Department of Defense Fiscal Year (FY) 2025 Budget Estimates

March 2024



Army

Justification Book Volume 4b of 4

Research, Development, Test & Evaluation, Army

RDT&E – Volume III, Budget Activity 7

Army • Budget Estimates FY 2025 • RDT&E Program

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UNCLASSIFIED 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.

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.

Budget Activity	<u>OSDPE / Project</u>	<u>Project Title</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

New Start Programs:

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):

	-	
<u>Budget Activity</u>	<u>OSDPE / Project</u>	<u>Project Title</u>
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)

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

Line <u>No</u>	Program Element <u>Number</u>	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
	Basic Reseau	ch			616,802	497,455	513,917
6	0602002 a	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	0602145 A	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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Department of the Army FY 2025 President's Budget Exhibit R-1 FY 2025 President's Budget Total Obligational Authority (Dollars in Thousands)

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

Line	Program Element				FY 2023	FY 2024 PB Request with	FY 2025
No	Number	Item	Act	Sec -	Actuals	CR Adjustments	Request
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	9999999999	Classified Programs	02	U _			35,766
	Applied Rese	earch			1,801,455	948,358	934,058
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	υ	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		239,597
43	0603462A	Next Generation Combat Vehicle Advanced Technology	03	U	467,533	217,394	175,198
				-	10,000		1.0,100

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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)

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

Line <u>No</u>	Program Element <u>Number</u>	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
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	9999999999	Classified Programs	03	U			155,526
	Advanced Tec	chnology Development			2,525,592	1,455,986	1,386,437
51	0603305A	Army Missle 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	Ŭ	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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Department of the Army FY 2025 President's Budget Exhibit R-1 FY 2025 President's Budget Total Obligational Authority (Dollars in Thousands)

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

Line	Program Element				FY 2023	FY 2024 PB Request with	FY 2025
No	Number	Item	<u>Act</u>	Sec _	Actuals	CR Adjustments	Request
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		TUDIT
84	0604193A	Hypersonics	04	U	309,068		
85	0604182A	Biotechnology for Materials - Dem/Val	04	U	509,000	45,455	20,862
86	0604388A	Future Interceptor	04	U	7,880	8,040	8,058
00	0604403A	ruture interceptor	04	U	7,000	8,040	0,030
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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Department of the Army FY 2025 President's Budget Exhibit R-1 FY 2025 President's Budget Total Obligational Authority (Dollars in Thousands)

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

Line <u>No</u>	Program Element <u>Number</u>	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
91	0305251A	Cyberspace Operations Forces and Force Support	04	U	55,599		2,270
999	9999999999	Classified Programs	04	U		19,200	277,181
	Advanced Cor	nponent Development & Prototypes			4,576,716	4,420,315	2,343,901
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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Department of the Army FY 2025 President's Budget Exhibit R-1 FY 2025 President's Budget Total Obligational Authority

(Dollars in Thousands)

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

Line <u>No</u>	Program Element <u>Number</u>	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
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

Department of the Army FY 2025 President's Budget Exhibit R-1 FY 2025 President's Budget Total Obligational Authority

(Dollars in Thousands)

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

Line <u>No</u>	Program Element <u>Number</u>	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
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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Department of the Army FY 2025 President's Budget Exhibit R-1 FY 2025 President's Budget Total Obligational Authority

(Dollars in Thousands)

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

			2				
Line <u>No</u>	Program Element <u>Number</u>	The	Det	2 • •	FY 2023	FY 2024 PB Request with	FY 2025
NO	Number	Item	Act	Sec _	Actuals	CR Adjustments	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	υ	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	9999999999	Classified Programs	05	U _			83,136
	System Devel	opment & Demonstration			4,077,609	5,639,364	6,150,910
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)

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

Line <u>No</u>	Program Element <u>Number</u>	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	A999999A	Financing for Cancelled Account Adjustments	06	U	135		
	Management S	Jupport			2,169,388	1,624,585	1,707,443
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	2001
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)

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

Line <u>No</u>	Program Element <u>Number</u>	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)

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

Line <u>No</u>	Program Element <u>Number</u>	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments	FY 2025 Request
230	0708045A	End Item Industrial Preparedness Activities	07	υ	128,617	75,317	67,187
999	9999999999	Classified Programs	07	υ	6,664	8,786	32,518
	Operational	Systems Development		2	1,238,962	1,105,748	962,094
231	0608041A	Defensive CYBER - Software Prototype Development	08	υ	92,460	83,570	74,548
	Software And	i Digital Technology Pilot Programs			92,460	83,570	74,548
232	0901560A	Continuing Resolution Programs	20	υ		1,366,740	
	Undistribute	ad			1,366,740		
Total :	Research, Dev	relopment, Test and Evaluation, Army			17,098,984	17,142,121	14,073,308

*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 Contingengy Operations (OCO) funding.

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

Appropriation 2040: Research, Development, Test & Evaluation, Army

Line #	Budget Activity	Program Element Number	Program Element Title	Page
190	07	0603778A	MLRS Product Improvement Program	Volume 4b - 1
191	07	0605024A	Anti-Tamper Technology Support	Volume 4b - 16
192	07	0607101A	Combating Weapons of Mass Destruction (CWMD) Product Improvement	Volume 4b - 22
193	07	0607131A	Weapons and Munitions Product Improvement Programs	Volume 4b - 27
194	07	0607136A	Blackhawk Product Improvement Program	Volume 4b - 62
195	07	0607137A	Chinook Product Improvement Program	Volume 4b - 69
196	07	0607139A	Improved Turbine Engine Program	Volume 4b - 79
197	07	0607142A	Aviation Rocket System Product Improvement and Development	Volume 4b - 88
198	07	0607143A	Unmanned Aircraft System Universal Products	Volume 4b - 95
199	07	0607145A	Apache Future Development	Volume 4b - 104
200	07	0607148A	AN/TPQ-53 Counterfire Target Acquisition Radar System	Volume 4b - 111
201	07	0607150A	Intel Cyber Development	
202	07	0607312A	Army Operational Systems Development	Volume 4b - 129
203	07	0607313A	Electronic Warfare Development	Volume 4b - 130
204	07	0607315A	Enduring Turbine Engines and Power Systems	Volume 4b - 138
206	07	0607665A	Family of Biometrics	

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Line # **Budget Activity Program Element Number Program Element Title** Page 207 07 0607865A Patriot Product Improvement......Volume 4b - 152 Joint Automated Deep Operation Coordination System (JADOCS)...... Volume 4b - 171 208 07 0203728A Combat Vehicle Improvement Programs......Volume 4b - 190 209 07 0203735A 210 07 0203743A 155mm Self-Propelled Howitzer Improvements...... Volume 4b - 225 211 07 0203752A Aircraft Engine Component Improvement Program......Volume 4b - 231 212 07 0203758A 213 07 0203801A 07 214 0203802A Environmental Quality Technology - Operational System Dev......Volume 4b - 259 215 07 0205412A Guided Multiple-Launch Rocket System (GMLRS)..... Volume 4b - 265 216 0205778A 07 217 07 0208053A 220 0303028A 07 221 07 0303140A 222 07 0303141A 223 07 0303142A Integrated Broadcast Service (IBS)......Volume 4b - 351 226 07 0305179A 227 07 0305204A Tactical Unmanned Aerial Vehicles......Volume 4b - 358 228 07 0305206A Airborne Reconnaissance Systems......Volume 4b - 364

Appropriation 2040: Research, Development, Test & Evaluation, Army

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Appropriation 2040: Research, Development, Test & Evaluation, Army

Line #	Budget Activit	y Program Element Number	Program Element Title Page	
229	07	0305219A	MQ-1 Gray Eagle UAVVolume 4b - 376	
230	07	0708045A	End Item Industrial Preparedness Activities	

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Program Element Table of Contents (Alphabetically by Program Element Title)

Program Element Title	Program Element Number	Line #	BA Page
155mm Self-Propelled Howitzer Improvements	0203743A	210	07 Volume 4b - 225
AN/TPQ-53 Counterfire Target Acquisition Radar System	0607148A	200	07 Volume 4b - 111
Airborne Reconnaissance Systems	0305206A	228	07 Volume 4b - 364
Aircraft Engine Component Improvement Program	0203752A	211	07 Volume 4b - 231
Anti-Tamper Technology Support	0605024A	191	07 Volume 4b - 16
Apache Future Development	0607145A	199	07 Volume 4b - 104
Army Operational Systems Development	0607312A	202	07 Volume 4b - 129
Aviation Rocket System Product Improvement and Development	0607142A	197	07 Volume 4b - 88
Blackhawk Product Improvement Program	0607136A	194	07 Volume 4b - 62
Chinook Product Improvement Program	0607137A	195	07 Volume 4b - 69
Combat Vehicle Improvement Programs	0203735A	209	07 Volume 4b - 190
Combating Weapons of Mass Destruction (CWMD) Product Improvement	0607101A	192	07 Volume 4b - 22
Digitization	0203758A	212	07 Volume 4b - 237
Electronic Warfare Development	0607313A	203	07 Volume 4b - 130
End Item Industrial Preparedness Activities	0708045A	230	07 Volume 4b - 382
Enduring Turbine Engines and Power Systems	0607315A	204	07 Volume 4b - 138
Environmental Quality Technology - Operational System Dev	0205412A	215	07 Volume 4b - 259

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Program Element Title	Program Element Number	Line #	BA Page
Family of Biometrics	0607665A	206	07 Volume 4b - 145
Global Combat Support System	0303141A	222	07 Volume 4b - 319
Guided Multiple-Launch Rocket System (GMLRS)	0205778A	216	07 Volume 4b - 265
Improved Turbine Engine Program	0607139A	196	07 Volume 4b - 79
Information Systems Security Program	0303140A	221	07 Volume 4b - 298
Integrated Broadcast Service (IBS)	0305179A	226	07 Volume 4b - 351
Intel Cyber Development	0607150A	201	07 Volume 4b - 123
Joint Automated Deep Operation Coordination System (JADOCS)	0203728A	208	07 Volume 4b - 171
Joint Tactical Ground System	0208053A	217	07 Volume 4b - 283
MLRS Product Improvement Program	0603778A	190	07Volume 4b - 1
MQ-1 Gray Eagle UAV	0305219A	229	07 Volume 4b - 376
Missile/Air Defense Product Improvement Program	0203801A	213	07 Volume 4b - 244
Other Missile Product Improvement Programs	0203802A	214	07 Volume 4b - 251
Patriot Product Improvement	0607865A	207	07 Volume 4b - 152
SATCOM Ground Environment (SPACE)	0303142A	223	07 Volume 4b - 329
Security and Intelligence Activities	0303028A	220	07 Volume 4b - 292
Tactical Unmanned Aerial Vehicles	0305204A	227	07 Volume 4b - 358
Unmanned Aircraft System Universal Products	0607143A	198	07Volume 4b - 95
Weapons and Munitions Product Improvement Programs	0607131A	193	07Volume 4b - 27

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army										Date: March 2024		
					R-1 Program Element (Number/Name) PE 0603778A / MLRS Product Improvement 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
Total Program Element	-	17.790	14.465	14.188	-	14.188	9.356	9.724	9.832	9.930	0.000	85.285
093: Multi-Launch Rocket System (MLRS)	-	9.805	10.233	9.947	-	9.947	5.111	5.433	5.493	5.548	0.000	51.570
DX8: HIMARS Product Improvement Program	-	7.985	4.232	4.241	-	4.241	4.245	4.291	4.339	4.382	0.000	33.715

A. Mission Description and Budget Item Justification

Program element 0603778A supports development and testing of the Army's rocket launcher fleet, including the Multiple Launch Rocket System (MLRS) launcher and the High Mobility Artillery Rocket System (HIMARS) launcher. MLRS and HIMARS launchers support the Army's Long Range Precision Fires modernization effort. Updated launchers are required to fire current and future munitions such as the Precision Strike Missile (PrSM) and Extended Range (ER) Guided Multiple Launch Rocket System (GMLRS). Funding from both Projects 093 and DX8 contributes to common efforts between both launcher platforms such as Assured Positioning, Navigation and Timing (APNT) integration and rocket launcher software development effort by Combat Capabilities Development Command Aviation and Missile Center (CCDC AvMC). Supports the Army's goal to develop common solutions applicable to both MLRS and HIMARS launchers.

This funding line is a key enabler of the Army Modernization Priorities in support of the Multiple Launch Rocket System (MLRS) and the High Mobility Artillery Rocket System (HIMARS) programs. The MLRS and HIMARS programs are components of an integrated fires development effort that includes survivability, resiliency, and effectiveness improvements against advanced threats from near-peer adversaries. These efforts include 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.

Project 093. The M270A2 Multiple Launch Rocket System (MLRS) launcher is a full-spectrum, combat-proven, all-weather, 24/7 lethal and responsive, precision strike weapon system. MLRS launchers support the Army's Long Range Precision Fires modernization effort. MLRS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. MLRS is a tracked, indirect fire, rocket/missile launcher capable of firing two pods of precision rockets/missiles from the current Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) including the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS), and future MFOM to include the Extended Range GMLRS (ER-GMLRS), and the Precision Strike Missile (PrSM). These munitions are capable of engaging targets with precision at ranges up to and in excess of 400 kilometers. MLRS launchers support Integrated Fires and Multi-Domain Operations. Funds software development, training updates, Assured Positioning, Navigation and Timing (APNT) technology implementation, integration of satellite communications, integration of evolving cybersecurity requirements, and nonrecurring engineering for the MLRS launcher. Funds development related to maintaining capability associated with the current and evolving threat. Funds non-recurring engineering for system hardware and software modernization to the MLRS chassis, Launcher Loader Module, and Fire Control System. Funding from both Projects 093 and DX8 contributes to common efforts between both launcher platforms such as Assured Positioning, Navigation and Timing (APNT) integration and rocket launcher software development effort by Combat Capabilities Development Command Aviation and Missile Center (CCDC AvMC). Supports the Army's goal to develop common solutions applicable to both MLRS and HIMARS launchers.

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 7: Operational	PE 0603778A I MLRS Product Improvement Program	
Systems Development		

Project DX8. The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS launchers support the Army's Long Range Precision Fires modernization effort. HIMARS provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/ missile launcher capable of firing one pod of precision rockets/missiles from the current Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), including the Guided MLRS (GMLRS) and the Army Tactical Missile System (ATACMS), and future MFOM to include the Extended Range GMLRS (ER-GMLRS), and the Precision Strike Missile (PrSM). These munitions are capable of engaging targets with precision at ranges up to and in excess of 400 kilometers. HIMARS launchers support Integrated Fires and Multi-Domain Operations. Funds software development, training updates, Assured Positioning, Navigation and Timing (APNT) technology implementation, integration of satellite communications, integration of evolving cybersecurity requirements, and nonrecurring engineering for the HIMARS launcher. Funds development related to maintaining capability associated with the current and evolving threat. Funding from both Projects 093 and DX8 contributes to common efforts between both launcher platforms such as Assured Positioning, Navigation and Timing (APNT) integration and rocket launcher software development effort by Combat Capabilities Development Command Aviation and Missile Center (CCDC AvMC). Supports the Army's goal to develop common solutions applicable to both MLRS and HIMARS launchers.

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	18.463	14.465	14.159	-	14.159
Current President's Budget	17.790	14.465	14.188	-	14.188
Total Adjustments	-0.673	0.000	0.029	-	0.029
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	0.001	-			
SBIR/STTR Transfer	-0.674	-			
 Adjustments to Budget Years 	-	-	0.029	-	0.029

Change Summary Explanation

Increased funding due to revised economic assumptions.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name)ProjPE 0603778A I MLRS Product Improvement093Program093				oject (Number/Name) 3 I Multi-Launch Rocket System (MLRS)			
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	
093: Multi-Launch Rocket System (MLRS)	-	9.805	10.233	9.947	-	9.947	5.111	5.433	5.493	5.548	0.000	51.570	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

A. Mission Description and Budget Item Justification

Project 093. The M270A2 Multiple Launch Rocket System (MLRS) launcher is a full-spectrum, combat-proven, all-weather, 24/7 lethal and responsive, precision strike weapon system. MLRS launchers support the Army's Long Range Precision Fires modernization effort. MLRS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. MLRS is a tracked, indirect fire, rocket/missile launcher capable of firing two pods of precision rockets/missiles from the current Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) including the Guided Multiple Launch Rocket System (GMLRS) and the Army Tactical Missile System (ATACMS), and future MFOM to include the Extended Range GMLRS (ER-GMLRS), and the Precision Strike Missile (PrSM). These munitions are capable of engaging targets with precision at ranges up to and in excess of 400 kilometers. MLRS launchers support Integrated Fires and Multi-Domain Operations. Funds software development, training updates, Assured Positioning, Navigation and Timing (APNT) technology implementation, integration of satellite communications, integration of evolving cybersecurity requirements, and nonrecurring engineering for the MLRS launcher. Funds development related to maintaining capability associated with the current and evolving threat. Funds non-recurring engineering for system hardware and software modernization to the MLRS chassis, Launcher Loader Module, and Fire Control System. Funding from both Projects 093 and DX8 contributes to common efforts between both launcher platforms such as Assured Positioning, Navigation and Timing (APNT) integration and rocket launcher software development effort by Combat Capabilities Development Command Aviation and Missile Center (CCDC AvMC). Supports the Army's goal to develop common solutions applicable to both MLRS and HIMARS launchers.

Justification:

FY2025 Base funding in the amount of \$9.947 million for Project 093 continues tactical launcher software development, qualification, and materiel release to support the Fire Control System (FCS) electronic obsolescence mitigation hardware upgrade required to operate a MLRS launcher. The tactical software is a critical developmental item required to field additional launchers, maintain backward compatibility for current fleet sustainment, and is the first release of government developed software common to both the MLRS and HIMARS launcher. Continues integration of Assured Positioning, Navigation and Timing (APNT) capabilities, and integration of satellite communications, allowing MLRS to continue to effectively operate in near-peer and peer-threat environments.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: MLRS Product Improvement Program	9.805	10.233	9.947
Description: The MLRS Product Improvement Program provides the preservation of platform viability and readiness to accept technology insertion as capability enhancements are developed and to mitigate electronic obsolescence. Support efforts include: obsolescence mitigation and enhancements for the M993 carrier, Fire Control System, Launcher Loader Module and Enhanced Command and Control; development and updating the Fire Control System software to keep pace with changes to the munitions; and performing Command, Control, Communications, Computers and Intelligence (C4I)/interoperability and Information.			

Exhibit R-2A, RDT&E Project Justificat	tion: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7											
B. Accomplishments/Planned Program	ns (\$ in N	<u>Aillions)</u>						F	Y 2023	FY 2024	FY 2025
Assurance compliance certification and n the following: electronic obsolescence mi and hardware/software enhancements, ir	itigation,	Assured Pos	sitioning, Na	vigation and	Timing (AP						
<i>FY 2024 Plans:</i> Continue updates to currently fielded tack updates post Functional Qualification Tes System (FCS). Integrate and test the imp communications. Development, integration support an annual Multi-Domain Operation Cyber-Electromagnetic activities.	st (FQT) proved As on, and te	and Post Sy ssured Posit esting of Mu	stem Integra ioning, Navig Itiple Launch	ation Test (S gation and T Rocket Sys	IT) qualificat iming (APN stem solutior	tion to suppo F) capabilities ns, including	rt the Fire Co s and satellite test planning	ntrol to			
FY 2025 Plans: Continue updates to currently fielded tact updates post Functional Qualification Tes System (FCS). Integrate and test the imp communications, to include M-Code and Development, integration, and testing of PEO MS-led Multi-Domain Operations te Electromagnetic activities.	st (FQT) proved As anti-jam Multiple I	and Post Sy ssured Posit capabilities. Launch Rocl	stem Integra ioning, Navig Update soft ket System s	ation Test (S gation and T ware to integ solutions, inc	IT) qualificat iming (APN ⁻ grate evolvir luding test p	tion to suppo () capabilities () cybersecu () anning to su	rt the Fire Co s and satellite rity requireme upport an ann	ntrol ents. ual			
FY 2024 to FY 2025 Increase/Decrease Decreased funding due to planned life cy											
				Accon	nplishment	s/Planned P	rograms Sul	ototals	9.805	10.233	9.947
C. Other Program Funding Summary (S	\$ in Milli	<u>ons)</u>	FY 2025	FY 2025	FY 2025					Cost To	
	Y 2023 18.359	<u>FY 2024</u> 168.198	<u>Base</u> 185.839	000	<u>Total</u> 185.839	<u>FY 2026</u> 244.227	<u>FY 2027</u> 288.714	<u>FY 2028</u> 289.244			Total Cost Continuing
Remarks C67500 is Budget Line Item Number (BL							200.714	203.244	302.303	Continuing	Continuing
D. Acquisition Strategy The MLRS Product Improvement Progra to, updates to address emerging threats	•	•		•							
PE 0603778A: <i>MLRS Product Improveme</i> Army	ent Progra	am		UNCLAS Page 4			R-1 Line #	190		Vo	lume 4b - 4

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army	Date: March 2024						
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name)Project (Number/Name)PE 0603778A I MLRS Product Improvement093 I Multi-Launch Rocket System (MLRS)Program093 I Multi-Launch Rocket System (MLRS)						
maintain compatibility and operational viability against near-peer adversaries. survivability, resiliency, and effectiveness improvements against advanced three	tainability costs. Update software and hardware for communications and munitions to The MLRS program is a component of an integrated fires development effort that includes eats from near-peer adversaries. This effort includes integration with an evolving common al test and evaluation to provide data to support program assessments and progress						

Appropriation/Budg 2040 / 7	•	ost Analysis: PB 2		R-1 Program Element (Number/Name)ProPE 0603778A I MLRS Product Improvement093Program093						Project (Number/Name) 093 / Multi-Launch Rocket System					
Product Developme	ent (\$ in Mi	llions)	ſ	FY 2023 FY 2024 FY 2025 FY 202 FY 2023 FY 2024 Base 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
Organic Software Development	MIPR	CCDC AvMC : Redstone Arsenal, AL	21.606	4.013	Nov 2022	4.653	Nov 2023	4.297	Nov 2024	-		4.297	Continuing	Continuing	Continuir
Assured Positioning, Navigation and Timing (APNT) Integration	WR	LMMFC : Grand Prairie, TX	1.907	5.395	Nov 2022	5.175	Nov 2023	5.047	Nov 2024	-		5.047	Continuing	Continuing	Continuir
		Subtotal	23.513	9.408	,	9.828		9.344		-		9.344	Continuing	Continuing	N//
Organic (government dev Assured Positioning, Navi communications.								m, Anti-Spo	ofing capab	ilities, and i	ntegration	of satellite	1		
Organic (government dev Assured Positioning, Navi communications.	igation and Ti	ming (APNT) includes a		h as Globa) System (G			oofing capab		ntegration				
Organic (government dev Assured Positioning, Navi communications.	igation and Ti	ming (APNT) includes a		h as Globa	al Positioning) System (G	SPS) Anti-Ja	m, Anti-Spo FY 2	oofing capab	ilities, and i	ntegration	of satellite	Cost To Complete	Total Cost	Value of
Organic (government dev Assured Positioning, Navi communications. Test and Evaluation Cost Category Item	igation and Ti (\$ in Milli Contract Method	ming (APNT) includes a ons) Performing	Prior	h as Globa FY 2 Cost	al Positioning 2023 Award	System (G FY 2 Cost	SPS) Anti-Ja 2024 Award	m, Anti-Spc FY 2 Ba Cost	oofing capab 2025 se Award	ilities, and i FY 2 OC	ntegration 025 :O Award	of satellite FY 2025 Total Cost	1 1	Cost	Target Value of Contract
Organic (government dev Assured Positioning, Navi communications. Test and Evaluation Cost Category Item	igation and Ti (\$ in Milli Contract Method & Type	ming (APNT) includes a ONS) Performing Activity & Location Ft Cavazos, TX, ATEC, APG, MD, WSMR, RTC, : RSA:	Prior Years	h as Globa FY 2 Cost	al Positioning 2023 Award Date Nov 2022	System (G FY 2 Cost	2024 Award Date Nov 2023	m, Anti-Spc FY 2 Ba Cost	2025 Se Award Date	ilities, and i FY 2 OC	ntegration 025 :O Award	of satellite FY 2025 Total Cost 0.603	Complete	Cost Continuing	Value of Contrac
Organic (government dev Assured Positioning, Navi communications. Test and Evaluation Cost Category Item Test Support	igation and Ti (\$ in Milli Contract Method & Type MIPR	ming (APNT) includes a ONS) Performing Activity & Location Ft Cavazos, TX, ATEC, APG, MD, WSMR, RTC, : RSA: Various Subtotal	Prior Years 1.791 1.791 System as Prior	h as Globa FY 2 Cost 0.397 0.397 well as the	al Positioning 2023 Award Date Nov 2022	System (G FY 2 Cost 0.405 0.405 n and testin	2024 Award Date Nov 2023	m, Anti-Spc FY 2 Ba Cost 0.603 0.603 ured Positic	oofing capab	ilities, and i FY 2 OC Cost - ation and T FY 2	ntegration 025 CO Award Date	of satellite FY 2025 Total Cost 0.603 0.603	Complete Continuing Continuing	Cost Continuing Continuing Total	Value of Contrac Continuir N/ Target Value of
Assured Positioning, Navi communications. Test and Evaluation Cost Category Item Test Support Remarks Test support includes soft	igation and Ti (\$ in Milli Contract Method & Type MIPR	ming (APNT) includes a ONS) Performing Activity & Location Ft Cavazos, TX, ATEC, APG, MD, WSMR, RTC, : RSA: Various Subtotal	Prior Years 1.791 1.791 System as	h as Globa FY 2 Cost 0.397 0.397 well as the	al Positioning 2023 Award Date Nov 2022 e qualification 2023	System (G FY 2 Cost 0.405 0.405 n and testin	2024 Award Date Nov 2023	m, Anti-Spc FY 2 Ba Cost 0.603 0.603 ured Positic	oofing capab	ilities, and i FY 2 OC Cost - - ation and T	ntegration 025 CO Award Date	FY 2025 Total Cost 0.603 0.603	Complete Continuing Continuing	Cost Continuing Continuing Total Cost	Value o Contrac Continui N Target Value o Contrac

Exhibit R-3, RDT&E Project Cost Analysis: F	B 2025 Anny					Date	: March 20	24	
Appropriation/Budget Activity 040 / 7			R-1 Program El PE 0603778A / Program	t System (MLRS					
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2 OC		Cost To Complete	Total Cost	Target Value o Contrac
Acronyms: APNT: Assured Positioning, Navigation and Timing CCDC: Combat Capabilities Development Command; AVMC: Aviation and Missile Center; ATEC - US Army Test and Evaluation Command; APG MD - Aberdeen Proving Ground, Maryland; WSMR - White Sands Missile Range; RTC RSA - Redstone Test Center, Redstone Arsenal; STORM - Strategic and Operational Rockets and Missiles									

Exhibit R-4, RDT&E Schedule Profile: PB 20	le: PB 2025 Army													Date: March 2024												
propriation/Budget Activity 40 / 7						R-1 Program Element (Number/Name)ProjectPE 0603778A / MLRS Product Improvement093 / MLProgram093 / ML								(Number/Name) ulti-Launch Rocket System (MLRS)						S)						
Event Name	nt Name FY 2023 FY							FY	2025			FY	2026		F	FY 2027 FY 2028					\top	FY 2029				
		1 2	3 4	1	2	3 4	1	2	3	4	1	2	3	4	1	2	3 4	ļ	1	2	3	4	1	2	3	4
Software Development & Support	So	ftware De	evelopment																			-				
GPS Anti-Jam/Anti-Spoof Design & Development	GF	PS Anti-Ja	m/Anti-Spoo	f Desig	n & Dev	elopment																				
APNT Integration			APNT Integ	ration																						
APNT Test						APN	Test																			
APNT Production Decision											1 T. Produ	uction	Decisio													
													Decisio													

whibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024		
opropriation/Budget Activity 40 / 7		Element (Number I MLRS Product In	Project (Number/Name) t 093 I Multi-Launch Rocket System (M				
	Schedule Details	5					
		Sta	rt	Er	ld		
Events		Quarter	Year	Quarter	Year		
Software Development & Support		1	2018	4	2029		
Functional Configuration Audit		2	2022	2	2022		
GPS Anti-Jam/Anti-Spoof Design & Development		1	2021	2	2023		
APNT Integration		3	2023	2	2025		
APNT Test		4	2024	4	2025		
			2026		2026		

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2025 A	vrmy							Date: Mare	ch 2024	
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name)Project (Number/Name)PE 0603778A I MLRS Product ImprovementDX8 I HIMARS ProductProgramProgram										ent
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2029	Cost To Complete	Total Cost		
DX8: HIMARS Product Improvement Program	-	7.985	4.232	4.241	-	4.241	4.245	4.291	4.339	4.382	0.000	33.715
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project DX8. The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS launchers support the Army's Long Range Precision Fires modernization effort. HIMARS provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/ missile launcher capable of firing one pod of precision rockets/missiles from the current Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), including the Guided MLRS (GMLRS) and the Army Tactical Missile System (ATACMS), and future MFOM to include the Extended Range GMLRS (ER-GMLRS), and the Precision Strike Missile (PrSM). These munitions are capable of engaging targets with precision at ranges up to and in excess of 400 kilometers. HIMARS launchers support Integrated Fires and Multi-Domain Operations. Funds software development, training updates, Assured Positioning, Navigation and Timing (APNT) technology implementation, integration of satellite communications, integration of evolving cybersecurity requirements, and nonrecurring engineering for the HIMARS launcher. Funds development related to maintaining capability associated with the current and evolving threat. Funding from both Projects 093 and DX8 contributes to common efforts between both launcher platforms such as Assured Positioning, Navigation and Timing (APNT) integration and rocket launcher software development effort by Combat Capabilities Development Command Aviation and Missile Center (CCDC AvMC). Supports the Army's goal to develop common solutions applicable to both MLRS and HIMARS launchers.

