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**Department of Defense  
Fiscal Year (FY) 2025 Budget Estimates**

March 2024



**Army**

*Justification Book Volume 3a of 3*

***Research, Development, Test & Evaluation, Army***

**RDT&E – Volume II, Budget Activity 5A**

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Army • Budget Estimates FY 2025 • RDT&E Program

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**RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY**  
**APPROPRIATION LANGUAGE**

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, \$14,073,308,000.00 to remain available for obligation until September 30, 2026.

The FY 2025 Overseas Operational Costs accounted for in the Base budget total \$3,157 thousand.

FY 2023 includes \$7,626 thousand in Overseas Operations Costs (OOC) Actuals. FY 2024 includes \$3,166 thousand in OOC Requested. FY 2025 includes \$3,157 thousand for the OOC Budget Estimate. OOC were financed previously with former Overseas Contingency Operations (OCO) funding.

**COST STATEMENT**

The following Justification Books were prepared at a cost of \$277,115.51 Aircraft (ACFT), Missiles (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 – Tactical & Support Vehicles, Other Procurement Army (OPA) 2 – Communications & Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 5C, Budget Activity 5D, Budget Activity 6, Budget Activity 7, and Budget Activity 8.

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## FY 2025 RDT&E, ARMY PROGRAM ELEMENT DESCRIPTIVE SUMMARIES

### Introduction and Explanation of Contents

1. **General.** The purpose of this document is to provide summary information concerning the Research, Development, Test and Evaluation, Army program. The descriptive summaries are comprised of R-2 (Army RDT&E Budget Item Justification – program element level), R-2A (Army RDT&E Budget Item Justification – project level), R-3 (Army RDT&E Cost Analysis), R-4 (Schedule Profile Detail) and R-5 (Termination Liability Funding for MDAPs) Exhibits, which provide narrative information on all RDT&E program elements and projects through FY 2025.
2. **Relationship of the FY 2025 Budget Submitted to Congress to the FY 2024 Budget Submitted to Congress.** This paragraph provides a list of program elements/projects that are major new starts and terminated programs. Explanations for these changes can be found in the narrative sections of the Program Element R-2A Exhibits.

#### New Start Programs:

<u><i>Budget Activity</i></u>	<u><i>OSDPE / Project</i></u>	<u><i>Project Title</i></u>
02	0602148A / CC3	FVL Radar Technologies
02	0602183A / DK1	Air Vehicle Integrated & Alternative Tech (AVIATe)
02	0602386A / SM1	Scale-Up Microbial Products for Biomanufacturing
02	0602150A / SU1	Counter Small Unmanned Aircraft Sys (C-sUAS) Tech
03	0603464A / CE9	Armaments Advanced Technology
03	0603119A / DI9	Comprehensive Adapt Operational Energy Adv Tech
03	0603043A / DK2	Air Vehicle Improvement & Adv Tech (AVIATe)
03	0603044A / EA7	Enhanced Indirect Fire Adv Tech
03	0603466A / IB1	Integrated Beam Control Systems Demo for C-CM
03	0603116A / LR1	Long Range Sensing Adv Tech
03	0603465A / CK2	High Speed Maneuverable Missile (HSMM) Adv Tech
03	0603042A / DI6	Anti-Tamper Advanced Tech Development
04	0604386A / CQ9	Biotechnology for Materials - Dem/Val
04	0604019A / DJ5	Multi-Domain Artillery Cannon System (MDACS)
04	0305251A / FA8	Cyberspace Operations Forces and Force Support
04	0603639A / FG1	Cannon-Delivered Area Effects Munitions (C-DAEM)
04	0603639A / XT5	30mm Anti-Personnel and Counter UAS

05	0604805A / DH4	CMOSS Mounted Form Factor (CMFF) Radio Cards
05	0604710A / DI5	FALCONS
05	0605244A / DJ3	Joint Reduced Range Rocket
05	0605242A / DJ4	Theater SIGINT System (TSIGS)
05	0605247A / DJ8	Spectrum Situational Awareness System (S2AS)
05	0605054A / DJ9	Guam Defense System - Management
05	0604854A / DH7	Next Generation Howitzer
05	0604818A / DK3	Sensor Computing Environment (SCE)
05	0604713A / EL2	Army Field Feeding Equipment
05	0605038A / EQ7	NBC Reconnaissance Vehicle (NBCRV) Sensor Suite
05	0605051A / ITD	Improved Threat Detection System (ITDS)
05	0604827A / LS2	Lethal Semi-Autonomous Aerial Unmanned Sys-Eng Dev
05	0604802A / MS1	Battalion Mortar System Modernization
05	0605241A / DG5	Future Long Range Assault Aircraft
05	0604805A / DH5	CMOSS Mounted Form Factor (CMFF)Chassis
06	0605805A / 857	DoD Explosives Safety Standards
07	0607101A / DJ7	Radiological Detection System Development

**Program Terminations (including transfers to Procurement and Sustainment):**

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<b><u>Budget Activity</u></b>	<b><u>OSDPE / Project</u></b>	<b><u>Project Title</u></b>
02	0602002A / DC5	Team Ignite
02	0602145A / BI4	Materials Application and Integration Tech
03	0603464A / AG5	Extended Range Artillery Munition Suite Adv Tech
03	0603118A / AY7	Small Arms Fire Control Advanced Technology
03	0603118A / BB8	Soldier Centric Advanced Technology
03	0603462A / BI5	Materials Application and Integration Adv Tech
03	0603462A / BK4	Next Gen Intelligent Fire Control(NG-IFC) Adv Tech

03	0603041A / CM8	Convergence Battlefield Integration
04	0603801A / CK7	FARA Ecosystem
04	0603801A / F12	Future Attack Reconnaissance Aircraft
04	0604120A / EJ2	MOUNTED
04	0604120A / BV4	Area Protection and Alt Nav Technology Development
05	0604802A / EP2	Shoulder-Launched Munitions
05	0604802A / EP4	One-Way Luminescence for Small Caliber Ammo
05	0604802A / FA6	30mm Lethality
05	0604818A / EJ6	TACTICAL ENHANCEMENT
05	0605041A / CY5	CYBER Situational Understanding
05	0605053A / BS9	Robotic Payloads
05	0604808A / CS3	Next Generation Advanced Bomb Suit (NGABS)
06	0605326A / 33B	Soldier-Centered Analyses For Future Force
07	0203735A / 280	RECOV VEH IMPROV PROG
07	0303028A / FG2	Counterintelligence & Human Intel Modernization
07	0607142A / EW9	Aviation Rocket System Product Improvement and Dev

3. **Classification:** This document contains no classified data. Appropriately cleared individuals can obtain further information on Classified/Special Access Programs by contacting the Department of the Army.



Department of the Army  
FY 2025 President's Budget  
Exhibit R-1 FY 2025 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

Mar 2024

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
1	0601102A	Defense Research Sciences	01	U	386,594	296,670	310,191
2	0601103A	University Research Initiatives	01	U	97,598	75,672	78,166
3	0601104A	University and Industry Research Centers	01	U	119,270	108,946	109,726
4	0601121A	Cyber Collaborative Research Alliance	01	U	5,355	5,459	5,525
5	0601601A	Artificial Intelligence and Machine Learning Basic Research	01	U	7,985	10,708	10,309
		<b>Basic Research</b>			<b>616,802</b>	<b>497,455</b>	<b>513,917</b>
6	0602002A	Army Agile Innovation and Development-Applied Research	02	U	127	5,613	8,032
7	0602134A	Counter Improvised-Threat Advanced Studies	02	U	5,966	6,242	6,163
8	0602141A	Lethality Technology	02	U	180,191	85,578	96,094
9	0602142A	Army Applied Research	02	U	27,833	34,572	
10	0602143A	Soldier Lethality Technology	02	U	266,501	104,470	102,236
11	0602144A	Ground Technology	02	U	256,916	60,005	66,707
12	0602145A	Next Generation Combat Vehicle Technology	02	U	273,166	166,500	149,108
13	0602146A	Network C3I Technology	02	U	221,293	81,618	84,576
14	0602147A	Long Range Precision Fires Technology	02	U	113,099	34,683	32,089
15	0602148A	Future Verticle Lift Technology	02	U	103,022	73,844	52,685
16	0602150A	Air and Missile Defense Technology	02	U	94,972	33,301	39,188
17	0602180A	Artificial Intelligence and Machine Learning Technologies	02	U	15,481	24,142	20,319
18	0602181A	All Domain Convergence Applied Research	02	U	26,362	14,297	12,269
19	0602182A	C3I Applied Research	02	U	26,913	30,659	25,839
20	0602183A	Air Platform Applied Research	02	U	40,372	48,163	53,206
21	0602184A	Soldier Applied Research	02	U	15,427	18,986	21,069

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22	0602213A	C3I Applied Cyber	02	U	13,605	22,714	28,656
23	0602386A	Biotechnology for Materials - Applied Research	02	U	21,015	16,736	11,780
25	0602785A	Manpower/Personnel/Training Technology	02	U	19,343	19,969	19,795
26	0602787A	Medical Technology	02	U	79,851	66,266	68,481
999	999999999	Classified Programs	02	U			35,766
	<b>Applied Research</b>				<b>1,801,455</b>	<b>948,358</b>	<b>934,058</b>
27	0603002A	Medical Advanced Technology	03	U	31,398	4,147	3,112
28	0603007A	Manpower, Personnel and Training Advanced Technology	03	U	15,146	16,316	16,716
29	0603025A	Army Agile Innovation and Demonstration	03	U	17,757	23,156	14,608
30	0603040A	Artificial Intelligence and Machine Learning Advanced Technologies	03	U	6,162	13,187	18,263
31	0603041A	All Domain Convergence Advanced Technology	03	U	40,955	33,332	23,722
32	0603042A	C3I Advanced Technology	03	U	12,252	19,225	22,814
33	0603043A	Air Platform Advanced Technology	03	U	13,062	14,165	17,076
34	0603044A	Soldier Advanced Technology	03	U	462	1,214	10,133
35	0603116A	Lethality Advanced Technology	03	U	11,460	20,582	33,969
36	0603117A	Army Advanced Technology Development	03	U	138,774	136,280	
37	0603118A	Soldier Lethality Advanced Technology	03	U	150,020	102,778	94,899
38	0603119A	Ground Advanced Technology	03	U	415,104	40,597	45,880
39	0603134A	Counter Improvised-Threat Simulation	03	U	20,782	21,672	21,398
40	0603386A	Biotechnology for Materials - Advanced Research	03	U	54,778	59,871	36,360
41	0603457A	C3I Cyber Advanced Development	03	U	41,354	28,847	19,616
42	0603461A	High Performance Computing Modernization Program	03	U	293,043	255,772	239,597
43	0603462A	Next Generation Combat Vehicle Advanced Technology	03	U	467,533	217,394	175,198

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44	0603463A	Network C3I Advanced Technology	03	U	174,768	105,549	94,424
45	0603464A	Long Range Precision Fires Advanced Technology	03	U	225,921	153,024	164,943
46	0603465A	Future Vertical Lift Advanced Technology	03	U	265,429	158,795	140,578
47	0603466A	Air and Missile Defense Advanced Technology	03	U	108,758	21,015	28,333
49	0603920A	Humanitarian Demining	03	U	20,674	9,068	9,272
999	999999999	Classified Programs	03	U			155,526
	<b>Advanced Technology Development</b>				<b>2,525,592</b>	<b>1,455,986</b>	<b>1,386,437</b>
51	0603305A	Army Missile Defense Systems Integration	04	U	117,723	12,904	13,031
52	0603308A	Army Space Systems Integration	04	U	30,453	19,120	19,659
53	0603327A	Air and Missile Defense Systems Engineering	04	U	15,000		
54	0603619A	Landmine Warfare and Barrier - Adv Dev	04	U	59,911	47,537	58,617
55	0603639A	Tank and Medium Caliber Ammunition	04	U	49,609	91,323	116,027
56	0603645A	Armored System Modernization - Adv Dev	04	U	133,300	43,026	23,235
57	0603747A	Soldier Support and Survivability	04	U	4,030	3,550	4,059
58	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	U	72,364	65,567	90,265
59	0603774A	Night Vision Systems Advanced Development	04	U	96,819	73,675	64,113
60	0603779A	Environmental Quality Technology - Dem/Val	04	U	75,614	31,720	34,091
61	0603790A	NATO Research and Development	04	U	3,666	4,143	4,184
62	0603801A	Aviation - Adv Dev	04	U	1,113,295	1,502,160	6,591
63	0603804A	Logistics and Engineer Equipment - Adv Dev	04	U	24,287	7,604	12,445
64	0603807A	Medical Systems - Adv Dev	04	U	5,598	1,602	582
65	0603827A	Soldier Systems - Advanced Development	04	U	20,807	27,681	24,284
66	0604017A	Robotics Development	04	U	27,444	3,024	3,039
67	0604019A	Expanded Mission Area Missile (EMAM)	04	U	250,351	97,018	102,589

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68	0604020A	Cross Functional Team (CFT) Advanced Development & Prototyping	04	U	74,189	117,557	63,831
69	0604035A	Low Earth Orbit (LEO) Satellite Capability	04	U	34,213	38,851	21,935
70	0604036A	Multi-Domain Sensing System (MDSS) Adv Dev	04	U	47,915	191,394	239,135
71	0604037A	Tactical Intel Targeting Access Node (TITAN) Adv Dev	04	U	863	10,626	4,317
72	0604100A	Analysis Of Alternatives	04	U	10,270	11,095	11,234
73	0604101A	Small Unmanned Aerial Vehicle (SUAV) (6.4)	04	U	1,373	5,144	1,800
74	0604103A	Electronic Warfare Planning and Management Tool (EWPMT)	04	U		2,260	2,004
75	0604113A	Future Tactical Unmanned Aircraft System (FTUAS)	04	U	134,719	53,143	127,870
76	0604114A	Lower Tier Air Missile Defense (LTAMD) Sensor	04	U	366,637	816,663	149,463
77	0604115A	Technology Maturation Initiatives	04	U	209,220	281,314	252,000
78	0604117A	Maneuver - Short Range Air Defense (M-SHORAD)	04	U	269,186	281,239	315,772
79	0604119A	Army Advanced Component Development & Prototyping	04	U	198,111	204,914	
80	0604120A	Assured Positioning, Navigation and Timing (PNT)	04	U	54,728	40,930	24,168
81	0604121A	Synthetic Training Environment Refinement & Prototyping	04	U	236,396	109,714	136,029
82	0604134A	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	U	14,298	16,426	17,341
83	0604135A	Strategic Mid-Range Fires	04	U	379,535	31,559	
84	0604182A	Hypersonics	04	U	309,068	43,435	
85	0604386A	Biotechnology for Materials - Dem/Val	04	U			20,862
86	0604403A	Future Interceptor	04	U	7,880	8,040	8,058
88	0604531A	Counter - Small Unmanned Aircraft Systems Advanced Development	04	U	36,629	64,242	59,983
90	0604541A	Unified Network Transport	04	U	35,616	40,915	31,837

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91	0305251A	Cyberspace Operations Forces and Force Support	04	U	55,599		2,270
999	999999999	Classified Programs	04	U		19,200	277,181
	<b>Advanced Component Development &amp; Prototypes</b>				<b>4,576,716</b>	<b>4,420,315</b>	<b>2,343,901</b>
92	0604201A	Aircraft Avionics	05	U	3,213	13,673	7,171
93	0604270A	Electronic Warfare Development	05	U	3,987	12,789	35,942
94	0604601A	Infantry Support Weapons	05	U	80,115	64,076	52,586
95	0604604A	Medium Tactical Vehicles	05	U	21,354	28,226	15,088
96	0604611A	JAVELIN	05	U	15,899	7,827	10,405
97	0604622A	Family of Heavy Tactical Vehicles	05	U	51,261	44,197	50,011
98	0604633A	Air Traffic Control	05	U	2,527	1,134	982
99	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05	U	107,975	142,125	92,540
100	0604642A	Light Tactical Wheeled Vehicles	05	U	13,667	53,564	100,257
101	0604645A	Armored Systems Modernization (ASM) - Eng Dev	05	U	60,827	102,201	48,097
102	0604710A	Night Vision Systems - Eng Dev	05	U	89,273	48,720	89,259
103	0604713A	Combat Feeding, Clothing, and Equipment	05	U	1,509	2,223	3,286
104	0604715A	Non-System Training Devices - Eng Dev	05	U	17,910	21,441	28,427
105	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	U	54,244	74,738	69,653
106	0604742A	Constructive Simulation Systems Development	05	U	28,404	30,985	30,097
107	0604746A	Automatic Test Equipment Development	05	U	4,989	13,626	12,927
108	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	U	7,890	8,802	8,914
109	0604798A	Brigade Analysis, Integration and Evaluation	05	U	22,207	20,828	26,352
110	0604802A	Weapons and Munitions - Eng Dev	05	U	284,859	243,851	242,949
111	0604804A	Logistics and Engineer Equipment - Eng Dev	05	U	74,150	37,420	41,829

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112	0604805A	Command, Control, Communications Systems - Eng Dev	05	U	43,533	34,214	92,300
113	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	U	25,035	6,496	7,143
114	0604808A	Landmine Warfare/Barrier - Eng Dev	05	U	36,707	13,581	19,134
115	0604818A	Army Tactical Command & Control Hardware & Software	05	U	128,240	168,574	165,229
116	0604820A	Radar Development	05	U	77,158	94,944	76,090
117	0604822A	General Fund Enterprise Business System (GFEBS)	05	U	10,022	2,965	1,995
118	0604827A	Soldier Systems - Warrior Dem/Val	05	U	19,237	11,333	29,132
119	0604852A	Suite of Survivability Enhancement Systems - EMD	05	U	75,520	79,250	77,864
120	0604854A	Artillery Systems - EMD	05	U	42,261	42,490	50,495
121	0605013A	Information Technology Development	05	U	85,713	104,024	120,076
122	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	U	65,055	102,084	126,354
123	0605030A	Joint Tactical Network Center (JTNC)	05	U	17,274	18,662	20,191
124	0605031A	Joint Tactical Network (JTN)	05	U	29,050	30,328	31,214
125	0605035A	Common Infrared Countermeasures (CIRCM)	05	U	9,602	11,509	11,691
126	0605036A	Combating Weapons of Mass Destruction (CWMD)	05	U		1,050	7,846
127	0605038A	Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) Sensor Suite	05	U			7,886
128	0605041A	Defensive CYBER Tool Development	05	U	33,029	27,714	4,176
129	0605042A	Tactical Network Radio Systems (Low-Tier)	05	U	4,265	4,318	4,288
130	0605047A	Contract Writing System	05	U	13,220	16,355	9,276
131	0605049A	Missile Warning System Modernization (MWSM)	05	U		27,571	
132	0605051A	Aircraft Survivability Development	05	U	18,425	24,900	38,225
133	0605052A	Indirect Fire Protection Capability Inc 2 - Block 1	05	U	126,308	196,248	167,912
134	0605053A	Ground Robotics	05	U	25,131	35,319	28,378

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135	0605054A	Emerging Technology Initiatives	05	U	212,750	201,274	164,734
136	0605143A	Biometrics Enabling Capability (BEC)	05	U	9,186		
137	0605144A	Next Generation Load Device - Medium	05	U	24,094	36,970	2,931
138	0605148A	Tactical Intel Targeting Access Node (TITAN) EMD	05	U	103,987	132,136	157,036
139	0605203A	Army System Development & Demonstration	05	U	143,616	81,657	
140	0605205A	Small Unmanned Aerial Vehicle (SUAV) (6.5)	05	U	6,292	31,284	37,876
141	0605206A	CI and HUMINT Equipment Program-Army (CIHEP-A)	05	U		2,170	1,296
142	0605216A	Joint Targeting Integrated Command and Coordination Suite (JTIC2S)	05	U		9,290	28,553
143	0605224A	Multi-Domain Intelligence	05	U	6,008	41,003	18,913
144	0605231A	Precision Strike Missile (PrSM)	05	U	250,034	272,786	184,046
145	0605232A	Hypersonics EMD	05	U	533,520	900,920	538,017
146	0605233A	Accessions Information Environment (AIE)	05	U	9,720	27,361	32,265
147	0605235A	Strategic Mid-Range Capability	05	U	4,833	348,855	182,823
148	0605236A	Integrated Tactical Communications	05	U	11,993	22,901	23,363
149	0605241A	Future Long Range Assault Aircraft Development	05	U			1,253,637
150	0605242A	Theater SIGINT System (TSIGS)	05	U			6,660
151	0605244A	Joint Reduced Range Rocket (JR3)	05	U			13,565
152	0605247A	Spectrum Situational Awareness System (S2AS)	05	U			9,330
153	0605450A	Joint Air-to-Ground Missile (JAGM)	05	U	2,280	3,014	3,030
154	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	U	245,791	284,095	602,045
155	0605531A	Counter - Small Unmanned Aircraft Systems Sys Dev & Demonstration	05	U	11,548	36,016	59,563
157	0605625A	Manned Ground Vehicle	05	U	519,131	996,653	504,841
158	0605766A	National Capabilities Integration (MIP)	05	U	16,790	15,129	16,565

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Exhibit R-1 FY 2025 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

Mar 2024

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments <sup>+</sup>	FY 2025 Request
159	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Phase (EMD)	05	U	9,033	27,243	27,013
160	0605830A	Aviation Ground Support Equipment	05	U	2,851	1,167	979
161	0303032A	TROJAN - RH12	05	U	3,761	3,879	3,930
162	0303767A	AMBIT - Pre-Auctioned SRF	05	U	21,730		
163	0304270A	Electronic Warfare Development	05	U	97,616	137,186	131,096
999	999999999	Classified Programs	05	U			83,136
		<b>System Development &amp; Demonstration</b>			<b>4,077,609</b>	<b>5,639,364</b>	<b>6,150,910</b>
164	0604256A	Threat Simulator Development	06	U	138,264	38,492	71,298
165	0604258A	Target Systems Development	06	U	53,434	11,873	15,788
166	0604759A	Major T&E Investment	06	U	144,173	76,167	78,613
167	0605103A	Rand Arroyo Center	06	U	30,800	37,078	38,122
168	0605301A	Army Kwajalein Atoll	06	U	297,859	314,872	321,755
169	0605326A	Concepts Experimentation Program	06	U	83,668	95,551	86,645
170	0605502A	Small Business Innovative Research	06	U	382,638		
171	0605601A	Army Test Ranges and Facilities	06	U	414,662	439,118	461,085
172	0605602A	Army Technical Test Instrumentation and Targets	06	U	72,760	42,220	75,591
173	0605604A	Survivability/Lethality Analysis	06	U	35,750	37,518	37,604
174	0605606A	Aircraft Certification	06	U	4,777	2,718	2,201
175	0605702A	Meteorological Support to RDT&E Activities	06	U	6,820		
176	0605706A	Materiel Systems Analysis	06	U	22,004	26,902	27,420
177	0605709A	Exploitation of Foreign Items	06	U	6,186	7,805	6,245
178	0605712A	Support of Operational Testing	06	U	69,879	75,133	76,088
179	0605716A	Army Evaluation Center	06	U	67,058	71,118	73,220



Department of the Army  
FY 2025 President's Budget  
Exhibit R-1 FY 2025 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

Mar 2024

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
180	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	U	5,874	11,204	11,257
181	0605801A	Programwide Activities	06	U	88,780	93,895	91,895
182	0605803A	Technical Information Activities	06	U	36,821	31,327	32,385
183	0605805A	Munitions Standardization, Effectiveness and Safety	06	U	59,088	50,409	50,766
184	0605857A	Environmental Quality Technology Mgmt Support	06	U	1,842	1,629	1,659
185	0605898A	Army Direct Report Headquarters - R&D - MHA	06	U	53,003	55,843	59,727
186	0606002A	Ronald Reagan Ballistic Missile Defense Test Site	06	U	85,873	91,340	73,400
187	0606003A	CounterIntel and Human Intel Modernization	06	U	1,424	6,348	4,574
188	0606942A	Assessments and Evaluations Cyber Vulnerabilities	06	U	5,816	6,025	10,105
189	0909999A	Financing for Cancelled Account Adjustments	06	U	135		
	<b>Management Support</b>				<b>2,169,388</b>	<b>1,624,585</b>	<b>1,707,443</b>
190	0603778A	MLRS Product Improvement Program	07	U	17,790	14,465	14,188
191	0605024A	Anti-Tamper Technology Support	07	U	9,028	7,472	7,489
192	0607101A	Combating Weapons of Mass Destruction (CWMD) Product Improvement	07	U			271
193	0607131A	Weapons and Munitions Product Improvement Programs	07	U	54,216	8,425	9,363
194	0607136A	Blackhawk Product Improvement Program	07	U		1,507	25,000
195	0607137A	Chinook Product Improvement Program	07	U	65,596	9,265	4,816
196	0607139A	Improved Turbine Engine Program	07	U	219,713	201,247	67,029
197	0607142A	Aviation Rocket System Product Improvement and Development	07	U	10,899	3,014	
198	0607143A	Unmanned Aircraft System Universal Products	07	U	10,493	25,393	24,539
199	0607145A	Apache Future Development	07	U	26,607	10,547	8,243
200	0607148A	AN/TPQ-53 Counterfire Target Acquisition Radar System	07	U	59,312	54,167	53,652
201	0607150A	Intel Cyber Development	07	U	13,343	4,345	9,753

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Department of the Army  
FY 2025 President's Budget  
Exhibit R-1 FY 2025 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

Mar 2024

## Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
202	0607312A	Army Operational Systems Development	07	U	26,131	19,000	
203	0607313A	Electronic Warfare Development	07	U	11,417	6,389	5,559
204	0607315A	Enduring Turbine Engines and Power Systems	07	U		2,411	2,620
206	0607665A	Family of Biometrics	07	U	1,073	797	590
207	0607865A	Patriot Product Improvement	07	U	146,753	177,197	168,458
208	0203728A	Joint Automated Deep Operation Coordination System (JADOCS)	07	U	18,606	42,177	27,582
209	0203735A	Combat Vehicle Improvement Programs	07	U	187,377	146,635	272,926
210	0203743A	155mm Self-Propelled Howitzer Improvements	07	U	112,257	122,902	55,205
211	0203752A	Aircraft Engine Component Improvement Program	07	U	148	146	142
212	0203758A	Digitization	07	U		1,515	1,562
213	0203801A	Missile/Air Defense Product Improvement Program	07	U	2,996	4,520	1,511
214	0203802A	Other Missile Product Improvement Programs	07	U	8,698	10,044	23,708
215	0205412A	Environmental Quality Technology - Operational System Dev	07	U	764	281	269
216	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07	U	19,443	75,952	20,590
217	0208053A	Joint Tactical Ground System	07	U	8,813	203	
220	0303028A	Security and Intelligence Activities	07	U		301	
221	0303140A	Information Systems Security Program	07	U	15,554	15,323	15,733
222	0303141A	Global Combat Support System	07	U	21,775	13,082	2,566
223	0303142A	SATCOM Ground Environment (SPACE)	07	U	14,551	26,838	26,643
226	0305179A	Integrated Broadcast Service (IBS)	07	U	9,426	9,456	5,701
227	0305204A	Tactical Unmanned Aerial Vehicles	07	U	4,500		
228	0305206A	Airborne Reconnaissance Systems	07	U	6,402		
229	0305219A	MQ-1 Gray Eagle UAV	07	U		6,629	6,681

Department of the Army  
FY 2025 President's Budget  
Exhibit R-1 FY 2025 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

Mar 2024

Appropriation: 2040A Research, Development, Test and Evaluation, Army

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
230	0708045A	End Item Industrial Preparedness Activities	07	U	128,617	75,317	67,187
999	999999999	Classified Programs	07	U	6,664	8,786	32,518
	<b>Operational Systems Development</b>				<b>1,238,962</b>	<b>1,105,748</b>	<b>962,094</b>
231	0608041A	Defensive CYBER - Software Prototype Development	08	U	92,460	83,570	74,548
	<b>Software And Digital Technology Pilot Programs</b>				<b>92,460</b>	<b>83,570</b>	<b>74,548</b>
232	0901560A	Continuing Resolution Programs	20	U		1,366,740	
	<b>Undistributed</b>					<b>1,366,740</b>	
<b>Total Research, Development, Test and Evaluation, Army</b>					<b>17,098,984</b>	<b>17,142,121</b>	<b>14,073,308</b>

\*A full-year FY 2024 appropriation for this account was not enacted at the time the budget was prepared; account is operating under the Further Additional Continuing Appropriations and Other Extensions Act, 2024 (Public Law 118-35). The amounts included for FY 2024 reflect the annualized level provided by the continuing resolution.

\*FY 2023 includes \$7,626 thousand in Overseas Operations Costs (OOC) Actuals. FY 2024 includes \$3,166 thousand in OOC Requested. FY 2025 includes \$3,157 thousand for the OOC Budget Estimate. OOC were financed previously with former Overseas Contingency Operations (OCO) funding.



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Program Element Table of Contents (by Budget Activity then Line Item Number)

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93	05	0604270A	Electronic Warfare Development.....	Volume 3a - 15
94	05	0604601A	Infantry Support Weapons.....	Volume 3a - 42
95	05	0604604A	Medium Tactical Vehicles.....	Volume 3a - 123
96	05	0604611A	JAVELIN.....	Volume 3a - 131
97	05	0604622A	Family of Heavy Tactical Vehicles.....	Volume 3a - 140
98	05	0604633A	Air Traffic Control.....	Volume 3a - 170
99	05	0604641A	Tactical Unmanned Ground Vehicle (TUGV).....	Volume 3a - 178
100	05	0604642A	Light Tactical Wheeled Vehicles.....	Volume 3a - 196
101	05	0604645A	Armored Systems Modernization (ASM) - Eng Dev.....	Volume 3a - 212
102	05	0604710A	Night Vision Systems - Eng Dev.....	Volume 3a - 228
103	05	0604713A	Combat Feeding, Clothing, and Equipment.....	Volume 3a - 261
104	05	0604715A	Non-System Training Devices - Eng Dev.....	Volume 3a - 277
105	05	0604741A	Air Defense Command, Control and Intelligence - Eng Dev.....	Volume 3a - 300
106	05	0604742A	Constructive Simulation Systems Development.....	Volume 3a - 328
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Air Traffic Control	0604633A	98	05.....	Volume 3a - 170
Aircraft Avionics	0604201A	92	05.....	Volume 3a - 1
Armored Systems Modernization (ASM) - Eng Dev	0604645A	101	05.....	Volume 3a - 212
Automatic Test Equipment Development	0604746A	107	05.....	Volume 3a - 343
Combat Feeding, Clothing, and Equipment	0604713A	103	05.....	Volume 3a - 261
Constructive Simulation Systems Development	0604742A	106	05.....	Volume 3a - 328
Electronic Warfare Development	0604270A	93	05.....	Volume 3a - 15
Family of Heavy Tactical Vehicles	0604622A	97	05.....	Volume 3a - 140
Infantry Support Weapons	0604601A	94	05.....	Volume 3a - 42
JAVELIN	0604611A	96	05.....	Volume 3a - 131
Light Tactical Wheeled Vehicles	0604642A	100	05.....	Volume 3a - 196
Medium Tactical Vehicles	0604604A	95	05.....	Volume 3a - 123
Night Vision Systems - Eng Dev	0604710A	102	05.....	Volume 3a - 228
Non-System Training Devices - Eng Dev	0604715A	104	05.....	Volume 3a - 277
Tactical Unmanned Ground Vehicle (TUGV)	0604641A	99	05.....	Volume 3a - 178

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					PE 0604201A / Aircraft Avionics							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	3.213	13.673	7.171	-	7.171	2.838	2.867	2.899	2.929	Continuing	Continuing
C97: ACFT Avionics	-	2.195	1.271	5.010	-	5.010	-	-	-	-	0.000	8.476
VU3: Networking And Mission Planning	-	1.018	12.402	2.161	-	2.161	2.838	2.867	2.899	2.929	Continuing	Continuing

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

A portion of this funding line is directly aligned to the Assured Positioning, Navigation, & Timing (APNT) Army Modernization Priority. Tasks in this Program Element support research, development, and test efforts in the Engineering and Manufacturing Development phases of these systems. Alternate capabilities (non-GPS) and/or complimentary PNT solutions will be investigated, studied, evaluated and developed as standalone or blended navigation functions.

The Enhanced Aviation Global Air Traffic Management (GATM) Localizer Performance with Vertical Guidance (LPV) Embedded Global Positioning System (GPS) Inertial Navigation System (EGI) (EAGLE-M) development program upgrades existing EGI hardware by incorporating M-Code to provide Assured Positioning, Navigation and Timing (A-PNT) capability in a GPS degraded environment.

The Alternate Position, Navigation, and Time (ALT-PNT) enables precise navigation and timing during Multidomain Operations (MDO) operations in the absence of GPS by leveraging ALT-NAV and Vision Based Navigation (VBN) efforts and providing a secure and reliable fused PNT solution utilizing new and existing high-grade sensors available on manned aviation aircraft. ALT-PNT utilizes Modular Open System Architecture (MOSA) standards allowing rapid and affordable platform integration, adopting of new technologies, and adjustment to changes in adversarial capability.

The AMCS is an obsolescence replacement and capability upgrade for the current Army Improved Data Modem (IDM) 401. It will provide the ability to rapidly apply technology upgrades utilizing a Modular Open Systems Approach (MOSA) with a nonproprietary Open Systems Architecture (OSA) to keep pace with evolving threats in the Multi-Domain Battlefield. The AMCS enables the hosting of applications to communicate, navigate, sense, and deploy weapon systems across the Joint Force in support of Army 2030 and future aviation operations. It supports the future Common Digital Backbone for the enduring and future Army Aviation fleets with the ability for further growth to host flight critical capabilities.

The Improved Data Modem (IDM) is the common solution for digitizing Army Aviation and is fielded on every modernized, rotary-wing Army aircraft. IDM provides digital air-to-air and air-to-ground connectivity and transmission of air-to-air target data between IDM equipped aircraft using legacy radio and crypto equipment. IDM also serves as interface between aircraft mission computers, data capable radios, and Tactical Internet (TI). Manages Situational Awareness (SA) data, processes command and control messages, and incorporates protocols for sending and receiving mission command digital messages on the TI, Private Net, and Longbow Net using the protocols Air Force Application Program Development Net (AFAPD) and Variable Messaging Format (VMF).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				
The Aviation Mission Planning System (AMPS) is a system used to conduct pre-mission and aircraft performance planning. It receives data from multiple sources and provides that data digitally to the aircraft to support aviation missions. AMPS is used for automated mission planning, risk assessment, and transfer of mission data to aviation platforms within an Aviation unit. This includes route generation, performance planning, communications planning, terrain analysis, data transfer, and mission rehearsal. These efforts include development and testing of a new underlying architecture to support the move of Army Aviation Mission Planning from the current structure to one that supports synchronization both vertically and horizontally between Aviation and Ground forces. It will allow aircrews to continually plan and update route, threat, and performance data throughout all phases of an Aviation mission. Development of a mobile aircraft performance planning/weight and balance calculator is currently underway and will be the first migration of AMPS capabilities to a mobile hardware agnostic environment.						
The AN/ARC-220 High Frequency (HF) Radio is a US Army rotary wing high frequency solution which is operational on over 2,400 Army helicopters (primarily CH-47, UH-60, and AH-64). Key capabilities are voice and data, Automatic Link Establishment, text messaging, position reporting, and Selective Calling. It is also Voice Interoperable with standard ground HF systems in use today. Efforts include development of an Airborne Radio Control Manager (ARCM) driver to enhance the modernization of the AN/ARC-220 HF Radio.						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		3.335	13.673	2.212	-	2.212
Current President's Budget		3.213	13.673	7.171	-	7.171
Total Adjustments		-0.122	0.000	4.959	-	4.959
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.122	-			
• Adjustments to Budget Years		-	-	4.959	-	4.959
Change Summary Explanation						
The increase of FY25 funding reflects the increased development of the Alternate Position, Navigation, and Timing (ALT-PNT) capabilities that will enable precise navigation and timing during Multidomain Operations in the absence of Global Positioning Systems.						

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) C97 / ACFT Avionics			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
C97: ACFT Avionics	-	2.195	1.271	5.010	-	5.010	-	-	-	-	0.000	8.476
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Fiscal Year (FY) 2025 budget request funds the development of Aircraft Avionics systems required to integrate the battlefield horizontally and vertically and the integration of those systems into Army aircraft. Tasks in this Program Element support research, development, and test efforts in the Engineering and Manufacturing Development phases of these systems. Alternate capabilities (non-GPS) and/or complimentary PNT solutions will be investigated, studied, evaluated, and developed as standalone or blended navigation functions.

The Enhanced Aviation Global Air Traffic Management (GATM) Localizer Performance with Vertical Guidance (LPV) Embedded Global Positioning System (GPS) Inertial Navigation System (EGI) (EAGLE-M) development program upgrades existing EGI hardware by incorporating M-Code to provide Assured Positioning, Navigation and Timing (A-PNT) capability in a GPS degraded environment.

The Alternate Position, Navigation, and Time (ALT-PNT) enables precise navigation and timing during Multidomain Operations (MDO) operations in the absence of GPS by leveraging ALT-NAV and Vision Based Navigation (VBN) efforts and providing a secure and reliable fused PNT solution utilizing new and existing high-grade sensors available on manned aviation aircraft. ALT-PNT utilizes Modular Open System Architecture (MOSA) standards allowing rapid and affordable platform integration, adopting of new technologies, and adjustment to changes in adversarial capability.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> EAGLE Navigation System A-PNT Integration	2.195	1.271	5.010
<b>Description:</b> The Enhanced Aviation Global Air Traffic Management (GATM) Localizer Performance with Vertical Guidance (LPV) Embedded Global Positioning System (GPS) Inertial Navigation System (EGI) (EAGLE-M) development program upgrades existing EGI hardware by incorporating M-Code to provide Assured Positioning, Navigation and Timing (A-PNT) capability in a GPS degraded environment.			
<b>FY 2024 Plans:</b> Conclude EAGLE-M full airworthiness testing/qualification and begin Alternate Position, Navigation, and Time (ALT-PNT) technological maturation development efforts.			
<b>FY 2025 Plans:</b> Continuing the development of ALT-PNT capabilities to enable precise navigation and timing during MDO operations in the absence of GPS by leveraging ALT-NAV and VBN efforts and providing a secure and reliable fused PNT solution utilizing new			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604201A / Aircraft Avionics	<b>Project (Number/Name)</b> C97 / ACFT Avionics	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
and existing high-grade sensors available on manned aviation aircraft. ALT-PNT utilizes MOSA standards allowing rapid and affordable platform integration, adopting of new technologies, and adjustment to changes in adversarial capability.			
<b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b> FY24 to FY25 increase reflects the initial ALT-PNT and completion of EAGLE-M development in FY24 to an incremental ALT-PNT development program beginning in FY25.			
<b>Accomplishments/Planned Programs Subtotals</b>	2.195	1.271	5.010

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• AA0723: Comms, Nav Surveillance	68.815	74.912	61.362	-	61.362	36.845	36.856	36.779	37.147	Continuing	Continuing
• AA0704: GATM - Rotary Wing Aircraft	14.683	8.924	4.842	-	4.842	4.883	-	-	-	Continuing	Continuing
• A01006: Aviation ASSURED PNT	66.294	67.383	69.161	-	69.161	58.689	58.709	58.587	59.174	Continuing	Continuing
• C97: ACFT Avionics	2.195	1.271	5.010	-	5.010	-	-	-	-	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

This project is comprised of multiple systems supporting aircraft avionics. While the detailed acquisition strategy varies from program to program, the general strategy is for each individual program to complete the development and testing efforts in coordination with the aircraft platforms on integration issues, use the various contracts of the aircraft platforms original equipment manufacturers on integration efforts, and utilize the DEVCOM Aviation & Missile Center (AvMC) Technology Development Directorate (TDD) for software development. This requires the use of various contract methods and types to accomplish the aircraft avionics development efforts. All required acquisition program documentation is prepared.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army													Date: March 2024		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) C97 / ACFT Avionics					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
EAGLE M-Code/ALT PNT	SS/CPFF	Honeywell International : Clearwater, FL	7.382	2.195	Jan 2023	1.271	Jan 2024	5.010	Jan 2025	-		5.010	0.000	15.858	-
Subtotal			7.382	2.195		1.271		5.010		-		5.010	0.000	15.858	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			7.382	2.195		1.271		5.010		-		5.010	0.000	15.858	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024																
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics								Project (Number/Name) C97 / ACFT Avionics														
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029							
	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				
EAGLE-M Development																																
ALT-PNT																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics	Project (Number/Name) C97 / ACFT Avionics

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AN/ARC-220 High Frequency Radio Modernization	3	2021	3	2022
Airborne Radio Control Manager Driver (AN/ARC-220 HF Radio)	3	2021	3	2022
EAGLE-M Development	1	2023	3	2024
ALT-PNT	4	2024	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) VU3 / Networking And Mission Planning			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
VU3: Networking And Mission Planning	-	1.018	12.402	2.161	-	2.161	2.838	2.867	2.899	2.929	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Fiscal Year (FY) 2025 budget request funds the development of Networking and Mission Planning systems required to horizontally and vertically integrate the battlefield and the integration of those systems into Army aircraft. Tasks in this Project support research, development, and test efforts in the Engineering and Manufacturing Development phases of these systems.

The AMCS is an obsolescence replacement and capability upgrade for the current Army Improved Data Modem (IDM) 401. It will provide the ability to rapidly apply technology upgrades utilizing a Modular Open Systems Approach (MOSA) with a nonproprietary Open Systems Architecture (OSA) to keep pace with evolving threats in the Multi-Domain Battlefield. The AMCS enables the hosting of applications to communicate, navigate, sense, and deploy weapon systems across the Joint Force in support of Army 2030 and future aviation operations. It supports the future Common Digital Backbone for the enduring and future Army Aviation fleets with the ability for further growth to host flight critical capabilities. The FY 2025 budget of \$2.161 million funds cybersecurity and airworthiness support for the AMCS.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Aviation Mission Common Server (AMCS)	1.018	12.402	2.161
<b>Description:</b> The AMCS is an obsolescence replacement and capability upgrade for the current Army Improved Data Modem (IDM) 401. It will provide the ability to rapidly apply technology upgrades utilizing a Modular Open Systems Approach (MOSA) with a nonproprietary Open Systems Architecture (OSA) to keep pace with evolving threats in the Multi-Domain Battlefield. The AMCS enables the hosting of applications to communicate, navigate, sense, and deploy weapon systems across the Joint Force in support of Army 2030 and future aviation operations. It supports the future Common Digital Backbone for the enduring and future Army Aviation fleets with the ability for further growth to host flight critical capabilities.			
<b>FY 2024 Plans:</b> Perform modification work order, testing and airworthiness development to support fielding of the Aviation Mission Common Server (AMCS). Perform and support software functionality integration and testing activities required to support integration into the AMCS hardware and initial platform integration lab and Safety of Flight testing for platform airworthiness qualification.			
<b>FY 2025 Plans:</b> Perform airworthiness development and cybersecurity certification to support fielding of the Aviation Mission Common Server (AMCS).			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) VU3 / Networking And Mission Planning				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
FY 2025 funding decreased due to the completion of Aviation Mission Common Server development and testing activities. The program transitions to cyber certification efforts in FY25 in support of fielding.												
Accomplishments/Planned Programs Subtotals										1.018	12.402	2.161
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• AA0712: Network And Mission Plan	42.450	32.418	49.862	-	49.862	66.267	73.672	75.313	76.068	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
The AMCS Acquisition Strategy for development and production leverages a competitively awarded Other Transaction agreement for a Hardware and Software Open Systems Architecture (OSA) Family of Systems Line Replaceable Unites (LRUs) which align with DoD's Modular Open System Approach (MOSA) and PEO Aviation's Aviation Mission Computing Environment (AMCE).												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) VU3 / Networking And Mission Planning					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Support (AMCS)	Various	Combat Communications Development Command, Aviation & Missile Center : Redstone Arsenal, AL	-	-		0.493	Dec 2023	0.445	Dec 2024	-		0.445	Continuing	Continuing	-
Subtotal			-	-		0.493		0.445		-		0.445	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
AMCS Hardware and Software Prototype Development OTA	C/FFP	Mercury Systems : Mesa, AZ	-	0.171	Feb 2023	-		-		-		-	0.000	0.171	-
Subtotal			-	0.171		-		-		-		-	0.000	0.171	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Airworthiness Support (AMCS Documentation)	C/Various	Combat Communications Development Command : Redstone Arsenal, AL	-	-		0.825	Feb 2024	0.297	Feb 2025	-		0.297	Continuing	Continuing	-
Hardware and Software Development Support for the Aviation Mission Common Server (AMCS)	C/Various	Combat Communications Development Command, Aviation & Missile Center, Redstone Test Center and Platform	0.816	0.847	Mar 2023	-		-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) VU3 / Networking And Mission Planning					
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
		SIL : Redstone Arsenal, AL													
AMCS Cybersecurity	C/Various	Combat Communications Development Command : Redstone Arsenal, AL	-	-		0.648	Aug 2024	0.190	Aug 2025	-		0.190	Continuing	Continuing	-
AMCS SW Architecture Updates	C/FFP	To Be Determined : RSA	-	-		-		0.623	Apr 2025	-		0.623	Continuing	Continuing	-
AMCS Enduring Fleet SIL Assets (RSA)	C/Various	Combat Communications Development Command, Aviation & Missile Center, Redstone Test Center and Platform SIL : Redstone Arsenal, AL	-	-		0.828	Apr 2024	-		-		-	Continuing	Continuing	-
Engineering Services	C/Various	Combat Communications Development Command, Aviation & Missile Center : Redstone Arsenal, AL	-	-		3.919	Feb 2024	0.606	Oct 2024	-		0.606	Continuing	Continuing	-
Subtotal			0.816	0.847		6.220		1.716		-		1.716	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Systems Level Integration (Step 5 SW integration & testing)	C/Various	Redstone Test Center : Redstone Arsenal, AL	-	-		0.871	Jul 2024	-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics				Project (Number/Name) VU3 / Networking And Mission Planning					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
AMCS Aircraft Integration	C/Various	AIC, Platform System Interoperability Lab, Utility, Apache, Cargo or OEM SILs : Redstone Arsenal, AL	-	-		2.539	Feb 2024	-		-		-	Continuing	Continuing	-
AMCS Enduring Fleet HW Aircraft Integration/testing	C/Various	UH-60M : Redstone Arsenal, AL	-	-		2.279	Feb 2024	-		-		-	Continuing	Continuing	-
Subtotal			-	-		5.689		-		-		-	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.816	1.018		12.402		2.161		-		2.161	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604201A / Aircraft Avionics		Project (Number/Name) VU3 / Networking And Mission Planning

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
AMCS OTA Contract Award Phase 3																												
Awarded Phase 3 OTA																												
AMCS Critical Design Review (CDR)																												
AMCS OTA Contract Award Phase 4																												
Awarded Phase 4 OTA																												
AMCS Deemonstrations																												
AMCS OTA Contract Award Phase 5																												
AMCS Production Decision																												
AMCS Production Contract Award																												
AMCS Production Deliveries																												

**Note**  
The Aviation Mission Common Server Modular Capabilities Demonstration Other Transaction Authority awarded 24 June 20. The schedule depicts the OTA's 5 Individual phases and their associated award and effort duration.

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army

Date: March 2024

Appropriation/Budget Activity

2040 / 5

R-1 Program Element (Number/Name)

PE 0604201A / Aircraft Avionics

Project (Number/Name)

VU3 / Networking And Mission Planning

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Develop IDM Software	4	2018	4	2018
AMCS Airworthiness Studies and Assessments	2	2019	2	2019
AMCS OTA Prototype Contract Award Phase 1	3	2020	3	2020
AMCS Alternative Systems Review (ASR)	4	2020	1	2021
AMCS OTA Prototype Contract Award Phase 2	1	2021	1	2021
AMCS preliminary Design Review (PDR)	1	2021	2	2021
AMCS OTA Contract Award Phase 3	3	2021	1	2025
AMCS Critical Design Review (CDR)	1	2024	1	2024
AMCS OTA Contract Award Phase 4	4	2022	3	2024
AMCS Deemonstrations	2	2024	2	2024
AMCS OTA Contract Award Phase 5	2	2024	1	2025
AMCS Production Decision	1	2025	1	2025
AMCS Production Contract Award	1	2026	1	2026
AMCS Production Deliveries	1	2027	2	2036

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

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / Electronic Warfare Development							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	3.987	12.789	35.942	-	35.942	20.909	14.502	13.683	13.820	0.000	115.632
CR8: Army Reprogramming Analysis Team (ARAT)	-	-	-	5.718	-	5.718	5.792	5.853	5.920	5.979	0.000	29.262
DX5: Electronic Warfare And Management Tool	-	1.887	5.022	12.271	-	12.271	5.762	5.823	4.918	4.967	0.000	40.650
DX6: Multi-Function Electronic Warfare (MFEW)	-	-	5.596	16.378	-	16.378	7.778	1.232	1.233	1.245	0.000	33.462
VS6: Integrated Electronic Warfare Systems	-	2.100	2.171	1.575	-	1.575	1.577	1.594	1.612	1.629	0.000	12.258

## **Note**

Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS) to 0604270A (EW Development), Project CR8 (Army Reprogramming Analysis Team (ARAT) in FY25.

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

A portion of this funding line is a key enabler of the Army Modernization Priorities in support of Electronic Warfare Planning and Management Tool (EWPMT) program.

This Program Element (PE) encompasses engineering and manufacturing development for tactical Electronic Warfare (EW). The Integrated Electronic Warfare System (IEWS) is a capability set that integrates electronic attack, protect and support functions to dramatically improve the ability to seize, retain, and exploit an advantage within the electromagnetic spectrum (EMS). It is based on a modular, scalable and open architecture to allow Army Brigade Combat Team (BCT) and Joint Force Commander's to tailor capability responses against a variety of EW threats/scenarios.

The IEWS capability set is structured along four program lines of effort: 1) Project DX5 Electronic Warfare Planning and Management Tool (EWPMT), 2) Project DX6 Multi-Function EW (MFEW), 3) Project VS6 Counter Radio-Controlled Improvised Explosive Devices (RCIED) Electronic Warfare (CREW) which provides current defensive electronic attack capability.

Project DX5 - This funding line is in support of the Electronic Warfare Planning and Management Tool (EWPMT) which is a key enabler of Army Modernization Priorities, APNT CFT and Network CFT. EWPMT is the Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS). It will provide the ability to control & manage Electronic Warfare (EW) assets in order to execute offensive and defensive Electronic Attack, EW targeting, and synchronize EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO). As a Commander's tool, EWPMT is predominantly utilized by the Cyber Electromagnetic Activities (CEMA) cell for mission planning, access to national and strategic sensors, data repositories, as well as enabling the synchronization of EW, Signals Intelligence (SIGINT) operations, and Cyber Domains.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604270A / Electronic Warfare Development				
<p>Project DX6 - MFEW-AL is the Army's only program providing tactical Commanders with deep look, organic, airborne, offensive electronic warfare (EW), empowering Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.</p> <p>Project VS6 - Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW) provides protection of ground forces operating in vehicle convoys, single vehicles and fixed locations in operational theaters which enables freedom of movement across the depth and breadth of the operational environment. Current CREW systems are programmable with techniques to mitigate emerging threats. In order to keep pace with the threat evolution, development efforts will provide fielded CREW systems as well as other Electronic Warfare (EW) systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, as well as hardware and software development and integration in order to pace the threat.</p> <p>Project CR8 - Army Reprogramming Analysis Team (ARAT) supports the tactical Commander by providing timely rapid reprogramming of mission software and information dissemination for Army supported, Joint and allied services. ARAT supports integrated reprogramming of target acquisition, target engagement, vehicle survivability, and Aircraft Survivability Equipment (ASE). ARAT rapid-reprogramming infrastructure supports tactical requirements for deployed aircraft and ground-based (e.g., CREW) survivability systems. ARAT identifies and analyzes threat signature changes which affect EW systems; determines the impact of observed signature changes; develops new mission software to adapt the system to the changes; disseminates the mission software; and provides methods to upload the new mission software into the affected EW systems. Each element within the ARAT infrastructure plays a specific role within the program's rapid reprogramming process, providing the Soldier with the capability to install mission and target identification software at the lowest possible level, thus maximizing flexibility for tactical commanders.</p>						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		4.140	12.789	13.832	-	13.832
Current President's Budget		3.987	12.789	35.942	-	35.942
Total Adjustments		-0.153	0.000	22.110	-	22.110
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-0.001	-			
• SBIR/STTR Transfer		-0.152	-			
• Adjustments to Budget Years		-	-	22.110	-	22.110



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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604270A / Electronic Warfare Development	
<div>Change Summary Explanation</div> <div>Fiscal Year (FY) 2025 Total funding increase for 0604270A is \$22.110 million to support engineering and logistics development, capability maturation, performance technology improvements, system hardening, software architecture modernization, and sensor integration.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) CR8 / <i>Army Reprogramming Analysis Team (ARAT)</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CR8: <i>Army Reprogramming Analysis Team (ARAT)</i>	-	-	-	5.718	-	5.718	5.792	5.853	5.920	5.979	0.000	29.262
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS) to 0604270A (EW Development), Project CR8 (Army Reprogramming Analysis Team (ARAT) in FY25.

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

Current military operations are conducted in a rapidly changing threat environment, where Improvised Explosive Devices (IEDs), Infra Red (IR) man-portable air defense systems (MANPADS) seekers, radar guided surface-to-air-missiles (SAM), laser guided weapons, anti-helicopter mines, and targeting sensors are proliferating and evolving. Integrated solutions are required to counter increasingly sophisticated EW threats. The ARAT reprogramming infrastructure supports the tactical Commander by providing timely rapid reprogramming of mission software and information dissemination for Army supported, Joint and allied services. ARAT supports integrated reprogramming of target acquisition, target engagement, vehicle survivability, and Aircraft Survivability Equipment (ASE). ARAT rapid-reprogramming infrastructure supports tactical requirements for deployed aircraft and ground-based (e.g. Counter Radio-Controlled Improvised Explosive Device (CREW)) survivability systems. ARAT identifies and analyzes threat signature changes which affect EW systems; determines the impact of observed signature changes; develops new mission software to adapt the system to the changes; disseminates the mission software; and provides methods to upload the new mission software into the affected EW systems. Each element within the ARAT infrastructure plays a specific role within the program's rapid reprogramming process, providing the Soldier with the capability to install mission and target identification software at the lowest possible level, thus maximizing flexibility for tactical commanders. ARAT participates in the operational and developmental test design of Army EW systems, and supports Joint Service Reprogramming Exercises in all theaters. ARAT Research and Development enables continuous development of: 1) automated threat analysis tools to rapidly detect (flag) threat changes within the intelligence system, 2) tools to minimize the time to develop Mission Software and Products (MSP), 3) tools and technology to minimize the time required to test and validate MSPs, 4) improved communications conduits to rapidly transmit mission software to upload into supported EW systems. These efforts allow for rapid threat analysis, threat modeling and simulation, mission software development and testing, distribution and uploading of mission software directly to the supported Soldier in the field. Additionally, beginning in FY26 ARAT CR8 will begin mission support to the Terrestrial Layer System (TLS) in support of PM EW&C mission. ARAT CR8 will develop the capability to produce system techniques, integration, test, archive, and distribute mission software to forward deployed combat forces.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Keeping Pace with the Enemy and Technology	-	-	1.529
<b>Description:</b> This effort focuses on developing a capability for the Government to rapidly develop and distribute organic mission software solutions for multiple EW systems. The Army must continually modernize and enhance software tools, hardware modernization, and processes counter enemy technology. ARAT EW6 executes Research, Development, Test, and Evaluation			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>		<b>Project (Number/Name)</b> CR8 / <i>Army Reprogramming Analysis Team (ARAT)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
(RDTE) funding to provide an organic Army capability for this organization to rapidly develop, test and distribute mission software solutions for forward deployed combat forces.					
<b>FY 2025 Plans:</b> ARAT plans to execute funding to enhance current software development and test infrastructure. ARAT will modernize to include threat simulations utilizing Software Defined Radios (SDR). ARAT CR8 plan to integrate Software Defined Radios into the program's software development and test infrastructure to enhance the Army's ability to replicate sophisticated peer and near peer Electronic Warfare systems. The modernized Software Defined Radios once integrated into the laboratory will allow for expedited development and testing of mission software to detect and defeat enemy Electronic Warfare systems.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS).					
<b>Title:</b> Infrastructure Improvements Multispectral  <b>Description:</b> This effort focuses on enhancing the Army's Multispectral Missile Warning System (MWS) software sustainment infrastructure. With the worldwide proliferation of MANPADS the Army must have the capability to rapidly analyze and develop mission software solutions that detect and counter MANPADS to defend Army Aviation platforms against this lethal threat.			-	-	0.894
<b>FY 2025 Plans:</b> Infrastructure enhancements to include preparations for integrating new ground Electronic Warfare systems into the ARAT Development and Testing Enterprise in support of migrating to a multispectral capability to incorporate Multi-Domain Operations.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS).					
<b>Title:</b> Infrastructure Improvement Radio Frequency General  <b>Description:</b> This effort focuses on enhancing the Army's Radio Frequency (RF) EW system Mission Software and Products (MSP) development and distribution infrastructure. The Army must fight in a contested and congested EW environment. Mission software solutions to defend against RF threats must be rapidly developed, tested, and distributed to Soldiers on an ever changing battlefield.			-	-	1.162
<b>FY 2025 Plans:</b> ARAT CR8 with modernization efforts to enhance Radio Frequency simulations of sophisticated peer and near peer threat systems. The modernization efforts will provide the Army the ability to rapidly program aircraft Radar Warning Receivers (RWR) to accurately detect and defeat enemy radar guided missiles directed against Army Aviation platforms. ARAT EW6 will leverage					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> CR8 / <i>Army Reprogramming Analysis Team (ARAT)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
modernized Software Defined Radio technologies that will provide more accurate representation of enemy Electronic Warfare systems.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS).			
<b>Title:</b> Threat Flagging and Mission Data Set Reprogramming Tool Development		-	-
<b>Description:</b> This effort focuses on enhancing the Army's capability to monitor changes in enemy Electronic Warfare systems that affect system performance of Army detection, declaration, and countermeasure Electronic Warfare systems onboard both air and ground platforms. The enemy is continuously developing or modifying it's Electronic Warfare systems. For Army platforms to have protection against enemy systems it must have a robust capability to immediately detect changes in threat system performance and rapidly develop, test, and distribute a mission software solution that counters the threat. This effort will enhance the Army's capability bridge detection of a change in enemy threat and the rapid development of Mission Software and Products.			1.128
<b>FY 2025 Plans:</b> ARAT CR8 will enhance threat change detection capabilities and tailor the flagging model to system specific to Electronic Warfare systems on Blackhawk and Apache helicopters. Threat change detection provides the Army the capability to rapidly assess parametric changes in enemy Radio Frequency radar systems. The ability to detect changes in enemy Radio Frequency systems increases the accuracy of mission software for Radar Warning systems on Army Aviation platforms.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS).			
<b>Title:</b> Arsenal Technique Development and Distribution		-	-
<b>Description:</b> Provides the Army an Electronic Warfare Enterprise-wide spectrum techniques (effectors and detectors) development and delivery ecosystem to address the dynamic threat for both deliberate/enduring and rapid/agile capabilities for integrated EW/SIGINT. The Techniques Arsenal ecosystem will focus on governance, development and delivery of deliberate/ enduring and agile/rapid effects.			1.005
<b>FY 2025 Plans:</b> Executes governance, manages pipeline to include test & verification; hosts arsenal; supports intel requirements.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding realigned from PE 0304270A / Electronic Warfare Development, Project EW6 (ARAT-TSS).			
<b>Accomplishments/Planned Programs Subtotals</b>		-	5.718

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>	Project (Number/Name) CR8 / <i>Army Reprogramming Analysis Team (ARAT)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy The ARAT CR8 program will leverage authorities including, but not limited to Middle Tier of Acquisition to accelerate delivery through rapid prototyping with rapid fielding authorities or a Milestone C Decision Point.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>					Project (Number/Name) CR8 / <i>Army Reprogramming Analysis Team (ARAT)</i>					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
USG Labor	C/Various	TBD : TBD	-	-		-		0.600	Jan 2025	-		0.600	Continuing	Continuing	Continuing
Travel	C/Various	TBD : TBD	-	-		-		0.107	Jan 2025	-		0.107	Continuing	Continuing	Continuing
Subtotal			-	-		-		0.707		-		0.707	Continuing	Continuing	N/A
Remarks Product development															
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Development Support	C/Various	TBD : TBD	-	-		-		5.011	Jan 2025	-		5.011	Continuing	Continuing	Continuing
Subtotal			-	-		-		5.011		-		5.011	Continuing	Continuing	N/A
Remarks support cost															
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		-		5.718		-		5.718	Continuing	Continuing	N/A
Remarks General remarks															

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**Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army**

Date: March 2024

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2040 / 5

R-1 Program Element (Number/Name)
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PE 0604270A / *Electronic Warfare Development*

Project (Number/Name)	Start Date	End Date	Duration (Days)	Project Manager	Status	Notes
101	2023-01-01	2023-01-15	14	John Doe	Completed	Project completed successfully.
102	2023-01-16	2023-02-01	16	Jane Smith	In Progress	Project is currently in progress.
103	2023-02-02	2023-02-15	13	John Doe	Completed	Project completed successfully.
104	2023-02-16	2023-03-01	15	Jane Smith	In Progress	Project is currently in progress.
105	2023-03-02	2023-03-15	13	John Doe	Completed	Project completed successfully.
106	2023-03-16	2023-03-31	15	Jane Smith	In Progress	Project is currently in progress.
107	2023-04-01	2023-04-15	14	John Doe	Completed	Project completed successfully.
108	2023-04-16	2023-05-01	15	Jane Smith	In Progress	Project is currently in progress.
109	2023-05-02	2023-05-15	13	John Doe	Completed	Project completed successfully.
110	2023-05-16	2023-05-31	15	Jane Smith	In Progress	Project is currently in progress.

