0.055		0.054		0.582		-		0.582	Continuing	Continuing	N/A

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			
Developmental and Operational Testing	RO	Various Activities : Various Locations	20.256	0.280		0.278		0.145		-		0.145	Continuing	Continuing	Continuing
Subtotal			20.256	0.280		0.278		0.145		-		0.145	Continuing	Continuing	N/A

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S61 / <i>Acis Engineering Development</i>
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	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	94.560	2.418	9.927	3.788	-	3.788	Continuing	Continuing	N/A

Remarks
 Funds for this project are allocated amongst a number of smaller development/qualification programs at various stages of technical maturity intended to address capability gaps associated with deferred Air SS capabilities being implemented as pre-planned product improvements to the baseline Air SS program. Efforts are largely focused on transitioning technologies and products initially developed under Small Business Innovative Research (SBIR) programs, Technology Maturation Initiatives (TMI), and/or the identification and qualification of COTS/GOTS capabilities that have the potential of satisfying remaining capability gaps as documented in the Air SS CDD.

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S61 / <i>Acis Engineering Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Air SS Pre-planned Product Improv (P3I) (Deferred Air SS CDDm requirements)	1	2016	4	2028
Aircrew Combat Equipment (ACE)	1	2020	4	2030
Nett Warrior Aviation Tablet	2	2022	4	2030

Note
Next Generation Heads Up Display (HUD) Integration & Qualification is the follow-on effort to the current Integrated Visual Augmentation System-Aviation (IVAS-A) Technical Maturation Initiative (TMI) effort.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) S63 / <i>Individual Weapons Engineering Development</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
S63: <i>Individual Weapons Engineering Development</i>	-	3.518	3.956	3.549	-	3.549	3.510	3.791	3.830	3.873	0.000	26.027
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Individual Weapons Engineering Development program provides funds to transition components or prototypes from Budget Activity 4 (BA 4) Element (PE) 0603827A Soldier Systems - Advanced Development Project S54 Small Arms Improvement Program and other domestic and foreign sources of small arms weapon systems to demonstrate, test and evaluate capability near or at planned operational requirements. The Maneuver Center of Excellence (MCoE), Fort Benning, GA (User Community) identifies the Individual Weapons Engineering Development as a critical capability gap for our Soldiers in combat and Soldier Lethality Cross Functional Team (CFT) has assumed this need as a task. Small arms systems include weapons up to 40 millimeter (mm) in caliber. Current and future efforts focus on system improvements designed to enhance lethality, target acquisition, fire control, usability, training effectiveness and reliability of weapons to include ammunition when developing and/or evaluating standard and non-standard weapons. Focus areas include system development, integration (to include human-systems), demonstration, test and evaluate components, prototypes and operational system prototypes of small arms weapon systems and/or enhancements. Benefits include continuous improvements to small arms weapon systems, fire control equipment, optics, gun barrels, ancillary equipment, training devices, component mounts, weapon mounts, and weapon/ammunition interface of current small arms fleet or new weapon systems.