FY 2025 Base funding in the amount of \$4.241 million for Project DX8 supports tactical launcher software development and qualification to support the Fire Control System (FCS) electronic obsolescence mitigation hardware upgrade required to operate a HIMARS launcher. The tactical software is a critical developmental item required to field additional launchers, maintain backward compatibility for current fleet sustainment, and is the first release of government developed software common to both the MLRS and HIMARS launcher.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: MLRS Production Improvement Program (PIP)-HIMARS PIP	7.985	4.232	4.241
Description: The HIMARS Product Improvement Program provides the preservation of platform viability and readiness to accept technology insertion. As capability enhancements are developed, technology is inserted to mitigate obsolescence. Support efforts include: obsolescence mitigation and enhancements for the Family of Medium Tactical Vehicles (FMTV) Carrier, Fire Control System, Launcher Loader Module and Enhanced Command and Control; development and updating the Fire Control System software to keep pace with changes to the munitions; and performing Command, Control, Communications, Computers and Intelligence (C4I)/interoperability and Information Assurance compliance certification and network interoperability testing. Perform technical assessments and concept studies for the following: electronic obsolescence mitigation and redesign to keep pace with			

Exhibit R-2A, RDT&E Project Justi	fication: PB	2025 Army							Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7					03778A I MI	nent (Numb .RS Product				lame) duct Improve	ment
B. Accomplishments/Planned Prog	grams (\$ in N	<u>Millions)</u>						Γ	FY 2023	FY 2024	FY 2025
the evolving threat, Assured Position enhancements, improving operation						ve and hardw	vare/software	e			
FY 2024 Plans: Continues tactical launcher software electronic obsolescence mitigation h						Fire Control S	System (FCS	5)			
FY 2025 Plans: Continue tactical launcher software of electronic obsolescence mitigation h Assured Positioning, Navigation and jam capabilities for CFCS-equipped equipped HIMARS launchers.	ardware upgr Timing (APN	rade required IT) capabiliti	d to operate es and satel	a HIMARS I lite commun	auncher. Inti ications, to i	egrate and t	est the impro	oved			
FY 2024 to FY 2025 Increase/Decre FY 2024 to FY 2025 funding increase			ise due to eo	conomic ass	umptions.						
					•	s/Planned P	rograms Su	btotals	7.985	4.232	4.24
C. Other Program Funding Summa	ary (\$ in Milli	ons)									
	-	-	FY 2025	FY 2025	FY 2025					Cost To	-
<u>Line Item</u> • C67501: HIMARS Modifications • C02901: High Mobility Artillery Rocket System (HIMARS)	<u>FY 2023</u> 20.468 672.129	<u>FY 2024</u> 76.266 179.230	<u>Base</u> 49.581 79.387	<u>000</u> - -	<u>Total</u> 49.581 79.387	<u>FY 2026</u> 54.173 80.676	<u>FY 2027</u> 54.216 93.431	<u>FY 202</u> 54.27 104.75	2 54.81	5 Continuing	Total Cos Continuin 1,319.52
Remarks											

Remarks

C67501 (Budget Line Item Number 28) and C02091 (Budget Line Item Number 19) are funded in the Missiles Procurement Army appropriation.

D. Acquisition Strategy

The M142 HIMARS Product Improvement Program performs development efforts required to address emerging requirements. Emerging requirements include, but are not limited to, updates to address emerging threats of the launcher organic version 8.x and 9.x software, reacting to system changes driven by policy and emerging requirements, and maintaining architectural compatibility with other Army ground-based systems reducing sustainability costs. Update software and hardware for communications and munitions to maintain compatibility and operational viability against near-peer adversaries. The HIMARS program 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.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20)24	
Appropriation/Budg 2040 / 7								•	umber/Na oduct Impr	,	-			provemer	nt
Product Developme	ent (\$ in M	illions)	ſ	FY	2023	FY 2	2024		2025 Ise	FY 2 OC		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
Organic Software Development	MIPR	CCDC AvMC : Redstone Arsenal, AL	29.928	3.877	Apr 2023	2.320	Apr 2024	3.105	Apr 2025	-		3.105	Continuing	Continuing	Continuing
APNT Integration	WR	LMMFC : Grand Prairie, TX	1.907	3.711	Nov 2022	1.507	Nov 2023	0.624	Nov 2024	-		0.624	Continuing	Continuing	Continuing
		Subtotal	31.835	7.588		3.827		3.729		-		3.729	Continuing	Continuing	N/A

Remarks

Organic (government developed, maintained, and owned) software development includes additional research and development related to Fire Control System electronic obsolescence.

Assured Positioning, Navigation and Timing (APNT) activities includes integration of Global Positioning System (GPS) Anti-Jam, Anti-Spoofing capabilities, and integration of satellite communications.

Test and Evaluation	(\$ in Milli	ions)		FY 2	2023	FY 2	2024		2025 Ise	FY 2 OC	2025 CO	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	MIPR	Ft Cavazos, TX, ATEC, APG, MD, WSMR, RTC, RSA : Various	5.303	0.397	Nov 2022	0.405	Nov 2023	0.512	Nov 2024	-		0.512	Continuing	Continuing	Continuing
		Subtotal	5.303	0.397		0.405		0.512		-		0.512	Continuing	Continuing	N/A

Remarks

Test support includes software qualification for the Fire Control System as well as the qualification and testing of the Assured Positioning, Navigation and Timing (APNT) solution.

	Prior Years	FY 2	023 FY 2		2025 ase	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.138	7.985	4.232	4.241		-	4.241	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 20	25 Army					Date	March 20	24	
Appropriation/Budget Activity 2040 / 7				lement (Number/N MLRS Product Imp				proveme	ent
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value o Contrac
Remarks Acronyms: APG MD - Aberdeen Proving Ground, Maryland APNT - Assured Positioning, Navigation and Timing ATEC - US Army Test and Evaluation Command AvMC - Aviation and Missile Center CCDC - Combat Capabilities Development Command DIGAR - Digital GPS Anti-Jam (AJ) Receiver RTC RSA - Redstone Test Center, Redstone Arsenal, Alabama STORM - Strategic and Operational Rockets and Missiles WSMR - White Sands Missile Range									

Exhibit R-4, RDT&E Schedule Profile: Pl	B 2025 Army					Date: March 20	24
Appropriation/Budget Activity 2040 / 7			603778A I MLRS	nt (Number/Name) S Product Improven		lumber/Name) IARS Product Imp	provement
Event Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Software Development & Support		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
APNT Design & Development	Software Development						
APNT Integration	APNT Integration	nı					
APNT Test	APNT Test						
APNT Production Decision			AF	NT Production Decision			

chibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	ch 2024		
opropriation/Budget Activity 40 / 7		R-1 Program Element (Number/Name)Project (Number/Name)PE 0603778A / MLRS Product ImprovementDX8 / HIMAProgramProgram					
	Schedule Detail						
		Sta	art	E E	nd		
					nd		
Events		Quarter	Year	Quarter	Year		
Events Software Development & Support					1		
			Year	Quarter	Year		
Software Development & Support			Year 2019	Quarter 4	Year 2029		
Software Development & Support APNT Design & Development			Year 2019 2021	Quarter 4	Year 2029 2023		

Exhibit R-2, RDT&E Budget Iten	n Justificat	i on: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	IBA 7: Ope		-		t (Number / amper Tech	,	port			
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	-	9.028	7.472	7.489	-	7.489	7.497	7.577	7.659	7.735	Continuing	Continuing
FB1: Anti-Tamper Technology Support	-	9.028	7.472	7.489	-	7.489	7.497	7.577	7.659	7.735	Continuing	Continuing

A. Mission Description and Budget Item Justification

Anti-Tamper (AT) Technology Support. The Protective Technologies (PT) organization is the Army's Technical Center for the DoD AT program, which is focused on preventing exploitation reverse engineering (RE) of U.S. systems lost or captured on the battlefield or sold via Foreign Military Sales (FMS) or Direct Commercial Sales (DCS). In support of this mission, PT's classified efforts are focused on AT Validation and Verification (V&V) activities with Army programs, AT/RE Lab facilities and equipment and AT/RE Lab assessments.

Work in this Project is performed by the United States Army Futures Command (AFC), U.S. Army Combat Capabilities Development Command (DEVCOM), Aviation & Missile Center (AvMC), Redstone Arsenal, AL.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	9.284	7.472	7.474	-	7.474
Current President's Budget	9.028	7.472	7.489	-	7.489
Total Adjustments	-0.256	0.000	0.015	-	0.015
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	0.001	-			
SBIR/STTR Transfer	-0.257	-			
 Adjustments to Budget Years 	-	-	0.015	-	0.015

Change Summary Explanation

Minor increase in FY25 funding from the previous PB to the current PB due to revised economic assumptions.

Exhibit R-2A, RDT&E Project J	ustification	: PB 2025 A	rmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					-		t (Number/ amper Tech		Project (N FB1 / Anti-		ne) hnology Su	pport
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
FB1: Anti-Tamper Technology Support	-	9.028	7.472	7.489	-	7.489	7.497	7.577	7.659	7.735	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Anti-Tamper (AT) Technology Support. The Protective Technologies (PT) organization is the Army's Technical Center for the DoD AT program, which is focused on preventing exploitation/reverse engineering (RE) of U.S. systems lost or captured on the battlefield or sold via Foreign Military Sales (FMS) or Direct Commercial Sales (DCS). In support of this mission, PT's classified efforts are focused on AT Validation and Verification (V&V) activities with Army programs, AT/RE Lab facilities and equipment and AT/RE Lab assessments.

Work in this Project is performed by the United States Army Futures Command (AFC), U.S. Army Combat Capabilities Development Command (DEVCOM), Aviation & Missile Center (AvMC), Redstone Arsenal, AL.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Anti-Tamper (AT) Technology Support	9.028	7.472	7.489
Description: AT is a DoD program that encompasses the systems engineering activities intended to prevent and/or delay exploitation of critical technologies in U.S. weapon systems. These activities involve the entire life-cycle of systems acquisition, including research, development, implementation, and testing of AT measures.			
<i>FY 2024 Plans:</i> Will continue to build and maintain the Protective Technologies (PT) core team of SMEs available for this ongoing mission to support the development and fielding of Army programs through the technical evaluation of their AT architectures. In support of that primary mission, PT must and will continue to build and maintain state-of-the-art RE capabilities to facilitate technical assessments to evaluate the vulnerabilities of micro-electronic components used in the electronic designs of Army weapons systems with CPI that requires protection.			
<i>FY 2025 Plans:</i> Will continue to build and maintain the Protective Technologies (PT) core team of SMEs available for this ongoing mission to support the development and fielding of Army programs through the technical evaluation of their AT architectures. In support of that primary mission, PT must and will continue to build and maintain state-of-the-art RE capabilities to facilitate technical assessments to evaluate the vulnerabilities of micro-electronic components used in the electronic designs of Army weapons systems with CPI that requires protection.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			larch 2024	
Appropriation/Budget Activity 2040 / 7		iject (Number/ľ 1 <i>I Anti-Tamper</i>		upport
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Funding increase is an economic adjustment.				
	Accomplishments/Planned Programs Subtota	ls 9.028	7.472	7.48
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
N/A				
D. Acquisition Strategy				
N/A				

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Arm	y		Date: March 2024									
Appropriation/Budg 2040 / 7	et Activity	/				R-1 Program Element (Number/Name)Project (Number/Name)PE 0605024A / Anti-Tamper Technology SFB1 / Anti-TamupportFB1 / Anti-Tam						•		ogy Supp	oort
Product Developme	ent (\$ in M	illions)	ſ	FY 2023		FY 2024		FY 2025 Base		FY 2					
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
AT V&V Activities	Various	Redstone Arsenal & Prime Contract locations : Redstone Arsenal	11.241	3.295	Oct 2022	2.716	Oct 2023	2.717	Oct 2024	-		2.717	0.000	19.969	-
		Subtotal	11.241	3.295		2.716		2.717		-		2.717	0.000	19.969	N/A
Support (\$ in Millions)			FY 2023		FY 2024		FY 2025 Base			2025 FY 2025 CO 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
AT/RE Lab Facilities & Equipment	Various	Redstone Arsenal, AL : Redstone Arsenal, AL	11.545	3.425	Oct 2022	2.822	Oct 2023	2.838	Oct 2024	-		2.838	0.000	20.630	-
		Subtotal	11.545	3.425		2.822		2.838		-		2.838	0.000	20.630	N/A
Test and Evaluation	(\$ in Milli	ions)	ſ	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
AT/RE Laboratory Assessments	Various	Redstone Arsenal, AL : Redstone Arsenal, AL	6.493	2.308	Oct 2022	1.934	Oct 2023	1.934	Oct 2024	-		1.934	0.000	12.669	-
		Subtotal	6.493	2.308		1.934		1.934		-		1.934	0.000	12.669	N/A
			Prior Years	FY 2	2023		2024		2025 ase		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals 29.279				9.028		7.472		7.489		-		7.489	0.000	53.268	N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army						Date: March 20	24
Appropriation/Budget Activity 2040 / 7		F	R-1 Program Elemer PE 0605024A / Anti-7 upport			Number/Name) i-Tamper Technology Support		
Event Name	FY 2023	FY 202		FY 2026		2027	FY 2028	FY 2029
AT V&V Activities	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
AT/RE Lab Facilities and Equipment								
AT/RE Laboratory Assessments								

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024	
propriation/Budget Activity 40 / 7	R-1 Program El PE 0605024A / A upport			Project (Number/Nam FB1 <i>I Anti-Tamper Tecl</i>	,	
	Schedule Details					
		Sta	art	Er	End	
Events		Quarter	Year	Quarter	Year	
AT V&V Activities		1	2017	4	2029	
AT/RE Lab Facilities and Equipment		1	2017	4	2029	
AT/RE Laboratory Assessments		1	2017	4	2029	
AT Congressional Add - New Novel Tech Solutions		2	2019	4	2019	

Exhibit R-2, RDT&E Budget Iter		I					Date: Mar	ch 2024					
Appropriation/Budget Activity 2040: Research, Development, To Systems Development	est & Evalua	tion, Army	I BA 7: Ope	rational	R-1 Program Element (Number/Name) PE 0607101A <i>I Combating Weapons of Mass Destruction (CWMD) Product Impro</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	
Total Program Element	0.000	0.000	0.000	0.271	0.000	0.271	0.000	0.000	0.000	0.000	0.000	0.2	
DJ7: Radiological Detection System Development	-	-	-	0.271	-	0.271	-	-	-	-	0.000	0.2	
Combating Weapons of Mass De A. Mission Description and Buc The Combating Weapons of Mas	lget Item Ju	ustification					ence manag	ement effo	rts for overa	all chemical	, radiological,	and	
A. Mission Description and Bud The Combating Weapons of Mas biological detection and protectio FY2025 Base amount of \$0.271	Iget Item Ju is Destruction in for the wa million supp	ustification on Product I rfighter for orts RDS.	mprovemen multiple prog	t (CWMD) grams of re	line support cord, includ	s obsolesce ing the Rac	liological De	etection Sys	item (RDS)		-		
A. Mission Description and Bud The Combating Weapons of Mas biological detection and protectio FY2025 Base amount of \$0.271 B. Program Change Summary (iget Item Ju s Destruction of for the wa million support \$ in Million	ustification on Product I rfighter for orts RDS.	mprovemen multiple prog	it (CWMD) grams of re FY 2023	line support cord, includ FY 202	s obsolesce ing the Rac <u>4 </u>	diological De	etection Sys			FY 2025 Tot	<u>al</u>	
A. Mission Description and Bug The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budg	Iget Item Ju is Destruction in for the wa million support for Millions get	ustification on Product I rfighter for orts RDS.	mprovemen multiple prog	it (CWMD) grams of re <u>FY 2023</u> 0.000	line support cord, includ <u>FY 202</u> 0.00	s obsolesce ing the Rac <u>4 </u>	diological De <u>Y 2025 Bas</u> 0.00	etection Sys	item (RDS)		FY 2025 Tot 0.00	<u>al</u>)0	
A. Mission Description and Bug The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge	Iget Item Ju is Destruction in for the wa million support for Millions get	ustification on Product I rfighter for orts RDS.	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	
 A. Mission Description and Bug The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments 	Iget Item Ju is Destruction in for the wa million support \$ in Million get et	ustification on Product I rfighter for orts RDS. s)	mprovemen multiple prog	it (CWMD) grams of re <u>FY 2023</u> 0.000	line support cord, includ <u>FY 202</u> 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De <u>Y 2025 Bas</u> 0.00	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00	<u>al</u>)0 '1	
A. Mission Description and Bug The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments • Congressional C	Iget Item Ju is Destruction in for the wa million support \$ in Million get et General Red	ustification on Product I rfighter for orts RDS. s) uctions	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	
A. Mission Description and Bud The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments • Congressional C • Congressional D	Iget Item Ju is Destruction in for the wa million support \$ in Million get et General Red Directed Red	ustification on Product I rfighter for orts RDS. s) uctions	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	
A. Mission Description and Bud The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments • Congressional C • Congressional D • Congressional F	Iget Item Ju is Destruction in for the wa million support \$ in Millions get et General Red Directed Red Rescissions	ustification on Product I rfighter for orts RDS. s) uctions	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	
A. Mission Description and Bud The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments • Congressional C • Congressional F • Congressional F • Congressional A	Aget Item Ju is Destruction on for the wa million support \$ in Millions get et General Red Directed Red Rescissions	ustification on Product I rfighter for orts RDS. s) uctions luctions	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	
A. Mission Description and Bud The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments • Congressional C • Congressional D • Congressional F	Aget Item Ju is Destruction on for the war million support \$ in Millions get et General Red Directed Red Rescissions adds Directed Tran	ustification on Product I rfighter for orts RDS. s) uctions luctions	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	
A. Mission Description and Bug The Combating Weapons of Mas biological detection and protection FY2025 Base amount of \$0.271 B. Program Change Summary (Previous President's Budge Current President's Budge Total Adjustments • Congressional D • Congressional D • Congressional D • Congressional D • Congressional D	Aget Item Ju is Destruction on for the wa million support \$ in Millions get et General Red Directed Red Rescissions adds Directed Trans	ustification on Product I rfighter for orts RDS. s) uctions luctions	mprovemen multiple prog	t (CWMD) grams of re <u>FY 2023</u> 0.000 0.000	line support cord, includ <u>FY 202</u> 0.00 0.00	s obsolesce ing the Rac <u>4 E</u> 0 0	diological De TY 2025 Bas 0.00 0.2	etection Sys se 00 71	item (RDS)		FY 2025 Tot 0.00 0.27	<u>al</u>)0 '1	

Increased funding to support radio interoperability and Radiological Detection System (RDS) requirements.

Exhibit R-2A, RDT&E Project J	lustification	: PB 2025 A	Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7					PE 060710	am Elemen 01A / Comb ion (CWMD	ating Weap	ons of Mas			me) etection Syst	tem
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
DJ7: Radiological Detection System Development	-	-	-	0.271	-	0.271	-	-	-	-	0.000	0.271
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
biological detection and protection The Radiological Detection Systemeters. Further development of FY25 funding will resource man	tem (RDS) p the RDS is i	rovides Dol required to o	D's first joint complete ac	t Radiologic	al and Nucl as meeting	key perform	nance parar	meter (KPP)	requireme	ents of Net		ADIAC
B. Accomplishments/Planned	Programs (\$ in Million	<u>s)</u>						F	Y 2023	FY 2024	FY 2025
Title: RDS Obsolescence Mana	gement		-							-	-	0.271
FY 2025 Plans: RDS new RDTE funding will use	e FY25 (\$0.2	71 million) f	unding for t	he following	g activities: /	Addressing	radio intero	perability.				
FY 2024 to FY 2025 Increase/E New start funding line in FY2025			dio interope	erability and	KPP requir	ements for	RDS.					
					Accomplis	shments/Pl	anned Pro	grams Sub	totals	-	-	0.271
<u>C. Other Program Funding Sum</u> N/A <u>Remarks</u>	<u>mmary (\$ in</u>	<u>Millions)</u>										
D. Acquisition Strategy The Radiological Detection Sys requirements consistent with the			nding throug	gh Other Go	overnment A	Agency (OG	A) support	via MIPR to	accomplis	h test and i	nteroperabili	ty
PE 0607101A: Combating Weap	ons of Mass	Destruction	n (C	UN		IED					Val	

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Exhibit R-3, RDT&E F								Date:	Date: March 2024						
Appropriation/Budget Activity 2040 / 7							R-1 Program Element (Number/Name)Project (NPE 0607101A / Combating Weapons of MasDJ7 / Radiis Destruction (CWMD) Product ImprovemeDevelopmentDisplay					adiologica		n Systen	า
Management Services (\$ in Millions)			FY 2023		FY 2024		FY 2025 Base		FY 2 OC						
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	TBD	TBD : TBD	-	-		-		0.016	Dec 2024	-		0.016	0.000	0.016	-
		Subtotal	-	-		-		0.016		-		0.016	0.000	0.016	N/A
Test and Evaluation	(\$ in Milli	ons)		FY 2023		FY 2024		FY 2025 Base			2025 FY 2025 CO 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
T&E Interoperability (RDS)	TBD	TBD : TBD	-	-		-		0.255	Dec 2024	-		0.255	0.000	0.255	-
		Subtotal	-	-		-		0.255		-		0.255	0.000	0.255	N/A
			Prior Years	FY	2023	FY	2024		2025 1se	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	-	-		-		0.271		-		0.271	0.000	0.271	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2	025 Army		Date: March 2024						
Appropriation/Budget Activity 2040 / 7		PE	0607101A / Com	e nt (Number/Name) bating Weapons of M D) Product Improvem		DJ7 I Radiological Detection System			
Event Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 FY 2028	8 FY 2029			
Event Name	1 2 3 4				1 2 3 4 1 2 3				
Interoperability - RDS									

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: March 2024		
propriation/Budget Activity 40 / 7	PE 0607101A	ogram Element (Number/Name)Project (Number/Name)7101A I Combating Weapons of MasDJ7 I Radiological Detection Suction (CWMD) Product ImprovemeDevelopment				
	Schedule Details					
		Sta	rt	End		
Events		Quarter	Year	Quarter	Year	
Etonito						

Exhibit R-2, RDT&E Budget Item	n Justificat	tion: PB 202	25 Army						Date: March 2024					
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0607131A <i>I Weapons and Munitions Product Improvement Programs</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		
Total Program Element	-	54.216	8.425	9.363	-	9.363	9.454	6.068	6.190	6.253	Continuing	Continuing		
CP2: Precision Fire Technology Improvements	-	5.468	3.451	3.549	-	3.549	3.640	3.735	3.832	3.871	0.000	27.546		
ER2: Close Combat Technology	-	5.205	0.687	1.754	-	1.754	1.753	-	-	-	Continuing	Continuing		
ER5: Indirect Fire and Fuze Technology	-	2.364	2.225	2.306	-	2.306	2.308	2.333	2.358	2.382	Continuing	Continuing		
ER6: Direct Fire Technology	-	41.179	2.062	1.754	-	1.754	1.753	-	-	-	Continuing	Continuing		

A. Mission Description and Budget Item Justification

Project CP2, Precision Fire Technology Improvements, supports required Precision Guided Munitions (PGMs), and Precision Fuze and Fuze Setter assessment and improvement initiatives to support increased rates of fire for items that have been fielded or in full rate production, such as the M1155 Enhanced Portable Inductive Artillery Fuze Setter (EPIAFS), Excalibur and Precision Guidance Kit (PGK). Efforts will identify, characterize, study, analyze, test, and develop PGM and Fuze technologies to increase range, lethality, effectiveness, survivability, and accuracy in support of the Army's Cannon Modernization Strategy. Fiscal Year (FY) 2025 funding will support software development and integration activities as well as continued monitoring of upgrade strategies and requirements of interfacing PGMs and Fuzes in support of Artillery ammunition and platform modernization. FY 2025 funding will also support fuze setter integration activities required for compatibility with PGMs and all Self-Propelled Howitzer (SPH) systems equipped with cannon lengths greater than or equal to 52-caliber.

Project ER2 Close Combat Technology includes development efforts to upgrade Close Combat technologies, energetics, and munitions, such as counter explosives, grenades, demolitions, shoulder launched munitions, pyrotechnic simulators, countermeasure flares, non-lethal ammunition/systems, and networked munitions and mines, that have been fielded or have received approval for full rate production. Funding will allow the project to identify, characterize, study, analyze, test and develop technologies to resolve close combat munition reliability, safety, environmental, storage, standardization, obsolescence and manufacturing/producibility issues.

Project ER5 The Indirect Fire and Fuze Technology Project includes product improvement development efforts to upgrade indirect fire weapon systems and munitions that have already been fielded and/or are in production. Initiatives include improved target engagement, increased reliability, availability, maintainability, and safety, standardization and interoperability with weapons and munitions of Allied Nations, defense exportability features, reduction of failure mechanisms, and supply chain risk through introduction of new and alternative technology and material solutions, improvement of manufacturing methods and their associated production and life cycle support processes, new capabilities in response to the evolving and emerging threats and countermeasures, and reduction/elimination of potential environmental and health risks associated with these products. Fiscal Year (FY) 2025 funding will support Fuze Technology Integration (FTI) efforts to expand and refine the fuze critical components database to identify and mitigate obsolescence as well as single point components and processes; complete extended duration artillery fuze power sources; investigate M734A1 signal processor product improvement; continue integrating electronic and energetic technologies into the M213 hand grenade fuze to increase fuze and explosive safety; continue to integrate miniature reserve cell batteries for use in 30mm to 40mm medium caliber fuzes to complete the proximity sensor Hardware-in-the-loop (HWIL) countermeasures testing infrastructure; completes updating the M82 66mm smoke grenade with an integrated electronic delay.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
	R-1 Program Element (Number/Name) PE 0607131A <i>I Weapons and Munitions Product Improv</i>	ement Programs
Drainet EDC: The Direct Fire Technology funding will be used to support direct	fire ensurities from enall caliber ensurities, modium	

Project ER6: The Direct Fire Technology funding will be used to support direct fire ammunition from small caliber ammunition, medium caliber ammunition and large caliber ammunition enhancements to lethality, effectiveness, survivability, accuracy and general product improvements. Fiscal Year (FY) 2025 funding supports a number of small caliber ammunition projects including improvements to training ammunition; improvements to make small caliber primers more environmentally friendly; optimization of handgun ammunition; exploring precision sniper improvements and continuing the effort to reduce Soldier load by developing lightweight ammunition. Improvements to medium caliber ammunition include lethality and safety enhancements. Improvements to 105mm and 120mm tank ammunition include examination and implementation of performance enhancement and improvements to tracer, combustible cartridge case and 105mm Advanced Multipurpose (AMP).

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	57.174	8.425	5.843	-	5.843
Current President's Budget	54.216	8.425	9.363	-	9.363
Total Adjustments	-2.958	0.000	3.520	-	3.520
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-2.531	-			
SBIR/STTR Transfer	-0.427	-			
 Adjustments to Budget Years 	-	-	3.520	-	3.520

5.000	-
10.000	
10.000	-
10.000	-
35.000	-
cts 35.000	-
	10.000 10.000 10.000 R6 35.000

ER2 (\$1.754M), CP2 (\$0.007M), ER5 (\$0.005M), and ER6 (\$1.754M) increases due to continuous product improvement efforts on small, medium and large caliber ammunition.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					PE 0607131A / Weapons and Munitions Pr				Project (Number/Name) CP2 <i>I Precision Fire Technology</i> <i>Improvements</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
CP2: Precision Fire Technology Improvements	-	5.468	3.451	3.549	-	3.549	3.640	3.735	3.832	3.871	0.000	27.546
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports required Precision Guided Munitions (PGMs), and Precision Fuze and Fuze Setter assessment and improvement initiatives to support increased rates of fire for items that have been fielded or in full rate production, such as the M1155 Enhanced Portable Inductive Artillery Fuze Setter (EPIAFS), Excalibur and Precision Guidance Kit (PGK). Efforts will identify, characterize, study, analyze, test, and develop PGM and Fuze technologies to increase range, lethality, effectiveness, survivability, and accuracy in support of the Army's Cannon Modernization Strategy. Fiscal Year (FY) 2025 funding will support software development and integration activities as well as continued monitoring of upgrade strategies and requirements of interfacing PGMs and Fuzes in support of Artillery ammunition and platform modernization. FY 2025 funding will also support fuze setter integration activities required for compatibility with PGMs and all Self-Propelled Howitzer (SPH) systems equipped with cannon lengths greater than or equal to 52-caliber.