CR8 / Army Reprogramming Analysis Team  
(ARAT)

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>	Project (Number/Name) CR8 / <i>Army Reprogramming Analysis Team (ARAT)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Development Enhancement Support	2	2025	4	2029



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Develop ment</i>				Project (Number/Name) DX5 / <i>Electronic Warfare And Management Tool</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
DX5: <i>Electronic Warfare And Management Tool</i>	-	1.887	5.022	12.271	-	12.271	5.762	5.823	4.918	4.967	0.000	40.650
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This funding line is in support of the Electronic Warfare Planning and Management Tool (EWPMT) which is a key enabler of Army Modernization Priorities, APNT CFT and Network CFT. EWPMT is the Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS). It will provide the ability to control & manage Electronic Warfare (EW) assets in order to execute offensive and defensive Electronic Attack, EW targeting, and synchronize EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO). As a Commander's tool, EWPMT is predominantly utilized by the Cyber Electromagnetic Activities (CEMA) cell for mission planning, access to national and strategic sensors, data repositories, as well as enabling the synchronization of EW, Signals Intelligence (SIGINT) operations, and Cyber Domains.

**Justification:**

Fiscal Year (FY) 2025 Base RDT&E funding in the amount of \$12.271 million to continue relevancy updates, sensor integration (TLS, MFEW, and other), and improved messaging standards. Additionally, it funds the EWPMT software architecture modernization required in order to make the software more efficient and enables easier integration with other EW systems.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> EWPMT	1.887	5.022	12.271
<b>Description:</b> EWPMT software application provides Electronic Warfare and Spectrum Management soldiers the ability to plan, coordinate, integrate, and synchronize Cyber Electromagnetic Activities (CEMA) across all Warfighting Functions in support of Multi-Domain Operations across all Army echelons.			
<b>FY 2024 Plans:</b> EWPMT capability maturation, performance improvements, system hardening, and Terrestrial Layer System (TLS) / Multi-Function Electronic Warfare (MFEW) and other sensor integration.			
<b>FY 2025 Plans:</b> Continued relevancy updates, sensor integration (TLS, MFEW, and other), and improved messaging standards. Additionally, the EWPMT software architecture modernization required in order to make the software more efficient and enables easier integration with other EW systems.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) DX5 / <i>Electronic Warfare And Management Tool</i>				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
Fiscal Year (FY) 2025 increase of \$7.249 million funds the EWPMT software architecture modernization required to increase software efficiency and enable integration with other EW systems.												
Accomplishments/Planned Programs Subtotals										1.887	5.022	12.271
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• K00002: <i>EW Planning &amp; Management Tools (EWPMT)</i>	4.482	21.278	26.327	-	26.327	17.935	8.597	3.110	3.141	0.000	84.870	
Remarks												
Supports EWPMT New Equipment Fielding/New Equipment Training (NEF/NET) to Army 2030.												
D. Acquisition Strategy												
EWPMT is an Acquisition Category II program of record that follows an agile acquisition strategy under the governance and requirements in the Information System Capability Development Document approved 11 JUN 2013. The acquisition strategy includes the delivery of software biannually as part of Development, Security, Operations (DEVSECOPS) model that will include refined or new capability and functionality. Operations will include executing fielding activities and supporting experimentation while moving to a continuous Authority to Operate. This acquisition and requirements strategy enables frequent delivery of critical EW planning and management capabilities in response to changing threat, technology, and techniques in support of MDO.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604270A / Electronic Warfare Development				Project (Number/Name) DX5 / Electronic Warfare And Management Tool					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Office Support	Various	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	14.561	0.395	Jan 2023	0.285	Nov 2023	0.337	Nov 2024	-		0.337	Continuing	Continuing	Continuing
Subtotal			14.561	0.395		0.285		0.337		-		0.337	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
EMD Contract- EWPMT Software Development & Interim Contractor Support	C/IDIQ	Raytheon : Fort Wayne, IN	8.360	0.201	Feb 2023	-		-		-		-	0.000	8.561	14.953
Contract - EWPMT Fielding, Training, Support and Product Improvement	C/CPFF	TBD : TBD	-	-		2.647	Apr 2024	7.327	Dec 2024	-		7.327	Continuing	Continuing	Continuing
Subtotal			8.360	0.201		2.647		7.327		-		7.327	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
EWPMT Technical and Engineering Support	Various	Various : Various	44.934	1.291	Mar 2023	1.620	Nov 2023	3.252	Nov 2024	-		3.252	Continuing	Continuing	Continuing
Subtotal			44.934	1.291		1.620		3.252		-		3.252	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
EWPMT Test Support	IA	Various : Various	8.685	-		0.470	Jun 2024	1.355	Jan 2025	-		1.355	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604270A / Electronic Warfare Development				Project (Number/Name) DX5 / Electronic Warfare And Management Tool					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Subtotal			8.685	-		0.470		1.355		-		1.355	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			76.540	1.887		5.022		12.271		-		12.271	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604270A / Electronic Warfare Develop ment		Project (Number/Name) DX5 / Electronic Warfare And Management Tool	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Full Deployment Decision (FDD)				1 FDD																								
Full Operational Capability (FOC)												2 FOC																
EWPMT Contract Software Development & Interim Contractor...																												
EWPMT Contract Fielding, Training, Support and Product I...																												
EWPMT Fielding ARMY 2030																												
EWPMT Fielding TOTAL ARMY																												
Cybersecurity, Functional, and Acceptance Testing																												
EWPMT Software Updates																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>	Project (Number/Name) DX5 / <i>Electronic Warfare And Management Tool</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Full Deployment Decision (FDD)	4	2023	4	2023
Full Operational Capability (FOC)	4	2025	4	2025
EWPMT Contract Software Development & Interim Contractor Support	4	2014	3	2024
EWPMT Contract Fielding, Training, Support and Product Improvement	2	2024	2	2029
EWPMT Fielding ARMY 2030	3	2024	2	2027
EWPMT Fielding TOTAL ARMY	3	2027	4	2029
Cybersecurity, Functional, and Acceptance Testing	3	2022	4	2029
EWPMT Software Updates	1	2024	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>	-	-	5.596	16.378	-	16.378	7.778	1.232	1.233	1.245	0.000	33.462
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

MFEW-AL is the Army's only program providing tactical Commanders with deep look, organic, airborne, offensive electronic warfare (EW), empowering Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.

Army Futures Command has designated MFEW-AL a CFT "Priority 2 Critical Enabler" with endorsements from: Long Range Precision Fires, Assured Position Navigation & Timing, Future Vertical Lift and Network CFTs.

MFEW-AL is a key technology in support of Army 2030 Priorities.

Justification:

Fiscal Year (FY) 2025 funding of \$16.378 million is for completion of Gray Eagle Integration, Developmental Test & Evaluation (DT&E) and Operational Test & Evaluation (OT&E).

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Multi-Function Electronic Warfare (MFEW) Air Large	-	5.596	16.378
<b>Description:</b> MFEW-Air Large is an airborne Electronic Warfare payload to be integrated onto the Gray Eagle Unmanned Aerial Vehicle to provide offensive Electronic Attack (EA) and Electronic Warfare Support (ES) capability to the Brigade Combat Team (BCT).			
<b>FY 2024 Plans:</b> Gray Eagle Integration			
<b>FY 2025 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army							<b>Date:</b> March 2024				
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>			<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>		
Fiscal Year (FY) 2025 funding of \$16.378 million is for completion of Gray Eagle Integration, Developmental Test & Evaluation (DT&E) and Operational Test & Evaluation (OT&E).											
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Fiscal Year (FY) 2025 funding increase of \$10.782 million is to accomplish the continuation and completion of the Gray Eagle integration and formal test and evaluation, to include IOT&E.											
<b>Accomplishments/Planned Programs Subtotals</b>							-	5.596	16.378		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• B05000: <i>Multi-Function Electronic Warfare (MFEW) Systems</i>	3.060	15.941	17.004	-	17.004	40.605	3.894	3.896	3.936	0.000	88.336
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
<p>A competitive acquisition approach was utilized for MFEW-AL using an Other Transaction Authority (OTA) to develop the Army's only Army's only airborne EW/Cyber enabled capability to support the maneuver commander to enable Multi-Domain Operations and Long-Range Precision Fires. MFEW-AL received an affirmative Milestone C Decision on 14 May 2021 and approval to conduct Low-Rate Initial Production (LRIP). Subsequent MFEW production may leverage 10 U.S.C. 4022(f) ("Authority of the Department of Defense to carry out certain prototype projects") pending a determination that MFEW has successfully met the OTA transition requirements. MFEW-AL will conduct IOT&amp;E in FY25 followed by First Unit Equipped (FUE) in FY26. MFEW-AL will employ Sensor Open Systems Architecture (SOSA) to enable the pursuit of continuous capability improvements to pace the threat.</p>											



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 and Technical Support	Various	PM Electronic Warfare & Cyber (PM EW&C) : Aberdeen Proving Ground, MD	1.902	-		0.582	Jan 2024	0.633	Jan 2025	-		0.633	12.520	15.637	-
Subtotal			1.902	-		0.582		0.633		-		0.633	12.520	15.637	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Gray Eagle Integration	C/CPFF	General Atomics : San Diego, CA	2.661	-		4.000	Jan 2024	3.004	Jan 2025	-		3.004	0.000	9.665	-
Engineering & Logistics Development	SS/CPFF	Lockheed Martin Corporation : Owego, NY	8.561	-		0.457	Dec 2023	-		-		-	0.000	9.018	-
Subtotal			11.222	-		4.457		3.004		-		3.004	0.000	18.683	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Engineering - MFEW Air	IA	DEVCOM : Aberdeen Proving Ground, MD	5.663	-		0.557	Jan 2024	0.575	Jan 2025	-		0.575	0.000	6.795	-
Subtotal			5.663	-		0.557		0.575		-		0.575	0.000	6.795	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Test & Evaluation (DT&E)	IA	Electronic Proving Ground, Ft. Huachuca AZ : Electronic Proving Ground, Ft. Huachuca AZ	-	-		-		3.169	Jan 2025	-		3.169	0.000	3.169	-
Operational Test & Evaluation (OT&E)	IA	Army Test Command, APG, MD : Army Test Command, APG, MD	-	-		-		8.997	Jul 2025	-		8.997	0.000	8.997	-
Subtotal			-	-		-		12.166		-		12.166	0.000	12.166	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			18.787	-		5.596		16.378		-		16.378	12.520	53.281	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>		Project (Number/Name) DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
MFEW Air OTA EMD																												
Developmental Test																												
Gray Eagle Integration																												
MFEW Air Production and Fielding																												
Gray Eagle Developmental Test																												
IOT&E																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>	Project (Number/Name) DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MFEW Air OTA EMD	2	2020	2	2023
Developmental Test	4	2023	4	2023
Gray Eagle Integration	2	2024	4	2025
MFEW Air Production and Fielding	2	2024	4	2031
Gray Eagle Developmental Test	2	2025	2	2025
IOT&E	4	2025	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) VS6 / <i>Integrated Electronic Warfare Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
VS6: <i>Integrated Electronic Warfare Systems</i>	-	2.100	2.171	1.575	-	1.575	1.577	1.594	1.612	1.629	0.000	12.258
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW) provides protection of ground forces operating in vehicle convoys, single vehicles and fixed locations in operational theaters which enables freedom of movement across the depth and breadth of the operational environment. Current CREW systems are programmable with techniques to mitigate emerging threats. In order to keep pace with the threat evolution, development efforts will provide fielded CREW systems as well as other Electronic Warfare (EW) systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, as well as hardware and software development and integration in order to pace the threat.

Justification:

Fiscal Year (FY) 2025 Base funding in the amount of \$1.575 million funds the continued support of CREW systems as well as other EW systems with techniques that mitigate the range of threats as required. These efforts include development of new techniques, integration of existing techniques, as well as hardware and software enhancement and integration in order to pace the threat.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> IEWS - CREW	2.100	2.171	1.575
<b>Description:</b> The Integrated Electronic Warfare System (IEWS) will provide multiple capabilities, to include Electronic Warfare Planning and Management Tool (EWPMT), Multi-Function EW (MFEW), and Defensive Electronic Attack (DEA). The Army's current Defensive Electronic Attack solution is Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW).			
<b>FY 2024 Plans:</b> Continue IEWS development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.			
<b>FY 2025 Plans:</b> Continue IEWS development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>	Project (Number/Name) VS6 / <i>Integrated Electronic Warfare Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Fiscal Year (FY) 2025 funding decrease of \$0.596 million is a reduction in effort to characterize, exploit and test new techniques to pace the threat.				
Accomplishments/Planned Programs Subtotals		2.100	2.171	1.575
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy VS6 funding supports hardware and software enhancement, to include open architecture waveforms, techniques, hardware, and integration to pace the threat leveraging Other Government Agencies' competitively awarded contracts and task orders.				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>				Project (Number/Name) VS6 / <i>Integrated Electronic Warfare Systems</i>					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
PMO Staff/Travel for CREW	Various	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	2.920	0.020	Dec 2022	0.020	Dec 2023	0.020	Dec 2024	-		0.020	0.000	2.980	-
Subtotal			2.920	0.020		0.020		0.020		-		0.020	0.000	2.980	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
IEWS Engineering and Development	IA	DEVCOM : Aberdeen Proving Ground, MD	9.569	1.780	Dec 2022	1.841	Dec 2023	1.255	Dec 2024	-		1.255	0.000	14.445	-
Subtotal			9.569	1.780		1.841		1.255		-		1.255	0.000	14.445	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Continuous evaluation of IEWS Technologies	IA	Yuma Proving Ground Yuma, AZ : YPG, AZ	1.718	0.300	Dec 2022	0.310	Dec 2023	0.300	Dec 2024	-		0.300	0.000	2.628	-
Subtotal			1.718	0.300		0.310		0.300		-		0.300	0.000	2.628	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			14.207	2.100		2.171		1.575		-		1.575	0.000	20.053	N/A
Remarks															

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**Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army**

Date: March 2024

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2040 / 5

R-1 Program Element (Number/Name)
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PE 0604270A / *Electronic Warfare Development*

Project (Number/Name)	Start Date	End Date	Duration (Days)	Actual Cost	Budgeted Cost	Variance	Cost Index	Performance Index	Cost Variance	Cost Performance	Cost Variance	Cost Performance
101	1/1/2020	1/31/2020	31	10000	10000	0	1.00	1.00	0	1.00	0	1.00
102	2/1/2020	2/28/2020	28	20000	20000	0	1.00	1.00	0	1.00	0	1.00
103	3/1/2020	3/31/2020	31	30000	30000	0	1.00	1.00	0	1.00	0	1.00
104	4/1/2020	4/30/2020	30	40000	40000	0	1.00	1.00	0	1.00	0	1.00
105	5/1/2020	5/31/2020	31	50000	50000	0	1.00	1.00	0	1.00	0	1.00
106	6/1/2020	6/30/2020	30	60000	60000	0	1.00	1.00	0	1.00	0	1.00
107	7/1/2020	7/31/2020	31	70000	70000	0	1.00	1.00	0	1.00	0	1.00
108	8/1/2020	8/31/2020	31	80000	80000	0	1.00	1.00	0	1.00	0	1.00
109	9/1/2020	9/30/2020	30	90000	90000	0	1.00	1.00	0	1.00	0	1.00
110	10/1/2020	10/31/2020	31	100000	100000	0	1.00	1.00	0	1.00	0	1.00
111	11/1/2020	11/30/2020	30	110000	110000	0	1.00	1.00	0	1.00	0	1.00
112	12/1/2020	12/31/2020	31	120000	120000	0	1.00	1.00	0	1.00	0	1.00
113	1/1/2021	1/31/2021	31	130000	130000	0	1.00	1.00	0	1.00	0	1.00
114	2/1/2021	2/28/2021	28	140000	140000	0	1.00	1.00	0	1.00	0	1.00
115	3/1/2021	3/31/2021	31	150000	150000	0	1.00	1.00	0	1.00	0	1.00
116	4/1/2021	4/30/2021	30	160000	160000	0	1.00	1.00	0	1.00	0	1.00
117	5/1/2021	5/31/2021	31	170000	170000	0	1.00	1.00	0	1.00	0	1.00
118	6/1/2021	6/30/2021	30	180000	180000	0	1.00	1.00	0	1.00	0	1.00
119	7/1/2021	7/31/2021	31	190000	190000	0	1.00	1.00	0	1.00	0	1.00
120	8/1/2021	8/31/2021	31	200000	200000	0	1.00	1.00	0	1.00	0	1.00
121	9/1/2021	9/30/2021	30	210000	210000	0	1.00	1.00	0	1.00	0	1.00
122	10/1/2021	10/31/2021	31	220000	220000	0	1.00	1.00	0	1.00	0	1.00
123	11/1/2021	11/30/2021	30	230000	230000	0	1.00	1.00	0	1.00	0	1.00
124	12/1/2021	12/31/2021	31	240000	240000	0	1.00	1.00	0	1.00	0	1.00
125	1/1/2022	1/31/2022	31	250000	250000	0	1.00	1.00	0	1.00	0	1.00
126	2/1/2022	2/28/2022	28	260000	260000	0	1.00	1.00	0	1.00	0	1.00
127	3/1/2022	3/31/2022	31	270000	270000	0	1.00	1.00	0	1.00	0	1.00
128	4/1/2022	4/30/2022	30	280000	280000	0	1.00	1.00	0	1.00	0	1.00
129	5/1/2022	5/31/2022	31	290000	290000	0	1.00	1.00	0			

VS6 / Integrated Electronic Warfare Systems

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604270A / <i>Electronic Warfare Development</i>	Project (Number/Name) VS6 / <i>Integrated Electronic Warfare Systems</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Integrated Electronic Warfare System Development	2	2021	4	2028

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	80.115	64.076	52.586	-	52.586	62.452	66.605	71.304	71.940	Continuing	Continuing
CF3: Integrated Soldier Systems (SL CFT)	-	3.842	4.407	4.349	-	4.349	4.440	4.486	4.536	4.581	0.000	30.641
ES9: Advanced Tactical Parachute System	-	2.918	2.776	3.646	-	3.646	3.977	4.020	4.065	4.106	0.000	25.508
EW4: Crew Served Weapons Engineering Development	-	7.277	4.300	3.685	-	3.685	3.981	4.022	4.067	4.108	0.000	31.440
FF2: Small Arms Fire Control	-	7.880	10.050	3.350	-	3.350	4.858	4.910	4.965	5.015	0.000	41.028
FM4: Next Generation Squad Weapons	-	17.156	16.141	10.805	-	10.805	10.818	10.934	11.056	11.168	0.000	88.078
GM1: Future Medium Machine Gun*	-	-	-	-	-	-	4.008	8.016	12.023	12.023	0.000	36.070
S58: Soldier Enhancement Program	-	10.077	4.897	4.977	-	4.977	4.984	4.988	5.044	5.095	Continuing	Continuing
S60: Clothing & Equipment	-	6.083	3.427	6.218	-	6.218	8.675	8.768	8.866	8.955	0.000	50.992
S61: Acis Engineering Development	-	10.553	3.788	3.025	-	3.025	3.857	3.476	3.552	3.627	Continuing	Continuing
S63: Individual Weapons Engineering Development	-	3.812	3.549	3.430	-	3.430	3.704	3.742	3.784	3.822	Continuing	Continuing
S70: Personnel Recovery Support System (PRSS)	-	1.554	2.591	0.591	-	0.591	0.637	0.644	0.651	0.658	Continuing	Continuing
VS5: Soldier Protective Equipment	-	8.963	8.150	8.510	-	8.510	8.513	8.599	8.695	8.782	0.000	60.212

\*This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2025

**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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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Army		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>		<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>
<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 &amp; 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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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army			Date: March 2024			
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				
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.						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		83.329	64.076	52.728	-	52.728
Current President's Budget		80.115	64.076	52.586	-	52.586
Total Adjustments		-3.214	0.000	-0.142	-	-0.142
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-0.900	-			
• SBIR/STTR Transfer		-2.314	-			
• Adjustments to Budget Years		-	-	-0.142	-	-0.142
Congressional Add Details (\$ in Millions, and Includes General Reductions)					FY 2023	FY 2024
Project: EW4: Crew Served Weapons Engineering Development						
Congressional Add: Congressional Add: Cannon Life Extension Program					1.500	-
Congressional Add: Congressional Add: CROWS - Acoustic Hailing Device					1.000	-
Congressional Add Subtotals for Project: EW4					2.500	-

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604601A I Infantry Support Weapons	
<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<b>Project: FM4: Next Generation Squad Weapons</b>			
Congressional Add: NGSW Commercial Magazine Testing		5.000	-
Congressional Add Subtotals for Project: FM4		5.000	-
<b>Project: S58: Soldier Enhancement Program</b>			
Congressional Add: Program increase - soldier enhancement program		5.000	-
Congressional Add Subtotals for Project: S58		5.000	-
Congressional Add Totals for all Projects		12.500	-
<b>Change Summary Explanation</b> Funding decreased due to completion of initial improvement of prototype development, and the transitioning of program management costs to production. Decrease also reflects a minor reduction in mission specific equipment integrated into Adaptive Squad Architecture (ASA), and Architecture Assessment Tool (AAT).			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) CF3 / Integrated Soldier Systems (SL CFT)			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CF3: Integrated Soldier Systems (SL CFT)	-	3.842	4.407	4.349	-	4.349	4.440	4.486	4.536	4.581	0.000	30.641
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Adaptive Squad Architecture (ASA) and Soldier Integration Facility (SIF) are Program Executive Office-Soldier (PEO-S) led efforts which will allow optimization of "Soldiers as Integrated Weapons Systems" and the "Squad(s) as an Integrated Platform(s)". 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) and Architecture Assessment Tool (AAT). The SIF focus is both team and squad level constructive and live experimentation to support ongoing PEO-S and Soldier Lethality Cross Functional Team 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 Soldier Lethality Cross Functional Team priority.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Integrated Soldier Systems  <b>Description:</b> Test, maintain, and evolve a Soldier/squad equipment configuration baseline, the Architecture Assessment Tool (AAT) 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.  <b>FY 2024 Plans:</b> Continue to develop and integrate mission-specific equipment with other combat platforms into initial version of ASA.  <b>FY 2025 Plans:</b> Continue to develop and integrate mission-specific equipment with other combat platforms into initial version of ASA and build to IBCT level Architecture.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The FY 2025 decrease reflects reduction in mission specific equipment integrated into ASA and AAT.	0.734	4.407	0.152
<b>Title:</b> ASA/SIF Evaluations  <b>Description:</b> ASA provides a digital engineering foundation for Soldier Centered Design in a virtual (Army Cloud) environment to provide a common operating picture across the CCIE. The ASA requirement is based on the 2018 Soldier Lethality Initial Capabilities Document which promotes "capturing models in the ASA that identify specific connection points for development,	3.108	-	4.197

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army							Date: March 2024				
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) CF3 / Integrated Soldier Systems (SL CFT)				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2023	FY 2024	FY 2025		
integration and commonality of new systems that exchange data to provide information to warfighters that augment the speed of decisions with improved accuracy and reliability". ASA provides a starting point for new integration efforts to explore integration gaps and opportunities prior to and as part of the prototyping phase, before a Soldier Touch Point, and throughout the acquisition life cycle.											
FY 2025 Plans: Execute integration, innovation and synchronization across PEO Soldier and other PEOs to provide Small Units with decisive overmatch resulting from a synchronization of effects in multiple domains.											
FY 2024 to FY 2025 Increase/Decrease Statement: Increase to support integration, innovation and synchronization of efforts to provide Small Units effects in multiple domains.											
Accomplishments/Planned Programs Subtotals							3.842	4.407	4.349		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• CF3: Integrated Soldier Systems (SL CFT)	3.842	4.407	4.349	-	4.349	4.440	4.486	4.536	4.581	0.000	30.641
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-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) CF3 / Integrated Soldier Systems (SL CFT)					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
ASA Engineering, Manufacturing, Development	MIPR	Various : Various	6.446	0.734	Jan 2023	0.152	Jan 2024	0.152	Jan 2024	-		0.152	0.000	7.484	-
Subtotal			6.446	0.734		0.152		0.152		-		0.152	0.000	7.484	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
ASA/SIF evaluations	MIPR	Various : To Be Determined	4.801	3.108	Jan 2023	4.255	Jan 2024	4.197	Jan 2024	-		4.197	0.000	16.361	-
Subtotal			4.801	3.108		4.255		4.197		-		4.197	0.000	16.361	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			11.247	3.842		4.407		4.349		-		4.349	0.000	23.845	N/A
Remarks															



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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024												
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons								Project (Number/Name) CF3 / Integrated Soldier Systems (SL CFT)										
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) CF3 / Integrated Soldier Systems (SL CFT)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ASA Integration	2	2020	4	2029
Soldier Integration Facility Evaluations	2	2020	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
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 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
ES9: Advanced Tactical Parachute System	-	2.918	2.776	3.646	-	3.646	3.977	4.020	4.065	4.106	0.000	25.508
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 with the Soldier system. This project will continue to support cross-service initiatives to improve commonality.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Advanced Tactical Parachute System	2.918	2.776	3.646
<b>Description:</b> 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.			
<b>FY 2024 Plans:</b> 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.			
<b>FY 2025 Plans:</b> Begin next phase of testing and evaluation of the Static Line Automatic Activation Device (SLAAD). Continue with test and evaluation of T-11 modification to address cross corner inversion malfunctions. Continue Developmental Testing (DT) and Operational Testing (OT) of Parachutist Emergency Release System (PERS). Continue enhancement of high and low altitude insertion capabilities and continue supporting modernization initiatives to parachute systems and ancillary equipment.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increased funding supports acquiring additional test assets and expanded scope of testing for the Static Line Reserve Parachute Automatic Activation Device (SLRPAAD) and the Parachutist Emergency Release System (PERS).			
<b>Accomplishments/Planned Programs Subtotals</b>	2.918	2.776	3.646

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) ES9 / Advanced Tactical Parachute System			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• MA7801: Advanced Tactical Parachute System	42.444	39.279	35.216	-	35.216	32.439	32.458	32.487	32.811	0.000	247.134
• ET8: Personnel Airdrop System Development	1.785	2.208	0.911	-	0.911	2.258	2.282	2.308	2.333	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Acquisition strategies for these programs vary in methods, and range from: 1) Material 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 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) ES9 / Advanced Tactical Parachute System					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Dev Contracts	C/FFP	Various : Various	11.396	0.600		0.500		0.950		-		0.950	6.335	19.781	Continuing
Dev Sys Engineering Spt	MIPR	Various : Various	1.932	0.724		0.400		0.450		-		0.450	1.190	4.696	Continuing
Subtotal			13.328	1.324		0.900		1.400		-		1.400	7.525	24.477	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	MIPR	DEVCOM-SC : Natick, MA	3.148	0.627		0.350		0.350		-		0.350	0.491	4.966	Continuing
Subtotal			3.148	0.627		0.350		0.350		-		0.350	0.491	4.966	N/A
Remarks Increase in engineering support to address system performance concerns.															
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
DT/OT	MIPR	Various : Various	8.887	0.967		1.526		1.896		-		1.896	4.913	18.189	Continuing
Subtotal			8.887	0.967		1.526		1.896		-		1.896	4.913	18.189	N/A
Remarks DT/OT decreased due to test schedule delays caused by aircraft availability and system performance not meeting KPPs.															
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			25.363	2.918		2.776		3.646		-		3.646	12.929	47.632	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity		R-1 Program Element (Number/Name)		Project (Number/Name)	
2040 / 5		PE 0604601A / Infantry Support Weapons		ES9 / Advanced Tactical Parachute System	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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																												
Airborne Insertion Enhancements																												
PERS Development																												
PERS Milestone C																												
Static Line Automatic Activation Device (SLAAD) Development																												
Static Line Parachute System Enhancements																												
T-11 Cross Corner Inversion Modification																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) ES9 / Advanced Tactical Parachute System	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Enhanced Electronic Auto Activation Device (EEAAD) Dev	1	2019	1	2023
EEAAD Milestone C	2	2023	2	2023
Airborne Insertion Enhancements	1	2019	4	2029
PERS Development	4	2021	2	2026
PERS Milestone C	3	2026	3	2026
Static Line Automatic Activation Device (SLAAD) Development	1	2025	4	2027
Static Line Parachute System Enhancements	1	2028	4	2029
T-11 Cross Corner Inversion Modification	1	2023	4	2027

**Note**  
Note: Airborne Insertion Enhancements includes the following programs: High Altitude Combo Drops, GPS Denied Navaid, Glide Modulation, T-11 Main Improvements, Towed Jumper Detection and Above 25K Operations.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) EW4 / Crew Served Weapons Engineering Development			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
EW4: Crew Served Weapons Engineering Development	-	7.277	4.300	3.685	-	3.685	3.981	4.022	4.067	4.108	0.000	31.440
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 small and medium caliber weapons ranging up to 40 millimeter 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)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Design and Development	3.723	3.165	2.550
<b>Description:</b> Design and development of Crew Served Weapons  <b>FY 2024 Plans:</b> 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.  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.  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.			



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024			
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) EW4 / Crew Served Weapons Engineering Development		
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2023	FY 2024	FY 2025
<p>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><b>FY 2025 Plans:</b></p> <p>Will conduct weapons characterization and development for light, medium, and heavy machine gun technologies and design upgrades. Will validate specification requirements, improve system performance, and increase barrel longevity.</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>Enhanced Weapon Coatings, previously called 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><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b></p> <p>Decrease accounts for a slight reduction of Design and Development activities in FY25.</p>						
<p><b>Title:</b> Test and Evaluation</p> <p><b>Description:</b> Test and evaluation of Crew Served Weapons</p> <p><b>FY 2024 Plans:</b></p>				1.054	1.135	1.135

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> EW4 / <i>Crew Served Weapons Engineering Development</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
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.			
Evaluate suitability of the XM250 for the current M240-series medium machine gun role.			
<b>FY 2025 Plans:</b> Will continue to test and evaluate technologies and improvements, to include required testing for medium machine gun and remote weapon station enhancements. Continue testing to evaluate suitability of the XM250 for the current M240-series medium machine gun role. Conduct testing of 6.8mm M240 barrel assembly, as well as evaluate other 6.8mm M240 solutions available in the marketplace.			
<b>Accomplishments/Planned Programs Subtotals</b>	4.777	4.300	3.685

	<b>FY 2023</b>	<b>FY 2024</b>
<b>Congressional Add:</b> Congressional Add: Cannon Life Extension Program	1.500	-
<b>FY 2023 Accomplishments:</b> Continued to advance and optimize the explosive bonding process of tantalum tungsten alloy liners to create improved, longer life small and medium caliber barrels. Continued 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. Developed and manufactured fully lined .50 Caliber MG barrels utilizing explosive bonding process for production qualification testing.		
<b>Congressional Add:</b> Congressional Add: CROWS - Acoustic Hailing Device	1.000	-
<b>FY 2023 Accomplishments:</b> Modified 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.		
<b>Congressional Adds Subtotals</b>	2.500	-

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• S54: <i>Small Arms Improvement</i>	7.950	9.094	7.971	-	7.971	8.974	9.069	9.169	9.261	0.000	61.488

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army								<b>Date:</b> March 2024			
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>				<b>Project (Number/Name)</b> EW4 / <i>Crew Served Weapons Engineering Development</i>			

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• FM4: <i>Next Generation Squad Weapons</i>	17.156	16.141	10.805	-	10.805	10.818	10.934	11.056	11.168	0.000	88.078
• GZ1500: <i>Sniper Rifles Modifications</i>	0.143	-	0.000	-	0.000	0.019	0.019	0.019	0.019	Continuing	Continuing
• GB4000: <i>M2 50 Cal Machine Gun MODS</i>	7.420	-	0.000	-	0.000	-	-	-	-	0.000	7.420
• GL3200: <i>Items Less Than \$5.0m (WOCV-WTCV)</i>	5.271	1.148	1.031	-	1.031	2.185	2.189	2.191	2.214	Continuing	Continuing
• G13000: <i>M240 Medium Machine Gun (7.62mm)</i>	12.801	0.425	0.003	-	0.003	0.002	0.003	-	-	Continuing	Continuing
• G01506: <i>Precision Sniper Rifle</i>	6.436	5.248	5.910	-	5.910	4.839	1.919	5.981	6.041	Continuing	Continuing
• G13101: <i>MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON SYSTEM</i>	26.627	-	0.000	-	0.000	-	-	-	-	0.000	26.627

**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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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2025 Army</b>												<b>Date: March 2024</b>			
<b>Appropriation/Budget Activity</b> 2040 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>						<b>Project (Number/Name)</b> EW4 / <i>Crew Served Weapons Engineering Development</i>			
<b>Management Services (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Program Management	Allot	PM Soldier Weapons, : Picatinny Arsenal	2.166	0.205	Mar 2023	0.205	Nov 2023	0.205	Mar 2025	-		0.205	Continuing	Continuing	Continuing
Travel	MIPR	PM Soldier Weapons, : Picatinny Arsenal	0.387	0.020	Mar 2023	0.020	Mar 2023	0.020	Mar 2025	-		0.020	Continuing	Continuing	Continuing
<b>Subtotal</b>			2.553	0.225		0.225		0.225		-		0.225	Continuing	Continuing	N/A
<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Fabrication	Various	Various : Multiple Contractors	11.712	0.207	Mar 2023	0.300	Mar 2023	0.300	Mar 2025	-		0.300	Continuing	Continuing	Continuing
Hardware Development	MIPR	Army Research Development Engineers Centers : Multiple	26.820	4.814	Mar 2023	2.230	Mar 2023	1.608	Mar 2025	-		1.608	Continuing	Continuing	Continuing
<b>Subtotal</b>			38.532	5.021		2.530		1.908		-		1.908	Continuing	Continuing	N/A
<b>Support (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Engineering	MIPR	Army Research Development Engineering Centers : Multiple	11.841	0.772	Mar 2023	0.259	Mar 2023	0.259	Mar 2025	-		0.259	Continuing	Continuing	Continuing
Logistics	MIPR	Tank & Automotive Command (TACOM), : Warren	0.780	0.080	Mar 2023	0.065	Mar 2023	0.065	Mar 2025	-		0.065	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) EW4 / Crew Served Weapons Engineering Development					
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	0.923	0.125	Mar 2023	0.100	Mar 2023	0.100	Mar 2025	-		0.100	Continuing	Continuing	Continuing
Subtotal			13.544	0.977		0.424		0.424		-		0.424	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	7.623	1.054	Mar 2023	0.607	Mar 2023	0.607	Mar 2025	-		0.607	Continuing	Continuing	Continuing
Operational Testing	MIPR	Army Test and Evaluation Command, : Aberdeen Proving Ground	4.115	-		0.407	Mar 2023	0.407	Mar 2025	-		0.407	Continuing	Continuing	Continuing
Validation Testing	MIPR	Army Test and Evaluation Centers, : Multiple	0.858	-		0.107	Mar 2023	0.114	Mar 2025	-		0.114	Continuing	Continuing	Continuing
Subtotal			12.596	1.054		1.121		1.128		-		1.128	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			67.225	7.277		4.300		3.685		-		3.685	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) EW4 / Crew Served Weapons Engineering Development	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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																												
Mounted Machinegun Optic (MMO)																												
Design Upgrade for light, medium and heavy MGs																												
Enhancements for Remote Weapon Station																												
Weapon Enhancements for Improved Ammunition																												
New Weapons and Enabling Technology Evaluations and As																												
TEST AND EVALUATION																												
Test and Evaluation of new technology																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) EW4 / Crew Served Weapons Engineering Development	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DESIGN AND DEVELOPMENT	1	2020	4	2029
Mounted Machinegun Optic (MMO)	1	2020	4	2025
Design Upgrade for light, medium and heavy MGs	1	2024	4	2029
Enhancements for Remote Weapon Station	1	2023	4	2029
Weapon Enhancements for Improved Ammunition	1	2025	4	2029
New Weapons and Enabling Technology Evaluations and Assessments	1	2023	4	2029
TEST AND EVALUATION	1	2020	4	2029
Test and Evaluation of new technology	1	2021	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FF2 / Small Arms Fire Control			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
FF2: Small Arms Fire Control	-	7.880	10.050	3.350	-	3.350	4.858	4.910	4.965	5.015	0.000	41.028
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 that supports the Next Generation Squad Weapons. NGSW-FC 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 along with modular interfaces that will 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 2023	FY 2024	FY 2025
<b>Title:</b> Design, Develop and Fabricate  <b>Description:</b> Includes contract awards for improvements of all Fire Control configurations, enhancements, and hand held devices.  <b>FY 2024 Plans:</b> 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.  <b>FY 2025 Plans:</b> Finalize and complete initial improvement prototype development for modular thermal sensor capability, increased Rapid Target Acquisition capability through networked integration with IVAS and ENVG-B, and advanced surface treatment signature reduction coatings. 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, 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; and continued optimization of system size, weight, and power, to reduce soldier load.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decreases due to final stage and completion of initial improvement of prototype development in FY25.	5.281	6.790	0.950
<b>Title:</b> Engineering Support	1.150	1.600	1.000



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>		<b>Project (Number/Name)</b> FF2 / <i>Small Arms Fire Control</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Description:</b> Government engineering support, providing oversight of design development and contractor performance.  <b>FY 2024 Plans:</b> Will continue to provide government engineering support at laboratories and engineering centers; providing design, limited testing and oversight of development and contractor performance.  <b>FY 2025 Plans:</b> Will continue to provide government engineering support at laboratories and engineering centers; providing design, limited testing and oversight of development and contractor performance, provide engineering support at program operational test events including adversarial assessment.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decreases due to final stage and completion of initial improvement of prototype development in FY25.					
<b>Title:</b> Test and Evaluation  <b>Description:</b> Government testing and evaluation of prototypes, articles, and improvements. Includes Soldier Touch Point evaluations.  <b>FY 2024 Plans:</b> 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.  <b>FY 2025 Plans:</b> Will continue Operational Testing of the M157 to evaluate integration, cyber security, operational effectiveness in natural environments. Product improvement prototypes will undergo technical testing and Soldier Touch Point user evaluations.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Slight increase in funding due to additional test costs in FY25.			1.178	1.310	1.317
<b>Title:</b> Program Management  <b>Description:</b> Program management office non-labor activities, to include travel and other indirect costs.  <b>FY 2024 Plans:</b> 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.  <b>FY 2025 Plans:</b>			0.271	0.350	0.083

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>				<b>Project (Number/Name)</b> FF2 / <i>Small Arms Fire Control</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>										<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
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.												
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decreased due to transition of the bulk of program management costs to production.												
<b>Accomplishments/Planned Programs Subtotals</b>										7.880	10.050	3.350
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
• S54: <i>Small Arms Improvement</i>	7.950	9.094	7.971	-	7.971	8.974	9.069	9.169	9.261	0.000	61.488	
• G14513: <i>Next Generation Squad Weapon - Fire Control</i>	111.387	186.759	252.712	-	252.712	121.207	121.405	156.877	158.437	Continuing	Continuing	
<b>Remarks</b>												
<b>D. Acquisition Strategy</b>												
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 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FF2 / Small Arms Fire Control					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Next Generation Squad Weapons- Fire Control OTA	C/FFP	Vortex Optics : Barneveld WI 53507-9412	3.189	5.281	Feb 2023	6.790	Feb 2024	0.953	Jan 2025	-		0.953	Continuing	Continuing	-
Subtotal			3.189	5.281		6.790		0.953		-		0.953	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	7.272	1.150	Nov 2022	1.600	Nov 2023	1.000	Nov 2024	-		1.000	Continuing	Continuing	-
Program Management	Allot	Project Manager Soldier Lethality (PMSL) : Picatinny Arsenal, NJ	0.955	0.271	Nov 2022	0.350	Nov 2023	0.080	Nov 2024	-		0.080	Continuing	Continuing	-
Subtotal			8.227	1.421		1.950		1.080		-		1.080	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Test and Evaluation	MIPR	Aberdeen Testing Center : Aberdeen Proving Ground, MD	6.573	1.100	Mar 2023	0.786		1.237	Nov 2024	-		1.237	Continuing	Continuing	-
Test and Evaluation	MIPR	DEVCOM Data Analysis Center (DAC) : Aberdeen Proving Ground, MD	0.246	0.078	Apr 2023	0.524	Jan 2024	0.080	Jan 2025	-		0.080	0.000	0.928	-
Subtotal			6.819	1.178		1.310		1.317		-		1.317	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons					Project (Number/Name) FF2 / Small Arms Fire Control			
	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.235	7.880		10.050		3.350		-		3.350	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) FF2 / Small Arms Fire Control	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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																												
Contractor Design and Prototype Fabrication																												
Limited User Testing (LUT)																												
Task Order - Improvements FY23																												
Task Order - Improvements FY24																												
Task Order - Improvements FY25																												
Task Order - Improvements FY26																												
Task Order - Improvements FY27																												
Test and Evaluation - Improvements																												
Test and Evaluation CPVA																												
Test and Evaluation Natural Environments																												
Test and Evaluation (OA)																												
Test and Evaluation AA																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> FF2 / <i>Small Arms Fire Control</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
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 (OA)	3	2025	1	2026
Test and Evaluation AA	1	2025	1	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FM4 / Next Generation Squad Weapons			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
FM4: Next Generation Squad Weapons	-	17.156	16.141	10.805	-	10.805	10.818	10.934	11.056	11.168	0.000	88.078
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)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Contractor Design and Improvements	6.964	7.750	3.822
<b>Description:</b> Contractor design, development and improvements.			
<b>FY 2024 Plans:</b> 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.			
<b>FY 2025 Plans:</b> Will continue improvements on the NGSW weapons to enhance system performance. Improvements will focus on feedback gained from operational test events to enhance the user's ability to effectively complete their missions. Efforts will include weapon system reliability and dispersion; reduction in recoil forces and total system weight, integration of new 6.8mm ammunition types			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) FM4 / Next Generation Squad Weapons		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
and projectile development, as well as other optics, enablers and Soldier equipment. Will purchase additional test articles to support integration, testing and user evaluations.				
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decreases due to the transition from initial iterative prototyping and conclusion of operational testing phase.				
<b>Title:</b> Engineering Support		1.131	1.300	1.200
<b>Description:</b> Government engineering support, providing oversight of design, development and contractor performance.				
<b>FY 2024 Plans:</b> Will continue government-engineering support to provide design, limited testing, and oversight of development and contractor performance for capability enhancements and design improvements.				
<b>FY 2025 Plans:</b> Will continue government-engineering support to provide design, limited testing, and oversight of development and contractor performance for capability enhancements and design improvements.				
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decreases due to decreased test activities.				
<b>Title:</b> Test and Evaluation		3.543	6.571	5.263
<b>Description:</b> Testing and evaluation at government ranges and facilities.				
<b>FY 2024 Plans:</b> 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 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.				
<b>FY 2025 Plans:</b> Will complete Live Fire Test and Evaluations, conduct Operational Assessment, continue Natural Environment Testing, and conduct other operational evaluations. Will continue testing vendor hardware at USG facilities to assess product improvements and potential future system enhancements, integration with other enables and will continue user evaluations.				
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decreases due to decreased test activities.				
<b>Title:</b> Program Management		0.518	0.520	0.520



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FM4 / Next Generation Squad Weapons			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
Description: Program management office and oversight of government and contractor efforts.											
FY 2024 Plans: Program management office will continue to provide oversight of contract actions, engineering support and test activities.											
FY 2025 Plans: Program management office will continue to provide oversight of contract actions, engineering support and test activities.											
Accomplishments/Planned Programs Subtotals									12.156	16.141	10.805
							FY 2023	FY 2024			
Congressional Add: NGSW Commercial Magazine Testing							5.000	-			
FY 2023 Accomplishments: 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.											
Congressional Adds Subtotals							5.000	-			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• S54: Small Arms Improvement	7.950	9.094	7.971	-	7.971	8.974	9.069	9.169	9.261	0.000	61.488
• EW4: Crew Served Weapons Engineering Development	7.277	4.300	3.685	-	3.685	3.981	4.022	4.067	4.108	0.000	31.440
• S63: Individual Weapons Engineering Development	3.812	3.549	3.430	-	3.430	3.704	3.742	3.784	3.822	Continuing	Continuing
• FL4: Small Caliber Ammo for Next Gen Squad Weapons	32.625	11.809	11.955	-	11.955	11.968	12.097	12.232	12.354	0.000	105.040
• G14511: Next Generation Squad Weapon-Automatic Rifle	10.161	18.665	23.133	-	23.133	13.833	15.820	13.862	14.000	Continuing	Continuing
• G14512: NEXT GENERATION SQUAD WEAPON-RIFLE	45.075	87.426	91.447	-	91.447	57.599	56.618	48.615	49.221	Continuing	Continuing
• E06001: NEXT GENERATION SQUAD WEAPON AMMUNITION	96.496	191.244	205.889	-	205.889	286.229	286.220	336.320	339.684	0.000	1,742.082

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FM4 / Next Generation Squad Weapons				
C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<u>Remarks</u>												
D. Acquisition Strategy												
The NGSW program, a Middle Tier Acquisition (MTA) program, transitioned from Rapid Prototyping authority under Section 804 of the FY 2016 National Defense Authorization Act (NDAA), to Rapid Fielding. Following a full and open competition, three vendors were selected for Rapid Prototyping and awarded Other Transaction Agreements (OTA) to prototype and mature system designs for a culminating test and evaluation effort to inform a down selection. 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 2025 Army													Date: March 2024		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FM4 / Next Generation Squad Weapons					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 (PMSL) : Picatinny Arsenal, NJ	2.574	0.518	Oct 2022	0.520	Oct 2023	0.520	Oct 2024	-		0.520	0.000	4.132	-
Subtotal			2.574	0.518		0.520		0.520		-		0.520	0.000	4.132	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Design Improvements	C/FFP	SIG Sauer, Inc. : Newington, NH	9.048	6.964	Jun 2023	7.750	Feb 2024	3.822	Jan 2025	-		3.822	0.000	27.584	-
Commercial Magazine Testing (Congressional Add)	Allot	PM Soldier Lethality : Picatinny Arsenal, NJ	-	5.000	Mar 2023	-		-		-		-	0.000	5.000	-
Subtotal			9.048	11.964		7.750		3.822		-		3.822	0.000	32.584	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	10.080	1.131	Nov 2022	1.300	Nov 2023	1.200	Nov 2024	-		1.200	0.000	13.711	-
Subtotal			10.080	1.131		1.300		1.200		-		1.200	0.000	13.711	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Test and Evaluation	MIPR	Army Test and Evaluation Command (ATEC) :	9.390	3.543	Jan 2023	6.571	Jan 2024	5.263	Nov 2024	-		5.263	0.000	24.767	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) FM4 / Next Generation Squad Weapons					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
		Aberdeen Proving Ground, ND													
Subtotal			9.390	3.543		6.571		5.263		-		5.263	0.000	24.767	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			31.092	17.156		16.141		10.805		-		10.805	0.000	75.194	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army

Date: March 2024

Appropriation/Budget Activity  
2040 / 5

R-1 Program Element (Number/Name)  
PE 0604601A / Infantry Support Weapons

Project (Number/Name)  
FM4 / Next Generation Squad Weapons

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
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 and Product Improvements																												
Task Order - Product Improvement FY23																												
Task Order - Product Improvement FY24																												
Task Order - Product Improvement FY25																												
Task Order - Product Improvement FY26																												
Task Order - Product Improvement FY27																												

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**Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army**

**Date:** March 2024

**Appropriation/Budget Activity**

2040 / 5

### R-1 Program Element (Number/Name)

PE 0604601A / Infantry Support Weapons

Project (Number/Name)

## FM4 / Next Generation Squad Weapons

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 FY28																					6							
Test and Evaluation - Product Improvements																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> FM4 / <i>Next Generation Squad Weapons</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
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	2025
Test and Evaluation - LFT&E	3	2024	1	2025
Test and Evaluation - IOT&E	1	2025	2	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 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) FM4 / Next Generation Squad Weapons
		Start		End
Events		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 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S58 / Soldier Enhancement Program			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S58: Soldier Enhancement Program	-	10.077	4.897	4.977	-	4.977	4.984	4.988	5.044	5.095	Continuing	Continuing
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 in Fiscal Year 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. SEP now uses 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 Officer (PEO) Soldier. Proposals are submitted by Soldiers and industry at any time, are reviewed monthly and new projects are approved semi-annually by the SEP Council of Colonels (CoC). Approved proposals are validated by the Director, MCDID. Validated SEP initiatives are procured and then 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 2023	FY 2024	FY 2025
<b>Title:</b> Evaluate COTS/GOTS/NDI equipment that have the potential to enhance Soldier combat effectiveness.	5.077	4.897	-
<b>Description:</b> The Soldier Enhancement Program (SEP) was established by the National Defense Authorization Act in Fiscal Year 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. SEP now uses 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 Officer (PEO) Soldier. Proposals are submitted by Soldiers and industry at any time, are reviewed monthly and new projects are approved semi-annually by the SEP Council of Colonels (CoC). Approved proposals are validated by the Director, MCDID. Validated SEP initiatives are procured and then 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).			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) S58 / Soldier Enhancement Program		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
<b>FY 2024 Plans:</b> 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.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The FY 2025 decrease represents a shift of priorities to SEP Evaluations for safety testing, collection, and analysis of user feedback and the documentation of results.					
<b>Title:</b> Program oversight			-	-	0.383
<b>FY 2025 Plans:</b> Fund travel and purchases required to perform oversight functions.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase to support program oversight requirements.					
<b>Title:</b> SEP Evaluations			-	-	4.594
<b>Description:</b> The Soldier Enhancement Program (SEP) was established by the National Defense Authorization Act for Fiscal Years 1990 and informs Army requirements generation and capitalizes on industry capabilities to support current and future force modernization. SEP provides a rapid approach to evaluate Commercial off-the-shelf (COTS), Government off-the shelf (GOTS), or Non-Developmental Items (NDI) capabilities to increase Soldier combat effectiveness. Using a "buy, try and decide" methodology, SEP provides significant savings and accelerates the evaluation of leading-edge Soldier capabilities to provide combat overmatch. Proposals are submitted by Soldiers, commanders, commercial industry and others at any time, are reviewed quarterly 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), the Infantry Commandant, and Program Executive Office (PEO) Soldier. Validated SEP initiatives are procured and evaluated by Soldiers for feasibility and suitability. The funding supports SEP evaluation preparation, execution, and results documentation. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy and is an Army Futures Command (AFC)priority.					
<b>FY 2025 Plans:</b> Conduct product assessments, acquire safety confirmations, and perform evaluations of COTS/GOTS/NDI capabilities to support the Army's Modernization Strategy to enhance and improve Soldier combat effectiveness.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase to support product assessments, address safety requirements and other program evaluations.					
Accomplishments/Planned Programs Subtotals			5.077	4.897	4.977

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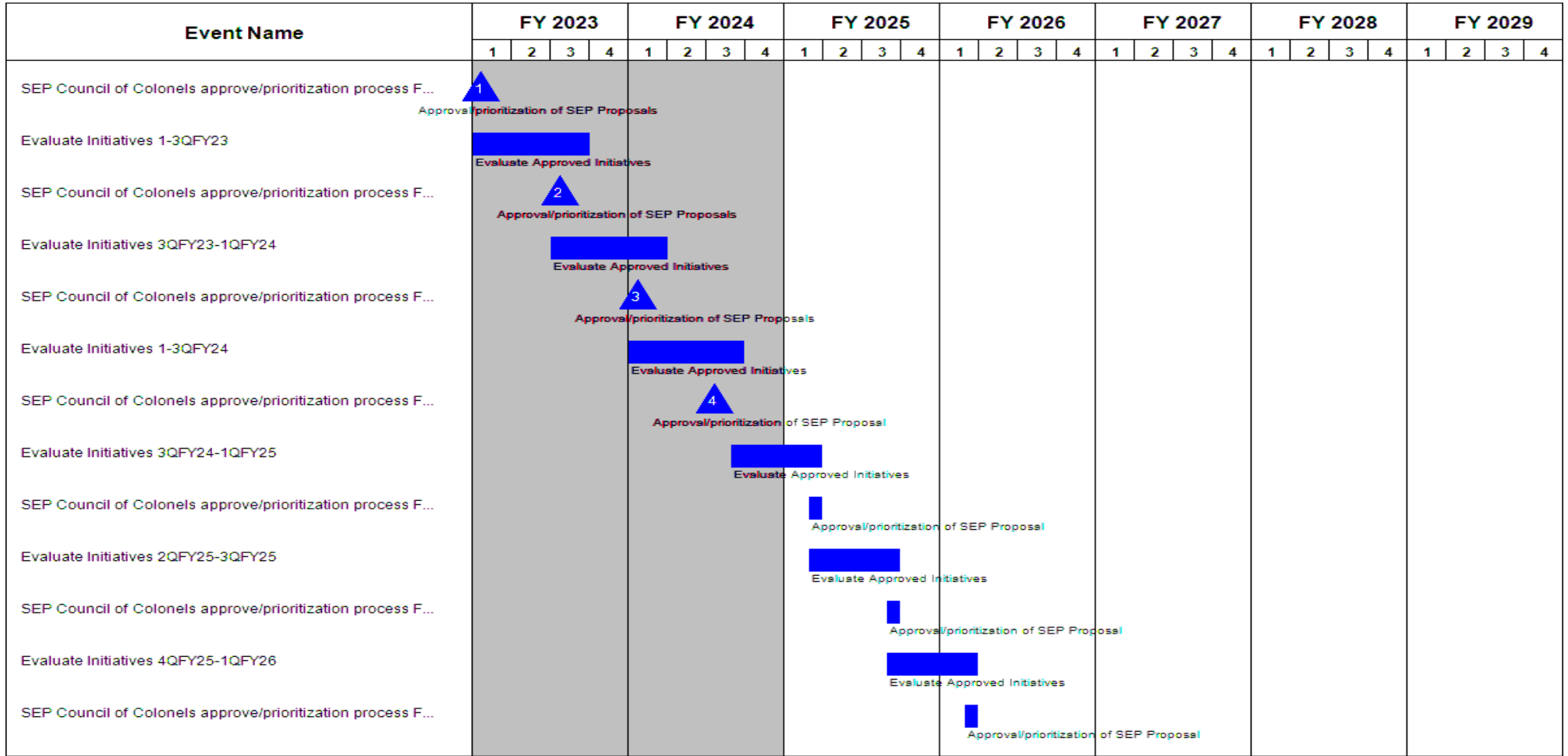
<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> S58 / <i>Soldier Enhancement Program</i>	
		<b>FY 2023</b>	<b>FY 2024</b>
<b>Congressional Add:</b> Program increase - soldier enhancement program		5.000	-
<b>FY 2023 Accomplishments:</b> \$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.			
<b>Congressional Adds Subtotals</b>		5.000	-
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
Other			
<b>D. Acquisition Strategy</b>			
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 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S58 / Soldier Enhancement Program					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Various	MIPR	PEO SOLDIER : Ft. Belvoir, VA	15.186	0.190	Aug 2023	0.373	Aug 2024	0.383	Aug 2024	-		0.383	0.000	16.132	-
Subtotal			15.186	0.190		0.373		0.383		-		0.383	0.000	16.132	N/A
Remarks Systems Engineering and Program Management includes engineering support, conducting technical evaluations, market research and program reviews.															
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Increase - Soldier Enhancement Program	TBD	Various : Various	-	5.000		-		-		-		-	0.000	5.000	-
Subtotal			-	5.000		-		-		-		-	0.000	5.000	N/A
Remarks Candidates for the Soldier Enhancement Program are received, reviewed, and approved semi-annually. Contractual efforts are focused on procuring prototypes for testing.															
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
SEP Evaluations	MIPR	Various : Various	66.172	4.887	May 2023	4.524	May 2024	4.594	May 2024	-		4.594	0.000	80.177	-
Subtotal			66.172	4.887		4.524		4.594		-		4.594	0.000	80.177	N/A
Remarks Testing costs vary annually depending on number and type of items being evaluated.															
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			81.358	10.077		4.897		4.977		-		4.977	0.000	101.309	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) S58 / Soldier Enhancement Program



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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) S58 / Soldier Enhancement Program	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 2QFY26-3QFY26																												
SEP Council of Colonels approve/prioritization process F...																												
Evaluate Initiatives 4QFY26-1QFY27																												
SEP Council of Colonels approve/prioritization process F...																												
Evaluate Initiatives 2QFY27-3QFY27																												
SEP Council of Colonels approve/prioritization process F...																												
Evaluate Initiatives 4QFY27-1QFY28																												
SEP Council of Colonels approve/prioritization process F...																												
Evaluate Initiatives 2QFY28-3QFY28																												
SEP Council of Colonels approve/prioritization process F...																												
Evaluate Initiatives 4QFY28-1QFY29																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> S58 / <i>Soldier Enhancement Program</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
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
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

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons		Project (Number/Name) S58 / Soldier Enhancement Program
		Start		End
Events		Quarter	Year	Quarter Year
Evaluate Initiatives 4QFY28-1QFY29		3	2028	1 2029



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / <i>Infantry Support Weapons</i>				Project (Number/Name) S60 / <i>Clothing &amp; Equipment</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S60: <i>Clothing &amp; Equipment</i>	-	6.083	3.427	6.218	-	6.218	8.675	8.768	8.866	8.955	0.000	50.992
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. Funding to support test and evaluation of both tactical and non-tactical clothing and individual equipment development and enhancement resulting in the integrated systems for the Airborne, Arctic, Arid, Jungle, and Temperate Soldier. This effort will further develop capabilities transitioning from Project S53 to increase performance and safety of Warfighter clothing and equipment. PdM 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)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Soldier Uniforms and Clothing	3.253	1.723	4.062
<b>Description:</b> Evaluate superior, integrated and sustainable clothing and footwear for the Soldier in an evolving global security environment.			
<b>FY 2024 Plans:</b> 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 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.			
<b>FY 2025 Plans:</b> Conduct ensemble level evaluations of novel materials providing moisture management, flame resistance, reduction in signature, antimicrobial treatments for fabrics in clothing, footwear and equipment in all climate zones. Perform technical testing, user evaluations, and qualify new fabrics with vector protection and flame resistance protection for combat clothing. Supports			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) S60 / Clothing & Equipment		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
opportunities for commonality in OCIE across all Services (Army, Navy, Air Force, Marines, Space Force and Coast Guard) and further supports the domestic Clothing and Textile Industrial Base. Continued development of Improved Combat Vehicle Crewman Uniform to include female and male variant patterns. Continue Clothing Bag Upgrades and Evaluations as directed by the Army Uniform Board. Procure test assets and perform DT/OT on garments produced with improved thermal camouflage capability. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding is increasing between FY24 and FY25 due to the incorporation of improved thermal camouflage capability and flame resistance fabrics.				
<b>Title:</b> Individual Equipment  <b>Description:</b> Evaluate superior, integrated and sustainable individual equipment for the Soldier in an evolving global security environment.  <b>FY 2024 Plans:</b> 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.  <b>FY 2025 Plans:</b> Procure test assets and perform Developmental Tests/Operational Tests (DT/OT) as required for Water Treatment Devices. Continue to develop the Welding Individual Protection System (WIPS) ensemble to provide welders with Occupational Safety Health Act (OSHA) compliant Personal Protective Equipment (PPE). Evaluate opportunities to mitigate signature threats across load carriage and individual equipment. Conduct Soldier testing of items appropriate for use in extreme or multi-climate environments focusing on arctic mobility equipment.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding is increasing between FY24 and FY25 to support design and evaluation of load carriage equipment.		2.830	1.704	2.156
Accomplishments/Planned Programs Subtotals		6.083	3.427	6.218

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S60 / Clothing & Equipment			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• S53: Clothing And Equipment	2.966	4.700	5.959	-	5.959	8.589	8.681	8.776	8.864	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 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S60 / Clothing & Equipment					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	13.462	0.588		0.377		0.638		-		0.638	Continuing	Continuing	Continuing
Subtotal			13.462	0.588		0.377		0.638		-		0.638	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 and Development Support	Various	DEVCOM : Natick, MA	18.547	0.845		0.496		1.236		-		1.236	Continuing	Continuing	Continuing
Development Contracts	Various	Various : Various	58.422	1.494		0.891		-		-		-	0.000	60.807	-
Subtotal			76.969	2.339		1.387		1.236		-		1.236	Continuing	Continuing	N/A
Remarks															
Previously annotated Development contracts (FY23 and FY24) are being placed in Engineering and Development Support cost element to align with DoD 7000.14-R, Volume 2B, Chapter 5.															
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Technical Support	Various	DEVCOM : Natick, MA	19.905	1.378		0.787		1.162		-		1.162	Continuing	Continuing	Continuing
Subtotal			19.905	1.378		0.787		1.162		-		1.162	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Operational Test & Evaluation (OT&E)	MIPR	Various : Various	36.382	1.778		0.876		3.182		-		3.182	Continuing	Continuing	Continuing
Subtotal			36.382	1.778		0.876		3.182		-		3.182	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024						
Appropriation/Budget Activity					R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 5					PE 0604601A / Infantry Support Weapons				S60 / Clothing & Equipment								
					Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals					146.718	6.083		3.427		6.218		-		6.218	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army										Date: March 2024			
Appropriation/Budget Activity					R-1 Program Element (Number/Name)					Project (Number/Name)			
2040 / 5					PE 0604601A / Infantry Support Weapons					S60 / Clothing & Equipment			