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

	FY 2022	FY 2023	FY 2024
Title: Design and Development	2.580	2.874	2.593
Description: Design and development of Individual Weapons			
FY 2023 Plans: New Weapons and Enabling Technology Evaluation and Assessment will continue to focus on weapon design and development utilizing current state-of-the-art technologies and integration of those technologies for individual weapons across the spectrum of small arms from pistols through rifles and grenade launchers. Evaluation will focus on terminal effects and those technologies utilized to achieve on-target effects, as well as increase sustainability, reliability, and producibility and will include advanced combat optics and improvement of small arms munitions. Will leverage enabling Innovative Designs and Engineering Assessment (IDEA) technologies to obtain enabling technologies that can generate new capabilities and enhancements.			
FY 2024 Plans: New Weapons and Enabling Technology Evaluation and Assessment will continue to focus on weapon design and development utilizing current state-of-the-art technologies and integration of those technologies for individual weapons across the spectrum of small arms from pistols through rifles and grenade launchers. Evaluation will focus on terminal effects and those technologies			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S63 / <i>Individual Weapons Engineering Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
utilized to achieve on-target effects, as well as increase sustainability, reliability, and producibility and will include advanced combat optics and improvement of small arms munitions. FY 2023 to FY 2024 Increase/Decrease Statement: Decrease due to anticipated reduction in weapon design and development evaluations and tasks from FY 2023 to FY 2024.			
Title: Testing and Evaluation Description: Test and evaluation of Individual Weapons FY 2023 Plans: New Weapons and Enabling Technology Testing and Evaluation will continue to test and evaluate new technology that can lead to enhancements of current and legacy weapon systems or create new weapon systems, as well as advanced combat optics and improvement of small arms munitions. FY 2024 Plans: New Weapons and Enabling Technology Testing and Evaluation will continue to test and evaluate new technology that can lead to enhancements of current and legacy weapon systems or create new weapon systems, as well as advanced combat optics and improvement of small arms munitions. FY 2023 to FY 2024 Increase/Decrease Statement: Increase due to anticipated increase in testing and evaluation of Individual Weapons from FY 2023 to FY 2024.	0.938	0.938	0.956
Title: SBIR/STTR Transfer Description: Funding transferred in accordance with Title 15 USC 638 FY 2023 Plans: FY 2023 SBIR/STTR Transfer in accordance with Title 15 USC §638. FY 2023 to FY 2024 Increase/Decrease Statement: SBIR/STTR Transfer in accordance with Title 15 USC §638.	-	0.144	-
Accomplishments/Planned Programs Subtotals	3.518	3.956	3.549

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• S54: <i>Small Arms Improvement</i>	10.659	9.248	9.094	-	9.094	9.183	9.184	9.281	9.384	0.000	66.033
• G13503: <i>M4A1 CARBINE</i>	7.226	-	0.571	-	0.571	0.570	0.340	0.340	-	0.000	9.047

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S63 / <i>Individual Weapons Engineering Development</i>

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

Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To	
			Base	OCO	Total					Complete	Total Cost
• G01501: <i>XM320 Grenade Launcher Module (GLM)</i>	13.934	11.703	14.143	-	14.143	17.711	17.873	17.894	17.869	Continuing	Continuing
• G15325: <i>Handgun</i>	4.930	-	0.032	-	0.032	0.033	0.007	0.007	-	0.000	5.009
• GL3200: <i>Items Less Than \$5.0m (WOCV-WTCV)</i>	13.826	2.138	1.148	-	1.148	1.055	2.237	2.241	2.243	Continuing	Continuing

Remarks

In support of Small Arms Requirements, components or prototypes developed in BA 4 PE 0603827A Soldier Systems - Advanced Development Project S54 Small Arms Improvement Program is transitioned to BA 5 PE 0604601A Infantry Support Weapons Project S63 Individual Weapons Engineering Development to conduct engineering and manufacturing development. Once the component, prototype or operational prototype achieves Milestone C and type classification the item transitions to small arms weapon systems production or modification program.

D. Acquisition Strategy

Primary strategy is to mature and finalize design efforts, award Research, Development, Test and Evaluation (RDT&E) Defense Ordnance Technology Consortium (DOTC) and Other Transaction Authority (OTA) type hardware contracts. Test and evaluate systems that result in type classification, material release, and follow-on production contract awards.