Title: Enhanced Portable Inductive Artillery Fuze Setter (EPIAFS) Modernization			
	-	3.451	3.549
Description: The effort supports fuze setting system requirements based on legacy and developmental platforms and munitions for 155mm Artillery systems. Efforts support development of comprehensive technology plan for all Self-Propelled Howitzer (SPH) systems equipped with cannon lengths greater than or equal to 52-caliber in support of the Army's Cannon Modernization Strategy.			
FY 2024 Plans: FY 2024 funding will support requirements management, software development and integration activities in support of 155mm Artillery ammunition and platform modernization. FY 2024 funding will also support fuze setting integration activities required for compatibility with the Extended Range Cannon Artillery (ERCA).			
<i>FY 2025 Plans:</i> Fiscal Year (FY) 2025 funding will support software development and integration activities as well as continued monitoring of upgrade strategies and requirements of interfacing PGMs and Fuzes in support of Artillery ammunition and platform modernization. FY 2025 funding will also support fuze setter integration activities required for compatibility with PGMs and all Self-Propelled Howitzer (SPH) systems equipped with cannon lengths greater than or equal to 52-caliber.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607131A / Weapons and Munitions Pr oduct Improvement Programs	CP2/	ct (Number/N Precision Fire vements	Name) re Technology	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
Increase in funding in FY 2025 due to increase in contract and engineer	ering costs associated with EPIAFS Modernization effo	orts.			
<i>Title:</i> Excalibur Ib Modernization			5.468	-	-
Description: This effort completed a series of Excalibur Ib safety and modernized Self-Propelled Howitzer (SPH) weapon systems with cann the Army's Cannon Modernization Strategy.					
	Accomplishments/Planned Programs Sub	ototals	5.468	3.451	3.549
contracts for development of modernized fuze setting concepts. Upon integrated into existing Federal Acquisition Regulation (FAR) production		lineering	g Change Pro	posais (ECP	s) to de

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	/							_	Date:	March 20	24	
Appropriation/Budge 2040 / 7	et Activity	1				PE 060	ogram Ele 7131A / V mproveme	Veapons	and Muni		-		r /Name) Fire Techn	ology	
Product Developmen	nt (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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
EPIAFS Modernization Development and Hardware	Various	To Be Determined : TBD	0.932	-		1.259	Jun 2024	1.300	Jun 2025	-		1.300	0.000	3.491	-
Excalibur lb Modernization Test Hardware	SS/CPFF	Raytheon Missles and Defense : Tuscon, AZ	4.115	1.900	Nov 2023	-		-		-		-	0.000	6.015	-
Excalibur Ib Modernization Component Hardware	C/Various	To Be Determined : TBD	0.234	0.756	Feb 2024	-		-		-		-	0.000	0.990	-
		Subtotal	5.281	2.656		1.259		1.300		-		1.300	0.000	10.496	N/A
Support (\$ in Millions	s)			FY	2023	FY	2024		2025 Ise		2025 CO	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
EPIAFS Modernization Engineering Support	MIPR	Combat Capabilities Development Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ	2.000	-		1.792	Nov 2023	1.849	Nov 2024	-		1.849	0.000	5.641	-
EPIAFS Modernization Platform/Fire Control Integration Support	MIPR	Combat Capabilities Development Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ	0.100	-		0.100	Nov 2023	0.100	Nov 2024	-		0.100	0.000	0.300	-
EPIAFS Modernization Cybersecurity Support	MIPR	Combat Capabilities Development Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ	0.100	-		0.100	Nov 2023	0.100	Nov 2024	-		0.100	0.000	0.300	-
Excalibur Ib Modernization Engineering Support	MIPR	Combat Capabilities Development	0.453	1.882	Dec 2023	-		-		-		-	0.000	2.335	-

PE 0607131A: *Weapons and Munitions Product Improvemen...* Army

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Appropriation/Budge 2040 / 7	et Activity	1				PE 060		Veapons	l umber/Na and Munit ams			t (Number Precision F ements		ology	
Support (\$ in Million	s)			FY 2	023	FY 2	2024		2025 ase		2025 CO	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
		Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ													
		Subtotal	2.653	1.882		1.992		2.049		-		2.049	0.000	8.576	N/A
Test and Evaluation	(\$ in Milli	ons)	ſ	FY 2	023	FY 2	2024		2025 ase		2025 CO	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
EPIAFS Modernization Environmental Testing	MIPR	Combat Capabilities Development Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ	0.100	-		0.100	Aug 2024	0.100	Aug 2025	-		0.100	0.000	0.300	-
EPIAFS Modernization Firing Testing	MIPR	Combat Capabilities Development Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ	0.100	-		0.100	Aug 2024	0.100	Aug 2025	-		0.100	0.000	0.300	-
Excalibur Ib Modernization Testing	MIPR	Yuma Proving Grounds (YPG) : Yuma, AZ	1.500	0.930	May 2024	-		-		-		-	0.000	2.430	-
		Subtotal	1.700	0.930		0.200		0.200		-		0.200	0.000	3.030	N/A
			Prior Years	FY 2	023	FY	2024		2025 1se		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	9.634	5.468		3.451		3.549		-		3.549	0.000	22.102	N/A

PE 0607131A: Weapons and Munitions Product Improvemen... Army

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	Army						Date: March 2	024
Appropriation/Budget Activity 2040 / 7			PE 06		nt (Number/Name ons and Munitions rograms		lumber/Name) cision Fire Tech ents	nology
	FY 2023	FY 20	24	FY 2025	FY 2026	 FY 2027	FY 2028	FY 2029
Event Name	1 2 3 4	1 2 3		1 2 3 4	1 2 3 4	 2 3 4	1 2 3 4	
EPIAFS Modernization								
Configuration Management	Configuration Manageme	nt						
Setter / Software Development	Setter / Software Develop	ment						
Requirements & Architecture Development	Requirements & Architect							
Power / Data Transmission Trade Studies	Power / Data Transmissio	n Trade Studies						
Developmental Projectile & Fuze Setting Integration	Developmental Projectile	& Fuze Setting In	tegration					
Platform/iPIK Setting Integration	Platform/iPIK Setting Inter							
Direct Set Interface Fabrication for Precision Guided Mu			Direct S	Set Interface Fabrication	for PGM Qualification			
EPIAFS Gen 2 Setter Platform Integration				EPIAFS Gen 2 Setter Pla	form Integration			
Excalibur Ib Modernization								
Development & Testing								

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	ch 2024
propriation/Budget Activity 40 / 7	PE 0607131A	Element (Number I Weapons and Me ement Programs		Project (Number/Nan CP2 <i>I Precision Fire T</i> <i>Improvements</i>	
		Sta	art	E	nd
Events		Quarter	Year	Quarter	Year
EPIAFS Modernization		1	2022	4	2029
Configuration Management		1	2022	4	2028
Setter / Software Development		3	2022	4	2029
Requirements & Architecture Development		1	2022	4	2027
Power / Data Transmission Trade Studies		1	2023	4	2026
Developmental Projectile & Fuze Setting Integration		1	2023	2	2029
Platform/iPIK Setting Integration		3	2022	3	2027
Direct Set Interface Fabrication for Precision Guided	Munition (PGM) Qualification	4	2024	2	2025
EPIAFS Gen 2 Setter Platform Integration		1	2025	3	2028
Excalibur Ib Modernization		4	2023	4	2024
Development & Testing		4	2023	3	2024

<u>Note</u>

EPIAFS = Enhanced Portable Inductive Artillery Fuze Setter

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					-	31A I Weapo	t (Number/ ons and Mu ograms	,	Project (N ER2 / Clos			
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
ER2: Close Combat Technology	-	5.205	0.687	1.754	-	1.754	1.753	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project ER2 Close Combat Technology includes development efforts to upgrade Close Combat technologies, energetics, and munitions, such as counter explosives, grenades, demolitions, shoulder launched munitions, pyrotechnic simulators, countermeasure flares, non-lethal ammunition/systems, and networked munitions and mines, that have been fielded or have received approval for full rate production. Funding will allow the project to identify, characterize, study, analyze, test and develop technologies to resolve close combat munition reliability, safety, environmental, storage, standardization, obsolescence and manufacturing/producibility issues.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: M330 Obscuration Grenade	3.888	0.300	0.600
Description: The M330 Hand Grenade Smoke Screening (HGSS) produces a dense cloud of non-colored smoke for 90 to 150 seconds in the visual spectrum for screening and concealment of the tactical small unit. The environmentally friendly M330 is the approved replacement for the highly toxic AN-M8 HC Smoke hand grenade currently restricted for contingency operations. The interim solution, the M83 TA "Practice" smoke hand grenade, is not suitable and sustainable for combat operations as it requires a 3:1 ratio when compared to the AN-M8 HC or M330 for tactical obscuration. The M83 TA "Practice" smoke hand grenade will serve as the M330 HGSS trainer. The M330 enables the Soldier Lethality modernization priority by providing the Soldier with a tactical replacement for the AN-M8 that provides effective obscuration capability to support Soldier Maneuver under enemy fire while reducing toxicity to the Soldiers and Environment. The M330 also reduces Soldier load and the associated logistics burden as Soldiers can now use a single M330 in lieu of 3 M83s currently needed in tactical operations.			
<i>FY 2024 Plans:</i> FY 2024 funding supports the completion of the PQT and preparation for Type Classification.			
FY 2025 Plans: FY 2025 funding supports engineering efforts required to support Type Classification Standard and Full Materiel Release.			
FY 2024 to FY 2025 Increase/Decrease Statement: FY25 funding required to finalize and certify the TDP.			
Title: M67 (G881) Fragmentation Hand Grenade	0.497	0.287	0.554
Description: The M67 Hand Grenade uses the M213 fuze which does not meet Insensitive Munitions (IM) requirements. The M67 E1 program is a modernization effort that will replace the legacy M67 with a more IM compliant system which greatly increases the safety of the warfighter as it will make the M67 less susceptible to inadvertent detonation. This effort will integrate the Israeli			

PE 0607131A: *Weapons and Munitions Product Improvemen...* Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7		Project (Number/I ER2 / Close Comb		/
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
M840 IM compliant foreign fuze as a replacement to the current M2 new IM compliant fuze and explosive fill will be qualified for incorpo The M67 is an enabler for Soldier Lethality as it provides Soldiers w produce casualties to enemy combatants via a 15 meter fragmenta modernization priority by providing increased lethality while increas compliant grenade.	oration into the M67 design and the TDP will be updated. with a highly effective capability that is easy to throw and ca tion radius. This capability enables the soldier lethality Arm	in Iy		
FY 2024 Plans: FY 2024 funding will finalize the load, assemble, pack (LAP) of qua compliant fuze for the M67 fragmentation grenade.	lification hardware in support of qualification testing of the	IM		
<i>FY 2025 Plans:</i> FY 2025 funding supports the completion of the qualification build, a of qualification testing.	a Limited User Assessment (LUA) at Fort Moore, and the s	start		
FY 2024 to FY 2025 Increase/Decrease Statement: Increase in FY25 funding to prepare for qualification testing.				
Title: M112 Demolition Block - Alternate Fill		0.686	0.100	0.40
Description: This effort will qualify an alternative explosive fill (PA) demolition for use in cold and extreme cold conditions and more en eliminates the need for Polyisobutylene (PIB) a current OCONUS s Block.	vironmentally friendly in manufacture and use. It also	ition		
FY 2024 Plans: FY 2024 funding will support the completion of EMQB required delt LAP of blocks for testing.	a qualification testing of Ensign Bickford produced PAX-52	and		
<i>FY 2025 Plans:</i> FY 2025 funding supports Insensitive Munition (IM), Final Hazard C Testing in support of a TC/MR decision.	Classification (FHC), and EOD Render Safe Procedure (RS	P)		
FY 2024 to FY 2025 Increase/Decrease Statement:				
Increase in FY25 funding to conduct testing in support of a TC/MR <i>Title:</i> M87A1 ASIC Modernization				0.10
			-	0.10

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date:	March 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607131A / Weapons and Munitions Pr oduct Improvement Programs	Project (Number ER2 / Close Com		у
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Description: The technical data for the M87A1 Volcano Canister obsolescence issues that impact the ability to produce the item. T to support potential production in future budget requests.				
FY 2025 Plans: The technical data for the M87A1 Volcano Canister has not been issues that impact the ability to produce the item. This funding will potential production in future budget requests.				
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2025 funding required for M87A1 producibility study.				
Title: Airborne Expendable Countermeasure Modernization		-	-	0.10
Description: FY25 funding supports combining the legacy counter Power (SWAP) and increase the number of countermeasure solution		and		
FY 2025 Plans: FY 2025 funding will support modeling and simulation countermeatesting.	asure improvements and produce initial prototypes for future	2		
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2025 funding required to begin the modernization of legacy co	untermeasure capabilities.			
Title: M82 Simulant Smoke Practice Grenade		0.134	+ -	-
Description: This effort is to address performance issues with the 66mm grenade fielded to train in the handling, usage and deployn Red Phosphorus grenades. This effort will modernize the M82 and legacy design. The improvement to the design will provide the sol readiness.	nent of the M76 infra-red, M81 graphite and brass flake and d will eliminate the end item reliability issues experienced by	L8 / the		
	Accomplishments/Planned Programs Sub	totals 5.20	5 0.687	1.754

Exhibit R-2A, RDT&E Project Jus	stification: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7				PE 06	r ogram Eler 07131A / We Improvemer	eapons and	er/Name) Munitions Pr		roject (Number/Name) R2 I Close Combat Technology		
C. Other Program Funding Sumn	<u>nary (\$ in Milli</u>	ons <u>)</u>								- · -	
			FY 2025	<u>FY 2025</u>	<u>FY 2025</u>					<u>Cost To</u>	
Line Item	FY 2023	<u>FY 2024</u>	Base	000	Total	FY 2026	<u>FY 2027</u>	<u>FY 2028</u>	FY 2029	Complete	Total Cost
• E31911: GRENADE, HAND:SMOKE, SCREENING, M330	-	2.968	0.100	-	0.100	3.033	3.064	3.095	3.126	0.000	15.386
• E32000: GRENADE, Hand, Frag, Delay, M67	5.005	0.457	0.104	-	0.104	0.314	0.311	0.311	0.315	0.000	6.817

Remarks

D. Acquisition Strategy

M330 Obscuration Grenade: qualify an alternative fill as the legacy AN-M8 grenade is restricted for use in contingency operations due to its toxicity. Development of the M330 will ensure the Warfighter has tactical smoke obscuration that is more environmentally friendly. Once the smoke fill is qualified, the plan is to conduct Design Verification Testing, product qualification testing, implement the final design into the technical data package, and prepare for LRIP and production.

M67 E1 Fragmentation Hand Grenade: replace the legacy M67 with a more IM compliant system which greatly increases the safety of the warfighter as it will make the M67 less susceptible to inadvertent detonation. This involves integrating an IM compliant fuze along with an IM compliant explosive fill into the M67 offensive hand grenade. The new design will be tested and qualified in order to mitigate the insensitive munition hazards associated with the explosive fill and the fuze technology. Follow-on procurement efforts will be competitive pending market research.

M112 Demolition Block: Alternate Fill: upon qualification of PAX-52 as a bulk explosive and qualification for use in the M112 as an alternative to C4, it will be incorporated into the M112 TDP via an Engineering Change Proposal (ECP). Starting in FY 2027, a new contract for M112 will be established. M112 orders will be placed for the alternate (PAX-52) fill configuration, unless the current C4 configuration is specifically requested.

M87A1 Volcano: The technical data for the M87A1 Volcano Canister has not been produced in several decades, leading to several obsolescence issues that impact the ability to produce the item. This funding will support a study to evaluate M87A1 producibility to support potential production in future budget requests.

Airborne Expendable Countermeasure Modernization: use Other Transaction Authority (OTA) to produce test samples for flight testing and verification testing.

M82 Simulant Smoke Practice Grenade: modernize the design of specific parts to address reliability issues and to make it more producible. The new design will be validated through testing. The Technical Data Package (TDP) will be updated to implement the changes. The program will utilize an Other Transaction Authority (OTA) contract to demonstrate the design improvements.

Exhibit R-3, RDT&E P	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20)24	
Appropriation/Budge 2040 / 7	t Activity	1				PE 060		Veapons	umber/Na and Munit ams			(Number lose Com		nology	
Product Developmen	it (\$ in Mi	illions)	ſ	FY 2	2023	FY 2	2024	FY 2 Ba	2025 se		2025 CO	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
M330 Hardware Build and LAP	MIPR	Pine Bluff Arsenal : White Hall, AR	-	0.804	Mar 2023	-		-		-		-	0.000	0.804	-
M67 (G881) Fragmentation Hand Grenade	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	0.401	-		-		-		-		-	0.000	0.401	-
M67 Load Assemble and Pack (LAP)	C/FFP	Battelle Memorial Institute : Columbus, OH	0.242	-		-		-		-		-	0.000	0.242	-
M112 Demolition Block - Alternate Fill Effort Materials	C/FFP	Leidos Inc : Reston, VA	0.118	0.204	Aug 2023	-		-		-		-	0.000	0.322	-
		Subtotal	0.761	1.008		-		-		-		-	0.000	1.769	N//
Support (\$ in Millions	5)			FY 2	2023	FY 2	2024	FY 2 Ba	2025 se	FY 2 O	2025 CO	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
M330 Enhanced Obscuration Grenade	MIPR	DEVCOM Chemical Biological Center : Edgewood, MD	1.915	0.280	Apr 2023	0.100	Oct 2023	0.150	Oct 2024	-		0.150	0.850	3.295	-
M330 Enhanced Obscuration Grenade	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	1.497	1.297	Apr 2023	0.200	Oct 2023	0.450	Oct 2024	-		0.450	0.000	3.444	-
M67 (G881) Fragmentation Hand Grenade	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	1.628	0.240	Feb 2023	0.287	Oct 2023	0.204	Oct 2024	-		0.204	Continuing	Continuing	-
M112 Demolition Block - Alternate Fill	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	0.400	0.256	Jan 2023	0.100	Oct 2023	0.100	Oct 2024	-		0.100	Continuing	Continuing	-
M87A1 Producibility Study	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	-	-		-		0.100	Jan 2025	-		0.100	Continuing	Continuing	-

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Exhibit R-3, RDT&E F	Project Co	ost Analysis: PB 2	2025 Army	/								Date:	March 20	024	
Appropriation/Budge 2040 / 7	et Activity					PE 060		Veapons	lumber/Na and Muni ams			(Numbe Close Corr		nology	
Support (\$ in Million	s)		ſ	FY 2	2023	FY	2024		2025 ase		2025 CO	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
Countermeasure Modernization	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	-	-		-		0.050	Oct 2024	-		0.050	Continuing	Continuing	-
M330 Enhanced Obscuration Grenade Human System Integration	MIPR	DEVCOM DAC : Aberdeen Proving Grounds, MD	-	0.036	Aug 2023	-		-		-		-	0.000	0.036	-
M330 Enhanced Obscuration Grenade	MIPR	Pine Bluff Arsenal : White Hall, AR	-	0.070	Dec 2023	-		-		-		-	0.000	0.070	-
		Subtotal	5.440	2.179		0.687		1.054		-		1.054	Continuing	Continuing	N/A
Test and Evaluation	(\$ in Milli	ons)	ſ	FY 2	2023	FY	2024		2025 ase	FY 2	2025 CO	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
M67 Qualification Testing	MIPR	Various : Various	-	-		-		0.350	Mar 2025	-		0.350	0.000	0.350	-
M112 Demolition Block - Alternate Fill IM, FHC, and TC/MR Testing	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	-	-		-		0.300	Feb 2025	-		0.300	0.000	0.300	-
Countermeasure Modernization M&S	MIPR	TBD : TBD	-	-		-		0.050	Jan 2025	-		0.050	0.000	0.050	-
M330 Qualification Testing	MIPR	ATEC : Aberdeen Proving Ground, MD	-	1.099	Jun 2023	-		-		-		-	0.000	1.099	-
M330 Air Drop Testing	MIPR	DEVCOM Soldier Center : Natick, MA	-	0.302	Jan 2024	-		-		-		-	0.000	0.302	-
M112 Demolition Block - Alternate Fill Delta EMQB Tests	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	-	0.175	Aug 2023	-		-		-		-	0.000	0.175	-
M112 Demolition Block - Alternate Fill Engineering Tests	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, NJ	-	0.051	Aug 2023	-		-		-		-	0.000	0.051	-
M82 Simulant Smoke Practice Grenade	MIPR	Pine Bluff Arsenal : White Hall, AR	0.798	0.134	May 2023	-		-		-		-	0.000	0.932	-

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Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20	24	
Appropriation/Budg 2040 / 7	et Activity	1				PE 060	7131A/ N	e ment (N Veapons ent Progra	and Mun		-	t (Numbe Close Corr	r/ Name) nbat Techr	ology	
Test and Evaluation	(\$ in Milli	ons)		FY 2	2023	FY 2	2024	FY 2 Ba			2025 CO	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
M67 ATEC Testing for LUA Prep	MIPR	Aberdeen Test Center : Aberdeen Proving Grounds, MD	-	0.200	Apr 2024	-		-		-		-	0.000	0.200	-
M67 ATEC Engineering Testing Completion	MIPR	Aberdeen Test Center : Aberdeen Proving Grounds, MD	-	0.057	Nov 2023	-		-		-		-	0.000	0.057	-
	. <u>.</u>	Subtotal	0.798	2.018		-		0.700		-		0.700	0.000	3.516	N/A
			Prior Years	FY	2023	FY	2024	FY 2 Ba			2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	6.999	5.205		0.687		1.754		-		1.754	Continuing	Continuing	N/A

Remarks

xhibit R-4, RDT&E Schedule Profile: PB 2025 ppropriation/Budget Activity)40 / 7					PE (06071	131A	Eleme I Wea ement	ipon	is an	d Mı					(Nur	nber Com	Nar		ology		
Event Name	FY	2023	1	FY 2	2 024 3 4	1	FY 2	2025 3 4			Y 20	26	1	FY 2		4 1	F)	20 2			Y 2	029
M330 Obscuration Grenade		5 4		2	3 4	Ľ	2	<u> </u>	•	<u> </u>	<u>z J</u>	4		2	<u>, s</u>	•	. 2		4	_ • _	2	<u> </u>
Engineering Tests	Engineering	Tests																				
Tech Data Package (TDP) Development	TDP Develop	oment																				
Product Qualification Hardware Procurement & Build	Hardw	are Build																				
Production Qualification Testing				Qu	alification *	Testing																
Type Classification & Material Release Approvals & Certs					TC/MR	Approve	als & C	erts														
Finalize & Certify TDP						Finaliz	e & Ce	rtify TDP														
Product Readiness Review							PF	R														
LRIP								LRIP														
Full Material Release														FMR								
Full Rate Production														FF	۲P							
M67 Fragmentation Hand Grenade - Insensitive Munition																						
Test/Evaluation	Test/E	Evaluation																				

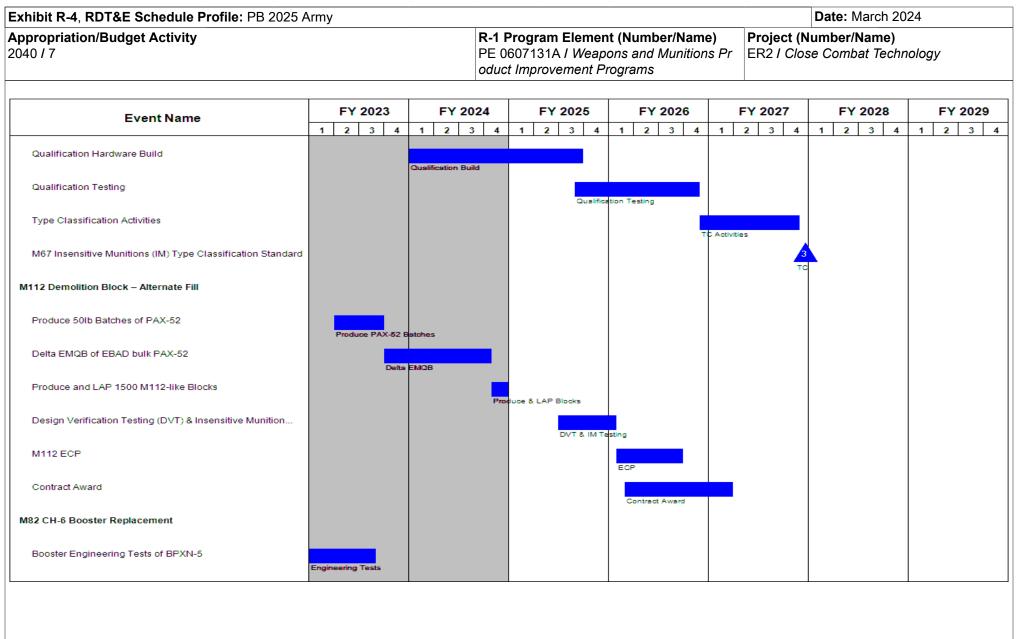


Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army																	_			Da	te: I	Mar	ch 2	024				
Appropriation/Budget Activity 040 / 7							P	PE 06	0713	31A	Eleme / Wea ment F	pon	s an	d N							lum se C			me) Tech	nolo	ogy			
Event Name		FY	2023	3		FY	2024	1	F	FY 2	025		F	Y 2	026			FY	202	7		FY	20	28		F	Y 2	029	,
	1	2	3	4	1	2	3	4	1	2	3 4	1	2	2	3 4	1	1	2	3	4	1	2	3	4		1 2	2	3	4
Booster Burster Qualification			e e e e e e e e e e e e e e e e e e e	Qualif	cation																								
Update Technical Data Packages (TDPs)					TDP	' Updat	te																						
M87A1 Producibility Study																													
Study								s	tudy																				
Airborne Expendable Countermeasure (CM) Modernization																													
Countermeasure Modeling and Simulation											M M&S																		
Countermeasure Prototyping												CM	Protot	typing															
Countermeasure Testing															CM Tes														
Verification Testing																	ocfool	ion T	esting										
Engineering Change Proposal																ľ	enncar		2										
																		E	CP										

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 7	U	•	umber/Name) e Combat Technology

Schedule Details

	Sta	End				
Events	Quarter	Year	Quarter	Year		
M330 Obscuration Grenade	1	2017	4	2025		
Engineering Tests	1	2022	1	2023		
Tech Data Package (TDP) Development	4	2021	2	2024		
Product Qualification Hardware Procurement & Build	1	2023	2	2024		
Production Qualification Testing	2	2024	3	2024		
Type Classification & Material Release Approvals & Certs	3	2024	2	2025		
Finalize & Certify TDP	1	2025	2	2025		
Product Readiness Review	2	2025	2	2025		
LRIP	3	2025	2	2027		
Full Material Release	2	2027	2	2027		
Full Rate Production	3	2027	4	2029		
M67 Fragmentation Hand Grenade - Insensitive Munition	1	2021	4	2027		
Test/Evaluation	1	2021	4	2023		
Qualification Hardware Build	1	2024	3	2025		
Qualification Testing	3	2025	4	2026		
Type Classification Activities	4	2026	4	2027		
M67 Insensitive Munitions (IM) Type Classification Standard	4	2027	4	2027		
M112 Demolition Block - Alternate Fill	4	2021	1	2027		
Produce 50lb Batches of PAX-52	2	2023	3	2023		
Delta EMQB of EBAD bulk PAX-52	4	2023	4	2024		
Produce and LAP 1500 M112-like Blocks	4	2024	4	2024		
Design Verification Testing (DVT) & Insensitive Munitions (IM) Testing	3	2025	1	2026		

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024			
propriation/Budget Activity 10 / 7	PE 0607131A	Element (Numbe I Weapons and M ment Programs	Project (Number/Name) ER2 / Close Combat Technology					
		St	art	Er	nd			
Events		Quarter	Year	Quarter	Year			
M112 ECP		1	2026	3	2026			
Contract Award		1	2026	1	2027			
M82 CH-6 Booster Replacement		1	2017	1	2024			
Baseline Testing and Dented Testing on the CH-6		1	2022	4	2022			
Booster Engineering Tests of BPXN-5		1	2023	3	2023			
Booster Burster Qualification		4	2023	1	2024			
Update Technical Data Packages (TDPs)		1	2024	1	2024			
M87A1 Producibility Study		1	2025	4	2026			
Study		1	2025	4	2026			
Airborne Expendable Countermeasure (CM) Modernization		1	2025	1	2030			
Countermeasure Modeling and Simulation		3	2025	4	2025			
Countermeasure Prototyping		1	2026	3	2026			
Countermeasure Testing		3	2026	4	2026			
Verification Testing		1	2027	2	2027			
Engineering Change Proposal		3	2027	3	2027			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name)Project (Number/Name)PE 0607131A / Weapons and Munitions Pr oduct Improvement ProgramsER5 / Indirect Fire and Fuze Techr						
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
ER5: Indirect Fire and Fuze Technology	-	2.364	2.225	2.306	-	2.306	2.308	2.333	2.358	2.382	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Indirect Fire and Fuze Technology Project includes product improvement development efforts to upgrade indirect fire weapon systems and munitions that have already been fielded and/or are in production. Initiatives include improved target engagement, increased reliability, availability, maintainability, and safety, standardization and interoperability with weapons and munitions of Allied Nations, defense exportability features, reduction of failure mechanisms, and supply chain risk through introduction of new and alternative technology and materiel solutions, improvement of manufacturing methods and their associated production and life cycle support processes, new capabilities in response to the evolving and emerging threats and countermeasures, and reduction/elimination of potential environmental and health risks associated with these products. Fiscal Year (FY) 2025 funding will support Fuze Technology Integration (FTI) efforts to expand and refine the fuze critical components database to identify and mitigate obsolescence as well as single point components and processes; complete extended duration artillery fuze power sources; investigate M734A1 signal processor product improvement; continue integrating electronic and energetic technologies into the M213 hand grenade fuze to increase fuze and explosive safety; continue to integrate miniature reserve cell batteries for use in 30mm to 40mm medium caliber fuzes to complete the proximity sensor Hardware-in-the-loop (HWIL) countermeasures testing infrastructure; completes updating the M82 66mm smoke grenade with an integrated electronic delay.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Fuze Technology Integration (FTI)	2.364	2.225	2.306
Description: This project implements new and mature technologies into fuzing systems to preclude obsolescence, maximize standardization, enhance performance, and improve the safety and exportability of existing munitions. The FTI project addresses two major areas: (1) analysis/risk mitigation and (2) block upgrades. Analysis efforts will identify second sources for fuzing systems that may reduce costs by providing competition and maintain production when sources or parts are no longer available. It will also allow for the performance enhancement of current ammunition items by conducting studies of major fuze components to detect, identify, and correct latent defects. The second major area is block upgrades, which will identify and perform studies on improvements to fuzes, increase commonality of fuze components and requirements. Block upgrades will enable the introduction of the latest technologies into fuzing, keep the fuzing design current to avoid obsolescence issues and add capabilities.			
<i>FY 2024 Plans:</i> Analysis/Risk Mitigation: Complete M783 mortar fuze evaluation, design improvement and testing to preclude early fuze functioning; continue to expand and refine the fuze critical components database to identify and mitigate obsolescence and single point components & processes; and continue integrating electronic and energetic technologies into the M213 hand grenade fuze to increase fuze and explosive safety. Block Upgrade: Continue maturing extended duration artillery fuze power sources; evaluate			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	1arch 2024				
Appropriation/Budget Activity 2040 / 7	- · · · · · · · · · · · · · · · · · · ·	Project (Number/Name) Pr ER5 I Indirect Fire and Fuze Technol					
B. Accomplishments/Planned Programs (\$ in Millions) miniature reserve cell batteries for use in 30mm to 40mm medium caliber fuz hardware in the loop testing infrastructure.	zes; and complete update of the proximity fuze sens	FY 2023	FY 2024	FY 2025			
FY 2025 Plans: Analysis/Risk Mitigation: Expand and refine the fuze critical components data as single point components and processes; complete the proximity sensor H infrastructure; and continue to integrate miniature reserve cell batteries for u Upgrade: Complete extended duration artillery fuze power sources; investiga continue to integrate electronic and energetic technologies into the M213 ha safety; completes updating the M82 66mm smoke grenade with an electronic	ardware-in-the-loop (HWIL) countermeasures testin se in 30mm to 40mm medium caliber fuzes. Block ate M734A1 signal processor product improvement; nd grenade fuze to increase fuze and explosive	g					
FY 2024 to FY 2025 Increase/Decrease Statement: Increase in FY 2025 funding supports additional FTI efforts; such as, the M8 initiates and ends in FY 2025.	2 66mm Smoke Grenade Electronic delay, which						
	Accomplishments/Planned Programs Subtot	Is 2.364	2.225	2.30			

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

N/A

<u>Remarks</u>

D. Acquisition Strategy

Fuze Technology Integration (FTI) will improve current production munitions by exploiting available fuzing technologies and integrating them into current fielded and/ or production fuzes, providing safer, more producible, and more lethal fuzing solutions. FTI develops second source suppliers and resolves component obsolescence issues to mitigate risk and prevent production interruptions in order to continue to provide safer, more reliable munitions for the Warfighter with significant risk reduction to production fuzes also benefiting the U.S. Taxpayer. The effort is a continuation of studies, analysis, evaluations, and insertion of fuzing technologies and safe and arm devices in production and fielded fuzes. This program will implement these technologies into fuzing systems to preclude component obsolescence, maximize standardization, enhance performance, and improve the safety, reliability, and exportability of existing munitions. FTI utilizes both the competitively awarded DoD Ordnance Technology Consortium (DOTC) Other Transaction Agreement (OTA) to produce prototypes of the fuze technologies and devices, and Federal Acquisition Regulation (FAR) based contracts to implement proven efforts into production fuzes.