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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																												
Water Treatment for Soldier Hydration																												
Evaluation of Cold Weather Mobility items																												
Welding Individual Protection System (WIPS)																												
Individual Shelter																												
Sleeping Mats																												
Hydration shelf life testing																												

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**Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army**

**Date:** March 2024

**Appropriation/Budget Activity**

2040 / 5

**R-1 Program Element (Number/Name)**

PE 0604601A / *Infantry Support Weapons*

Project (Number/Name)

## S60 / Clothing & Equipment

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> S60 / <i>Clothing &amp; Equipment</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
UNIFORM CLOTHING & FOOTWEAR	1	2011	4	2028
Enhanced Uniform Upgrades	3	2009	4	2029
Clothing Bag Upgrades and Evaluations	1	2013	4	2029
Spectral Mitigation	1	2020	4	2029
Cold Weather/Extreme Cold Weather Clothing and Footwear Improvement	1	2023	4	2028
Athletic Footwear	1	2021	4	2024
INDIVIDUAL EQUIPMENT	2	2008	4	2027
Water Treatment for Soldier Hydration	2	2021	4	2029
Evaluation of Cold Weather Mobility items	1	2024	4	2027
Welding Individual Protection System (WIPS)	1	2022	4	2025
Individual Shelter	1	2023	4	2025
Sleeping Mats	1	2023	4	2024
Hydration shelf life testing	1	2023	4	2028
Load Carriage	1	2019	4	2029



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S61 / Acis Engineering Development			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S61: Acis Engineering Development	-	10.553	3.788	3.025	-	3.025	3.857	3.476	3.552	3.627	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 Air SS 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 Soldier-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). Additional effort is focused on a digital replacement for paper-based DoD Flight Information Publications, and the Aircrew Combat Equipment (ACE), 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)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Air Soldier System	3.053	3.788	3.025
<p><b>Description:</b> This project conducts development, integration, and qualification activities in support of the 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 SA; and inadequate aircrew protection from environmental extremes, hostile threats, and induced threats resulting from aircraft mishaps or crashes.</p> <p><b>FY 2024 Plans:</b> 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><b>FY 2025 Plans:</b> The Program will continue to focus on supporting Army aircrew hardware and software changes, and integration and test of NW-A Air SS requirements. Continue support for the execution of P3I capability demonstrations in conjunction with upcoming Soldier</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S61 / Acis Engineering Development				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>										FY 2023	FY 2024	FY 2025
Touch Points and key Army demonstration and experimentation events focused on Air SS capabilities intended to enhance AGO in support of Large-Scale Combat Operations initiatives. Begin integration of Air SS products into the FLRAA platforms.												
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decrease from FY 2024 to FY 2025 is due to anticipated decrease in HUD Integration.												
<b>Title:</b> Congressional Add for TacPAN										7.500	-	-
<b>Description:</b> Intent of TacPAN efforts is to develop a body-mounted, equipment-embedded power and data distribution and management system, that provide significant capability and human factors upgrades by reducing weight and bulk by 30% over current Air Warrior systems. Congressional add funding facilitates further maturation of TacPAN hardware and software. Perform bench test evaluations collecting sufficient data to provide authorization to test on aircraft in flight. Provide adequate software test documentation demonstrating system is safe to fly and produce sufficient hardware systems to support limited development testing in flight.												
Accomplishments/Planned Programs Subtotals										10.553	3.788	3.025
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• AZ3110: Aircrew Integrated Systems	25.773	22.097	14.478	-	14.478	15.148	15.303	15.387	15.595	0.000	123.781	
<b>Remarks</b>												
<b>D. Acquisition Strategy</b>												
Air SS Milestone C was approved in April 2019 for initial capabilities to include: Aircraft-mounted hardware and helmet worn displays that provide integrated helmet capabilities and increased aircrew SA; 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 procurement over time. Efforts for the Air SS program included development, integration, test, and airworthiness qualification of aviator flight display symbology technologies, hardware and software changes of NW-A Air SS requirements and integration of Air SS products into the FLRAA platforms. Air SS requirements include improvements to the current flight helmet; improvements to the survival gear carriage system; lightweight body armor; environmental protective clothing and personal survival equipment; enhanced mission planning and execution capability allowing for improved connectivity between aircrew members, other aircraft, and ground assets and a day/night helmet-mounted flight symbiology display for Rotary Wing platform aviators. These efforts migrate from program/platform-unique hardware and software solutions to common integrated air/ground solutions that align with Network and Future Vertical Lift (FVL) modernization priorities.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S61 / Acis Engineering Development					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Government : Huntsville, Alabama	4.459	0.148		0.181		0.144		-		0.144	Continuing	Continuing	Continuing
Subtotal			4.459	0.148		0.181		0.144		-		0.144	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Air Warrior and Air Soldier System Development	C/CPFF	Various Government : Various Locations	67.396	2.538		2.880		2.301		-		2.301	Continuing	Continuing	Continuing
TACPAN Congressional Add	TBD	TBD : TBD	-	7.500		-		-		-		-	0.000	7.500	-
Subtotal			67.396	10.038		2.880		2.301		-		2.301	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	RO	Various Government : Various Locations	4.587	0.089		0.582		0.464		-		0.464	Continuing	Continuing	Continuing
Subtotal			4.587	0.089		0.582		0.464		-		0.464	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 and Operational Testing	RO	Various Activities : Various Locations	20.536	0.278		0.145		0.116		-		0.116	Continuing	Continuing	Continuing
Subtotal			20.536	0.278		0.145		0.116		-		0.116	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons					Project (Number/Name) S61 / Acis Engineering Development				
		Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		96.978	10.553		3.788		3.025		-		3.025	Continuing	Continuing	N/A

**Remarks**

Funds for this project are allocated amongst several smaller development/qualification programs at various stages of technical maturity intended to address capability gaps associated with deferred Air SS capabilities being implemented as P3I 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-4, RDT&E Schedule Profile: PB 2025 Army**

**Date:** March 2024

### Appropriation/Budget Activity

2040 / 5

### R-1 Program Element (Number/Name)

PE 0604601A / Infantry Support Weapons

Project (Number/Name)

## S61 / Acis Engineering Development

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) S61 / Acis Engineering Development

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Air SS P3I (Deferred Air SS CDD requirements)	1	2017	4	2030
Aircrew Combat Equipment (ACE)	1	2021	4	2030
Nett Warrior Aviation (NW-A)	2	2022	4	2030

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
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 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S63: <i>Individual Weapons Engineering Development</i>	-	3.812	3.549	3.430	-	3.430	3.704	3.742	3.784	3.822	Continuing	Continuing
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 Moore, 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)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Design and Development	3.018	2.593	2.593
<b>Description:</b> Design and development of Individual Weapons			
<b>FY 2024 Plans:</b> 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.			
<b>FY 2025 Plans:</b> 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 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S63 / Individual Weapons Engineering Development			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
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.											
Title: Testing and Evaluation									0.794	0.956	0.837
Description: Test and evaluation of Individual Weapons											
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 2025 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 to FY 2025 Increase/Decrease Statement: Decrease in FY25 funding represents less estimated testing for New Weapons and Enabling Technology.											
Accomplishments/Planned Programs Subtotals									3.812	3.549	3.430
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• S54: Small Arms Improvement	7.950	9.094	7.971	-	7.971	8.974	9.069	9.169	9.261	0.000	61.488
• G13503: M4A1 CARBINE	-	0.571	0.003	-	0.003	0.003	0.003	-	-	0.000	0.580
• G01501: XM320 Grenade Launcher Module (GLM)	11.703	14.143	17.747	-	17.747	17.909	17.930	17.905	18.084	Continuing	Continuing
• G15325: Handgun	-	0.032	0.034	-	0.034	0.007	0.007	-	-	0.000	0.080
• GL3200: Items Less Than \$5.0m (WOCV-WTCV)	5.271	1.148	1.031	-	1.031	2.185	2.189	2.191	2.214	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											



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) S63 / Individual Weapons Engineering Development	

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
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 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S63 / Individual Weapons Engineering Development					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	11.362	0.050	Mar 2023	0.050	Mar 2024	0.050	Mar 2025	-		0.050	Continuing	Continuing	Continuing
Travel	MIPR	PM Soldier Lethality, : Picatinny Arsenal	1.597	0.010	Mar 2023	0.010	Mar 2024	0.010	Mar 2025	-		0.010	Continuing	Continuing	Continuing
Subtotal			12.959	0.060		0.060		0.060		-		0.060	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	5.037	0.408	Mar 2023	0.408	Mar 2024	0.408	Mar 2025	-		0.408	Continuing	Continuing	Continuing
Hardware Development	MIPR	DEVCOM AC, : Multiple	19.658	1.631	Mar 2023	1.243	Mar 2024	1.200	Mar 2025	-		1.200	Continuing	Continuing	Continuing
Subtotal			24.695	2.039		1.651		1.608		-		1.608	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	69.625	0.719	Mar 2023	0.708	Mar 2024	0.710	Mar 2025	-		0.710	Continuing	Continuing	Continuing
Logistics	MIPR	TACOM, : Warren	5.278	0.100	Mar 2023	0.100	Mar 2024	0.100	Mar 2025	-		0.100	Continuing	Continuing	Continuing
Human Research and Engineering	MIPR	Army Research Laboratory, : Aberdeen Proving Ground	4.203	0.100	Mar 2023	0.100	Mar 2024	0.100	Mar 2025	-		0.100	Continuing	Continuing	Continuing
Subtotal			79.106	0.919		0.908		0.910		-		0.910	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S63 / Individual Weapons Engineering Development					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	28.080	0.794	Mar 2023	0.750	Mar 2024	0.757	Mar 2025	-		0.757	Continuing	Continuing	Continuing
Operational Testing	MIPR	Army Test and Evaluation Command, : Aberdeen Proving Ground	18.255	-		0.090	Mar 2024	-		-		-	Continuing	Continuing	Continuing
Validation Testing	MIPR	Army Test and Evaluation Centers, : Multiple	10.567	-		0.090	Mar 2024	0.095	Mar 2025	-		0.095	Continuing	Continuing	Continuing
Subtotal			56.902	0.794		0.930		0.852		-		0.852	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			173.662	3.812		3.549		3.430		-		3.430	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024												
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons								Project (Number/Name) S63 / Individual Weapons Engineering Development										
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) S63 / Individual Weapons Engineering Development	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DESIGN AND DEVELOPMENT	1	2021	4	2029
TEST AND EVALUATION	1	2021	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S70 / Personnel Recovery Support System (PRSS)			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S70: Personnel Recovery Support System (PRSS)	-	1.554	2.591	0.591	-	0.591	0.637	0.644	0.651	0.658	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) 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)**

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Personnel Recovery Systems	1.554	2.591	0.591
<b>Description:</b> The Personnel Recovery Support System (PRSS) consists of items including Personnel Recovery Devices (PRD) 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>FY 2024 Plans:</b> Continues research, development, and evaluation and begins integration and testing of secure and classified components and hardware directly supporting Army personnel recovery requirements.			
<b>FY 2025 Plans:</b> Continues minimal integration and testing of the secure and classified components and hardware directly supporting personnel recovery requirements.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decrease from FY 2024 to FY 2025 is due to completion of the PRSS1b PRD integration/solution of the secure mode.			
<b>Accomplishments/Planned Programs Subtotals</b>	1.554	2.591	0.591

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army							Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons			Project (Number/Name) S70 / Personnel Recovery Support System (PRSS)		

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

Line Item	FY 2023	FY 2024	FY 2025	FY 2025	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Cost To	Total Cost
			Base	OCO	Total					Complete	
• G01101: Personnel Recovery Support System (PRSS)	4.691	5.356	6.503	-	6.503	9.183	9.188	9.196	9.289	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy for the PRSS/PRSE program describes the acquisition approach to procure, field, and support PRSS capabilities that involve executing program development efforts through contracts with industry and reimbursable support agreements with other Government agencies, labs, and Federally Funded Research and Development Centers. The acquisition strategy is based upon leveraging an existing product that meets the additional capabilities required. This approach is preferred for cost and schedule efficiency and lower technical risk. Additionally, there will be a focus on continuing development and testing of new waveforms and hardware to ensure successful interoperability for personnel recovery. This will also help in mitigating potential security compromises to the PRSS/PRSE program, to enhance the detection, identification, and recovery of lost or captured Soldiers during contingency or combat operations, the future program strategy will involve adapting PRSS/PRSE products to align with changing doctrine and concepts of operations (CONOPS). This strategy will ensure that the program remains effective and relevant in evolving operational environments. The overall cost, schedule, and technical risks for the program are assessed as low.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S70 / Personnel Recovery Support System (PRSS)					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Adminstration	Allot	Various Government : Huntsville, Alabama	1.138	0.065		0.062		0.014		-		0.014	Continuing	Continuing	Continuing
Subtotal			1.138	0.065		0.062		0.014		-		0.014	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	11.596	0.710		1.688		0.384		-		0.384	Continuing	Continuing	Continuing
Subtotal			11.596	0.710		1.688		0.384		-		0.384	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	2.408	0.075		0.071		0.016		-		0.016	Continuing	Continuing	Continuing
Subtotal			2.408	0.075		0.071		0.016		-		0.016	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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		0.177		-		0.177	Continuing	Continuing	Continuing
Subtotal			3.509	0.704		0.770		0.177		-		0.177	Continuing	Continuing	N/A



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) S70 / Personnel Recovery Support System (PRSS)				
	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.651	1.554		2.591		0.591		-		0.591	Continuing	Continuing	N/A

Remarks

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**Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army**

**Date:** March 2024

### Appropriation/Budget Activity

2040 / 5

### R-1 Program Element (Number/Name)

PE 0604601A / *Infantry Support Weapons*

Project (Number/Name)

*S70 I Personnel Recovery Support System (PRSS)*

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) S70 / Personnel Recovery Support System (PRSS)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Personnel Recovery (PR) Development	1	2022	4	2029
PR Component, Integration, and Testing	3	2022	4	2029
PRD Secure Mode Upgrades	3	2023	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) VS5 / Soldier Protective Equipment			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
VS5: Soldier Protective Equipment	-	8.963	8.150	8.510	-	8.510	8.513	8.599	8.695	8.782	0.000	60.212
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 developmental testing / operational testing (DT/OT) and Soldier touchpoints, and continued development of SPS technologies transitioning from Project 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 such as Vital Torso Protection (VTP) and Torso and Extremity Protection (TEP), head protection components such as Integrated Head Protection System (IHPS) and Next Generation (NG) IHPS), Military Protective Eyewear systems and other personal protective equipment. This project will continue to support cross-service initiatives to increase commonality.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Soldier Protective Equipment	8.963	8.150	8.510
<b>Description:</b> 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).			
<b>FY 2024 Plans:</b> 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 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.  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			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army							Date: March 2024				
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons			Project (Number/Name) VS5 / Soldier Protective Equipment				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2023	FY 2024	FY 2025		
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).											
FY 2025 Plans: The VS5 project supports testing, integration, human factors evaluations and continued development across the Personal Protective Equipment (PPE) portfolio. These items include hard and soft armor, head protection, hearing protection, and other personal protective equipment.											
The project will fund test support, surveillance, and continuous improvements on Soft and Hard Body Armor and Head Protection capabilities that transition from VS4 project such as Fragmentation Uniform Protective Materials, Test Method Optimization through Parallel Production Testing, Novel Defeat Mechanisms, Torso Plate Backing Evaluation, Improved Blunt Impact Protection, Integrated Head borne Systems, Anti-Fog for Integrated Eyewear Platform, and Lens Longevity efforts to determine efficacy in operational environment.											
Ongoing efforts in this project consist of test methods and measures emerging threat performance of current PPE after exposure to extreme storage and environmental conditions to address and eliminate critical gaps to existing test methods which improve test performance and service life predictions to support repurposing efforts. The project will also continue improving test methodology for the Soldier Protection System (SPS), Next Generation Soldier Protection, human factor evaluations focusing on the female and small-statured soldier, environmental and exposure testing (i.e., cold, tropical and jungle).											
FY 2024 to FY 2025 Increase/Decrease Statement: Funding increase in Soldier Protective Equipment portfolio is due implementation of Improved Blunt Impact Protection in FY 2025.											
Accomplishments/Planned Programs Subtotals							8.963	8.150	8.510		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• VS4: Soldier Protective Equipment	4.815	7.991	5.801	-	5.801	7.810	7.891	7.980	8.060	Continuing	Continuing
• OMA - 121 - 121017000:	-	-	-	-	-	-	-	-	-		
Soldier Modernization -											
Soldier Protection Systems											
Remarks											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604601A / <i>Infantry Support Weapons</i>	<b>Project (Number/Name)</b> <i>VS5 / Soldier Protective Equipment</i>

### 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 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons				Project (Number/Name) VS5 / Soldier Protective Equipment					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	Various SSV : Fort Belvoir, VA	3.494	0.637		0.936		0.830		-		0.830	Continuing	Continuing	Continuing
Subtotal			3.494	0.637		0.936		0.830		-		0.830	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Prototype Contracts	Various	Various : Various	36.843	1.431		2.150		2.350		-		2.350	Continuing	Continuing	Continuing
Prod Sys Engineering Spt	MIPR	Various : Various	14.031	2.815		2.330		2.090		-		2.090	Continuing	Continuing	Continuing
Subtotal			50.874	4.246		4.480		4.440		-		4.440	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Engineering Spt	MIPR	CCDC-SC : Natick, MA	7.774	0.485		0.635		0.698		-		0.698	Continuing	Continuing	Continuing
Subtotal			7.774	0.485		0.635		0.698		-		0.698	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Environmental/HFE	MIPR	Various DTC & OTC : Various DTC & OTC	14.957	1.315		0.559		0.650		-		0.650	Continuing	Continuing	Continuing
Surveillance Testing - Base Threat/Emerging Threat	TBD	TBD : TBD	5.127	2.280		1.540		1.892		-		1.892	Continuing	Continuing	Continuing
Subtotal			20.084	3.595		2.099		2.542		-		2.542	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons					Project (Number/Name) VS5 / Soldier Protective Equipment			
	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	82.226	8.963		8.150		8.510		-		8.510	Continuing	Continuing	N/A

Remarks



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**Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army**

Date: March 2024

Appropriation/Budget Activity
2040 / 5

<b>R-1 Program Element (Number/Name)</b>
PE 0604601A / <i>Infantry Support Weapons</i>

<b>Project (Number/Name)</b> <i>VS5 / Soldier Protective Equipment</i>
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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604601A / Infantry Support Weapons	Project (Number/Name) VS5 / Soldier Protective Equipment	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Test and Qualify Improvements to SPS	1	2022	4	2029
Torso Protection Improvements	1	2022	4	2029
Head Protection Improvements	1	2022	4	2029
Hard Armor Protection Improvements	1	2022	4	2029
SPS System Level Test Technology Insertions	1	2022	4	2029
Non-Destructive Test Equipment	1	2023	4	2027

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

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604604A / Medium Tactical Vehicles							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	21.354	28.226	15.088	-	15.088	6.530	36.627	3.581	3.617	0.000	115.023
H07: Family Of Med Tac Veh	-	21.354	28.226	15.088	-	15.088	6.530	36.627	3.581	3.617	0.000	115.023

## A. Mission Description and Budget Item Justification

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

The Family of Medium Tactical Vehicles (FMTV) includes Cargo, Tractor, Load Handling System (LHS), Wrecker, Expandable Van, Shop Van, and Dump variants with payloads ranging from 3-tons to 10-tons and associated companion trailers. FMTV trucks perform over 55 percent of the Army's local haul, line haul, and unit resupply missions. It operates throughout theater as multi-purpose transportation vehicles in combat, combat support, and combat service support units. Funding from this Program Element will be used to support the continued evolution of the future FMTV fleet as well as tech insertion opportunities to keep the current FMTV fleet relevant on today's battlefield. This includes upgrades in survivability and crew protection, improved safety by leveraging advancements in commercial active safety technologies, improved utilization through modularity, integration of advanced high efficiency powertrains and fuel saving technologies, and insertion of autonomous vehicle capabilities that will change the way transportation missions are conducted around the world.

FY 2025 Project H07 Base funds in the amount of \$15.088 million will be used for Demand Reduction initiatives and Improved Vehicle Safety Technologies.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	22.163	28.226	15.058	-	15.058
Current President's Budget	21.354	28.226	15.088	-	15.088
Total Adjustments	-0.809	0.000	0.030	-	0.030
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.809	-			
• Adjustments to Budget Years	-	-	0.030	-	0.030

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604604A / Medium Tactical Vehicles	
<div>Change Summary Explanation</div> <div>decrease due to minor economic adjustment.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604604A / Medium Tactical Vehicles				Project (Number/Name) H07 / Family Of Med Tac Veh			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
H07: Family Of Med Tac Veh	-	21.354	28.226	15.088	-	15.088	6.530	36.627	3.581	3.617	0.000	115.023
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

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

This Project also supports development of Demand Reduction initiatives such as Vehicle Electrification, Onboard Vehicle Power, Fuel Sense, Predictive Logistics (PL) and other demand reduction related technologies for the Tactical Wheeled Vehicle fleet.

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

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

FY 2025 Project H07 Base funds in the amount of \$3.588 million will be used for development and integration of Improved Vehicle Safety Technologies, including active safety technologies such as front collision warning, collision mitigation, lane keeping assist, adaptive cruise control, and 360 degree situational awareness.

FY 2025 Project H07 Base funds in the amount of \$11.500 million will be used to continue the development, test, and integration of Demand Reduction initiatives such as Tactical Vehicle Anti-Idle Retrofit Kit, On Board Vehicle Power, Hybrid Propulsion, and other associated technologies for the Tactical Wheeled Vehicle fleet.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> FMTVA2 Production and ECP Modernization Effort	2.354	0.500	3.588
<b>Description:</b> Funding used to support the continued evolution of the future FMTV fleet as well as tech insertion opportunities to keep the current FMTV fleet relevant on today's battlefield. The FMTVA2 production and ECP modernization effort restores vehicle performance that was lost due to the addition of armor protection kits as the threat to tactical vehicles and the FMTV has increased. Live Fire test assets are needed to support Live Fire Testing required per Chapter 139, Title 10 USC. Operational Testing required per Chapter 141, Title 10 USC.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604604A / <i>Medium Tactical Vehicles</i>		<b>Project (Number/Name)</b> H07 / <i>Family Of Med Tac Veh</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>FY 2024 Plans:</b> FY 2024 will continue to fund the development of Improved Vehicle Safety Technologies					
<b>FY 2025 Plans:</b> FY 2025 Project H07 Base funds will be used for the development of Improved Vehicle Safety Technologies for the FMTV A2 Fleet.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funds have increased due to start of the development and integration of Improved Vehicle Safety Technologies.					
<b>Title:</b> FMTV LVAD Next Generation Model  <b>Description:</b> Updates to the FMTV Low Velocity Air Drop (LVAD) are needed to address obsolescence issues and to modernize the fleet.			4.000	2.726	-
<b>FY 2024 Plans:</b> FY 2024 will fund the LVAD Automotive Production Qualification Testing, Transportation testing, LVAD Airdrop safety certification testing.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funds have decreased for the Low Velocity Air Drop Vehicle (LVAD) development as LVAD transitions to the production in FY 2025.					
<b>Title:</b> Climate Change Initiatives  <b>Description:</b> Funding will be used to develop Demand Reduction Engineering Change Proposals for the MTV and HTV fleets including Anti-idle, On Board Vehicle Power, Advanced Hybrid Propulsion, and Fuel Sense 2.0. Funding will also be used to develop technologies associated with Demand Reduction including battery modernization, power and energy management, and increased capability at extreme temperatures.			15.000	25.000	11.500
<b>FY 2024 Plans:</b> FY2024 Project H07 Base funds in the amount of \$25.000 million will be used to develop engineer change proposals for the MTV Anti-Idle kits and continue to fund the HTV prototype development and test. It will procure On board vehicle Power prototypes kits, fund the integration and start of test. Funds will also support testing of FuelSense 2.0 technologies, as well as fund the development of other technologies associated with the combatting climate change, power and battery modernization strategies and the support of artic strategies for the Tactical Wheeled Vehicle fleet.					
<b>FY 2025 Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army								<b>Date:</b> March 2024			
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604604A / <i>Medium Tactical Vehicles</i>				<b>Project (Number/Name)</b> H07 / <i>Family Of Med Tac Veh</i>			
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	
FY2025 Project H07 Base funds in the amount of \$11.500 million will be used for the continuation of engineering change proposals for the FMTV and FHTV test for Anti-Idle, On-Board Vehicle Power and fund the integration and start of test. Funds will also support the continuation of the development of other technologies associated with Demand Reduction, power and battery modernization strategies, and the support of arctic strategies for the Tactical Wheeled Vehicle fleet.											
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funds represent a decrease due to the completion of prototypes, beginning of test, and the transition in FY 2026 to production.											
<b>Accomplishments/Planned Programs Subtotals</b>								21.354	28.226	15.088	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• D15500: <i>Family Of Medium Tactical Veh (FMTV)</i>	211.378	110.734	133.924	-	133.924	128.049	104.308	127.969	85.621	0.000	901.983
• D04016: <i>MEDIUM TACTICAL VEHICLE PROTECTION KITS</i>	-	-	-	-	-	-	-	-	-		
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
The strategy to develop, integrate, and test Improved Vehicle Safety Technologies is to leverage active safety capabilities developed commercially and adapt for military use on the FMTV. The development and integration will be conducted either via STS Task Order with the vehicle OEM or an Other Transaction Authority (OTA) with industry.											
The FMTV program will continually monitor emerging technologies and capabilities and leverage existing partnerships within the science and technology centers as well as through industry market research and partnerships in order to support Demand Reduction initiatives such as Vehicle Electrification, Onboard Vehicle Power, Fuel Sense, Predictive Logistics (PL) and other demand reduction related technologies for the Tactical Wheeled Vehicle fleet. The anticipated outcomes of these efforts are fully validated Engineering Change Proposals that can be applied to the current and future FMTV fleet.											
The FMTV program will procure prototypes via Other Transaction Authority (OTA) Agreements for test and evaluation, including soldier touch points to gain user feedback. The OTAs then offer a path to transition to production.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604604A / Medium Tactical Vehicles				Project (Number/Name) H07 / Family Of Med Tac Veh					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
FMTV Improved Vehicle Safety Technologies	MIPR	ATEC : ABERDEEN PROVING GROUNDS, MD	2.700	0.600	Mar 2023	0.500	Mar 2024	3.588	Mar 2025	-		3.588	0.000	7.388	-
Climate Change Initiatives	TBD	tbd : tbd	-	15.000	Mar 2023	25.000	Jun 2024	11.500	Mar 2025	-		11.500	0.000	51.500	-
FMTV Implementation of Predictive logistics	TBD	tbd : tbd	0.300	-		-		-		-		-	0.000	0.300	-
LVAD PROTOTYPES FMTV	SS/FFP	OshKosh Defense : OshKosh, WI	-	3.392		-		-		-		-	0.000	3.392	-
Subtotal			3.000	18.992		25.500		15.088		-		15.088	0.000	62.580	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
FMTV LVAD Testing	MIPR	Army Test Center (ATC) : Aberdeen Proving Grounds, MD	0.477	2.362	Nov 2022	-		-		-		-	0.000	2.839	-
LVAD PVT / PQT	MIPR	Army Test Center (ATC) : Aberdeen Proving Grounds, MD	-	-		2.726	Mar 2024	-		-		-	0.000	2.726	-
Subtotal			0.477	2.362		2.726		-		-		-	0.000	5.565	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			3.477	21.354		28.226		15.088		-		15.088	0.000	68.145	N/A
Remarks															



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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604604A / Medium Tactical Vehicles		Project (Number/Name) H07 / Family Of Med Tac Veh

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FMTVA2																												
FMTVA2 Operational Testing (OT)																												
FMTVA2 Type Classification and Material Release (TC/MR)																												
FMTVA2 First Unit Equipped (FUE)																												
FMTV LVAD NEXT GENERATION MODEL																												
FMTV LVAD Next Generation Model Analysis																												
FMTV LVAD Live Fire Test																												
FMTV LVAD Air Drop / Production Qualification Testing (PQT)																												
FMTV LVAD TRANSITION TO PROCUREMENT																												
FMTV Improved Vehicle Safety Development Integration Testing																												
FMTV Climate Change Initiatives																												
Electrification Anti-Idle																												
Electrification Demand Reduction Initiatives																												

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Exhibit R-4A, RDT&amp;E Schedule Details: PB 2025 Army

Date: March 2024

Appropriation/Budget Activity

2040 / 5

R-1 Program Element (Number/Name)

PE 0604604A / Medium Tactical Vehicles

Project (Number/Name)

H07 / Family Of Med Tac Veh

## Schedule Details

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

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Army	<b>Date:</b> March 2024
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	PE 0604611A / JAVELIN											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	15.899	7.827	10.405	-	10.405	10.085	10.192	10.306	10.409	0.000	75.123
499: <i>Javelin (AAWS-M)</i>	-	15.899	7.827	10.405	-	10.405	10.085	10.192	10.306	10.409	0.000	75.123

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

The Javelin Advanced Anti-Tank Weapon System-Medium (AAWS-M) is a man-portable, fire-and-forget, medium-range missile with enhanced situational awareness and precision direct-fire effects to defeat armored vehicles, fortifications, and soft targets in a range of military operations. Javelin has a high kill rate against a variety of targets at extended ranges under day/night, battlefield obscurants, adverse weather and multiple counter-measure conditions. The system's soft launch feature permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a disposable launch tube assembly. The system also includes training devices for tactical training and classroom training. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality through the use of a tandem multi-purpose warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. This system also provides defensive capability against attacking/hovering helicopters. The CLU can also be used as a stand-alone surveillance and target acquisition asset. Javelin can be adapted for use on a variety of platforms and remote weapon stations using the Javelin Vehicle Platform Adapter Kit (JVPK). The Javelin weapon system is an Army-led, Acquisition Category (ACAT) IC Major Defense Acquisition Program (MDAP) that has joint interest with United States forces and international partners. Research, Development, Test & Evaluation (RDT&E) funding provides for system improvements in accordance with the Javelin Capabilities Production Document objectives and user priorities for future development.

FY 2025 dollars in the amount of \$10.405 million will continue Javelin system improvements to address emerging threats, improve engagement timeline, and increase lethality.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	16.186	7.827	10.384	-	10.384
Current President's Budget	15.899	7.827	10.405	-	10.405
Total Adjustments	-0.287	0.000	0.021	-	0.021
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.287	-			
• Adjustments to Budget Years	-	-	0.021	-	0.021

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604611A / JAVELIN	
<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<b>Project:</b> 499: Javelin (AAWS-M)			
Congressional Add: Program Increase - Army Requested Transfer from MiP Line 11		8.316	-
Congressional Add Subtotals for Project: 499		8.316	-
Congressional Add Totals for all Projects		8.316	-
<b>Change Summary Explanation</b> Increase due for minor economic adjustment increase.			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604611A / JAVELIN				Project (Number/Name) 499 / Javelin (AAWS-M)			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
499: Javelin (AAWS-M)	-	15.899	7.827	10.405	-	10.405	10.085	10.192	10.306	10.409	0.000	75.123
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Javelin Advanced Anti-Tank Weapon System-Medium (AAWS-M) is a man-portable, fire-and-forget, medium-range missile with enhanced situational awareness and precision direct-fire effects to defeat armored vehicles, fortifications, and soft targets in a range of military operations. Javelin has a high kill rate against a variety of targets at extended ranges under day/night, battlefield obscurants, adverse weather and multiple counter-measure conditions. The system's soft launch feature permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a disposable launch tube assembly. The system also includes training devices for tactical training and classroom training. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality through the use of a tandem multi-purpose warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. This system also provides defensive capability against attacking/hovering helicopters. The CLU can also be used as a stand-alone surveillance and target acquisition asset. Javelin can be adapted for use on a variety of platforms and remote weapon stations using the Javelin Vehicle Platform Adapter Kit (JVPAK). The Javelin weapon system is an Army-led, Acquisition Category (ACAT) IC Major Defense Acquisition Program (MDAP) that has joint interest with United States forces and international partners. Research, Development, Test & Evaluation (RDT&E) funding provides for system improvements in accordance with the Javelin Capabilities Production Document objectives and user priorities for future development.

FY 2025 dollars in the amount of \$10.405 million will continue Javelin system improvements to address emerging threats, improve engagement timeline, and increase lethality.

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

	FY 2023	FY 2024	FY 2025
<b>Title:</b> Javelin System Improvements	7.471	7.712	10.288
<b>Description:</b> Javelin Weapon System Research and Development funding line completes development of a new Lightweight Command Launch Unit (LWCLU), conducts countermeasure and threat mitigation as well as develops critical software/hardware upgrades for the Javelin Missile System. It provides improved capability to the warfighter by doubling the target identification range and increasing system engagement range up to 4km, while reducing soldier burden. LWCLU and Missile Software improvements, like Auto-Gate/Fast-Launch, will address emerging threats, improve engagement timeline, and increase lethality.			
<b>FY 2024 Plans:</b> Complete LWCLU Qualification Testing. Begin software improvements, including Auto-Gate/Fast-Launch, to improve the Javelin Weapons System engagement time and increase lethality against emerging threats and potential adversary countermeasures.			
<b>FY 2025 Plans:</b>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604611A / JAVELIN				Project (Number/Name) 499 / Javelin (AAWS-M)		
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
Continue software improvements and begin hardware improvements to improve the Javelin Weapon System engagement time and increase lethality against emerging threats and potential adversary countermeasures.											
FY 2024 to FY 2025 Increase/Decrease Statement: The increase in funding from FY 2024 to FY 2025 is to begin hardware improvements to improve the Javelin Weapon System engagement time.											
Title: Integration and Countermeasure/Threat management									0.112	0.115	0.117
Description: Integration and Countermeasure/Threat management allows for technical assessments, concept studies, documentation, prototypes, demonstrations and risk mitigation efforts to address emerging threats and to maintain modernized overmatch capability for U.S. and Allied Nations ground forces.											
FY 2024 Plans: Continue to perform technical assessments, concept studies, prepare documentation, develop prototypes and perform risk reduction efforts to address emerging threats as well as peer and near peer adversary Javelin countermeasures.											
FY 2025 Plans: Continue to perform technical assessments, concept studies, prepare documentation, develop prototypes and perform risk reduction efforts to address emerging threats as well as peer and near peer adversary Javelin countermeasures.											
FY 2024 to FY 2025 Increase/Decrease Statement: Minor increase due to economic assumptions.											
Accomplishments/Planned Programs Subtotals									7.583	7.827	10.405
									FY 2023	FY 2024	
Congressional Add: Program Increase - Army Requested Transfer from MiP Line 11									8.316	-	
FY 2023 Accomplishments: Congressional Interest Item funding provided for Army Requested Transfer from MiP Line 11.											
Congressional Adds Subtotals									8.316	-	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• H06102: JAVELIN (AAWS-M)	811.396	132.564	165.313	-	165.313	307.499	315.476	322.918	330.958	0.000	2,386.124
• H06103: Javelin Lightweight Command Launch Unit (CLU)	63.122	66.945	160.807	-	160.807	164.448	163.351	167.240	170.520	0.000	956.433

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604611A / JAVELIN				Project (Number/Name) 499 / Javelin (AAWS-M)			
C. Other Program Funding Summary (\$ in Millions)											
				<u>FY 2025</u>	<u>FY 2025</u>	<u>FY 2025</u>				<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>		<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Complete</u> <u>Total Cost</u>
<u>Remarks</u>											
D. Acquisition Strategy											
Current Acquisition Strategy addresses software and hardware technology upgrades to the Javelin system. The Javelin Lightweight Command Launch Unit (LWCLU) addresses the Close Combat Missile System-Medium (CCMS-M) Capability Production Document requirement for a low soldier burden dismounted anti-tank missile system. System upgrades will address emerging threats, improve engagement timeline and increase lethality. Development effort utilizes prime contractor, Javelin Joint Venture (Raytheon, Tucson, AZ, and Lockheed Martin, Orlando, FL). The Javelin Joint Venture has invested Independent Research and Development in the LWCLU. Future LWCLU and Missile system upgrades will continue to address emerging threats and ensure modernized overmatch capability for U.S and allied ground forces. LWCLU is currently in Low-Rate Initial Production (LRIP) with Full-Rate Production (FRP) scheduled in FY 2024. Pre-Planned Product Improvements will be cut into future production as Engineering Change Proposals (ECPs) to the existing LWCLU and missile configurations. These improvements will include technology refresh efforts as necessary, and capability enhancements as prioritized by the requirements developer.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army													Date: March 2024		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604611A / JAVELIN				Project (Number/Name) 499 / Javelin (AAWS-M)					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
System Engineering/ Program Management, Govt	Various	Multiple : Redstone Arsenal, AL	6.324	0.054	Mar 2023	0.769	Feb 2024	0.785	Feb 2025	-		0.785	0.000	7.932	-
Subtotal			6.324	0.054		0.769		0.785		-		0.785	0.000	7.932	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Javelin System Improvements	Various	Multiple : Various Locations	56.760	-		6.943	Mar 2024	9.503	Mar 2025	-		9.503	0.000	73.206	-
Integration and Counter Measure/Threat management	MIPR	Multiple : Various Locations	0.255	0.112	Mar 2023	0.115	Mar 2024	0.117	Mar 2025	-		0.117	0.000	0.599	-
Subtotal			57.015	0.112		7.058		9.620		-		9.620	0.000	73.805	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Lightweight CLU Qualification	SS/CPFF	JJV/Raytheon/ Lockheed Martin : Orlando, FL/Tucson, AZ	9.454	9.561	Feb 2023	-		-		-		-	0.000	19.015	-
Lightweight CLU Qualification	MIPR	Redstone Test Center : Redstone Arsenal, AL	1.137	1.955	May 2024	-		-		-		-	0.000	3.092	-
Lightweight CLU Airborne Compatibility Qualification Test	MIPR	Yuma Proving Grounds : Yuma, AZ	-	0.122	Apr 2023	-		-		-		-	0.000	0.122	-
Lightweight CLU Operational Testing	MIPR	Multiple : Various Locations	1.146	4.095	Apr 2023	-		-		-		-	0.000	5.241	-
Subtotal			11.737	15.733		-		-		-		-	0.000	27.470	N/A



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604611A / JAVELIN				Project (Number/Name) 499 / Javelin (AAWS-M)					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Remarks FY 2024 - Due to failures found in system qualification, additional qualification testing (Delta Qual) will be required in FY 2024. FY 2024 testing will be conducted using residual FY 2023 funds.															
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			75.076	15.899		7.827		10.405		-		10.405	0.000	109.207	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army										Date: March 2024			
Appropriation/Budget Activity					R-1 Program Element (Number/Name)					Project (Number/Name)			
2040 / 5					PE 0604611A / JAVELIN					499 / Javelin (AAWS-M)			

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Lightweight Command Launch Unit (LWCLU)																												
LWCLU Qualification Testing																												
LWCLU Airborne Compatibility Qualification Test																												
LWCLU Operational Testing																												
Javelin System Improvements																												
Auto-Gate/Fast-Launch																												
Formal Qualification Test (FQT)																												
Flight Test																												
ECP Cut-in 1																												
LWCLU HIPPI CCA Modernization																												
LWCLU HIPPI CCA Qualification Test																												
ECP Cut-in 2																												
Integration and Counter Measure/Threat management																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604611A / JAVELIN	<b>Project (Number/Name)</b> 499 / Javelin (AAWS-M)	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Lightweight Command Launch Unit (LWCLU)	3	2021	1	2024
LWCLU Qualification Testing	3	2021	1	2024
LWCLU Airborne Compatibility Qualification Test	4	2023	4	2023
LWCLU Operational Testing	1	2023	4	2023
Javelin System Improvements	1	2020	4	2028
Auto-Gate/Fast-Launch	2	2024	4	2029
Formal Qualification Test (FQT)	4	2028	4	2028
Flight Test	3	2029	3	2029
ECP Cut-in 1	4	2029	4	2029
LWCLU HIPPI CCA Modernization	1	2025	4	2029
LWCLU HIPPI CCA Qualification Test	2	2029	3	2029
ECP Cut-in 2	4	2029	4	2029
Integration and Counter Measure/Threat management	4	2022	4	2029

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604622A I Family of Heavy Tactical Vehicles							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	51.261	44.197	50.011	-	50.011	34.527	39.110	50.102	50.604	0.000	319.812
659: Family Of Hvy Tac Veh	-	23.392	7.232	-	-	-	-	-	-	-	0.000	30.624
DG7: Common Tactical Truck	-	-	23.905	4.605	-	4.605	11.288	16.069	11.032	11.143	0.000	78.042
E50: TRAILER DEVELOPMENT	-	0.710	-	-	-	-	-	-	-	-	0.000	0.710
EZ8: Leader/Follower	-	27.159	13.060	45.406	-	45.406	23.239	23.041	39.070	39.461	0.000	210.436

## Note

The execution for CTT was previously tracked on 0604622A / Family of Heavy Tactical Vehicles - Project Number 659. Out-year funding for Heavy Tactical Vehicles (HTV) is also captured on Project Number DG7 but will be transferred to project 659 before the next budget cycle.

## A. Mission Description and Budget Item Justification

This Program Element (PE) aligns system development and demonstration of Heavy Tactical Vehicles (HTV) with Multi-Domain Operations (MDO) requirements to support combat and combat support missions to include line haul, local haul, and unit resupply. HTV trucks transport water, ammunition, and general cargo over all terrains and throughout the battle-space. Systems include the Heavy Expanded Mobility Tactical Truck (HEMTT), Palletized Load System (PLS), Heavy Equipment Transporter System (HETS), Enhanced Heavy Equipment Transporter System (EHETS), Line Haul, Heavy Dump Truck (HDT), medium tactical trailers including the Medium Equipment Trailer (MET), the family of flatbed semitrailers to include but not limited to the 40-Ton M870, 34-Ton M872 and the 25-Ton M172 that support multiple Army missions and the development and demonstration of enablers. Recovery systems such as the Modular Catastrophic Recovery System (MCRS) and other heavy wreckers, that rescue large wheeled and track vehicle platforms in severe off-road conditions are also included. Periodic evolutionary upgrade of survivability and crew protection as described in the Long Term Protection Strategy (LTPS) is supported by this PE for both the HTV family of vehicles and the Family of Medium Tactical Vehicles (FMTV). Arctic and Demand Reduction Initiatives are also supported by this PE.

The Common Tactical Truck (CTT) is the next generation of tactical trucks to meet the Army's Tactical Wheeled Vehicle (TWV) Modernization Strategy to take full advantage of economies of scale and commonality with the objective to procure a commercial based Family of Vehicles to replace HEMTT, PLS, Line Haul and M1088 vehicles and leverage best commercial practices at lower procurement costs that are autonomy ready. CTT Middle Tier of Acquisition Rapid Prototyping effort is \$59.370 million RDT&E from FY22 to FY26. The remainder of the CTT MTA program is fully funded across the Future Years Defense Program.

The Leader Follower (LF) funding line supports the Autonomous Transport Vehicle-System (ATV-S) effort that equips Tactical Wheeled Vehicles with autonomous behaviors. Additionally, the capability gives convoy commanders flexibility to leverage the six levels of automated driving that range from Level 0 (Fully Manual) to Level 5 (Fully Autonomous), and any combination therein to conduct convoy operations. Autonomous driving behaviors enables increased operational efficiency of tactical wheeled vehicles resulting in an increase of sustainment throughput while reducing Soldier exposure to hostile threats. The total cost of the Autonomous Transport Vehicle-System (ATV-S) Middle Tier of Acquisition Rapid Prototyping effort is \$84.580 million from FY23 to FY26. The ATV-S MTA-RP program is fully funded across the Future Years Defense Program.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army			Date: March 2024			
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604622A I Family of Heavy Tactical Vehicles				
Funding supports modernization of the current Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: Predictive Logistics, vetronics, transportability of tactical wheeled vehicle equipment, vehicle electrification, fully autonomous operations, and other emerging technologies. Funding also supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.						
In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		53.014	44.197	18.430	-	18.430
Current President's Budget		51.261	44.197	50.011	-	50.011
Total Adjustments		-1.753	0.000	31.581	-	31.581
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-1.753	-			
• Adjustments to Budget Years		-	-	31.581	-	31.581
Congressional Add Details (\$ in Millions, and Includes General Reductions)					FY 2023	FY 2024
Project: 659: Family Of Hvy Tac Veh						
Congressional Add: HTV Winter Tires					5.000	-
Congressional Add Subtotals for Project: 659					5.000	-
Congressional Add Totals for all Projects					5.000	-
Change Summary Explanation						
The increase for FY25 is attributable to funding the Autonomous Transport Vehicle-System (ATVS) program activities under a planned Middle Tier of Acquisition - Rapid Prototyping (MTA-RP) pathway.						

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) 659 / Family Of Hvy Tac Veh			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
659: Family Of Hvy Tac Veh	-	23.392	7.232	-	-	-	-	-	-	-	0.000	30.624
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
No FY25 Base 659 mission requirements. Funds were transferred to DG7, Common Tactical Truck, for execution.												
In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), these items are necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025	
Title: Common Tactical Truck (CTT) Non-Recurring Engineering									0.435	-	-	
Description: Middle Tier Acquisition is being considered for rapid prototyping, including designs by multiple vendors for replacement of the M915 Tractor, Palletized Loading System (PLS) and Heavy Expanded Mobility Tactical Truck (HEMTT).												
Title: Common Tactical Truck (CTT) Prototype Manufacturing									12.300	-	-	
Description: Middle Tier Acquisition is being considered for rapid prototyping, including designs by multiple vendors for replacement of the M915 Tractor, Palletized Loading System (PLS) and Heavy Expanded Mobility Tactical Truck (HEMTT).												
Title: Common Tactical Truck (CTT) Matrix Functional Support									2.920	-	-	
Description: Matrix Functional Support is required to address/augment Engineering and Logistic functions, capabilities and gaps to supplement core employee competencies.												
Title: Common Tactical Truck (CTT) Test Planning Development									1.212	-	-	
Description: The CTT Prototype Testing and Soldier Touch Points will determine which vendor's prototype meets the program's desired characteristics such as Digitization and Autonomy Ready.												
Title: Common Tactical Truck (CTT) Requirements Framing Analysis									0.430	-	-	
Title: Predictive Logistics (PL) Development									0.875	2.007	-	
Description: Development of PL Engineer Change Proposals (ECPs) to enable the Tactical Wheeled Vehicle fleet to transition from time-based/conditioned-based maintenance to the ability to act prior to material failure.												
FY 2024 Plans:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604622A / Family of Heavy Tactical Vehicles	<b>Project (Number/Name)</b> 659 / Family Of Hvy Tac Veh		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Development of Engineer Change Proposals (ECPs) for the Digital Source Collector Ruggedized (DSCR), Operator Support Device (OSD), and Digital Logbook (DLB) applications.				
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding reduced to support reduction in the development of Predictive Logistics Change Proposals and realigned resources within the same PE to support project DG7 Common Tactical Truck.				
<b>Title:</b> HTV Matrix Functional Support  <b>FY 2024 Plans:</b> Funding required in FY24 for functional matrix support for HTV efforts  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding reduced to support reduction in the development of Predictive Logistics Change Proposals and realigned resources within the same PE to support project DG7 Common Tactical Truck.		0.220	0.225	-
<b>Title:</b> Predictive Logistics - Rapid Sustainment Improvement Process (RSIP)  <b>Description:</b> Rapid Sustainment Improvement Process (RSIP) is used for projects and processes that can improve current sustainment throughout the Department of Defense, including, Capturing information from sensors already on the vehicles, assist with the accurate analysis for system usage, assessing the actual health of the fleet and accurate life cycle cost reporting.  <b>FY 2024 Plans:</b> FY 2024 funds implements the Rapid Sustainment Improvement Process (RSIP) for predictive logistics in support of the HEMTT and PLS programs.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> RSIP effort completed in FY24		-	5.000	-
<b>Accomplishments/Planned Programs Subtotals</b>		18.392	7.232	-
		<b>FY 2023</b>	<b>FY 2024</b>	
<b>Congressional Add:</b> HTV Winter Tires  <b>FY 2023 Accomplishments:</b> Development, prototype builds, and testing of advanced tire technology.		5.000	-	
<b>Congressional Adds Subtotals</b>		5.000	-	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army								<b>Date:</b> March 2024			
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604622A / Family of Heavy Tactical Vehicles				<b>Project (Number/Name)</b> 659 / Family Of Hvy Tac Veh			

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• DA0924: <i>Modification Of In Svc Equip</i>	140.869	80.326	169.726	-	169.726	234.974	300.615	231.440	222.959	Continuing	Continuing
• DA0500: <i>Family Of Heavy Tactical Vehicles (FHTV)</i>	275.047	66.428	98.906	-	98.906	71.371	68.938	64.862	65.512	0.000	711.064

**Remarks**

DA0924 - Modification Of In Svc Equip and DA0500 - Family of Heavy Tactical Vehicles are shared funding lines with other product offices

**D. Acquisition Strategy**

The Common Tactical Truck (CTT) Family of Vehicles (FoVs) is a modernization effort to replace the Line Haul, HEMTT, PLS, and M1088 vehicles. The CTT has an approved Abbreviated Capability Development Document (A-CDD) and has been approved to pursue the Middle-Tier of Acquisition Rapid Prototyping pathway with an anticipated transition to Major Capability Acquisition for Low-Rate Initial production. The rapid prototyping effort will be executed as a competitive Other Transaction Authority (OTA), awarded to four offerors to deliver three prototypes and three digital designs/studies. The Operational Demonstration / Soldier Touch Points and prototype assessments will inform the Capability Development Document (CDD).

The strategy to develop, integrate and test Predictive Logistics technologies is to leverage existing capabilities developed commercially and adapt for military use on the tactical wheeled vehicle fleet. Development and testing will be conducted by the U.S. Army Capabilities Development Command and ECPs will be integrated by the vehicle Original Equipment Manufacturers.



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles						Project (Number/Name) 659 / Family Of Hvy Tac Veh			
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
CTT Non-Recurring Engineering	C/IDIQ	Various : Various	3.887	0.435	Jan 2023	-		-		-		-	0.000	4.322	-
CTT Prototype Manufacturing	C/IDIQ	Various : Various	-	12.300	Jul 2023	-		-		-		-	0.000	12.300	-
PL Development	TBD	TBD : TBD	-	0.875	Jun 2023	2.007	Jan 2024	-		-		-	Continuing	Continuing	-
HTV Winter Tires	TBD	National Center for Manufacturing Sciences Commercial Technologies for Maintenance : Michigan	-	2.100	Apr 2023	-		-		-		-	0.000	2.100	-
PL - Rapid Sustainment Improvement Process (RSIP)	TBD	TBD : TBD	-	-		5.000	Jan 2024	-		-		-	Continuing	Continuing	-
Subtotal			3.887	15.710		7.007		-		-		-	Continuing	Continuing	N/A
Remarks															
CTT Non-Recurring Engineering and Prototype Manufacturing awarded to four vendors: Mack Defense, Navistar Defense, American Rheinmetall Vehicles, Oshkosh Defense															
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
CTT Matrix Functional Support	MIPR	TACOM LCMC : Warren, MI	1.009	2.920	Jan 2023	-		-		-		-	0.000	3.929	-
Requirement Frame Analysis (RFA) report	MIPR	Ft. Leavenworth, MD : Ft. Leavenworth, MD	-	0.430	Mar 2023	-		-		-		-	0.000	0.430	-
PdM HTV Matrix Functional Support	MIPR	TACOM, LCMC : Warren, MI	-	0.220	Mar 2023	0.225	Mar 2024	-		-		-	Continuing	Continuing	-
HTV Winter Tires Support Cost	TBD	TACOM, LCMC : Warren, MI	-	1.579	Jul 2023	-		-		-		-	0.000	1.579	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2025 Army</b>												<b>Date: March 2024</b>			
<b>Appropriation/Budget Activity</b> 2040 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604622A / Family of Heavy Tactical Vehicles						<b>Project (Number/Name)</b> 659 / Family Of Hvy Tac Veh			
<b>Support (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			1.009	5.149		0.225		-		-		-	Continuing	Continuing	N/A
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
CTT Test Planning Development	MIPR	Aberdeen Test Center (ATC) : Aberdeen, MD	-	1.212	Aug 2023	-		-		-		-	0.000	1.212	-
HTV Winter Tires Testing	TBD	Gound Vehicle Systems Center, Michigan Technological University : Michigan	-	1.321	Jul 2023	-		-		-		-	0.000	1.321	-
<b>Subtotal</b>			-	2.533		-		-		-		-	0.000	2.533	N/A
			<b>Prior Years</b>	<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			4.896	23.392		7.232		-		-		-	Continuing	Continuing	N/A
<b>Remarks</b>															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles		Project (Number/Name) 659 / Family Of Hvy Tac Veh	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
PL Development																												
PL ECP Development																												
PL ECP Production																												
Common Tactical Truck (CTT)																												
RFA, Trade-Space Analysis, CDD Development																												
OTA #1 Award																												
DP MTA-RP Entry																												
Prototype Delivery																												
Performance Testing/ Operational Demonstration / Solider...																												
Framing Analysis																												
AROC																												
JROC																												
CDD																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles		Project (Number/Name) 659 / Family Of Hvy Tac Veh	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Outcome Determination / Exit MTA RP / Enter MCA / MS C																												
Contract Award																												
Test Asset Build																												
DT/ OT/ PQT																												
Production LRIP																												
HTV Winter Tire																												
HTV Winter Tire Testing																												

**Note**  
The CTT schedule was approved by the Army Acquisition Executive (AAE) during the Middle Tier of Acquisition - Rapid Prototyping Initiation Brief in January 2023.

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604622A / Family of Heavy Tactical Vehicles	<b>Project (Number/Name)</b> 659 / Family Of Hvy Tac Veh	

**Schedule Details**

Events	Start		End	
	Quarter	Year	Quarter	Year
PL Development	1	2024	4	2027
PL ECP Development	1	2024	4	2027
PL ECP Production	2	2026	4	2028
Common Tactical Truck (CTT)	1	2021	4	2027
RFA, Trade-Space Analysis, CDD Development	4	2022	3	2025
OTA #1 Award	2	2023	2	2023
DP MTA-RP Entry	2	2023	2	2023
Prototype Delivery	2	2024	2	2024
Performance Testing/ Operational Demonstration / Solider Touch Points	2	2024	4	2024
Framing Analysis	2	2024	4	2024
AROC	4	2025	4	2025
JROC	2	2026	2	2026
CDD	2	2026	2	2026
Outcome Determination / Exit MTA RP / Enter MCA / MS C	3	2026	3	2026
Contract Award	1	2027	1	2027
Test Asset Build	1	2027	4	2027
DT/ OT/ PQT	2	2029	2	2031
Production LRIP	4	2028	3	2031
Full Rate Production	3	2031	1	2041
HTV Winter Tire	3	2023	4	2024
HTV Winter Tire Testing	3	2023	4	2024

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles	Project (Number/Name) 659 / Family Of Hvy Tac Veh

**Note**  
The CTT schedule was approved by the Army Acquisition Executive (AAE) during the Middle Tier of Acquisition - Rapid Prototyping Initiation Brief in January 2023.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) DG7 / Common Tactical Truck			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
DG7: Common Tactical Truck	-	-	23.905	4.605	-	4.605	11.288	16.069	11.032	11.143	0.000	78.042
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note												
The execution for CTT was previously tracked on 0604622A / Family of Heavy Tactical Vehicles - Project Number 659. Out-year funding for Heavy Tactical Vehicles (HTV) is also captured on Project Number DG7 but will be transferred to project 659 before the next budget cycle.												
A. Mission Description and Budget Item Justification												
The Common Tactical Truck (CTT) is a Family of Vehicles (FoV) modernization effort to replace the HEMTT, PLS, Line Haul, and M1088 vehicles while leveraging the best commercial practices, lowering procurement cost (commercial economies of scale), and incorporating technology upgrades including Predictive Logistics, Advanced Driver Assistance Systems (ADAS), and autonomy ready without significantly degrading the performance from current platforms.												
Heavy Tactical Vehicles (HTV) Predictive Logistics (PL) and Data Integration Ground Systems (DIGS) Development enables the Tactical Wheeled Vehicle fleet to transition from time-based/conditioned-based maintenance to the ability to act prior to materiel failure; conserves combat power for the battlefield commander. DIGS Development enables the Tactical Wheeled Vehicle fleet to transition from time-based/conditioned-based maintenance to the ability to act prior to materiel failure; conserves combat power for the battlefield commander.												
FY 2025 Project DG7 Base funds in the amount of \$2.005 million supports the matrix functional support for the Common Tactical Truck Program. FY2025 Project DG7 Base funds in the amount of \$2.600 million supports DIGS development for Heavy Tactical Vehicles. The DIGS effort provides Heavy Tactical Vehicles with Engineer Change Proposals (ECPs) that will enhance fleet readiness and help to overcome the effects obsolescence.												
The total cost of the CTT Middle Tier of Acquisition Rapid Prototyping effort is \$59.370 million RDT&E from FY22 to FY26. The remainder of the CTT MTA program is fully funded across the Future Years Defense Program.												
Matrix Functional Support is required to address/augment Engineering and Logistic functions, capabilities and gaps to supplement core employee competencies. System Engineering oversight and multiple functions of Logistics support such as management, fielding, tracking and documentation is required during the acquisition process.												
In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), these items are necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025	
Title: CTT Prototype Manufacturing									-	8.170	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles	Project (Number/Name) DG7 / Common Tactical Truck		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<b>Description:</b> Middle Tier Acquisition is being considered for rapid prototyping, including designs by multiple vendors for replacement of the M915 Tractor, Palletized Loading System (PLS) and Heavy Expanded Mobility Tactical Truck (HEMTT).  <b>FY 2024 Plans:</b> Funding for phase three of OTA award.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funds reduced due to prototype manufacturing completion in FY24.				
<b>Title:</b> CTT Matrix Functional Support  <b>Description:</b> Matrix Functional Support is required to address/augment Engineering and Logistic functions, capabilities and gaps to supplement core employee competencies.  <b>FY 2024 Plans:</b> Funding for CTT matrix functional support.  <b>FY 2025 Plans:</b> Funding for CTT matrix functional support.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decreased funding as a result of completed prototypes and testing efforts in FY24.		-	3.860	2.005
<b>Title:</b> CTT Prototype Testing  <b>Description:</b> Developmental testing consisting of safety, performance and limited durability testing.  <b>FY 2024 Plans:</b> Funding used for the testing of the CTT prototypes from the four vendors.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Reduced funding because completed testing in FY24.		-	9.609	-
<b>Title:</b> CTT Soldier Assessment  <b>Description:</b> Evaluation of the prototype system performance while operating the vehicles in an environment that best represents the mission profiles defined for the variants procured. Also will introduce Soldiers to the new technologies provided by the CTT such as digital backbone, Active Safety Systems, anti-idle and other energy saving technologies and solicit their feedback.  <b>FY 2024 Plans:</b>		-	2.266	-



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army								Date: March 2024			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) DG7 / Common Tactical Truck			
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2023	FY 2024	FY 2025	
Funding for the Soldier assessment of the CTT prototypes.											
FY 2024 to FY 2025 Increase/Decrease Statement: Funding reduced due to CTT Soldier Assessment completion in FY24											
Title: Predictive Logistics (PL) Data Integration Ground Systems (DIGS) Development								-	-	2.600	
Description: Development of PL Engineer Change Proposals (ECPs) to enable the Tactical Wheeled Vehicle fleet to transition from time-based/conditioned-based maintenance to the ability to act prior to material failure.											
FY 2025 Plans: Development of Engineer Change Proposals (ECPs) for the Digital Source Collector Ruggedized (DSCR), Operator Support Device (OSD), and Digital Logbook (DLB) applications.											
FY 2024 to FY 2025 Increase/Decrease Statement: Funds increased to continue the Predictive Logistics Data Integration Ground Systems Development effort from Project 659.											
Accomplishments/Planned Programs Subtotals								-	23.905	4.605	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• D17011: CTT LINE HAUL	-	-	0.000	-	0.000	-	-	69.470	80.940	0.000	150.410
Remarks											
D. Acquisition Strategy											
The Common Tactical Truck (CTT) Family of Vehicles (FoVs) is a modernization effort to replace the Line Haul, HEMTT, PLS, and M1088 vehicles. The CTT has an approved Abbreviated Capability Development Document (A-CDD) and has been approved to pursue the Middle-Tier of Acquisition Rapid Prototyping pathway with an anticipated transition to Major Capability Acquisition for Low-Rate Initial production. The rapid prototyping effort will be executed as a competitive OTA, awarded to four offerors to deliver three prototypes and three digital designs/studies. The Operational Demonstration/Soldier Touch Points and prototype assessments will inform the Capability Development Document (CDD).											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army													Date: March 2024		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) DG7 / Common Tactical Truck					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
CTT Prototype Manufacturing	C/IDIQ	TBD : TBD	-	-		8.170	Dec 2023	-		-		-	0.000	8.170	-
Predictive Logistics DIGS Development	TBD	TBD : TBD	-	-		-		2.600	Jan 2025	-		2.600	0.000	2.600	-
Subtotal			-	-		8.170		2.600		-		2.600	0.000	10.770	N/A
Remarks CTT Non-Recurring Engineering and Prototype Manufacturing awarded to four vendors: Mack Defense, Navistar Defense, American Rheinmetall Vehicles, Oshkosh															
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Functional Support	MIPR	TACOM LCMP : Warren, MI	-	-		3.860	Jan 2024	2.005	Jan 2025	-		2.005	0.000	5.865	-
Subtotal			-	-		3.860		2.005		-		2.005	0.000	5.865	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
CTT Prototype Testing	MIPR	U.S. Army Test Center : Aberdeen, MD	-	-		9.609	Feb 2024	-		-		-	0.000	9.609	-
CTT Soldier Assessment	MIPR	Aberdeen Test Center : ATC, MD	-	-		2.266	May 2024	-		-		-	0.000	2.266	-
Subtotal			-	-		11.875		-		-		-	0.000	11.875	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		23.905		4.605		-		4.605	0.000	28.510	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army							Date: March 2024			
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles			Project (Number/Name) DG7 / Common Tactical Truck				
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles		Project (Number/Name) DG7 / Common Tactical Truck	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Common Tactical Truck																												
RFA, Trade-Space Analysis, CDD Development																												
OTA #1 Award		1																										
DP MTA-RP Entry		2																										
Prototype Delivery						3																						
Performance Testing/ Operational Demonstration / Solider...																												
Framing Analysis																												
AROC												4																
JROC														5														
CDD															6													
Outcome Determination / Exit MTA RP / Enter MCA / MS C																7												
Contract Award																	8											
Test Asset Build																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles	Project (Number/Name) DG7 / Common Tactical Truck	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
DT / OT/PQT																												
Production LRIP																												
Predictive Logistics Development																												
Predictive Logistics Development ECP Development																												
Predictive Logistics Development ECP Productions																												

**Note**  
The CTT schedule was approved by the Army Acquisition Executive (AAE) during the Middle Tier of Acquisition - Rapid Prototyping Initiation Brief in January 2023.