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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 / 5				PE 0604601A / Infantry Support Weapons				S63 / Individual Weapons Engineering Development								
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	
Program Management	Allot	PM Soldier Lethality, : Picatinny Arsenal	11.312	0.050	Mar 2022	0.050	Mar 2023	0.050	Mar 2024	-		0.050	Continuing	Continuing	Continuing	
Travel	MIPR	PM Soldier Lethality, : Picatinny Arsenal	1.587	0.010	Mar 2022	0.010	Mar 2023	0.010	Mar 2024	-		0.010	Continuing	Continuing	Continuing	
Subtotal			12.899	0.060		0.060		0.060		-		0.060	Continuing	Continuing	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	
Fabrication	Various	Various : Multiple Contractors	4.120	0.917	Mar 2022	0.408	Mar 2023	0.408	Mar 2024	-		0.408	Continuing	Continuing	Continuing	
Hardware Development	MIPR	DEVCOM AC, : Multiple	18.608	1.050	Mar 2022	1.631	Mar 2023	1.243	Mar 2024	-		1.243	Continuing	Continuing	Continuing	
Subtotal			22.728	1.967		2.039		1.651		-		1.651	Continuing	Continuing	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	
Engineering	MIPR	DEVCOM AC, : Multiple	69.234	0.391	Mar 2022	0.719	Mar 2023	0.708	Mar 2024	-		0.708	Continuing	Continuing	Continuing	
Logistics	MIPR	TACOM, : Warren	5.178	0.100	Mar 2022	0.100	Mar 2023	0.100	Mar 2024	-		0.100	Continuing	Continuing	Continuing	
Human Research and Engineering	MIPR	Army Research Laboratory, : Aberdeen Proving Ground	4.103	0.100	Mar 2022	0.100	Mar 2023	0.100	Mar 2024	-		0.100	Continuing	Continuing	Continuing	
Subtotal			78.515	0.591		0.919		0.908		-		0.908	Continuing	Continuing	N/A	

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S63 / <i>Individual Weapons Engineering Development</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
DESIGN AND DEVELOPMENT																												
TEST AND EVALUATION																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S63 / <i>Individual Weapons Engineering Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DESIGN AND DEVELOPMENT	1	2021	4	2028
TEST AND EVALUATION	1	2021	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) S70 / <i>Personnel Recovery Support System (PRSS)</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
<i>S70: Personnel Recovery Support System (PRSS)</i>	-	3.018	2.963	2.591	-	2.591	0.605	0.652	0.659	0.667	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Personnel Recovery Support System (PRSS) consists of items including Personnel Recovery Devices (PRD), e.g. Personal Locator Beacons, and other Personnel Recovery Support Equipment (PRSE) items that provide the capability to report and locate isolated Soldiers, forces and elements. Funding supports system research, development, testing, and evaluation of next-generation PRSS/PRSE items to enhance capability and provide a secure waveform with Low Probability of Intercept (LPI)/Low Probability of Detection (LPD) while operating in increasingly contested environments utilizing secure signals of opportunity that meet Army qualifications. It ensures continued successful interoperability within the relevant theaters of operations and the Continental United States (CONUS).

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

	FY 2022	FY 2023	FY 2024
Title: Personnel Recovery Systems	3.018	2.855	2.591
FY 2023 Plans: Continues research, development, and evaluation of components and hardware directly supporting Army personnel recovery requirements.			
FY 2024 Plans: Continues research, development, and evaluation and begins integration and testing of secure and classified components and hardware directly supporting Army personnel recovery requirements.			
FY 2023 to FY 2024 Increase/Decrease Statement: The FY24 decrease is due to shift from development to integration and testing of secure waveform.			
Title: SBIR/STTR Transfer	-	0.108	-
Description: Funding transferred in accordance with Title 15 USC 638			
FY 2023 Plans: Funding transferred in accordance with Title 15 USC 638.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC 638.			
Accomplishments/Planned Programs Subtotals	3.018	2.963	2.591

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S70 / <i>Personnel Recovery Support System (PRSS)</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>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• G01101: <i>Personnel Recovery Support System (PRSS)</i>	9.741	4.691	5.356	-	5.356	6.655	9.398	9.403	9.412	Continuing	Continuing

Remarks

D. Acquisition Strategy

Execute PRSS/PRSE program development efforts for performance optimization through contracts with industry and reimbursable support agreements with other Government agencies, labs, and Federally Funded Research and Development Centers. Perform continuing development and test of new waveforms and hardware to ensure successful interoperability for personnel recovery and to mitigate potential security compromises to the PRSS/PRSE program.

Future program strategy is to adapt PRSS/PRSE products to align with changing doctrine and concepts of operations (CONOPS) to ensure integration and interoperability between ground and air forces and increase coverage within the relevant theaters of operations and the CONUS to ensure Soldier safety, recovery, and survivability.