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7							R-1 Program Element (Number/Name)Project (Number/Name)PE 0607131A / Weapons and Munitions Pr oduct Improvement ProgramsER5 / Indirect Fire and Fuze Technic							e Techno	ology
Product Developmen	nt (\$ in Mi	illions)	ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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
Fuze Technology Integration Development	MIPR	DoD Ordnance Technology Consortium (DOTC) : Various	7.182	0.743	Nov 2022	1.125	Nov 2023	1.321	Oct 2024	-		1.321	0.000	10.371	-
	1	Subtotal	7.182	0.743		1.125		1.321		-		1.321	0.000	10.371	N/A
Support (\$ in Millions	s)			FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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
Fuze Technology Integration Engineering Support	MIPR	Combat Capabilities Development Command Armaments Center (DEVCOM AC) : Picatinny Arsenal, NJ	6.966	0.983	Nov 2022	1.050	Nov 2023	0.935	Oct 2024	-		0.935	0.000	9.934	-
		Subtotal	6.966	0.983		1.050		0.935		-		0.935	0.000	9.934	N/A
Test and Evaluation	(\$ in Milli	ons)	 [FY 2	2023	FY 2	2024		2025 Ise		2025 CO	FY 2025 Total			1
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
Fuze Technology Integration Ballistic Testing	MIPR	Army Test and Evaluation Command (ATEC) : Yuma Proving Ground, AZ	0.100	0.638	May 2023	0.050	May 2024	0.050	May 2025	-		0.050	0.000	0.838	-
		Subtotal	0.100	0.638		0.050		0.050		-		0.050	0.000	0.838	N/A
			Prior Years	FY 2	2023	FY 2	2024		2025 ISE		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
	_	Project Cost Totals	14.248	2.364		2.225		2.306		-		2.306	0.000	21.143	N/A

PE 0607131A: *Weapons and Munitions Product Improvemen...* Army

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2		Date: March 2024							
Appropriation/Budget Activity 2040 / 7	-	ement (Number/N Weapons and Mun ent Programs		Project (Number/Name) ER5 / Indirect Fire and Fuze Technolog					
	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

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	rmy				Date: March 2024				
Appropriation/Budget Activity 2040 / 7	F	PE 060	ogram Elemen 07131A / Weap Improvement Pl		Number/Name) irect Fire and Fuze Technology				
Event Name					FY 2025 FY 2026		FY 2027	FY 2028	FY 2029
Fuze Technology Integration	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
Alternate Suppliers for Critical Fuzing Components									
Extended Range Gun Fired Fuzing Power Sources									
M734A1 Signal Processor Product Improvement									
Electronic Time M213 Hand Grenade									
Medium Caliber Miniature Power Sources									
Proximity Sensor HWIL Countermeasures Testing Infrastructu	re								
M82 66mm Smoke Grenade Electronic Delay									

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	 	umber/Name) rect Fire and Fuze Technology

Schedule Details

	St	art	Er	ıd
Events	Quarter	Year	Quarter	Year
Fuze Technology Integration	1	2017	4	2029
Alternate Suppliers for Critical Fuzing Components	1	2022	4	2029
Extended Range Gun Fired Fuzing Power Sources	1	2023	4	2026
M734A1 Signal Processor Product Improvement	1	2019	4	2028
Electronic Time M213 Hand Grenade	1	2023	4	2026
Medium Caliber Miniature Power Sources	1	2024	4	2028
Proximity Sensor HWIL Countermeasures Testing Infrastructure	1	2024	4	2025
M82 66mm Smoke Grenade Electronic Delay	1	2025	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
						umber/Nan ct Fire Tech						
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
ER6: Direct Fire Technology	-	41.179	2.062	1.754	-	1.754	1.753	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Direct Fire Technology funding will be used to support direct fire ammunition from small caliber ammunition, medium caliber ammunition and large caliber ammunition enhancements to lethality, effectiveness, survivability, accuracy and general product improvements. Fiscal Year (FY) 2025 funding supports a number of small caliber ammunition projects including improvements to training ammunition; improvements to make small caliber primers more environmentally friendly; optimization of handgun ammunition; exploring precision sniper improvements and continuing the effort to reduce Soldier load by developing lightweight ammunition. Improvements to medium caliber ammunition include lethality and safety enhancements. Improvements to 105mm and 120mm tank ammunition include examination and implementation of performance enhancement and improvements to tracer, combustible cartridge case and 105mm Advanced Multipurpose (AMP).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Small Caliber Ammunition Product Improvements	5.179	1.062	0.754
Description: Develop, demonstrate, and qualify improvements for 5.56mm, 7.62mm, .50 cal, Next Generation Squad Weapon ammunition, Precision Sniper ammunition and Handgun ammunition to achieve an increase in overall lethality and effectiveness.			
 FY 2024 Plans: FY 2024 request will support development efforts for lightweight case .50 Caliber variant, continue material assessment, continue finalizing design, procure qualification sample, conduct qualification test. FY 2024 request will support an interim metallic solution development effort while developing the polymer case solution for lightweight case 7.62mm ammunition variant. FY 2024 will down-select to a single metallic solution, test polymer data, perform polymer aging study and material analysis, and conduct Lake City Army Ammunition Plant (LCAAP) impact study. FY 2024 request will support completing pre-production qualification testing (PPQT) for 7.62mm green primer, completing Energetic Qualification (EMQB) and initiate prototype machine design. FY 2024 request will support testing to field handgun improvements such as Enhanced Ball Round (EBR) and Breeching capability. FY 2024 request will continue to support 7.62mm M118LRA1 which improves sniper lethality. FY 2025 Plans: FY 2025 Plans: FY 2025 request will support development efforts for lightweight case .50 Caliber variant, continue material assessment, continue finalizing design, procure qualification sample, conduct qualification test. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date	: March 2024	
Appropriation/Budget Activity 1040 / 7	R-1 Program Element (Number/Name) PE 0607131A / Weapons and Munitions Pr oduct Improvement Programs	Project (Numb ER6 / Direct Fir	,	
8. Accomplishments/Planned Programs (\$ in Millions)		FY 202	B FY 2024	FY 2025
FY 2025 request will support an interim metallic solution development effort wightweight case 7.62mm ammunition variant. FY 2025 will down-select to a solymer aging study and material analysis, and conduct Lake City Army Amm	single metallic solution, test polymer data, perfor	m		
FY 2025 request will support completing pre-production qualification testing (F Energetic Qualification (EMQB), and initiating prototype machine design.	PPQT) for 7.62mm green primer, completing			
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to planned activities as small caliber efforts implement enginee	ring changes and transition into production.			
Fitle: Medium Caliber Ammunition Product Improvements		0.5	00 0.500	0.500
Description: Develop, demonstrate, and qualify improvements for 20mm, 25 vill improve lethality (fragmentation) of the M433 grenade. The 40mm M550 f vith a dual spinlock fuze to improve safety and performance reliability. Impro 20mm M940 ammunition.	uze replacement will replace the single stage fu	ze		
EY 2024 Plans: EY 2024 funding supports continuing various 20mm, 30mm, 40mm ammunities safety, performance, reliability issues, and reducing barrel wear. Develop and increasing system effectiveness through velocity correction, and improving po Develop, demonstrate and qualify an improved 40mm Smoke munition, include environmental regulations and evaluating producibility of 40mm smoke munition obscure heat and Infra-Red (IR) signatures.	d demonstrate methods for increasing range, bint detonation sensitivity of the XM1166 cartridg ding assessing current formulations compliance	with		
EY 2025 Plans: EY 2025 funding supports continuing various 20mm, 30mm, 40mm ammunities afety, performance, reliability issues, and reducing barrel wear. Develop and increasing system effectiveness through velocity correction, and improving po Develop, demonstrate and qualify an improved 40mm Smoke munition, include environmental regulations and evaluating producibility of 40mm smoke munition obscure heat and Infra-Red (IR) signatures.	d demonstrate methods for increasing range, bint detonation sensitivity of the XM1166 cartrido ding assessing current formulations compliance	with		
Title: Tank Ammunition Product Improvements		0.5	00 0.500	0.500
Description: Develop and test potential improvements to 105mm and 120mn	n gun system ammunition.			
-Y 2024 Plans:				

PE 0607131A: Weapons and Munitions Product Improvemen... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army				Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/ PE 0607131A <i>I Weapons and Mu</i> <i>oduct Improvement Programs</i>		Project (N ER6 / Dire		lame) echnology	
B. Accomplishments/Planned Programs (\$ in Millions)			F	r 2023	FY 2024	FY 2025
FY 2024 funding supports continuing various 105mm and 120mm tank ammun improvements, combustible cartridge case design and fabrication improvement Advanced Multipurpose (AMP) and 120mm AMP training cartridge/solution. Ev warhead lethality studies, modeling and simulation, conduct fuze assessment s assess fabrication improvements, and perform integration and testing of tank c	ts, and continuing efforts to assess aluate 105mm candidate cartridges studies, perform propulsion system	the 105mm s, perform				
FY 2025 Plans: FY 2025 funding supports continuing various 105mm and 120mm tank ammunimprovements, combustible cartridge case design and fabrication improvement Advanced Multipurpose (AMP) and 120mm AMP training cartridge/solution. Every warhead lethality studies, modeling and simulation, conduct fuze assessment states assess fabrication improvements, and perform integration and testing of tank contents.	ts, and continuing efforts to assess aluate 105mm candidate cartridges studies, perform propulsion system	the 105mm s, perform				
	Accomplishments/Planned Prog	grams Subt	otals	6.179	2.062	1.754
		FY 2023	FY 2024	7		
Congressional Add: Smart Manufacturing for Armaments		5.000	-	_		
FY 2023 Accomplishments: Development of Automated Manufacturing and In Automated Inspection Processes for GOCO Data & Image Processing for Munition Inspection Robotic Integration into Manufacturing Process	nspection Processing Solutions					
Congressional Add: Additive Manufacuring for Weapons and Armaments Con	nponents	10.000	-			
FY 2023 Accomplishments: Exchange best practices with the organic industri industrial base (OIB/MIB) for a Robust US Manufacturing ecosystem. Multiple contracts to advance armaments systems lethality, range, and readine Assess components & systems produced for operational effectiveness in extre Expand the ability to produce munitions on agile production line(s) that can be manufacturing models". Assess Stratasys' "Data Security Platform" that is supporting U.S. Government	ss. me environments. assessed for "distributed					
Congressional Add: Refractory Metal Alloys for Hypersonics		10.000	-	1		
FY 2023 Accomplishments: Development of refractory metal materials and m solutions. Advanced materials development & prototyping.	anufacturing processing					
Congressional Add: Proof of Concept Military-Grade Antimony Trisulfide		10.000	-			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			0	Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/I PE 0607131A <i>I Weapons and Mul oduct Improvement Programs</i>	Project (Number/Name) ER6 / Direct Fire Technology		
		FY 2023	FY 2024	
FY 2023 Accomplishments: Using modern extraction and purification technoline layout at a pilot scale to produce natural or synthetic stibnite that complie				
	Congressional Adds Subtotals	35.000	-	
The acquisition strategy for small, medium and large caliber product improve		-	-	

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20)24	
Appropriation/Budge 2040 / 7	et Activity	1				R-1 Program Element (Number/Name)Project (Number/Name)PE 0607131A I Weapons and Munitions Pr oduct Improvement ProgramsER6 I Direct Fire Technology								gy	
Product Developmer	nt (\$ in M	illions)		FY 2	FY 2023 FY 2024		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 Case Ammunition	C/FFP	Vista Outdoor : Anoka, MN	1.580	1.900	Mar 2023	-		-		-		-	0.000	3.480	-
M118LRA1 - Contract 2	C/FFP	TBD : TBD	-	0.675	Mar 2023	-		-		-		-	Continuing	Continuing	Continuing
Smart Manufacturing for Armaments Contract	C/FFP	TBD : TBD	-	4.500	Jun 2023	-		-		-		-	0.000	4.500	-
Refractory Metal Alloys for Hypersonics Manufacturing contract	C/FFP	TBD : TBD	-	8.500	Jun 2023	-		-		-		-	0.000	8.500	-
Refractory Metal Alloys for Hypersonics Prototyping contract	C/FFP	TBD : TBD	-	0.500	Jun 2023	-		-		-		-	0.000	0.500	-
Antimony Sulfide proof of concept contract	C/CPFF	Perpetua Resources : Boise, ID	-	8.000	May 2023	-		-		-		-	0.000	8.000	-
Additive Manufacturing - Contract	C/FFP	TBD : TBD	-	3.998	Jun 2023	-		-		-		-	0.000	3.998	-
		Subtotal	1.580	28.073		-		-		-		-	Continuing	Continuing	N/A
								EV	2025	EV	2025	EV 2025	1		

Support (\$ in Millior	ns)			FY	2023	FY 2	2024		2025 Ase	FY 2 O(2025 CO	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 - Small, Medium & Large Caliber	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, New Jersey	15.053	1.666	Nov 2022	0.803	Nov 2023	0.754	Nov 2023	-		0.754	Continuing	Continuing	Continuing
Engineering Support - Antimony Sulfide	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, New Jersey	-	2.000	May 2023	-		-		-		-	0.000	2.000	-
Engineering Support - Metal Alloys for Hypersonics	MIPR	DEVCOM Armaments Center :	-	1.000	Jun 2023	-		-		-		-	0.000	1.000	-

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ppropriation/Budg 040 / 7	et Activity	1											r/ Name) Technolo	gу	
support (\$ in Million	ıs)			FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location Picatinny Arsenal,	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		New Jersey													
ngineering Support - mart Manufacturing	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, New Jersey	-	0.500	Jun 2023	-		-		-		-	0.000	0.500	-
ngineering Support - dditive Manufacturing	MIPR	DEVCOM Armaments Center : Picatinny Arsenal, New Jersey	-	6.002	Jun 2023	-		-		-		-	0.000	6.002	-
		Subtotal	15.053	11.168		0.803		0.754		-		0.754	Continuing	Continuing	N/A
est and Evaluation	(\$ in Milli	ions)		FY 2	2023	FY 2	2024		2025 ase	FY 2 O(2025 CO	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
RL Test Support Small ledium & Large Caliber	MIPR	Army Research Lab (ARL) : Aberdeen, Maryland	4.623	1.700	Mar 2023	0.603	Mar 2024	0.500	Mar 2024	-		0.500	Continuing	Continuing	J Continuin
TC Test Support Small ledium & Large Caliber	MIPR	Aberdeen Test Center (ATC) : Aberdeen, Maryland	4.098	-		0.656	Mar 2024	0.500	Mar 2024	-		0.500	Continuing	Continuing	J Continuin
allistic Support Office	MIPR	Lake City Army Ammunition Plant LCAAP : Independence, Missouri	-	0.238	Mar 2023	-		-		-		-	0.000	0.238	-
		Subtotal	8.721	1.938		1.259		1.000		-		1.000	Continuing	Continuing) N/A
			Prior Years	FY 2	2023	FY 2	2024		2025 15e		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Independence, Missouri	Prior	1.938			2024	FY	2025 ase	FY 2		1.000 FY 2025 Total	Continuing Cost To Complete	Conti To Co	inuing otal ost

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	2025 Arm	у				Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7			-	ement (Number/N Veapons and Mun ent Programs		Project (Number/Name) ER6 <i>I Direct Fire Technology</i>			
	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

Exhibit R-4, RDT&E Schedule Profile: PB 2025	5 Army					Date: March 20	24
Appropriation/Budget Activity 2040 / 7		F	R-1 Program Eleme PE 0607131A <i>I Weap</i> oduct Improvement P	oons and Munition	e) Project (N as Pr ER6 I Dire	lumber/Name) ect Fire Technolog	ענ
	EX 2022	FY 202	A EX 2025	EX 2026	EV 2027	EX 2020	EX 2020
Event Name	FY 2023			FY 2026	FY 2027	FY 2028	FY 2029
Small Caliber Ammunition Product Improvements							
Medium Caliber Ammunition Product Improvements	Small Caliber Ammunition						
Tank Ammunition Product Improvements	Medium Caliber Ammuniti	ion Product Improve	ments				
	Tank Ammunition Produc	t Improvements					

hibit R-4A, RDT&E Schedule Details: PB 2025 Army					Date: Marc	ch 2024
propriation/Budget Activity 40 / 7	R-1 Program Element (Number/Name) PE 0607131A I Weapons and Munitions Pr oduct Improvement ProgramsProject (Nu ER6 I Direct					
	Schedule Details	6				
	F					
	[St	art		E	nd
Events		St	art Year	(Ei Quarter	nd Year
Events Small Caliber Ammunition Product Improvements				(1
			Year			Year

Exhibit R-2, RDT&E Budget Item	n Justificat	i on: PB 202	25 Army							Date: Marc	h 2024	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development							t (Number/ nawk Produc	ent Prograi	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
Total Program Element	-	-	1.507	25.000	-	25.000	27.000	35.000	47.000	57.000	Continuing	Continuing
ES3: Blackhawk Product Improvement Program	-	-	1.507	25.000	-	25.000	27.000	35.000	47.000	57.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

MEDEVAC (Medical Evacuation):

Independent of the UH-60V Program of Record and Acquisition Program Baseline (APB), incremental RDT&E funding was utilized to support integration of a MEDEVAC capability on UH-60V in FY 2019-2022 and planned in FY 2024 for Follow-On Test and Evaluation (FOT&E). In accordance with AR 40-60, Medical Materiel Acquisition Policy, the Army's Aeromedical Evacuation capability is funded by two portfolio managers, Program Executive Office for Aviation (PEOAVN) and the Medical Research Development Command, (MRDC). PEOAVN is responsible for the integration of MEDEVAC Mission Equipment Package (MEP) on the UH-60V. MRDC is responsible for recurring costs to procure kits and resource the installation of MEP kits on UH-60V MEDEVAC helicopters.

Blackhawk H60M Targeted Modernization:

Airframe enhancements for the Improved Turbine Engine (ITE) will be developed and qualified through existing Engineering Services contracts with the H-60M prime Contractor, either in parallel or in sequence with ITE integration into the aircraft. These enhancements are not required to integrate the T901 into the Black Hawk but will allow the platform to fully harness the power of ITE, which increases range and lift capabilities of the aircraft.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	1.507	0.000	-	0.000
Current President's Budget	0.000	1.507	25.000	-	25.000
Total Adjustments	0.000	0.000	25.000	-	25.000
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	25.000	-	25.000
<u>Change Summary Explanation</u> FY2025 funding increase of \$25 million supports the in	nplementation of I	TE Targeted Mod	dernization.		

Exhibit R-2A, RDT&E Project Ju	stification	PB 2025 A	vrmy							Date: Marc	h 2024	
Appropriation/Budget Activity 2040 / 7					-	6A I Blackh	t (Number/ awk Produc	t Improv	•	umber/Nan khawk Prod	1e) luct Improve	ement
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
ES3: Blackhawk Product Improvement Program	-	-	1.507	25.000	-	25.000	27.000	35.000	47.000	57.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

MEDEVAC:

The Utility Helicopter Project Office (UHPO) is responsible for day-to-day test management activities to include the execution of all developmental and operational tests for the UH-60V MEDEVAC program. For this effort, the UHPO will manage Follow-On Operational Test and Evaluation (FOT&E) necessary to demonstrate the integration of the MEDEVAC MEP kits onto the UH-60V platform and evaluate the ability of MEDEVAC units to execute operational missions equipped with production UH-60V aircraft that include the MEDEVAC MEP.

Blackhawk H60M Targeted Modernization:

Airframe enhancements for the Improved Turbine Engine (ITE) will be developed and qualified through existing Engineering Services contracts with the H-60M prime Contractor, either in parallel or in sequence with ITE integration into the aircraft. These enhancements are not required to integrate the T901 into the Black Hawk but will allow the platform to fully harness the power of ITE, which increases range and lift capabilities of the aircraft.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: MEDEVAC Test & Evaluation	-	1.507	-
Description: The Utility Helicopter Project Office (UHPO) is responsible for day-to-day test management activities to include the execution of all developmental and operational tests for the UH-60V MEDEVAC program. For this effort, the UHPO will manage Follow-On Operational Test and Evaluation (FOT&E) necessary to demonstrate the integration of the MEDEVAC MEP kits onto the UH-60V platform and evaluate the ability of MEDEVAC units to execute operational missions equipped with production UH-60V aircraft that include the MEDEVAC MEP.			
<i>FY 2024 Plans:</i> FOT&E is required to evaluate the UH-60V MEDEVAC effectiveness, suitability, and survivability.			
FY 2024 to FY 2025 Increase/Decrease Statement: UH-60V MEDEVAC FOT&E will be fully funded in FY 2024; therefore, no funding is required in FY 2025.			
Title: ITE Airframe Enhancements	-	-	25.000

Exhibit R-2A, RDT&E Project Justif Appropriation/Budget Activity 2040 / 7		2023 Amy		PE 06	PE 0607136A / Blackhawk Product Improv ES					Date: March 2024 Project (Number/Name) ES3 / Blackhawk Product Improveme Program		
B. Accomplishments/Planned Prog	rams (\$ in I	<u> Millions)</u>							FY 2023	FY 2024	FY 2025	
Description: ITE enhancements will prime Contractor, either in parallel or to integrate the T901 into the Black H capabilities of the aircraft.	in sequence	with ITE inte	gration into	the aircraft.	These enha	ancements a	re not require	d				
FY 2025 Plans: Airframe enhancements for the Impro Services contracts with the H-60M pri enhancements are not required to inte ITE, which increases range and lift ca	me Contrac egrate the T	tor, either in p 901 into the E	parallel or in	sequence v	with ITE inte	gration into t	he aircraft. Th	nese				
FY 2024 to FY 2025 Increase/Decree FY2025 funding increase of \$25 million			itation of ITE	Targeted N	Modernizatio	ın.						
				Accor	nplishment	s/Planned F	rograms Su	btotals	-	1.507	25.00	
C. Other Program Funding Summar	r <mark>y (\$ in Mill</mark> i	ions)										
Line Item • Q13015: MEDICAL EVACUATION	<u>FY 2023</u> 32.164	<u>FY 2024</u> 7.618	FY 2025 Base 1.991	<u>FY 2025</u> <u>OCO</u> -	FY 2025 Total 1.991	<u>FY 2026</u> 1.787	<u>FY 2027</u> 2.320	<u>FY 2028</u> 9.031		<u>Cost To</u> 9 <u>Complete</u> 7 0.000	Total Co	
<u>Remarks</u> Q13015000 MEDICAL EVACUATION Q13015000 will resource procurement funding line, which includes the produce Q13015000 OPA funding provided for	nt of MEDE\ uction kits a	/AC MEP kits nd MEP insta	and installa	ations. Figur at Corpus (es shown a Christy Army	ove reflect to Depot (CC/	he full FL8D/ AD) as well as	Q130150 s other no	00/OPA/ME n-MEDEVA	DICAL EVAC	UATION quirements	
D. Acquisition Strategy Independent of the UH-60V Program Command (DEVCOM) Aviation and M leveraging the same GOGO facility ut tasks and employing experienced gov engineering (NRE) effort. Prototype, v completion of the UH-60V Initial Open Production (LRIP) aircraft will be allow	Aissile Cente tilized by the vernment re validation, a ration Test a	er (AVMC) an e UH-60V pro sources alrea nd verification and Evaluation	nd Prototype gram, efficie ady in posse n of technica n (IOT&E), a	Integration ent design, s ssion of per al publication at which time	Facility (PIF software dev tinent UH-6 ns, as well a e one UH-60	 ito design a relopment, ir ite technical s airworthine ite technical 	and integrate tegration, and data required ess testing, w ng Developm	MEDEVA d testing v l to suppo ill be acco ent Mode	C capability vill occur by rt the MEDE omplished fo I (EDM) and	into the UH- eliminating r EVAC MEP n Ilowing I two Low-Ra	60V. By edundant onrecurrin te Initial	
PE 0607136A: <i>Blackhawk Product Im</i> Army	provement F	Program		UNCLAS Page 3	-		R-1 Line #	404		Vo	ume 4b - 6	

xhibit R-2A, RDT&E Project Justification: PB 2025 Arm	ıy	Date: March 2024
Appropriation/Budget Activity 1040 / 7	R-1 Program Element (Number/Name) PE 0607136A <i>I Blackhawk Product Improv</i> <i>ement Program</i>	Project (Number/Name) ES3 I Blackhawk Product Improvement Program
and fielding contracts, which will be resourced by the U.S. EVACUATION.	Army Medical Department, AMEDD. Procurement funding is proc	grammed on Q13015000 MEDICAL
Blackhawk H60M Targeted Modernization: ITE Airframe er Contractor (Sikorsky).	nhancements will be developed and qualified through an Enginee	ring Service contracts with the H-60M prim