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles	Project (Number/Name) DG7 / Common Tactical Truck	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Common Tactical Truck	2	2022	4	2028
RFA, Trade-Space Analysis, CDD Development	4	2022	3	2025
OTA #1 Award	2	2023	2	2023
DP MTA-RP Entry	2	2023	2	2023
Prototype Delivery	2	2024	2	2024
Performance Testing/ Operational Demonstration / Solider Touch Points	2	2024	4	2024
Framing Analysis	2	2024	4	2024
AROC	4	2025	4	2025
JROC	2	2026	2	2026
CDD	2	2026	2	2026
Outcome Determination / Exit MTA RP / Enter MCA / MS C	3	2026	3	2026
Contract Award	1	2027	1	2027
Test Asset Build	1	2027	4	2027
DT / OT/ PQT	2	2029	2	2031
Production LRIP	4	2028	3	2031
Full Rate Production	3	2031	1	2041
Predictive Logistics Development	1	2024	4	2027
Predictive Logistics Development ECP Development	1	2024	4	2027
Predictive Logistics Development ECP Productions	2	2026	4	2028

### Note

The CTT schedule was approved by the Army Acquisition Executive (AAE) during the Middle Tier of Acquisition - Rapid Prototyping Initiation Brief in January 2023.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) E50 / TRAILER DEVELOPMENT			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
E50: TRAILER DEVELOPMENT	-	0.710	-	-	-	-	-	-	-	-	0.000	0.710
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Medium Equipment Trailer (MET) provides critical layered, agile and responsive sustainment capability required for Large Scale Combat Operations (LSCO). The MET supports Multi-Domain Operations (MDO) with the ability to maneuver across strategic distances by providing intermediate weight combat vehicles transportation for a competitive advantage. The MET will be assigned to Heavy Equipment Transporter Systems (HETS) Companies and Composite Truck Companies- Heavy (CTC-H) to expeditiously move Combat Tracked Vehicles such as the Bradley Fighting Vehicle, Armored Multi-Purpose Vehicles (AMPV), Paladin and Field Artillery Ammunition Support Vehicles (FAASV) with a threshold of up to 60 tons and an objective to meet up to 70 tons while also obtaining North Atlantic Treaty Organization (NATO) road permits with a 45 ton payload. The MET will also be capable of transporting vehicles at the OCONUS standard minimum bridge and underpass clearance of 157.5 inches (4 meters).

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Medium Equipment Trailer (MET) Prototype Testing and Soldier Assessment	0.710	-	-
<b>Description:</b> MET prototypes will be tested to determine which trailer provides the best value to the Government while meeting the MET requirement. To assist in determining the best value to the Government, a Soldier touch point will also be a part of the evaluation. The best value determination will be used to support a follow on production contract.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.710	-	-

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

<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• DA0926: MODIFICATION APPLICATION	13.070	26.717	96.292	-	96.292	140.898	185.435	116.004	106.366	0.000	684.782
• D08921: MEDIUM EQUIPMENT TRAILER (MET)	20.260	41.639	61.090	-	61.090	60.492	60.417	61.204	61.816	0.000	366.918

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army							Date: March 2024		
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) E50 / TRAILER DEVELOPMENT		

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

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Remarks											

D. Acquisition Strategy

The Acquisition Strategy is to execute the MET as a competitive Other Transaction Agreement (OTA) awarded to two Original Equipment Manufacturers (OEMs). The OEMs will provide three prototypes per vendor in preparation to test and down-select to one vendor for follow-on production.



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024					
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles						Project (Number/Name) E50 / TRAILER DEVELOPMENT					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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		
MET Prototype Testing	MIPR	Aberdeen Test Center (ATC) : Abderdeen, MD	2.510	0.710	Apr 2023	-		-		-		-	0.000	3.220	-		
Subtotal			2.510	0.710		-		-		-		-	0.000	3.220	N/A		
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals			2.510	0.710		-		-		-		-	0.000	3.220	N/A		
Remarks																	

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles		Project (Number/Name) E50 / TRAILER DEVELOPMENT	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Medium Equipment Trailer (MET)																												
MET Competitive Run-off Test																												
MET OTA Down Select																												
MET Milestone C																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles	Project (Number/Name) E50 / TRAILER DEVELOPMENT	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Medium Equipment Trailer (MET)	1	2022	4	2023
MET Materiel Development Decision	2	2021	2	2021
MET Request Prototype Proposal (RPP)	3	2021	3	2021
MET Other Transaction Agreement (OTA) Award	1	2022	1	2022
MET Prototype Manufacturing	1	2022	4	2022
MET Competitive Run-off Test	1	2023	3	2023
MET OTA Down Select	3	2023	3	2023
MET Milestone C	4	2023	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) EZ8 / Leader/Follower			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
EZ8: Leader/Follower	-	27.159	13.060	45.406	-	45.406	23.239	23.041	39.070	39.461	0.000	210.436
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Leader Follower (LF) funding line supports the Autonomous Transport Vehicle-System (ATV-S) effort that equips Tactical Wheeled Vehicles with autonomous behaviors. Additionally, the capability gives convoy commanders flexibility to leverage the six levels of automated driving that range from Level 0 (Fully Manual) to Level 5 (Fully Autonomous), and any combination therein to conduct convoy operations. Autonomous driving behaviors enables increased operational efficiency of tactical wheeled vehicles resulting in an increase of sustainment throughput while reducing Soldier exposure to hostile threats.

The total cost of the Autonomous Transport Vehicle-System (ATV-S) Middle Tier of Acquisition Rapid Prototyping effort is \$84.580 million from FY23 to FY26. The ATV-S MTA-RP program is fully funded across the Future Years Defense Program.

Funding supports modernization of the current Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: Predictive Logistics, vetronics, transportability of tactical wheeled vehicle equipment, vehicle electrification, fully autonomous operations, and other emerging technologies. Funding also supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Tactical Wheeled Vehicle Leader Follower (Autonomous Transport Vehicle-System)	27.159	13.060	45.406
<b>Description:</b> Leader Follower (Autonomous Transport Vehicle-System program) equips Tactical Wheeled Vehicles with autonomous behaviors to reduce Soldier risk and increase convoy throughput.			
<b>FY 2024 Plans:</b> FY 2024 funds agile software development for additional autonomous behaviors, configuration management, competitive demonstration & evaluation, and logistics activities.			
<b>FY 2025 Plans:</b> FY 2025 funds the completion of Phase I - Competitive Demonstration and Evaluation of up to three vendor solutions, execution of Phase II - Vendor Prototype Build and Evaluation of up to two vendor solutions, and down select to single vendor solution and award prototypes for Phase III - Build Prototypes / Conduct Operational Demonstration. Activities funded include program management, technical design reviews, test, cyber, prototypes, contractor support and spares to support test, and Government support to vendors using government-provided software.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) EZ8 / Leader/Follower			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
FY 2024 to FY 2025 funding increase due to ATV-S requirements to support prototype demonstration, test, and award prototype build for Phase III operational demonstration activities.											
Accomplishments/Planned Programs Subtotals									27.159	13.060	45.406
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• R06806: Leader/ Follower Applique (L/F)	-	0.438	0.000	-	0.000	1.900	2.431	3.618	5.065	0.000	13.452
• W20897: AUTONOMOUS TRANSPORT VEHICLE (ATV)	-	-	0.577	-	0.577	1.233	1.220	1.221	1.234	0.000	5.485
Remarks											
D. Acquisition Strategy											
The Leader Follower (Autonomous Transport Vehicle-System (ATV-S) program) strategy utilizes the Middle Tier of Acquisition (MTA) Rapid Prototyping pathway to compete multiple contractor solutions through a three phased competitive selection process. The ATV-S program has entered Phase I, Prototype Build and Demonstration with three awarded contractors. Phase I will conclude with the evaluation of the three contractor solutions through a demonstration event, and transition to Phase II with two vendors selected to continue into performance test and evaluation. The best value solution from Phase II will transition to Phase III to build additional prototypes to support the FY26 Army Transportation Company-level evaluation required to gain operational feedback to support the follow-on production acquisition.											

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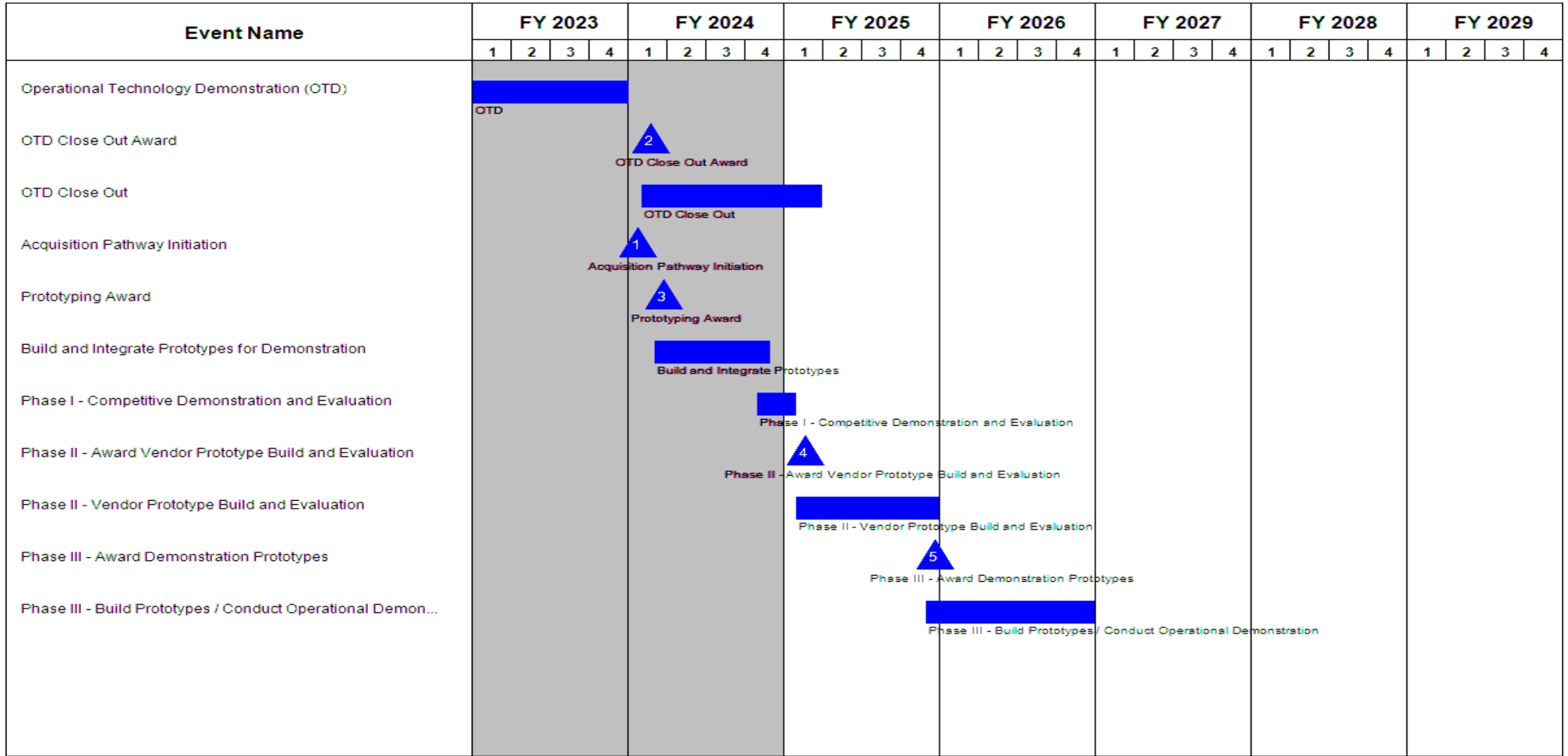
Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army													Date: March 2024		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles				Project (Number/Name) EZ8 / Leader/Follower					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
LF / ATV-S Program Management	Allot	PM FP : Warren, MI; Harrison Twp, MI	4.085	0.811	Oct 2022	1.833	Oct 2023	6.214	Oct 2024	-		6.214	0.000	12.943	-
Subtotal			4.085	0.811		1.833		6.214		-		6.214	0.000	12.943	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Operational Technology Demonstration, Maturation, And Close Out	C/CPFF	Multiple : Various	15.883	-		-		-		-		-	0.000	15.883	-
Development Engineering	MIPR	GVSC : Warren, MI	-	3.367		-		4.291	Oct 2024	-		4.291	0.000	7.658	-
Prototyping Award	C/FFP	Multiple : Various	-	12.430	Aug 2023	5.435	Nov 2023	-		-		-	0.000	17.865	-
Phase II - Vendor Prototype Build and Evaluation	C/FFP	Multiple : Various	-	-		-		11.217	Nov 2024	-		11.217	0.000	11.217	-
Phase III - Build Prototypes / Conduct Operational Demonstration	C/FFP	Multiple : Various	-	-		-		15.321	Sep 2025	-		15.321	0.000	15.321	-
Subtotal			15.883	15.797		5.435		30.829		-		30.829	0.000	67.944	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Tech Support	MIPR	GVSC, TACOM : Warren, MI	2.425	10.551	Oct 2022	5.042	Oct 2023	0.173	Oct 2024	-		0.173	0.000	18.191	-
Data	TBD	TBD : TBD	-	-		-		0.402	Nov 2024	-		0.402	0.000	0.402	-
Subtotal			2.425	10.551		5.042		0.575		-		0.575	0.000	18.593	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles						Project (Number/Name) EZ8 / Leader/Follower			
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Government Test Support	MIPR	ATEC : Aberdeen, MD	5.177	-		0.750	Mar 2023	6.707	Nov 2024	-		6.707	0.000	12.634	-
SIL Support	MIPR	GVSC : Warren, MI	-	-		-		1.081	Nov 2024	-		1.081	0.000	1.081	-
Subtotal			5.177	-		0.750		7.788		-		7.788	0.000	13.715	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			27.570	27.159		13.060		45.406		-		45.406	0.000	113.195	N/A
Remarks Cost breakout changed in FY25 to better reflect FY23 initiated MTA-RP approach.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604622A / Family of Heavy Tactical Vehicles	Project (Number/Name) EZ8 / Leader/Follower	





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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604622A / <i>Family of Heavy Tactical Vehicles</i>	<b>Project (Number/Name)</b> EZ8 / <i>Leader/Follower</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Operational Technology Demonstration (OTD)	1	2022	4	2023
OTD Close Out Award	1	2024	1	2024
OTD Close Out	1	2024	1	2025
Acquisition Pathway Initiation	1	2024	1	2024
Prototyping Award	1	2024	1	2024
Build and Integrate Prototypes for Demonstration	1	2024	4	2024
Phase I - Competitive Demonstration and Evaluation	4	2024	1	2025
Phase II - Award Vendor Prototype Build and Evaluation	1	2025	1	2025
Phase II - Vendor Prototype Build and Evaluation	1	2025	4	2025
Phase III - Award Demonstration Prototypes	4	2025	4	2025
Phase III - Build Prototypes / Conduct Operational Demonstration	4	2025	4	2026

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Army	<b>Date:</b> March 2024
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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> / BA 5: <i>System Development &amp; Demonstration (SDD)</i>					<b>R-1 Program Element (Number/Name)</b> PE 0604633A / <i>Air Traffic Control</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	2.527	1.134	0.982	-	0.982	0.539	0.544	0.551	0.557	0.000	6.834
586: <i>Air Traffic Control</i>	-	2.527	1.134	0.982	-	0.982	0.539	0.544	0.551	0.557	0.000	6.834

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

Program Element (PE) 0604633A Air Traffic Control funds continuous efforts in the development of modernized tactical Air Traffic Control (ATC) systems that enable safety of aircraft operations. ATC systems are required to achieve or maintain compliance with civil, military, domestic and international ATC mandates and combat identification requirements.

The Tactical Airspace Integration System (TAIS) is the Army's program of record for Airspace Control (AC) and enroute Air Traffic Services (ATS). TAIS provides Airspace Management, planning, and dynamic execution capabilities at all echelons above Brigade, and enroute flight following air traffic services. TAIS is the only Army system with direct interface to the U.S. Air Force Air Operations Center (AOC) Weapon System for submission of the Army's requests for airspace from the Battlefield Coordination Detachment (BCD). Airspace Coordinating Measure Requests (ACMREQs) received from other mission command systems are passed to TAIS for approval or higher coordination. TAIS software supports U.S. Army commanders, airspace users, airspace managers, Army air traffic controllers, Joint organizations, and Unified Action Partners (UAP) by providing digitized, multi-echelon planning and execution of airspace management and Air Traffic Services. TAIS provides AC planning and enhanced AC execution; improved theater, intra-, and inter-Corps/Division Air Traffic Services (ATS) support; effective battlespace synchronization; and direct links to the Theater Air Ground System (TAGS) through interface with the automated airspace planning and communications systems of the Joint Force Air Component Commander (JFACC).

TAIS Common Operating Environment (COE) convergence to Integrated Mission Planning and Airspace Control Tools (IMPACT) will provide interoperability with Army Mission Command, Joint, and UAP systems. This will facilitate AC capabilities, enhance situational understanding, reduce risks, and provide more effective Air-Ground Integration to enable Multi-Domain Operations (MDO), Joint All Domain Operations (JADO), and Joint All Domain Command and Control (JADC2). IMPACT will be instantiated across Command Post Computing Environment (CE), Mounted CE, and Mobile/Handheld CE and will extend AC services to the tactical edge.

TAIS/IMPACT will leverage Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) technology. ASTARTE provides artificial intelligence and machine learning algorithms which will allow IMPACT to achieve more rapid synchronization of airspace planning and dynamic execution. This will enable commanders to maximize airspace usage, increase freedom of maneuver in the 3rd dimension, enhance safety and fratricide prevention, and enable seamless integration / deconfliction of fires and aviation operations in highly congested and complex environments during Large Scale Combat Operations (LSCO).

The Air Traffic Navigation Integration and Coordination System (ATNAVICS) is a highly mobile Airport Surveillance Radar and Precision Approach Radar system that provides Air Traffic Services at Army airfields and landing sites at Division, Corps, and Echelons above Corps to include services for Joint and Allied aircraft. ATNAVICS integrates capabilities to control aircraft both Outside of the Continental United States and in the Continental United States. ATNAVICS is upgrading the Interrogation Identification Friend-or-Foe (IFF) system to maintain international airspace compatibility, capture flight information through the reception of aircraft self-reporting data broadcasts, and process into an interconnected air picture.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604633A / Air Traffic Control				
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		2.623	1.134	1.005	-	1.005
Current President's Budget		2.527	1.134	0.982	-	0.982
Total Adjustments		-0.096	0.000	-0.023	-	-0.023
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.096	-			
• Adjustments to Budget Years		-	-	-0.023	-	-0.023
Change Summary Explanation						
The decrease in FY25 reduces investment in additional Mission Planning Capabilities into IMPACT Web Services to Provide Battalion and Above Support for Mission Planning. These capabilities include display of FLIP data on map, additional tactical message support possibly including K5.17 air overlay message.						

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604633A / Air Traffic Control				Project (Number/Name) 586 / Air Traffic Control			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
586: Air Traffic Control	-	2.527	1.134	0.982	-	0.982	0.539	0.544	0.551	0.557	0.000	6.834
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

The Tactical Airspace Integration System (TAIS) is the Army's program of record for Airspace Control (AC) and enroute Air Traffic Services (ATS). TAIS provides Airspace Management, planning, and dynamic execution capabilities at all echelons above Brigade, and enroute flight following air traffic services. TAIS is the only Army system with direct interface to the U.S. Air Force Air Operations Center (AOC) Weapon System for submission of the Army's requests for airspace from the Battlefield Coordination Detachment (BCD). Airspace Coordinating Measure Requests (ACMREQs) received from other mission command systems are passed to TAIS for approval or higher coordination. TAIS software supports U.S. Army commanders, airspace users, airspace managers, Army air traffic controllers, Joint organizations, and Unified Action Partners (UAP) by providing digitized, multi-echelon planning and execution of airspace management and Air Traffic Services. TAIS provides AC planning and enhanced AC execution; improved theater, intra-, and inter-Corps/Division Air Traffic Services (ATS) support; effective battlespace synchronization; and direct links to the Theater Air Ground System (TAGS) through interface with the automated airspace planning and communications systems of the Joint Force Air Component Commander (JFACC).

TAIS modernization is mandated through Common Operating Environment (COE) Software convergence, and eventually C2 Fix and Pivot strategies, to the Integrated Mission Planning and Airspace Control Tools (IMPACT). IMPACT contributes to four of the Army's six modernization priorities: future vertical lift, long range precision fires, the network, and air and missile defense. IMPACT also directly supports the National Military Strategy Joint force task of integrating capabilities rapidly. IMPACT is the software convergence of AC and will provide interoperability with Army Mission Command, Joint, and UAP systems. This will facilitate AC capabilities, enhance situational understanding, reduce risks, and provide more effective Air-Ground Integration to enable Multi-Domain Operations (MDO), Joint All Domain Operations (JADO), and Joint All Domain Command and Control (JADC2). IMPACT will be instantiated across Command Post Computing Environment (CE), Mounted CE, and Mobile/Handheld CE and will extend AC services to the tactical edge. Any changes driven by the C2 Pivot and Fix strategy will be assessed in terms of cost, schedule, and performance impacts to product development. The modernized software baseline is following Continuous Integration/Continuous Deployment (CI/CD) tenants of the Software Acquisition Pathway (SWP) of the Adaptive Acquisition Framework (AAF) to leverage the shift to more Agile acquisition to mirror modern Agile development and delivery. This includes use of Government owned Software Factories and DEVSECOPS processes to ensure that products are tested early and often to mitigate cyber and other vulnerabilities to delivery hardened code from the Minimum Viable Product (MVP) through all successive Minimum Viable Capability Releases (MVCR).

TAIS and IMPACT plans to leverage Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) technology. ASTARTE provides artificial intelligence and machine learning algorithms which will allow IMPACT to achieve more rapid synchronization of airspace planning and dynamic execution. This will enable commanders to maximize airspace usage, increase freedom of maneuver in the 3rd dimension, enhance safety and fratricide prevention, and enable seamless integration / deconfliction of fires and aviation operations in highly congested and complex environments during Large Scale Combat Operations (LSCO). Persistent experimentation events like Project Convergence and COCOM sponsored exercises continue to confirm the existence of airspace planning and management challenges that are only increasing in complexity. IMPACT has been part of Project Convergence and Experimental Demonstration Gateway Event (EDGE) events in demonstrating critical mission threads showing a measurable reduction in sensor to shooter timelines.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604633A / <i>Air Traffic Control</i>		<b>Project (Number/Name)</b> 586 / <i>Air Traffic Control</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Tactical Airspace Integration System (TAIS)			2.527	1.134	0.982
<p><b>Description:</b> The Tactical Airspace Integration System (TAIS) is the Army's program of record for Airspace Control (AC) and enroute Air Traffic Services (ATS). TAIS provides Airspace Management, planning, and dynamic execution capabilities at all echelons above Brigade, and enroute flight following air traffic services. TAIS is the only Army system with direct interface to the U.S. Air Force Air Operations Center (AOC) Weapon System for submission of the Army's requests for airspace from the Battlefield Coordination Detachment (BCD). Airspace Coordinating Measure Requests (ACMREQs) received from other mission command systems are passed to TAIS for approval or higher coordination. TAIS software supports U.S. Army commanders, airspace users, airspace managers, Army air traffic controllers, Joint organizations, and Unified Action Partners (UAP) by providing digitized, multi-echelon planning and execution of airspace management and Air Traffic Services. TAIS provides AC planning and enhanced AC execution; improved theater, intra-, and inter-Corps/Division Air Traffic Services (ATS) support; effective battlespace synchronization; and direct links to the Theater Air Ground System (TAGS) through interface with the automated airspace planning and communications systems of the Joint Force Air Component Commander (JFACC).</p> <p>TAIS Common Operating Environment (COE) convergence to Integrated Mission Planning and Airspace Control Tools (IMPACT) will provide interoperability with Army Mission Command, Joint, and UAP systems. This will facilitate AC capabilities, enhance situational understanding, reduce risks, and provide more effective Air-Ground Integration to enable Multi-Domain Operations (MDO), Joint All Domain Operations (JADO), and Joint All Domain Command and Control (JADC2). IMPACT will be instantiated across Command Post Computing Environment (CE), Mounted CE, and Mobile/Handheld CE and will extend AC services to the tactical edge.</p> <p>TAIS/IMPACT will leverage Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) technology. ASTARTE provides artificial intelligence and machine learning algorithms which will allow IMPACT to achieve more rapid synchronization of airspace planning and dynamic execution. This will enable commanders to maximize airspace usage, increase freedom of maneuver in the 3rd dimension, enhance safety and fratricide prevention, and enable seamless integration / deconfliction of fires and aviation operations in highly congested and complex environments during Large Scale Combat Operations (LSCO).</p> <p><b>FY 2024 Plans:</b> Continue with IMPACT software development and testing to meet CD Operational Needs Requirements. Continue to develop JADC2 AC capabilities and AC service extension using MCIS and TAK frameworks, plugins, and services. Continue developing a solution to utilize common and enterprise services in all Computing Environments. Continue development for integration and direct machine interfaces to emerging Artificial Intelligence assisted decision making aids to leverage the Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) technology.</p> <p><b>FY 2025 Plans:</b></p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604633A / Air Traffic Control				Project (Number/Name) 586 / Air Traffic Control				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
Continue with IMPACT software development and testing to meet CD Operational Needs Requirements. Continue to develop JADC2 AC capabilities and AC service extension using Mission Command Information System (MCIS) and Tactical Assault Kit (TAK) frameworks, plugins, and services. Continue developing a solution to utilize common and enterprise services in all Computing Environments. Continue development for integration and direct machine interfaces to emerging Artificial Intelligence assisted decision making aids to leverage the Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) technology.												
FY 2024 to FY 2025 Increase/Decrease Statement: The decreased funding reduces investment in additional Mission Planning Capabilities into IMPACT Web Services to Provide Battalion and Above Support for Mission Planning. These capabilities include display of FLIP data on map, additional tactical message support possibly including K5.17 air overlay message.												
Accomplishments/Planned Programs Subtotals										2.527	1.134	0.982
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• AA0050: Air Traffic Control	27.492	21.216	27.428	-	27.428	22.845	11.230	11.206	11.318	0.000	132.735	
Remarks												
D. Acquisition Strategy												
This project is comprised of multiple systems supporting ATC development and test efforts. While the detailed acquisition strategy varies by program, the general strategy for each program is to complete development and testing efforts through contract modifications, engineering service tasks, and new/follow-on contracts. ATC systems are required to achieve or maintain compliance with civil, military, domestic and international air traffic control and upcoming Next Gen requirements and mandates as well as current aircraft self-reporting transponders.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604633A / Air Traffic Control				Project (Number/Name) 586 / Air Traffic Control					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
TAIS IMPACT Software Development	SS/T&M	General Dynamics C4S : Huntsville, AL	45.809	2.286	Jan 2022	0.837	Mar 2024	0.570	Mar 2024	-		0.570	Continuing	Continuing	Continuing
TAIS Cyber/JITC/CTSF Testing	MIPR	Redstone Test Center/CCDC : Redstone Arsenal, AL	0.161	0.241	Jan 2022	0.297	Jan 2024	0.412	Jan 2024	-		0.412	Continuing	Continuing	Continuing
Subtotal			45.970	2.527		1.134		0.982		-		0.982	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			45.970	2.527		1.134		0.982		-		0.982	Continuing	Continuing	N/A
Remarks															
PM: Program Management															
TAIS: Tactical Airspace Integration System															

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**Appropriation/Budget Activity**  
2040 / 5

**R-1 Program Element (Number/Name)**  
PE 0604633A / *Air Traffic Control*

**Project (Number/Name)**  
586 / Air Traffic Control

[illegible]

TAIS: Tactical Airspace Integration System



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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604633A / Air Traffic Control	Project (Number/Name) 586 / Air Traffic Control	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
TAIS and IMPACT Software Development	1	2022	4	2036

**Note**  
TAIS: Tactical Airspace Integration System

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)					PE 0604641A I Tactical Unmanned Ground Vehicle (TUGV)							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	107.975	142.125	92.540	-	92.540	140.898	136.879	142.311	142.322	0.000	905.050
CF5: Robotic Combat Vehicle (BA5) NGCV-CFT	-	107.975	142.125	92.540	-	92.540	140.898	136.879	142.311	142.322	0.000	905.050

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

The Robotic Combat Vehicle (RCV) has transitioned from a family of light, medium, and heavy variants to a single vehicle approach with a common chassis. The Army has decided to field a common platform that will pair elements of the previous RCV medium concept with the RCV common chassis. The development programs, which include a RCV Middle-Tier Acquisition Rapid Prototyping (MTA-RP) and a RCV Software Acquisition Pathway (SWP) program, will produce unmanned ground combat vehicle prototypes to inform Concepts of Operations (CONOPS) and Tactics, Techniques, and Procedures (TTP) maturation, Capabilities Development Document (CDD) development, acquisition and integration of secure advanced autonomy and artificial intelligence algorithms, force design updates, robotic and autonomous systems (RAS) doctrine development, and follow-on production and fielding decisions.

The RCV program will enhance the Human Machine Integration (HMI) effort by soliciting early Soldier feedback to reduce risk to the MTA-RP and SWP acquisition pathways. The RCV MTA-RP program will perform three complementary lines of effort (LOE): 1) Surrogate Prototypes (SP); 2) Full System Prototypes (FSP); 3) and Manned Control Vehicles (MCV), while leveraging the software developed in the SWP to perform incremental capability releases.

The RCV SP LOE utilizes RCV experimental prototypes and new build SP vehicles in an iterative design-upgrade-test approach that includes integration of software updates from the RCV SWP and follow-on Capability Releases (CR) from the RCV SWP. The SP LOE includes recurring design-upgrade-test cycles from FY 2023-2024 that conclude with FORSCOM operational pilots to collect Soldier feedback and demonstrate improved capabilities related to demonstrate improved capabilities to sensors, autonomous software, system safety, control architecture, and network resiliency. Each design-upgrade-test cycle will culminate in a Knowledge Point (KP) to review program progress and determine SP architectures or capabilities ready for incorporation into the FSP LOE. The SP LOE will also serve to validate user requirements, assist in finalization of the RCV Capabilities Development Document (CDD) and inform DOTMLPF-P and force design considerations.

The RCV FSP LOE will leverage mature capabilities from previous RCV experimentation and SP development efforts and integrate additional embedded software, perception sensors, user control interfaces, and communication links that will permit autonomous movement, tele-op movement, and increased battlefield situational awareness. The FSP acquisition strategy includes a robust competition through Other Transaction Authority (OTA) that selected four vendors to deliver platform prototypes to inform down select to a single vendor for prototype build. Developmental testing of prototypes will include safety, Reliability, Availability and Maintainability (RAM), lethality, survivability, and Electromagnetic Environmental Effects (E3) testing. Additionally, Operational Testing (OT) in the form of Prototype Operational Demonstration (POD) will be executed to evaluate system suitability and effectiveness.

The MCV focuses on Control Station hardware and Human Systems Integration into host platforms for RCV operations.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Army	<b>Date:</b> March 2024
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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>
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The RCV SWP focuses on embedded software development and sustainment activities including RCV autonomy software, control station software, and payload control software. A system integration laboratory (SIL) will be used in conjunction with RCV systems to verify and validate software capabilities in both virtual and live test environments. The RCV SWP will provide software capabilities to the SP and FSP LOEs for integration. The RCV SWP will incorporate Soldier and integrator feedback into product roadmaps to guide the development and maturation of critical software capabilities.

The Robotic Combat Vehicle (RCV) development program directly aligns with the Next Generation Combat Vehicle (NGCV) Army Modernization Priority and includes the RCV Middle-Tier Acquisition Rapid Prototyping and a RCV Software Pathway.

The projected total cost of the RCV MTA Rapid Prototyping program is \$497.81 million (then-year dollars) RDT&E from FY 2022 to FY 2027. The remainder of the RCV MTA Rapid Prototyping program is fully funded across the Future Years Defense Program.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	109.849	142.125	142.354	-	142.354
Current President's Budget	107.975	142.125	92.540	-	92.540
Total Adjustments	-1.874	0.000	-49.814	-	-49.814
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.135	-			
• SBIR/STTR Transfer	-4.009	-			
• Adjustments to Budget Years	-	-	-49.814	-	-49.814

**Change Summary Explanation**

Decreased funding associated with a reduction of planned activities for FY25 RCV Surrogate Prototypes FORSCOM Operational Pilot.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)				Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CF5: Robotic Combat Vehicle (BA5) NGCV-CFT	-	107.975	142.125	92.540	-	92.540	140.898	136.879	142.311	142.322	0.000	905.050
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Robotic Combat Vehicle (RCV) has transitioned from a family of light, medium, and heavy variants to a single vehicle approach with a common chassis. The Army has decided to field a common platform that will pair elements of the previous RCV medium concept with the RCV common chassis. The development programs, which include a RCV Middle-Tier Acquisition Rapid Prototyping (MTA-RP) and a RCV Software Acquisition Pathway (SWP) program, will produce unmanned ground combat vehicle prototypes to inform Concepts of Operations (CONOPS) and Tactics, Techniques, and Procedures (TTP) maturation, Capabilities Development Document (CDD) development, acquisition and integration of secure advanced autonomy and artificial intelligence algorithms, force design updates, robotic and autonomous systems (RAS) doctrine development, and follow-on production and fielding decisions.

The RCV program will enhance the Human Machine Integration (HMI) effort by soliciting early Soldier feedback to reduce risk to the MTA-RP and SWP acquisition pathways. The RCV MTA-RP program will perform three complementary lines of effort (LOE): 1) Surrogate Prototypes (SP); 2) Full System Prototypes (FSP); 3) and Manned Control Vehicles (MCV), while leveraging the software developed in the SWP to perform incremental capability releases.

The RCV SP LOE utilizes RCV experimental prototypes and new build SP vehicles in an iterative design-upgrade-test approach that includes integration of software updates from the RCV SWP and follow-on Capability Releases (CR) from the RCV SWP. The SP LOE includes recurring design-upgrade-test cycles from FY 2023-2024 that conclude with FORSCOM operational pilots to collect Soldier feedback and demonstrate improved capabilities related to demonstrate improved capabilities to sensors, autonomous software, system safety, control architecture, and network resiliency. Each design-upgrade-test cycle will culminate in a Knowledge Point (KP) to review program progress and determine SP architectures or capabilities ready for incorporation into the FSP LOE. The SP LOE will also serve to validate user requirements, assist in finalization of the RCV Capabilities Development Document (CDD) and inform DOTMLPF-P and force design considerations.

The RCV FSP LOE will leverage mature capabilities from previous RCV experimentation and SP development efforts and integrate additional embedded software, perception sensors, user control interfaces, and communication links that will permit autonomous movement, tele-op movement, and increased battlefield situational awareness. The FSP acquisition strategy includes a robust competition through Other Transaction Authority (OTA) that selected four vendors to deliver platform prototypes to inform down select to a single vendor for prototype build. Developmental testing of prototypes will include safety, Reliability, Availability and Maintainability (RAM), lethality, survivability, and Electromagnetic Environmental Effects (E3) testing. Additionally, Operational Testing (OT) in the form of Prototype Operational Demonstration (POD) will be executed to evaluate system suitability and effectiveness.

The MCV focuses on Control Station hardware and Human Systems Integration into host platforms for RCV operations.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)	Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT		
The RCV SWP focuses on embedded software development and sustainment activities including RCV autonomy software, control station software, and payload control software. A system integration laboratory (SIL) will be used in conjunction with RCV systems to verify and validate software capabilities in both virtual and live test environments. The RCV SWP will provide software capabilities to the SP and FSP LOEs for integration. The RCV SWP will incorporate Soldier and integrator feedback into product roadmaps to guide the development and maturation of critical software capabilities.					
The Robotic Combat Vehicle (RCV) development program directly aligns with the Next Generation Combat Vehicle (NGCV) Army Modernization Priority and includes the RCV Middle-Tier Acquisition Rapid Prototyping and a RCV Software Pathway.					
The projected total cost of the RCV MTA Rapid Prototyping program is \$497.81 million (then-year dollars) RDT&E from FY 2022 to FY 2027. The remainder of the RCV MTA Rapid Prototyping program is fully funded across the Future Years Defense Program.					
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
Title: RCV (L) Surrogate Prototypes (SP) - Product Development			26.190	31.781	1.500
Description: Engineering design and development of the Surrogate Prototypes (SPs), to include integration of software capability updates from the Software Acquisition Pathway (SWP) program. SP Product Development also includes the design and integration of improvements for safety, perception sensors, and reliability to support the FORSCOM Operational Pilots and modeling and simulation (M&S) efforts. Additionally, SP Product Development includes engineering support to SP vehicle hardware and software updates, in addition to on-site Field Service Representative (FSR) support, New Equipment Training (NET) for all phases of SP testing, and spare parts needed to execute the United States Army Forces Command (FORSCOM) Pilots.					
FY 2024 Plans:					
FY 2024 SP Product Development includes engineering efforts to design and integrate additional mobility autonomy software from the RCV SWP, improved safety and perception upgrades, continued and safety advancements into SPs. Engineering efforts will be provided by both Government Development Centers, to include Ground Vehicle Systems Center (GVSC), Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) Center, and Armaments Center (AC), as well as by the SP vehicle prime contractors, QinetiQ and Textron. FY 2024 SP Product Development also includes GVSC engineering support and spare parts necessary to conduct a six-month 2024 FORSCOM Pilot that will solicit additional Soldier feedback, inform new doctrine for manned/unmanned teaming based operations, validate user requirements, and aid in determination of further SP capabilities ready for incorporation into the FSP LOE.					
FY 2025 Plans:					
FY 2025 SP Product Development supports the termination and close out of RCV surrogate prototyping activities. This includes recovering equipment following FY 2024 FORSCOM Pilot Soldier experimentation, preparing equipment for divestiture from the RCV program, and completing close out activities such as contract closeout, product development transition to the Full System Prototype line of effort, and completing any final activities necessary to conclude SP line of effort objectives and risk reduction efforts. Engineering efforts will be provided by both Government Development Centers, to include Ground Vehicle Systems					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>	<b>Project (Number/Name)</b> CF5 / <i>Robotic Combat Vehicle (BA5) NGCV-CFT</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
Center (GVSC), Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) Center, and Armaments Center (AC), as well as by the SP vehicle prime contractors, QinetiQ and Textron.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to the conclusion of the SP line of effort including Soldier experimentation, developmental testing and evaluation, and risk reduction activities using legacy surrogate prototype platforms. SP efforts will transition to Rapid Capabilities and Critical Technologies Office (RCCTO) in FY25 to support the HMI effort.			
<b>Title:</b> RCV (L) Surrogate Prototypes (SP) - Refurbishment  <b>Description:</b> Refurbishment of Experimental Prototypes or Surrogate Prototypes at the conclusion of developmental testing and Soldier experimentation. Vehicle refurbishment includes scheduled and deferred maintenance as well as prepares the platforms for reliability and capability upgrades needed to support additional developmental testing and Soldier experimentation to solicit feedback on new capabilities, inform doctrine and tactics, techniques, and procedures (TTP) refinement for robotic and autonomous systems (RAS), inform a force design decision, validate user requirements, and aid in determination of SP architectures and technologies ready for incorporation into the FSP LOE.  <b>FY 2024 Plans:</b> Refurbishment/Reset of four (4) RCV (L) Surrogate Prototypes. Includes all labor, parts and transportation necessary to refurbish SPs.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to the conclusion of the SP line of effort including Soldier experimentation, developmental testing and evaluation, and risk reduction activities.		5.100	1.244
<b>Title:</b> RCV (L) Surrogate Prototypes (SP) - Government Test & Evaluation (T&E)  <b>Description:</b> Government Test and Evaluation (T&E) includes Surrogate Prototype (SP) safety testing, developmental testing, and execution of FORSCOM operational pilots to solicit feedback on new capabilities, inform doctrine and tactics, techniques, and procedures (TTP) refinement for robotic and autonomous systems (RAS), inform a force design decision, validate user requirements, and aid in determination of SP architectures and technologies ready for incorporation into the FSP LOE. Additionally, Government T&E includes Modeling and Simulation (M&S) efforts to enhance test design, predict results for comparison with field results, and provide simulation or stimulation of systems and capabilities that are not practical or capable of being fully tested using SP platforms or test facility capabilities.  <b>FY 2024 Plans:</b> FY 2024 Government T&E includes support from the Combat Capabilities Development Command - Armaments Center (CCDC-AC) and the Command, Control, Communication, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR)		5.315	0.300

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)	Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Center, Ground Vehicle Systems Center (GVSC),and Army Test and Evaluation Command (ATEC) test sites for six months of operational testing, shakeout testing, operator training, safety testing, and execution of 2024 FORSCOM Pilot activities. <b>FY 2025 Plans:</b> FY 2025 Government T&E includes support from the Combat Capabilities Development Command - Armaments Center (CCDC-AC) and the Command, Control, Communication, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) Center, Ground Vehicle Systems Center (GVSC), and Army Test and Evaluation Command (ATEC) to complete the FORSCOM Pilot test report and support the completion of developmental test activities for FY 2024 SP product development. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to the conclusion of the SP line of effort, including Soldier experimentation, developmental testing and evaluation, and risk reduction activities. SP efforts will transition to RCCTO in FY25 to support the HMI effort.				
<b>Title:</b> RCV (L) Full System Prototypes (FSP) - Product Development <b>Description:</b> Engineering design and development of Full System Prototypes (FSPs), to include integration of safety, cyber security, autonomy, and Aided Target Detection and Recognition (AiTDR) software updates from the Software Acquisition Pathway (SWP), incorporation of capabilities transitioned from the Surrogate Prototype (SP) Line of Effort (LOE), and integration of dismounted controllers and mounted control stations. Additionally, FSP Product Development includes the integration of Government Furnished Equipment (GFE) and Government Furnished Software (GFS), architecture development to support integration of vehicle software payloads, early assessments to guide product development, and technical support to Government Test and Evaluation (T&E) activities. <b>FY 2024 Plans:</b> FY 2024 product development includes contractor development engineering for additional capabilities to be integrated into RCV(L) FSPs, to include Mounted Mission Command-Transport (MMC- T), platform hardware and software architecture updates to enable integration of Government Furnished Software from the RCV Software Acquisition Pathway (SWP), platform design updates to support safety critical system requirements, integration of Modular Assured Position, Navigation, and Timing System (MAPS), Producibility Engineering Planning (PEP), and new equipment training in support of demonstrator testing. <b>FY 2025 Plans:</b> FY 2025 Product Development includes contractor development engineering for additional capabilities to be integrated into RCV FSPs, to include Mounted Mission Command-Transport (MMC-T), platform hardware and software architecture updates to enable integration of Government Furnished Software from the RCV Software Acquisition Pathway (SWP), platform design updates to support safety critical system requirements, integration of Modular Assured Position, Navigation, and Timing System (MAPS), Producibility Engineering Planning (PEP), and new equipment training in support of prototype testing. FY 2025 Product		26.272	2.246	74.058

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)	Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Development also includes the conclusion of the full and open competition and the FSP contract award for Phase II where the Government down selects to a single vendor for the prototype build, delivering nine (9) RCV FSPs with options to procure more. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase in FY 2025 is due to the award for Phase II in which the Government will select one (1) contractor to develop, produce, and deliver nine (9) RCV Production Representative Prototypes (PRPs) for developmental testing and a POD.				
<b>Title:</b> RCV (L) Full System Prototypes (FSP) - Government Test & Evaluation (T&E) <b>Description:</b> Full System Prototype (FSP) Government Test and Evaluation (T&E) includes all test activities performed at Army Test and Evaluation Center (ATEC) test sites to evaluate FSP system safety, performance, effectiveness, and suitability. Initial T&E will be executed on vendor platform prototypes, while further T&E, to include safety, Reliability, Availability and Maintainability (RAM), lethality, survivability, cybersecurity, and Electromagnetic Environmental Effects (E3) testing, will be conducted on PRPs. Additionally, OT in the form of POD will be completed to evaluate system suitability and effectiveness. <b>FY 2024 Plans:</b> In FY 2024, T&E of demonstrators from up to four (4) vendors will be completed to inform down select to a single vendor for FSP builds. The scope of prototype demonstrators T&E includes safety testing, automotive performance testing, lethality testing, vibration testing, and a soldier evaluation. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to T&E not being planned for FY 2025. T&E is currently scheduled in FY 2024 for test activities evaluating vendors' Phase I Platform Prototypes. T&E is next scheduled for FY 2026 for test activities evaluating the Phase II PRPs.		-	3.069	-
<b>Title:</b> RCV (L) Full System Prototypes (FSP) - Source Selection Evaluation Board (SSEB) <b>Description:</b> Engineering, logistics, product assurance and test, financial management, acquisition, legal, and operations support Selection Evaluation Board (SEB) activities to both select four (4) vendors for prototype build, and down select to a single vendor for PRP prototype builds. SEB expenditures include salaries, training, travel, supplies, facilities, and equipment. <b>FY 2024 Plans:</b> In FY 2024, a Source Selection Evaluation Board (SSEB) will be completed to down select from up to four (4) vendors participating in the initial effort to a single vendor for continued development and FSP prototype builds. SSEB membership will include Government experts in engineering, logistics, product assurance and test, financial management, acquisition, contracting, operations, and law. SSEB expenses include salaries, training, travel, supplies, facilities, and equipment. <b>FY 2025 Plans:</b>		0.600	1.724	0.449



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>	<b>Project (Number/Name)</b> CF5 / <i>Robotic Combat Vehicle (BA5) NGCV-CFT</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<p>In FY 2025, a Selection Evaluation Board (SEB) will conclude to down select from the four (4) vendors to a single vendor for continued development and PRP prototype builds. SEB membership will include Government experts in engineering, logistics, product assurance and test, financial management, acquisition, contracting, operations, and law. SEB expenses include salaries, training, travel, supplies, facilities, and equipment.</p> <p>Any mention of SSEB in FY 2024 Plans or prior should be considered SEB.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease in FY2025 is due to decreased efforts from twelve months in FY 2024 to three months in FY 2025. The down select and contract award is planned for Q2 FY 2025.</p>			
<p><b>Title:</b> Software Acquisition Pathway (SWP) - Capability Release (CR) Development and Integration</p> <p><b>Description:</b> Software Acquisition Pathway (SWP) Capability Release Development and Integration focuses on Robotic Combat Vehicle embedded software development, to include developing and integrating autonomous mobility software, control station software, payload control software, software reliability, and cyber and spectrum resiliency. The SWP program will deliver annual software CRs through the Software System Integrator (SWSI) to both the Surrogate Prototype (SP) and Full System Prototype (FSP) lines of effort within the RCV Middle Tier Acquisition - Rapid Prototyping (MTA-RP) program. Developed software will also be delivered to the SWP systems integration laboratory (SIL) for live and virtual software testing.</p> <p><b>FY 2024 Plans:</b> FY 2024 activities include completion of the MVCR development and testing, and MVCR release to the RCV(L) MTA Rapid Prototyping program for assessment during an FY 2024 FORSCOM Operational Pilot. Additionally, development of the RCV SWP Capability Release (CR 2) will be initiated. CR 2 will incorporate feedback from the FY 2023 FORSCOM Operational Pilot, improved safety and cyber resiliency, and contain expanded autonomous capabilities developed by the Government and Industry, to include autonomous mobility across multiple environments and terrains. Further, CR2 will begin to incorporate refactor and re-architecture recommendations from Industry analysis. CR 2 is targeted for completion and release to the RCV(L) Middle Tier Acquisition - Rapid Prototyping program in 2nd Quarter, FY 2025.</p> <p><b>FY 2025 Plans:</b> Deliver CR1 for integration into the ongoing hardware efforts. CR1 will incorporate feedback from the FY 2023 FORSCOM Operational Pilot, improved safety and cyber resiliency, and contain expanded autonomous capabilities developed by the Government and Industry, to include autonomous mobility across multiple environments and terrains. Further, CR1 will begin to incorporate refactor and re-architecture recommendations from Industry analysis. The SWSI will integrate autonomy software, payload control software, and control station software on the FSP platform prototypes. Development of the RCV SWP CR2 will</p>		5.119	11.724
			4.020

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>	<b>Project (Number/Name)</b> CF5 / <i>Robotic Combat Vehicle (BA5) NGCV-CFT</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
initiate. CR2 will focus on adding additional User Representative prioritized capabilities to further refine DOTMLPF-P and support further Autonomy Vehicle (AV) experimentation.			
Any mention of CR2 in FY 2024 Plans should be considered CR1.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to expected costs of CR1 being less than Minimum Viable Capability Release (MVCR) costs.			
<b>Title:</b> Software Acquisition Pathway (SWP) - Autonomous Mobility Development		18.717	44.206
<b>Description:</b> Development of software and hardware to enable RCV autonomous mobility across a spectrum of use cases, to include marked, on-road surfaces, unmarked surfaces, and multiple on and off-road terrains. RCV Autonomous Mobility software and hardware capabilities will be successively integrated into future SWP Capability Releases for evaluation within the RCV MTA Rapid Prototyping Surrogate Prototyping (SP) and Full System Prototyping (FSP) lines of effort.			2.348
<b>FY 2024 Plans:</b> Continued Autonomous Mobility software and hardware development, focusing on the development of autonomous mobility capabilities for multiple off-road use cases to ensure system utility in diverse military environments. Efforts include development of RCV off-road autonomous mobility software and hardware and integration into commercially-available demonstration vehicles to assess autonomous system development against multiple military off-road use cases. In addition to developing autonomous mobility navigation capabilities, safety and cyber resiliency will continue to be improved, and teleoperations capabilities will be expanded from to off-road use cases. Lastly, autonomous mobility system simulations and off-road testing will be conducted.			
<b>FY 2025 Plans:</b> Continuing to develop hardware and software in support of autonomous mobility with emphasis on the development of multiple on and off-road use cases that allows for system utility in diverse military environments. The RCV on and off-road autonomous mobility software and hardware will be integrated into commercially-available demonstration vehicles to evaluate the autonomous system development against diverse military on and off-road use cases. Continuous improvement will be made upon safety and cyber resiliency, teleoperations abilities as well as continued development of autonomous mobility navigation. Autonomous mobility system simulations and on and off-road testing will be conducted.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to a down select to fewer autonomy vendors and the reduction of scope following an evaluation of commercial autonomy efforts in FY 2024.			
<b>Title:</b> Software Acquisition Pathway (SWP) - DevSecOps Pipeline Development, Software Integration Lab (SIL) Support, and Data Management Support		12.120	22.692
			1.342

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>	<b>Project (Number/Name)</b> CF5 / <i>Robotic Combat Vehicle (BA5) NGCV-CFT</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<p><b>Description:</b> The RCV Software Acquisition Pathway program will develop and mature a DevSecOps pipeline to enable simulation and evaluation of the performance and security of both expanding RCV autonomous capabilities and existing Government and Commercial autonomous software. The DevSecOps Pipeline, will assess software performance across a spectrum of relevant military use cases and will inform the development of new autonomous capabilities and refactoring and re-architecting of the existing code base. Additionally, the RCV SWP program will build and operate a SIL to augment testing of autonomous software and hardware and reduce technical risk. Finally, the RCV SWP program will include class leading pipeline management support to enable effective scaling of data annotation necessary to iteratively incorporate increasing autonomous software capabilities.</p> <p><b>FY 2024 Plans:</b> Continued development of a DevSecOps Data Management Pipeline to enable current and future assessment of RCV autonomous mobility and safety architecture software. The RCV DevSecOps Pipeline will also incorporate relevant military use Operational Design Domain (ODD) descriptions, test cases, and test criteria to effectively enable software performance assessment as autonomous mobility capabilities increase. Appropriate simulation environments to test RCV software will be developed, focusing on enabling performance assessment of off-road capabilities. Additionally, leading class industry analysis of RCV autonomous vehicle stacks (with focus on unmarked road and off-road navigation), to include assessments of simulated performance and live performance on surrogate demonstrators, will be performed to inform improvements to future RCV SWP CRs. Lastly, FY 2024 efforts include SIL operation and data pipeline management support to RCV autonomous software developers to enable effective scaling of data labeling necessary to iteratively incorporate increasing autonomous software capabilities.</p> <p><b>FY 2025 Plans:</b> Continued development of a DevSecOps Data Management Pipeline to enable current and future assessment of RCV Autonomous Mobility and safety architecture software. Military use Operational Design Domain (ODD) descriptions, test cases and test criteria will be incorporated into the RCV DevSecOps Pipeline to allow successful software performance assessment as autonomous mobility capabilities increase. Simulated environments will be developed to test the RCV software, concentrating on performance assessment of off-road capabilities. Leading class industry analysis of RCV autonomous vehicle stacks (focusing on unmarked road and off-road navigation), to include assessments of simulated performance and live performance on surrogate demonstrators, will be performed to inform improvements to future RCV SWP CRs. Efforts include SIL operation and data pipeline management support to RCV autonomous software developers to enable effective scaling of data labeling necessary to iteratively incorporate increasing autonomous software capabilities.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b></p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army							Date: March 2024				
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)			Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2023	FY 2024	FY 2025		
Decrease due to existing Other Transaction Authority (OTAs) completing in the beginning of FY 2025 with potential for limited follow-on development.											
Title: RCV Development - Government Program Management							8.542	9.720	8.523		
Description: Government Program Management to RCV development programs. Includes salaries, travel, training, supplies, facilities, and equipment.											
FY 2024 Plans: Activities include Government engineering, financial management, acquisition planning, risk assessment and mitigation, contract preparation, and operations support necessary for the RCV development effort, to include management of build-test and FORSCOM operational pilots for the Surrogate Prototype (SP) Line Of Effort (LOE), oversight of Full System Prototype (FSP) demonstrator testing, and oversight of Software Acquisition Pathway (SWP) activities. Includes salaries, training, travel, supplies, facilities, and equipment.											
FY 2025 Plans: Activities include Government engineering, financial management, acquisition planning, risk assessment and mitigation, contract preparation, and operations support necessary for the RCV development effort, to include management of conclusion of the Surrogate Prototype (SP) Line Of Effort (LOE), oversight of Full System Prototype (FSP) prototype testing, and oversight of Software Acquisition Pathway (SWP) activities. Includes salaries, training, travel, supplies, facilities, and equipment.											
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to manpower requirement reduction related to the conclusion of the Surrogate Prototype level of effort.											
Accomplishments/Planned Programs Subtotals							107.975	142.125	92.540		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• 0604017A: Robotics Development	27.444	3.024	3.039	-	3.039	3.043	3.075	3.109	3.140	0.000	45.874
Remarks											
RCV development and Software Acquisition Pathway (SWP) efforts are continuations of efforts from program element 0604017A/Robotics Development, Project CF4: Robotic Combat Vehicle (RCV). FY 2024-2029 funding in program element 0604017A/Robotics Development is not associated with the RCV program.											
D. Acquisition Strategy											
RCV development includes a RCV Middle-Tier Acquisition (MTA) Rapid Prototyping program as well as a Software Acquisition Pathway (SWP) program.											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>	<b>Project (Number/Name)</b> CF5 / <i>Robotic Combat Vehicle (BA5) NGCV-CFT</i>
<p>RCV Acquisition Strategy:</p> <p>On 10 February 2022, the Army Acquisition Executive (AAE) approved the execution of RCV Rapid Prototyping program under authorities granted under Section 804 of the 2016 NDAA (PL 114-92). The RCV MTA Rapid Prototyping program will be accomplished in two complementary lines of effort (LOE), Surrogate Prototypes (SP), and Full System Prototypes (FSP).</p> <p>The SP LOE will utilize existing Other Transaction Authority (OTA) task assignment with QinetiQ North America and Textron Systems to both update existing RCV experimental prototypes to Surrogate Prototype configuration as well as procure new build Surrogate Prototypes. The Surrogate Prototypes will support recurring design-upgrade-test cycles from FY 2023-2024 that include FORSCOM operational pilots to collect Soldier feedback and demonstrate improved capabilities related to autonomous software, system safety, and network capabilities, and integrated architecture validation. Each design-upgrade-test cycle will culminate in a Knowledge Point (KP) to review program process and determine SP capabilities ready for incorporation into the FSP LOE. SP efforts will transition to RCCTO in FY25 to support the HMI effort. The lessons learned from the HMI effort will feed into FSP development in future years.</p> <p>The FSP acquisition strategy includes a full and open competition that will select up to four vendors, delivering two demonstrators each, to inform down select to a single vendor for prototype build and testing. Developmental testing of FSPs will include safety, Reliability, Availability and Maintainability (RAM), lethality, survivability, and Electromagnetic Environmental Effects (E3) testing. Additionally, Operational Testing (OT) in the form of Prototype Operational Demonstration (POD) will be executed to evaluate system suitability and effectiveness.</p> <p>Upon successful completion of the RCV Rapid Prototyping program, an MTA Outcome Determination (OD) will determine if the program will transition to a MTA Rapid Fielding effort aimed at fielding RCV FSPs to selected unit(s) for Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policies (DOTMLPF-P) analysis and integration of Human-Machine Integration formations.</p> <p>Software Acquisition Pathway (SWP) Acquisition Strategy:</p> <p>The SWP Acquisition Decision Memorandum (ADM), signed 3 August 2021, directs the use of the draft Cross Functional Team (CFT) Next Generation Combat Vehicle (NGCV) Robotic and Optionally Manned Autonomous (ROMA) Capabilities Needs Statement (CNS) as the base user capabilities document from which to derive capabilities for the RCV SWP. The RCV SWP will provide government furnished software to RCV SP and FSP LOEs. The RCV SWP will implement a Government - Contractor hybrid development approach to mature, integrate, and secure software capabilities from the science and technology base. The RCV SWP will incorporate software contracting best practices to support the transition of software capabilities into secure code base required for the resilient operation of RCVs in contested environments. On 25 January 2023, the AAE approved Software Acquisition Pathway entrance into the Execution Phase.</p>		