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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 / 5				PE 0604601A / Infantry Support Weapons				S70 / Personnel Recovery Support System (PRSS)							
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
PM Administration	Allot	Various Organizations : Huntsville, Alabama	0.988	0.150		0.065		0.062		-		0.062	Continuing	Continuing	Continuing
Subtotal			0.988	0.150		0.065		0.062		-		0.062	Continuing	Continuing	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
Personnel Recovery System Development Systems Engineering	MIPR	Various Organizations : Various Locations	8.788	2.808		2.119		1.688		-		1.688	Continuing	Continuing	Continuing
Subtotal			8.788	2.808		2.119		1.688		-		1.688	Continuing	Continuing	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
Matrix Support	MIPR	Various Organizations : Various Locations	2.348	0.060		0.075		0.071		-		0.071	Continuing	Continuing	Continuing
Subtotal			2.348	0.060		0.075		0.071		-		0.071	Continuing	Continuing	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
Developmental Testing/Operational Testing	MIPR	Various Organizations : Various Locations	3.509	-		0.704		0.770		-		0.770	Continuing	Continuing	Continuing
Subtotal			3.509	-		0.704		0.770		-		0.770	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S70 / <i>Personnel Recovery Support System (PRSS)</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
Personnel Recovery (PR) Development	[Redacted]																											
PR Component, Integration, and Testing	[Redacted]																											
Next Generation PR Upgrades and Adaptations to New Platforms	[Redacted]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) S70 / <i>Personnel Recovery Support System (PRSS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Personnel Recovery (PR) Development	1	2022	4	2028
PR Component, Integration, and Testing	3	2022	4	2028
Next Generation PR Upgrades and Adaptations to New Platforms	3	2023	4	2028

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) VS5 / <i>Soldier Protective Equipment</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
<i>VS5: Soldier Protective Equipment</i>	-	8.837	9.303	8.150	-	8.150	8.710	8.712	8.800	8.899	0.000	61.411
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding in this project supports the Army's Cross Functional Teams (CFT) initiatives. It supports Engineering and Manufacturing Development (EMD) to include design integration and manufacturing of production representative articles, formal DT/OT and Soldier touchpoints, and continued development of SPS technologies transitioning from VS4. It leverages advancements in technology to continue improvements to the Army's Personal Protective Equipment (PPE) portfolio to include hard and soft body armor components (including Vital Torso Protection (VTP) and Torso and Extremity Protection (TEP) respectfully), helmets (including Integrated Head Protection System (IHPS) and Next Generation (NG) IHPS), Military Protective Eyewear systems and other personal protective equipment to include female specific design and development. This project will continue to support cross-service initiatives to increase commonality.

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

	FY 2022	FY 2023	FY 2024
Title: Soldier Protective Equipment	8.837	8.963	8.150
Description: Project VS5 (Soldier Protective Equipment) supports engineering and manufacturing development of Individual Soldier Ballistic Protection equipment. It will leverage advancements in technology to continue incremental improvements to Personal Protective Equipment (PPE).			
FY 2023 Plans: Evaluate and develop system and subsystem technologies across the PPE portfolio from emerging ballistic/blast threats. Continue to test ballistic properties of current PPE after exposure to extreme storage conditions to improve service life predictions and support repurposing efforts. Continue improving the Soldier Protection System (SPS), Next Generation Soldier Protection and Non-Destructive Test Equipment (NDTE) methodology, female and small statured soldier focused human factor evaluations that includes environmental/exposure testing, including Cold & Tropical regions, and durability testing. Continue to advance technology and materials into production processes as these technologies mature and enable expanded opportunities associated with gender specific PPE.			
FY 2024 Plans: The VS5 project supports testing, design integration, human factors evaluations and continued development across the Personal Protective Equipment (PPE) portfolio. These items include hard and soft armor, helmets, hearing protection, and other personal protective equipment. In FY24, the project will procure test assets and conduct user evaluation on Body Armor and Head Protection capabilities that transition from the S&T community such as Novel Fabric for Torso Protection, Anti-Fog for integrated Eyewear Platform, Durable			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Army	Date: March 2023
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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) VS5 / <i>Soldier Protective Equipment</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Anti-Fog Coatings, and Lens Longevity efforts to determine efficacy in operational environment. Procure test assets and conduct user evaluation on uniforms made from p-aramid fabric transition from S&T community that provides extremity protection against frag threats.</p> <p>Ongoing efforts in this project consist of testing blast and ballistic properties of current PPE after exposure to extreme storage and environmental conditions, which improve service life predictions and support repurposing efforts. The project will also continue improving test methodology for the Soldier Protection System (SPS), Next Generation Soldier Protection, and Non-Destructive Test Equipment (NDTE), human factor evaluations focus on the female and small-statured soldier, and environmental and exposure testing (i.e., cold, tropical and jungle).</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease in Soldier Protective Equipment portfolio is due to an anticipated decrease of Head Protection requirements in FY24.</p>			
<p>Title: SBIR/STTR Transfer</p> <p>Description: Funding transferred in accordance with Title 15 USC 638</p> <p>FY 2023 Plans: Funding transferred in accordance with Title 15 USC 638</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC 638</p>	-	0.340	-
Accomplishments/Planned Programs Subtotals	8.837	9.303	8.150