Project C	ost Analysis : PB 2	025 Army	/								Date:	March 20	24	
et Activity	1				PE 060	7136A / B				ES3 / B	lackhawk		mproverr	nent
nt (\$ in Mi	illions)	ſ	FY	2023	FY	2024					FY 2025 Total			
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
Option/ IDIQ	Sikorsky : Stratford, Connecticut	-	-		-		25.000	Jan 2025	-		25.000	0.000	25.000	Continuin
	Subtotal	-	-		-		25.000		-		25.000	0.000	25.000	N/A
(\$ in Milli	ons)	ſ	FY	2023	FY	2024					FY 2025 Total			
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
MIPR	Redstone Test Center : Redstone Arsenal, AL	1.414	-		1.507	Dec 2023	-		-		-	0.000	2.921	-
	Subtotal	1.414	-		1.507		-		-		-	0.000	2.921	N/A
		Deien						0005				Cont To	Tatal	Target
		Years	FY	2023	FY 2	2024					Total	Complete	Cost	Value of Contract
	Project Cost Totals	1.414	-		1.507		25.000		-		25.000	0.000	27.921	N/A
	Activity at Activity at (\$ in Mi Contract Method & Type Option/ IDIQ (\$ in Milli Contract Method & Type	Activity Activity Activity Contract Method & Type Performing Activity & Location Option/ IDIQ Sikorsky : Stratford, Connecticut Sikorsky : Stratford, IDIQ Sikorsky : Stratford, Connecticut Subtotal (\$ in Millions) Contract Method & Type Performing Activity & Location Redstone Test Center : Redstone Arsenal, AL	et Activity Activity Activity Activity & Location Option/ DilQ Sikorsky : Stratford, Connecticut Subtotal - Subtotal - (\$ in Millions) Contract Method & Type Activity & Location Years Contract Method Performing Activity & Location Years Redstone Test Center : Redstone Arsenal, AL Subtotal 1.414 Years Subtotal 1.414	Activity & Location Prior Years Cost Option/ IDIQ Sikorsky : Stratford, Connecticut - - Subtotal - - (\$ in Millions) FY 2 Contract Method & Type Performing Activity & Location Prior Years (\$ in Millions) FY 2 Contract Method & Type Performing Activity & Location Prior Years MIPR Redstone Test Center : Redstone Arsenal, AL 1.414 Subtotal 1.414 -	et Activity Activity Activity Performing & Type Performing Activity & Location Prior Years Award Cost Option/ IDIQ Sikorsky : Stratford, Connecticut - - Subtotal - - - (\$ in Millions) FY 2023 - - (\$ in Millions) Performing Activity & Location Prior Years Cost - MIPR Redstone Test Center : Redstone Arsenal, AL 1.414 - - Subtotal 1.414 - - - -	Activity R-1 Propression Pet Activity R-1 Propression PE 0600 ement 1 nt (\$ in Millions) FY 2023 Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Cost Option/ IDIQ Sikorsky : Stratford, Connecticut - - - - Subtotal - - - - - (\$ in Millions) FY 2023 FY 2 FY 2 Contract Method & Type Performing Activity & Location Prior Years Award Cost Cost MIPR Redstone Test Center : Redstone Arsenal, AL 1.414 - 1.507 Subtotal 1.414 - 1.507 Prior Subtotal 1.414 - 1.507	Activity R-1 Program Ele PE 0607136A / Bernent Program nt (\$ in Millions) FY 2023 FY 2024 Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Award Date Option/ IDIQ Sikorsky : Stratford, Connecticut - - - - Subtotal - - - - - (\$ in Millions) FY 2023 FY 2024 - - (\$ in Millions) FY 2023 FY 2024 - - (\$ in Millions) FY 2023 FY 2024 - - (\$ in Millions) FY 2023 FY 2024 - - (\$ in Millions) FY 2023 FY 2024 - - (\$ in Millions) Performing Activity & Location Prior Award Date Award Date - MIPR Redstone Test Center : Redstone Arsenal, AL 1.414 - 1.507 Dec 2023 Prior Prior Intervent in the intervent in th	Activity R-1 Program Element (N PE 0607136A / Blackhawl ement Program nt (\$ in Millions) FY 2023 FY 2024 Ba Contract Method & Type Performing Activity & Location Performing Prior Years Award Cost Award Date Award Cost Award Date Cost Option/ IDIQ Sikorsky : Stratford, Connecticut - - - 25.000 Subtotal - - - 25.000 (\$ in Millions) FY 2023 FY 2024 Ba Contract Method & Type Performing Activity & Location Prior Years Cost Award Date Cost MIPR Performing Activity & Location Prior Years Cost Award Date Cost MIPR Redstone Test Center : Redstone Arsenal, AL 1.414 - 1.507 Dec 2023 - Subtotal 1.414 - 1.507 - -	Activity R-1 Program Element (Number/Na PE 0607136A / Blackhawk Product ement Program nt (\$ in Millions) FY 2023 FY 2024 Base Contract Method & Performing Activity & Location Prior Years Cost Award Date Award Cost Award Date Option/ Sikorsky: Stratford, Connecticut - - - 25.000 Jan 2025 Subtotal - - - 25.000 FY 2024 FY 2025 Subtotal - - - 25.000 Jan 2025 Contract Method & Performing Activity & Location Prior - - 25.000 Jan 2025 Subtotal - - - 25.000 Jan 2025 Contract Method & Performing & Prior State Cost Award Cost Award Date Award Cost Award Date MIPR Redstone Test Center : Redstone Arsenal, AL 1.414 - 1.507 Dec 2023 - Subtotal 1.414 - 1.507 - - - Prior Frior Frior Frior Frior - - Subtotal 1.414	Activity R-1 Program Element (Number/Name) PE 0607136A <i>I</i> Blackhawk Product Improvement Program Contract Method & Type Performing Activity & Location Frior Years FY 2023 FY 2024 Base Other Base Award Cost Award Date Award Cost Award Date Cost Date Cost Endston FY 2025 FY 2025 FY 2025 FY 2025 Endston En	Activity R-1 Program Element (Number/Name) PE 0607136A / Blackhawk Product Improv ement Program Project ES3 / B Program nt (\$ in Millions) FY 2023 FY 2024 FY 2025 Base FY 2025 OCO Contract Method Performing Stype Prior Years Award Cost Award Date FY 2025 FY 2025 <td< td=""><td>Performing & Type Prior Cost Award Date Award Cost Award Date Cost FY 2025 FY 2025</td><td>Activity R-1 Program Element (Number/Name) PE 0607136A <i>I</i> Blackhawk Product Improv ement Program Project (Number/Name) ES3 <i>I</i> Blackhawk Product Improv error Improvement Program nt (\$ in Millions) FY 2023 FY 2024 FY 2025 Base FY 2025 OCO FY 2025 Total Contract Method & Type Performing Activity & Location Prior Years Cost Cost Award Date Award Cost Award Date Award Cost Award Date Cost Cost To Complete Option/ IDIQ Subtotal - - - 25.000 - 25.000 0.000 Subtotal - - - 25.000 Jate Cost FY 2025 FY 2025 FY 2025 FY 2025 Cost Cost To Complete Option/ IDIQ Subtotal - - - 25.000 Jate Cost Cost To Cost Cost To Complete Contract Method Performing Activity & Location Prior Cost Award Date Cost Award Date Cost Award Date Cost Cost To Complete MIPR Redstone Test Arsenal, AL 1.414 - 1.507 - - - 0.000 Frior</td><td>Activity R-1 Program Element (Number/Name) PE 0607136A / Blackhawk Product Improv ement Program Project (Number/Name) ES3 / Blackhawk Product Improver Program It (\$ in Millions) FY 2023 FY 2024 Base OCO FY 2025 Total FY 2025 Cost FY 2025 Total Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Cost Award Date Cost Award Date Cost Award Cost Cost Cost</td></td<>	Performing & Type Prior Cost Award Date Award Cost Award Date Cost FY 2025 FY 2025	Activity R-1 Program Element (Number/Name) PE 0607136A <i>I</i> Blackhawk Product Improv ement Program Project (Number/Name) ES3 <i>I</i> Blackhawk Product Improv error Improvement Program nt (\$ in Millions) FY 2023 FY 2024 FY 2025 Base FY 2025 OCO FY 2025 Total Contract Method & Type Performing Activity & Location Prior Years Cost Cost Award Date Award Cost Award Date Award Cost Award Date Cost Cost To Complete Option/ IDIQ Subtotal - - - 25.000 - 25.000 0.000 Subtotal - - - 25.000 Jate Cost FY 2025 FY 2025 FY 2025 FY 2025 Cost Cost To Complete Option/ IDIQ Subtotal - - - 25.000 Jate Cost Cost To Cost Cost To Complete Contract Method Performing Activity & Location Prior Cost Award Date Cost Award Date Cost Award Date Cost Cost To Complete MIPR Redstone Test Arsenal, AL 1.414 - 1.507 - - - 0.000 Frior	Activity R-1 Program Element (Number/Name) PE 0607136A / Blackhawk Product Improv ement Program Project (Number/Name) ES3 / Blackhawk Product Improver Program It (\$ in Millions) FY 2023 FY 2024 Base OCO FY 2025 Total FY 2025 Cost FY 2025 Total Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Cost Award Date Cost Award Date Cost Award Cost Cost Cost

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	Arm	ny																					D	ate	: Ma	arch	202	24			
Appropriation/Budget Activity 2040 / 7								PE	Pro 0607 ent P	713	6A	l Bla								E	S3	e ct (I I Bla ram						nprov	/em	ent	
				2023			Y 2	024			- ~ ~	2028			-	~ ~	026	Т		FV	20	07	Т		~ ~	028				2029	•
Event Name	1		2	3 4	1		2		1			3	4	1	2			4	1	2			1		2		4	1	2	3	
MEDEVAC MEP Integration Management Services (RDTE)	ME	DEVA	AC ME	EP Integra	ation N	/lanag	jemen	t Service	25																						
MEDEVAC MEP Product Development and Integration (RDTE)		DEVA	AG ME	EP Produc	ct Deve	elopn	nent ar	nd Integ	nation																						
MEDEVAC MEP Integration Support (RDTE)	ME	DEVA	AC ME	EP Integra	ation S	uppo	rt																								
MEDEVAC MEP Integration Test and Evaluation (RDTE)	ME	DEVA		EP Integra	atien Tr	est ar	nd Eva	aluation																							
Blade Improvement Blackhawk (RDTE)				Blade Imp					ju ct De	velo	pmen	t)																			
ITE Airframe Enhancements																															
										ITI	E Airfi	ramel	Enhar	nceme	ints																
														1				I									I				

whibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: Marc	ch 2024
opropriation/Budget Activity 40 / 7	R-1 Program Element (Numb PE 0607136A <i>I Blackhawk Pro</i> <i>ement Program</i>		Project (Number/Nan ES3 I Blackhawk Prod Program	
	Schedule Details			
	S	tart	E	nd
Events	Quarter	Year	Quarter	Year
MEDEVAC MEP Integration Management Services (RDTE)	1	2019	4	2023
MEDEVAC MEP Product Development and Integration (RDTE)	1	2019	4	2023
MEDEVAC MEP Integration Support (RDTE)	4	2019	4	2023
MEDEVAC MEP Integration Test and Evaluation (RDTE)	2	2021	4	2024
Blade Improvement Blackhawk (RDTE)	3	2023	3	2024
ITE Airframe Enhancements	2	2025	1	2032

Exhibit R-2, RDT&E Budget Iten	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope	rational		am Elemen 37A I Chinoc			nt 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
Total Program Element	-	65.596	9.265	4.816	-	4.816	12.599	8.738	8.836	8.924	Continuing	Continuing
ES4: Chinook Product Improvement Program	-	65.596	9.265	4.816	-	4.816	12.599	8.738	8.836	8.924	Continuing	Continuing
Program MDAP/MAIS Code: 57	7											

A. Mission Description and Budget Item Justification

Program Element (PE) 0607137A Chinook Product Improvement Program is critical to achieving heavy lift for the Army of 2030 Operational capability. With an increased payload and operational reach, the CH-47F Block II is the only platform that can lift the Joint Light Tactical Vehicle (JLTV), M777 and medium girder bridge to enable Army of 2030 Forces to Compete, Penetrate, Disintegrate and Exploit at operationally relevant distances.

CH-47F Block II Modernization Product Management Office includes the Block II acquisition program that upgrades existing CH-47F aircraft and procures common hardware between the CH-47F and MH-47G aircraft. The CH-47F Block II program reduces O&S costs. It provides additional capability to the field with greater reach, increased payload capability and increased maximum gross weight to 54,000 pounds. CH-47F Block II upgrades include a strengthened airframe and improvements to the rotor, fuel and electrical systems which improves the aircraft's safety and reliability. The program updates the Common Avionics Architecture System (CAAS) and Digital Advanced Flight Control System (DAFCS) software packages of the aircraft and incorporates other avionics changes introduced into the final CH-47F production lots. Along with providing significantly increased capability to the field, the program includes provisions for anticipated future upgrades as well as weight and cost savings initiatives to ensure the Army has a platform with the flexibility and performance needed to meet the needs of the Army of 2030 operations.

The Cargo Project Management Office awarded the CH-47F Block II Engineering and Manufacturing Development (EMD) contract in July 2017. The EMD phase produced three production representative test articles to support an acquisition decision. This phase includes contractor and government led ground and flight system level qualification testing, which requires Electromagnetic Environmental Effects (E3), operation assessments and aircraft subsystem Live-Fire Test and Evaluation (LFTE). On 27 September 2021, the Army provided direction to remove the Advanced Chinook Rotor Blade (ACRB) from the CH-47F Block II system configuration and replace them with the currently fielded Fiberglass Rotor Blades (FRB) for the duration of the EMD phase.

xhibit R-2, RDT&E Budget Item Justification: PB 2025 A	rmy			Date	: March 2024	
ppropriation/Budget Activity 040: Research, Development, Test & Evaluation, Army I BA Systems Development	7: Operational	-	lement (Number/Name) Chinook Product Improv			
8. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025	Total
Previous President's Budget	67.513	9.265	4.929	-		4.929
Current President's Budget	65.596	9.265	4.816	-		4.816
Total Adjustments	-1.917	0.000	-0.113	-		-0.113
 Congressional General Reductions 	-	-				
 Congressional Directed Reductions 	-	-				
 Congressional Rescissions 	-	-				
 Congressional Adds 	-	-				
 Congressional Directed Transfers 	-	-				
 Reprogrammings 	-	-				
 SBIR/STTR Transfer 	-1.917	-				
 Adjustments to Budget Years 	-	-	-0.113	-		-0.113
Congressional Add Details (\$ in Millions, and Inclu	udes General Red	ductions)		[FY 2023	FY 2024
Project: ES4: Chinook Product Improvement Program	n					
Congressional Add: Program increase - CH-47 E	ngine Enhanceme	ent		-	15.000	
		(Congressional Add Subto	otals for Project: ES4	15.000	
			Congressional Add	Totals for all Projects	15.000	
Change Summary Explanation						

FY25 funding reduction impacts engineering activities driven by EMD testing and decreases support from Other Government Agencies (OGA) on the EMD aircraft.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Marc	h 2024	
Appropriation/Budget Activity 2040 / 7						am Element 37A / Chinoc m			Project (N ES4 / Chin Program		,	ent
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
ES4: Chinook Product Improvement Program	-	65.596	9.265	4.816	-	4.816	12.599	8.738	8.836	8.924	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Program Element (PE) 0607137A Chinook Product Improvement Program is critical to achieving heavy lift for the Army of 2030 Operational capability. With an increased payload and operational reach, the CH-47F Block II is the only platform that can lift the Joint Light Tactical Vehicle (JLTV), M777 and medium girder bridge to enable Army of 2030 Forces to Compete, Penetrate, Disintegrate and Exploit at operationally relevant distances.

CH-47F Block II Modernization Product Management Office includes the Block II acquisition program that upgrades existing CH-47F aircraft and procures common hardware between the CH-47F and MH-47G aircraft. The CH-47F Block II program reduces O&S costs. It provides additional capability to the field with greater reach, increased payload capability and increased maximum gross weight to 54,000 pounds. CH-47F Block II upgrades include a strengthened airframe and improvements to the rotor, fuel and electrical systems which improves the aircraft's safety and reliability. The program updates the Common Avionics Architecture System (CAAS) and Digital Advanced Flight Control System (DAFCS) software packages of the aircraft and incorporates other avionics changes introduced into the final CH-47F production lots. Along with providing significantly increased capability to the field, the program includes provisions for anticipated future upgrades as well as weight and cost savings initiatives to ensure the Army has a platform with the flexibility and performance needed to meet the needs of the Army of 2030 operations.

The Cargo Project Management Office awarded the CH-47F Block II Engineering and Manufacturing Development (EMD) contract in July 2017. The EMD phase produced three production representative test articles to support an acquisition decision. This phase includes contractor and government-led, ground and flight, system-level qualification testing, which requires Electromagnetic Environmental Effects (E3), operation assessments and aircraft subsystem Live-Fire Test and Evaluation (LFTE). On 27 September 2021, the Army provided direction to remove the Advanced Chinook Rotor Blade (ACRB) from the CH-47F Block II system configuration and replaced them with the currently fielded Fiberglass Rotor Blades (FRB) for the duration of the EMD phase.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: CH-47F Block II Engineering and Manufacturing Development (EMD)	1.374	-	-
Description: Conducted and supported aircraft development, completed assembly, and delivered three EMD test articles, including airframe components, Improved Drive Train (IDT), Improved Rotor System (IRS), lightweight fuel system, electrical components, and the currently fielded FRB. Completed fabrication, assembly, and initial functional checks of the Ground Test Vehicle (GTV) and remote control system (RCS); conducted GTV test operations, functional testing of the CH-47F Block II systems, and Test Readiness Review (TRR) for EMD ground and flight testing. Released EMD flight test software. Performed contractor-led system-level ground and flight testing. Delivered documentation that demonstrates requirements verification and			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607137A <i>I Chinook Product Improvem</i> <i>ent Program</i>	Project (Number/ ES4 <i>I Chinook Pro</i> <i>Program</i>		ment
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
production configuration baseline. Continued Integrated Logistics S for initial flight test activities. Shut down all ACRB efforts and termin		port		
Title: Matrix and Contractor Support		6.600	1.016	0.384
Description: This funding provides support costs for various govern supporting the Block II Engineering and Manufacturing Development airworthiness certification, project management, general engineering	t (EMD) program with systems engineering, test support,	ons		
<i>FY 2024 Plans:</i> Continue funding for various government agencies, contractor support II EMD activities, design, system engineering, fabrication, and Integr configuration, corrective hardware and software actions.				
FY 2025 Plans: Continues funding support costs for various government agencies, of CH-47F Block II EMD closeout, Milestone C documentation devel airworthiness coordination.		ort		
FY 2024 to FY 2025 Increase/Decrease Statement: The decrease is the reduction of support from Other Government Ag	gencies (OGAs) activities on the EMD aircraft.			
<i>Title:</i> Testing and Evaluation		25.104	7.249	3.364
Description: This effort supports component and system level testir avionics, drive train, and rotor subsystem. Block II improvements are Live Fire Test and Evaluation (LFTE), Electromagnetic Environment	e validated through component endurance, testing of IDT			
 FY 2024 Plans: Continue engineering support and mitigations for technical challenge mitigations and improvements onto the production aircraft. Continue configuration in preparation of future operational testing. Complete the handling qualities in support of operational test and fielding. Testing integration laboratories (SIL) for software testing of production aircraft FY 2025 Plans: Enter into Safety of Flight (SOF) testing for Aviation Survivability Equ (AMSA) equipment. Conduct Electromagnetic Environmental Effects 	system level validation and verification of production air esting of DAFCS software to provide improved system includes hardware and software modifications to the soft ift configuration.	vare		

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	arch 2024	
Appropriation/Budget Activity 2040 / 7		Project (Number/N ES4 / Chinook Proc Program		nent
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
followed by handling qualities testing. Provide continued engineerin system level testing to prepare for IOT&E testing.	ng support for any issues or challenges encountered durin	g		
FY 2024 to FY 2025 Increase/Decrease Statement: The decrease is the reduction of engineering activities driven by EN drawing updates and analyses.	ID testing to include completion of any reports, engineerin	g		
Title: System Support		17.518	1.000	1.068
Description: Conduct design, system engineering, fabrication, and hardware and software actions that are required to address technic requirements update and verification efforts resulting from CH-47F Support test efforts to improve production aircraft operational availa of production aircraft and other test assets to support component ar and software actions that are required to address technical challeng system level verification and validation of production aircraft configu documentation in support of a material release that enables system	al challenges identified in the EMD phase. Conduct Block II system configuration change from ACRB to FRB. bility and reduce maintenance costs. Conduct modification of system level testing events. Implement corrective hard ges identified during testing of the production aircraft. Performant iration in preparation for future operational testing. Deliver	ns vare orm		
FY 2024 Plans: Continue the qualification of Government Furnished Equipment in s Aviation Mission Planning Systems to support SIL testing, developm and Evaluation (IOT&E) activities. Additionally, a tool to support the Analysis Cockpit (CH-EAC), where the CH-EAC provides a virtual of The CSWGs are conducted by actual pilot Subject Matter Experts (facility to help evaluate software and avionics changes and how that	nental flight test activities, and pre-Initial Operational Test e previously mentioned activities is the Cargo Engineering apability to perform Crew Station Working Groups (CSWC SMEs) in the field and the SMEs are brought into the CH-	Gs).		
FY 2025 Plans: Continued development of the Aviation Mission Planning System (A items for performance improvements to the CH-47 Block II for Lot 3 Engineering Analysis Cockpit (CH-EAC) for evaluation of software a	. Provide development and engineering support of Cargo			
FY 2024 to FY 2025 Increase/Decrease Statement: The increase supports continued qualification of GFE for the Block AMPS and new Common Avionics Architecture System (CAAS) sof		ion of		
	Accomplishments/Planned Programs Subt	otals 50.596	9.265	4.816

Exhibit R-2A, RDT&E Project Just	tification: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7					07137A / Ch	nent (Numbe hinook Produc			lumber/Na nook Produ	me) Ict Improven	nent
							FY 2023	FY 2024]		
Congressional Add: Program incre	ease - CH-47 I	Engine Enha	ancement				15.000	-			
FY 2023 Accomplishments: Cong	ressional incre	ease for CH-	47 Engine E	nhancement	t						
				Cong	ressional A	dds Subtotal	s 15.000	-			
C. Other Program Funding Summ	ary (\$ in Millio	ons)									
			<u>FY 2025</u>	FY 2025	<u>FY 2025</u>					Cost To	
Line Item • A05105: CH-47 SLEP	<u>FY 2023</u> 387.898	<u>FY 2024</u> 221.423	<u>Base</u> 699.698	<u>000</u> -	<u>Total</u> 699.698	<u>FY 2026</u> 690.613	<u>FY 2027</u> 559.420	<u>FY 2028</u> 544.381	<u>FY 2029</u> 535.033		Total Cost Continuing
FY 2020 A05008 OCO is for Army FY 2021 A05008 OCO is for CH-47 FY 2021 A05105 All Funding is for FY 2021 A05105 Funding is for 6 A FY 2021 A05105 Funding is for 6 A FY 2022 A05105 Funding is for 2 C FY 2022 A05105 Funding is for 2 C FY 2023 A05105 Funding is for 3 C D. Acquisition Strategy Inducted CH-47F Block I aircraft remaximum gross weight of 54,000 p platforms, improve design life, lower through mission equipment packag capability and reduce Operation an Quantity of RDT&E Articles: FY 2019 - Delivered: 1 - GTV, 2 - C FY 2020 - Delivered: 1 - CH-47F Block	F New Build V Army Common rmy Common H-47F RENEV rmy Common H-47F RENEV rmy Common H-47F RENEV ceive consolida ounds. The Cher maintenance e (MEP) growt d Support (O& est Vehicle (GT H-47F Block I	Var Replace n MH-47G R MH-47G R W Aircraft BI MH-47G R W Aircraft BI MH-47G R W Aircraft BI Aircraft BI ated separat H-47F Block cost, enhar th. It enhanc S) costs. TV), 3 - CH-4 I Prototypes	ment Aircraft ENEW Aircra ock II procur ENEW Aircra ock II procur ENEW Aircra ock II procur ENEW Aircra ock II procur te engineerir II program p nce reliability es flight cont	t Block I pro- aft Block II p ft Block II p ement. aft Block II p ement. ft Block II pr ement. ng change p provides add r, safety, airv trol systems	curement. orocurement. rocurement. ocurement. ocurement. roposals for itional benef	a single CH-4 fits to increase	17F Block II u e commonali urity. The CH	ty and intere -47F Block	operability Il program	between the restores pa	e two yload lost

Appropriation/Budg 2040 / 7	et Activity	/					7137A / C		lumber/Na Product Im			t (Numbe i Chinook Pi m		provemer	nt
Product Developme	nt (\$ in M	illions)	ſ	FY	2023	FY 2	2024		2025 ase		2025 CO	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 Manufacturing Development (EMD)	SS/CPIF	Boeing Ridley : Park, PA	369.268	1.374	Nov 2022	-		-		-		-	0.000	370.642	-
System Support	SS/ Various	Boeing : Ridley Park PA and Various Government	17.186	17.518	Jun 2023	1.000	May 2024	1.068	Jul 2025	-		1.068	0.000	36.772	-
Congressional Add Program Increase CH-47 Engine Enhancement	Various	Various : Various	7.500	15.000	Dec 2023	-		-		-		-	0.000	22.500	-
		Subtotal	393.954	33.892		1.000		1.068		-		1.068	0.000	429.914	N//
Support (\$ in Millior	ıs)		ſ	FY	2023	FY 2	2024		2025 ase		2025 CO	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 Support	Various	Various Government and contractor : RSA & Huntsville, AL, Aberdeen Proving Ground MD,	40.493	6.600	Oct 2022	1.016	Oct 2023	0.384	Oct 2024	-		0.384	Continuing	Continuing) Continuin
		Subtotal	40.493	6.600		1.016		0.384		-		0.384	Continuing	Continuing	, N//
Test and Evaluation	(\$ in Milli	ons)	 [FY	2023	FY 2	2024		2025 ase		2025 CO	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	Boeing Ridley : Park PA and Various Government	67.923		Nov 2022		Nov 2023		Nov 2024	-			Continuing		
Testing and Evaluation					· · · · · · · · · · · · · · · · · · ·	7.249		3.364	1	-	1	3.364	1		1

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army Date: March 2024													
2040 / 7				PE 0607137A / Chinook Product Improvem					Project (Number/Name) ES4 I Chinook Product Improvement Program				t
	Prior Years FY 2023		FY 2	:024		2025 Ise	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	502.370	65.596		9.265		4.816		-		4.816	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army					Date: March 202	24		
Appropriation/Budget Activity 2040 / 7		PE (R-1 Program Element (Number/Name)Project (Number/Name)PE 0607137A / Chinook Product Improvem ent ProgramES4 / Chinook Product Improve Program						
Event Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029		
CH-47F Block II EMD	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		
Program Support	CH-47F Block II EMD Program Support								
Testing and Evaluation	Testing and Evaluation								
System Support	System Support								

chibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Mar	ch 2024
propriation/Budget Activity 40 / 7	-	Element (Numbe I Chinook Product	Project (Number/Name) ES4 I Chinook Product Improvement Program		
	Schedule Details	S			
		Sta	art	E	ind
Events		Quarter	Year	Quarter	Year
Improved Drive Train (IDT)		3	2014	4	2021
Transportable Flight Proficiency Simulator (TFPS)		2	2018	4	2020
Milestone B		3	2017	3	2017
CH-47F Block II EMD		4	2017	2	2024
Program Support		1	2017	4	2029
Advanced Chinook Rotor Blade (ACRB)		1	2011	4	2021
Testing and Evaluation		3	2015	4	2029
System Support		3	2022	4	2029

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 7: Operational Systems Development				R-1 Program Element (Number/Name) PE 0607139A / Improved Turbine Engine 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
Total Program Element	-	219.713	201.247	67.029	-	67.029	84.161	58.470	44.038	44.528	Continuing	Continuing
ES6: Improved Turbine Engine Program	-	219.713	201.247	67.029	-	67.029	84.161	58.470	44.038	44.528	Continuing	Continuing
Program MDAP/MAIS Code: 487	7											

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Modernization Priorities in support of the Improved Turbine Engine Program (ITEP). ITEP develops, tests, qualifies, and integrates the next generation turboshaft engine on Black Hawk and Apache aircraft. The Improved Turbine Engine (ITE) replaces the existing T700 engine design originated in the 1970s and meets the operational requirement of 6,000 feet pressure altitude and 95 degrees (6K/95). The ITE will fit inside the existing engine bays of the Black Hawk and Apache Helicopters and provides a significant power enhancement of up to fifty percent (total of 3,000 class shaft horsepower) with increased fuel efficiency. Additional benefits include improved design life, enhanced reliability, lower maintenance cost and restored capability lost due to aircraft weight growth without an increase to the logistics footprint. The program consists of systems engineering and program management, detailed design engineering, design assurance, hardware manufacturing and testing, component and module level development and testing, system level testing and qualification, and platform integration and qualification.

FY 2023 funding began engine testing to achieve Preliminary Flight Rating (PFR), provided for completion of Black Hawk A-Kit CDR and continued detailed test planning. FY 2024 funding continues PFR testing, continues detailed test planning, provides for the delivery of flight test engines, and initiates Black Hawk aircraft testing activities. FY 2025 continues PFR testing, continues detailed test planning, provides for delivery of flight test engines and continues Black Hawk aircraft testing activities.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	228.036	201.247	130.868	-	130.868
Current President's Budget	219.713	201.247	67.029	-	67.029
Total Adjustments	-8.323	0.000	-63.839	-	-63.839
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-8.323	-			
 Adjustments to Budget Years 	-	-	-63.839	-	-63.839

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024			
Appropriation/Budget Activity 040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0607139A <i>I Improved Turbine Engine Program</i>				
Change Summary Explanation					
Decrease in FY 2025 funding reflects reprioritization of resources acros	ss the Army portfolio.				
E 0607139A: Improved Turbine Engine Program UN	NCLASSIFIED				
my	Page 2 of 9 R-1 Line #196	Volume 4b -			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024			
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name)Project (Number/Name)PE 0607139A / Improved Turbine Engine PriES6 / Improved Turbine Engine Program					rogram		
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
ES6: Improved Turbine Engine Program	-	219.713	201.247	67.029	-	67.029	84.161	58.470	44.038	44.528	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 the Improved Turbine Engine Program (ITEP). ITEP develops, tests, qualifies, and integrates the next generation turboshaft engine on Black Hawk and Apache aircraft. The Improved Turbine Engine (ITE) replaces the existing T700 engine design originated in the 1970s and meets the operational requirement of 6,000 feet pressure altitude and 95 degrees (6K/95). The ITE will fit inside the existing engine bays of the Black Hawk and Apache Helicopters and provides a significant power enhancement of up to fifty percent (total of 3,000 class shaft horsepower) with increased fuel efficiency. Additional benefits include improved design life, enhanced reliability, lower maintenance cost and restored capability lost due to aircraft weight growth without an increase to the logistics footprint. The program consists of systems engineering and program management, detailed design engineering, design assurance, hardware manufacturing and testing, component and module level development and testing, system level testing and qualification, and platform integration and qualification.