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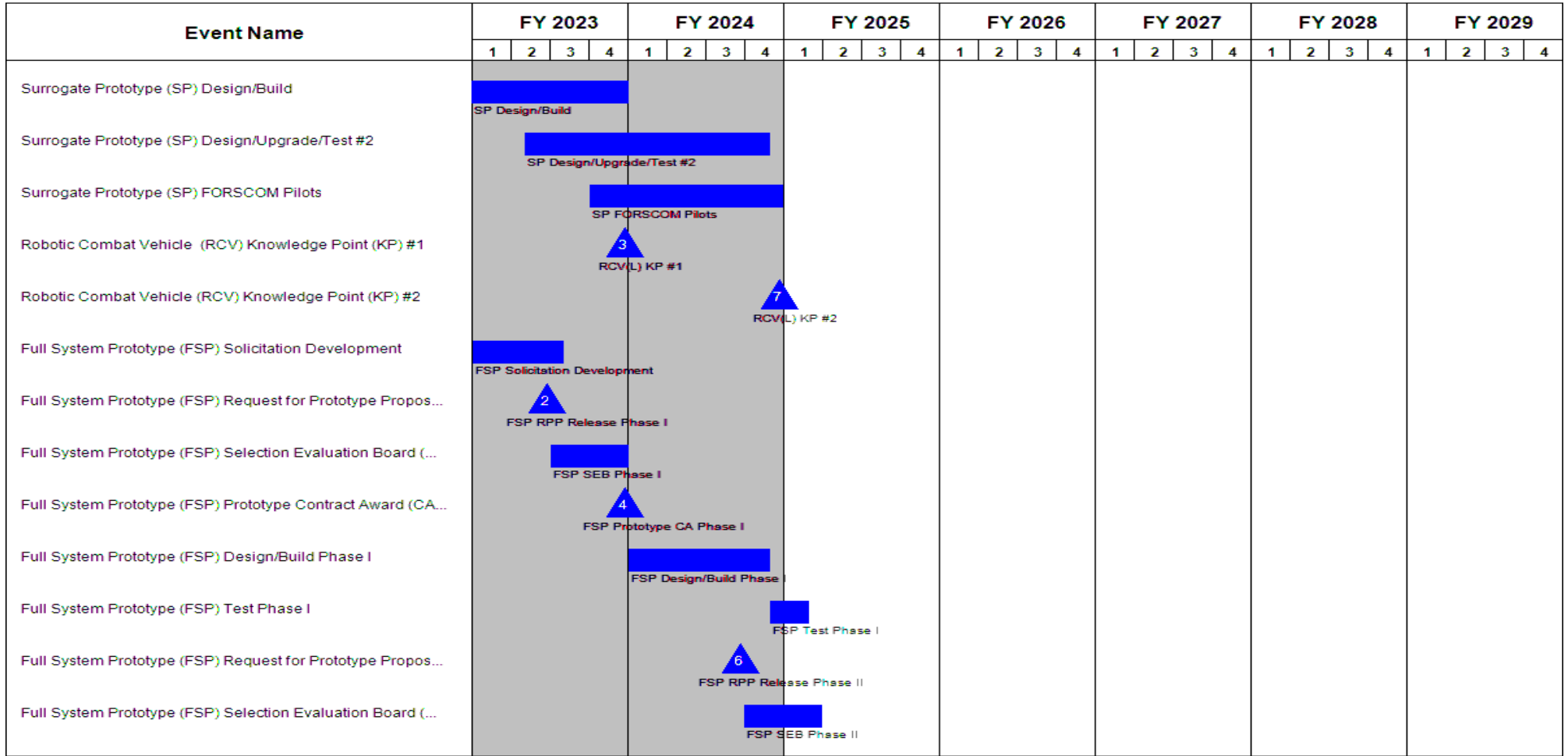
Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)				Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
RCV Program Management	Various	Various : Warren, MI; Various	-	8.542	Nov 2022	9.720	Nov 2023	8.523	Nov 2024	-		8.523	Continuing	Continuing	-
Subtotal			-	8.542		9.720		8.523		-		8.523	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
RCV Surrogate Prototypes (SP) - Product Development	Various	GVSC; Various : Warren, MI; Various	-	26.190	Nov 2022	31.781	Nov 2023	1.500	Oct 2024	-		1.500	0.000	59.471	-
RCV Surrogate Prototypes (SP) - Refurbishment	SS/FFP	QinetiQ North America : Waltham, MA	-	5.100	Feb 2023	1.244	Feb 2024	-		-		-	0.000	6.344	-
RCV Full System Prototypes (FSP) - Product Development	C/FFP	Oshkosh Defense, LLC; General Dynamics Land Systems; Textron Systems Corporation; McQ Inc : Various	-	26.272	Sep 2023	2.246	Apr 2024	74.058	Feb 2025	-		74.058	Continuing	Continuing	-
Software Acquisition Pathway (SWP) - Capability Release (CR) Development and Integration	Various	GVSC; Various, TBD : Warren, MI; Various, TBD	-	5.119	Mar 2023	11.724	Nov 2023	4.020	May 2025	-		4.020	Continuing	Continuing	-
Software Acquisition Pathway (SWP) - Autonomous Mobility Development	SS/FFP	Kodiak; Overland AI; RRAI : Mountain View, CA; TBD	-	18.717	May 2023	44.206	May 2024	2.348	Jan 2025	-		2.348	Continuing	Continuing	-
Software Acquisition Pathway (SWP) - DevSecOps, SIL Support	SS/FFP	Applied Intuition, Scale AI : MountainView, CA; San Fransisco, CA	-	12.120	Mar 2023	22.692	May 2024	1.342	Jan 2025	-		1.342	Continuing	Continuing	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2025 Army</b>												<b>Date:</b> March 2024			
<b>Appropriation/Budget Activity</b> 2040 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604641A / <i>Tactical Unmanned Ground Vehicle (TUGV)</i>						<b>Project (Number/Name)</b> CF5 / <i>Robotic Combat Vehicle (BA5) NGCV-CFT</i>			
<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
and Data Management Support															
<b>Subtotal</b>			-	93.518		113.893		83.268		-		83.268	Continuing	Continuing	N/A
<b>Support (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
RCV Full System Prototypes (FSP) - Selection Evaluation Board (SEB)	MIPR	Various : Warren, MI	-	0.600	Jul 2023	1.724	Nov 2023	0.449	Oct 2024	-		0.449	0.000	2.773	-
<b>Subtotal</b>			-	0.600		1.724		0.449		-		0.449	0.000	2.773	N/A
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
RCV Surrogate Prototypes (SP) - Government Test & Evaluation (T&E)	MIPR	Various : Various	-	5.315	Jan 2023	13.719	Jan 2024	0.300	Oct 2024	-		0.300	0.000	19.334	-
RCV Full System Prototypes (FSP) - Government Test & Evaluation (T&E)	MIPR	ATEC : Aberdeen, MD	-	-		3.069	Oct 2023	-		-		-	Continuing	Continuing	-
<b>Subtotal</b>			-	5.315		16.788		0.300		-		0.300	Continuing	Continuing	N/A
			<b>Prior Years</b>	<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			-	107.975		142.125		92.540		-		92.540	Continuing	Continuing	N/A
<b>Remarks</b>															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)		Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT





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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)		Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Full System Prototype (FSP) Contract Award Phase II									8																			
Full System Prototype (FSP) Design/Build Phase II																												
Full System Prototype (FSP) Test Phase II																												
RCV Outcome Determination (OD)																												
Software Acquisition Pathway (SWP) Planning Phase																												
Software Acquisition Pathway (SWP) Execution Phase																												
Software Acquisition Pathway (SWP) Software (SW) Design/...																												
Software Acquisition Pathway (SWP) Minimum Viability Cap...																												
Software Acquisition Pathway (SWP) Capability Release (C...																												
Software Acquisition Pathway (SWP) Capability Release (C...																												
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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)	Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT	

**Schedule Details**

Events	Start		End	
	Quarter	Year	Quarter	Year
DEVCOM Experimental Prototype Build	1	2021	2	2021
DEVCOM Experimental Prototype Testing	3	2021	3	2022
Soldier Operational Experiment (SOE) II	3	2022	4	2022
Surrogate Prototype (SP) OTA Contract Development/Modification	2	2021	4	2021
Surrogate Prototype (SP) Contract Build #1	4	2021	4	2021
Surrogate Prototype (SP) Design/Build	4	2021	4	2023
Middle-Tier Acquisition Rapid Prototyping (MTA-RP) Start	2	2022	2	2022
Surrogate Prototype (SP) Design/Upgrade/Test #2	2	2023	4	2024
Surrogate Prototype (SP) FORSCOM Pilots	4	2023	4	2024
Robotic Combat Vehicle (RCV) Knowledge Point (KP) #1	4	2023	4	2023
Robotic Combat Vehicle (RCV) Knowledge Point (KP) #2	4	2024	4	2024
Full System Prototype (FSP) Solicitation Development	1	2023	3	2023
Full System Prototype (FSP) Request for Prototype Proposal (RPP) Release Phase I	2	2023	2	2023
Full System Prototype (FSP) Selection Evaluation Board (SEB) Phase I	3	2023	4	2023
Full System Prototype (FSP) Prototype Contract Award (CA) Phase I	4	2023	4	2023
Full System Prototype (FSP) Design/Build Phase I	1	2024	4	2024
Full System Prototype (FSP) Test Phase I	4	2024	1	2025
Full System Prototype (FSP) Request for Prototype Proposal (RPP) Release Phase II	3	2024	3	2024
Full System Prototype (FSP) Selection Evaluation Board (SEB) Phase II	4	2024	1	2025
Full System Prototype (FSP) Contract Award Phase II	2	2025	2	2025
Full System Prototype (FSP) Design/Build Phase II	2	2025	2	2026
Full System Prototype (FSP) Test Phase II	2	2026	2	2027

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604641A / Tactical Unmanned Ground Vehicle (TUGV)		Project (Number/Name) CF5 / Robotic Combat Vehicle (BA5) NGCV-CFT

Events	Start		End	
	Quarter	Year	Quarter	Year
RCV Outcome Determination (OD)	2	2027	2	2027
Software Acquisition Pathway (SWP) Planning Phase	3	2021	2	2023
Software Acquisition Pathway (SWP) Execution Phase	2	2023	2	2023
Software Acquisition Pathway (SWP) Software (SW) Design/Build/Test	4	2022	4	2029
Software Acquisition Pathway (SWP) Minimum Viability Capability Release (MVCR)	3	2024	3	2024
Software Acquisition Pathway (SWP) Capability Release (CR) #1	3	2025	3	2025
Software Acquisition Pathway (SWP) Capability Release (CR) #2	1	2026	1	2026
Software Acquisition Pathway (SWP) Capability Release (CR) #3	3	2027	3	2027
Software Acquisition Pathway (SWP) Capability Release (CR) #4	3	2028	3	2028
Software Acquisition Pathway (SWP) Capability Release (CR) #5	3	2029	3	2029

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

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					<b>R-1 Program Element (Number/Name)</b> PE 0604642A / Light Tactical Wheeled Vehicles							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	13.667	53.564	100.257	-	100.257	56.175	1.817	0.809	0.817	0.000	227.106
E40: LTV Prototype	-	13.667	53.564	100.257	-	100.257	56.175	1.817	0.809	0.817	0.000	227.106

## A. Mission Description and Budget Item Justification

The Army Infantry Squad Vehicle (ISV), through enhanced tactical mobility, will motorize the Infantry Brigade Combat Teams (IBCT), Security Forces Assistance Brigade (SFAB), and the 75th Ranger Regiment with their associated equipment to move quickly around the battlefield. This capability is required across the range of military operations conducting crisis response, initial entry, and selected decisive action missions. ISV deploys worldwide by sea, air, and land modes to support strategic deployment and operational maneuver in accordance with Army and Joint doctrine. This capability provides flexibility for entry operations (permissive and non-permissive) to counter threat anti-access strategies by using multiple austere entry points to bring in combined arms configured units.

The electric Light Reconnaissance Vehicle (eLRV) platform through electrification will provide commanders a substantial competitive advantage in the Multi-Domain Operational (MDO) Environment against threat capabilities through reduction in acoustic and thermal signature, silent mobility, increased dash speed, extended range, increased reliability and reduction in Class (CL) III requirements. These attributes will enhance lethality and survivability of the mounted reconnaissance squad, platoon and troop.

The electric Infantry Squad Vehicle (eISV) will leverage the Automotive Industry's push into electrification to realize Class III (CL III) and CL IX demand reduction by incorporating COTS and mCOTS battery electric drive systems into a highly mobile, light weight tactical vehicle that provides seating for four soldiers and their associated equipment for a 72-hour mission. The eISV platform, through electrification, will provide commanders a substantial competitive advantage in Multi-Domain Operations (MDO) environment against threat capabilities through reduction in acoustic and thermal signature, silent mobility, increased dash speed, extended range, increased reliability, and reduction in CL III requirements.

Funding supports modernization of the current Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: predictive logistics, vetronics, Victory Architecture, autonomous operations and other emerging technologies. Funding also supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.

FY 2025 Ground Mobility Vehicles (GMV) budget activities in the amount of \$10.274 million includes eLRV pursuit of Middle Tier of Acquisition Rapid Prototyping (MTA-RP). Product Director Ground Mobility Vehicle (PD GMV) will award contract/agreements to up to four vendors to procure eLRV Prototypes, contractor management support, data, and government management support.

The Army's High Mobility Multipurpose Vehicle (HMMWV) is a lightweight, high performance four-wheel drive, air transportable and air droppable family of tactical vehicles. The vehicle comes armored and unarmored with several different configurations: Command and Control; Cargo/Shelter Carrier; Weapons Carrier and Ambulance and is capable of performing multiple mission roles for personnel and payloads across the full spectrum of military operations.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army			Date: March 2024			
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles				
A HMMWV Hybrid Electric Vehicle (HEV) introduces fuel demand reduction capability through HEV propulsion and helps mitigate a gap in Large-Scale Combat Operations to employ semi-independent maneuver in a Multi-Domain Operational (MDO) environment. A HMMWV HEV will seek to improve and provide new capabilities that give commanders advantages to enhance maneuver operations such as onboard power, export power, silent watch, and potentially silent mobility.						
FY2025 HMMWV HEV budget activities in the amount of \$89.802 million will design, develop and test prototype HMMWV HEV solutions.						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		0.000	53.564	100.316	-	100.316
Current President's Budget		13.667	53.564	100.257	-	100.257
Total Adjustments		13.667	0.000	-0.059	-	-0.059
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		13.667	-			
• SBIR/STTR Transfer		-	-			
• Adjustments to Budget Years		-	-	-0.059	-	-0.059
Change Summary Explanation						
Decrease of \$0.059 million is due to cost adjustments.						

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604642A / <i>Light Tactical Wheeled Vehicles</i>				Project (Number/Name) E40 / <i>LTV Prototype</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
E40: <i>LTV Prototype</i>	-	13.667	53.564	100.257	-	100.257	56.175	1.817	0.809	0.817	0.000	227.106
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

The Army Infantry Squad Vehicle (ISV), through enhanced tactical mobility, will motorize the Infantry Brigade Combat Teams (IBCT), Security Forces Assistance Brigade (SFAB), and the 75th Ranger Regiment with their associated equipment to move quickly around the battlefield. This capability is required across the range of military operations conducting crisis response, initial entry, and selected decisive action missions. ISV deploys worldwide by sea, air, and land modes to support strategic deployment and operational maneuver in accordance with Army and Joint doctrine. This capability provides flexibility for entry operations (permissive and non-permissive) to counter threat anti-access strategies by using multiple austere entry points to bring in combined arms configured units.

The electric Light Reconnaissance Vehicle (eLRV) platform through electrification will provide commanders a substantial competitive advantage in the Multi-Domain Operational (MDO) Environment against threat capabilities through reduction in acoustic and thermal signature, silent mobility, increased dash speed, extended range, increased reliability and reduction in Class (CL) III requirements. These attributes will enhance lethality and survivability of the mounted reconnaissance squad, platoon and troop.

The electric Infantry Squad Vehicle (eISV) will leverage the Automotive Industry's push into electrification to realize Class III (CL III) and CL IX demand reduction by incorporating COTS and mCOTS battery electric drive systems into a highly mobile, light weight tactical vehicle that provides seating for four soldiers and their associated equipment for a 72-hour mission. The eISV platform, through electrification, will provide commanders a substantial competitive advantage in Multi-Domain Operations (MDO) environment against threat capabilities through reduction in acoustic and thermal signature, silent mobility, increased dash speed, extended range, increased reliability, and reduction in CL III requirements.

Funding supports modernization of the current Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: predictive logistics, vetronics, Victory Architecture, autonomous operations and other emerging technologies. Funding also supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.

FY 2025 Ground Mobility Vehicles (GMV) budget activities in the amount of \$10.274 million includes eLRV pursuit of Middle Tier of Acquisition Rapid Prototyping (MTA-RP). Product Director Ground Mobility Vehicle (PD GMV) will award contract/agreements to up to four vendors to procure eLRV Prototypes, contractor management support, data, and government management support.

The Army's High Mobility Multipurpose Vehicle (HMMWV) is a lightweight, high performance four-wheel drive, air transportable and air droppable family of tactical vehicles. The vehicle comes armored and unarmored with several different configurations: Command and Control; Cargo/Shelter Carrier; Weapons Carrier and Ambulance and is capable of performing multiple mission roles for personnel and payloads across the full spectrum of military operations.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles	Project (Number/Name) E40 / LTV Prototype		
A HMMWV Hybrid Electric Vehicle (HEV) introduces fuel demand reduction capability through HEV propulsion and helps mitigate a gap in Large-Scale Combat Operations to employ semi-independent maneuver in a Multi-Domain Operational (MDO) environment. A HMMWV HEV will seek to improve and provide new capabilities that give commanders advantages to enhance maneuver operations such as onboard power, export power, silent watch, and potentially silent mobility.				
FY2025 HMMWV HEV budget activities in the amount of \$89.802 million will design, develop and test prototype HMMWV HEV solutions.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p><b>Title:</b> ISV Contract Test Support</p> <p><b>Description:</b> Funding is provided for Infantry Squad Vehicle (ISV) contractor test support.</p> <p><b>FY 2024 Plans:</b> Ground Mobility Vehicles (GMV) contractor test support for Infantry Squad Vehicle (ISV) to include Security Force Assistance Brigade (SFAB) kit integration.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease as a result of the completion of contractor test support for Infantry Squad Vehicle (ISV) to include Security Force Assistance Brigade (SFAB) kit integration.</p>		-	0.030	-
<p><b>Title:</b> ISV Kit Development</p> <p><b>Description:</b> Development of ISV kit requirements to include Non-Recurring Engineering (NRE) and Security Force Assistance Brigade (SFAB).</p> <p><b>FY 2024 Plans:</b> The development of ISV kit requirements to include Security Force Assistance Brigade (SFAB).</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease as a result of the completion of the development and integration of ISV kit requirements to include Security Force Assistance Brigade (SFAB).</p>		-	2.833	-
<p><b>Title:</b> ISV Testing</p> <p><b>Description:</b> Testing of ISV and kit configurations onto ISV, to include SFAB.</p> <p><b>FY 2024 Plans:</b> Testing of ISV and kit configurations onto ISV, to include SFAB.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b></p>		-	0.340	-

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<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604642A / <i>Light Tactical Wheeled Vehicles</i>		<b>Project (Number/Name)</b> E40 / <i>LTV Prototype</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Decrease as a result of the completion of testing of ISV and kit configurations onto ISV, to include SFAB.					
<b>Title:</b> eLRV Prototypes <b>Description:</b> Funding is provided for the support of electric Light Reconnaissance Vehicle (eLRV) Prototypes. <b>FY 2024 Plans:</b> Funding is provided for the support of electric Light Reconnaissance Vehicle (eLRV) Prototypes. <b>FY 2025 Plans:</b> Funding is provided for the support of electric Light Reconnaissance Vehicle (eLRV) Prototypes. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase in eLRV supports the use of up to four vendors to acquire three prototypes each for additional developmental testing and Soldier Touch Point 2 (STP2) focusing on operational effectiveness of militarized prototypes.			-	0.938	8.217
<b>Title:</b> eLRV Test and Evaluation <b>Description:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) testing events. <b>FY 2024 Plans:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) safety testing, developmental testing, and Soldier touch point events. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to no eLRV Test and Evaluation until FY26.			-	3.004	-
<b>Title:</b> eLRV Contractor Test Support <b>Description:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) contractor test support. <b>FY 2024 Plans:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) contractor test support. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to no eLRV Contractor Test Support needed until FY26.			-	0.429	-
<b>Title:</b> eLRV Government Management Support <b>Description:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) government management support. <b>FY 2024 Plans:</b>			-	1.158	1.155



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Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles	Project (Number/Name) E40 / LTV Prototype		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
Funding is provided for electric Light Reconnaissance Vehicle (eLRV) government management support. <b>FY 2025 Plans:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) government management support. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to minor funding adjustment between activities.					
<b>Title:</b> eLRV Contractor Managment Support <b>Description:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) contractor management support. <b>FY 2024 Plans:</b> Funding is provided for electric Light Reconnaissance Vehicle (eLRV) contractor management support. <b>FY 2025 Plans:</b> To provide electric Light Reconnaissance Vehicle (eLRV) contractor management support. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding has decrease as a result of project lower cost for electric Light Reconnaissance Vehicle (eLRV) contractor management support.			-	0.939	0.902
<b>Title:</b> HMMWV Hybrid Electric Vehicle (HEV) Prototype Design and Manufacturing. <b>Description:</b> Design and manufacturing of HMMWV HEV prototypes. <b>FY 2024 Plans:</b> Funding is provided to support HMMWV HEV prototype design and manufacturing for future developmental testing. Contract will be awarded to up to three vendors for prototype build. Vendors will initiate design and develop a prototype HMMWV HEV solution. <b>FY 2025 Plans:</b> Funding is provided to continue support of HMMWV HEV prototype design and manufacturing for future developmental testing. Vendors will finalize design, integrate and build prototype HMMWV HEV solutions. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase in FY25 is due to the transition of designing HMMWV HEV prototypes to building HMMWV HEV Prototypes.			-	33.082	44.627
<b>Title:</b> HMMWV HEV Testing Development <b>Description:</b> Initial HMMWV HEV prototype test planning development.			-	1.795	28.724

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles	Project (Number/Name) E40 / LTV Prototype		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
FY 2024 Plans: Funding is provided to support initial HMMWV HEV prototype test planning development.				
FY 2025 Plans: Funding is provided to support initiation of HMMWV HEV prototype testing.				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase supports HMMWV HEV transitioning from test planning development to initiating testing.				
Title: HMMWV HEV Contractor Test Support Description: Initial HMMWV HEV prototype test planning development.		-	3.180	9.240
FY 2024 Plans: Funding is provided to support initial contractor HMMWV HEV prototype test support.				
FY 2025 Plans: Funding is provided to continue contractor support for HMMWV HEV prototype testing.				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase in FY25 is due to the increase in contractor support required for test initiation.				
Title: HMMWV HEV Government Management Support Description: Funding is provided for HMMWV HEV government management support.		-	5.836	7.392
FY 2024 Plans: Funding is provided for HMMWV HEV government management support.				
FY 2025 Plans: Funding is provided for HMMWV HEV government management support.				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase needed for additional support required to align HMMWV HEV Government Management Support with planned program workload increase.				
Title: eISV Prototypes		2.442	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles				Project (Number/Name) E40 / LTV Prototype			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
Description: Funding is provided for the support of electric Infantry Squad Vehicle (eISV) development delivery and support of BEV3 powered eISV prototypes for field experimentation. These prototypes integrate the BEV3 battery (400V 100kWh) on the current US Army ISV design.											
Title: eISV STS									10.937	-	-
Description: Funding is provided for the support of electric Infantry Squad Vehicle (eISV) System Technical Support (STS) Work Directive (WD) for the development delivery and support of BEV3 powered eISV prototypes for field experimentation.											
Title: eISV Government Management Support									0.288	-	-
Description: Funding is provided for the support of electric Infantry Squad Vehicle (eISV) government management support.											
Accomplishments/Planned Programs Subtotals									13.667	53.564	100.257
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• D15505: Ground Mobility Vehicles (Light) GMV (L)	44.316	36.223	34.407	-	34.407	34.448	34.481	34.513	34.858	Continuing	Continuing
• D15402: TRUCK UTILITY HEAVY VARIANT 10000 LB GUW	145.459	25.904	5.265	-	5.265	4.597	80.362	135.287	6.375	0.000	403.249
Remarks											
D. Acquisition Strategy											
Infantry Squad Vehicle (ISV): A firm fixed priced production contract was awarded to General Motors Defense (GMD) on 26 June 2020 following successful prototype determination and findings from the ISV Other Transaction Authority (OTA). Per Army Requirements Oversight Council (AROC) on 08 February 2019, the Vice Chief Secretary of Army (VCSA) approved the Acquisition Procurement Objective (APO) of 11 Infantry Brigade Combat Team (IBCT) sets at 59 vehicles per IBCT (649 vehicles) to be completed by FY 2024. During a follow on AROC on 22 February 2019, the VCSA approved the ISV annex to the approved Special Operations Command (SOCOM) GMV1.1 Capabilities Production Document (CPD) which approved the total requirement for the ISV program. On 8 Feb 2021, AROCM 21-01 added 300 Security Force Assistance Brigades (SFAB) vehicles to the Base Of Issue Plan (BOIP) increasing the APO to 949. The APO was increased on 16 Feb 2023 to include an additional 187 ISVs for the 75th Ranger Regiment increasing the APO to 1136.											
electric Light Reconnaissance Vehicle (eLRV) :											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604642A / <i>Light Tactical Wheeled Vehicles</i>	<b>Project (Number/Name)</b> E40 / <i>LTV Prototype</i>
<p>Product Director Ground Mobility Vehicle (PD GMV) conducted market research and Industry coordination to assess industry capabilities and verify maturity of integration in support of an Army Requirements Oversight Council (AROC) in April 2021. eLRV Abbreviated-Capability Development Document (A-CDD) was validated July 2021. PD GMV will utilize a three-phased acquisition strategy for eLRV.</p> <p>Phase I Initial Prototypes: Will use novel acquisition approaches to award up to four vendors to procure two prototypes each for limited safety/performance testing and a Soldier Touch Point (STP). STP1 will focus on electric drive, off road mobility, and range/duration.</p> <p>Phase II Operational Prototypes: Option to down select at Critical Design Review (CDR) to up to four vendors to procure three prototypes each for additional developmental testing and Operational Demonstration (Ops Demo) focusing on operational effectiveness of militarized prototypes. Knowledge Point 1 (KP) will be conducted after CDR to provide transition Course of Action (COA) recommendations and updated production cost estimate. A Second Knowledge Point will be conducted after Ops Demo to validate the path forward to AROC.</p> <p>Phase III Transition to Production: Utilize Soldier Feedback and test data obtained during Phases I &amp; II presented during Decision Point (DP)/Outcome Determination (OD) to inform updates to Capability Development Document (CDD) and validate proposed transition path forward. COAs for path forward: COA1 Initiate a new Middle Tier of Acquisition (MTA)-Rapid Fielding, COA2 Transition to Major Capability Acquisition (MCA) Pathway at Milestone C, COA3 Transition to MCA Pathway at Milestone B, and COA4 Terminate the program.</p> <p>electric Infantry Squad Vehicle (eISV):</p> <p>GMV will leverage the current STS contract to develop eISV Prototypes through integration of BEV3 battery onto the ISV platform. Upon completion of the prototyping effort and user evaluation, the eISV will demonstrate the operational viability of electric drive train technologies for military use.</p> <p>HMMWV Hybrid Electric Vehicle (HEV): Product Director Light Tactical Vehicle (PD LTV) plans to award a prototype development contract to design, develop and test HMMWV HEV prototypes. The program will leverage data from recent and ongoing Army Rapid Capabilities and Critical Technologies Office (RCCTO) HEV projects and commercial industry advancements to inform HMMWV HEV prototype requirements. Prototype conclusion will provide a decision point for Army Senior Leaders for transition alternatives into a production phase.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles				Project (Number/Name) E40 / LTV Prototype					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
ISV Contractor Test Support	Various	General Motor Defense (GM-D) : Various	1.365	-		0.030	Jan 2024	-		-		-	0.000	1.395	-
eLRV Prototypes	TBD	TBD : TBD	0.253	-		0.938	Oct 2023	8.217	Dec 2024	-		8.217	0.000	9.408	-
eLRV Contractor Test Support	TBD	TBD : TBD	-	-		0.429	Oct 2023	-		-		-	0.000	0.429	-
ISV Kit Development	Various	General Motor Defense (GM-D) : Various	-	-		2.833	Oct 2023	-		-		-	0.000	2.833	-
eLRV Contractor Management Support	TBD	TBD : TBD	-	-		0.939	Oct 2023	0.902	Dec 2024	-		0.902	0.000	1.841	-
HMMWV HEV Prototypes	C/TBD	TBD : TBD	-	-		33.082	May 2024	44.627	Mar 2025	-		44.627	0.000	77.709	-
HMMWV HEV Contractor Test Support	C/TBD	TBD : TBD	-	-		3.180	May 2024	9.240	Mar 2025	-		9.240	0.000	12.420	-
eISV Prototype	Various	General Motor Defense (GM-D) : Various	-	2.442	Jan 2024	-		-		-		-	0.000	2.442	-
eISV STS	Various	General Motor Defense (GM-D) : Various	-	10.937	Jan 2024	-		-		-		-	0.000	10.937	-
Subtotal			1.618	13.379		41.431		62.986		-		62.986	0.000	119.414	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
eLRV Government Management Support	Various	PM Office : Selfridge ANG	0.345	-		1.158	Oct 2023	1.155	Oct 2024	-		1.155	0.000	2.658	-
HMMWV HEV Government Management Support	Various	PM OFFICE : SELFTRIDGE	-	-		5.836	Nov 2023	7.392	Nov 2024	-		7.392	0.000	13.228	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles				Project (Number/Name) E40 / LTV Prototype					
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
eISV Governmemnt Management Support	Various	PM Office : Selfridge ANG	-	0.288	Jan 2024	-		-		-		-	0.000	0.288	-
Subtotal			0.345	0.288		6.994		8.547		-		8.547	0.000	16.174	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
eLRV Test and Evaluation	MIPR	Various : Various	0.100	-		3.004	Apr 2024	-		-		-	0.000	3.104	-
ISV Testing	MIPR	Various : Various	-	-		0.340	Jul 2024	-		-		-	0.000	0.340	-
HMMWV HEV Test Development	TBD	TBD : TBD	-	-		1.795	May 2024	28.724	May 2025	-		28.724	0.000	30.519	-
Subtotal			0.100	-		5.139		28.724		-		28.724	0.000	33.963	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.063	13.667		53.564		100.257		-		100.257	0.000	169.551	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles		Project (Number/Name) E40 / LTV Prototype	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Phase II IOTE																												
ISV Maintenance Evaluation																												
ISV Kit Development & Testing																												
ISV Full Rate Production (FRP)																												
eLRV Request for Project Proposal (RPP) Development																												
eLRV Market Research																												
eLRV Other Transaction Authority (OTA) Award # 1																												
eLRV Phase 1 Build																												
eLRV Phase 1 Developmental Testing																												
eLRV Soldier Touch Point 1																												
eLRV Critical Design Review (CDR)																												
eLRV Other Transaction Authority (OTA) Award # 2																												
eLRV Knowledge Point (KP) # 1																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604642A / <i>Light Tactical Wheeled Vehicles</i>	Project (Number/Name) E40 / <i>LTV Prototype</i>	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
eLRV Phase 2 Build																												
eLRV Phase 2 Developmental Testing																												
eLRV Soldier Touch Point 2																												
eLRV Successful Prototype Determination (SPD)																												
eLRV Knowledge Point (KP) # 2																												
HMMWV HEV Prototype Contract Solicitation Development																												
HMMWV HEV Prototype Contract Award																												
HMMWV HEV Development																												
HMMWV HEV Prototype Build																												
HMMWV HEV Integration & Ktr Testing:																												
HMMWV HEV Prototype USG Developmental Testing																												
HMMWV HEV Production Transition Decision Point																												
eISV Contract Award																												



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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604642A / <i>Light Tactical Wheeled Vehicles</i>	Project (Number/Name) E40 / <i>LTV Prototype</i>	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
eISV Engineering																												
eISV Build																												
eISV Testing																												
eISV User Evaluation																												

**Note**  
ISV Kit Development and Testing includes Infantry Squad Vehicle (ISV) Security Force Assistance Brigade (SFAB) kits.

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles	Project (Number/Name) E40 / LTV Prototype	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ISV Production Qualification Testing (PQT)	1	2021	3	2022
ISV First Unit Equipped (FUE)	3	2022	3	2022
Phase II IOTE	4	2023	4	2023
ISV Maintenance Evaluation	2	2024	2	2024
ISV Kit Development & Testing	1	2022	4	2026
ISV Full Rate Production (FRP)	2	2023	2	2023
eLRV Request for Project Proposal (RPP) Development	2	2022	4	2023
eLRV Commerical Electric Vehicle (EV) Purchase	4	2022	4	2022
eLRV Market Research	4	2022	1	2023
eLRV Other Transaction Authority (OTA) Award # 1	1	2024	1	2024
eLRV Phase 1 Build	1	2024	2	2024
eLRV Phase 1 Developmental Testing	3	2024	4	2024
eLRV Soldier Touch Point 1	4	2024	1	2025
eLRV Critical Design Review (CDR)	1	2025	1	2025
eLRV Other Transaction Authority (OTA) Award # 2	1	2025	1	2025
eLRV Knowledge Point (KP) # 1	2	2025	2	2025
eLRV Phase 2 Build	1	2025	1	2026
eLRV Phase 2 Developmental Testing	2	2026	2	2026
eLRV Soldier Touch Point 2	3	2026	4	2026
eLRV Successful Prototype Determination (SPD)	4	2026	4	2026
eLRV Knowledge Point (KP) # 2	4	2026	4	2026
HMMWV HEV Prototype Contract Solicitation Development	2	2023	4	2024

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604642A / Light Tactical Wheeled Vehicles		Project (Number/Name) E40 / LTV Prototype	
	Start		End	
Events	Quarter	Year	Quarter	Year
HMMWV HEV Prototype Contract Award	3	2024	3	2024
HMMWV HEV Development	3	2024	3	2025
HMMWV HEV Prototype Build	3	2025	4	2025
HMMWV HEV Integration & Ktr Testing:	1	2026	2	2026
HMMWV HEV Prototype USG Developmental Testing	2	2026	4	2026
HMMWV HEV Production Transition Decision Point	4	2026	4	2026
eISV Contract Award	2	2024	2	2024
eISV Engineering	2	2024	2	2024
eISV Build	3	2024	3	2025
eISV Testing	4	2025	2	2026
eISV User Evaluation	3	2026	3	2027
Note ISV Kit Development and Testing includes Infantry Squad Vehicle (ISV) Security Force Assistance Brigade (SFAB) kits.				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604645A I Armored Systems Modernization (ASM) - Eng Dev							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	0.000	60.827	102.201	48.097	0.000	48.097	17.033	0.000	0.000	0.000	0.000	228.158
EV8: Mobile Protected Firepower	-	60.827	102.201	48.097	-	48.097	17.033	-	-	-	0.000	228.158

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

Infantry Brigades lack the mobile, protected firepower capability necessary to defeat enemy prepared positions, destroy enemy armored vehicles, close with the enemy through fire and maneuver, and ensure freedom of maneuver and action in close contact with the enemy. The M10 Booker (formerly, Mobile Protected Firepower (MPF)) will provide the protected, long range, precision direct-fire capability to ensure freedom of movement during offensive operations and defeat attacking enemy during defensive operations.

The Armored Systems Modernization - Engineering Development program element is directly aligned with the Next Generation Combat Vehicle (NGCV) Army Modernization Priority.

<b><u>B. Program Change Summary (\$ in Millions)</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>	<b><u>FY 2025 Base</u></b>	<b><u>FY 2025 OCO</u></b>	<b><u>FY 2025 Total</u></b>
Previous President's Budget	63.131	102.201	65.249	-	65.249
Current President's Budget	60.827	102.201	48.097	-	48.097
Total Adjustments	-2.304	0.000	-17.152	-	-17.152
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.304	-			
• Adjustments to Budget Years	-	-	-17.152	-	-17.152

**Change Summary Explanation**

Decrease in FY 2025 due to shifting development of a portion of Booker training devices from FY 2025 to FY 2026.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev				Project (Number/Name) EV8 / Mobile Protected Firepower			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
EV8: Mobile Protected Firepower	-	60.827	102.201	48.097	-	48.097	17.033	-	-	-	0.000	228.158
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Infantry Brigades lack the mobile, protected firepower capability necessary to defeat enemy prepared positions, destroy enemy armored vehicles, close with the enemy through fire and maneuver, and ensure freedom of maneuver and action in close contact with the enemy. The M10 Booker (formerly, Mobile Protected Firepower (MPF)) will provide the protected, long range, precision direct-fire capability to ensure freedom of movement during offensive operations and defeat attacking enemy during defensive operations.												
This program is directly aligned with the Next Generation Combat Vehicle (NGCV) Army Modernization Priority.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
Title: Product Development - LRIP Phase Logistics Products										11.330	11.104	3.459
Description: M10 Booker Low Rate Initial Production (LRIP) phase development activities for logistics products include Technical Manual (TM) and Training Support Package (TSP) updates, verification and demonstration of supportability tasks, evaluation of incidents during performance testing for supportability impacts, continued development of National/Depot Maintenance Work Requirements (NMWR/DMWR), continued execution of Level of Repair Analyses (LORA) and Source of Repair Analyses (SORA), the provisioning of spare parts, supportability analysis of operator and maintenance tasks, and management of the Integrated Logistics Support (ILS) program.												
FY 2024 Plans:												
FY 2024 activities include execution of the Logistics Demonstration (Log Demo) to evaluate the adequacy of the product support package, continued LORA to determine whether vehicle parts will be replaced, repaired, or discarded should they malfunction, and NMWR/DMWR development to enable depot level sustainment of the vehicle and subsystems once MPF vehicles are fielded. Additionally, Full Material Release procedures and verification of Operator, Field Maintenance, BDAR manual development will be initiated, and New Equipment Training in support of the Initial Operational Test & Evaluation (IOT&E) will be conducted.												
FY 2025 Plans:												
FY 2025 activities complete Material Release procedures such as the LORA, NMWR/ DMWR work instructions, verification of supportability tasks, and the Training Support Package update.												
FY 2024 to FY 2025 Increase/Decrease Statement:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	<b>Project (Number/Name)</b> EV8 / Mobile Protected Firepower	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
Decrease is due to completion of logistics development activities.			<b>FY 2025</b>
<b>Title:</b> Product Development - LRIP Phase Contractor Technical Support to Government Test  <b>Description:</b> M10 Booker Low Rate Initial Production (LRIP) phase development activities for Contractor Technical Support to Test include purchase of the spare parts for LRIP phase testing, root cause analysis and the development of corrective actions on test incidents, training of vehicle operators at U.S. Government test sites, initiation of vehicle lethality, survivability, and weight reduction integration efforts, and integration of system design changes informed by user feedback. Efforts also include Systems Technical Support (STS) in the form of test configuration updates to M10 Booker vehicle subsystems and field service representatives at U.S. Government test sites to perform M10 Booker vehicle maintenance.  <b>FY 2024 Plans:</b> FY 2024 activities include contractor technical support and systems technical support to PQT, Full Up System Level (FUSL) Live Fire Testing, and Corrosion testing, initiation of support to Initial Operational Test & Evaluation (IOT&E), IOT&E material management, IOT&E technical support, and continued root cause and corrective action analysis of test incidents. Activities also include initiation of survivability, lethality, mobility, and weight reduction integration efforts, battlefield and target awareness improvements, vehicle subsystem updates leveraging commonality with existing Army systems, and integration of system design changes informed by user feedback.  <b>FY 2025 Plans:</b> FY 2025 activities include contractor technical support and systems technical support to the conclusion of Production Qualification Testing (PQT), FUSL, and IOT&E. FY 2025 activities also consist of the refurbishment of up to 22 M10 Booker test vehicles to a fully mission capable standard prior to fielding to Army units, continued root cause and corrective action analysis of test incidents, requirements development for survivability, lethality, mobility, and weight reduction integration efforts, requirements development of battlefield and target awareness improvements, requirements development of vehicle subsystem updates leveraging commonality with existing Army systems, and integration of system design changes informed by user feedback.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to completed acquisition of long lead spare parts supporting M10 Booker IOT&E and PQT in FY 2024.		8.265	18.396
<b>Title:</b> Prototype Upgrade to LRIP Configuration  <b>Description:</b> After a successful Milestone C, eight (8) prototype vehicles will be updated to the initial LRIP configuration to support LRIP phase survivability testing, logistics products development, and implementation of design changes driven by Production Qualification Testing (PQT) and Initial Operational Test and Evaluation (IOT&E). Upgrading M10 Booker prototypes to LRIP configuration will result in substantial cost avoidance compared with producing additional LRIP vehicles to support test requirements.		24.278	8.483
			-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / <i>Armored Systems Modernization (ASM) - Eng Dev</i>	<b>Project (Number/Name)</b> EV8 / <i>Mobile Protected Firepower</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<b>FY 2024 Plans:</b> Labor and material supporting final assembly, test, checkout, and acceptance of eight (8) MPF Prototypes upgraded to the initial LRIP configuration for use in survivability, performance, and reliability testing, logistics products development, and to aid implementation of design changes driven by PQT and IOT&E.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to deliveries of upgraded prototypes occurring in FY 2024.			
<b>Title:</b> Government Test and Evaluation (Performance Testing)  <b>Description:</b> During the Rapid Prototyping phase, the Government executed performance testing on sixteen (16) prototypes (eight per contractor) and four BH&T assets (two per contractor). FY 2021 and FY 2022 performance testing during the Rapid Prototyping phase included Ballistic Hull & Turret (BH&T) survivability testing and Pre-Production Testing (PPT), which consisted of vehicle-level lethality, Reliability, Availability, and Maintainability (RAM), and electromagnetic compatibility and interference testing. PPT also contained an initial cybersecurity evaluation.  BH&T testing provided Force Protection and vehicle-level survivability data while PPT provided vehicle-level automotive, lethality, and RAM performance data. The results of Rapid Prototyping performance testing has informed the LRIP down select, which occurred on 24 June 2022.  During the LRIP phase, the Government will execute performance testing on twelve (12) vehicles. Performance testing during the LRIP phase will include survivability testing and Production Qualification Testing (PQT), which consists of vehicle-level lethality, RAM, electromagnetic compatibility and interference testing, environmental performance testing, and cybersecurity testing.  <b>FY 2024 Plans:</b> Activities include execution of the PQT and Full Up System Level (FUSL) Live Fire testing to inform the FY 2025 Full Rate Production (FRP) decision. PQT evaluating system reliability, transportability, and automotive performance will be assessed at the Yuma Test Center (YTC), Aberdeen Test Center (ATC), and the Cold Regions Test Center (CRTC). PQT environmental performance testing will be assessed at YTC and CRTC. PQT system safety will be evaluated at White Sands Missile Range (WSMR), YTC, ATC, and CRTC. PQT electromagnetic environmental effects (E3) testing will occur at WSMR. Fire control, lethality, and cybersecurity PQT will occur at ATC. Corrosion testing will also be completed at ATC. PQT assessing Army Interoperability Certification requirements will occur at Fort Hood, Texas. The FUSL Live Fire test will be performed at ATC and will assess ballistic resiliency and platform survivability. Additionally, ballistic survivability models and simulations will be updated with results from MPF FUSL Live Fire testing.  <b>FY 2025 Plans:</b>		8.091	31.847
			5.995

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / <i>Armored Systems Modernization (ASM) - Eng Dev</i>	<b>Project (Number/Name)</b> EV8 / <i>Mobile Protected Firepower</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
Activities include conclusion of PQT at YTC, ATC, WSMR, and CRTC and conclusion of Full Up System Level (FUSL) Live Fire testing to inform the FY 2025 Full Rate Production (FRP) decision. Other concluding activities include final test scoring of RAM data, PQT and FUSL final report authoring, and conclusion of Ballistics M&S activities. These activities will support the M10 Booker FRP decision.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to the conclusion of test activities.			
<b>Title:</b> Government Test and Evaluation (Operational Testing)		-	10.814
<b>Description:</b> During LRIP phase, the Government will execute a thirteen (13) vehicle Company-Level Initial Operational Test and Evaluation (IOT&E). The IOT&E is planned to begin in FY 2024 and conclude in FY 2025.			4.727
<b>FY 2024 Plans:</b> Activities include site preparation, test planning, ATEC support to initiate execution of the MPF IOT&E, spare parts support to MPF, opposing force (OPFOR), tactical support, and other IOT&E participant vehicles, and test instrumentation of IOT&E participant vehicles. The IOT&E will evaluate the mission effectiveness, suitability, cybersecurity, and survivability of a unit equipped with MPF vehicles in an operational environment. The IOT&E will be conducted under realistic operational conditions using Army units executing decisive action operations in accordance with U.S. Army doctrine against a representative opposing force. Additionally, Soldier participants will undergo field maintenance and operator training in preparation for the IOT&E. The IOT&E will serve as a key data source for the Full Rate Production (FRP) decision.			
<b>FY 2025 Plans:</b> Activities include conduct and conclusion of the M10 Booker IOT&E at Fort Liberty and Fort Stewart, transportation of tactical support and OPFOR vehicles to and from test events, parts repair support to M10 Booker and tactical support vehicles, and authoring of the final report concerning the operational effectiveness of the M10 Booker. The IOT&E will serve as a key data source for the Full Rate Production (FRP) decision.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to the conclusion of test activities.			
<b>Title:</b> Training Aids and Devices Development		2.970	15.918
<b>Description:</b> Development of aids and devices to facilitate institutional training for M10 Booker operators and maintainers. Training aids and devices development will include activities for an M10 Booker Advanced Gunnery Training System (AGTS) and an M10 Booker Family of Maintenance Trainers (FMT) which include Diagnostic Troubleshooting Trainers (DTT) and turret Hands on Trainers (HOT). M10 Booker training aids and devices will be interoperable/compatible with the Army's current live Tactical			11.048



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604645A / <i>Armored Systems Modernization (ASM) - Eng Dev</i>	<b>Project (Number/Name)</b> EV8 / <i>Mobile Protected Firepower</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
Engagement Simulation (TES) systems, instrumentation systems, Common Training Instrumentation Architecture (CTIA), Live, Virtual Constructive-Integrated Architecture (LVC-IA) training enablers, and the future Synthetic Training Environment (STE).			
<b>FY 2024 Plans:</b> FY 2024 activities include contract awards for HOT, DTT, and AGTS development. HOT development will initiate the design of an MPF production representative turret and subsystem structure to enable the maintenance training of the MPF turret and its subsystems. DTT development will enable computer-based simulations of MPF repair tasks in a classroom setting using a three-dimensional (3D) virtual environment. AGTS development will include the build of prototype gunnery training devices which will train Soldiers on Gate-to-Live-Fire (GTLF) qualification and on the Crew Training Program which are exercises designed to train crew coordination supporting the execution of precision gunnery tasks.			
<b>FY 2025 Plans:</b> FY 2025 activities include continued development of the M10 Booker FMT and M10 Booker AGTS. M10 Booker FMT development will continue the requirements development and design of a Booker production representative turret and subsystem structure to enable the maintenance training of the Booker turret and its subsystems. Development of the FMT systems for the Booker turret will, to the greatest extent possible, leverage commonality with other fielded Army turret maintenance systems. M10 Booker FMT development of computer-based simulation systems teaching Booker repair tasks in a classroom setting using a three-dimensional (3D) virtual environment will conclude and allow for the procurement and fielding of these systems to Army training institutions. M10 Booker AGTS prototype build will continue, and design development will conclude to allow for the procurement of gunnery training systems to be fielded at M10 Booker unit locations and schools.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease is due to the finalization of designs for the FMT computer-based maintenance training simulation systems and the M10 Booker AGTS.			
<b>Title:</b> Government Engineering and Project Management  <b>Description:</b> Government program management and system engineering support, to include salaries, travel, training, supplies, facilities, equipment, and support contractors necessary to manage development efforts during the MPF MTA Rapid Prototyping and LRIP phases.		5.893	5.639
<b>FY 2024 Plans:</b> Continue engineering, logistics, product assurance and test, financial management, and operations support for MPF LRIP development activities from November 2023 through October 2024. Includes salaries, training, travel, supplies, facilities, and equipment to manage MPF test and evaluation and logistics products development efforts.			
<b>FY 2025 Plans:</b>			4.683

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev				Project (Number/Name) EV8 / Mobile Protected Firepower				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
Continue engineering, logistics, product assurance and test, financial management, and operations support for M10 Booker LRIP development activities from November 2024 through October 2025. Includes salaries, training, travel, supplies, facilities, and equipment to manage M10 Booker test and evaluation and logistics products development efforts.												
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease is due to the transition from RDTE development efforts to a production environment.												
Accomplishments/Planned Programs Subtotals										60.827	102.201	48.097
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• G80820: M10 BOOKER	349.720	394.635	460.637	-	460.637	502.011	487.611	490.466	500.170	Continuing	Continuing	
Remarks												
Standard Serial Number (SSN) G80820 resources production of the M10 Booker. FY 2022 - FY 2024 resourcing supports M10 Booker Low Rate Initial Production (LRIP). Resourcing in FY 2025 and beyond supports M10 Booker Full Rate Production (FRP).												
D. Acquisition Strategy												
The Mobile Protected Firepower (MPF) RFP was issued on 21 November 2017 as a full and open, best value competitive action. On 25 September 2018, the Army Acquisition Executive (AAE) approved the execution of MPF Rapid Prototyping activities under Section 804 of the 2016 National Defense Authorization Act (NDAA) (Public Law 114-92), Middle Tier Acquisition (Rapid Prototyping). The competitive selection process for MPF Rapid Prototyping contracts included the evaluation of written proposals and optional bid samples to provide additional substantiating data for Source Selection Evaluation. On 17 December 2018, two MPF Rapid Prototyping contracts were awarded, one to BAE Systems and the other to General Dynamics Land Systems (GDLS). On 24 June 2022 the MPF program obtained AAE Milestone C approval, and an LRIP phase contract was awarded to GDLS on 28 June 2022 for continued Logistics Products development, continued Contractor Technical Support to Test, and for the first production order of MPF vehicles. On 10 June 2023, the Army redesignated MPF as the M10 Booker. An M10 Booker Full Rate Production (FRP) decision is targeted for 3rd Quarter, FY 2025.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev				Project (Number/Name) EV8 / Mobile Protected Firepower					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Government Engineering and Project Management	MIPR	Various : Warren, MI; Picatinny, NJ	-	5.893	Nov 2022	5.639	Nov 2023	4.683	Nov 2024	-		4.683	1.565	17.780	-
Government Engineering and Project Management (Middle Tier Acquisition Rapid Prototyping Phase)	MIPR	Various : Warren, MI; Picatinny, NJ	53.654	-		-		-		-		-	0.000	53.654	-
Subtotal			53.654	5.893		5.639		4.683		-		4.683	1.565	71.434	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Product Development - LRIP Phase - LRIP Logistics Products	C/FFP	General Dynamics Land Systems (GDLS) : Sterling Heights, MI	-	11.330	Oct 2022	11.104	Oct 2023	3.459	Oct 2024	-		3.459	0.000	25.893	46.429
Product Development - LRIP Phase - LRIP Contractor Technical Support to Government Test	C/FFP	General Dynamics Land Systems (GDLS) : Sterling Heights, MI	-	4.981	Oct 2022	9.837	Oct 2023	10.245	Oct 2024	-		10.245	2.191	27.254	71.472
System Technical Support to Government Testing	SS/CPFF	General Dynamics Land Systems (GDLS) : Sterling Heights, MI	-	3.284	Oct 2022	8.559	Oct 2023	7.940	Nov 2024	-		7.940	0.000	19.783	-
Prototype Upgrade to LRIP Configuration	C/FFP	General Dynamics Land Systems (GDLS) : Sterling Heights, MI	-	24.278	Oct 2022	8.483	Oct 2023	-		-		-	0.000	32.761	46.966
Product Development (Middle Tier Acquisition Rapid Prototyping Phase)	C/FFP	General Dynamics Land Systems (GDLS); BAE Systems : Sterling Heights, MI	802.303	-		-		-		-		-	0.000	802.303	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2025 Army</b>												<b>Date: March 2024</b>			
<b>Appropriation/Budget Activity</b> 2040 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev						<b>Project (Number/Name)</b> EV8 / Mobile Protected Firepower			
<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			802.303	43.873		37.983		21.644		-		21.644	2.191	907.994	N/A
<b>Support (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Training Aids and Devices Development	C/CPFF	General Dynamics Land Systems (GDLS) : Sterling Heights, MI	3.697	2.970	Nov 2022	15.918	Nov 2023	11.048	Jan 2025	-		11.048	13.277	46.910	-
Support Costs (Middle Tier Acquisition Rapid Prototyping Phase)	RO	Various : Warren, MI; Picatinny, NJ	29.771	-		-		-		-		-	0.000	29.771	-
<b>Subtotal</b>			33.468	2.970		15.918		11.048		-		11.048	13.277	76.681	N/A
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Production Qualification Testing (PQT) at Aberdeen Test Center (ATC) & Army Interoperability Testing	PO	Aberdeen Test Center (ATC); Central Technical Support Facility (CTSF) : Aberdeen, MD; Fort Hood, TX	-	1.705	Jan 2023	8.424	Nov 2023	0.651	Nov 2024	-		0.651	0.000	10.780	-
PQT at Yuma Test Center (YTC)	PO	Yuma Test Center (YTC) : Yuma, AZ	-	0.129	Jan 2023	5.666	Feb 2024	0.549	Nov 2024	-		0.549	0.000	6.344	-
PQT at White Sand Missile Range (WSMR)	PO	White Sands Missile Range (WSMR) : White Sands Missile Range, NM	-	0.096	Jan 2023	1.928	Apr 2024	0.228	Nov 2024	-		0.228	0.000	2.252	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev				Project (Number/Name) EV8 / Mobile Protected Firepower					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
PQT at Cold Regions Test Center (CRTC)	PO	Cold Regions Test Center : Fort Greely, AK	-	-		3.009	Sep 2024	0.768	Nov 2024	-		0.768	0.000	3.777	-
Survivability, Lethality, and Full Up System Level (FUSL) Live Fire Testing	PO	Aberdeen Test Center (ATC) : Aberdeen, MD	-	5.956	Jan 2023	10.709	Dec 2023	3.574	Nov 2024	-		3.574	0.000	20.239	-
Data Analysis and Evaluation Support	Various	Combat Capability Development Command - Data Analysis Center (CCDC-DAC), Army Evaluation Center (AEC), Combined Arms Support Command (CASCOM) : Various	-	0.205	Oct 2022	2.111	Nov 2023	0.225	Nov 2024	-		0.225	0.000	2.541	-
Initial Operational Test & Evaluation (IOT&E)	PO	Operational Test Center (OTC) : Fort Hood, TX	-	-		10.814	Jun 2024	4.727	Nov 2024	-		4.727	0.000	15.541	-
Test and Evaluation (Middle Tier Acquisition Rapid Prototyping Phase)	PO	Aberdeen Test Center (ATC); Yuma Test Center (YTC) : Aberdeen, MD; Yuma, AZ	36.712	-		-		-		-		-	0.000	36.712	-
Subtotal			36.712	8.091		42.661		10.722		-		10.722	0.000	98.186	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			926.137	60.827		102.201		48.097		-		48.097	17.033	1,154.295	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev		Project (Number/Name) EV8 / Mobile Protected Firepower	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Full Rate Production (FRP) Decision												4																
Material Release (MR)												5																
First Unit Equipped (FUE)												6																
TM Development Update																												
Logistics Demonstration (Log Demo)																												
TM Verification																												
Level of Repair Analysis (LORA)																												
Source of Repair Analysis (SORA)																												
Training Support Package (TSP) Update																												
Nationa/Depot Maintenance Work Instruction (NMWR/DMWR)/B																												
Spares Provisioning																												
Prototype Vehicle Updates to LRIP Configurations (Qty 8)																												
Corrosion Testing																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	Project (Number/Name) EV8 / Mobile Protected Firepower	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
CDE/SL/AFES Testing																												
Training Devices Requirements Refinement Performance Spe...																												
Vehicle Data Interface Development for Training Devices																												
M10 Booker Gunnery Training System (GTS) Development and...																												
Family of Maintenance Trainers (FMT) Development																												
LRIP Option #1 Deliveries																												
Production Qualification Testing (PQT) at Aberdeen Test ...																												
Production Qualification Testing (PQT) at Yuma Test Cent...																												
Production Qualification Testing (PQT) at White Sands Mi...																												
Production Qualification Testing (PQT) at Cold Regions T...																												
Full Up System Level (FUSL) Live Fire Testing at Aberdee...																												
Army Interoperability Testing																												
Initial Operational Test and Evaluation (IOT&E)																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity		R-1 Program Element (Number/Name)		Project (Number/Name)	
2040 / 5		PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev		EV8 / Mobile Protected Firepower	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 Vehicle Refurbishment																												
LRIP Option #2 Award																												
LRIP Option #2 Deliveries																												
LRIP Option #3 Award																												
LRIP Option #3 Deliveries																												
FRP Lot #1 Award																												
FRP Lot #1 Deliveries																												



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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev	Project (Number/Name) EV8 / Mobile Protected Firepower	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Section 804 MTA Rapid Prototyping Designation	4	2018	4	2018
Milestone C (MS C)	3	2022	3	2022
Full Rate Production (FRP) Decision	3	2025	3	2025
Material Release (MR)	4	2025	4	2025
First Unit Equipped (FUE)	4	2025	4	2025
Request for Proposal (RFP) Release	1	2018	1	2018
Risk Reduction of Large Caliber Weapon System	3	2017	3	2022
Middle Tier Acquisition (MTA) Source Selection Evaluation Board (SSEB)	2	2018	1	2019
Rapid Prototyping Contract Awards	1	2019	1	2019
Mobile Protected Firepower (MPF) Rapid Prototyping Phase	1	2019	3	2022
Design Maturity Review (DMR)	3	2019	3	2019
Ballistic Hull & Turret (BH&T) Deliveries (4 BH&Ts)	1	2021	2	2021
BH&T Test Readiness Review (TRR)	1	2021	1	2021
BH&T Test	2	2021	4	2021
Prototype Deliveries (24 Prototypes)	3	2020	2	2022
Pre-Production Test (PPT)	4	2020	2	2022
Soldier Vehicle Assessment (SVA) Readiness Review (RR)	1	2021	1	2021
SVA	2	2021	4	2021
Limited User Training (LUT)	4	2021	1	2022
Training Support Package (TSP) Development	2	2019	3	2022
Maintenance Task Analysis (MTA) and Level Of Repair Analysis (LORA)	2	2019	3	2022
Technical Manual (TM) Development	2	2019	3	2022

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev		Project (Number/Name) EV8 / Mobile Protected Firepower	
Events	Start		End	
	Quarter	Year	Quarter	Year
TM Validation	3	2021	3	2022
TM Development Update	1	2023	4	2024
Logistics Demonstration (Log Demo)	3	2024	4	2024
TM Verification	4	2024	4	2025
Level of Repair Analysis (LORA)	3	2022	2	2025
Source of Repair Analysis (SORA)	3	2022	3	2023
Training Support Package (TSP) Update	3	2022	3	2025
Nationa/Depot Maintenance Work Instruction (NMWR/DMWR)/Battle Damage Assessment and Repair (BDAR) Development	3	2022	3	2025
Spares Provisioning	3	2022	4	2023
Prototype Vehicle Updates to LRIP Configurations (Qty 8)	3	2022	2	2024
Corrosion Testing	2	2023	2	2024
CDE/SL/AFES Testing	4	2022	4	2023
Supportability Assessment (SA)	1	2022	1	2022
Training Devices Requirements Refinement Performance Spec Development	2	2019	4	2023
Vehicle Data Interface Development for Training Devices	3	2023	3	2024
M10 Booker Gunnery Training System (GTS) Development and Prototype Build	2	2024	1	2026
Family of Maintenance Trainers (FMT) Development	1	2024	4	2026
Low Rate Initial Production (LRIP) Option #1 Award	3	2022	3	2022
LRIP Option #1 Deliveries	2	2024	1	2025
Production Qualification Testing (PQT) at Aberdeen Test Center (ATC)	2	2024	2	2025
Production Qualification Testing (PQT) at Yuma Test Center (YTC)	3	2024	2	2025
Production Qualification Testing (PQT) at White Sands Missile Range (WSMR)	4	2024	2	2025
Production Qualification Testing (PQT) at Cold Regions Test Center (CRTC)	1	2025	2	2025
Full Up System Level (FUSL) Live Fire Testing at Aberdeen Test Center (ATC)	2	2024	2	2025
Army Interoperability Testing	1	2025	1	2025

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604645A / Armored Systems Modernization (ASM) - Eng Dev		Project (Number/Name) EV8 / Mobile Protected Firepower
		Start		End
Events		Quarter	Year	Quarter Year
Initial Operational Test and Evaluation (IOT&E)		3	2024	2 2025
Test Vehicle Refurbishment		3	2025	3 2026
LRIP Option #2 Award		3	2023	3 2023
LRIP Option #2 Deliveries		1	2025	1 2026
LRIP Option #3 Award		3	2024	3 2024
LRIP Option #3 Deliveries		1	2026	4 2026
FRP Lot #1 Award		2	2025	2 2025
FRP Lot #1 Deliveries		4	2026	1 2028

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	89.273	48.720	89.259	-	89.259	64.969	100.824	40.427	66.951	Continuing	Continuing
BQ6: Visual Augmentation System Eng Dev	-	66.782	7.973	39.183	-	39.183	45.371	81.675	21.066	47.396	Continuing	Continuing
DI5: FALCONS	-	-	-	10.450	-	10.450	-	-	-	-	0.000	10.450
L67: Soldier Night Vision Devices	-	2.881	6.061	12.140	-	12.140	5.585	5.644	5.706	5.763	Continuing	Continuing
L70: Night Vision Dev Ed	-	8.209	10.521	7.473	-	7.473	7.514	7.593	7.678	7.755	Continuing	Continuing
L79: Joint Effects Targeting Systems (JETS)	-	11.401	24.165	20.013	-	20.013	6.499	5.912	5.977	6.037	Continuing	Continuing
Note Project DI5 / FALCONS is a New Start in FY2025.												
A. Mission Description and Budget Item Justification A portion of this funding line is directly aligned to the Army Soldier Lethality Modernization Priority in support of situational awareness for the Close Combat Soldier. This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for United States defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations.  Project BQ6 focuses on transitioning demonstrated technologies that bring improvements to the dismounted Soldier's augmented vision and situational awareness system and provide Soldiers with the ability to fight, rehearse, train and win during multi-domain operations. Funded efforts will accelerate the implementation of components, terrain shared coordinate data and processing, algorithms including machine learning/artificial intelligence and demonstrations in support of the next generation augmented vision and situational awareness. Efforts will provide rapid decision making and targeting capabilities with the integration of external video and data sources such as weapon sights, air and ground vehicles and other data sources enabled by tactical cloud package and advanced network services. This project will provide data driven analytics to optimize unit performance and enhance lethality and to enable Synthetic Training Environment (STE) squad capability to perform live mixed reality training and rehearsing. This project includes costs for efforts associated with movement of information and high level processing, integration, and interface of products with the Soldiers' head, body, weapon, and platforms. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy and this project supports the Soldier Lethality Cross Functional Team.												