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>
• VS4: <i>Soldier Protective Equipment</i>	4.122	5.434	7.991	-	7.991	7.988	7.994	8.076	8.166	Continuing	Continuing
• OMA - 121 - 121017000: <i>Soldier Modernization - Soldier Protection Systems</i>	-	-	-	-	-	-	-	-	-		
Remarks											

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) VS5 / <i>Soldier Protective Equipment</i>
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D. Acquisition Strategy

Acquisition strategies for these programs vary in methods, and range from: 1) Material Change programs that result in engineering changes to existing systems to; 2) Traditional development programs that include an Engineering and Manufacturing Development phase ranging in duration from 12 to 48 months, depending on the level of design complexity and testing required.

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

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) VS5 / <i>Soldier Protective Equipment</i>
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Management Services (\$ 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			
Program Management Support	Allot	Various SSV : Fort Belvoir, VA	2.998	0.496		0.637		0.936		-		0.936	Continuing	Continuing	Continuing
Subtotal			2.998	0.496		0.637		0.936		-		0.936	Continuing	Continuing	N/A

Product Development (\$ 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			
Prototype Contracts	Various	Various : Various	36.092	0.751		1.026		2.150		-		2.150	Continuing	Continuing	Continuing
Prod Sys Engineering Spt	MIPR	Various : Various	11.535	2.496		2.815		2.330		-		2.330	Continuing	Continuing	Continuing
Subtotal			47.627	3.247		3.841		4.480		-		4.480	Continuing	Continuing	N/A

Support (\$ 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			
Matrix Engineering Spt	MIPR	CCDC-SC : Natick, MA	6.339	1.435		1.230		0.635		-		0.635	Continuing	Continuing	Continuing
Subtotal			6.339	1.435		1.230		0.635		-		0.635	Continuing	Continuing	N/A

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			
Environmental/HFE	MIPR	Various DTC & OTC : Various DTC & OTC	13.843	1.114		1.315		0.559		-		0.559	Continuing	Continuing	Continuing
Surveillance Testing - Base Threat/Emerging Threat	TBD	TBD : TBD	2.582	2.545		2.280		1.540		-		1.540	Continuing	Continuing	Continuing
Subtotal			16.425	3.659		3.595		2.099		-		2.099	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) VS5 / <i>Soldier Protective Equipment</i>
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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
Test and Qualify Improvements to SPS																												
Test and Qualify Improvements to SPS																												
Torso Protection Improvements																												
Torso Protection Improvements																												
Head Protection Improvements																												
Head Protection Improvements																												
Hard Armor Protection Improvements																												
Hard Armor Protection Improvements																												
SPS System Level Test Technology Insertions																												
SPS System Level Test Technology Insertions																												
Non-Destructive Test Equipment																												
					NOTE																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>	Project (Number/Name) VS5 / <i>Soldier Protective Equipment</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Test and Qualify Improvements to SPS	1	2022	4	2028
Torso Protection Improvements	1	2022	4	2028
Head Protection Improvements	1	2022	4	2028
Hard Armor Protection Improvements	1	2022	4	2028
SPS System Level Test Technology Insertions	1	2022	4	2028
Non-Destructive Test Equipment	1	2023	1	2025