FY 2023 funding began engine testing to achieve Preliminary Flight Rating (PFR), provided for completion of Black Hawk A-Kit CDR and continued detailed test planning. FY 2024 funding continues PFR testing, continues detailed test planning, provides for the delivery of flight test engines, and initiates Black Hawk aircraft testing activities. FY 2025 continues PFR testing, continues detailed test planning, provides for delivery of flight test engines and continues Black Hawk aircraft testing activities.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: ITEP	219.713	201.247	67.029
Description: ITEP - a multi-platform turbine engine development required across existing Army aircraft to fill the capability gaps for Army Aviation Operations			
FY 2024 Plans: FY 2024 funding completes PFR testing, provides for the delivery of flight test engines to platforms, initiates UH-60M aircraft flight/ qualification activities, initiates AH-64E instrumentation and ground testing, and initiation of engine qualification.			
FY 2025 Plans: FY 2025 continues PFR testing, continues detailed test planning, provides for delivery of flight test engines and continues Black Hawk aircraft testing activities.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army	Date: March 2024						
Appropriation/Budget Activity R-1 Program Element (Number/National States of the s		Project (Number/Name) Pr ES6 I Improved Turbine Engine Prog					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025			
Decrease in FY 2025 funding reflects reprioritization of resources across the Army portfolio.							
Accomplishments/Planned Program	ns Subtotals	219.713	201.247	67.029			

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

N/A

<u>Remarks</u>

For FY 2014 and prior, all funding for ITEP was contained in Program Element (PE) 0203744A - Aircraft Modifications/Product Improvement Programs, Project 504. FY 2015 funding was initially moved to PE 0203744A, Project EB1. Prior to execution, FY 2015 and beyond funding was moved to the PE 0607139A, Project ES6.

D. Acquisition Strategy

Following a successful Milestone B decision, a cost-plus-incentive-fee contract was awarded to General Electric for EMD contractual effort in FY 2019.

ITEP Platform Integration Trade Studies Contracts were awarded to the Boeing Company and the Sikorsky Corporation in FY 2015. In FY 2019, two follow-on efforts were awarded to design and develop A-kits to integrate the ITE into both the Apache and Black Hawk platforms.

Exhibit R-3, RDT&E	-	-	2025 Army	/							Drologi		March 20	024	
Appropriation/Budge 2040 / 7	et Activity								lumber/Na Turbine E			t (Numbe i nproved 7		ngine Pro	gram
Management Servic	es (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 ase	FY 2 OC		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
ITEP SEPM - Organic	Allot	Program Management Office (PMO) Aviation Turbine Engines Project Office (ATE), Various : Redstone Arsenal, AL	70.987	9.881	Oct 2022	9.911	Oct 2023	6.500	Oct 2024	-		6.500	Continuing	Continuing) Continuin
ITEP SEPM - Contractor	C/IDIQ	Program Management Office (PMO) Aviation Turbine Engines Project Office (ATE), Various : Redstone Arsenal, AL	25.243	3.975	Oct 2022	4.217	Oct 2023	2.150	Oct 2024	-		2.150	Continuing	Continuing) Continuin
ITEP SEPM - OGA	MIPR	Program Management Office (PMO) Aviation Turbine Engines Project Office (ATE), Various : Redstone Arsenal, AL	25.221	2.425	Oct 2022	2.655	Oct 2023	1.550	Oct 2024	-		1.550	Continuing	Continuing) Continuin
		Subtotal	121.451	16.281		16.783		10.200		-		10.200	Continuing	Continuing) N/A
Product Developme	nt (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 ase	FY 2 OC		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
Engine OEM EMD Contract	C/CPIF	General Electric Company (GE) : Lynn, MA	474.334	133.000	Oct 2022	86.369	Oct 2023	32.197	Oct 2024	-		32.197	Continuing	Continuing	Continuin
Platform Integration and Qualification Contracts	SS/CPIF	The Boeing Company, The Sikorsky Corporation :	168.932	49.849	Oct 2022	75.514	Oct 2023	10.013	Oct 2024	-		10.013	Continuing	Continuing) Continuin

Appropriation/Budget / 2040 / 7	Activity								umber/Na Turbine E			t (Numbe Inproved 7		ngine Pro	gram
Product Development	(\$ in Mi	llions)	ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	FY 2025 Total			
	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
		Phoenix, AZ, Stratford, CT													
· · · · · · · · · · · · · · · · · · ·		Subtotal	643.266	182.849		161.883		42.210		-		42.210	Continuing	Continuing	N/A
Support (\$ in Millions)			ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	FY 2025 Total			
1	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
ITEP Engineering Support - Contractor	C/IDIQ	Program Management Office (PMO) Aviation Turbine Engines Project Office (ATE), Various : Redstone Arsenal, AL	16.403	2.966	Oct 2022	3.029	Oct 2023	2.029	Oct 2024	-		2.029	Continuing	Continuing	Continuing
ITEP Engineering Support - OGA	MIPR	Program Management Office (PMO) Aviation Turbine Engines Project Office (ATE), Various : Redstone Arsenal, AL	48.959	8.396	Oct 2022	8.502	Oct 2023	6.036	Oct 2024	-		6.036	Continuing	Continuing	Continuing
Platform Integration Support	MIPR	Program Management Office (PMO) Apache and Black Hawk Project Offices : Redstone Arsenal, AL	15.795	6.196	Oct 2022	6.304	Oct 2023	4.304	Oct 2024	-		4.304	Continuing	Continuing	Continuing
		Subtotal	81.157	17.558		17.835		12.369		-		12.369	Continuing	Continuing	N/A

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Arm	у								Date:	March 20)24	
Appropriation/Budg 2040 / 7	et Activity	1					-	•	umber/Na Turbine E	,	-	: (Numbe mproved 7		ngine Pro	gram
Test and Evaluation	(\$ in Milli	ons)		FY	2023	FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item			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 Planning/Flight Test Support and Analysis	SS/TBD	Program Management Office (PMO) Aviation Turbine Engines Project Office (ATE), Various : Redstone Arsenal, AL	10.053	3.025	Oct 2022	4.746	Oct 2023	2.250	Oct 2024	-		2.250	Continuing	Continuing	Continuin
		Subtotal	10.053	3.025		4.746		2.250		-		2.250	Continuing	Continuing	N/A
			Prior Years	FY	2023	FY 2	2024		2025 ISE	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
l .		Project Cost Totals	855.927	219.713		201.247		67.029		-		67.029	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 202	5 Army					Date: March 20	24
Appropriation/Budget Activity 2040 / 7		PI	- 1 Program Elemer E 0607139A <i>I Impro</i> gram	nt (Number/Name) wed Turbine Engine	e Projec ES6 / I	t (Number/Name) mproved Turbine En	gine Program
Event Name	FY 2023	FY 2024	FY 2025 4 1 2 3 4	FY 2026 1 2 3 4	FY 2027		FY 2029 1 2 3 4
ITEP Systems Engineering/Program Management							
Engineering & Manufacturing Development							
Air Vehicle Integration							
Testing							
Preliminary Flight Rating							
L				<u> </u>		1	<u> </u>

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: March	า 2024
propriation/Budget Activity 40 / 7	-	Element (Numbe I Improved Turbin		ect (Number/Nam I Improved Turbine	
	Schedule Details	5			
		St	art	En	d
Events		Quarter	Year	Quarter	Year
ITEP Systems Engineering/Program Management		1	2015	4	2030
Engineering & Manufacturing Development		2	2019	4	2030
Critical Design Review (CDR)		4	2020	4	2020
Air Vehicle Integration		2	2019	4	2030
Testing		2	2019	4	2030
First Engine To Test (FETT)		3	2022	3	2022
Preliminary Flight Rating		3	2026	3	2026

Exhibit R-2, RDT&E Budget Iten	ibit R-2, RDT&E Budget Item Justification: PB 2025 Army									Date: Marc	ch 2024				
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	940: Research, Development, Test & Evaluation, Army I BA 7: Operational stems Development						R-1 Program Element (Number/Name) PE 0607142A <i>I Aviation Rocket System Product Improvement and Deve</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			
Total Program Element	0.000	10.899	3.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing			
EW9: Aviation Rocket System Product Improvement and Dev	-	10.899	3.014	-	-	-	-	-	-	-	Continuing	Continuing			

A. Mission Description and Budget Item Justification

The Aviation Rockets and Small Guided Munitions Product Improvement and Development line funds the development, integration and test of current and future munitions and launchers, and their interface to platforms. Additionally, it will fund a range of improvement initiatives to modernize the Hydra-70 2.75 inch rocket and launcher system. The current Hydra-70 2.75 inch rocket system requires performance improvements to comply with 1) US Code - Title 10, Chapter 141, Section 2389 "Ensuring Safety regarding Insensitive Munitions", 2) Department of Defense (DoD) Directive 5000.1, Chairman of the Joint Chiefs of Staff (CJCS) Instruction 3170.01C, Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD (AT&L)) Memorandum of January 26, 1999, "Exemption for Existing Inventory Items to Insensitive Munitions (IM) Requirements", 3) signed Initial Capability Document (ICD) for Army Aviation Weapons, Sub-Systems and Munitions (AAWSSM), 4) Air Launched Effects (ALE) Initial Capability Refinement Document (ICRD) dated 21 October 2019, and 5) existing/emerging Headquarters, Department of the Army (HQDA) G-3/5/7 and U.S. Army Training and Doctrine Command (TRADOC) aviation weapon requirements for guided and unguided rocket and munition systems. Improvements to existing rocket systems and munitions will include design, qualification and integration of precision guidance capability, increased lethality, improved target suppression, increased standoff range, reduced minimum engagement range, improved pre-launch constraints and munitions communications/programmability, increased stowed kills, increased product reliability, improved hardness against unplanned stimuli, reduced Warfighter workload, and reduced environmental impact for both manned and unmanned applications.

PE 0607142A has no FY 2025 funding request.

<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
11.312	3.014	0.000	-	0.000
10.899	3.014	0.000	-	0.000
-0.413	0.000	0.000	-	0.000
-	-			
-	-			
-	-			
-	-			
-	-			
-	-			
-0.413	-			
	11.312 10.899 -0.413 - - - - - - - - - -	11.312 3.014 10.899 3.014 -0.413 0.000 - -	11.312 3.014 0.000 10.899 3.014 0.000 -0.413 0.000 0.000 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	11.312 3.014 0.000 - 10.899 3.014 0.000 - -0.413 0.000 0.000 - - - - -

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2025 A	rmy							Date: Mar	ch 2024				
Appropriation/Budget Activity 2040 / 7	040 / 7							R-1 Program Element (Number/Name)Project (Number/Name)PE 0607142A I Aviation Rocket System Pro duct Improvement and DevelopmentEW9 I Aviation RocketImprovement and DevelopmentImprovement and 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			
EW9: Aviation Rocket System Product Improvement and Dev	-	10.899	3.014	-	-	-	-	-	-	-	Continuing	Continuing			
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-					

A. Mission Description and Budget Item Justification

The Aviation Rockets and Small Guided Munitions Product Improvement and Development line funds the development, integration and test of current and future munitions and launchers, and their interface to platforms. Additionally, it will fund a range of improvement initiatives to modernize the Hydra-70 2.75 inch rocket and launcher system. The current Hydra-70 2.75 inch rocket system requires performance improvements to comply with 1) US Code - Title 10, Chapter 141, Section 2389 "Ensuring Safety regarding Insensitive Munitions", 2) Department of Defense (DoD) Directive 5000.1, Chairman of the Joint Chiefs of Staff (CJCS) Instruction 3170.01C, Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD (AT&L)) Memorandum of January 26, 1999, "Exemption for Existing Inventory Items to Insensitive Munitions (IM) Requirements", 3) signed Initial Capability Document (ICD) for Army Aviation Weapons, Sub-Systems and Munitions (AAWSSM), 4) Air Launched Effects (ALE) Initial Capability Refinement Document (ICRD) dated 21 October 2019, and 5) existing/emerging Headquarters, Department of the Army (HQDA) G-3/5/7 and U.S. Army Training and Doctrine Command (TRADOC) aviation weapon requirements for guided and unguided rocket and munition systems. Improvements to existing rocket systems and munitions will include design, qualification and integration of precision guidance capability, increased lethality, improved target suppression, increased standoff range, reduced minimum engagement range, improved pre-launch constraints and munitions communications/programmability, increased stowed kills, increased product reliability, improved hardness against unplanned stimuli, reduced Warfighter workload, and reduced environmental impact for both manned and unmanned applications.

PE 0607142A has no FY 2025 funding request.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Guided Air-to-Ground Rocket (AGR) variants (Advanced Precision Kill Weapon System (APKWS))	1.044	1.064	-
Description: These funds will be used to optimize current and future air-to ground variant integration on the Apache and for activities required to obtain an Army Materiel Release. This effort will utilize in-house expertise and Other Government Agencies in order to complete activities, including design and build of all-up-round (AUR) containers and test assets, conduct of environmental qualification testing, performance of ground firings, update of aviation platform software, support of Apache weapon survey firings, technical support to platform integration and testing, and development and revision of training/maintenance materiel.			
FY 2024 Plans: Complete characterization of performance changes/improvements of single variant block upgrade (SVBU) guided rockets and qualification for use on Army Aviation platforms will be conducted.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

PE 0607142A: Aviation Rocket System Product Improveme... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607142A <i>I Aviation Rocket System Pro</i> <i>duct Improvement and Development</i>	EW9 /	ct (Number/N Aviation Roc vement and D	ket System F	Product
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
EW9 has no FY 2025 funding request.					
<i>Title:</i> Army Aviation Weapons			7.018	1.467	-
Description: These funds will be used for fielded Army Aviation modular weap and platforms. These efforts will utilize in-house subject matter expertise, Othe capabilities, and Other Transactional Agreements to complete activities, includ technology maturation, demonstration, engineering design, engineering/manuf document preparation for Army Aviation manned and unmanned platforms.	er Government Agencies, defense industry ing technical assessment, risk reduction efforts				
 FY 2024 Plans: 1. Continue analysis, engineering design, and demonstration of warhead, fuze, technologies that will enable future munitions to meet requirements of the Army Initial Capability Document and the Army Aviation Munition Strategy. 2. Continue modeling and simulation, studies, assessments, risk reduction effor adaptation of future guided and unguided munition technologies. 3. Continue launcher concept development to prototype development, integration munitions. 	y Aviation Weapons, Sub-Systems and Munitic ort and documentation to determine feasibility c	of the			
FY 2024 to FY 2025 Increase/Decrease Statement: EW9 has no FY 2025 funding request.					
<i>Title:</i> Modular Effects Launcher (MEL)/Launcher Electronics Assembly (LEA)			2.837	0.483	-
Description: These funds will be used to upgrade and enhance launcher comoutlined in the Army Aviation Weapons, Sub-Systems and Munitions Initial Capt the Air Launched Effects (ALE) Initial Capability Refinement Document (ICRD) Government to align technology-enabling solutions with the Army Aviation Weaponent, maturing technological developments of launcher component protocomponent efforts will define and provide the interfaces between aircraft and e systems architecture allowing easy compatibility when integrating onto aviation architecture serves as a building block for future weapon systems.	bability Document, dated 17 July 2018, and , dated 21 October 2019. This effort allows the apons, Sub-Systems and Munitions Initial Capa types to mitigate launcher limitations. The laur merging munitions utilizing a nonproprietary, o	e ability ncher			
FY 2024 Plans:					
Integrate enduring munitions with the emerging launcher technology.					
FY 2024 to FY 2025 Increase/Decrease Statement:					

PE 0607142A: Aviation Rocket System Product Improveme... Army

Exhibit R-2A, RDT&E Project Ju	ustification: PB	2025 Army							Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7				PE 06	r ogram Ele r 07142A <i>I Av</i> mprovement	iation Rocke	t System Pro	EW9/	ct (Number/N Aviation Roc vement and D	ket System F	Product
B. Accomplishments/Planned F	Programs (\$ in M	<u>/lillions)</u>						ſ	FY 2023	FY 2024	FY 2025
EW9 has no FY 2025 funding req	quest.										
				Accon	nplishments	s/Planned P	rograms Su	btotals	10.899	3.014	-
C. Other Program Funding Sum	<u>nmary (\$ in Milli</u> FY 2023	<u>ons)</u> FY 2024	<u>FY 2025</u> Base	<u>FY 2025</u> OCO	<u>FY 2025</u> Total	FY 2026	FY 2027	FY 202	28 FY 2029	<u>Cost To</u> Complete	Total Cos
• E37300: Rocket, Hydra 70, All Types	171.697	87.293	34.302	-	34.302	111.746	92.568	92.56		6 Continuing	
Remarks											
E37300 procures guided and ung	guided Hydra Ro	ckets									
D. Acquisition Strategy		0.1				1					

The Acquisition Strategy utilizes in-house expertise, Other Government Agencies, defense industry capabilities, and when appropriate Other Transactional Agreements. The strategy allows the Government the ability to support urgent operational needs and unanticipated requirements, which require immediate and expert attention.

This strategy will allow the Government to maintain the relevance of the Hydra-70 all-up-round rocket, its variants, and Small Guided Munitions, and posture for emerging requirements and capabilities, while leveraging new authorities and progressing as many technologies as funding allows.

Appropriation/Budge	t Activity	1					•	•	lumber/Na Rocket Sys	,		(Number		tem Proc	luct
204077									velopmer			ement and			
Management Service	es (\$ in M	illions)		FY	2023	FY 2	2024		2025 ase	FY 2 OC		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/ Project Management	Various	Various : Performers	13.280	1.562	Nov 2022	0.464	Nov 2023	-		-		-	Continuing	Continuing	-
		Subtotal	13.280	1.562		0.464		-		-		-	Continuing	Continuing	N/A
Product Developmen	nt (\$ in Mi	illions)	ſ	FY	2023	FY 2	2024		2025 ase	FY 2 OC		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
Advanced Precision Kill Weapon System (APKWS)	MIPR	CCDC : Redstone Arsenal, AL	2.798	0.894	Apr 2023	0.708	Apr 2024	-		-		-	0.000	4.400	-
Army Aviation Weapons	MIPR	Various : Various Performers	12.784	5.002	Mar 2023	0.961	Mar 2024	-		-		-	Continuing	Continuing	-
Modular Effects Launcher (MEL)/Launcher Electronics Assembly (LEA)	MIPR	CCDC : Redstone Arsenal, AL	10.670	2.431	Mar 2023	0.404	Mar 2024	-		-		-	Continuing	Continuing	-
		Subtotal	26.252	8.327		2.073		-		-		-	Continuing	Continuing	N/A
Support (\$ in Millions	5)			FY	2023	FY 2	2024		2025 ase	FY 2 OC		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
Research Studies	MIPR	CCDC : Redstone Arsenal, AL	4.926	1.010	Apr 2023	0.477	Jan 2024	-		-		-	Continuing	Continuing	-
		Subtotal	4.926	1.010		0.477		-		-		-	Continuing	Continuing	N/A
			Prior Years	FY	2023	FY 2	2024		2025 ase	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	44.458	10.899		3.014		-		-		-	Continuing	Continuing	N/A

PE 0607142A: Aviation Rocket System Product Improveme... Army

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	Arm	у																			Da	te: N	/larc	h 20	24			
Appropriation/Budget Activity 2040 / 7								PE 0	E 0607142A I Aviation Rocket System Pro EW9 I Avia								Number/Name) viation Rocket System Product nent and Dev											
		FY	(202	23		FY	202	24		F١	(20:	25		FY	202	26		FY	202	7		FY	202	8		FY	2029	
Event Name	1				1		3		1	2			1	2			1	2		4	1	2	3		1	2		4
APKWS - SVBU Performance Characterization / Fire Control																												
Technology Analysis, Development, and Improvement in sup																												
AAWSSM Munitions Technologies and Capabilities Studies																												
AAWSSM Launcher Risk Mitigation Demo							2																					

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607142A <i>I Aviation Rocket System Pro</i> <i>duct Improvement and Development</i>	Project (Number/Name) EW9 I Aviation Rocket System Product Improvement and Dev
	Schedule Details	

	St	art	End		
Events	Quarter	Year	Quarter	Year	
APKWS - AH-64E Fire Control Optimization	3	2021	2	2022	
APKWS - SVBU Performance Characterization / Fire Control Optimization	3	2021	3	2024	
Technology Analysis, Development, and Improvement in support of AAWSSM ICD	2	2019	1	2025	
AAWSSM Munitions Technologies and Capabilities Studies	1	2024	1	2024	
AAWSSM Launcher Risk Mitigation Demo	3	2024	3	2024	

<u>Note</u>

APKWS: Advanced Precision Kill Weapon System

AAWSSM ICD: Army Aviation Weapons, Sub-Systems and Munitions Initial Capability Document

SVBU: Single Variant Block Upgrade

Exhibit R-2, RDT&E Budget Item	xhibit R-2, RDT&E Budget Item Justification: PB 2025 Army									Date: Marc	ch 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0607143A I Unmanned Aircraft System Universal Products								
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base									
Total Program Element	-	10.493	25.393	24.539	-	24.539	33.438	31.210	28.190	28.472	Continuing	Continuing	
EX1: Unmanned Aircraft Systems Universal Products	-	10.493	25.393	24.539	-	24.539	33.438	31.210	28.190	28.472	Continuing	Continuing	

A. Mission Description and Budget Item Justification

Scalable Control Interface (SCI) is the software in both ground and airborne platforms that is hosted on hardware controllers within the Integrated Tactical Network or other Army-provided networks to retrieve and provide data. SCI distributes UAS capabilities by greatly increasing the number of UAS control devices available to Soldiers, Commanders, and Battle Staff. SCI provides simultaneous employment of multiple aircraft/payloads from a single control node. SCI leverages a Modular Open System Approach (MOSA) to software in order to reduce time and cost to integrate new hardware and software in response to the dynamic future operating environment.

Deployment of SCI includes devices in the Mobile/Handheld Computing Environment (such as Nett Warrior), Mounted Computing Environment such as MFoCS (Mounted Family of Computer Systems), Command Post Computing Environment such as TSI (Tactical Services Infrastructure), fixed wing aircraft, and rotary wing aircraft.

Justification: Fiscal Year 2025 SCI (Universal Products) Base funding of \$24.539 million will continue the development, test, and integration of SCI capabilities as hosted on Mission Command and manned aircraft command and control devices in accordance with the SCI Abbreviated-Capabilities Development Document (A-CDD).

Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	10.512	25.393	0.503	-	0.503
Current President's Budget	10.493	25.393	24.539	-	24.539
Total Adjustments	-0.019	0.000	24.036	-	24.036
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
 SBIR/STTR Transfer 	-0.019	-			
 Adjustments to Budget Years 	-	-	24.036	-	24.036
Congressional Add Details (\$ in Millions, and Includ	es General Redu	<u>ctions)</u>			FY 2023 FY 2024
Project: EX1: Unmanned Aircraft Systems Universal Pr	roducts				

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	D	Date: March 2024		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0607143A <i>I Unmanned Aircraft System Universal Produ</i>	ıcts		
Congressional Add Details (\$ in Millions, and Includes General Red	ductions)	FY 2023	FY 2024	
Congressional Add: Program Increase: Software Development Effo	orts	10.000	-	
	Congressional Add Subtotals for Project: EX	10.000	-	
	Congressional Add Totals for all Projec	ts 10.000	-	
Change Summary Explanation Funding supports software development and integration for command a universal interface.	and control software for unmanned or optionally manned airc	raft and payloads	through a	

Exhibit R-2A, RDT&E Project Ju	stificatio	<mark>ո։</mark> PB 2025 A	rmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					-	am Elemen I3A I Unmai Products	•	Project (Number/Name) EX1 I Unmanned Aircraft Systems Universal Products				
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
EX1: Unmanned Aircraft Systems Universal Products	-	10.493	25.393	24.539	-	24.539	33.438	31.210	28.190	28.472	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Scalable Control Interface (SCI) is the software in both ground and airborne platforms that is hosted on hardware controllers within the Integrated Tactical Network or other Army-provided networks to retrieve and provide data. SCI distributes UAS capabilities by greatly increasing the number of UAS control devices available to Soldiers, Commanders, and Battle Staff. SCI provides simultaneous employment of multiple aircraft/payloads from a single control node. SCI leverages a Modular Open System Approach (MOSA) to software in order to reduce time and cost to integrate new hardware and software in response to the dynamic future operating environment.

Deployment of SCI includes devices in the Mobile/Handheld Computing Environment (such as Nett Warrior), Mounted Computing Environment such as MFoCS (Mounted Family of Computer Systems), Command Post Computing Environment such as TSI (Tactical Services Infrastructure), fixed wing aircraft, and rotary wing aircraft. SCI will integrate decision aiding, autonomy, and artificial intelligence improvements as they technically mature, in order to support MDO and reduce cognitive workload.

Justification: Fiscal Year 2025 SCI (Universal Products) Base funding of \$24.539 million will be utilized in the Execution Phase of the Software Acquisition Pathway to continue the development, test, and integration of SCI capabilities as hosted on Mission Command and manned aircraft command and control devices in accordance with the SCI A-CDD.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Scalable Control Interface (SCI)	0.493	25.393	24.539
Description: SCI will be the primary means of C2 for Program of Record Army UAS. SCI software will be hosted on Mission Command devices in both ground and airborne platforms serving as nodes on the Integrated Tactical Network to retrieve and provide data. SCI distributes UAS capabilities by greatly increasing the number of UAS control devices available to Soldiers, Commanders, and Battle Staff. SCI provides simultaneous employment of multiple aircraft/payloads from a single control node.			
FY 2024 Plans: FY 2024 funding will be used to continue the development, test, and the integration of improved SCI capabilities as hosted on Mission Command and manned aircraft command and control devices in accordance with the SCI Abbreviated - Capabilities Development Document (A-CDD).			
FY 2025 Plans:			

PE 0607143A: Unmanned Aircraft System Universal Produ... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army				Date: N	larch 2024				
2040 / 7 PE	1 Program Element (Number/I 0607143A / Unmanned Aircrat niversal Products		EX1/	Project (Number/Name) EX1 I Unmanned Aircraft Systems Universa Products					
B. Accomplishments/Planned Programs (\$ in Millions)			[FY 2023	FY 2024	FY 2025			
RDTE funding supports software development for Launched Effects, FTUAS, and	other prioritized platforms.								
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease in funding due to reduced software development planned to be complete	ed in FY25.								
Ac	complishments/Planned Prog	rams Subt	totals	0.493	25.393	24.539			
		FY 2023	FY 20	024					
Congressional Add: Program Increase: Software Development Efforts		10.000		-					
FY 2023 Accomplishments: Continued Scalable Control Interface development e	fforts								
Co	ongressional Adds Subtotals	10.000		-					
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A <u>Remarks</u>									
D. Acquisition Strategy SCI is Software Acquisition Pathway program per the Acquisition Decision Memory software using a phased acquisition strategy to bridge current systems, integrate f autonomy, networks, and mature SCI-enabled platforms.		•	•	· · ·	•				
The Scalable Control Interface Abbreviated Capabilities Development Document of developmental environment, and capabilities developed for SCI will provide the ballegacy and future platforms.									

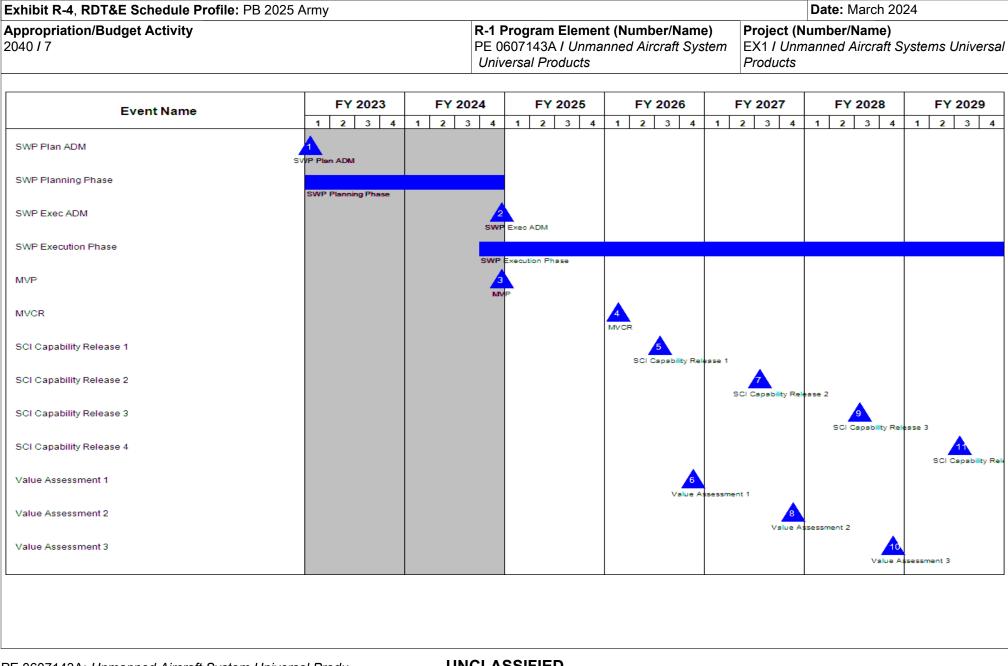
Project Manager Uncrewed Aircraft Systems (PM-UAS), as the material developer, will coordinate the Army's combined efforts for the development of UAS Command and Control. The Future Vertical Lift Cross Functional Team and Aviation CDID serve as the lead capability developer for SCI. This partnership will prioritize development of detailed user needs and will integrate these needs into the system's capabilities. PM UAS will also provide annual SCI requirements updates, in partnership with the FVL CFT, and in-line with the jointly developed User Agreement.

PM UAS will develop and maintain a product roadmap and product backlog for each of the main capabilities based on the SCI User Agreement. PM UAS will seek to gain user feedback through a series of virtual/simulated or live/field test events. PM UAS will utilize user feedback from these events to inform prioritization for the product roadmaps and backlogs for each capability.