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	
<p>The total cost of the Integrated Visual Augmentation 1.2 Rapid Prototyping Middle Tier of Acquisition effort is \$314.0 million RDT&amp;E from FY22 to FY25. The remainder of the IVAS 1.2 Rapid Prototyping MTA is fully funded across the Future Years Defense Program.</p> <p>Project DI5 begins development on Future Advanced Long-range Common Optical/Netted-fires Sensor (FALCONS). FALCONS is the replacement for the Long Range Advanced Scout Surveillance System (LRAS3) and Fire Support Sensor System (FS3) providing an unmatched capability to detect, identify, and locate threats in all battlefield conditions at extended ranges, in all conditions, locate targets with the fidelity required to employ numerous Army and Joint precision, near precision, and conventional munitions, and have a networked capability to provide direct links for Scouts and Fire Supporters to streamline the kill chain.</p> <p>Project L67 develops, improves and miniaturizes high performance electro-optics, thermal and laser systems. It provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. It also adapts demonstrated technologies that bring improvements to the mounted and dismounted Soldiers' equipment and capabilities. This project develops or enhances equipment that provides the individual Soldier's day and/or night situational awareness and individual targeting capability. This project includes cost associated with efforts for the development, integration and interface of products on Soldiers head, body and weapons. Funding in this project supports the Army Future's Command Situational Awareness Strategy. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.</p> <p>Project L70 supports the 3rd Generation Forward Looking Infrared (3GEN FLIR) B-Kit program, which incorporates the next generation of forward-looking infrared technologies. The 3GEN FLIR program provides a common 3GEN FLIR B-Kit for integration into US Army FLIR sensor systems in accordance with the approved Improved Forward Looking Infrared (I-FLIR) Capability Development Document (CDD). When integrated in platform sensor packages, 3GEN FLIR technology enhances the warfighters' survivability and lethality through increased identification range performance, while enabling the detection of difficult or obscured targets and faster threat detection through automated processes. Executing Army guidance to implement advancements in digital processing and artificial intelligence has positioned 3GEN FLIR as the lead sensor to provide the Army's path forward for AI/ML capabilities for ground platforms. The 3GEN FLIR B-Kit program is key to the maintenance of the Army's FLIR industrial base.</p> <p>Project L79 is an Army program with joint information (Air Force and Marine Corps). JETS addresses the one-man, hand-held precision targeting gap identified by the Fires Center of Excellence (FCoE). JETS is a lightweight, handheld system that will provide the single dismounted observer with a common, enhanced day and night thermal capability to rapidly acquire, accurately locate, positively identify, and precisely designate targets. JETS Target Location and Designation System (TLDS) will be able to interface with existing and future Forward Entry Systems (FESSs) and operate in environments where global positioning system (GPS) capabilities are degraded or denied and will integrate the military-code (M-Code) GPS receivers. This project will address continued development and integration of improved precision targeting components to reduce size, weight, power, and cost of systems for dismounted precisions Fires mission. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)		PE 0604710A I Night Vision Systems - Eng Dev			
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	92.951	48.720	104.429	-	104.429
Current President's Budget	89.273	48.720	89.259	-	89.259
Total Adjustments	-3.678	0.000	-15.170	-	-15.170
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.509	-			
• SBIR/STTR Transfer	-2.169	-			
• Adjustments to Budget Years	-	-	-15.170	-	-15.170
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: BQ6: Visual Augmentation System Eng Dev					
Congressional Add: HUD Congressional Add					
Congressional Add Subtotals for Project: BQ6					
Congressional Add Totals for all Projects					
Change Summary Explanation					
The overall decrease in funding is attributed to the realignment of resources to PE 0603774A / Night Vision Systems Advanced Development's BQ5 (6.4) to support IVAS' modernization cycle. This reduction offset increases supporting EMD requirements for NVD-N and FALCONS.					

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) BQ6 / Visual Augmentation System Eng Dev			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
BQ6: Visual Augmentation System Eng Dev	-	66.782	7.973	39.183	-	39.183	45.371	81.675	21.066	47.396	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project focuses on transitioning demonstrated technologies that bring improvements to the dismounted Soldier's augmented vision and situational awareness system and provide Soldiers with the ability to fight, rehearse, train and win during multi-domain operations. Funded efforts will accelerate the implementation of components, terrain shared coordinate data and processing, algorithms including machine learning/artificial intelligence and demonstrations in support of the next generation augmented vision and situational awareness. Efforts will provide rapid decision making and targeting capabilities with the integration of external video and data sources such as weapon sights, air and ground vehicles and other data sources enabled by tactical cloud package and advanced network services. This project will provide data driven analytics to optimize unit performance and enhance lethality and to enable Synthetic Training Environment (STE) squad capability to perform live mixed reality training and rehearsing. This project includes costs for efforts associated with movement of information and high-level processing, integration, and interface of products with the Soldiers' head, body, weapon, and platforms. Funding for this project aligns with the Army's priorities in support of the National Defense Strategy. This project supports the Soldier Lethality Cross Functional Team.

The total cost of the Integrated Visual Augmentation 1.2 Rapid Prototyping Middle Tier of Acquisition effort is \$314.0 million RDT&E from FY22 to FY25. The remainder of the IVAS 1.2 Rapid Prototyping MTA is fully funded across the Future Years Defense Program.

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

	FY 2023	FY 2024	FY 2025
<b>Title:</b> Heads Up Display (HUD)	33.282	7.973	39.183
<b>Description:</b> Integrated Visual Augmentation System (IVAS) HUD provides a digital platform for Soldier to fight, rehearse, and train in day and night that provides increased lethality, mobility, and situational awareness necessary to achieve overmatch against our current and future adversaries.			
<b>FY 2024 Plans:</b> Improve IVAS 1.2 producibility and reliability. Continue test and evaluation of IVAS 1.2			
<b>FY 2025 Plans:</b> Continue test and evaluation of IVAS 1.2. Supports software development, implementation, and reliability.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army								<b>Date:</b> March 2024			
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>				<b>Project (Number/Name)</b> BQ6 / <i>Visual Augmentation System Eng Dev</i>			
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	
Increase in FY2025 due to the integration of improved components; continuation with test and evaluation of 1.2; initiation of vehicle integration of IVAS cloud and edge computing capability; and continued support of software development, implementation, and reliability.											
<b>Accomplishments/Planned Programs Subtotals</b>								33.282	7.973	39.183	
								<b>FY 2023</b>	<b>FY 2024</b>		
<b>Congressional Add:</b> HUD Congressional Add								33.500	-		
<b>FY 2023 Accomplishments:</b> Congressional Interest Item funding provided for continued 1.2 development.											
<b>Congressional Adds Subtotals</b>								33.500	-		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• K36402: <i>IVAS/Heads Up Display</i>	-	89.451	255.491	-	255.491	-	-	-	-	Continuing	Continuing
• BQ5: <i>Visual Augmentation</i>	68.153	67.935	58.592	-	58.592	44.459	9.222	70.958	45.650	Continuing	Continuing
<i>System Advanced Development</i>											
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
The Army has adjusted the IVAS program plan to field IVAS 1.0 and IVAS 1.1 systems while accelerating the development, production, and fielding of IVAS 1.2. IVAS 1.2 is accomplished as a technology insertion to the base production agreement awarded in Dec 2022. Initial 1.2 prototypes were delivered in 4QFY2023, an IVAS 1.2 phase 2 Technology Insertion (TI) was awarded in 4QFY2023. IVAS 1.2 Operational Test (OT) in 2QFY2025 will validate the system improvements and inform a production and fielding decision in 4QFY2025. IVAS will transition to a Major Capability Acquisition pathway no later than October 2025.											



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) BQ6 / Visual Augmentation System Eng Dev					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	C/TBD	Various : Various	-	1.189	Apr 2024	-		3.736	Nov 2024	-		3.736	Continuing	Continuing	Continuing
Subtotal			-	1.189		-		3.736		-		3.736	Continuing	Continuing	N/A
Remarks															
FY2023 Program Management will be completed with its final \$167K between December 2023 through April 2024. FY2025 costs increased from FY 2024 for personnel completing 1.2 and ramping towards work for IVAS Next.															
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Heads Up Display (HUD)	Various	Various : Various	27.919	0.944	Nov 2023	0.226	Nov 2023	18.480	Sep 2025	-		18.480	Continuing	Continuing	Continuing
Heads Up Display (HUD)	C/FFP	Microsoft : Redmond, WA	2.689	62.847	Sep 2023	4.677	Mar 2024	5.889	Mar 2025	-		5.889	Continuing	Continuing	Continuing
Vehicle Integration	TBD	Various : Various	-	-		-		1.200	Mar 2025	-		1.200	0.000	1.200	-
Subtotal			30.608	63.791		4.903		25.569		-		25.569	Continuing	Continuing	N/A
Remarks															
FY 2025 costs increased in Heads Up Display Various from FY 2024 for software development. FY 2025 costs increased in Heads Up Display Microsoft from FY 2024 due to completing IVAS 1.2 development. Vehicle Integration costs in FY 2025 is for GMR Circuit Card work for See Through Armor.															
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
IVAS HUD Testing	MIPR	Various : Various	13.992	1.802	Dec 2023	3.070	Mar 2024	9.878	Mar 2025	-		9.878	Continuing	Continuing	Continuing
Subtotal			13.992	1.802		3.070		9.878		-		9.878	Continuing	Continuing	N/A
Remarks															
FY 2025 costs increased from FY 2024 due to any governmental operational testing for IVAS 1.2.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024				
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev					Project (Number/Name) BQ6 / Visual Augmentation System Eng Dev					
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			44.600	66.782		7.973		39.183		-		39.183	Continuing	Continuing	N/A

**Remarks**  
Some cost categories include multiple efforts, so award date is the last scheduled award date.

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev		Project (Number/Name) BQ6 / Visual Augmentation System Eng Dev	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
1.2 Tech Insertion	<div>Development</div>								[Redacted]																			
1.2 Test													[Redacted]															
Platform Integration													[Redacted]															
IVAS Extensibility and Improvements													[Redacted]															

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) BQ6 / Visual Augmentation System Eng Dev	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
1.2 Tech Insertion	1	2023	1	2025
1.2 Test	1	2023	3	2025
Platform Integration	2	2023	4	2029
IVAS Extensibility and Improvements	1	2025	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) DI5 / FALCONS			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
DI5: FALCONS	-	-	-	10.450	-	10.450	-	-	-	-	0.000	10.450
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
<b>Note</b> FALCONS is a new start within the Night Vision Systems - Eng Dev program in FY 2025.												
<b>A. Mission Description and Budget Item Justification</b> Future Advanced Long-range Common Optical/Netted-fires Sensor (FALCONS) is the next generation sensor for Reconnaissance and Fires missions to enhance lethality and survivability of Brigade Combat Teams (BCTs) in Large Scale Combat Operations (LSCO). FALCONS provides interoperability between ground platforms and dismounted personnel through a Common Operational Picture (COP) of the battlefield and interchangeable components. The enhanced capabilities of FALCONS provide the ability to detect threats at greater distances in full spectrum conflict, terrain, and weather conditions with greater image resolution to develop civil considerations. It is envisioned FALCONS capabilities will be part of the system of systems approach enabled by current or future data sharing networks and transport layers to transmit target quality data to effectors in operational and tactical environments maintaining overmatch in the 2030 and 2040 timeframe. FALCONS equipped systems will be part of an Army 2030/2040 force that is decisive in varying operations against threats in environments of national interest. The Army requires FALCONS equipped forces be operationally responsive and able to adapt and exploit patterns of operations faster than the enemy, while dominating situations and adversaries. FALCONS equipped systems are a key entity of maneuver and fires tactical forces, and provides versatility, agility, and lethality.  The FY2025 RDTE Dollars in the amount of \$10.450 million will fund the award of a prototype contract to begin system development. Efforts will include initial system design and the beginning of digital prototyping.												
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>									<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	
<b>Title:</b> FALCONS Prototype Development									-	-	10.450	
<b>Description:</b> Development effort to build prototype systems, complete Soldier Touch Points, and testing.												
<b>FY 2025 Plans:</b> Funds in FY2025 will award development contract to begin initial design and digital prototyping.												
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FALCONS is a new start effort in FY2025.												
<b>Accomplishments/Planned Programs Subtotals</b>									-	-	10.450	

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) DI5 / FALCONS			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• KA4511: Improved Forward Looking Infrared (IFLIR) B-Kit	37.914	20.438	68.504	-	68.504	66.989	122.356	122.464	123.686	Continuing	Continuing
• L70: Night Vision Dev Ed	8.209	10.521	7.473	-	7.473	7.514	7.593	7.678	7.755	Continuing	Continuing
Remarks											
FALCONS will use a 3GEN FLIR B-Kit which will extend range and resolution.											
D. Acquisition Strategy											
The FALCONS Abbreviated Capability Development Document (A-CDD) was approved 23 March 2023. The program was approved by the AAE on 17 November 2023 to proceed with a Mid-Tier Acquisition-Rapid Prototyping (MTA-RP) strategy using an Other Transaction Agreement (OTA). FALCONS is currently drafting the Simplified Acquisition Management Plan (SAMP) and the required OTA award documentation. FALCONS plans to award the prototype OTA in 2QFY2025 that will complete the initial design and begin digital prototyping for the program.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) DI5 / FALCONS					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
FALCONS Program Management	MIPR	PM GS : Fort Belvoir, VA	-	-		-		1.048	Dec 2024	-		1.048	15.260	16.308	-
SBIR Tax	Various	Various : Various	-	-		-		0.497	Dec 2024	-		0.497	8.318	8.815	-
Subtotal			-	-		-		1.545		-		1.545	23.578	25.123	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
FALCONS Development	C/TBD	TBD : TBD	-	-		-		8.302	Mar 2025	-		8.302	155.186	163.488	-
Subtotal			-	-		-		8.302		-		8.302	155.186	163.488	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
FALCONS Matrix Support	MIPR	Various : Various	-	-		-		0.603	Dec 2024	-		0.603	1.499	2.102	-
Subtotal			-	-		-		0.603		-		0.603	1.499	2.102	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		-		10.450		-		10.450	180.263	190.713	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024																
Appropriation/Budget Activity 2040 / 5									R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev									Project (Number/Name) DI5 / FALCONS														
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029							
	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				
Contract Award Prep									Contract Award Prep																							
Contract Award																																
FALCONS Development																																



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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) DI5 / FALCONS

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Contract Award Prep	1	2025	2	2025
Contract Award	2	2025	2	2025
FALCONS Development	2	2025	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L67 / Soldier Night Vision Devices			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
L67: Soldier Night Vision Devices	-	2.881	6.061	12.140	-	12.140	5.585	5.644	5.706	5.763	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project develops, improves and miniaturizes high performance electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability and supports the Night Vision Goggles Modernization Strategy. This project includes cost associated with efforts for the development, integration and interface of products on Soldiers head, body and weapons. Funding in this project supports the Army's Soldier Lethality Cross Functional Teams (SL CFT) initiatives. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Family of Weapon Sights (FWS)	0.946	2.027	3.213
<p><b>Description:</b> There are three variants in the Family of Weapon Sights: FWS-Individual (FWS-I), FWS-Crew Served (FWS-CS) and FWS-Sniper (FWS-S). These sights enable combat forces to acquire and engage targets with small arms and conduct surveillance and fire control under day/night obscurants, no-light, and adverse weather conditions. The FWS utilizes advancements in thermal and low light level sensors to produce sights operable in-line with a day optic or in stand-alone mode. This RDT&amp;E project integrates smaller pixel thermal detectors/imagers in high definition formats with improved sensitivity, clarity, and range, while simultaneously reducing the size, weight and power consumption for all FWS variants and provides a minimum of a 20% overmatch for each of the weapon platforms they are intended.</p> <p>The FWS-I variant is a weapon-mounted thermal sensor that enables Soldiers to fire quickly and accurately from any carry position and with significantly reduced exposure to enemy fire by providing a wireless, zeroed weapon aimpoint in the Soldier's Enhanced Night Vision Goggle - Binocular (ENVG-B) or Integrated Visual Augmentation System (IVAS). FWS-I requires RDT&amp;E in FY2022 and FY2023 to design and qualify a second vendor in production, because additional capacity is required to meet the increase AAO of 112K.</p> <p>The FWS-CS variant leverages the success of the FWS-I development effort, and will be the primary sight for the MK19, M240B and M2. The FWS-CS system integrates High Definition (HD) Thermal and Day Color imagers, an Integrated Laser Range Finder (ILRF) and ballistic calculator to provide Soldiers with an accurate aimpoint that adjusts automatically for range, ammunition</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>		<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>characteristics, vertical angle, and weapon cant. The FWS-CS includes a wireless HD Helmet Mounted Display (HMD) that receives weapon sight imagery allowing the Soldier to utilize the weapon sight without requiring them to look through the weapon sights eyepiece. This wireless HMD provides the opportunity for the Solder to stay in a protected, unexposed posture while still accurately detecting and engaging targets. Additionally, the FWS-CS will integrate into Adaptive Squad Architecture and wirelessly share video and data with the Night Vision Systems (NVS) and the Nett Warrior End User Device (EUD). All wireless communication will be through the Intra Soldier Wireless (ISW) Network.</p> <p>The FWS-S variant utilizes a HD thermal sensor and mounts in-line with the Sniper's direct view optic providing a thermal capability without the need to remove or re-boresight the current direct view optic. The FWS-S provides Snipers a large format display with increased pixel density that enables accurate long range engagements in all battlefield conditions while utilizing the direct view optic's aiming features, extending lethality and providing exceptional observation.</p> <p><b>FY 2024 Plans:</b> Both FWS Individual and FWS Crew Served will continue to conduct operational and airborne testing, to include an Airborne Limited User Test for FWS-CS. In addition, integration efforts between FWS Individual and the fused awareness system.</p> <p><b>FY 2025 Plans:</b> Continue to execute product improvements for the FWS Individual and FWS Sniper, to include ongoing reliability growth efforts and developmental/operational testing. Begin efforts to qualify improved night/day fire control devices, including improved mid-wave thermal sights and integration with Next Generation Fire Control, other sensors and weapon enablers. Continued integration efforts for the FWS Individual with multiple systems, weapons, and enablers.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increase from FY2024 to FY2025 to cover additional costs associated with FWS Individual and FWS Crew Served product improvements and qualification of an improved variant of the FWS Sniper.</p>					
<p><b>Title:</b> Night Vision Device - Next (NVD-N) (formerly Night Vision Goggle-Next (NVG-N))</p> <p><b>Description:</b> NVD-N systems will replace Soldiers' legacy monocular AN/PVS-14s and bi-ocular AN/PVS-7s increasing the Soldiers' situational awareness, mobility, speed, and effectiveness to support an increased operational tempo. NVD-N provides the capability to identify obstacles and threats at night or in low light conditions with greater clarity, better depth perception, and further recognition range.</p> <p><b>FY 2024 Plans:</b> Continue development and testing of the NVD-N product in support of the Situational Awareness Modernization Strategy.</p> <p><b>FY 2025 Plans:</b></p>			1.935	2.900	8.927

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L67 / Soldier Night Vision Devices			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
Continue development and testing of the NVD-N product in support of the Situational Awareness Strategy.											
FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to greater test asset quantities and testing scope for development and testing of NVD-N.											
Title: Laser Target Locator Module (LTLM)									-	1.134	-
Description: LTLM is a Lightweight, Handheld Laser Target Locator with a direct view optic, un-cooled thermal camera, eye-safe laser range finder, digital magnetic compass, and an internal Selective Availability Anti-Spoofing Module (SAASM) GPS receiver, which provides the dismounted observer or Scout a fully digital, handheld system to accurately determine target location and the ability to call for fire during all weather and light conditions.											
FY 2024 Plans: Funding for FY 2024 will support the completion of testing and qualification of the LTLM upgraded variant.											
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2025 decrease due to the completion of the Government's test and qualification of the LTLM upgraded variant in FY 2024.											
Accomplishments/Planned Programs Subtotals									2.881	6.061	12.140
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• VT7: Soldier Maneuver Sensors - Adv Dev	26.696	3.729	3.507	-	3.507	3.622	3.660	3.700	3.737	Continuing	Continuing
• K22002: FWS-INDIVIDUAL	156.649	129.807	144.152	-	144.152	93.710	92.622	92.062	92.976	0.000	801.978
• K35110: Small Tactical Optical Rifle Mounted MLRF	11.357	15.484	10.864	-	10.864	2.166	1.562	11.078	11.188	Continuing	Continuing
• B53800: Laser Target Locator Systems	34.229	21.539	21.660	-	21.660	2.755	2.780	21.439	21.654	Continuing	Continuing
• K22003: FWS-CREW SERVED	23.831	42.649	50.044	-	50.044	-	-	45.791	46.249	Continuing	Continuing
• K22004: FWS-SNIPER	18.668	13.178	13.156	-	13.156	12.885	13.149	13.371	13.505	Continuing	Continuing
• BQ5: Visual Augmentation System Advanced Development	68.153	67.935	58.592	-	58.592	44.459	9.222	70.958	45.650	Continuing	Continuing
• BQ6: Visual Augmentation System Eng Dev	66.782	7.973	39.183	-	39.183	45.371	81.675	21.066	47.396	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army						Date: March 2024	
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev			Project (Number/Name) L67 / Soldier Night Vision Devices	

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

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• K36400: Helmet Mounted Enhanced Vision Devices	358.140	30.153	100.292	-	100.292	-	-	-	-	0.000	488.585

Remarks

D. Acquisition Strategy

The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L67 / Soldier Night Vision Devices					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 MGMT	MIPR	Various : Various	24.813	0.010	Sep 2023	0.850	Nov 2023	1.037	Nov 2024	-		1.037	Continuing	Continuing	-
Subtotal			24.813	0.010		0.850		1.037		-		1.037	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Family of Weapon Sights (FWS-I/FWS-CS/FWS-S)	C/FFP	Various : Various	3.046	0.946	Dec 2023	1.687	Feb 2024	3.213	Feb 2025	-		3.213	Continuing	Continuing	-
Night Vision Device - Next	C/TBD	TBD : TBD	-	-		0.812	Feb 2024	7.165	Feb 2025	-		7.165	Continuing	Continuing	-
Subtotal			3.046	0.946		2.499		10.378		-		10.378	Continuing	Continuing	N/A
Remarks															
In FY 2023, \$60K will be obligated to Operational Test Command and \$283K obligated to C5ISR in December.															
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	RTI : Ft Belvoir, VA	30.688	0.593	Aug 2023	0.540	Dec 2023	0.473	Dec 2024	-		0.473	Continuing	Continuing	-
Subtotal			30.688	0.593		0.540		0.473		-		0.473	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Government Test Support Activity	MIPR	Army Test and Evaluation Command : Various	68.304	1.332	Aug 2023	2.172	Mar 2024	0.252	Mar 2025	-		0.252	Continuing	Continuing	-
Subtotal			68.304	1.332		2.172		0.252		-		0.252	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev					Project (Number/Name) L67 / Soldier Night Vision Devices				
		Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		126.851	2.881		6.061		12.140		-		12.140	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L67 / Soldier Night Vision Devices	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
FWS-I Contract 2nd Source / Design Qualification																												
FWS-I and the fused awareness system																												
FWS-CS Qualification Testing																												
STORM II - Power Data Rail Integration																												
LTLM M-Code GPS Integration																												
Advanced Sensor Development/Enhancements																												
Night Vision Device-Next Engineering, Qualification & Go...																												
Night Vision Device-Next MS B																												
Night Vision Device-Next MS C																												



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604710A / <i>Night Vision Systems - Eng Dev</i>	<b>Project (Number/Name)</b> L67 / <i>Soldier Night Vision Devices</i>	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FWS-I Contract 2nd Source / Design Qualification	3	2022	2	2023
FWS-I and the fused awareness system	1	2024	2	2026
FWS-CS Qualification Testing	2	2021	4	2023
STORM II - Power Data Rail Integration	1	2024	2	2026
LTLM M-Code GPS Integration	2	2021	3	2023
Advanced Sensor Development/Enhancements	3	2026	4	2029
Night Vision Device-Next Engineering, Qualification & Government Testing	4	2023	2	2026
Night Vision Device-Next MS B	2	2024	2	2024
Night Vision Device-Next MS C	3	2026	3	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L70 / Night Vision Dev Ed			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
L70: Night Vision Dev Ed	-	8.209	10.521	7.473	-	7.473	7.514	7.593	7.678	7.755	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The project supports the 3rd Generation Forward Looking Infrared (3GEN FLIR) B-Kit program, which incorporates the next generation of forward-looking infrared technologies. The 3GEN FLIR program provides a common 3GEN FLIR B-Kit for integration into US Army FLIR sensor systems in accordance with the approved Improved Forward Looking Infrared (I-FLIR) Capability Development Document (CDD). The common 3GEN FLIR B-Kit will integrate with XM30, FALCONS, and future platforms; with potential 3GEN FLIR component utilization opportunities for future reconnaissance and airborne applications. The 3GEN FLIR B-Kit provides Mid Wave Infrared and Long Wave Infrared digital video and the electronic interfaces required to integrate the 3GEN FLIR technology with the host platform sensor. When integrated in platform sensor packages, 3GEN FLIR technology enhances the warfighters' survivability and lethality through increased identification range performance, while enabling the detection of difficult or obscured targets and faster threat detection through automated processes. Executing Army guidance to implement advancements in digital processing and artificial intelligence has positioned 3GEN FLIR as the lead sensor to provide the Army's path forward for AI/ML capabilities for ground platforms. The 3GEN FLIR B-Kit program is key to the maintenance of the Army's FLIR industrial base.

FY 2025 Base funding in the amount of \$7.473 million supports the 3GEN FLIR B-Kit program activities.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> 3GEN FLIR B-Kit Product Improvements & Competition Development	8.209	10.521	7.473
<b>Description:</b> 3GEN FLIR B-Kit Product Improvements, Technical Insertions, and promotion of competition			
<b>FY 2024 Plans:</b> FY 2024 Base Funding supports demonstration of the continued integration of sensor automation and artificial intelligence/machine learning to support Aided Target Detection and Recognition and promote competition for full rate production.			
<b>FY 2025 Plans:</b> FY 2025 Base Funding supports continued development and integration of sensor automation and artificial intelligence/machine learning to support Aided Target Detection and Recognition and promote competition for full rate production.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to program transition from development to continued product improvements & competition development in FY2025.			
<b>Accomplishments/Planned Programs Subtotals</b>	8.209	10.521	7.473

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L70 / Night Vision Dev Ed			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• 330: Abrams Tank Improve Prog	58.971	96.240	246.475	-	246.475	366.247	179.373	148.671	140.239	Continuing	Continuing
• CF6: Optionally Manned Fighting Vehicle (OMFV)	519.131	996.653	504.841	-	504.841	363.092	366.931	364.919	368.567	0.000	3,484.134
• KA4511: Improved Forward Looking Infrared (IFLIR) B-Kit	37.914	20.438	68.504	-	68.504	66.989	122.356	122.464	123.686	Continuing	Continuing
• DI5: FALCONS	-	-	10.450	-	10.450	-	-	-	-	0.000	10.450
Remarks											
D. Acquisition Strategy											
3GEN FLIR: Materiel Development Decision (MDD) was received from the Army Acquisition Executive (AAE) and the Acquisition Decision Memorandum (ADM) was signed on 22-Dec-2014. Per the ADM, 3GEN FLIR entered the acquisition lifecycle at Milestone B (MS B) on 11-Feb-2016. After a successful MS B decision, competitive EMD contracts were awarded to design, develop, integrate and test the 3GEN FLIR B-Kit prior to production and mitigate the industrial base risk. The host platforms are responsible for integration of the 3GEN FLIR B-Kit. MDA approved 3GEN FLIR MS C on 28-Apr-2023. 3GEN FLIR RDT&E activities will now focus on continued integration and refinement of artificial intelligence/machine learning capabilities per Army guidance, and 2nd source development to promote competition to achieve full rate production.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L70 / Night Vision Dev Ed					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Project Management	MIPR	PM TS : Ft. Belvoir, VA	17.417	0.548	Jan 2023	0.522	Jan 2024	0.447	Jan 2025	-		0.447	Continuing	Continuing	-
Subtotal			17.417	0.548		0.522		0.447		-		0.447	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
3GEN FLIR Product Improvements	TBD	Various : Various	-	7.136	Mar 2023	9.625	Jan 2024	6.728	Mar 2025	-		6.728	Continuing	Continuing	-
Subtotal			-	7.136		9.625		6.728		-		6.728	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
3GEN FLIR B-Kit Support	C/TBD	Various : Various	43.664	0.525	Feb 2022	0.374	Feb 2024	0.298	Nov 2024	-		0.298	Continuing	Continuing	-
Subtotal			43.664	0.525		0.374		0.298		-		0.298	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			61.081	8.209		10.521		7.473		-		7.473	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024												
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev								Project (Number/Name) L70 / Night Vision Dev Ed										
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
3GEN FLIR B-Kit Development, Test, and Integration	[Blue bar]				[Grey bar]																							
3GEN FLIR Incremental Product Improvements	[Blue bar]																											
3GEN FLIR B-Kit MS C	[Grey bar with 1]				[Grey bar]																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L70 / Night Vision Dev Ed	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Common Operating Environment, Development	2	2012	4	2018
3GEN FLIR Materiel Development Decision (MDD)	1	2015	1	2015
3GEN FLIR Development Request For Proposal Release Review (DRFPRR)	3	2015	3	2015
3GEN FLIR B-Kit MS B	2	2016	2	2016
3GEN FLIR B-Kit Development, Test, and Integration	2	2016	3	2023
3GEN LRAS3 ECP to Integrate 3GEN FLIR B-Kit: Spec Development & Documentation	1	2018	4	2019
3GEN FLIR Incremental Product Improvements	4	2022	4	2030
3GEN FLIR B-Kit MS C	3	2023	3	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
L79: Joint Effects Targeting Systems (JETS)	-	11.401	24.165	20.013	-	20.013	6.499	5.912	5.977	6.037	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Joint Effects Targeting System (JETS) is an Army Joint Information Program. JETS addresses the one-man, hand-held precision targeting gap identified by the Fires Center of Excellence (FCoE). JETS is a light-weight, handheld system that will provide the single dismounted observer with a common, enhanced day and night thermal capability to rapidly acquire, accurately locate, positively identify, and precisely designate targets. JETS Target Location and Designation System (TLDS) is able to interface with existing and future Forward Entry Systems (FESS) and will be able to operate in environments where global positioning system (GPS) capabilities are degraded or denied, and will integrate military-code (M-Code) GPS receivers. This project will develop and integrate improved precision targeting components to reduce size, weight, power, and cost of systems for dismounted precision Fires mission. Funding in this project aligns with the Army's priorities in support of the National Defense Strategy.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> JETS II Development	11.401	24.165	20.013
<b>Description:</b> This project performs engineering and manufacturing development of the next generation JETS, transitioning technologies developed in the Precision Targeting and Target Acquisition Development project. The JETS II will be an advanced precision targeting system incorporating improved target acquisition sensors and optics, improved targeting sensors, targeting algorithms, and a M-Code GPS receiver while reducing size, weight, and power requirements. It will integrate JETS into the Adaptive Squad Architecture (ASA) using the Intra Soldier Wireless (ISW) capability.			
<b>FY 2024 Plans:</b> The FY24 resources will continue to support the competitive engineering and manufacturing development of JETS II.			
<b>FY 2025 Plans:</b> The FY 2025 resources will continue to support the competitive engineering, manufacturing development and test and evaluation of JETS II.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The FY 2025 decrease reflects a shift from the development, integration, and material costs to build the JETS II prototypes to the contractor testing and evaluation of the JETS II prototypes.			
<b>Accomplishments/Planned Programs Subtotals</b>	11.401	24.165	20.013

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• VT8: SOLDIER PRECISION TARGETING DEVICES - ADV DEV	1.970	2.011	2.014	-	2.014	2.016	2.037	2.060	2.081	Continuing	Continuing
• K32101: JOINT EFFECTS TARGETING SYSTEM (JETS)	2.576	8.932	9.345	-	9.345	69.134	69.802	69.867	70.560	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The Joint Effects Targeting System (JETS) Target Location Designation System (TLDS) entered the acquisition framework on 25 February 2013 at Milestone (MS) B and the Engineering Manufacturing & Development phase. On 26 May 2016, MS C was approved for entry into the Production and Deployment Phase, Low Rate Initial Production. On 6 March 2022, the Milestone Decision Authority provided an Acquisition Decision Memorandum directing the Product Manager to develop a comprehensive plan to acquire an updated version of JETS, implementing M-Code to be compliant with Public Law 111-383, and insertion of other capability improvements commensurate with user Requirements. The Program Manager awarded two Other Transaction Agreements in September 2023 on a cost plus fixed-fee basis for competitive development of the JETS II integrating M-Code GPS. The development is planned to complete in second quarter fiscal year 2026, with one vendor being selected for production on a best value basis beginning in fiscal year 2026.											



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev				Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	MIPR	Various : Various	5.653	0.067	Nov 2022	0.400	Dec 2023	0.500	Dec 2024	-		0.500	Continuing	Continuing	Continuing
Subtotal			5.653	0.067		0.400		0.500		-		0.500	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
JETS II	C/CPFF	TBD : TBD	-	-		22.606	Nov 2023	15.988	Nov 2024	-		15.988	Continuing	Continuing	Continuing
JETS II (DRS)	C/CPFF	DRS : Melbourne, FL	-	4.407	Sep 2023	-		-		-		-	0.000	4.407	-
JETS II (ESA)	C/CPFF	Elbit Systems of America (ESA) : Merrimack, NH	-	6.293	Sep 2023	-		-		-		-	0.000	6.293	-
Subtotal			-	10.700		22.606		15.988		-		15.988	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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	C5ISR (RTI) : Ft. Belvoir, VA	13.867	0.134	Nov 2023	0.250	Dec 2023	0.275	Dec 2024	-		0.275	Continuing	Continuing	-
Science and Engineering Support	SS/CPFF	Johns Hopkins University : Laurel, MD	9.397	0.500	Apr 2023	0.659	Jan 2024	0.750	Jan 2025	-		0.750	Continuing	Continuing	-
Subtotal			23.264	0.634		0.909		1.025		-		1.025	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Testing	MIPR	Various : Various	6.061	-		0.250	Jan 2024	2.500	Jan 2025	-		2.500	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev					Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)				
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Subtotal			6.061	-		0.250		2.500		-		2.500	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			34.978	11.401		24.165		20.013		-		20.013	Continuing	Continuing	N/A
Remarks															
FY 2025 test and evaluation cost increase due to a ramping up of Government testing of the JETS II prototypes.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
JETS II Development																												
JETS II Government Testing																												
JETS II Production Decision																												
JETS II Production																												
JETS II Initial Operational Test & Evaluation																												
JETS II SWAP-C																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604710A / Night Vision Systems - Eng Dev	Project (Number/Name) L79 / Joint Effects Targeting Systems (JETS)	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JETS II Development	4	2023	2	2026
JETS II Government Testing	2	2025	1	2026
JETS II Production Decision	1	2026	1	2026
JETS II Production	3	2026	2	2032
JETS II Initial Operational Test & Evaluation	3	2027	3	2027
JETS II SWAP-C	2	2028	4	2030

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

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					<b>R-1 Program Element (Number/Name)</b> PE 0604713A / Combat Feeding, Clothing, and Equipment							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	1.509	2.223	3.286	-	3.286	5.693	5.408	3.023	2.438	0.000	23.580
548: Mil Subsistence Sys	-	1.509	2.223	1.583	-	1.583	1.585	1.601	1.620	1.636	0.000	11.757
EL2: Army Field Feeding Equipment	-	-	-	1.703	-	1.703	4.108	3.807	1.403	0.802	0.000	11.823

## Note

Project EL2 / Army Field Feeding Equipment is a new start in FY25

## A. Mission Description and Budget Item Justification

Projects under this Program Element (PE) support the development, demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance soldier efficiency, improve soldier survivability, and reduce food service logistics requirements for all four services. These Projects support multi-fuel, rapidly deployable field food service equipment initiatives. Efforts also support the Engineering and Manufacturing Development (EMD) phase of programs to improve equipment, enhance safety in food service, and decrease fuel and water requirements. The Projects develop critical enablers that support the Joint Future Capabilities and Joint Expeditionary mindset, by maintaining readiness through integrating new equipment, enhancing the field soldier's well-being, and providing soldiers usable equipment. The Projects also reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

Projects under this PE support Field Feeding programs for all the services.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	1.566	2.223	1.620	-	1.620
Current President's Budget	1.509	2.223	3.286	-	3.286
Total Adjustments	-0.057	0.000	1.666	-	1.666
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.057	-			
• Adjustments to Budget Years	-	-	1.666	-	1.666

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment
<div>Change Summary Explanation</div> <div>FY25 increase supports planned heightened efforts under Army Field Feeding Equipment.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>				Project (Number/Name) 548 / <i>Mil Subsistence Sys</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
548: <i>Mil Subsistence Sys</i>	-	1.509	2.223	1.583	-	1.583	1.585	1.601	1.620	1.636	0.000	11.757
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This Project enables system development and demonstration of Joint Service combat rations and field feeding equipment/systems designed to improve warfighter performance and reduce the logistics burden of subsistence support. Efforts funded in this Project support all four Services, the Special Operations Command, and the Defense Logistics Agency (DLA). The Army serves as the Executive Agent for this Department of Defense (DoD) program, with oversight and coordination provided by the DoD Combat Feeding Research and Engineering Board (CFREB) as required by DoD Directive (DoDD) 3235.02E. Centralized execution of the DoD Combat Feeding Research and Engineering Program (CFREP) with Joint Service review and approval eliminates unnecessary duplication of efforts across the Services and maximizes use of common materiel solutions.

Work in this Project is performed by the United States Army Futures Command (AFC), U.S. Army Combat Capabilities Development Command (DEVCOM) Soldier Center (SC), Natick, MA.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Joint Service Combat Ration System Development	1.238	1.186	0.939
<b>Description:</b> This effort integrates and demonstrates mature Joint Service combat ration systems that enable warfighter maneuver, readiness and effectiveness during highly mobile, dispersed operations. Prototypes are transitioned from APE 0603747A Project 610 to develop individual and group combat rations with improved capabilities including improved warfighter physical and cognitive performance through optimized nutrition and reduced logistics burden through weight and cube reduction. This effort completes operational test and evaluation (OT&E) to confirm system level performance, and develops ration specifications for transition to Defense Logistics Agency - Troop Support (DLA - Troop Support) for procurement.			
<b>FY 2024 Plans:</b> For existing operational ration platforms (Meal, Ready-to-Eat; Close Combat Assault Ration; Unitized Group Rations - A/M/ Heat&Serve, Expeditionary Group Ration), will integrate prototype components/technologies into menu systems and ration assembly processes to improve quality, optimize nutritional content, decrease weight/cube/cost and/or improve modularity and field utility; will continue to conduct OT&E on ration systems to validate system level performance; will present recommendations to the Joint Services for Milestone C approval; will finalize procurement documents and initiate transition to DLA-Troop Support; will obtain US Army, Surgeon General approval of revised menus; will execute production testing with industry to			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>		<b>Project (Number/Name)</b> 548 / <i>Mil Subsistence Sys</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
ensure consistent ration quality, validate documents, and resolve vendor/supplier technical production issues; and will conduct confirmatory sensory, chemical, physical and shelf life testing, in addition to complete nutrient analysis.					
<b>FY 2025 Plans:</b> For existing operational ration platforms: Meal, Ready-to-Eat (MRE); Close Combat Assault Ration (CCAR); Unitized Group Rations (UGR) - A/M/ Heat&Serve; will integrate prototype components/technologies into menu systems; complete documentation of MRE 26 and UGR-M assembly contract requirements (ACR); will define ration assembly processes to improve quality, optimize nutritional content, decrease weight/cube/cost and/or improve modularity and field utility; will continue to conduct OT&E on ration systems to validate system level performance; will present recommendations to the Joint Services for Milestone C approval; will finalize procurement documents and initiate transition to DLA-Troop Support; will obtain US Army, Surgeon General approval of revised menus; will execute production testing with industry to ensure consistent ration quality, validate documents, and resolve vendor/supplier technical production issues; and will conduct confirmatory sensory, chemical, physical and shelf life testing, in addition to complete nutrient analysis.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decrease reflects a reduction in operational test and evaluation and conducting planned lifecycle.					
<b>Title:</b> Joint Service Field Feeding Systems Development			0.271	1.037	0.644
<b>Description:</b> This effort integrates and demonstrates field feeding equipment systems in support of the Navy (USN), Air Force (USAF), and Marine Corps (USMC) that reduce the logistics burden, improve efficiency, and decrease operation and support costs as directed by the DoD CFREB and Joint Service partners. Validated systems, specifications, and technical data packages are transitioned to the appropriate Service partner for procurement and fielding. Service partners include Product Manager Combat Support Equipment (PdM-CSE), Naval Sea Systems Command (NAVSEA), Naval Supply Systems Command (NAVSUP), Navy Expeditionary Combat Command (NECC) and USAF Basic Expeditionary Airfield Resources (BEAR) Program Office.					
<b>FY 2024 Plans:</b> Will complete system fabrication and integration of upgraded Expeditionary Field Kitchen in support of DT&E and Limited User Testing; Will finalize technical data package for Expeditionary Field Feeding Equipment System and transition package to DLA-TS for procurement and sustainment; Will complete DT&E of Joint Air Containerized Kitchen Systems for air transportability and deliver systems to USAF for limited user evaluations; In support of Navy galley operations, will award contracts and initiate T&E for bakery equipment, to increase equipment diagnostics and automation, while reducing labor requirements.					
<b>FY 2025 Plans:</b> Will complete operational test and evaluation (OT&E) and perform at-sea user evaluations of bakery equipment in support of Navy galley operations; Will conduct operational test and evaluation (OT&E) for component upgrades in support of water/fuel/					



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment				Project (Number/Name) 548 / Mil Subsistence Sys				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
energy conservation in USAF BEAR field feeding systems; Will complete test and evaluation (T&E), generate Engineering Change Proposals and Technical Data Packages for upgrades to USMC Expeditionary Field Kitchen;												
FY 2024 to FY 2025 Increase/Decrease Statement: Funding decrease reflects a reduction in operational test and evaluation and conducting planned lifecycle.												
Accomplishments/Planned Programs Subtotals										1.509	2.223	1.583
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• 610: Food Adv Development	4.030	3.550	4.059	-	4.059	4.065	4.108	4.154	4.196	0.000	28.162	
Remarks												
D. Acquisition Strategy												
Complete Engineering and Manufacturing Development (EMD) and Demonstration of food items and equipment for transition into competitive procurement contract. Complete advanced research efforts to support Engineering Change Proposals for previously developed equipment.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment				Project (Number/Name) 548 / Mil Subsistence Sys					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Combat Feeding Program Management	Allot	DEVCOM Soldier Center : Natick, MA	4.852	0.350	Oct 2022	0.111	Oct 2023	0.068	Oct 2024	-		0.068	Continuing	Continuing	Continuing
Subtotal			4.852	0.350		0.111		0.068		-		0.068	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Joint Service Rations and Combat Feeding Equipment	Various	Various : Various	7.234	0.148	Oct 2022	0.211	Oct 2023	0.450	Oct 2024	-		0.450	Continuing	Continuing	Continuing
Subtotal			7.234	0.148		0.211		0.450		-		0.450	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Joint Service Rations and Combat Feeding Equipment	Allot	DEVCOM Soldier Center : Natick, MA	5.021	1.011	Oct 2022	1.901	Oct 2023	1.065	Oct 2024	-		1.065	Continuing	Continuing	Continuing
Subtotal			5.021	1.011		1.901		1.065		-		1.065	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			17.107	1.509		2.223		1.583		-		1.583	Continuing	Continuing	N/A
Remarks															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2025 Army</b>			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>		<b>Project (Number/Name)</b> 548 / <i>Mil Subsistence Sys</i>	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Conduct operational testing of combat ration systems																												
Conduct OT&E of Expeditionary Group Ration (EGR)																												
Develop and transition EGR documents to DLA-TS for procu...																												
Obtain Joint Service and Army Surgeon General approval o...																												
Conduct OT&E of through the mask feeding system																												
Develop and transition individual and group ration docum...																												
Conduct OT&E & transition labor & energy saving bakery u...																												
Conduct OT&E of Energy Conversation technologies for BEA...																												
Conduct OT&E of EFK upgrades and transition to USMC																												
Conduct OT&E of EFFES at the squad/platoon level																												
Conduct OT&E and shipboard user evaluations for submarin...																												
Conduct OT&E and First Article Testing for USMC scalable...																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	<b>Project (Number/Name)</b> 548 / <i>Mil Subsistence Sys</i>	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct operational testing of combat ration systems	1	2018	4	2028
Conduct OT&E of Close Combat Assault Ration (CCAR)	1	2020	4	2022
Obtain Joint Service and Army Surgeon General approval of first generation CCAR	3	2021	2	2022
Develop CCAR Technical Data Package and contract for Low Rate Initial Production	3	2021	1	2022
Develop and transition CCAR documents to DLA-TS for procurement	1	2022	2	2022
Conduct OT&E of Expeditionary Group Ration (EGR)	1	2023	4	2023
Develop and transition EGR documents to DLA-TS for procurement	2	2023	4	2024
Obtain Joint Service and Army Surgeon General approval of EGR	2	2024	3	2024
Conduct OT&E of through the mask feeding system	1	2023	4	2023
Develop and transition individual and group ration documents annually to DLA-TS	1	2018	4	2028
Obtain Joint Service and Army Surgeon General approval of MORE Performance Pack	2	2022	3	2022
Conduct OT&E & transition labor & energy saving bakery upgrades to USN	1	2024	4	2025
Conduct OT&E of Energy Conversation technologies for BEAR kitchens to USAF	1	2025	4	2025
Conduct OT&E and transition Mobile Feeding Galley to USN	1	2020	3	2020
Conduct OT&E & transition labor & energy saving galley/scullery upgrades to USN	1	2020	4	2021
Conduct OT&E of expeditionary kitchen systems for shore-based Navy units	1	2022	4	2022
Conduct OT&E of Improved Tray Ration Heater and transition to USMC	1	2020	4	2021
Obtain Aerial Delivery Certification of Inflatable Refrigerated Space (IRefS)	1	2020	4	2021
Conduct OT&E of IRefS and transition to Services	1	2021	4	2022
Conduct OT&E of EFK upgrades and transition to USMC	1	2024	4	2025
Conduct OT&E of intuitive kitchen and galley equipment; transition to Services	1	2021	4	2022
Conduct OT&E of EFFES at the squad/platoon level	1	2022	4	2024

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment		Project (Number/Name) 548 / Mil Subsistence Sys	
	Start		End	
Events	Quarter	Year	Quarter	Year
Conduct OT&E and shipboard user evaluations for submarine galley systems, transition results to Navy Foodservice Equipment Catalog	1	2026	4	2027
Conduct OT&E and First Article Testing for USMC scalable feeding platforms; qualify systems for production and sustainment;	1	2027	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment				Project (Number/Name) EL2 / Army Field Feeding Equipment			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
EL2: Army Field Feeding Equipment	-	-	-	1.703	-	1.703	4.108	3.807	1.403	0.802	0.000	11.823
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Army Field Feeding Equipment is a new start within the Combat Feeding, Clothing, and Equipment program in FY 2025.

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

This Project supports the development, demonstration and Non-Developmental Item (NDI) Commercial Off The Shelf (COTS) evaluation of combat feeding equipment to enhance Soldier efficiency, improve Soldier survivability, and reduce food service logistics requirements for the Army. The Project supports rapidly deployable, organically maintained and provisioned field food service equipment initiatives. Efforts also support the Engineering and Manufacturing Development (EMD) phase of programs to improve equipment, enhance safety in food service, reduce environmental impact, and decrease fuel and water requirements. The Projects develop critical enablers that support the Army's Strategic Planning Guidance by developing and integrating critical expeditionary capabilities that maintain readiness, providing effective solutions that reduce the resource and operational energy footprint, providing modernized deployable kitchen equipment for Army 2030, and enhancing the field Soldier's well-being. This project reduces sustainment requirements, related Combat Support/ Combat Service Support (CS/CSS) demands on lift, the combat zone footprint, and costs for logistical support.

This PE/Project supports Field Feeding programs for the Army.

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

<b>Title:</b> MTRCS RU Replacement	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Description:</b> Provides the next generation refrigeration unit for the Multi-temperature Refrigerated Container System (MTRCS). The MTRCS maintains rations and or/blood at refrigerated or frozen temperatures in ambient temperatures ranging from -25F to 120F. The MTRCS has the capacity to feed 800 soldiers 2 meals a day for 3 days at which point it is replaced in the field by another fully loaded MTRCS. A new EPA compliant refrigeration unit (RU) is required to replace the legacy RU which is no longer being produced.	-	-	1.103
<b>FY 2025 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	<b>Project (Number/Name)</b> EL2 / <i>Army Field Feeding Equipment</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
Complete market research and develop a prototype refrigeration unit that meets the Army's performance requirements for tactical refrigeration. Develop collaborative test plan and implement comprehensive technical testing of prototype.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY25 is a new start for this MTRCS RU replacement effort.			
<b>Title:</b> AK Integration with JLTV  <b>Description:</b> Mitigates safety issues that have developed from the fielding of the Army's Joint Light Tactical Vehicle (JLTV). The Assault Kitchen (AK) provides heat on the move capability to feed remote company sized units in environments from -25F to 120F all over the world. The AK uses the Army's Unitized Group Ration Heat and Serve to provide hot meals to up to 250 soldiers upon arrival onsite (500 daily). The AK is housed in a light tactical trailer that is incompatible with the new JLTV and requires that the AK components be integrated into the trailer that is compatible with the JLTV.  <b>FY 2025 Plans:</b> Integrate AK components into testable JLTV and trailer combination. Execute initial in-house testing and formal test program at government facility. Initiate required logistics documentation changes based on design.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY25 is a new start for this AK Integration effort.		-	-
			0.600
<b>Accomplishments/Planned Programs Subtotals</b>		-	1.703
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> Complete Engineering Manufacturing Development (EMD) of food service items and equipment for transition into competitive procurement contract. Complete advanced research efforts to support Engineer Change Proposals for previously developed equipment.			

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2025 Army</b>												<b>Date: March 2024</b>			
<b>Appropriation/Budget Activity</b> 2040 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>						<b>Project (Number/Name)</b> EL2 / <i>Army Field Feeding Equipment</i>			
<b>Management Services (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MTRCS	TBD	TBD : TBD	-	-		-		0.203	Dec 2024	-		0.203	0.000	0.203	-
AK	TBD	TBD : TBD	-	-		-		0.050	Dec 2024	-		0.050	0.000	0.050	-
<b>Subtotal</b>			-	-		-		0.253		-		0.253	0.000	0.253	N/A
<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MTRCS	TBD	TBD : TBD	-	-		-		0.750	Apr 2025	-		0.750	0.000	0.750	-
AK	TBD	TBD : TBD	-	-		-		0.400	Nov 2024	-		0.400	0.000	0.400	-
<b>Subtotal</b>			-	-		-		1.150		-		1.150	0.000	1.150	N/A
<b>Support (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
MTRCS	TBD	TBD : TBD	-	-		-		0.150	Dec 2024	-		0.150	0.000	0.150	-
AK	TBD	TBD : TBD	-	-		-		0.050	Dec 2024	-		0.050	0.000	0.050	-
<b>Subtotal</b>			-	-		-		0.200		-		0.200	0.000	0.200	N/A
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
AK	TBD	TBD : TBD	-	-		-		0.100	Apr 2025	-		0.100	0.000	0.100	-
<b>Subtotal</b>			-	-		-		0.100		-		0.100	0.000	0.100	N/A



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment				Project (Number/Name) EL2 / Army Field Feeding Equipment				
	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		-		1.703		-		1.703	0.000	1.703	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment		Project (Number/Name) EL2 / Army Field Feeding Equipment	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
AK Integration development																												
MTRCS RU market research																												
MTRCS RU contract award																												
MTRCS RU development																												
MTRCS RU prototype																												
MTRCS RU testing																												
MTRCS RU ECP																												
MTRCS RU supporting documentation																												
AK Integration prototype																												
AK Integration test and evaluation																												
AK Integration ECP																												
AK Integration supporting documentation																												
MTRCS RU development																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024																
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604713A / Combat Feeding, Clothing, and Equipment										Project (Number/Name) EL2 / Army Field Feeding Equipment												
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029							
	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				
MIRCS RU prototype																					7											
MIRCS RU testing																																
MIRCS RU ECP																																
MIRCS RU supporting documentation																																
MIRCS RU contract award																																
																	6															

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604713A / <i>Combat Feeding, Clothing, and Equipment</i>	<b>Project (Number/Name)</b> EL2 / <i>Army Field Feeding Equipment</i>	

**Schedule Details**

Events	Start		End	
	Quarter	Year	Quarter	Year
AK Integration development	1	2025	2	2025
MTRCS RU market research	1	2025	2	2025
MTRCS RU contract award	3	2025	3	2025
MTRCS RU development	3	2025	2	2026
MTRCS RU prototype	2	2026	2	2026
MTRCS RU testing	2	2026	1	2027
MTRCS RU ECP	2	2027	2	2027
MTRCS RU supporting documentation	1	2027	4	2027
AK Integration prototype	3	2025	3	2025
AK Integration test and evaluation	3	2025	2	2026
AK Integration ECP	2	2026	2	2026
AK Integration supporting documentation	1	2026	4	2026
MIRCS RU development	3	2027	2	2028
MIRCS RU prototype	2	2028	2	2028
MIRCS RU testing	2	2028	1	2029
MIRCS RU ECP	2	2029	2	2029
MIRCS RU supporting documentation	1	2029	4	2029
MIRCS RU contract award	3	2027	3	2027

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

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0604715A / Non-System Training Devices - Eng Dev
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	17.910	21.441	28.427	-	28.427	15.555	14.699	15.283	15.466	Continuing	Continuing
241: Nstd Combined Arms	-	17.910	21.441	28.427	-	28.427	15.555	14.699	15.283	15.466	Continuing	Continuing

## A. Mission Description and Budget Item Justification

Program Element funds development of Non-System Training Devices to support force-on-force and force-on-target training at the Combat Training Centers (CTC), general military training, and training on more than one item/system, as compared with system devices which are developed in support of a specific item/weapon system. Army training devices and training simulations contribute to the modernization of the forces by enabling readiness and strengthening combat effectiveness through realistic training solutions for the Warfighter. Training devices maximize the transfer of knowledge, skills, and experience from the training situation to a combat situation. Force-on-force training and force-on-target at the National Training Center (NTC), Ft. Irwin, CA; Joint Readiness Training Center (JRTC), Ft. Johnson, LA, Joint Multinational Readiness Center (JMRC), Hohenfels, Germany; Home Stations and deployed locations around the world; and battle staff training in Battle Command Training Program (BCTP) provide increased combat readiness through realistic collective training in low, mid, and high intensity scenarios. Project 241, Non-System Training Devices-Combined Arms, develops simulation training devices for Army-wide use, including the CTCs.

FY 2025 Project 241 funds significant development efforts in support of U.S. Army Training and Readiness on the Combat Training Center Instrumentation Systems (CTC-IS), Instrumentable-Multiple Integrated Laser Engagement System (I-MILES), Common Training Instrumentation Architecture (CTIA), Future Army System of Integrated Targets (FASIT), Medical Simulation Training Center (MSTC), Unmanned Aerial Systems (UAS) Swarm, Opposing Forces Mechanized Vehicle Replacement (OMVR), and the Live, Virtual, Constructive Integrating - Architecture (LVC-IA).

FY25 funding in the amount of \$6.212 Million is in support of the Pacific Defense Initiative.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	18.588	21.441	24.778	-	24.778
Current President's Budget	17.910	21.441	28.427	-	28.427
Total Adjustments	-0.678	0.000	3.649	-	3.649
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.001	-			
• SBIR/STTR Transfer	-0.679	-			
• Adjustments to Budget Years	-	-	3.649	-	3.649

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0604715A / Non-System Training Devices - Eng Dev	
<b><u>Change Summary Explanation</u></b> Increase reflects revised economic assumptions and further OMVR prototype development efforts.		

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
241: Nstd Combined Arms	-	17.910	21.441	28.427	-	28.427	15.555	14.699	15.283	15.466	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

The Common Training Instrumentation Architecture (CTIA) program is the foundation architecture of the Live Training Transformation Family of Training Systems (LT2-FTS). The program contains critical core product-line architecture which provides commonality across training instrumentation systems and interoperability across Live, Virtual, Constructive Integrated Training Environment (LVC-ITE) and joint training systems. CTIA includes Army owned software components, architecture services, standards, protocols and governance used by domain-specific Live Training Transformation (LT2) and Live Training Systems (LTS) to include instrumented Force-On-Force (FOF) and Force-On-Target (FOT) training requirements. The CTIA also provides Post Deployment Software Support (PDSS) and technology refresh for the LT2 family of LTS supporting over 22 live instrumented training products which are fielded at over 200 CONUS and OCONUS sites across the Army.

Combat Training Center Instrumentation System (CTC-IS) funds the continued development of the existing Instrumentation Systems (IS) at the National Training Center (NTC), Joint Readiness Training Center (JRTC) and Joint Multinational Readiness Center (JMRC). CTC-IS funds the continued development of the Range Communication System at the NTC and JRTC, to provide high-fidelity live, virtual, and constructive brigade training rotations which prepare Brigade Combat Teams (BCTs), Joint partners, and supporting units to deploy in support of the Army Sustainable Readiness Model (SRM). The CTCs primary goal is to develop agile and adaptive leaders at the tactical, operational and strategic levels while providing BCTs the core training necessary to conduct decisive action in a dynamic operating environment.

The Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) program provides realistic, real-time casualty effects for force-on-force tactical engagement training scenarios. Its ability to integrate into training instrumentation systems provides for high fidelity combined arms combat exercises supporting Readiness and closely aligns with the Modernization priority of Soldier Lethality. I-MILES is required for use at Home Stations, the Combat Training Centers (CTCs) and in theater of operations to meet force-on-force training requirements. I-MILES program funding provides for the Development and Integration of new vehicle and dismount weapon systems meeting the Common Operating Environment (COE) requirements, as well as embedded Tactical Engagement Simulation (TES) development. This includes development efforts of the Live Training Engagement Composition (LTEC) / Live Player Area Network (LPAN) Development of Legacy software patches that incorporate the Government owned LTEC operating system software. This creates a common architecture that provides the ability to develop new services to adapt to evolving Army requirements (i.e. Changes in weapon platforms, technologies, Pk Table Updates).

The Home Station Instrumentation Training System (HITS) currently provides a high-fidelity deployable instrumented training capability to support platoon thru battalion ground based Soldiers and vehicles in Force-on-Force Training. HITS tracks location of soldiers and vehicles and simulates weapons' effects and engagements, allowing units to "Train as they Fight" against live opponents. HITS provides accurate feedback to training units. HITS consists of light deployable components that can be rapidly assembled/disassembled and transported to support deployed training. HITS is a member of the Live Training Transformation (LT2) product line of training systems implementing hardware and software reuse with other Instrumentation Systems (IS). HITS provides the only Live training component for the large scale Live-

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<p>Virtual-Constructive (LVC) military training exercises. HITS begins US Army aviation vehicle integration with Home Station instrumentation to cover comprehensive training engagements between ground and air forces.</p> <p>The Medical Simulation Training Center (MSTC) provides realistic medical training to both medical and non-medical Soldiers in the Active, Reserve, and National Guard. MSTCs provide hands-on instruction on the latest battlefield trauma and critical care techniques based on Army Medical Center of Excellence (MEDCoE) approved performance oriented Program of Instruction (POI). Medical treatment validation exercises simulate the high stress of performing medical interventions in combat. MSTC supports Unit Medical Readiness by validating Combat Medic (68W) Emergency Medical Technician (EMT) biennial recertification requirements and provides Combat Lifesaver (CLS) training to non-medical Soldiers. The Tactical Combat Casualty Care Exportable (TC3X) Soldier System provides capability to train Soldiers on medical Warrior skills at the individual, leader, and collective levels.</p> <p>The Basic Electronics Maintenance Trainer (BEMT) provides the essential modernized electronic system maintenance training capability for the Army, Army National Guard, and the Army Reserve to achieve Military Occupational Specialty-Qualification (MOS-Q) for 40 Military Occupational Specialties (MOS) at 24 Active, National Guard, and Army Reserve camps, posts, and stations. Soldiers utilizing the BEMT system receive highly realistic training using scenarios which require performing basic electronic tasks in a virtual environment including tests, diagnosis, and repair while saving institutions significant expenses over live training alternatives. The BEMT consists of an Instructor Operator Station (IOS), Student Training Station(s) (STS), associated test equipment, Commercial-off-the-Shelf (COTS) computer, electronics console(s), supporting experiment cards, soldering station, and content server as applicable.</p> <p>The Live, Virtual, Constructive Integrating Architecture (LVC-IA) provides a net-centric linkage that collects, retrieves and exchanges data among LVC Training Aids, Devices, Simulations, and Simulators (TADSS) to include: Games For Training (GFT), Home Station Instrumentation Training System (HITS), Joint Land Component Constructive Training Capability (JLCCTC) and Synthetic Environment Core (SE Core), Universal Mission Simulator (UMS) and Mission Command Information Systems (MCIS). The LVC-IA defines "how" information is exchanged among the different LVC domains and the MCIS. The LVC-IA provides enterprise level tools for exercise control, after action review, and system information assurance. It develops hardware and software to interface the different Live, Virtual, Constructive and Gaming communication protocols and to provide a correlated common operating picture for the training audience on their organic Mission Command equipment. The integration of the LVC TADSS with the Mission Command equipment will enable larger and more robust training events, to better prepare U.S. Soldiers for their missions at an overall reduced cost. The end-state goal is to enable an LVC Integrated Training Environment that can replicate Operational Environments in a cost-effective manner to provide a high level of value-added training and mission rehearsal opportunities to Army Commanders and their Soldiers. In FY 2019, the LVC-IA program commence design and developmental activities for Version 4, which allowed for Web-based optimization; inclusion of new simulations to the architecture; and concurrency with core system TADSS and MCIS through FY 2022. FY 2025 request will continue developmental and integration activities to ensure Interoperability with the Synthetic Training Environment (STE), while maintaining concurrency with JLCCTC, HITS, GFT and MCIS. The LVC-IA program supports the modernization and readiness priorities by bringing JLCCTC and HITS to the Synthetic Training Environment enabling an Integrated Training Environment until the STE constructive and live systems are developed and integrated with STE.</p> <p>The Army identified an operational gap in the training strategy for the Opposing Force (OPFOR) Integrated Air Defense System (IADS). It is a collection of enemy air defense weapons systems that engages Army aviation assets. Training Aircraft Survivability Equipment (ASE) Simulation Suite (TASS) is a live training system consisting of aircraft components and ground emitters that replicates current and emerging enemy Air Defense systems. Its fidelity supports individual pilot training as</p>		



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<p>well as the collective training requirements of the Brigade Combat Team to fully plan, prepare, execute and react against enemy air defense weapons at the Combat Training Centers (CTC).</p> <p>Future Army System of Integrated Targets (FASIT) provides Live Fire training systems and software capable of supporting all Army automated ranges and it's Installations around the world. The FASIT training systems include: A single, universal target control software for all automated ranges (ground and aviation) identified in TC 25-8, providing users a controller with a common look and feel; downrange stationary and moving infantry and armor Presentation Devices (PDs) that interact with the control software to present targets and provide scoring feedback; battlefield/weapons effects devices that simulate combat situations, visuals, and sounds; and targets that provide visual, and thermal representations of friendly/threat engagements. The FASIT systems enable trainers to develop scenarios to simulate wartime mission tasks in a stressful battlefield environment.</p> <p>The Digital Range Training System (DRTS) provides advanced instrumentation specifically required for live fire gunnery training and qualification with the Abrams, Bradley, Stryker/Mobile Gun System (MGS), Apache Aircraft and Unmanned Aerial Systems (UAS) on larger mounted maneuver Instrumented "Digital" Ranges. DRTS provides crew, section, platoon and company training and qualification capabilities above and beyond any other range in the Army inventory. These ranges interface with the tactical vehicles through an Integrated Player Unit Recorder (IPUR) or Smart Onboard Data Interface Module (SMODIM) to provide both real-time feedback to leaders and rapid development of complete After Action Reviews (AARs) and Take Home Packages (THPs). These AAR THPs include synchronized Thru-Sight Video (TSV) from the Commander/Gunner sights, crew camera video from inside the vehicles, thermal field camera video from the range cameras and internal crew audio for a complete evaluation. Nine of these DRTS ranges also incorporate Aerial Weapons Scoring System (AWSS) to interface with Aviation and Unmanned Aerial System gunnery training and qualification in a similar manner. The five standard training ranges utilize all available combat systems capabilities and digitally integrate them to manage all forces undergoing crew through collective live-fire training and qualification: Digital Multi-Purpose Range Complex (DMPRC) supports all gunnery tables and Combined Arms Live Fire Exercise (CALFEX) for Armor, Infantry and Aviation; Digital Multi-Purpose Training Range (DMPTR) supports crew and section qualification for Armor and Infantry; Battle Area Complex (BAX) supports crew through company CALFEX for Stryker &amp; Infantry Brigade Combat Teams (SBCT/IBCT); Digital Air Ground Integration Range (DAGIR) supports all gunnery tables and CALFEX for Armor, Infantry and Aviation platforms; Aerial Gunnery Range (AGR) at Fort Bragg supports crew through Company CALFEX for manned/unmanned aviation platforms.</p> <p>OPFOR Surrogate Wheeled Vehicles (OSWV) provides a collection of wheeled vehicles, used as training aids to portray threat vehicles including tactical vehicles, technical vehicles, and Civilian on the Battlefield vehicles (COB-V). The program supports the CTC OPFOR/COE Pillar capability through technical vehicles, unique visual modifications (VISMODs), and COB-Vs. This capability provides for an accurate replication of OPFOR and COB-Vs environment that rotational units must train against.</p> <p>Unmanned Aerial Systems (UAS) Swarm provides integrated, multi-domain threat representative UAS platforms through custom UAS components and payloads that challenge training communities' execution of UAS Tactics, Techniques and Procedures (TTPs), use of current and evolving UAS technologies (i.e., Drone buster), and gives feedback on their vulnerabilities to UAS-enabled Intelligence, Surveillance, and Reconnaissance, Cyber, Electronic Warfare, Dynamic Targeting and Swarm operations.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024		
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Opposing Forces Mechanized Vehicle Replacement (OMVR) will consist of a common Army tracked platform that uses modular VISMODs. This capability will allow the Opposing Forces to replicate five of the six warfighting functions. This replication will train Army units to synchronize all Intelligence, Surveillance, and Reconnaissance (ISR) assets available to the Brigade Combat Rotational Training Unit (RTU), present threat representative tracked/mechanized vehicles and formations to the RTU across the depth and breadth of the training area, and provide the OPFOR and the Army with a sustainable system that is safe for Soldiers to operate and maintain.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p><b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Common Training Instrumentation Architecture (CTIA) program.</p> <p><b>Description:</b> Continue EMD phase contract activities for the CTIA program to provide common architecture capabilities.</p> <p><b>FY 2024 Plans:</b> FY 2024 Base RDTE dollars in the amount of \$2.740 million will fund the continued development of CTIA to provide the common architecture capabilities that are essential for development, fielding, technology and capability insertion for 22 live training systems at 200+ training locations worldwide, to include the Combat Training Centers-Instrumentation System utilized at the National Training Center, the Joint Readiness Training Center, and at the Joint Multinational Readiness Center; the Home Station Instrumentation System; the Digital Ranges Training System, and future modernization efforts including emerging Army and joint architectures.</p> <p><b>FY 2025 Plans:</b> FY 2025 Base RDTE dollars in the amount of \$2.830 million will fund the continued development of CTIA to provide the common architecture capabilities that are essential for development, fielding, technology and capability insertion for 22 Live Training Systems at 200+ training locations worldwide, to include the Combat Training Centers-Instrumentation System utilized at the National Training Center, the Joint Readiness Training Center, and at the Joint Multinational Readiness Center; the Home Station Instrumentation System; the Digital Ranges Training System, and future modernization efforts including emerging Army and joint architectures.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase from FY2024 to FY2025 is due to economic assumptions associated with continuing development activities to provide the common architecture capabilities.</p>		2.377	2.740	2.830
<p><b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Combat Training Center Instrumentation System (CTC-IS).</p> <p><b>Description:</b> Continue EMD phase contract activities for the CTC-IS.</p> <p><b>FY 2024 Plans:</b> FY 2024 Base RDTE dollars in the amount of \$0.520 million will fund Post Deployment Software Support (PDSS), After Action Review (AAR) Artificial Intelligence (AI) Engine Study on the application of Artificial Intelligence (AI) for the development of AAR</p>		2.582	0.520	4.160

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
products to research the opportunity of utilizing AI software to analyze combat Training Center training events for cause and effect, which would provide swifter in-depth awareness to trainers for AAR purposes.			
<b>FY 2025 Plans:</b> FY 2025 Base RDTE dollars in the amount of \$4.160 million will fund multiple efforts: Artificial Intelligence - Study on the application of Artificial Intelligence (AI) for the development of After Action Review (AAR) products. Research the opportunity of utilizing AI software to analyze Combat Training Center training events for cause and effect, which would provide more swift in-depth awareness to trainers for AAR purposes. Assessments - New Systems consists of design and integration of the capture of multiple waveforms of Rotational Unit voice communications for Exercise Control and AAR products. The funding will also integrate Synthetic Training Environment (STE) Live components into the Instrumentation System, evolving the capability of the Instrumentation to capture new weapons and threats.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> RDTE Funds for CTC-IS increased by \$3.640 million for funding the development of new systems such as Integrated Tactical Network (ITN) and Synthetic Training Environment (STE) components.			
<b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Instrumentable-Multiple Integrated Laser Engagement System (I-MILES).  <b>Description:</b> EMD phase contract activities for the I-MILES program.		3.081	3.608
<b>FY 2024 Plans:</b> FY 2024 Base RDTE dollars in the amount of \$3.608 million will continue to analyze, develop, test and implement the Live Training Engagement Composition (LTEC) through Post Deployment Software Support. Funds will also begin service life extension development efforts to redesign the Tactical Vehicle System (TVS) and Individual Weapon System (IWS) product line key components to extend product life and supportability as a result of them reaching end of useful life.			
<b>FY 2025 Plans:</b> FY2025 Base RDTE dollars in the amount of \$3.985 million will fund continued service life extension development efforts to redesign the Tactical Vehicle System (TVS) and Individual Weapon System (IWS) product line key components to extend product life and supportability as a result of them reaching end of useful life. Funding will commence development and integration of Synthetic Training Environment-Live Training System (STE-LTS) capabilities into Vehicle Tactical Engagement Simulation System (VTESS) kits along with the US Army Electronics Proving Ground (EPG) testing support.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Increase from FY2024 to FY2025 is due to commencing development and integration of STE-LTS capabilities into VTESS kits.				
<b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Home Station Instrumentation Training System (HITS) program.  <b>Description:</b> EMD phase contract activities for the HITS program.  <b>FY 2024 Plans:</b> FY 2024 Base RDTE dollars in the amount of \$0.495 million will continue efforts for Home-Station Instrumentation Training Systems (HITS) Concurrency for new software (either COTS or developmental) that will yield additional capabilities to HITS.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 decrease to maintain planned lifecycle of this effort.		1.616	0.495	-
<b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Medical Simulation Training Center (MSTC).  <b>Description:</b> Contract activities for the MSTC program to develop the Virtual Patient System technologies. The approved MSTC Capability Production Document (CPD), Inc 1, Rev 1, dtd 6 MAR 2019, shows capability has additional unfulfilled requirements. The MSTC CPD requires that ALL GENDERS shall be represented within the medical training simulations and scenarios. The FEMALE GENDER is now under development. The CPD also states that realistic medical scenarios are required, which are also being developed.  <b>FY 2024 Plans:</b> FY 2024 Base RDTE dollars in the amount of \$0.289 million will allow the continuation of the analysis of the test results and Report generation of the Operational Test of the Female Trauma Mannequin. The verification, validation, and accreditation (VV&A) results from the Operational Test of the hardware will allow the productionization of the Female Trauma Mannequin and posture the mannequin for fielding in FY 2024.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The MSTC program RDT&E requirement will be met in FY 2024. In FY 2025, the MSTC program will transition to sustainment.  As a result of the MSTC programs transition to sustainment, FY 2024 Base RDTE dollars in the amount of \$0.289 million will be reallocated for cyber security support.		1.165	0.289	-
<b>Title:</b> Live, Virtual, Constructive Integrating Architecture (LVC-IA) Engineering and Manufacturing Development (EMD) phase contract activity.		2.935	2.985	3.315

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p><b>Description:</b> Continue EMD phase contract activities for the LVC-IA program.</p> <p><b>FY 2024 Plans:</b> Live, Virtual, and Constructive-Integrating Architecture (LVC-IA) program will continue system development, integration and demonstration of the LVC-IA capability to ensure concurrency with Synthetic Training Environment (STE), core system Training Aids, Devices, Simulations, and Simulators (TADSS), and Army Mission Command Information Systems.</p> <p><b>FY 2025 Plans:</b> Live, Virtual, and Constructive-Integrating Architecture (LVC-IA) program will continue system development, integration and demonstration of the LVC-IA capability to ensure concurrency with Synthetic Training Environment (STE), core system Training Aids, Devices, Simulations, and Simulators (TADSS), and Army Mission Command Information Systems</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase from FY2024 to FY2025 is due to continuing efforts to ensure interoperability with the Synthetic Training Environment (STE) while maintaining concurrency with Joint Land Component Constructive Training Capability (JLCCTC), Home Station Instrumentation Training System (HITS), and Games for Training (GFT).</p>				
<p><b>Title:</b> Live, Virtual, Constructive Integrating Architecture (LVC-IA) Program Government System Test and Evaluation.</p> <p><b>Description:</b> Government System Test and Evaluation for the LVC-IA Program.</p> <p><b>FY 2024 Plans:</b> LVC-IA will continue integration, testing and evaluation activities in support of LVC-IA interoperability with STE, TADSS and Mission Command Information Systems.</p> <p><b>FY 2025 Plans:</b> LVC-IA will continue integration, testing and evaluation activities in support of LVC-IA interoperability with STE, TADSS and Mission Command Information Systems.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase from FY2024 to FY2025 is due to economic assumptions.</p>		0.372	0.385	0.393
<p><b>Title:</b> Government Program Management for the Live, Virtual, Constructive Integrating Architecture (LVC-IA) Program.</p> <p><b>Description:</b> Government Program Management for the LVC-IA Program.</p> <p><b>FY 2024 Plans:</b></p>		0.386	0.338	0.345

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
Will provide program management, engineering and technical oversight, contract support, and travel for the LVC-IA Program.			
<b>FY 2025 Plans:</b> Will provide program management, engineering and technical oversight, contract support, and travel for the LVC-IA Program.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase from FY2024 to FY2025 is due to economic assumptions.			
<b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Future Army System of Integrated Targets (FASIT).		2.238	0.944
<b>Description:</b> The FASIT program's primary innovation goals are the development of advanced non-contact ballistic hit detection and recognition system, advanced human type targets, non-contact area scoring technology, combat ID targets, electromagnetic/cyber replication, multi domain operations, and augmented reality on live fire ranges; all aimed at increasing training realism, enhancing Soldier resiliency, and lowering life cycle costs.			2.860
<b>FY 2024 Plans:</b> FY 2024 Base RDTE dollars in the amount of \$0.944 million provides for the final development and testing of the prototype components for the Non-Contact Area Scoring Technology (NCAST). NCAST is a capability that will be developed to replace the mobile Aerial Weapons Scoring System (AWSS) systems as well as the fixed AWSS on select aviation Home Station ranges to support Aviation Gunnery Training. Additionally, the system will provide real-time detection of incoming munitions, location of penetration, and determine the caliber and velocity of incoming rounds. These efforts and solutions will align with the defined OPTEMPO in the FASIT CPD and Army Training Circular 25-8.			
<b>FY 2025 Plans:</b> FY 2025 Base RDTE dollars in the amount of \$2.860 million provides for the development of the prototype systems focused on Combat Identification in support of Multi-Domain operations. Currently aviation platforms cannot use their thermal and radar detection systems to identify threat systems when training on live-fire ranges. This funding will provide for the maturation of the systems to be demonstrated in a relevant environment. Additionally, the funding will provide continuing maturation of the Advanced Human Type Target. This capability will be demonstrated in a live-fire shoothouse and provides a more realistic mannequin that has multiple hit zones, collapses realistically, and resets itself onto its stand without manual intervention.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> RDTE Funds for FASIT increased by \$1.916 million from FY2024. The funding in the program fluctuates annually as it is aligned to mature technologies that begin under Small Business Innovation Research (SBIR) efforts. As a technology reaches Technology Readiness Level (TRL) 6 under the SBIR funding, it needs to be further matured using program RDTE funding. That funding			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
needs to be aligned to that timeframe, hence the increase from FY2024. The Combat ID SBIR and Advanced Human Type Targets (AHTT) work transition from SBIR funding to program funding in FY2025.			
<b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Unmanned Aerial System (UAS) Swarm <b>FY 2024 Plans:</b> FY 2024 RDTE of \$0.900 million provides for the incremental funding for continued development of UAS Swarm software and integration with 4G/LTE networks, development of payload and integration, initial operational assessments, and hardware development for charging stations, tablets, and manual/remote deployment systems. <b>FY 2025 Plans:</b> Provides sustainment of the deployed UAS Swarm hardware and software at the Combat Training Centers (CTCs), as well as the testing and airworthiness release support to incorporate these updates. Provides spares required for airframes, ground control stations, batteries, and battery chargers to maintain operational readiness. Software sustainment includes bug and safety patches encountered during operations as well as enhancements to usability based on customer feedback. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2024 to FY 2025 decrease in funding due to program reaching Full Operational Capability (FOC) and transitioning to sustainment.		1.158	0.900
<b>Title:</b> Prototype phase contract activity for Opposing Forces Mechanized Vehicle Replacement (OMVR) <b>Description:</b> The Opposing Forces Mechanized Vehicle Replacement (OMVR) will consist of a common Army tracked platform that uses modular visual modifications (VISMOSDs). This capability will allow the Opposing Forces to replicate five of the six warfighting functions. This replication will train Army units to synchronize all Intelligence, Surveillance, and Reconnaissance (ISR) assets available to the Brigade Combat Rotational Training Unit (RTU) across the depth and breadth of the training area, and provide the Opposing Force (OPFOR) and the Army with a sustainable system that is safe for Soldiers to operate and maintain. <b>FY 2024 Plans:</b> FY2024 funding will be utilized for program management (OTA white paper evaluation, contract package preparation, and technical evaluations), baseline host chassis, conduct host chassis variation analysis to determine and document differences between variants, and begin prototype development. <b>FY 2025 Plans:</b> Funding will be used to transition from vehicle baseline and variation analysis to prototype design, development, and integration of the Visual Modifications (VISMOSD) variants, as well as host chassis maintenance associated with the OMVR program. Efforts will also include preparation of a contract package that will support the production of the OMVR VISMOSDs. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>		-	1.507
			3.929

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
FY 2024 to FY 2025 increase in funding will provide design and development of VISMODO prototypes.					
<b>Title:</b> Engineering and Manufacturing Development (EMD) phase contract activity for the Joint Pacific Maneuver Readiness Center (JPMRC)  <b>FY 2024 Plans:</b> FY2024 Base RDTE dollars in the amount of \$2.511 million will fund the USARPAC Low Cost Threat Emitter (LCTE) Prototypes which supports the Pacific Multi-Domain Training and Experimentation Capability (PMTEC) campaign plan to instrument high end threat replication capabilities, USARPAC conducts spiral development and experimentation with 3 x LCTE prototype systems in partnership with US Army Intel Center of Excellence, Electronic Proving Ground, USAF 56th RMO, and Arizona State University Affiliated Research Center (UARC). The LCTE is a portable system that contributes to the EMS effects toolkit for realistic, Joint training. An LCTE formation can create an Integrated Air Defense System (IADS) threat operating environment that can closely mimic our adversary's A2AD bubble to include radars, vehicle signatures, and unit EMS signatures. By utilizing sophisticated, abundant, integrated, and easily deployable threat emitters during training, the Joint Force can better understand the threat spectrum and how to best operate in a contested environment. With functional integration in a Joint exercise as early as April 2023, the LCTE will enhance MDO training for the MSTF, all service components fixed wing, UAS units, SOF, and other experimental assets.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease from FY2024 to FY2025 due to reassignment of the US Army Pacific (USARPAC) Low Cost Threat Emitter (LCTE) planned prototype development and experimentation effort from under the Joint Pacific Maneuver Readiness Center (JPMRC) program to a stand-alone effort.			-	2.511	-
<b>Title:</b> USARJ Cyberspace Integration  <b>FY 2024 Plans:</b> USAR-J is postured to integrate multi-domain training FWD in Japan in FY2022-2026, advancing USARPAC multi-domain land power objectives and experimentation throughout the Pacific Theater. This effort will support cyberspace domain integration into Army exercises in Japan (Orient Shield, Yama Sakura, North Wind). This will be accomplished via a Cyberspace exercise integration services contract that will enable realistic cyber training for Joint and Bilateral exercises and support USARPAC MDO experimentation FED in Japan. This effort will transition current USAR-J cyber OAs from notional white card cyber training to practical value-added cyberspace exercise integration providing active cyberspace simulation venues for MDTF/MDEB, US cyber, and JSDF system protection unit (cyber) teams to train on METL and exercise objectives.  These funds will be executed by USARPAC (Command 820).  <b>FY 2025 Plans:</b>			-	2.712	2.705



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>	<b>Project (Number/Name)</b> 241 / <i>Nstd Combined Arms</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<p>FY2025 Base RDT&amp;E dollars in the amount of \$2.705 million will fund USAR-J's integrated multi-domain training FWD in Japan in FY24-28, advancing USARPAC multi-domain land power objectives and experimentation throughout the Pacific Theater. This effort will support cyberspace domain integration into Army exercises in Japan (Orient Shield, Yama Sakura, North Wind). This will be accomplished via a Cyberspace exercise integration services contract that will enable realistic cyber training for Joint and Bilateral exercises and support USARPAC Multi-Domain Operations (MDO) experimentation FED in Japan. This effort will transition current USAR-J cyber OAs from notional white card cyber training to practical value-added cyberspace exercise integration providing active cyberspace simulation venues for MDTF/MDEB, US cyber, and JSDF system protection unit (cyber) teams to train on METL and exercise objectives. They include: Exercise MDTF All Domain Operations Center (ADOC) FWD into exercise networks; Conduct Cyber, information operations, and electromagnetic spectrum training utilizing AI/ML stimulated information environment; Develop and exercise threat hunting ability between partners, increased awareness of DOD and NCMF players of partner capability in cyber; Refine and exercise bilateral cyber development TTPs/SOPs; Improve US-Japan response capability to cyber-attacks on US-Japan common equipment.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 decrease to maintain planned lifecycle of this effort.</p>			
<p><b>Title:</b> Establish Combined Joint System Integration Laboratory (CJSIL) Nodes</p> <p><b>FY 2024 Plans:</b> Pilot Program to extend the Combined Joint Systems Integration Lab (CJSIL) test floor using a deployable "forward node" to support USARPAC experimentation. The "How" Small forward node (transit case) connects USARPAC to closed restricted sandbox at the CJSIL, Aberdeen Proving Ground (APG). Majority of test architecture will be deployed at APG, experimental systems can be either connected to the forward node or located at APG. The "Why" First contact / initial testing can be conducted in a lab environment before incurring costs to deploy in live / exercise environment. Provides a clean, instrumented, reproducible environment with experts on hand to assist where needed. Remotely accessible, persistent "sandbox" environment to accommodate rapid execution and flexible evaluation requirements. Lower IA thresholds for System Under Test (SUT) deployment -Insert vendor systems into test architecture in CONUS. The "So What" Cost Savings - Reduces or eliminates travel costs for CIV, MIL, CTR, and Vendors; Architecture blend of Virtual/Real systems provides an efficient, reusable footprint for testing. Time Savings - Reduces experimentation lead time; allows for 'quick looks' at proposed technologies. Risk Mitigation - Reduces Integration risks for formal events / exercises.</p> <p>These funds will be executed by USARPAC (Command 820).</p> <p><b>FY 2025 Plans:</b> FY2025 Base RDT&amp;E dollars in the amount of \$1.503 million will fund a program to extend the Combined Joint Systems Integration Lab (CJSIL) test floor using a deployable "forward node" to support USARPAC experimentation. This is in support of</p>		-	1.507
			1.503

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>	<b>Project (Number/Name)</b> 241 / <i>Nstd Combined Arms</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
the INDOPACOM Pacific Warfighting Concept for the future force. Access through the CJSIL increases and improves integrated experimentation with emerging C5ISR capabilities and DOD technologies. This program will 1. Provide the connection point of Army and Joint service experimentation. Connects Army and Joint service labs in a single, virtual, operational realistic tactical network environment, enabling greater collaboration for better solutions. 2. Provide a realistic and scalable tactical network architecture comprised of current / future tactical radios, software applications and transport systems to provide a system of systems integration and testing environment for emerging communications and networking technologies; 3. Assess whether new or enhanced tech work with fielded systems; 4. Replicate realistic operational conditions to understand the effect on systems' resilience and reliability; 5. Contain five network floors (Closed Restricted, Project Convergence/Operational Test, Army Persistent Experimentation Environment, JADC2 Development/Demonstration Environment, and Coalition Experimentation).			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decreased funding due to revised economic assumptions.			
<b>Title:</b> USARPAC Low Cost Threat Emitter (LCTE)  <b>Description:</b> In support of the US Army Pacific (USARPAC) Low-Cost Threat Emitter (LCTE) prototypes for the Pacific Multi-Domain Training and Experimentation Capability campaign plan, funding will be used to instrument high end threat replication capabilities using Integrated Air Defense Radar emulators that operate from mid S-Band to mid C-Band as well as X-Band to fulfill this requirement.  <b>FY 2025 Plans:</b> FY2025 Base RDTE dollars in the amount of \$2.004 million will fund the US Army Pacific (USARPAC) Low Cost Threat Emitter (LCTE) prototypes which supports the Pacific Multi-Domain Training and Experimentation Capability campaign plan to instrument high end threat replication capabilities. USARPAC conducts spiral development and experimentation with LCTE prototype systems in partnership with US Army Intel Center of Excellence, Electronic Proving Ground, UASF 56th Range Management Office, and Arizona State University Affiliated Research Center. The LCTE is a portable system that contributes to the electromagnetic spectrum (EMS) effects toolkit for realistic, Joint training. An LCTE formation can create an integrated air defense system threat operating environment that can closely mimic our adversary's Anti-Access Area Denial bubble to include radars, vehicle signatures, and unit EMS signatures. By utilizing sophisticated, abundant, integrated, and easily deployable threat emitters during training, the Joint Force can better understand the threat spectrum and how to best operate in a contested environment.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase from FY2024 to FY2025 due to reassignment of the LCTE effort from under the JPMRC program to a stand-alone effort.		-	2.004
<b>Accomplishments/Planned Programs Subtotals</b>		17.910	28.427

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army								<b>Date:</b> March 2024			
<b>Appropriation/Budget Activity</b> 2040 / 5				<b>R-1 Program Element (Number/Name)</b> PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>				<b>Project (Number/Name)</b> 241 / <i>Nstd Combined Arms</i>			

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

<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• MA6600: <i>Combat Training Centers Support</i>	48.044	56.619	40.686	-	40.686	36.567	31.302	31.451	32.019	Continuing	Continuing
• NA0100: <i>Training Devices, Nonsystem</i>	179.879	226.379	174.890	-	174.890	176.905	179.194	188.420	186.547	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

Competitive development efforts based on performance specifications.

1. In FY 2019 - 2023, Combat Training Center Instrumentation Systems (CTC-IS) RDTE will be used to fund a Life Cycle Product-line Management (LCPM) contract structured as a 5 year Single Award Indefinite-Delivery/Indefinite-Quantity (IDIQ) for the implementation of a Hardware Product Line (HPL), the contractor was selected. The strategy is to establish a deliberate approach to Life Cycle Management (LCM) of Live Training Family of Systems, providing the framework for future Life Cycle Efforts for the Hardware Product Line Framework.
2. In FY 2020, CTIA awarded a new competitive IDIQ contract with a 1-year base and 7 single-year option periods to General Dynamics Mission Systems to continue to provide the common architecture for 22 live training systems at 200+ training locations worldwide.
3. In FY2022, the Live, Virtual, Constructive Integrating Architecture (LVC-IA) program awarded a new competitive IDIQ contract with a 2-year base period, two 2-year option periods and four 1-year option periods to Dignitas Technologies, LLC. The LVC-IA concurrency and Synthetic Training Environment interoperability will be executed under this contract.
4. In FY 2024, FASIT will incrementally fund the Small Business Innovative Research Phase III contract for the development of the NCAST capabilities.
5. In FY 2025, FASIT will incrementally fund the separate Small Business Innovative Research Phase III contracts for the development of the Combat Identification and Advanced Human Type Target capabilities.
6. In FY 2023-2026, Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) will leverage the General Dynamics contract vehicle and competitive OTA approaches to address EUL / relevancy challenges as product lines reach those trigger points in their life cycle or changes to weapon system configurations drive those actions. By FY23 three of the five I-MILES product lines will be at end of useful live. These efforts will enable a wide range of industry partners to integrate LTEC/LPAN into existing systems and execute Tech Refresh activities as required until Live STE capabilities are introduced.
7. In FY 2021, Home Station Instrumentation Training System (HITS) awarded a new delivery order on the General Dynamics contract.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev	Project (Number/Name) 241 / Nstd Combined Arms
<p>8. In FY 2022, OPFOR Integrated Air Defense System (IADS) will start development of weapon processor software, integration with the training instrumentation systems at the Combat Training Centers (CTCs), and validate the solution through testing.</p> <p>9. UAS Swarm will continue to provide the U.S. Army Combined Training Centers with UAS Swarm support utilizing the existing Aviation and Missile Technology Consortium OTA.</p> <p>10. FY 2024, OMVR program will have a full and open competitive contract for the initial prototype development and design, logistics planning and host chassis maintenance for the OMVR program. The contract package will support the development, design, fabrication, testing, and fielding of the OMVR Visual Modifications to the Combat Training Centers.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev						Project (Number/Name) 241 / Nstd Combined Arms			
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
LVC-IA Program Management	Various	PEO STRI : Orlando, FL	11.507	0.386	Feb 2023	0.385	Feb 2024	0.345	Feb 2024	-		0.345	Continuing	Continuing	Continuing
Subtotal			11.507	0.386		0.385		0.345		-		0.345	Continuing	Continuing	N/A
Remarks															
NOTE: FY2024 Base RDTE for LVC-IA Program Management should reflect a cost of \$0.338 million; this will be updated in the next available cycle.															
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
I-MILES	Option/IDIQ	General Dynamics Mission Systems : Orlando, FL	8.199	0.904	Dec 2022	2.123	Dec 2023	-		-		-	Continuing	Continuing	Continuing
I-MILES	C/FFP	National Security Technology Accelerator : Orlando, FL	-	2.177	Aug 2023	-		2.485	Dec 2024	-		2.485	Continuing	Continuing	Continuing
I-MILES SLEP Development	C/TBD	TBD : TBD	-	-		1.388	Feb 2024	1.372	Feb 2025	-		1.372	Continuing	Continuing	Continuing
HITS	Option/IDIQ	General Dynamics Mission Systems (GDMS) : Orlando, FL 32826	8.837	1.616	Mar 2023	0.495	Mar 2024	-		-		-	Continuing	Continuing	Continuing
MSTC Development	C/FP	Multiple : Various	6.517	1.165	May 2023	0.289	Feb 2024	-		-		-	0.000	7.971	8.014
LVC-IA Follow-On Contract	C/CPFF	Dignitas Technologies, LLC : Orlando, FL	2.748	2.935	Apr 2023	2.985	Apr 2024	3.315	Apr 2025	-		3.315	Continuing	Continuing	Continuing
CTIA	C/CPFF	General Dynamics Mission Systems, Inc (GDMS) : Orlando, FL	7.290	2.377	Jan 2023	2.740	Jan 2024	2.830	Jan 2025	-		2.830	Continuing	Continuing	Continuing
CTC-IS	C/TBD	TBS : Orlando, FL	47.219	2.582	May 2023	0.520	May 2024	4.160	Dec 2024	-		4.160	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Future Army Systems of Integrated Targets (FASIT) Non-Contact Area Scoring Technology	C/CPFF	SensorMetrix : San Diego, CA	-	1.241	Jan 2023	0.944	Nov 2023	-		-		-	Continuing	Continuing	Continuing
Future Army Systems of Integrated Targets (FASIT)	C/CPFF	TBD : TBD	-	0.997	Sep 2023	-		2.860	Mar 2025	-		2.860	Continuing	Continuing	Continuing
Digital Range Training System (DRTS)	Option/CPFF	General Dynamics One Source, LLC : Fairfax, VA	2.584	-		-		-		-		-	0.000	2.584	-
Unmanned Aerial System Swarm	Option/CPFF	Colsa : Huntsville, AL	0.999	1.158	Jan 2023	0.900	Jan 2024	0.398	Mar 2025	-		0.398	Continuing	Continuing	Continuing
OMVR	C/FFP	TBD : Redstone Arsenal, AL	-	-		1.507	Jan 2024	3.929	May 2025	-		3.929	Continuing	Continuing	Continuing
Joint Pacific Manuever Readiness Center (JPMRC)	C/FFP	USARPAC : PACIFIC REGION	-	-		2.511	May 2024	-		-		-	0.000	2.511	-
Combined Joint System Integration Laboratory (CJSIL) Nodes	C/TBD	USARPAC : PACIFIC REGION	-	-		1.507	May 2024	1.503	May 2025	-		1.503	0.000	3.010	-
USARJ Cyberspace Integration	C/TBD	USARPAC : PACIFIC REGION	-	-		2.712	May 2024	2.705	May 2025	-		2.705	0.000	5.417	-
Low Cost Threat Emitter (LCTE) Prototypes	TBD	TBD : Redstone Arsenal, AL	-	-		-		2.004	Mar 2025	-		2.004	0.000	2.004	Continuing
Subtotal			84.393	17.152		20.621		27.561		-		27.561	Continuing	Continuing	N/A
Remarks															
1. The Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) - FY 2022 began the fielding of the LTEC integration into VTESS and TVS. FY 2023 to FY 2026 will be focused on extending the product life of the three I-MILES product lines that are at the end of useful life.															
2. The LVC-IA program awarded its follow-on contract on 24 May 2022 to Dignitas Technologies, LLC. This follow-on award will continue their concurrency efforts with the Synthetic Training Environment (STE) and Mission Command Information Systems (MCIS) through program completion slated for FY 2035. FY 2024 Base RDTE will support the award option period 1 on the follow-on contract to continue concurrency effort with the STE and MCIS.FY 2025 Base RDTE will the support the second year of option period 1 to continue integration and testing with STE and MCIS.															
3. Combat Training Center Instrumentation System (CTC-IS): 31 March 2023 award to General Dynamics to fund National Training Center Western Training Area Instrumentation Systems Network Expansion design effort.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024					
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev						Project (Number/Name) 241 / Nstd Combined Arms					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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		
LVC-IA Test Support	Various	Multiple : Orlando, FL	13.935	0.372	Nov 2022	0.338	Nov 2023	0.393	Nov 2024	-		0.393	Continuing	Continuing	Continuing		
I-MILES EPG Testing	MIPR	ATEC : FT Huachuca, AZ	0.324	-		0.097	Mar 2024	0.128	Mar 2025	-		0.128	Continuing	Continuing	Continuing		
Subtotal			14.259	0.372		0.435		0.521		-		0.521	Continuing	Continuing	N/A		
Remarks																	
NOTE: FY2024 Base RDTE for LVC-IA Test Support should reflect a cost of \$0.385 million; this will be updated in the next available cycle.																	
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals			110.159	17.910		21.441		28.427		-		28.427	Continuing	Continuing	N/A		
Remarks																	

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev		Project (Number/Name) 241 / Nstd Combined Arms	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
CTIA Development and Architectural Evolution																												
CTC IS Development																												
I-MILES Development																												
I-MILES RELEVANCY																												
HITS Development																												
MSTC Trainer Developments																												
LVC-IA - Version 4 (Development, Integration, Demonstrat...																												
LVC-IA Version 4.1 (Development, Integration, Demonstrat...																												
LVC-IA - Concurrency with STE, TADSS, and Mission Comm...																												
FASIT Battlefield Effects Device																												
FASIT Dynamic Infrared Projections																												
FASIT Non Pyro Effects																												
FASIT Non Contact Area Scoring Tech																												



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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024												
Appropriation/Budget Activity 2040 / 5									R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev									Project (Number/Name) 241 / Nstd Combined Arms										
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
FASIT Combat Identification																												
FASIT Advanced Human Type Target																												
Unmanned Aerial Systems (UAS) Swarm Development																												
BEMT Army Enterprise Network Server Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev	Project (Number/Name) 241 / Nstd Combined Arms	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CTIA Development and Architectural Evolution	1	2012	4	2029
CTC IS Development	1	2010	4	2027
I-MILES Development	2	2017	3	2027
I-MILES RELEVANCY	2	2018	4	2027
HITS Development	3	2012	4	2024
MSTC Trainer Developments	2	2017	4	2024
LVC-IA - Version 3 (Development, Integration, Demonstration and Testing)	4	2016	3	2018
LVC-IA - Version 4 (Development, Integration, Demonstration and Testing)	4	2018	4	2023
LVC-IA Version 4.1 (Development, Integration, Demonstration and Testing)	1	2024	1	2025
LVC-IA - Concurrency with STE, TADSS, and Mission Command Systems	1	2024	4	2032
FASIT Battlefield Effects Device	2	2022	2	2023
FASIT Dynamic Infrared Projections	2	2022	2	2024
FASIT Non Pyro Effects	4	2021	4	2023
FASIT Non Contact Area Scoring Tech	4	2022	4	2024
FASIT Combat Identification	1	2025	4	2027
FASIT Advanced Human Type Target	2	2025	1	2027
Integrated Military Operations in Urban Terrain (MOUT) Training System (IMTS)	2	2020	4	2021
OPFOR Integrated Air Defense System (IADS)	4	2017	4	2022
Unmanned Aerial Systems (UAS) Swarm Development	1	2022	4	2026
OPFOR Surrogate Wheeled Vehicles (OSWV)	2	2019	4	2021
OPFOR Attack Aircraft Shoot-back Capability (OA2SBC)	2	2021	2	2022
S/SVT - Development	3	2019	3	2020

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604715A / <i>Non-System Training Dev</i> <i>ces - Eng Dev</i>	<b>Project (Number/Name)</b> 241 / <i>Nstd Combined Arms</i>

	Start		End	
Events	Quarter	Year	Quarter	Year
BEMT Army Enterprise Network Server Development	1	2020	1	2023

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

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					<b>R-1 Program Element (Number/Name)</b> PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	54.244	74.738	69.653	-	69.653	63.879	70.400	71.366	72.084	Continuing	Continuing
126: PEO Electronic Protect	-	-	14.061	-	-	-	-	-	-	-	0.000	14.061
146: Air & Msl Defense Planning Control Sys	-	1.209	26.367	19.996	-	19.996	15.243	15.529	15.790	15.952	Continuing	Continuing
FG5: Counter Unmanned Aerial Systems (UAS)	-	53.035	34.310	49.657	-	49.657	48.636	54.871	55.576	56.132	Continuing	Continuing

## Note

In Fiscal Year (FY) 2025, ALPS efforts realigned from PE 0604741A / Air Defense Command Control and Intelligence - Eng Dev, Project 126 /PEO Electronic Protect to 0604820A / Radar Development, Project PS1 /Army Long Range Persistent Surveillance (ALPS).

## A. Mission Description and Budget Item Justification

The Air Missile Defense Planning and Control System (AMDPCS) FY 2025 funding request of \$19.996 million provides integration of air and missile defense operations at all echelons. Specifically, the Air and Missile Defense Work Station (AMDWS) provides a correlated air picture using local radars, allowing the Commander the visibility and situational understanding of the airspace; automated defense design and staff planning tools in AMDWS allow Soldiers horizontal and vertical collaborative planning with adjacent units. Air Defense System Integrator (ADSI) serves as a joint tactical data link gateway/air picture, and when correlated by the Forward Area Air Defense Command and Control (FAAD C2) and displayed on AMDWS, provides a near real-time, three-dimensional air picture for the Commander. Joint Tactical Terminal (JTT) provides soldiers Theater Ballistic Missile (TBM) early warning, allowing them to take appropriate actions. AMDPCS is fielded to Army Air and Missile Defense Commands (AAMDC), Air Defense Artillery Brigades (ADA BDE), Air and Missile Defense Battalions (AMD BN), and Terminal High Altitude Area Air Defense Batteries (THAAD BTRY). Air Defense Airspace Management (ADAM), a variant of AMDPCS with similar capabilities, is fielded to Corps, Divisions, Brigade Combat Teams (BCT), and multi-functional support brigades. As part of the capability and technology reuse, AMDWS external interfaces are being leveraged by Integrated Battle Command System (IBCS) to avoid redevelopment of existing capabilities. AMDWS and FAAD C2 are core components of the Air and Missile Defense system-of-systems currently deployed in combat zones.

Counter-Unmanned Aircraft Systems (C-UAS) FY 2025 funding request of \$49.657 million will provide forces at all echelons with cross-domain capabilities to identify, classify, track, and defeat Groups 1-3 UAS threats, while supporting joint operational requirements. These combined arms solutions will support the full kill-chain and result in solutions addressing fixed/semi-fixed, mounted/mobile platform, dismounted, and handheld missions. Development efforts are aligned with Joint Requirements Oversight Council Memorandum (JROCM) 078-20, which codifies the threshold and objective capability requirements for C-UAS development.

FY 2025 Base dollars in the amount of \$5.319 million will fund technological development of C-UAS capabilities supporting deployed systems, to keep pace with evolving threats in response to existing Joint Urgent Operational Need (JUON) CC-0558 (managed by PEO MS).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024		
Appropriation/Budget Activity		R-1 Program Element (Number/Name)				
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				
FY 2025 Base dollars in the amount \$1.554 million will fund technology refreshes in support of existing Army Joint Emergent Operational Need (JEON) system improvements in response to ST-0008, to provide Army priority fixed sites with the ability to detect, ID, track and defeat Group 1 and 2 Remote Controlled Model Aircraft (RCMA) (managed by PEO Intelligence, Electronic Warfare and Sensors (IEWS)).						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		55.541	74.738	70.022	-	70.022
Current President's Budget		54.244	74.738	69.653	-	69.653
Total Adjustments		-1.297	0.000	-0.369	-	-0.369
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-1.297	-			
• Adjustments to Budget Years		-	-	-0.369	-	-0.369
Congressional Add Details (\$ in Millions, and Includes General Reductions)						
Project: FG5: Counter Unmanned Aerial Systems (UAS)						
Congressional Add: Software Integration Facility (SWIF) Digital Ecosystem						
Congressional Add Subtotals for Project: FG5						
Congressional Add Totals for all Projects						
Change Summary Explanation						
Decreased funding represents Army approved minor reduction.						

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) 126 / PEO Electronic Protect			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
126: PEO Electronic Protect	-	-	14.061	-	-	-	-	-	-	-	0.000	14.061
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note												
In Fiscal Year (FY) 2025, ALPS efforts realigned from PE 0604741A / Air Defense Command Control and Intelligence - Eng Dev, Project 126 /PEO Electronic Protect to 0604820A / Radar Development, Project PS1 /Army Long Range Persistent Surveillance (ALPS).												
A. Mission Description and Budget Item Justification												
Army Long-Range Persistent Surveillance (ALPS) is a passive sensor that provides long-range surveillance against Cruise Missile (CM), Fixed Wing (FW), Rotary Wing (RW), and Unmanned Aircraft System (UAS) threats.												
President's Budget 2024 request in the amount of \$14.061 million is for the ALPs program office to provide development and integration in support of the Pacific Deterrence Initiative including the engineering, testing and validation of the system and software updates necessary to meet the new requirement for ALPS to integrate into the Army Integrated Air and Missile Defense (AIAMD) architecture (\$1.004 million). This funding will also provide prototype fabrication, system support and operation for air surveillance assessments including hardware, engineering and testing of the system necessary to determine the effective use of ALPS. (\$13.057 million).												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025	
Title: ALPS Surveillance Assessment									-	13.057	-	
Description: Provide prototype fabrication, system support and operation for air surveillance assessments.												
FY 2024 Plans:												
This support includes fabricating hardware, engineering and testing of the system.												
FY 2024 to FY 2025 Increase/Decrease Statement:												
Fabrication of hardware, engineering and testing of the system efforts are on track for completion. Funds realigned to 0604820A to 0654820 PS1.												
Title: ALPS Development and Integration for Pacific Deterrence Initiative									-	1.004	-	
Description: Provide development and integration in support of the Pacific Deterrence Initiative.												
FY 2024 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) 126 / PEO Electronic Protect			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
This support includes the engineering, testing and validation of the system and software updates necessary to meet the new requirement for ALPS to integrate into the AIAMD architecture.											
FY 2024 to FY 2025 Increase/Decrease Statement: Engineering, testing and validation of the system and software updates for ALPS to integrate into the AIAMD architecture efforts are on track for completion.											
Funds moved to PE: 654820PS1.											
Accomplishments/Planned Programs Subtotals									-	14.061	-
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• EX2: Lower Tier Air Missile Defense (LTAMD) Capability	366.637	816.663	149.463	-	149.463	122.785	124.002	128.507	123.399	0.000	1,831.456
• FM3: Future Interceptor	7.880	8.040	8.058	-	8.058	8.068	8.154	8.245	8.327	0.000	56.772
• C53101: MSE Missile	2,471.372	1,212.832	963.060	-	963.060	975.410	1,132.518	1,461.976	1,204.578	Continuing	Continuing
• C62002: IFPC INC 2- I BLOCK 1 SYSTEM	22.709	313.189	411.430	-	411.430	663.872	786.454	802.826	997.832	0.000	3,998.312
• 0604117A: Maneuver - Short Range Air Defense (M-SHORAD)	269.186	281.239	315.772	-	315.772	245.380	347.669	406.934	270.679	Continuing	Continuing
• C14300: M-SHORAD - Procurement	246.867	400.697	69.091	-	69.091	42.676	-	-	-	Continuing	Continuing
• 0604820A: Radar Development	77.158	94.944	76.090	-	76.090	53.492	44.895	41.684	40.167	0.000	428.430
• S40: Army Integrated Air and Missile Defense	245.791	254.163	525.963	-	525.963	412.252	394.003	310.057	316.151	0.000	2,458.380
• BZ5075: IAMD Battle Command System	459.343	412.556	403.028	-	403.028	584.262	651.373	449.114	509.060	Continuing	Continuing
• 0604741A: Air Defense Command, Control and Intelligence - Eng Dev	54.244	74.738	69.653	-	69.653	63.879	70.400	71.366	72.084	Continuing	Continuing
• AD5070: AIR & MSL Defense Planning & Control Sys	72.619	68.892	80.011	-	80.011	-	-	-	-	0.000	221.522
• 0605052A: Indirect Fire Protection Capability Inc 2 - Block 1	126.308	196.248	167.912	-	167.912	199.241	63.965	65.244	150.204	0.000	969.122

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army								Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) 126 / PEO Electronic Protect		

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

Line Item	FY 2023	FY 2024	FY 2025	FY 2025	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Cost To	Total Cost
			Base	OCO	Total					Complete	
• 146: Air & Msl Defense Planning Control Sys	1.209	26.367	19.996	-	19.996	15.243	15.529	15.790	15.952	0.000	110.086

**Remarks**  
ALPS was previously funded under Program Element 0603327A, Air and Missile Defense Systems Engineering. This funding transitioned to Program Element 0604741A, Project 126: PEO Electronic Protect.

D. Acquisition Strategy

ALPS will utilize an Indefinite Delivery, Indefinite Quantity (IDIQ) contract to support the engineering, testing and validation of the system and software updates required to integrate ALPS into the AIAMD architecture and provide prototype fabrication, system support and operation for air surveillance assessments.



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024					
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev						Project (Number/Name) 126 / PEO Electronic Protect					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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		
Other Government Agencies & Government Program Management	Various	Various : Various	3.822	-		1.557	Dec 2023	-		-		-	Continuing	Continuing	Continuing		
Subtotal			3.822	-		1.557		-		-		-	Continuing	Continuing	N/A		
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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		
ALPS Surveillance Assessment	Various	Various : Various	-	-		11.500	Dec 2023	-		-		-	0.000	11.500	-		
ALPS Development and Integration for Pacific Deterrence Initiative	Various	Various : Various	-	-		1.004	Dec 2023	-		-		-	0.000	1.004	-		
Subtotal			-	-		12.504		-		-		-	0.000	12.504	N/A		
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals			3.822	-		14.061		-		-		-	Continuing	Continuing	N/A		
Remarks																	
ALPS was previously funded under PE 0603327A.																	

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024													
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev										Project (Number/Name) 126 / PEO Electronic Protection									
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029				
	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	
ALPS Pacific Deterrence Initiative - Engineering for Sys...					[Redacted] PDI Engr for Sys & SW Updates																								
ALPS Pacific Deterrence Initiative - System and Software...					[Redacted] PDI System & SW Testing																								
ALPS Pacific Deterrence Initiative - Integration Validation					[Redacted] PDI Integration & Validation																								
ALPS Air Surveillance Assessments - Fabricate Hardware					[Redacted] Air SA for OSD CAPE Study - Fabricate HW																								
ALPS Air Surveillance Assessments - Testing					[Redacted] Air SA for OSD CAPE Study - Testing																								
ALPS Air Surveillance Assessments - Assessment					[Redacted] Air SA for OSD CAPE Study - Assessment																								

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev	Project (Number/Name) 126 / PEO Electronic Protect	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ALPS Prototype Development and Integration	1	2017	4	2022
ALPS Prototype Deployments	3	2019	4	2022
ALPS Pacific Deterrence Initiative - Engineering for System and Software Updates	1	2024	2	2024
ALPS Pacific Deterrence Initiative - System and Software Testing	2	2024	3	2024
ALPS Pacific Deterrence Initiative - Integration Validation	4	2024	4	2024
ALPS Air Surveillance Assessments - Fabricate Hardware	1	2024	2	2024
ALPS Air Surveillance Assessments - Testing	2	2024	4	2024
ALPS Air Surveillance Assessments - Assessment	4	2024	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) 146 / Air & Msl Defense Planning Control Sys			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
146: Air & Msl Defense Planning Control Sys	-	1.209	26.367	19.996	-	19.996	15.243	15.529	15.790	15.952	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This funding line is a key enabler of the Army Modernization Priorities in support of Air and Missile Defense.

The Air Missile Defense Planning and Control System (AMDPCS) provides integration of air and missile defense operations at all echelons. AMDPCS is comprised of the following major subsystems: Air Missile Defense Work Station (AMDWS) ensures updated interfaces for interoperability between Air Defense and the rest of the force, allowing the Commander the visibility and situational understanding of the airspace; tools in AMDWS afford Soldiers horizontal and vertical collaborative planning with adjacent units. Common Data Link Interface-Module (CDLI-M) serves as a joint tactical datalink gateway/air picture. Forward Area Air Defense Command and Control (FAAD C2), correlates the joint and local air picture and when displayed on AMDWS, provides a near real time, three-dimensional air picture for the Commander. Joint Tactical Terminal (JTT) provides Soldiers Theater Ballistic Missile (TBM) early warning allowing them to take appropriate actions. AMDPCS are currently fielded to Army Air and Missile Defense Commands (AAMDC), Air Defense Artillery Brigades, (ADA BDE), Air and Missile Defense Battalions (AMD BN) and Terminal High Altitude Area Defense Batteries (THAAD BTRY). Air Defense Airspace Management (ADAM), a variant of AMDPCS, are fielded to Corps, Divisions, Brigade Combat Teams (BCTs) and multi-functional support brigades. AMDPCS is also being procured to support Maneuver Short Range Air Defense (M-SHORAD), European Deterrence Initiative (EDI), and Grow the Army (GTA) initiative. As part of the capability and technology reuse, AMDWS external interfaces are being leveraged by Integrated Battle Command System (IBCS) to avoid redevelopment of existing capabilities. AMDWS, CDLI-M, and FAAD C2 are core components of the Air and Missile Defense system-of-systems currently deployed in combat zones.

FY 2025 Base dollars in the amount of \$19.996 million fund development, cyber compliance and certification of AMDWS, CDLI-M and FAAD C2 software, as well as accreditation of AMDPCS family-of-systems shelters and software.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> AMDWS Software Development	0.467	2.894	1.283
<b>Description:</b> AMDWS supports the Common Operating Environments (COE) architecture framework. AMDWS serves as a bridge between Command Post (CP) and Real Time/Safety Critical/Embedded (RTSCE) and Sensor Computing Environments. AMDWS provides Air and Missile Defense planning, situational awareness, and operational capabilities to the force. It also interfaces at the operational and strategic level with Missile Defense and Joint systems. AMDWS external interfaces are being leveraged by Integrated Air and Missile Defense Battle Command System (IBCS) to avoid duplicating existing capabilities. Interfaces and architectures evolve over time, requiring software development support to maintain capability.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev	<b>Project (Number/Name)</b> 146 / Air & Msl Defense Planning Control Sys		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>FY 2024 Plans:</b> Support updated Army interfaces with the new Kessel Run program, expanded interfaces with Command and Control Battle Management and Communications (C2BMC) Planner and Theater High Altitude Air Defense (THAAD) Portable Planner, and supporting additional geospatial requirements with Mission Command.					
<b>FY 2025 Plans:</b> Maintain interoperability with Command Post Computing Environment (CPCE), migrate to a microservices/container-based architecture and expand Call for Fire (CFF) messaging. Update interface with Missile Defense Agency and the new Kessel Run, which will serve as a replacement for the Theater Battle Management Core System (TBMCS).					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to a reduction in funding to support critical cyber security compliance in FY 2025.					
<b>Title:</b> Engineering, Development, Test and Evaluation  <b>Description:</b> Ensures Interoperability Engineering System Suite Tool and Software Suitability and Supportability Service, testing and licenses, and interoperability and cyber compliance through engineering, development, test, and evaluation of the AMDPCS family-of-systems shelter objective configurations; execute evaluation and finalization of the AMDPCS tactical communications, data processing, and vehicle/shelter/power generation/environmental system block upgrade program for fielded systems.			0.483	8.585	3.721
<b>FY 2024 Plans:</b> Maintain FAAD C2 and AMDWS cyber certification and accreditation for AMDPCS Family-of-Systems and Integrated Battle Command System (IBCS) convergence.					
<b>FY 2025 Plans:</b> Continue to maintain FAAD C2 and AMDWS for cyber certification and accreditation for all AMDPCS Family-of-Systems and Integrated Battle Command System (IBCS) convergence.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to reorganization of efforts after FY 2024 to complete IBCS ADAM design and integration efforts in support of IBCS convergence.					
<b>Title:</b> Software System Certification Testing, Accreditation, and Approval of Authority-to-Operate (ATO)  <b>Description:</b> Accomplish software system certification testing, accreditation, and approval of ATOs for the various software systems; BitLocker encryption and other authorized/approved software implementation; Army and joint integration interoperability assessments.			0.259	0.267	0.272

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		<b>Project (Number/Name)</b> 146 / Air & Msl Defense Planning Control Sys	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>FY 2024 Plans:</b> Conduct Information Assurance Vulnerability Assessments and Management activities and maintain required Authority to Operate (ATOs).  <b>FY 2025 Plans:</b> Continue to conduct Information Assurance Vulnerability Assessments (IAVAs), and associated management activities in addition to maintaining required Authority to Operate (ATOs) for net ready AMDPCS Family of Systems as they converge to IBCS.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.					
<b>Title:</b> FAAD C2 Software Development and Modernization  <b>Description:</b> Supports software lab, testing, interoperability, cyber compliance, Hardware Obsolescence and software configuration management of the FAAD C2 software required to support program of record AMDPCS, Counter-Rocket, Artillery, Mortar (C-RAM), Counter-Unmanned Aerial Systems (C-UAS), and Short-Range Air Defense (SHORAD) Command and Control (C2) solutions.  <b>FY 2024 Plans:</b> FY 2024 funding provides for FAAD C2 software integration, development, and tests in support to AMDPCS Family-of-Systems and future program platform requirements in support of IBCS convergence.  <b>FY 2025 Plans:</b> Continue FAAD C2 software integration, development, and tests in support to maintain net ready AMDPCS Family-of-Systems and future program platform requirements in support of IBCS convergence.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.			-	9.400	9.429
<b>Title:</b> IBCS/FAAD C2 Convergence; Ada to C++ Refactoring and Modernization  <b>Description:</b> Convert the Forward Area Air Defense (FAAD) Command and Control (C2) software capabilities and interfaces from Ada software language to C++ Software Language; modernize the software by modularizing the capabilities, and developing a capabilities software product line (SPL) for Integrated Air and Missile Defense Battle Command System's (IBCS) to utilize.  <b>FY 2024 Plans:</b>			-	5.221	5.291

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) 146 / Air & Msl Defense Planning Control Sys				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
Convert FAAD C2 software ADA language to C++. Modernize the Software by Modularizing it. Develop a Software Capabilities SPL to be converged into IBCS for a single software baseline.												
FY 2025 Plans: Continue conversion efforts of FAAD C2 software ADA language to C++. Modernize the Software by Modularizing it. Develop a Software Capabilities SPL to be converged into IBCS for a single software baseline.												
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.												
Accomplishments/Planned Programs Subtotals										1.209	26.367	19.996
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• AD5070: AIR & MSL Defense Planning & Control Sys	72.619	68.892	80.011	-	80.011	-	-	-	-	0.000	221.522	
• 0605457A: Army Integrated Air and Missile Defense (AIAMD)	245.791	284.095	602.045	-	602.045	529.043	416.826	312.065	316.661	0.000	2,706.526	
• BZ5075: IAMD Battle Command System	459.343	412.556	403.028	-	403.028	584.262	651.373	449.114	509.060	Continuing	Continuing	
• 0604117A: Maneuver - Short Range Air Defense (M-SHORAD)	269.186	281.239	315.772	-	315.772	245.380	347.669	406.934	270.679	Continuing	Continuing	
• C14300: M-SHORAD - Procurement	246.867	400.697	69.091	-	69.091	42.676	-	-	-	Continuing	Continuing	
Remarks												
This program is an integral part of the Army Integrated Fires Mission Command (IFMC) convergence capability for Integrated Battle Command System (IBCS) architecture.												
D. Acquisition Strategy												
The acquisition strategy relies primarily on Non-Developmental Item (NDI) integration efforts. The primary intent of the AMDPCS program is to take the best available governmental and commercial technologies and integrate them into a seamless Command and Control (C2) program to provide common tools for airspace situational awareness, and command and control for all Army Air Defense units at all echelons. Also, to continue development, testing, and certification of AMDWS and FAAD C2 software, and ensure accreditation of AMDPCS shelter configurations and software until convergence with the Integrated Air & Missile Defense (IAMD) Battle Command												

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 5	PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev	146 / Air & Msl Defense Planning Control Sys
<p>System (IBCS). Finally, to complete procurement of AMDPCS shelter configurations, field, and execute tech refresh on fielded systems until convergence with IBCS and transition to sustainment in FY 2027.</p> <p>The AMDWS software development contract is sole source (SS)/cost plus fixed fee (CPFF) to Northrop Grumman Corp.</p>		



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev					Project (Number/Name) 146 / Air & Msl Defense Planning Control Sys				
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 Administration	SS/CPFF	Various : Huntsville, AL	35.156	0.299	Dec 2022	0.307	Dec 2022	0.313	Dec 2024	-		0.313	Continuing	Continuing	Continuing
Subtotal			35.156	0.299		0.307		0.313		-		0.313	Continuing	Continuing	N/A
Remarks Not Applicable															
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
AMDWS Software Development and Engineering	SS/CPFF	Northrop Grumman : Huntsville AL	187.163	0.467	Oct 2022	2.894	Oct 2022	1.283	Dec 2024	-		1.283	Continuing	Continuing	Continuing
Developmental Engineering	SS/CPFF	Various : Huntsville, AL	48.477	0.380	Dec 2022	8.278	Dec 2022	3.408	Dec 2024	-		3.408	Continuing	Continuing	Continuing
IBCS/FAAD C2 Convergence; Ada to C++ Refactoring and Modernization	TBD	Various : Redstone Arsenal	-	-		5.221		5.091		-		5.091	0.000	10.312	-
Subtotal			235.640	0.847		16.393		9.782		-		9.782	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
FAAD C2 Software Development and Modernization	SS/CPFF	Various : Redondo Beach, CA	-	-		9.400		9.629	Apr 2024	-		9.629	0.000	19.029	-
Subtotal			-	-		9.400		9.629		-		9.629	0.000	19.029	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) 146 / Air & Msl Defense Planning Control Sys					
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Certification/Testing	SS/CPFF	JITC : Ft Huachuca, AZ	1.535	0.027	Feb 2023	0.267	Feb 2023	0.272	Feb 2025	-		0.272	Continuing	Continuing	Continuing
Interoperability Assessment	Various	CTSF : Ft Hood, TX	1.999	0.036	May 2023	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			3.534	0.063		0.267		0.272		-		0.272	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			274.330	1.209		26.367		19.996		-		19.996	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		Project (Number/Name) 146 / Air & Msl Defense Planning Control Sys

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
AMDWS Block VI Contract																												
AMDWS Block VI Contract																												
AMDWS AMD Interfaces: C2BMC, Kessel Run, AOC WS, etc																												
AMDWS AIC 7.0.3.2																												
FAAD C2 SW Maintenance and Modernization Planning																												
FAAD C2 Modernization																												
FAAD C2 Modularity to IBCS Maneuver																												
FAAD C2 Certification Testing																												
CDLI-M AIC T24.1																												
CDLI-M AIC T24.2																												
CDLI-M AIC T25.1																												
CDLI-M AIC T25.2																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev	Project (Number/Name) 146 / Air & Msl Defense Planning Control Sys	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AMDWS Block VI Contract	1	2022	2	2026
AMDWS AMD Interfaces: C2BMC, Kessel Run, AOC WS, etc	4	2012	4	2030
AMDWS AIC 7.0.3.1	1	2022	3	2022
AMDWS AIC 7.0.3.2	1	2024	3	2024
FAAD C2 SW Maintenance and Modernization Planning	2	2022	1	2025
FAAD C2 Modernization	1	2025	1	2027
FAAD C2 Modularity to IBCS Manuever	2	2024	2	2028
FAAD C2 Certification Testing	3	2027	4	2028
CDLI-M AIC T24.1	1	2024	3	2024
CDLI-M AIC T24.2	3	2024	1	2025
CDLI-M AIC T25.1	1	2025	3	2025
CDLI-M AIC T25.2	3	2025	1	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
FG5: Counter Unmanned Aerial Systems (UAS)	-	53.035	34.310	49.657	-	49.657	48.636	54.871	55.576	56.132	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

Counter-Unmanned Aircraft Systems (C-UAS) efforts provide forces at all echelons with cross-domain capabilities to identify, classify, track, and defeat Groups 1-3 UAS threats, while supporting joint operational requirements. These combined arms solutions support the full kill-chain and result in solutions addressing fixed/semi-fixed, mounted/mobile, dismounted, and handheld missions. Development efforts are aligned with Joint Requirements Oversight Council Memorandum (JROCM) 078-20, which codifies the threshold and objective capability requirements for C-UAS development.