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 / 7	PE 0607143A / Unmanned Aircraft System	EX1 I Unmanned Aircraft Systems Universal
	Universal Products	Products
PM UAS will implement software that builds on a Modular Open Systems App	roach (MOSA) and aligns with UAS Interoperal	bility Profiles (IOPs).
DE 06071/13A: Linmanned Aircraft System Universal Produ	ICI ASSIFIED	

Exhibit R-3, RDT&E	Project Co	ost Analysis: PB 2	2025 Arm	у								Date:	March 20	24	
Appropriation/Budget ActivityR-1 Program Element (Number/Name)Project (Number2040 / 7PE 0607143A / Unmanned Aircraft System Universal ProductsEX1 / Unmanned Products							Inmanned		Systems l	Universal					
Product Developme	ent (\$ in Mi	llions)		FY 2	2023	FY :	2024		2025 Ise		2025 CO	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
Scalable Control Interface (SCI) Software Development	C/Various	Various : Various	88.645	8.096	Apr 2023	21.350	Mar 2024	21.041	Mar 2025	-		21.041	0.000	139.132	-
SEPM	TBD	Various : Multiple	-	1.194	Apr 2023	2.890	Dec 2023	2.449	Dec 2024	-		2.449	0.000	6.533	-
Software Support	Various	Various : Various	-	1.203	Apr 2023	1.153	Mar 2024	1.049	Mar 2025	-		1.049	0.000	3.405	-
		Subtotal	88.645	10.493		25.393		24.539		-		24.539	0.000	149.070	N/A
			Prior Years	FY	2023	FY	2024		2025 ISE		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	88.645	10.493		25.393		24.539		-		24.539	0.000	149.070	N/A

Remarks



xhibit R-4, RDT&E Schedule Profile: PB	2025 Anny			Date: Marc					
ppropriation/Budget Activity 040 / 7		R-1 Program Elemen PE 0607143A / Unma Universal Products	t (Number/Name) nned Aircraft System	Project (Number/Name) EX1 / Unmanned Aircraft Systems Universa Products					
Event Name		2024 FY 2025 3 4 1 2 3 4	FY 2026	FY 2027 FY 202 2 3 4 1 2 3	28 FY 2029 4 1 2 3				
Value Assessment 4									

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024
propriation/Budget Activity 40 / 7		n Element (Numbe A I Unmanned Aircr roducts		Project (Number/Nam EX1 I Unmanned Aircr Products	
	Schedule Deta	ils			
		Sta	art	E	nd
Events		Quarter	Year	Quarter	Year
A-CDD		2	2022	2	2022
SWP Plan ADM		1	2023	1	2023
SWP Planning Phase		1	2023	4	2024
SWP Exec ADM		4	2024	4	2024
SWP Execution Phase		4	2024	4	2029
MVP		4	2024	4	2024
MVCR		1	2026	1	2026
SCI Capability Release 1		3	2026	3	2026
SCI Capability Release 2		3	2027	3	2027
SCI Capability Release 3		3	2028	3	2028
SCI Capability Release 4		3	2029	3	2029
Value Assessment 1		4	2026	4	2026
Value Assessment 2		4	2027	4	2027
Value Assessment 3		4	2028	4	2028
Value Assessment 4		4	2029	4	2029

Exhibit R-2, RDT&E Budget Iten	n Justinicat	ion: PB 202	25 Army							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope	erational		a m Elemen 5A I Apach		Name) evelopment				
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	-	26.607	10.547	8.243	-	8.243	-	27.297	27.843	-	0.000	100.53
FD5: Apache Product Improvement	-	26.607	10.547	8.243	-	8.243	-	27.297	27.843	-	0.000	100.53
The Apache Capabilities Enhance address known capability gaps, ic integration and implementation to	dentified du	ring real-wo	rld combat	missions ar	nd associate							
B. Program Change Summary (\$ in Million	s)		FY 2023	<u>FY 202</u>	<u>4 F</u>	Y 2025 Ba	se	FY 2025 OC	00	<u>FY 2025 T</u>	<u>otal</u>
Previous President's Budg				25.074	10.54	7	0.0	00		-	0.	000
Current President's Budge				26.607	10.54	7	8.2	43		-	8.	243
Total Adjustments				1.533	0.00	0	8.2	43		-	8.	243
 Congressional G 	General Red	uctions		-	-							
 Congressional D 		ductions		-	-							
 Congressional R 				-	-	•						
 Congressional A 		_		-	-							
Congressional D		nsfers		-	-							
Reprogrammings				1.900	-							
SBIR/STTR Tran				-0.367	-		0.0	40			0	0.40
 Adjustments to E 	Budget Year	ſS		-		•	8.2	43		-	8.	243
Congressional Add Detai	ils (\$ in Mil	lions, and I	ncludes G	eneral Red	<u>uctions)</u>					FY	2023	FY 2024
Project: FD5: Apache Pro	duct Improv	vement										
Congressional Add: Mo	odernizatior	n Efforts									10.000	-
Congressional Add: St	rap Down F	Pilotage									5.000	-
						Congre	ssional Ado	d Subtotals	for Project:	FD5	15.000	-
						Co	ongressiona	I Add Totals	s for all Proj	ects	15.000	-

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 7: Operational	PE 0607145A I Apache Future Development	
Systems Development		

Change Summary Explanation

Additional funding in FY25 begins the development effort of the Oil-Cooled Generator. This is a new effort to design, integrate, and qualify an oil-cooled generator (OCG) for the AH-64E based on systemic quality issues with the current legacy air-cooled generator.

Exhibit R-2A, RDT&E Project J	lustification	: PB 2025 A	rmy							Date: Ma	arch 2024	
Appropriation/Budget Activity 2040 / 7					-	am Elemen 45A <i>I Apach</i>	•	,	Project (N FD5 / Apac		ame) ct Improvem	ent
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
FD5: Apache Product Improvement	-	26.607	10.547	8.243	-	8.243	-	27.297	27.843	-	0.000	100.537
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
 A. Mission Description and But The Apache Capabilities Enhan address known capability gaps, integration and implementation B. Accomplishments/Planned 	cements (AC identified du to the AH-64	CE) prioritize ring real-wo E fleet to ind	s, informs, rld combat crease com	missions ai	nd associate				or transition			
Title: Apache Improved Tail Rot	•		•						FT	9.706	10.547	FT 2025
Description: Increase performa FY 2024 Plans: Apache Project Management Of reliability/maintainability risk miti will serve as the end cap milesto completed, Phase III will continu Concurrently, component fabrica FY 2024 to FY 2025 Increase/D The decrease in funding from FN Title: Oil Cooled Generator	nce/safety a fice (PMO) v gation asses one for Phase ie pre-qualifie ation and pro	s well as red vill continue sments and e II, locking cation and ri totyping effo atement:	ducing logis to execute technical d down the In sk reduction orts for the o	design leve levelopmen nproved Ta n efforts to design will o	el reviews, c t analysis. il Rotor Driv mature the commence.	component c The Critical ve System (I approved sy	lrawing dev Design Re TRDS) des /stem desig	elopment a view (CDR) ign. Once		1.901		8.243
<i>Description:</i> To design, integrative with the current legacy air-cooler <i>FY 2025 Plans:</i> Apache PMO will continue to work Integrated Baseline Review (IBF procurement to minimize risk of <i>FY 2024 to FY 2025 Increase/D</i>	d generator. ork with the c <) and Syster long lead iter	ontractor ar n Readines ms to the ov	d the Origir s Review (S	nal Equipme SRR) activit	ent Manufac ies. Contrac	cturer (OEM) supplier to	o conduct		1.901		0.243
									I	1	I	

Exhibit R-2A, RDT&E Project Jus	tification: PB	2025 Army							Date: N	arch 2024	
Appropriation/Budget Activity 2040 / 7	40 / 7 PE 0607145A / Apache Future Developm										nent
B. Accomplishments/Planned Pre	ograms (\$ in N	<u>/lillions)</u>							FY 2023	FY 2024	FY 2025
The increase in FY25 funding starts	s the developm	nent effort fo	r the Oil Coo	oled Generat	or.						
				Accon	nplishment	s/Planned Pro	ograms Sub	ototals	11.607	10.547	8.243
							FY 2023	FY 202	24		
Congressional Add: Modernizatio	n Efforts						10.000	1	-		
(LOE) for the Improved Tail Rotor I in preparation for component and b Congressional Add: Strap Down I FY 2023 Accomplishments: Deve article to evaluate options for a nex	ench level qua Pilotage elopment and d	lification.	n of a protot				5.000		-		
· · ·	• •			Cong	ressional A	dds Subtotals	s 15.000	1	-		
C. Other Program Funding Sumn	narv (\$ in Milli	ons)						1			
	2 .		<u>FY 2025</u>	FY 2025	FY 2025	51/ 0000		E \(0000	51/ 000	Cost To	
Line Item	FY 2023	<u>FY 2024</u>	Base	000	<u>Total</u>		FY 2027	FY 2028		-	Total Cost
• A05111: AH-64 Apache Block IIIA Reman	787.773	828.938	570.655	-	570.655	1.753	1.612	1.609) 1.62	5 5,763.012	7,956.977
• 0607145A: Apache	26.607	10.547	8.243	-	8.243	-	27.297	27.843	3 -	0.000	100.537
Future Development							-				
• AA6605: AH-64 MODS	85.840	113.127	81.026	-	81.026	94.530	122.083	107.678	3 114.77	6 Continuing	Continuing
<u>Remarks</u>											

D. Acquisition Strategy

The NRE will encompass subsystem integration and will utilize existing test aircraft, incorporate the technical insertions, and initiate appropriate qualification and operational flight-testing. FY 2020 - FY 2023, the Apache Capabilities Enhancements (ACE) delivers required capability enhancements supported by Apache's Modernization Strategy to ensure AH-64E maintains relevance and dominance throughout its expected service life.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Arm	у								Date:	March 20	24	
Appropriation/Budg 2040 / 7	Appropriation/Budget Activity 1040 / 7								R-1 Program Element (Number/Name)ProjectPE 0607145A / Apache Future DevelopmenFD5 / Apachett						
Product Developme	nt (\$ in M	illions)		FY	2023	FY 2	2024	FY 2 Ba	2025 Ise	FY 2 OC		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
Apache Improved Tail Rotor Drive System (ITRDS)	C/CPFF	The Boeing Company : Mesa, AZ	11.945	19.706	Mar 2023	10.547	Dec 2023	-		-		-	0.000	42.198	-
Strap Down Pilotage	MIPR	TBD : TBD	-	5.000	Apr 2023	-		-		-		-	0.000	5.000	-
Oil Cooled Generator	SS/CPFF	The Boeing Company : Mesa, AZ	-	1.901	Sep 2023	-		8.243	Dec 2024	-		8.243	0.000	10.144	-
		Subtotal	11.945	26.607		10.547		8.243		-		8.243	0.000	57.342	N/A
			Prior Years	FY	2023	FY 2	2024	FY 2 Ba	2025 Ise	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	11.945	26.607		10.547		8.243		-		8.243	0.000	57.342	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2	025 Army										Da	ite:	Marcl	n 20	24		
Appropriation/Budget Activity 2040 / 7		R-1 Pr PE 060 <i>t</i>	ogram)7145A	Elemer	nt (Nur he Futu	nber/Nan ure Develo	ne) opme	en I	Project FD5 / A _l	(Num bache	ber/ Pro	Nam duct	e) Impr	rovem	ent		
Event Name	FY 2023	FY 20				Y 2026 2 3 4	L 1	FY 2027		4 1	FY 2	202	8 4			3 4	
ITRDS Activities					ŀ				·			•				•	
Contract Award for SPIKE NLOS																	
Strap Down Pilotage	-																
Crossbow																	
Oil Cooled Generator	•																

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date	e: March 2024
propriation/Budget Activity 40 / 7		Element (Number I Apache Future D		Project (Numb FD5 / Apache F	er/Name) Product Improvement
	Schedule Details	S Sta	.rt		End
Events		Quarter	Year	Quart	
ITRDS Activities		4	2022	4	2027
					2021
Contract Award for SPIKE NLOS		3	2021	2	2024
Contract Award for SPIKE NLOS Strap Down Pilotage		3	2021 2023	2	
				2 3 4	2024

Exhibit R-2, RDT&E Budget Iten				Date: Marc	ch 2024							
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development						am Elemen I8A / <i>AN/TP</i>	•	et Acquisitio	tion Radar 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
Total Program Element	-	59.312	54.167	53.652	-	53.652	29.514	66.499	84.960	64.181	Continuing	Continuing
BY8: AN/TPQ-53 Counterfire Target Acquisition Radar Sys	-	59.312	54.167	53.652	-	53.652	29.514	66.499	84.960	64.181	Continuing	Continuing

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Long Range Precision Fires (LRPF) Modernization Priority in support of the AN/TPQ-53 Counterfire target Acquisition Radar System is a highly mobile radar set that automatically detects, classifies, tracks, and locates the point of origin of projectiles fired from mortar, artillery, and rocket systems. It mitigates close combat radar coverage gaps by providing a 90 degree search sector (stare mode) as well as 360 degree coverage (rotating). The AN/TPQ-53 system interoperates with mission command systems to provide the maneuver commander increased counterfire radar flexibility. It provides data to the Forward Area Air Defense Command and Control (FAAD C2) node for the sense and warn force protection capability. The AN/TPQ-53 currently supports contingency operations to include Operation Inherent Resolve (OIR) and is provided to Brigade Combat Teams (BCTs), Field Artillery Brigades (FABs) and Division Artilleries (DIVARTYs).

Fiscal Year (FY) 2025 research, development, test and evaluation (RDT&E) funds in the amount of \$53.652 million supports the completion of software development, integration, and test for Distributed Digital Receiver Exciter (DDREX) Capability Sets #1 and #2 to enhance system survivability, electronic protection (EP), bandwidth agility, and an integrated fires capability in a peer/near-peer threat environment. FY 2025 funds also continues DDREX Capability Sets #3 and #4 to counter indirect fire with improved hostile weapon location accuracy and survivability against the latest electronic warfare threats identified in the Validated Online Lifecycle Threat (VOLT) Counterfire Radar Systems (CFRS) report dated 15 February 2022.

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	61.559	54.167	33.213	-	33.213
Current President's Budget	59.312	54.167	53.652	-	53.652
Total Adjustments	-2.247	0.000	20.439	-	20.439
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-2.247	-			
 Adjustments to Budget Years 	-	-	20.439	-	20.439

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
	R-1 Program Element (Number/Name) PE 0607148A / AN/TPQ-53 Counterfire Target Acquisitio	on Radar System

Change Summary Explanation

The FY 2025 increase of \$20.439 million RDT&E continues DDREX Capability Sets #3 and #4 design and development, enabling survivability improvements, hostile weapon location accuracy, and advanced electronic protection features to address urgent emerging threats identified in the Validated Online Lifecycle Threat (VOLT) Counterfire Radar Systems (CFRS).

Exhibit R-2A, RDT&E Project Ju	xhibit R-2A, RDT&E Project Justification: PB 2025 Army												
Appropriation/Budget Activity 2040 / 7		PE 0607148A / AN/TPQ-53 Counterfire Targ BY8 / AN/T					Number/Name) /TPQ-53 Counterfire Target n Radar 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	
BY8: AN/TPQ-53 Counterfire Target Acquisition Radar Sys	-	59.312	54.167	53.652	-	53.652	29.514	66.499	84.960	64.181	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Long Range Precision Fires (LRPF) Modernization Priority in support of the AN/TPQ-53 Counterfire target Acquisition Radar System is a highly mobile radar set that automatically detects, classifies, tracks, and locates the point of origin of projectiles fired from mortar, artillery, and rocket systems. It mitigates close combat radar coverage gaps by providing a 90 degree search sector (stare mode) as well as 360 degree coverage (rotating). The AN/TPQ-53 system interoperates with mission command systems to provide the maneuver commander increased counterfire radar flexibility. It provides data to the Forward Area Air Defense Command and Control (FAAD C2) node for the sense and warn force protection capability. The AN/TPQ-53 currently supports contingency operations to include Operation Inherent Resolve (OIR) and is provided to Brigade Combat Teams (BCTs), Field Artillery Brigades (FABs) and Division Artilleries (DIVARTYs).

Fiscal Year (FY) 2025 research, development, test and evaluation (RDT&E) funds in the amount of \$53.652 million supports the completion of software development, integration, and test for Distributed Digital Receiver Exciter (DDREX) Capability Sets #1 and #2 to enhance system survivability, electronic protection (EP), bandwidth agility, and an integrated fires capability in a peer/near-peer threat environment. FY 2025 funds also continues DDREX Capability Sets #3 and #4 to counter indirect fire with improved hostile weapon location accuracy and survivability against the latest electronic warfare threats identified in the Validated Online Lifecycle Threat (VOLT) Counterfire Radar Systems (CFRS) report dated 15 February 2022.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Multi-Domain Operation (MDO) Digitization / Distributed Digital Receiver Exciter (DDREX)	48.003	47.057	11.576
Description: MDO Digitization / Distributed Digital Receiver Exciter (DDREX) is a modification-in-service Engineering Change Proposal (ECP) that provides increased force protection by addressing emerging and evolving electronic attack threats, improving electronic protection capabilities against Cyber Electromagnetic Activity (CEMA), and improving performance in a congested spectrum/environment via waveform diversity, spectrum agility and broadening the operational bandwidth. The system is also less susceptible to directed energy, jamming, and provides improved extended range capability to enable timely and accurate targetable data in support of Long Range Precision Fires (LRPF).			
FY 2024 Plans: FY 2024 research, development, test and evaluation (RDT&E) funds in the amount of \$47.057 million supports the continuation of DDREX modification kit design and the integration, and testing of four DDREX Engineering Development Models (EDMs) in support of Capability Set #1 and Capability Set #2. These Capability Sets, which include development of DDREX hardware and			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	PE 0607148A I AN/TPQ-53 Counterfire Targ BY	oject (Number/I 8 I AN/TPQ-53 quisition Radar 3	Counterfire Ta	arget
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
software to enable advanced survivability capability, will increase Counterfire T survivability.	arget Acquisition (CTA) performance and radar			
<i>FY 2025 Plans:</i> FY 2025 research, development, test and evaluation (RDT&E) funds in the am DDREX modification kit design and the software integration and testing of four in support of Capability Set #1 and Capability Set #2. These Capability Sets, w software to enable advanced survivability capability, will increase Counterfire T survivability.	DDREX Engineering Development Models (EDM hich include development of DDREX hardware an	5)		
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 efforts center around EDM hardware build, software development, intervironmental qualification testing, software builds, Developmental Test (DT), a 2024 to FY 2025 is a result of decreased material procurement costs and hardware builds.	and User Test. The net reduction in costs from FY			
<i>Title:</i> DDREX Capability Sets #3 and #4		-	-	17.671
Description: Capability Set #3 will merge with Capability Set #2 software to en electronic protection features. The capability integrates electronic protection so survivable in a contested and complex Cyber Electromagnetic Activity (CEMA) It includes long-range communications and sensor fusion that allows multiple so Capability Set #4 will merge with Capability Set #3 software. The capability includes navigation, radar survivability techniques, and terminal guidance to support Long	oftware techniques for the AN/TPQ-53 to be environment against a peer/near-peer threat. ensors to exchange data with other sensors. ludes counter electronic warfare, radar aided			
<i>FY 2025 Plans:</i> FY 2025 research, development, test and evaluation (RDT&E) funds in the am the survivability improvement effort for the design and development of DDREX development and integration of an additional high performance data processing	Capability Sets #3 and #4. This will require the			
FY 2024 to FY 2025 Increase/Decrease Statement: The net increase in costs from FY 2024 to FY 2025 represents the initiation of enable survivability improvements and advanced electronic protection features				
Title: Modernization Development Efforts and Emerging Threats		8.288	4.272	8.094
Description: Modernization Development Efforts and Emerging Threats provide the battlefield by countering indirect fire and improving survivability against electronic survivability against electro				

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date:	March 2024			
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607148A <i>I AN/TPQ-53 Counterfire Targ</i> <i>et Acquisition Radar System</i>		· · · · · · · · · · · · · · · · · · ·			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025		
Online Lifecycle Threat (VOLT). These efforts will continue to address complex development.	evolving threats through advanced survivabilities	iy 🛛				
FY 2024 Plans: FY 2024 research, development, test and evaluation (RDT&E) funds in the amo Modernization Development Efforts and Emerging Threats. This requirement w threats on the battlefield that are in the VOLT. This requirement is necessary to	vill continue to allow the ability to address evol-	ving				
FY 2025 Plans: FY 2025 research, development, test and evaluation (RDT&E) funds in the amo Modernization Development Efforts and Emerging Threats. This requirement w threats on the battlefield that are in the VOLT CFRS, 15 February 2022. This re survivability improvements.	vill continue to allow the ability to address evolv	ing				
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 efforts center around software engineering development. The net increase of continued engineering efforts, sub-system to system level functional testing evaluation event at the test range and post data analysis on the radar's perform	prior to executing the live fire performance test					
Title: Test & Evaluation Support		-	-	13.243		
Description: Test and Evaluation Support provides the planning, execution, ar Test Program.	nd reporting for the AN/TPQ-53 MDE and DDR	EX				
<i>FY 2025 Plans:</i> FY 2025 research, development, test and evaluation (RDT&E) funds in the amount test & evaluation events for DDREX Capability Sets #1 and #2 that includes cylitests to evaluate radar performance, reliability, survivability, radar system acceptransportability tests, interoperability tests, Developmental Tests (DTs), and Us	bersecurity assessments, engineering live fire ptance tests, environmental qualification tests,					
FY 2024 to FY 2025 Increase/Decrease Statement: The net increase in costs from FY 2024 to FY 2025 is a result of execution of th #2 in FY 2025.	ne test program for DDREX Capability Sets #1	and				
<i>Title:</i> Program Management Support		3.02	1 2.838	3.068		
Description: Program management efforts include engineering, integration, and development and modernization efforts addressing new and emerging threats.	nd test support associated with DDREX					

Exhibit R-2A, RDT&E Project Justi	fication: PB	2025 Army							Date: Ma	arch 2024			
Appropriation/Budget Activity 2040 / 7	n/Budget Activity R-1 Program Element (Number/Name) Proj PE 0607148A / AN/TPQ-53 Counterfire Targ BY8									ect (Number/Name) I AN/TPQ-53 Counterfire Target iisition Radar Sys			
B. Accomplishments/Planned Prog	grams (\$ in N	<u>/lillions)</u>						ſ	FY 2023	FY 2024	FY 2025		
FY 2024 Plans: FY 2024 funding of \$2.838 million su	pports progra	am manager	nent require	ments.									
FY 2025 Plans: FY 2025 funding of \$3.068 million su	pports progra	am manager	nent require	ments.									
FY 2024 to FY 2025 Increase/Decre The net increase in costs from FY 20 and User Test.			of increased	d support for	the execution	on of Develo	pmental Test	(DT)					
				Accon	nplishments	s/Planned P	rograms Sub	ototals	59.312	54.167	53.65		
C. Other Program Funding Summa	ry (\$ in Milli	ons)											
			FY 2025	FY 2025	FY 2025					Cost To	<u>)</u>		
Line Item • B05310: AN/TPQ-53 Counterfire Target Acquisition Radar	<u>FY 2023</u> 338.387	<u>FY 2024</u> -	<u>Base</u> 0.000	<u>000</u> -	<u>Total</u> 0.000	<u>FY 2026</u> -	FY 2027 1.889	FY 202 1.82			Total Cos 343.949		
• BA5315: AN/TPQ-53 MOD-IN-SERVICE LINE	70.975	99.782	21.250	-	21.250	19.360	343.413	356.03	35 435.488	Continuing	Continuin		
<u>Remarks</u>													

D. Acquisition Strategy

The AN/TPQ-53 Distributed Digital Receiver Exciter (DDREX) Capability Sets #1 and #2 development began in FY 2022. This effort builds upon GaN, SDP 2.0, extended range (ER), electronic protection (EP), and secure contractor facilitization efforts. The initial development task order took place on the FRP Indefinite Delivery Indefinite Quantity (IDIQ) contract in FY 2022 and includes engineering development, design, prototyping, subsystem integration, and survivability software (electronic protect). A second task order will award in FY 2023 to develop and harden the survivability software. All development efforts will culminate in a series of tests leading to an Operational Test in the 2Q FY 2026. The program will utilize RDT&E funds in FY 2025 to award a new task order in order to support the start of the survivability improvement effort for the design and development of DDREX Capability Sets #3 and #4. DDREX hardware and initial survivability capability will undergo Operational Testing in 2Q FY 2026 to support a procurement decision. Full material release is planned for FY 2027. Procurement funds in FY 2027 will support DDREX mod kit buys, technical manual and training material updates, as well as the preparation of organic depot and supply transition of the DDREX configuration. Organic depot establishment and supply transition will take place in FY 2029. DDREX retrofitted systems will be fielded beginning in 4QFY 2029.

In April 2022, Army approved an Acquisition Objective (AAO) increase of 16 systems from 189 to 205 systems due to the establishment of eight new Army National Guard Division Artilleries (ARNG DIVARTYs). In April 2023, the Army approved an AAO increase of 12 systems from 205 to 217 due to an increase in requirements to replace eight repair cycle floats (RCF) supporting joint urgent operational need (JUON) CC-0558, one additional RCF requirement for an increase in fleet size, and

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name)Project (Number/Name)PE 0607148A I AN/TPQ-53 Counterfire TargBY8 I AN/TPQ-53 Counterfire Targetet Acquisition Radar SystemAcquisition Radar Sys
three additional systems to support the United States Army Training and Doctr program awarded an FRP Lot 4 production contract in FY 2023 for a total of 28	ine Command (TRADOC) requirements. In conjunction with Ukraine Assistance funds, the 3 systems. The last FRP Lot 4 system will deliver in FY 2026.
	ffort that includes survivability, resiliency, and effectiveness improvements against vith an evolving common fires mission command, common development tools and assessments and progress toward closure of performance gaps.
DE 0607148A: AN/TPO-53 Counterfire Target Acquisition	

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7							•	N/TPQ-5	umber/Na 53 Counter em	Project (Number/Name) BY8 I AN/TPQ-53 Counterfire Target Acquisition Radar Sys					
Product Developmen	nt (\$ in M	illions)		FY	2023	FY 2024		FY 2025 Base		FY 2 OC		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
Modernization Development Efforts and EmergingThreats	SS/CPFF	Lockheed Martin : Syracuse, NY	8.453	8.288	Dec 2022	4.272	Dec 2023	8.094	Dec 2024	-		8.094	0.000	29.107	Continuing
MDO Digitization / Distributed Digital Receiver Exciter (DDREX)	SS/CPFF	Lockheed Martin : Syracuse, NY	35.760	48.003	Dec 2022	47.057	Dec 2023	11.576	Dec 2024	-		11.576	0.000	142.396	Continuin
DDREX Capability Sets #3 and #4	SS/CPFF	Lockheed Martin : Syracuse, NY	-	-		-		17.671	Dec 2024	-		17.671	0.000	17.671	Continuin
	·	Subtotal	44.213	56.291		51.329		37.341		-		37.341	0.000	189.174	N/A
Support (\$ in Millions)			FY 2	FY 2023 FY 2024		2024	FY 2025 FY 2 Base OC								
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 - Contractor	SS/ Various	Various : Various	0.880		Nov 2022	1.277	Nov 2023	1.382		-		1.382	0.000		Continuing
Program Management Support - Government	SS/ Various	Various : Various	0.916	1.661	Nov 2022	1.561	Nov 2023	1.686	Nov 2024	-		1.686	0.000	5.824	Continuing
		Subtotal	1.796	3.021		2.838		3.068		-		3.068	0.000	10.723	N/A
Test and Evaluation	(\$ in Milli	ons)		FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO					
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 & Evaluation Support	SS/CPFF	Lockheed Martin : Syracuse, NY	-	-		-		13.243	Dec 2024	-		13.243	0.000	13.243	Continuing
		Subtotal	-	-		-		13.243		-		13.243	0.000	13.243	N/A
			Prior Years	FY	2023	FY 2	2024		2025 Ise	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	46.009	59.312		54.167		53.652		-		53.652	0.000	213.140	N/A

PE 0607148A: *AN/TPQ-53 Counterfire Target Acquisition...* Army

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	2025 Army					Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7			-	ement (Number/N AN/TPQ-53 Counte adar System	erfire Targ BY8 I	ct (Numbe AN/TPQ-5 sition Rada	3 Counterf	ire Targ	et
	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

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Appropriation/Budget Activity 040 / 7	Anny				P	E 060)714	18A /		PQ-53	Col	er/Nam unterfire		rg	Proje BY8 I Acqu	AŇ	Nun I/TP	nbe Q-5	er/N 53 C	ount)		rget	
Event Name		Y 2023			2024			FY 2				2026			Y 202					028				2029
DDREX Capability Sets #1 and #2 Development	1	2 3 4	1	2	3	4	1	2	3 4	1	2	3 4	1	2	2 3	4	1		2	3	4	1	2	3 4
DDREX Capability Sets #1 and #2 Integration and Testing																								
DDREX System Critical Design Review																								
Developmental Test #1							5																	
Developmental Test #2																								
Soldier Touch Point #1 (CDR)																								
Soldier Touch Point #2 (EDM)																								
Soldier Touch Point #3 (Live Fire)						4																		
Soldier Touch Point #4 (Cooperative Vulnerability Penetr																								
SoldierTouch Point #5 (Tech Manual Verification)									8															
DDREX Operational Test																								
DDREX Adversarial Assessment												l –												
DDREX Transition to Organic Supply																								

xhibit R-4, RDT&E Schedule Profile: PB 2025	Army									Da	te: March 2	2024
ppropriation/Budget Activity 040 / 7			R-1 Pro PE 060 et Acqu	7148A	I AN/TF	PQ-53	Counte			Ŵ/TPQ		erfire Target
Event Name	FY 2023	FY 20			2025	<u> </u>	Y 202		FY 2027		FY 2028	FY 2029
DDREX Material Release	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
DDREX Transition to Organic Depot Repair												
Modernization, Emerging Threats and Testing (per VOLT)												
DDREX Capability Sets #3 and #4 Development												
DDREX Capability Sets #3 and #4 Integration and Testing												

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607148A <i>I AN/TPQ-53 Counterfire Targ</i> <i>et Acquisition Radar System</i>	Project (Number/Name) BY8 <i>I AN/TPQ-53 Counterfire Target</i> <i>Acquisition Radar Sys</i>
	Schedule Details	

	Sta	art	E	nd
Events	Quarter	Year	Quarter	Year
DDREX Capability Sets #1 and #2 Development	1	2022	3	2025
DDREX Capability Sets #1 and #2 Integration and Testing	1	2024	4	2025
DDREX System Critical Design Review	1	2023	1	2023
Developmental Test #1	2	2025	2	2025
Developmental Test #2	3	2025	3	2025
Soldier Touch Point #1 (CDR)	1	2023	1	2023
Soldier Touch Point #2 (EDM)	4	2024	4	2024
Soldier Touch Point #3 (Live Fire)	1	2025	1	2025
Soldier Touch Point #4 (Cooperative Vulnerability Penetration Assessment)	4	2025	4	2025
SoldierTouch Point #5 (Tech Manual Verification)	4	2025	4	2025
DDREX Operational Test	2	2026	2	2026
DDREX Adversarial Assessment	3	2026	3	2026
DDREX Transition to Organic Supply	1	2027	4	2029
DDREX Material Release	1	2027	1	2027
DDREX Transition to Organic Depot Repair	2	2029	2	2029
Modernization, Emerging Threats and Testing (per VOLT)	1	2022	4	2029
DDREX Capability Sets #3 and #4 Development	1	2025	4	2029
DDREX Capability Sets #3 and #4 Integration and Testing	3	2028	4	2030

Exhibit R-2, RDT&E Budget Iten	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope			am Elemen 50A / Intel C	•	,				
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	-	13.343	4.345	9.753	-	9.753	13.165	13.637	14.132	14.645	0.000	83.020
BS5: Intel Cyber Development	-	13.343	4.345	9.753	-	9.753	13.165	13.637	14.132	14.645	0.000	83.020

A. Mission Description and Budget Item Justification

The Rapid Capability Development Program provides cutting edge Signals Intelligence, Electronic Warfare, and Cyberspace (SIGINT/EW/Cyber) capabilities to gain an advantage over rapidly emerging and changing threats in multiple domains. The capabilities enable Army mission commanders to execute overarching mission command and gain a significant competitive advantage inside of the threat's decision cycle. Further, rapid development efforts address capabilities needed to realize specified tasks outlined in the DoD Cyber Strategy and The Army's Operating Concept by integrating these multi-domain capabilities into modular and scalable platforms and architectures that are tailored to conduct expeditionary operations and accelerate the decision cycle across the range of military operations. Development of capabilities is derived from established JCIDs, CRDs, and ONS, and in response to Theater Army Commands and Functional/Geographic Combatant Command named operations.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	13.343	4.345	4.849	-	4.849
Current President's Budget	13.343	4.345	9.753	-	9.753
Total Adjustments	0.000	0.000	4.904	-	4.904
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	4.904	-	4.904

Change Summary Explanation

Increased funding to develop multi-domain intelligence and cyberspace operations technologies.