FY 2025 Base dollars in the amount of \$8.771 million will fund rapid component prototyping, facilitate operational assessments, pursue development and integration of mature hardware, address obsolescence, and test performance improvements of existing systems against current and near-term threats.

FY 2025 Base dollars in the amount of \$34.013 million will fund prototyping, pursue development and integration of emerging technologies, and test performance improvements against future threats.

FY 2025 Base dollars in the amount of \$5.319 million will fund technological development of C-UAS capabilities supporting deployed systems, to keep pace with evolving threats in response to existing Joint Urgent Operational Need (JUON) CC-0558 (managed by PEO MS).

FY 2025 Base dollars in the amount \$1.554 million will fund technology refreshes in support of existing Army Joint Emergent Operational Need (JEON) system improvements in response to ST-0008, to provide Army priority fixed sites with the ability to detect, ID, track and defeat Group 1 and 2 Remote Controlled Model Aircraft (RCMA) (managed by PEO Intelligence, Electronic Warfare and Sensors (IEWS)).

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

	FY 2023	FY 2024	FY 2025
<b>Title:</b> Fixed/Mobile System Development	10.064	8.695	8.771
<b>Description:</b> Funds rapid component prototyping, facilitates operational assessments, pursues development and integration of mature hardware, addresses obsolescence, and tests performance improvements of existing systems against current and near-term threats.			
<b>FY 2024 Plans:</b> FY 2024 Base funding will complete prototype build and integration efforts and support environmental and qualification testing for a small, flat-panel fire control radar, to provide fixed and mounted systems with an enhanced air surveillance capability against			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		<b>Project (Number/Name)</b> FG5 / Counter Unmanned Aerial Systems (UAS)	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
fixed wing, rotary wing, and Groups 1-3 UAS. Funding will support biannual C-UAS system of systems integration/record tests for new and enhanced components, systems, and subsystems.					
<b>FY 2025 Plans:</b> FY 2025 Base funding will support hardware and software development efforts for the eXpeditionary Battlefield active electronically-scanned array (AESA) External Unit (XBAEU) radar (a vehicle-mounted multi-mission sensor operating on-the-move), such as developing localized-heat exchangers (L-HEX) to reduce the requirement for centralized HEX and transitioning the system controller unit (SCU) and power distribution unit (PDU) from liquid-cooled to air-cooled, resulting in reliability and producibility improvements at a lower cost than the current Ku-720 radar. Funding will also support biannual C-UAS system of systems integration/record tests for new and enhanced components, systems, and subsystems.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.					
<b>Title:</b> Tech Refresh for Army JUON/JEON Efforts			6.660	6.830	6.873
<b>Description:</b> Funds technology refreshes at Army priority fixed sites and continues technological development of C-UAS capabilities supporting deployed systems.					
<b>FY 2024 Plans:</b> FY 2024 Base funding will provide technology refresh supporting existing Army JEON system improvements in response to ST-0008, to develop new and emerging signals of interest to pace the evolving threat and provide Army priority fixed sites with the ability to detect, engage, and defeat Groups 1 and 2 UAS. This funding will also support technological development of C-UAS systems deployed under existing JUON CC-0558, to include improvements to electronic warfare effectiveness against current and future threats.					
<b>FY 2025 Plans:</b> FY 2025 Base funding will develop new and emerging signals of interest to pace the evolving threat and provide Army priority fixed sites with the ability to detect, engage, and defeat enemy UAS. Funding will also continue technological development of C-sUAS capabilities supporting deployed systems, such as further developing new electronic warfare defeat measures (e.g, multi-stage cognitive radio frequency sensor, upgraded antenna suite for added reliability and flexibility, electronically-steered antenna), to keep pace with evolving UAS threats.					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.					
<b>Title:</b> C-sUAS Capability Development Document (CDD) Pre-Planned Product Improvement (P3I)			16.311	18.785	34.013

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		<b>Project (Number/Name)</b> FG5 / Counter Unmanned Aerial Systems (UAS)	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p><b>Description:</b> The C-sUAS P3I program incorporates incremental improvements to address future C-sUAS capabilities, creating enduring next generation C-sUAS solutions. Funding supports prototyping, pursues development and integration of emerging technologies, and tests performance of system improvements against future threats. This effort was previously titled Next Generation Product Development.</p> <p><b>FY 2024 Plans:</b> FY 2024 Base funding will continue efforts to identify and characterize emerging technologies which support prototyping, integration, and testing of system improvements to increase the capability to detect, track, and defeat the 2035 C-sUAS threat, and will continue development and testing of updated technical manuals and safety documentation required to transition Coyote interceptor loading responsibility to Soldiers, enhanced command and control systems for automated decision aids, and improvements to address obsolescence and reduce reliance on contractor logistics support for EW systems. Testing will ensure technologies meet environmental and reliability/survivability/availability requirements.</p> <p><b>FY 2025 Plans:</b> FY 2025 Base funding will continue efforts to identify and characterize emerging technologies which support prototyping, integration, and testing of system improvements to increase the capability to detect, track, and defeat future C-sUAS threats. Funding will continue development and testing of updated technical manuals and safety documentation required to transition Coyote interceptor loading responsibility to Soldiers; continue efforts to improve reliability for the Coyote kinetic interceptor, with an emphasis on payload, propulsion, and seeker components; and continue improvements to C-sUAS command and control (C2) systems for automated decision aids, such as incremental steps to a single pane of glass, camera/radar software improvements, and enhanced real-time mission analysis to improve Soldier effectiveness. Funding will also support tech refresh of electronic warfare hardware, by identifying, testing, and replacing components that are approaching end-of-life; pursuing open architecture solutions, which enable multi-vendor/multi-service framework environments; and implementing additional software libraries. Testing will ensure technologies meet environmental and reliability/survivability/availability requirements.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 Base funds increase is due to a reprioritization of requirements to support C-sUAS P3I efforts.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>			33.035	34.310	49.657
			<b>FY 2023</b>	<b>FY 2024</b>	
<b>Congressional Add:</b> Software Integration Facility (SWIF) Digital Ecosystem			20.000	-	
<b>FY 2023 Accomplishments:</b> FY 2023 Base funding supported hardware procurement, development, and integration to provide the initial SWIF for the Integrated Fires Rapid Capabilities Office (IFRCO), managed by PEO MS. The SWIF capability provides an integrated development environment, and it enables increased					

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)				
								FY 2023	FY 2024			
system-of-systems (SoS) development and integration speed and efficiency across the Integrated Fires architecture.												
Congressional Adds Subtotals								20.000			-	
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• AD0511: C-SUAS FIXED	299.789	27.847	16.233	-	16.233	39.996	38.707	39.743	40.139	0.000	502.454	
• AD0512: C-SUAS OPERATIONAL	-	313.490	235.363	-	235.363	226.162	235.449	243.047	246.032	0.000	1,499.543	
• AD0513: C-SUAS	-	24.039	28.490	-	28.490	-	-	-	-	0.000	52.529	
GROUND READINESS												
• C82216: C-SUAS EFFECTORS	-	-	96.182	-	96.182	37.435	36.369	37.977	38.524	0.000	246.487	
• C82217: C-SUAS LAUNCHERS	-	-	21.242	-	21.242	21.667	20.479	20.889	20.299	0.000	104.576	
Remarks												
D. Acquisition Strategy												
<p>The C-UAS program began as a rapid acquisition and deployment of interim capabilities program, in response to JUON CC-0558 and JEON ST-0008; however, based upon FY22 direction from the Army Acquisition Executive (AAE), combined with approval of the C-sUAS Capability Development Document (CDD) Increment 1, it has transitioned to a formalized acquisition approach with five individual Acquisition Category (ACAT) III programs of record (PoR) within the C-sUAS portfolio: Fixed Site-Low, slow, small Unmanned Aircraft System (UAS) Integrated Defeat System (FS-LIDS); Mobile-Low, slow, small UAS Integrated Defeat System (M-LIDS); Ku-band Radio Frequency System (KuRFS) Family of Radars; Coyote Launchers and Interceptors; and Handheld/Dismounted Systems. Currently, the FS-LIDS, M-LIDS, Coyote, and KuRFS requirements are fulfilled through existing Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts, which are in place through FY25, to procure and field all C-sUAS major end items. Acquisition planning is underway for individual PoR follow-on ID/IQ contracts, with anticipated periods of performance of 8 years, to support the remaining CDD Increment 1 requirements, along with potential Increment 2 requirements. Handheld/Dismounted systems are procured through a combination of the Defense Logistics Agency, Army Contracting Command, and U.S. Special Operations Command.</p>												
<p>C-UAS is a component of an integrated fires development effort that includes survivability, resiliency, and effectiveness improvements against advanced threats from near-peer adversaries. This effort includes integration with an evolving common fires mission command, common development tools and processes, and annual test and evaluation to provide data to support program assessments and progress toward closure of performance gaps.</p>												



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev				Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)					
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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 - CsUAS	Various	Multiple : Multiple	1.293	2.374	Feb 2023	2.946	Dec 2023	3.367	Dec 2024	-		3.367	Continuing	Continuing	-
Program Management - JUON CC-0558	Various	Multiple : Multiple	32.997	0.457	Feb 2023	-		-		-		-	0.000	33.454	-
Program Management - SWIF	Various	Multiple : Multiple	-	1.600	Aug 2023	-		-		-		-	Continuing	Continuing	-
Subtotal			34.290	4.431		2.946		3.367		-		3.367	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Fixed/Mobile System Development	C/IDIQ	Multiple : Multiple	106.032	8.162	Aug 2023	7.052	Mar 2024	7.289	Apr 2025	-		7.289	Continuing	Continuing	-
Tech Refresh - Deployed Systems	C/Various	Multiple : Multiple	9.359	4.114	Aug 2023	4.258	Mar 2024	4.420	Apr 2025	-		4.420	Continuing	Continuing	-
Tech Refresh - Fixed Sites	MIPR	Multiple : Multiple	1.638	1.587	Feb 2023	1.580	Jan 2024	1.554	Mar 2025	-		1.554	Continuing	Continuing	-
CDD P3I	C/Various	Multiple : Multiple	-	13.228	Jun 2023	15.234	Mar 2024	28.265	Apr 2025	-		28.265	Continuing	Continuing	-
Software Integration Facility (SWIF) Digital Ecosystem	MIPR	Multiple : Multiple	-	18.400	Aug 2023	-		-		-		-	Continuing	Continuing	-
Subtotal			117.029	45.491		28.124		41.528		-		41.528	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Test Support - C-sUAS	MIPR	Multiple : Multiple	0.793	2.611	May 2023	2.720	Feb 2024	4.762	Feb 2025	-		4.762	Continuing	Continuing	-
Test Support - JUON CC-0558	MIPR	Multiple : Multiple	66.072	0.502	Feb 2023	0.520	Feb 2024	-		-		-	0.000	67.094	-
Subtotal			66.865	3.113		3.240		4.762		-		4.762	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev					Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)				
		Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		218.184	53.035		34.310		49.657		-		49.657	Continuing	Continuing	N/A

**Remarks**  
FY 2024 to FY 2025 increases in Program Management and Test Support are based on anticipated costs associated with P3I efforts.

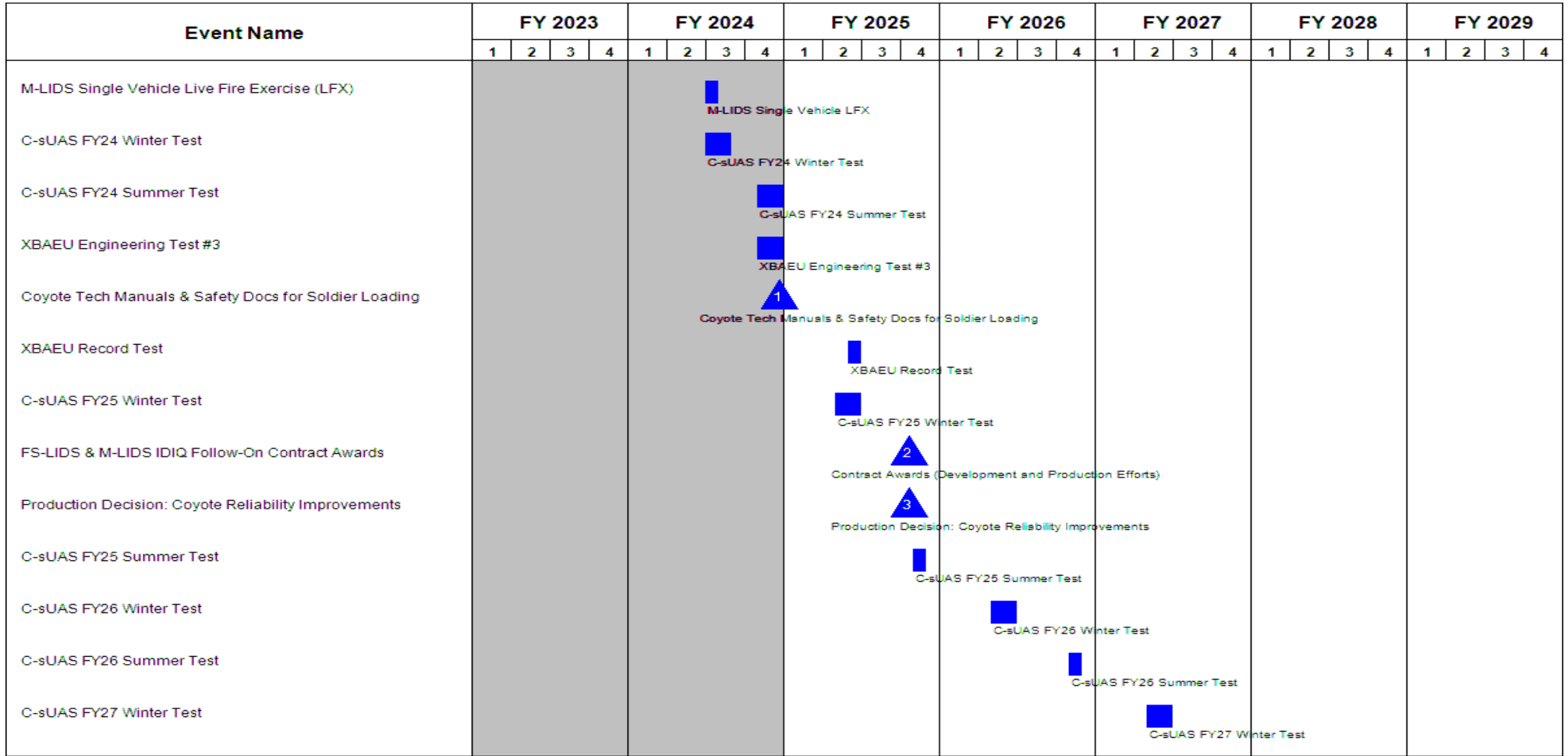
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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Fixed/Mobile Systems Development																												
Fixed/Mobile Systems Development (Emerging Threats, Obsolescence Mitigation)																												
Tech Refresh for Deployed Systems and Fixed Sites																												
Tech Refresh for Deployed Systems and Fixed Sites																												
CDD P3I Program - Development & Prototyping																												
CDD P3I Program - Development & Prototyping																												
XBAEU Radar Design Updates & Producibility, Build & Inte...																												
XBAEU Radar Design Updates & Producibility, Build & Integration																												
Single Vehicle Concept Verification Event (CVE)																												
C-sUAS CVE																												
C-sUAS FY23 Winter Test																												
C-sUAS FY23 Winter Test																												
Software Integration Facility (SWIF) Hardware Procuremen...																												
SWIF Hardware Procurement, Development & Integration																												
C-sUAS FY23 Summer Test																												
C-sUAS FY23 Summer Test																												
XBAEU Engineering Test #1																												
XBAEU Engineering Test #1																												
FoCUS 1B Record Test																												
FoCUS 1B Record Test																												
XBAEU Environmental Test and Qualification																												
XBAEU Environmental Test and Qualification																												
XBAEU Tech Manuals, Training Materials, and Safety Docum...																												
XBAEU TMs, Training Mat'l, & Safety Docs																												
XBAEU Engineering Test #2																												
XBAEU Engineering Test #2																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)	



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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army																Date: March 2024												
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev								Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)										
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
C-sUAS FY27 Summer Test																												
C-sUAS FY28 Winter Test																												
C-sUAS FY28 Summer Test																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Army			<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev	<b>Project (Number/Name)</b> FG5 / Counter Unmanned Aerial Systems (UAS)	

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Fixed/Mobile Systems Development	1	2017	4	2029
Tech Refresh for Deployed Systems and Fixed Sites	1	2021	4	2029
CDD P3I Program - Development & Prototyping	1	2023	4	2029
XBAEU Radar Design Updates & Producibility, Build & Integration	3	2022	3	2025
Single Vehicle Concept Verification Event (CVE)	1	2023	1	2023
C-sUAS FY23 Winter Test	2	2023	2	2023
Software Integration Facility (SWIF) Hardware Procurement, Development, and Integration	3	2023	3	2024
C-sUAS FY23 Summer Test	4	2023	4	2023
XBAEU Engineering Test #1	4	2023	4	2023
FoCUS 1B Record Test	4	2023	4	2023
XBAEU Environmental Test and Qualification	4	2023	4	2024
XBAEU Tech Manuals, Training Materials, and Safety Documentation	1	2024	3	2025
XBAEU Engineering Test #2	2	2024	2	2024
M-LIDS Single Vehicle Live Fire Exercise (LFX)	3	2024	3	2024
C-sUAS FY24 Winter Test	3	2024	3	2024
C-sUAS FY24 Summer Test	4	2024	4	2024
XBAEU Engineering Test #3	4	2024	4	2024
Coyote Tech Manuals & Safety Docs for Soldier Loading	4	2024	4	2024
XBAEU Record Test	2	2025	2	2025
C-sUAS FY25 Winter Test	2	2025	2	2025
FS-LIDS & M-LIDS IDIQ Follow-On Contract Awards	4	2025	4	2025

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604741A / Air Defense Command, Control and Intelligence - Eng Dev		Project (Number/Name) FG5 / Counter Unmanned Aerial Systems (UAS)
		Start		End
Events		Quarter	Year	Quarter Year
Production Decision: Coyote Reliability Improvements		4	2025	4 2025
C-sUAS FY25 Summer Test		4	2025	4 2025
C-sUAS FY26 Winter Test		2	2026	2 2026
C-sUAS FY26 Summer Test		4	2026	4 2026
C-sUAS FY27 Winter Test		2	2027	2 2027
C-sUAS FY27 Summer Test		4	2027	4 2027
C-sUAS FY28 Winter Test		2	2028	2 2028
C-sUAS FY28 Summer Test		4	2028	4 2028

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	28.404	30.985	30.097	-	30.097	30.504	14.199	8.696	8.718	0.000	151.603
361: Intelligence Simulation Systems	-	6.681	7.873	7.869	-	7.869	7.827	8.106	8.696	8.718	0.000	55.770
362: Jnt Land Component Constructive Trng	-	21.723	23.112	22.228	-	22.228	22.677	6.093	-	-	0.000	95.833
A. Mission Description and Budget Item Justification												
This Program Element funds the development of constructive and wargame simulations used to realistically train commanders and their battle staffs on today's complex battlefield conditions.												
Project 361, Intelligence Simulation Systems, funds the development of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT). IEWTPT is a Non-System Training Device (NSTD) which supports home-station training by simulating and stimulating Military Intelligence (MI) organic or surrogate equipment. It enables sustainment of critical individual and collective MI tasks/skills and is the core of the U.S. Army Intelligence Center of Excellence (USAICoE) Military Intelligence (MI) holistic training strategy supporting mission command, targeting, and MI Soldier readiness. IEWTPT provides a realistic simulation intelligence target environment for multi-intelligence disciplines such as All Source Analysis, Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), Human Intelligence (HUMINT), Geospatial Intelligence (GEOINT) and emerging electronic warfare (EW) systems. IEWTPT provides training for analyst and system operators to exploit intelligence data during training, just as they would in "Real World" operations. The IEWTPT Technical Control Cell (TCC) is composed of two components: the Lower Enclave (LE) which supports exercise planning and development and drives the All Source and GEOINT (and emerging EW) training tasks and the Upper Enclave (UE) which supports all SIGINT related training and operates at the Top Secret / Sensitive Compartmented Information (TS/SCI) classification level.												
Project 362, Joint Land Component Constructive Training Capability (JLCCTC) supports Army Title X training worldwide for Army Commanders and their staff at Mission Training Complexes (MTCs), Training and Doctrine Command (TRADOC) facilities, and other customer locations. JLCCTC trains Commanders and their staff in Decisive Actions to include offensive, defensive, stability, and civil support operations. JLCCTC is a software modeling and simulation capability that contributes to Army Training Mission Area by providing appropriate levels of modeling and simulation resolution and fidelity to support unit collective and combined arms training. JLCCTC provides a composable federation configurable to any combination of models and simulations, as required by training exercise intent/design. JLCCTC provides accurate representations of tactically and operationally relevant land warfare operations executed in a contemporary Joint operating environment/context and in support of Army Training and Readiness.												



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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		PE 0604742A / Constructive Simulation Systems Development			
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	29.481	30.985	30.320	-	30.320
Current President's Budget	28.404	30.985	30.097	-	30.097
Total Adjustments	-1.077	0.000	-0.223	-	-0.223
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.001	-			
• SBIR/STTR Transfer	-1.076	-			
• Adjustments to Budget Years	-	-	-0.223	-	-0.223
<b>Change Summary Explanation</b>					
Decrease due to alignment of funding with planned life cycle of programs.					

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development				Project (Number/Name) 361 / Intelligence Simulation Systems			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
361: Intelligence Simulation Systems	-	6.681	7.873	7.869	-	7.869	7.827	8.106	8.696	8.718	0.000	55.770
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Project 361 funds the development, integration and testing of the Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT). IEWTPT is a Non-System Training Device (NSTD) which supports home-station training by simulating and stimulating Military Intelligence (MI) and Electronic Warfare (EW) organic or surrogate equipment. It enables training of critical individual, crew, and collective MI tasks/skills and is the core of the U.S. Army Intelligence Center of Excellence (USAICoE) Military Intelligence (MI) holistic training strategy supporting mission command, targeting, and MI Soldier, and multi-domain army readiness. IEWTPT provides a realistic simulation intelligence target environment for multi-intelligence disciplines such as All Source Analysis, Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), Human Intelligence (HUMINT), Geospatial Intelligence (GEOINT) and EW in support of multi-domain operations (MDO) training. IEWTPT provides training for analyst and system operators to exploit intelligence and EW data during training, just as they would in "Real World" operations. The IEWTPT Technical Control Cell (TCC) is composed of two components: the Lower Enclave (LE) which supports exercise planning and scenario development and drives the All Source and GEOINT (and emerging EW) training tasks and the Upper Enclave (UE) which supports all SIGINT related training and operates at the Top Secret / Sensitive Compartmented Information (TS/SCI) classification level.

FY 2025 base funding in the amount of \$7.869 million will be used for the development and advancement of agile software development tools supporting capability releases, improving integration into the Military Intelligence (MI) cloud-ready baseline, improvement of multi-intelligence and electronic warfare (EW) scenario development tools, and enhancement of threat modeling capabilities and replicate theater and national level intelligence capabilities.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Software Engineering, Development, Integration and Testing	6.681	7.873	7.869
<b>FY 2024 Plans:</b> IEWTPT will continue to support Information Systems-Capabilities Development Document (IS-CDD) requirements and simulation interface capabilities for Intelligence, Surveillance, Reconnaissance (ISR) platform system in the PEO Intelligence Electronic Warfare & Sensors (PEO IEW & S) portfolio to support home-station intelligence training for multi-domain operations (MDO). Funding will develop and advance the Army Military Intelligence (MI) cloud-ready baseline for point of need training execution across all components (Active, Guard, Reserve). Funding will improve multi-intelligence and Electronic Warfare (EW) scenario development tools for cloud employment; mature sensor emulation effects; enhance threat modeling capabilities and replicate theater and national level intelligence. The program will deliver multi-intelligence training improvements to the distributed/federated constructive simulation environment, expand the All Source and Signals Intelligence (SIGINT) baselines, and continued detailed electronic warfare key critical task analysis and training development. Funding will expand EW/SIGINT integration to			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army			<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0604742A / <i>Constructive Simulation Systems Development</i>		<b>Project (Number/Name)</b> 361 / <i>Intelligence Simulation Systems</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>reduce risk for the Terrestrial Layer System (TLS) training strategy and support training mission analysis and development for the Tactical Intelligence Targeting Access Node (TITAN) multi-domain ground station. Expands SIGINT scenario development tools for cloud employment; sensor emulation effects modeling as well as theater and National level intelligence replication for the simulation/user environment. Will execute technology development and integration supporting product deliverables needed to meet Intelligence Center of Excellence (ICoE) and Army G2 training and modernization strategies. IEWTPT simulation and simulation capabilities will support integration of test and training systems for MDO events and the Regionally Aligned Readiness and Modernization Model (ReARMM).</p> <p><b><i>FY 2025 Plans:</i></b> IEWTPT will continue to support Information Systems-Capabilities Development Document (IS-CDD) requirements and simulation interface capabilities for Intelligence, Surveillance, Reconnaissance (ISR) and EW platform system training to support homestation intelligence training for multi-domain operations (MDO) in a large-scale, simulation environment. Funding will develop and advance the Army Military Intelligence (MI) cloud-ready baseline for point of need training execution across all components (Active, Guard, Reserve). Funding will improve multi-intelligence and electronic warfare (EW) scenario development tools for greater representation of the congested-contested, operational training environment; Add and mature blue and red sensors and their emulation effects; expand and enhance threat modeling capabilities and replicate theater and national level intelligence capabilities. The program will deliver multi-intelligence/EW training improvements to the distributed/federated constructive simulation environment, expand the EW and Signals Intelligence (SIGINT) combined baselines in order to replicate the complex, critical task training for the emerging Terrestrial Layer System - Brigade Combat Team (TLS-BCT). Funding will provide mission analysis for the TLS - Echelons Above Brigade (EAB) training strategy and support training mission analysis and development for the Tactical Intelligence Targeting Access Node (TITAN) multi-domain ground station. Expand the program development and implementation of security, operations (DevSecOps) practices and tools for cloud employment and more rapid product deliverables to the warfighter.</p> <p><b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b> FY2025 decrease to maintain planned lifecycle of this effort.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>			6.681	7.873	7.869
<b>C. Other Program Funding Summary (\$ in Millions)</b>					
N/A					
<b>Remarks</b>					

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development	Project (Number/Name) 361 / Intelligence Simulation Systems
<p><b>D. Acquisition Strategy</b></p> <p>The program will leverage the Software Acquisition Pathway (SWP) Execution Phase to release Minimum Viable Products (MVPs) and Minimum Viable Capability Releases (MVCR), at least annually, in support of intelligence modernization priorities. The IEWTPT Increment 2 contract will provide multi-intelligence and electronic warfare training support to multi-domain functions. Funds support development, integration and testing in an agile acquisition environment using active user engagements, value assessments and continuous improvement to meet the Information Systems-Capability Development Document (IS-CDD), Military Intelligence Corps requirements and the Requirements and Configuration Control Board (RC2B) General Officer Steering Committee (GOSC) priorities.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development						Project (Number/Name) 361 / Intelligence Simulation Systems			
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Increment 2 Software Eng, Development, Integration and Test Dev Sec Ops Tools/Agile Ready Architect.	C/CPFF	General Dynamics : Orlando, FL	5.323	4.470	Feb 2023	7.873	Feb 2024	7.869	Feb 2025	-		7.869	Continuing	Continuing	Continuing
Tools/Agile	C/CPFF	General Dynamics : Orlando, Florida	-	2.211	May 2023	-		-		-		-	0.000	2.211	-
Subtotal			5.323	6.681		7.873		7.869		-		7.869	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			5.323	6.681		7.873		7.869		-		7.869	Continuing	Continuing	N/A
Remarks															
The IEWTPT Increment 2 contract is actively proceeding to meet IS-CDD and software acquisition pathway execution phase requirements in support of intelligence modernization training.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development		Project (Number/Name) 361 / Intelligence Simulation Systems	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
Increment 2 Contract Award																												
Min. Viable Capability Release 2								1																				
Min. Viable Capability Release 3												2																
Min. Viable Capability Release 4															3													
Min. Viable Capability Release 5																			4									
Min. Viable Capability Release 6																								5				
Min. Viable Capability Release 7																												6

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development	Project (Number/Name) 361 / Intelligence Simulation Systems	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment 1 Bridge	2	2022	2	2022
Increment 2 Contract Award	2	2023	2	2028
Min. Viable Capability Release 2	4	2024	4	2024
Min. Viable Capability Release 3	4	2025	4	2025
Min. Viable Capability Release 4	4	2026	4	2026
Min. Viable Capability Release 5	4	2027	4	2027
Min. Viable Capability Release 6	4	2028	4	2028
Min. Viable Capability Release 7	4	2029	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development				Project (Number/Name) 362 / Jnt Land Component Constructive Trng			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
362: Jnt Land Component Constructive Trng	-	21.723	23.112	22.228	-	22.228	22.677	6.093	-	-	0.000	95.833
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Joint Land Component Constructive Training Capability (JLCCTC) supports Army Title X training worldwide for Army Commanders and their staff at Mission Training Complexes (MTCs), Training and Doctrine Command (TRADOC) facilities, and other customer locations. JLCCTC trains Commanders and their staff in Decisive Actions to include offensive, defensive, stability, and civil support operations. JLCCTC is a software modeling and simulation capability that contributes to Army Training Mission Area by providing appropriate levels of modeling and simulation resolution and fidelity to support unit collective and combined arms training. JLCCTC provides a composable federation configurable to any combination of models and simulations, as required by training exercise intent/design. JLCCTC provides accurate representations of tactically and operationally relevant land warfare operations executed in a contemporary Joint operating environment/context and in support of Army Training and Readiness.

FY 2025 base funding in the amount of \$22.228 million will be used for the development, integration and test, and verification activities for JLCCTC Version 9.x to train Commanders and their Staff. JLCCTC will continue to support emerging Common Operating Environment / Computing Environment (COE/CE), Mission Command (MC), Cyber Security/Risk Management Framework (RMF), Concurrency warfighter requirements, Synthetic Environment (SE) Core No Fail activities, and One World Terrain (OWT) Data to JLCCTC Runtime Translation Tool development. In addition, JLCCTC will continue to support the integration activities with Live, Virtual, Constructive-Integrated Architecture (LVC-IA), Combat Training Center Instrumentation System (CTC- IS), Intelligence Electronic Warfare Tactical Proficiency Trainer (IEWTPT), and to begin interfacing the Army ground model with the Joint simulation capability.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Improve JLCCTC software models to comply with emerging Common Operating Environment (COE)/Computing Environment (CE) requirements.	0.650	0.650	0.650
<b>Description:</b> Improve JLCCTC software models to comply with emerging COE/CE requirements.			
<b>FY 2024 Plans:</b> Will continue improvements of JLCCTC software models to include common overlay development/modifications in support of COE compliance/standards.			
<b>FY 2025 Plans:</b> Will continue improvements of JLCCTC software models to include common overlay development/modifications in support of COE compliance/standards.			
<b>Title:</b> Improve JLCCTC software models to meet emerging Mission Command (MC) stimulation and Cyber Security requirements.	0.800	0.800	0.800



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604742A / <i>Constructive Simulation Systems Development</i>	<b>Project (Number/Name)</b> 362 / <i>Jnt Land Component Constructive Trng</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<b>Description:</b> Improve JLCCTC software models to meet emerging Mission Command (MC) stimulation and Risk Management Framework (RMF)/Cyber Security requirements.  <b>FY 2024 Plans:</b> Continue to evolve JLCCTC to support emerging Mission Command requirements and fully comply with the Cyber Security RMF requirement.  <b>FY 2025 Plans:</b> Continue to evolve JLCCTC to support emerging Mission Command requirements and fully comply with the Cyber Security RMF requirement.			
<b>Title:</b> Improve JLCCTC software models to meet emerging warfighter requirements for Concurrency of Commander and staff training (Battalion thru Theater Level).  <b>Description:</b> Improve JLCCTC software models to meet emerging warfighter requirements for Concurrency of Commander and staff training (Brigade through Theater Level).  <b>FY 2024 Plans:</b> Continue to evolve JLCCTC software models to support additional emerging requirements in support of Commander and staff warfighter training exercises through Theater level  <b>FY 2025 Plans:</b> Continue to evolve JLCCTC software models to support additional emerging requirements in support of Commander and staff warfighter training exercises through Theater level.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 decrease to maintain planned lifecycle of this effort.		6.160	6.428
<b>Title:</b> Government System Test and Evaluation for the Joint Land Component Constructive Training Capability (JLCCTC) Program.  <b>Description:</b> Government System Test and Evaluation for the Joint Land Component Constructive Training Capability (JLCCTC).  <b>FY 2024 Plans:</b> Continue conducting system test events (Integration and Testing) in support of the JLCCTC v9.x validation event (VE).  <b>FY 2025 Plans:</b>		1.750	1.848
			6.215
			1.711

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development				Project (Number/Name) 362 / Jnt Land Component Constructive Trng			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2023	FY 2024	FY 2025
Continue conducting system test events (Integration and Testing) in support of the JLCCTC v9.x validation event (VE). <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 decrease to maintain planned lifecycle of this effort.											
<b>Title:</b> Conduct Army Ground Model Analysis of Alternative <b>FY 2024 Plans:</b> Continue development to interface the Army ground model with the Joint simulation capability. <b>FY 2025 Plans:</b> Continue development to interface the Army ground model with the Joint simulation capability. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 decrease to maintain planned lifecycle of this effort.									6.837	7.760	7.453
<b>Title:</b> Constructive Terrain and Tools Development <b>FY 2024 Plans:</b> Continue execution of the SE Core No Fail Activities and development of tools to transform OWT data into JLCCTC compliant runtime formats. <b>FY 2025 Plans:</b> Continue execution of the SE Core No Fail Activities and development of tools to transform OWT data into JLCCTC compliant runtime formats. <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY 2025 decrease to maintain planned lifecycle of this effort.									5.526	5.626	5.399
Accomplishments/Planned Programs Subtotals									21.723	23.112	22.228
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• NA0103: NSTD COMMAND & CONTROL	35.470	33.047	28.178	-	28.178	32.529	31.732	34.892	34.990	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The JLCCTC contract (with Base contract of 4 years and two-three year options) was awarded to Phoenix Logistics Inc. (PLI) on 17 March 2020.											

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development	Project (Number/Name) 362 / Jnt Land Component Constructive Trng
<p>Activities under the current contract and follow-on contracts include System Engineering, Software Development, Integration and Test, support to validation events and Post Deployment Software Support (PDSS) and Pre-Planned Product Improvements (P3I) support.</p> <p>JLCCTC produces a major software release/version which is then distributed/fielded to 46 sites worldwide in support of Army Command and Staff Training.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army													Date: March 2024		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development					Project (Number/Name) 362 / Jnt Land Component Constructive Trng				
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Improve JLCCTC to meet emerging warfighter requirements.	C/CPFF	Phoenix Logistics, Inc. : Orlando, FL	15.959	6.160	Dec 2022	6.428	Dec 2023	6.215	Dec 2024	-		6.215	Continuing	Continuing	Continuing
MC Systems Stimulation and Cyber Security	C/CPFF	Phoenix Logistics, Inc. : Orlando, FL	9.932	0.800	Dec 2022	0.800	Dec 2023	0.800	Dec 2024	-		0.800	Continuing	Continuing	Continuing
COE Compliance	C/CPFF	Phoenix Logistics, Inc. : Orlando, FL	7.040	0.650	Dec 2022	0.650	Dec 2023	0.650	Dec 2024	-		0.650	Continuing	Continuing	Continuing
Conduct Army ground Model AoA	C/CPFF	Phoenix Logistics, Inc. : Orlando, FL	8.200	6.837	Dec 2022	7.760	Dec 2023	7.453	Dec 2024	-		7.453	Continuing	Continuing	Continuing
Constructive Terrain and Tools Development	C/CPFF	Phoenix Logistics, Inc. : Orlando, FL	4.937	5.526	Dec 2022	5.626	Dec 2023	5.399	Dec 2024	-		5.399	Continuing	Continuing	Continuing
Subtotal			46.068	19.973		21.264		20.517		-		20.517	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
System T&E (I&T, VE, ORE)	Various	Various : Various	29.942	1.750	Dec 2022	1.848	Dec 2023	1.711	Dec 2024	-		1.711	Continuing	Continuing	Continuing
Subtotal			29.942	1.750		1.848		1.711		-		1.711	Continuing	Continuing	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			76.010	21.723		23.112		22.228		-		22.228	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army			Date: March 2024		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development		Project (Number/Name) 362 I Jnt Land Component Constructive Trng	

Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
JLCCTC Version 9.0 System Engr / Develop / I&T / Validation	Version 9.0																											
JLCCTC Version 9.0 Release					1 JLCCTC V9.0 Release																							
JLCCTC Version 9.x System Engr / Develop / I&T / Validation					Version 9.x																							
JLCCTC Version 9.x Release									2 JLCCTC V9.x Release																			
JLCCTC Integration into LVC-IA / CTC-IS	LVC-IA Integration																											
JLCCTC Version 9.x 2027 Sys Engr/ Develop/ I&T/ Validation									Version 9.x 2027																			
JLCCTC Version 9.x 2027 Release													3 JLCCTC V9.x 2027 Release															
JLCCTC Transition to Sustainment																	4 JLCCTC Transition to Sustainment											

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604742A / Constructive Simulation Systems Development	Project (Number/Name) 362 / Jnt Land Component Constructive Trng	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JLCCTC Version 9.0 System Engr / Develop / I&T / Validation	1	2018	4	2023
JLCCTC Version 9.0 Release	1	2024	1	2024
JLCCTC Version 9.x System Engr / Develop / I&T / Validation	1	2024	2	2025
JLCCTC Version 9.x Release	2	2025	2	2025
JLCCTC Integration into LVC-IA / CTC-IS	1	2014	3	2027
JLCCTC Version 9.x 2027 Sys Engr/ Develop/ I&T/ Validation	3	2025	4	2026
JLCCTC Version 9.x 2027 Release	1	2027	1	2027
JLCCTC Transition to Sustainment	1	2028	1	2028

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development							
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	4.989	13.626	12.927	-	12.927	4.555	4.603	4.653	4.699	Continuing	Continuing
L59: Diagnost/Expert Sys	-	1.108	6.859	6.036	-	6.036	1.200	1.213	1.226	1.238	0.000	18.880
L65: Test Equipment Development	-	3.881	6.767	6.891	-	6.891	3.355	3.390	3.427	3.461	Continuing	Continuing

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

This program element (PE) provides for development and testing of automatic test equipment, precision calibration instruments, general-purpose test equipment, state-of-the-art diagnostics and prognostics technologies, and software and systems to support the increasingly complex electronic components of the Army's new and upgraded weapon systems focused on joint operations in a sophisticated multi-domain area of operation. It focuses on standardization and implementation of commercial test and diagnostic technologies across multiple weapon platforms to minimize the cost of troubleshooting and maintenance of Army equipment in the field. Funding supports modernization of the test equipment fleets by investigating technology insertions including, but not limited to, predictive and prognostic maintenance, Electronic Intermittent Fault Detection, instrument reduction/miniaturization, electro-mechanical, electro-optics (EO), radio frequency (RF), physical, radiological, chemical, and biological warfare sensor calibration support capabilities, and other emerging technologies. Funding also supports development of initial prototypes to enable refinement of Operational Requirements documented by Combatant Commands (COCOM), Program Executive Offices (PEO), Army Futures Command (AFC), Army Staff, US Army Training and Doctrine Command (TRADOC), and early user feedback to support future sustainment and testing capabilities required for emerging weapons platforms. This PE provides for continued development and improvement of general-purpose test equipment and calibration standards with emphasis on the incorporation of digital electronics and tailoring of configurations to improve deployability, mobility and survivability of the support equipment. It includes development, demonstration and testing of calibration standards and techniques to support new Army test equipment requirements; and, it provides for feasibility studies, market research, inventory analyses, bid sample testing and prototyping to support acquisition of calibration systems and general-purpose test and diagnostics equipment.

The Department of Defense (DoD) has designated the Integrated Family of Test Equipment (IFTE), comprised of the Maintenance Support Device (MSD) and the Next Generation Automatic Test System (NGATS), as the authorized Army standard for field and sustainment maintenance. The MSD provides at-system automatic test and diagnostic support and the NGATS consolidates off-system automatic test and diagnostic equipment requirements. The IFTE systems being developed under this PE provide electronic fault isolation, diagnostic and repair capabilities at all levels of maintenance and do it more cost effectively than system-specific testers. They provide state-of-the-art test and diagnostic capabilities, reducing costs and logistics footprints while providing the Warfighter fix-forward capability for current and future weapon systems in multi-domain operations. The systems are designed to support the Cross-Functional Teams (CFT) in the Army Futures Command (AFC) as they mature in accordance with the DoD Automatic Test Systems strategy. The MSD is employed by more than thirty military occupational specialties to perform field level maintenance on approximately 50 weapon systems, including Abrams, Bradley, Stryker, aviation platforms, missile systems, and the Army's wheeled vehicle fleet.

FY 2025 base funding continues incremental development of the Army's standard At-Platform Automatic Test System, MSD, which will enhance testing and diagnostic capability required by supported weapon systems. Funding supports tactical vehicle sustainment concepts, evaluates evolving weapon system diagnostic testing requirements, incorporates additional organic diagnostic software capabilities to troubleshoot weapon systems, and ensures data bus compatibility and readability

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army				Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development				
with commercial technology. It evaluates and incorporates cyber security enhancements into at-platform diagnostic hardware and software. Funding also provides for market research, feasibility assessment, and interaction with supported weapon systems to determine most effective methodology for diagnostic software to incorporate emerging At-Platform Predictive Logistics requirements. The FY 2025 funding will develop or significantly modify test equipment to satisfy modular force and homeland security support requirements that cannot be accommodated with test equipment currently available in the commercial marketplace such as RF and EO testing capability. It will also develop and test general-purpose test equipment and calibration standards to meet Army weapon system support requirements, and initiate development of enhanced diagnostic software and interfaces to support emerging maintenance concepts for Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, and Air and Missile Defense. The funding will provide prototype test and evaluation of field level calibration and repair support for the Radiation Detection System (RDS) in response to Operational Needs Statement ONS 17-22580. The project resolves significant radiation measurement accuracy gaps throughout the Department of the Army operational areas and CONUS, and it provides for analysis of courses of action to incorporate additional intrinsic calibration instruments and general-purpose test equipment to reduce the maintenance hierarchy, increase calibration intervals, extend lifecycle reliability, and increase supportability across generational changes in weapon systems and weapon support systems technology.						
B. Program Change Summary (\$ in Millions)		FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget		5.178	13.626	8.226	-	8.226
Current President's Budget		4.989	13.626	12.927	-	12.927
Total Adjustments		-0.189	0.000	4.701	-	4.701
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.189	-			
• Adjustments to Budget Years		-	-	4.701	-	4.701
Change Summary Explanation						
Increase to allow for critical NGATS software, hardware, and system performance updates to support Army 2030.						



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development				Project (Number/Name) L59 / Diagnost/Expert Sys			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
L59: Diagnost/Expert Sys	-	1.108	6.859	6.036	-	6.036	1.200	1.213	1.226	1.238	0.000	18.880
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This Project funds development of system enhancements for the Maintenance Support Device (MSD). The MSD is a general-purpose automatic test system (ATS) that provides test and diagnostic capabilities required to support current and future weapons and combat support systems across the Cross-Functional Teams (CFTs) in the Army Futures Command (AFC) and will facilitate retirement of aging, obsolete and non-cyber secure test equipment that imposes increasing logistics and operations and support cost burdens. The MSD is the Army's standard at-system tester and requires continuing technology insertions to support modernization of the supported weapon systems. This Project funds development efforts to insert the most current relevant technology into the next generation MSD, supports capability enhancement of at-platform test adapters, develops and standardizes capabilities to minimize or eliminate Army dependence on expensive proprietary software to support tactical vehicles, and maintains compatibility with emerging platform hardware bus technology and software interface requirements. The Department of Defense has identified the need for Intermittent Fault Detection (IFD) testers to aid in the identification of intermittent faults in difficult to troubleshoot platforms, mitigate No Evidence of Failures (NEOF) to reduce unit costs of unnecessary line replaceable unit (LRU) requisitions, and improve unit operational readiness in support of multi-domain operations, large-scale combat operations and the Indo-Pacific Command which will be funded in part by this Project. The test and diagnostic systems and procedures developed under this Project are essential for ensuring the operational readiness, accuracy and effectiveness of the Army's warfighting systems.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Maintenance Support Device (MSD) Technology Enhancements	1.108	1.179	1.176
<b>Description:</b> Modernizes the current MSD fleet by investigating and incorporating relevant technology into the next-generation MSD and supporting capability enhancement of the Wireless At-platform Test Set (WATS). Develops diagnostic capabilities to minimize or eliminate Army dependency on proprietary software to support tactical vehicles and maintain compatibility with emerging platform hardware bus technology and software interface requirements. Provides a data processing capability to enable Predictive Logistics on weapon systems.			
<b>FY 2024 Plans:</b> Evaluate market research findings for the Next Generation At-Platform Test System (Maintenance Support Device). Continue to incorporate greater range of supported weapons system diagnostic code fault detection into diagnostic software to minimize dependency on proprietary software, support tactical vehicle maintenance concepts, evaluate evolving weapon system diagnostic testing concepts and ensure data bus compatibility and readability. Continue to evaluate and incorporate cyber security enhancements into diagnostic software. Continue market research, feasibility assessment, and interaction with supported			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604746A / Automatic Test Equipment Development	<b>Project (Number/Name)</b> L59 / Diagnost/Expert Sys	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>
<p>weapon systems to determine most effective methodology for diagnostic software, data collection, and data display to incorporate emerging Predictive Logistics requirements.</p> <p><b>FY 2025 Plans:</b> Conduct early assessment of Next Generation At-Platform Test System (Maintenance Support Device) requirements and continue market research. Continue to incorporate greater range of supported weapons system diagnostic code fault detection into diagnostic software to minimize dependency on proprietary software, support tactical vehicle sustainment concepts, evaluate evolving weapon system diagnostic testing concepts and ensure data bus compatibility and readability. Continue to evaluate and incorporate cyber security enhancements into diagnostic software. Continue market research, feasibility assessment, and interaction with supported weapon systems to determine most effective methodology for Diagnostic Software and a Data Source Collector prototype to incorporate emerging At Platform Predictive Logistics requirements.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease reflects planned lifecycle of the effort.</p>			
<p><b>Title:</b> Intermittent Electronic Fault Detection</p> <p><b>Description:</b> Test and integration of commercial off the shelf (COTS) (or modified COTS) Intermittent Fault Detection (IFD) solutions and prototypes for evaluation. IFD Test Program Set (TPS) development to adapt and work with various Army platforms.</p> <p><b>FY 2024 Plans:</b> Test and integrate COTS (or modified COTS) IFD solutions and prototypes for evaluation and develop IFD TPSs to adapt and work with various Army platforms.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to this project being a Rapid Sustainment Improvement Process, it is intended to be a rapid acquisition of commercial of the shelf (COTS) or modified COTS items. The prototyping, testing, and selection of this developmental item will be completed in FY24.</p>		-	5.680
<p><b>Title:</b> NGATS Software Performance Enhancements</p> <p><b>FY 2025 Plans:</b> Develop and test modernization of A/B runtime system to allow for increased TPS functionality and performance for the User</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase to allow for critical system enhancements required to support Army 2030.</p>		-	1.000
<b>Title:</b> NGATS Interconnect Hardware Performance Enhancements		-	1.930

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development				Project (Number/Name) L59 / Diagnost/Expert Sys				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2023	FY 2024	FY 2025
FY 2025 Plans: Develop and test CCA-based ruggedized A/B and Avenger ICD replacements												
FY 2024 to FY 2025 Increase/Decrease Statement: Increase to allow for critical system enhancements required to support Army 2030.												
Title: NGATS System Enhancements										-	-	1.930
FY 2025 Plans: Develop and test replacement of Matrix Switch, single video solution, and cable ruggedization. System software/OS testing.												
FY 2024 to FY 2025 Increase/Decrease Statement: Increase to allow for critical system enhancements required to support Army 2030.												
Accomplishments/Planned Programs Subtotals										1.108	6.859	6.036
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost	
• MB4000: Integrated Family Of Test Equipment (IFTE)	76.834	36.149	48.329	-	48.329	12.027	12.035	12.019	12.139	0.000	209.532	
Remarks												
D. Acquisition Strategy												
This developmental Project consists of organic and contractual actions. When the necessary expertise and capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source via support agreements; otherwise, commercial contracts are used. Equipment required for developmental projects is obtained by contract from the commercial supplier.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development						Project (Number/Name) L59 / Diagnost/Expert Sys			
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Software Development/Verification/Validation	Various	Various, : Various	48.992	0.619	Jan 2023	3.355	Jan 2024	1.830	Jan 2025	-		1.830	0.000	54.796	-
Hardware/Support Items Development	Various	Various, : Various	79.383	0.324	Jan 2023	3.055	Jan 2024	3.500	Jan 2025	-		3.500	0.000	86.262	-
Subtotal			128.375	0.943		6.410		5.330		-		5.330	0.000	141.058	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Technical Support	Various	Various, : Various	52.613	0.115	Dec 2022	0.350	Jan 2024	0.600	Jan 2025	-		0.600	0.000	53.678	-
Other Direct	Various	Various, : Various	6.428	0.050	Dec 2022	0.099	Jan 2024	0.106	Jan 2025	-		0.106	0.000	6.683	-
Subtotal			59.041	0.165		0.449		0.706		-		0.706	0.000	60.361	N/A
			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			187.416	1.108		6.859		6.036		-		6.036	0.000	201.419	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army												Date: March 2024																
Appropriation/Budget Activity 2040 / 5								R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development								Project (Number/Name) L59 / Diagnost/Expert Sys												
Event Name	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
NGATS Full-Rate Production (Increment 1)																												
NGATS Testing (Increment 2)																												
NGATS Product Improvements - Netcentric																												
New Systems Test Capability																												
MSD Technology Enhancements																												
Intermittent Fault Detection Project																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development	Project (Number/Name) L59 / Diagnost/Expert Sys		
Schedule Details				
	Start		End	
Events	Quarter	Year	Quarter	Year
NGATS Testing (Increment 1)	1	2011	1	2012
Production for First Article	1	2015	2	2017
Training Materiel Release	4	2019	4	2019
Full Materiel Release	1	2021	1	2021
First Unit Equipped	1	2021	1	2021
Full Rate Production Decision Review	3	2021	3	2021
NGATS Testing (Increment 1 Follow-On DT/OT)	1	2016	3	2016
NGATS Full-Rate Production (Increment 1)	1	2025	4	2026
NGATS System Development and Demonstration (SDD) (Increment 2)	1	2016	4	2020
NGATS Testing (Increment 2)	1	2025	4	2026
FOT&E Completed (DT)	3	2018	3	2018
NGATS Development (EO Subsystem)	4	2010	4	2015
NGATS Development (RF Subsystem)	1	2016	4	2021
NGATS EO Integration	3	2016	4	2021
NGATS RF Integration	3	2017	1	2022
NGATS Testing (EO & RF Subsystems)	1	2016	2	2022
NGATS Product Improvements - Netcentric	1	2025	4	2026
New Systems Test Capability	1	2016	4	2023
MSD Technology Enhancements	1	2016	4	2029
Intermittent Fault Detection Project	1	2024	1	2025
<b>Note</b> Test program set (TPS) compatibility testing runs continually throughout the product development process.				

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development				Project (Number/Name) L65 / Test Equipment Development			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
L65: Test Equipment Development	-	3.881	6.767	6.891	-	6.891	3.355	3.390	3.427	3.461	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This Project supports Program Executive Office (PEO) and Army Futures Command (AFC) system support requirements with modernization of calibration instruments, techniques, and existing Army calibration systems by investigating technology insertions including automated and autonomous operations and other emerging technologies. Funding also supports development of initial prototypes to enable refinement of Operational Requirements and early user feedback to support future calibration systems and general-purpose test, measurement, and diagnostic equipment (TMDE) acquisitions. This Project develops calibration software and calibration capability for electro-optical, chemical, biological agent, radiation sourcing and detection systems, signal measurement from direct current to microwave ranges, physical and mechanical measurements such as torque, pressure, and temperature, and improvements in test and measurement performance envelopes. It provides for product improvements and development/evaluation of advanced technologies to increase reliability of calibration systems and general-purpose TMDE. The product improvements eliminate gaps in existing organic capabilities and ensure operational readiness and safety of Army weapons and combat support systems. These improvements employ reconfigurable open-electronics architecture and computer-based instrumentation where feasible and focus on reduced test equipment footprints to improve deployability and mobility in complex multi-domain areas of operation.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Calibration Sets (CALSETS) Software Environment and Calibration Procedures	0.600	0.367	0.785
<b>Description:</b> Continue development and testing of Army automated calibration environment (ACE) and develop calibration procedures. Develop and test an enterprise data system to capture management and test data for reporting, metrics, and dashboard to inform management and leader decisions in acquisition and operations. Test and evaluate automated calibration equipment software efforts in support of the Army risk management framework (RMF).			
<b>FY 2024 Plans:</b> Develop and test an enterprise data system that will integrate with ACE to capture management and test data for reporting metrics to inform management and leader decisions in acquisition and operations.			
<b>FY 2025 Plans:</b> Continue development of enterprise data system. Develop new ACE capabilities to include test data uploading, integrated training, and major procedure editor updates to improve user experience for automated calibration procedure authors.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Army		<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604746A / <i>Automatic Test Equipment Development</i>	<b>Project (Number/Name)</b> L65 / <i>Test Equipment Development</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
FY25 Increase to develop new ACE Capabilities.				
<b>Title:</b> Physical Instruments  <b>Description:</b> Research, develop, and test physical parameter calibration instrumentation to support areas such as intrinsic high reliability physical and dimensional standards. Modernize force and torque calibration capability. Develop radiological, chemical and biological agent detection systems, small arms gage calibration, pneumatic pressure systems, and temperature radiometer calibration related to target detection in the infrared spectrum.  <b>FY 2024 Plans:</b> Complete follow-up research and testing on the Bio-Sensor Calibrator to develop Photolithography on Silicon Wafer technology for organic calibration support of the BWA detector JBPDS. Develop a field deployable calibration suite to support calibration of high volume small arms and ammunition gages (SAAG) in theatre.  <b>FY 2025 Plans:</b> Develop and test a next generation automated torque calibration system that will integrate into the CALSETS tactical AN/GSM-421 platform. Develop and test a field deployable calibration suite to support calibration of high-volume small arms and ammunition gages (SAAG) in theatre. Develop and test a NIST on a Chip (NOAC) project for Intrinsic Air Data Standard Prototype.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Increase due to funding required for materials and hardware for next generation automated torque calibration system.		0.944	0.903	1.121
<b>Title:</b> Electrical Instruments  <b>Description:</b> Research, develop, and test electrical parameter calibration instrumentation to support modernization and replacement of aged and obsolete test instruments in areas such as intrinsic electrical standards, electrical transport standards and electro-optic standards. Develop calibration support for advanced capability in spectral and vector dense signal analysis in complex Multi-Domain areas of operation.  <b>FY 2024 Plans:</b> Continue development and testing of Army-wide alternating current voltage measurement modernization project. Continue development and testing of microwave power sensor calibration system, meeting Army Futures Command support requirements for Multi-Domain secured signal send and receive capability with integrated antenna functionality. Continue development and testing of the Army's s.primary traceable fiber-optic calibration station to support all army optical time-domain reflectometer test equipment.  <b>FY 2025 Plans:</b>		2.025	1.497	0.985



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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army							Date: March 2024				
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development				Project (Number/Name) L65 / Test Equipment Development				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2023	FY 2024	FY 2025		
Continue development and testing the NOAC concept of Army-wide alternating current voltage measurement modernization project. Continue development and testing of microwave power sensor calibration system, meeting Army Futures Command support requirements for Multi-Domain secured signal send and receive capability with integrated antenna functionality. Continue development and testing of the Army's primary traceable fiber-optic calibration station to support all army optical time-domain reflectometer test equipment.											
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to re-prioritization to CALSETS ACE Software development and the completion of microwave power sensor calibration system hardware.											
Title: Test Equipment Modernization (TEMOD)							0.312	4.000	4.000		
Description: Perform market research, bid sample testing and evaluation of commercial general-purpose electronic test equipment (GPETE), and develop performance specifications for TEMOD acquisitions.											
FY 2024 Plans: Develop the TEMOD Application Program Sets (APS) associated with the TS-4549 Radio Test Sets, which will allow the TS-4549 to support additional Army radios.											
FY 2025 Plans: Develop the TEMOD Application Program Sets (APS) associated with the TS-4549 Radio Test Sets, which will allow the TS-4549 to support additional Army radios, bid sample testing and evaluation of TS-485 Transmission Test Set Replacement, AN/PRM-36 Replacement, & AN/USM-459 Replacement.											
Accomplishments/Planned Programs Subtotals							3.881	6.767	6.891		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• G02510: Test Equipment Modernization (TEMOD)	30.134	32.623	46.128	-	46.128	52.998	53.031	52.886	53.414	0.000	321.214
Remarks											
D. Acquisition Strategy											
Projects focus on commercial and nondevelopmental item technologies. Department of Defense services provide programmatic, engineering expertise and capability for individual development projects; otherwise, commercial service contracts are used to obtain required capabilities. Equipment required for development projects											

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development	Project (Number/Name) L65 / Test Equipment Development
<p>is obtained from commercial suppliers. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government test and evaluation.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army												Date: March 2024			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development				Project (Number/Name) L65 / Test Equipment Development					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
CALSETS Software Environment and Calibration	Various	Various : Various	8.350	0.327	Mar 2023	0.186	Mar 2024	0.434	Mar 2025	-		0.434	Continuing	Continuing	-
Physical Instruments	Various	Various : Various	10.457	0.533	Feb 2023	0.507	Feb 2024	0.635	Feb 2025	-		0.635	Continuing	Continuing	-
Electrical Instruments	Various	Various : Various	11.518	1.182	Mar 2023	0.865	Mar 2024	0.555	Mar 2025	-		0.555	Continuing	Continuing	-
Test Equipment Modernization	Various	Various : Various	4.221	0.187	Mar 2023	2.400	Mar 2024	2.400	Mar 2025	-		2.400	Continuing	Continuing	-
Subtotal			34.546	2.229		3.958		4.024		-		4.024	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Contract Engineering	C/FFP	Various : Various	4.072	0.165	Feb 2023	0.168	Mar 2024	0.185	Mar 2025	-		0.185	Continuing	Continuing	-
Subtotal			4.072	0.165		0.168		0.185		-		0.185	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
CALSETS Software Environment and Calibration	Various	Various : Various	2.418	0.218	Mar 2023	0.125	Mar 2024	0.289	Mar 2025	-		0.289	Continuing	Continuing	-
Physical Instruments	Various	Various : Various	4.246	0.356	Feb 2023	0.339	Feb 2024	0.423	Feb 2025	-		0.423	Continuing	Continuing	-
Electrical Instruments	Various	Various1600 : Various	3.146	0.788	Mar 2023	0.577	Mar 2024	0.370	Mar 2025	-		0.370	Continuing	Continuing	-
Test Equipment Modernization	Various	Various : Various	3.046	0.125	Mar 2023	1.600	Mar 2024	1.600	Mar 2025	-		1.600	Continuing	Continuing	-
Subtotal			12.856	1.487		2.641		2.682		-		2.682	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development					Project (Number/Name) L65 / Test Equipment Development			
	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	51.474	3.881		6.767		6.891		-		6.891	Continuing	Continuing	N/A

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / Automatic Test Equipment Development	Project (Number/Name) L65 / Test Equipment Development	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AN/GSM-421(V2) User Testing	2	2007	4	2012
Physical Instruments	1	2016	4	2029
CALSETS Software Environment and Calibration	1	2016	4	2029
Electrical Instruments	1	2016	4	2029
Test Equipment Modernization	1	2016	4	2029