Appropriation/Budget Activity 2040 / 7						am Elemen 50A I Intel C			Project (N BS5 / Intel			
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
BS5: Intel Cyber Development	-	13.343	4.345	9.753	-	9.753	13.165	13.637	14.132	14.645	0.000	83.020
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Buc INSCOM's SIGINT/EW/Cyberspa a capability, the target delivery w Combatant Commands, ARCYBE INSCOM's tools portfolio provide software developers to build tools	ice Capabil indow is be ER and PdN s mission a s at the spe	ity Developr tween 30 da /-IW to deve pplications t ed required	nent Progra ays up to 12 elop an effe hat serve as for persiste	months. If ctive capab s the "amm nt engagen	INSCOM ca ility solution unition" nee nent.	annot delive n. eded to conc	er in the wind duct operati	dow, we co	ordinate with	n Geograph vhile enabli	nic and Fund	ctional
Maintain robust development leve	C C	C C		ctronic war	lare, signals	sintelligence	e and cyber	space oper				
B. Accomplishments/Planned P Title: Offensive Cyberspace Ope	• •		•							2023 F 13.343	Y 2024 4.345	FY 2025 9.753
Description: INSCOM's RDTE p intelligence collection and cybers directed, degrade, deny, disrupt, conditions favorable to the applica	pace techno or destroy a	ologies (SIG adversary C4	INT, EW, C 4I and shap	yberspace) e the opera	designed t	o collect, pr	ocess, expl	oit, and whe	en			
FY 2024 Plans: Develop and support leading-edg process, exploit, and, when direct and intelligence (C4I) cyber syste create conditions favorable to the intelligence and cyberspace oper Defense Strategy, Comprehensiv Defense Cyber Strategy, Preside Defense Presidential Directive (H INSCOM will address the operation of offensive capabilities to maintal spectrum focused on signals intel and Electronic Attack), and cyber	ed, degrade ms to enab application ations techr e National (ntial Policy SPD) 23, at onal force re in critical ac ligence (SI	e, deny, disi le command of other ele hologies in c Cyber-Secu Directive (P nd The Arm eports of inc dvantage ac GINT), elect	rupt, or dest lers in shap ments of na lirect suppo rity Initiative PD) 20, Nat y Operating reasing thre ross the op ronic warfar	roy threat of ing the operational power of the full a, National Securi Concept. eat sophistic erational do re (EW, cor	command, c erational wa er. Support I range of m Security Stra rity Presider cation that r omains, part nposed of tl	control, com rfighting env the develop issions calle ategy, Natio ntial Directiv requires mat ticularly with he sub-dom	munications vironment ir oment of mu ed for in the nal Defense ve (NSPD) 5 tching pace nin the elect ains of Elect	s, computer order to Iti-domain National Guidance 4, Homelar in developr romagnetic tronic Supp	nd ment port			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army

Date: March 2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607150A / Intel Cyber Development		ct (Number/N Intel Cyber D	,	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
the Army service component commander's emerging needs. The requirement t multi-domain operations that are expanding across the warfighting domains dri capabilities.					
<i>FY 2025 Plans:</i> Develop and support leading-edge multi-domain intelligence and cyberspace of process, exploit, and, when directed, degrade, deny, disrupt, or destroy threat of intelligence (C4I) cyber systems to enable commanders in shaping the operation create conditions favorable to the application of other elements of national power intelligence and cyberspace operations technologies in direct support of the full Defense Strategy, Comprehensive National Cyber-Security Initiative, National Security Defense Presidential Directive (HSPD) 23, and The Army Operating Concept.	command, control, communications, computer onal warfighting environment in order to er. Support the development of multi-domain I range of missions called for in the National Security Strategy, National Defense Guidance	9 ,			
INSCOM will address the operational force reports of increasing threat sophisti of offensive capabilities to maintain critical advantage across the operational do spectrum focused on signals intelligence (SIGINT), electronic warfare (EW, cor and Electronic Attack), and cyberspace operations. Expand combatant comma the Army service component commander's emerging needs. The requirement t multi-domain operations that are expanding across the warfighting domains dri capabilities.	pmains, particularly within the electromagnetic mposed of the sub-domains of Electronic Sup nd focal points in accordance with Secretary of to address NEER-PEER threat actors and Arm	c port of ny			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding growth as a result of increased focus on the development of leading-e operations technologies.	dge multi-domain intelligence and cyberspace	e			
	Accomplishments/Planned Programs Sub	ototals	13.343	4.345	9.753
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A					

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	y								Date:	March 20)24	
Appropriation/Budg 2040 / 7	et Activity	1						ement (N ntel Cybe				t (Numbe ntel Cyber	,	ment	
Product Developme	nt (\$ in M	illions)		FY 2	2023	FY 2	2024	FY 2 Ba			2025 CO	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
MDI Cyberspace Operations Capability Development	Various	Various : Various	18.263	13.343		4.345		9.753		-		9.753	Continuing	Continuing	Continuing
		Subtotal	18.263	13.343		4.345		9.753		-		9.753	Continuing	Continuing	N/A
			Prior Years	FY 2	2023	FY 2	2024	FY 2 Ba			2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	18.263	13.343		4.345		9.753		-		9.753	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army						Date: March 20	24
Appropriation/Budget Activity 2040 / 7					t (Number/Name Syber Developme		Number/Name) I Cyber Developn	nent
-	FY 2023	FY 20	024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Event Name	1 2 3 4	1 2 3		2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
IP-BASED OPERATIONS PLATFORMS	IP-BASED OPERATION	PLATFORMS						
AERIAL/GROUND-BASED PLATFORMS	AERIAL/GROUND-BASE	D PLATFORMS						
REMOTE ACCESS CAPABILITIES	REMOTE ACCESS CAP							
CLOSE ACCESS CAPABILITIES	CLOSE ACCESS CAPAI	BILITIES						
PLATFORM CZ AND VISUALIZATION CAPABILITIES	PLATFORM CZ AND VIS		PABILITIES					
TESTING & EVALUATION SUPPORT FOR RDTE CAPABILITIE				BILITIES				
L					1		1	1

xhibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	ch 2024
ppropriation/Budget Activity 040 / 7		Element (Number I Intel Cyber Deve		Project (Number/Nan BS5 / Intel Cyber Deve	
S	Schedule Details	S			
		Sta	art	E	nd
Events		Quarter	Year	Quarter	Year
IP-BASED OPERATIONS PLATFORMS		1	2022	4	2029
AERIAL/GROUND-BASED PLATFORMS		1	2022	4	2029
REMOTE ACCESS CAPABILITIES		1	2022	4	2029
CLOSE ACCESS CAPABILITIES		1	2022	4	2029
PLATFORM CZ AND VISUALIZATION CAPABILITIES		1	2022	4	2029
FLATFORM CZ AND VISUALIZATION CAPABILITIES		•			

Exhibit R-2, RDT&E Budget Item	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ntion, Army	I BA 7: Ope	rational	R-1 Progra PE 060731		•	,	evelopment	f		
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	26.131	19.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.131
BR5: Army Operational Systems Development	-	26.131	19.000	-	-	-	-	-	-	-	0.000	45.131
			1									

A. Mission Description and Budget Item Justification

The Army Operational System Development budget line includes development efforts across all Army Battlefield Operating Systems to upgrade systems that have been fielded or have received approval for full rate production. Systems in this budget line are characterized as having, or supporting programs that have received, Milestone C or Low Rate Initial Production (LRIP) approval.

Selected programs within this budget line will exhibit a logical progression of program phases, development and production funding within the FYDP, consistent with the Department's full funding policy.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	26.131	19.000	22.388	-	22.388
Current President's Budget	26.131	19.000	0.000	-	0.000
Total Adjustments	0.000	0.000	-22.388	-	-22.388
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-22.388	-	-22.388

Change Summary Explanation

Funding decrease due to budget line item restructure in order to protect Army interests.

Exhibit R-2, RDT&E Budget Iten	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope			am Element 13A / Electro	•	,	ent			
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	-	11.417	6.389	5.559	-	5.559	5.565	5.623	5.687	5.743	0.000	45.983
CE2: Prophet	-	11.417	6.389	5.559	-	5.559	5.565	5.623	5.687	5.743	0.000	45.983

A. Mission Description and Budget Item Justification

This Program Element encompasses operational system development for tactical Electronic Warfare (EW) terrestrial (ground) employment applications. The systems under this program provide the Army with the capability to detect, identify, locate, collect/process, report, and engage (disrupt, degrade or deny) hostile forces to prevent their effective use of communications & non-communications networks, counter-mortar/counter-battery radars, surveillance radars, electronically fused munitions and other enemy threats using the Electro-Magnetic Spectrum (EMS). Prophet enables integration, interoperability and force modernization with emerging capabilities in support of Multi-Domain Task Forces.

Fiscal Year (FY) 2025 funding in the amount of \$5.559 million funds the Prophet Enhanced efforts (Project CE2). Project CE2 supports the Prophet Enhanced Program of Record, the Army's current Terrestrial Signals Intelligence (SIGINT) system. Funding provides for development of relevancy efforts for state-of-the-art SIGINT exploitation to pace near peer and emerging enemy threat signals as well as engineering to mitigate component obsolescence. The primary mission of the Prophet Enhanced effort is to provide 24-hour Situation Development and Information Superiority to the supported maneuver brigade enabling the most effective engagement of enemy forces. Prophet Enhanced provides a modular, scalable, open architecture-based system solution optimized for ease of use in a variety of configurations.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	6.432	6.389	5.689	-	5.689
Current President's Budget	11.417	6.389	5.559	-	5.559
Total Adjustments	4.985	0.000	-0.130	-	-0.130
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	4.985	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-0.130	-	-0.130

Change Summary Explanation

Fiscal Year (FY) 2025 Decrease of \$0.130 million due to gained efficiencies in collaboration with cross portfolio software development and reduced support costs.

Exhibit R-2A, RDT&E Project Ju	stification:	: PB 2025 A	rmy							Date: Marc	h 2024	
Appropriation/Budget Activity 2040 / 7					-	am Element 3A / Electro	•	,	Project (N CE2 / Prop	umber/Nan bhet	ne)	
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
CE2: Prophet	-	11.417	6.389	5.559	-	5.559	5.565	5.623	5.687	5.743	0.000	45.983
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project CE2 supports the Prophet Enhanced Program of Record, the Army's current fielded terrestrial Signals Intelligence (SIGINT)/Electronic Warfare Support system. Funds provide for development and integration of Signals of Interest (SOI); Technical Insertion engineering for Next Generation Signals; state-of-the-art SIGINT exploitation techniques to increase the capabilities of Prophet Enhanced; enabling the system to pace near peer; and emerging enemy threat signals. Additionally, funds provide for efforts to include engineering, development and testing to mitigate component obsolescence. The Prophet Enhanced is the tactical commander's organic ground-based SIGINT/Electronic Warfare Support system. Its primary mission is to provide 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. Prophet Enhanced provides a modular, scalable, open architecture-based system solution optimized for ease of use in a variety of configurations. It also incorporates product modification, integration, evaluation and demonstration events of equipment for rapid integration of Technical Insertions (TI) and product development to ensure operational relevance.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Program Management	1.336	0.682	0.520
Description: Engineering and technical oversight of the development of next generation signals.			
FY 2024 Plans: Funds will provide for continued matrix and contractor system engineering and program management support for the Prophet program.			
FY 2025 Plans: FY 2025 Funds will provide for continued matrix and contractor system engineering support for the Prophet program.			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding change is consistent with the planned lifecycle of this effort.			
Title: Signal of Interest upgrades	3.285	2.854	2.853
Description: The Signal Environment that Prophet Systems exploit is constantly contested with evolving threats. This environment creates gaps in Prophet's ability to collect and exploit these signals. Prophet must integrate the latest emerging Intelligence Community (IC), commercial solutions and capabilities from other sources to remain relevant against these numerous, key, and high-priority emerging threats.			
FY 2024 Plans:			

	stification: PB	2025 Army		1						arch 2024	
Appropriation/Budget Activity 2040 / 7						nent (Numb ectronic War	er/Name) fare Develop		(Number/N cophet	ame)	
B. Accomplishments/Planned P									FY 2023	FY 2024	FY 2025
Continuing development and intersignals and libraries of signals ad peer signals and emerging threat	dress key exploi										
FY 2025 Plans: FY 2025 will Continue developme (PS2). The new signals and librar tactical near peer signals and em	ies of signals ad										
FY 2024 to FY 2025 Increase/De Funding change is consistent with			effort.								
Title: Componnet Obsolescence	Engineering								6.796	2.853	2.18
Description: Due to the highly te are no longer produced or suppor replacement parts.											
FY 2024 Plans: Continuing obsolescence engineer	ering for compon	ents on the	Prophet Enh	anced syste	ms.						
FY 2025 Plans: FY 2025 will Continue obsolescer systems.	ice engineering	and conduct	customer te	esting for cor	nponents or	the Prophe	t Enhanced				
FY 2024 to FY 2025 Increase/De Fiscal Year (FY) 2025 funding de funding levels anticipated to rema	crease of \$0.667	' million due	to gained ef	ficiencies fro	om obsolesc	ence engine	ering. Future	e FY			
				Accon	nplishment	s/Planned P	rograms Su	btotals	11.417	6.389	5.55
C. Other Program Funding Sum	mary (\$ in Milli	ons <u>)</u>									
C. Other Program Funding Sum			FY 2025	FY 2025	FY 2025	EV 2026	EV 2027	EV 2029	EV 2020	<u>Cost To</u>	
	mary (\$ in Milli <u>FY 2023</u> 9.224	<u>ons)</u> <u>FY 2024</u> 4.169	FY 2025 Base 6.541	<u>FY 2025</u> <u>OCO</u> -	<u>FY 2025</u> <u>Total</u> 6.541	<u>FY 2026</u> 6.568	<u>FY 2027</u> 6.572	FY 2028 6.577	<u>FY 2029</u> 6.643	Complete	Total Cos

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 7	PE 0607313A / Electronic Warfare Develop	CE2 / Prop	ohet
	ment		

D. Acquisition Strategy

The Prophet Research and Development (R&D) Acquisition Strategy is structured to maintain operational relevancy of Prophet Enhanced systems in a dynamic threat environment while reducing risk and streamlining business and engineering processes. Developing a portfolio wide system agnostic common software baseline which provides a reduction in costs from multiple software efforts and provides increased threat detection capabilities and reduces developmental risks from having multiple disparate software activities. Contracting activities are to maintain SIGINT relevance and complete Technical Insertion (TI) to Prophet Enhanced systems to pursue the latest Signals of Interest and design against obsolescence. The Technical Insertion (TI) contract supports R&D and other developmental work.

Appropriation/Budge 2040 / 7	-	ost Analysis: PB 2	025 Army	y					umber/Na Warfare I		Project CE2 / F	(Number	March 20 r/ Name)	24	
Management Service	es (\$ in M	illions)		FY 2	2023	FY	2024		2025 Ise	FY 2	2025 CO	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/Various	PM Electronic Warfare & Cyber : APG, MD	0.365	1.336	Nov 2022	0.682	Nov 2023	0.520	Nov 2024	-		0.520	0.000	2.903	-
		Subtotal	0.365	1.336		0.682		0.520		-		0.520	0.000	2.903	N//
Product Developmer	Contract			FY 2		FY 2			2025 Ise		2025 CO	FY 2025 Total			Target
Cost Category Item	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	Value of Contract
Signal of Interest Upgrades	SS/CPFF	GD Mission Systems and Various Supporting Organizations : Scottsdale, AZ	2.654	3.285	Jul 2023	2.854	Dec 2023	2.853	Mar 2025	-		2.853	0.000	11.646	-
Component Obsolescence Engineering	SS/CPFF	GD Mission Systems and Various Supporting Organizations : Scottsdale, AZ	2.654	6.796	Aug 2023	2.853	Dec 2023	2.186	Mar 2025	-		2.186	0.000	14.489	-
		Subtotal	5.308	10.081		5.707		5.039		-		5.039	0.000	26.135	N/A
Remarks Efforts will be accomplished become obsolete or are no track to be awarded March	longer prod			Signals of I	nterest and	Obsolescer	nce efforts w	ere awarde		FY 23. The	FY24 effor		Cost To	Total	Target Value of
			Years	FY 2	2023	FY 2	2024	Ba	ise	00	0	Total	Complete	Cost	Contrac
		Project Cost Totals	5.673	11.417	1	6.389	1	5.559	1 1			5.559	0.000	29.038	N/

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	025 Army	ý					Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7				ement (Number/I Electronic Warfare		Project (N CE2 / Prop		/Name)		
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2		Y 2025 Total	Cost To Complete	Total Cost	Target Value of Contrac

Remarks

xhibit R-4, RDT&E Schedule Profile: PE ppropriation/Budget Activity)40 / 7	-	I	R-1 Program Elemer PE 0607313A I Electr ment	nt (Number/Name) ronic Warfare Develop		Date: March 20. lumber/Name) phet	
Event Name	FY 2023 1 2 3 4	FY 202	24 FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Prophet Enhanced Technical Insertion							
Customer Testing (2025)							
Customer Testing (2027)							
Customer Testing (2029)							

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024	
propriation/Budget Activity 40 / 7	R-1 Program Element (Number/Name)Project (Number/Name)PE 0607313A I Electronic Warfare Develop mentCE2 I Prophet					
	Schedule Details					
				End		
		Sta	art	En	nd	
Events		Sta Quarter	art Year	Er Quarter	nd Year	
Events Prophet Enhanced Technical Insertion		T				
		T	Year	Quarter	Year	
Prophet Enhanced Technical Insertion		Quarter 1	Year 2020	Quarter 4	Year 2029	

Exhibit R-2, RDT&E Budget Iter	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 7: Operational Systems Development				R-1 Program Element (Number/Name) PE 0607315A <i>I Enduring Turbine Engines and Power 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	
Total Program Element	-	-	2.411	2.620	-	2.620	4.740	3.028	5.052	5.102	0.000	22.953	
DD5: Army Power Systems Modernization	-	-	2.411	2.620	-	2.620	4.740	3.028	5.052	5.102	0.000	22.953	

A. Mission Description and Budget Item Justification

This funding line is in support of the Electrical Power Systems (EPS) Modernization efforts, a key enabler for Army Aviation Modernization Priorities. EPS is a Tier 2 Army Aviation modernization priority effort and Major Systems Component (MSC) of the PEO Aviation Modular Open System Approach (MOSA) Strategy to address aging platform electrical systems architectures developed in the 1970's, current capability gaps, and future system requirements. EPS will increase capacity, enhance system capability, enable new technology insertions and improve systems supporting increased lethality and survivability in Multi-Domain Operations (MDO). EPS will provide a modernized common systems architecture, active power management capability, improved power generation, distribution, and storage thru new higher capacity and density common generators, airworthy supplemental power units, advanced common batteries, and improved conversion electronics capable of supporting the increased systems loads and demands. Benefits include improved platform safety and decreased pilot workload, improved design life, enhanced reliability, lower maintenance and sustainment costs, and a decreased logistics footprint. Additionally, EPS lays the foundations necessary for optionally piloted/increased autonomy, more electrified aircraft initiatives, and supports the US Army Climate Strategy to break the tether to fossil fuels. The program consists of systems engineering and program management, design engineering, design assurance, component development and testing, system level testing and qualification, and platform integration and qualification.

FY 2025 funding completes the AH-64 and CH-47 Platform Architecture Studies, initiates development of the Common EPS Architecture, and initiates the EPS Power Management Systems Integration Lab (SIL) development efforts. FY 2026 funding completes the Common EPS Architecture development efforts, continues the EPS Power Management SIL development, and initiates component testing efforts. FY 2027 funding continues the EPS Power Management SIL development, continues component testing efforts and initiates the Supplemental Power Unit (SPU) testing efforts. FY 2028 funding continues the EPS Power Management SIL development, continues component testing efforts, continues Supplemental Power Unit (SPU) testing efforts and supports Project Convergence demonstration efforts.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	rmy			Date:	March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	7: Operational	R-1 Program El PE 0607315A / E			
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	2.411	2.615	-	2.615
Current President's Budget	0.000	2.411	2.620	-	2.620
Total Adjustments	0.000	0.000	0.005	-	0.005
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	0.005	-	0.005

Change Summary Explanation

Increase due to revised economic assumptions.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040 / 7											lumber/Name) ay Power Systems Modernization		
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	
DD5: Army Power Systems Modernization	-	-	2.411	2.620	-	2.620	4.740	3.028	5.052	5.102	0.000	22.953	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

A. Mission Description and Budget Item Justification

This funding line is in support of the Electrical Power Systems (EPS) Modernization efforts, a key enabler for Army Aviation Modernization Priorities. EPS is a Tier 2 Army Aviation modernization priority effort and Major Systems Component (MSC) of the PEO Aviation Modular Open System Approach (MOSA) Strategy to address aging platform electrical systems architectures developed in the 1970's, current capability gaps, and future system requirements. EPS will increase capacity, enhance system capability, enable new technology insertions and improve systems supporting increased lethality and survivability in Multi-Domain Operations (MDO). EPS will provide a modernized common systems architecture, active power management capability, improved power generation, distribution, and storage thru new higher capacity and density common generators, airworthy supplemental power units, advanced common batteries, and improved conversion electronics capable of supporting the increased systems loads and demands. Benefits include improved platform safety and decreased pilot workload, improved design life, enhanced reliability, lower maintenance and sustainment costs, and a decreased logistics footprint. Additionally, EPS lays the foundations necessary for optionally piloted/increased autonomy, more electrified aircraft initiatives, and supports the US Army Climate Strategy to break the tether to fossil fuels. The program consists of systems engineering and program management, design engineering, design assurance, component development and testing, system level testing and qualification, and platform integration and qualification.

FY 2024 funding will initiate MOSA architecture and Systems Engineering efforts, and initiate EPS Platform Architecture Studies for the AH-64 and CH-47 aircraft. FY 2025 funding completes the AH-64 and CH-47 Platform Architecture Studies, initiates development of the Common EPS Architecture, and initiates the EPS Power Management Systems Integration Lab (SIL) development efforts. FY 2026 funding completes the Common EPS Architecture development efforts, continues the EPS Power Management SIL development, and initiates component testing efforts. FY 2027 funding continues the EPS Power Management SIL development, continues component testing efforts. FY 2028 funding continues the EPS Power Management SIL development, continues component testing efforts, continues Supplemental Power Unit (SPU) testing efforts and supports Project Convergence demonstration efforts.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Electric Power Systems (EPS) Modernization Efforts	-	2.411	2.620
FY 2024 Plans: FY 2024 funding will initiate MOSA architecture and System Engineering efforts, and initiate EPS Platform Architecture Studies for the AH-64 and CH-47 aircraft.			
FY 2025 Plans:			

PE 0607315A: *Enduring Turbine Engines and Power Syste...* Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army	hibit R-2A, RDT&E Project Justification: PB 2025 Army								
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607315A <i>I Enduring Turbine Engines a</i> <i>nd Power Systems</i>								
B. Accomplishments/Planned Programs (\$ in Millions) FY 2025 funding completes the AH-64 and CH-47 Platform Architecture Stur Architecture, and initiates the EPS Power Management Systems Integration	•		FY 2023	FY 2024	FY 2025				
FY 2024 to FY 2025 Increase/Decrease Statement: Increased funding due to planned lifecycle of the effort.									
	Accomplishments/Planned Programs Sub	totals	-	2.411	2.620				
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A <u>Remarks</u>									
D. Acquisition Strategy Apache and Chinook Platform Architecture Studies will be awarded in FY 20 Architecture Studies, in FY 2025 the integrator for the Common Architecture Government Owned power management Systems Integration Lab effort and Development Command C5ISR Center.	e development efforts will be selected and award	ed an O	TA. In FY20	25, developm	ent of the				

Exhibit R-3, RDT&E Appropriation/Budge 2040 / 7	•	*	025 Am	у		PE 060		Enduring	umber/Na Turbine E		Date: March 2024 Project (Number/Name) DD5 / Army Power Systems Moderniza				nization
Product Developme	nt (\$ in M	illions)		FY 2023		FY 2024		FY 2025 Base		FY 2	2025 CO	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 Contrac
Common Architecture	MIPR	MOSA : Redstone Arsenal, AL	-	-		-		2.420	Oct 2025	-		2.420	0.000	2.420	-
		Subtotal	-	-		-		2.420		-		2.420	0.000	2.420	N/A
Support (\$ in Million	cture and Chinook Architecture were replaced with Con		ok Architecture were replaced with		FY 2023 FY 2024		FY 2025 Base OCC]				
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
CSM Modeling	MIPR	MOSA : Redstone Arsenal, AL	-	-		0.211		0.200		-		0.200		0.411	-
Apache Architecture	TBD	Boeing : Mesa, AZ	-	-		1.100		-		-		-	0.000	1.100	-
Chinook Architecture	TBD	Boeing : Philadelphia, PA	-	-		1.100		-		-		-	0.000	1.100	-
		Subtotal	-	-		2.411		0.200		-		0.200	0.000	2.611	N/A
<u>Remarks</u> In FY25, Apache Architect	ure and Chir	nook Architecture were m	eplaced wit Prior Years		Architectur	e and placed		FY 2	2025 Ise	FY 2	2025	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
	_	Project Cost Totals	-	-	2023	2.411	.024	2.620		-	.0	2.620	-	5.031	
<u>Remarks</u> In FY25, Apache Architect	ure and Chir		eplaced wit	h Common	Architectur	e and placed	l under Pro	1	11			1	<u> </u>		1

Appropriation/Budget Activity 2040 / 7					ent (Number/Nan						
				ver Systems	luring Turbine Eng	Project (Number/Name) DD5 / Army Power Systems Modernization					
Event Name	FY 2023	FY 2023 FY 202		024 FY 2025 FY 2026			FY 2027	FY 2028 FY)29
Event Name	1 2 3 4	1 2 3	3 4 1	1 2 3	4 1 2 3 4	1	2 3 4	1 2 :	3 4	1 2 3	3
CSM Modeling											
Apache Architecture											
Chinook Architecture				•							
Common Architecture											
EPS Power Management											

chibit R-4A, RDT&E Schedule Details: PB 2025 Army				Dat	e: March 2024	
opropriation/Budget Activity 040 / 7	R-1 Program PE 0607315A <i>nd Power Syst</i>	Project (Numb DD5 / Army Po	er/Name) wer Systems Moderi	izatior		
	Schedule Details	5				
	[Sta	art		End	
Events		Quarter	Year	Quart	ter Year	
CSM Modeling		1	2024	4	2026	
Apache Architecture		1	2024	1	2025	
Chinook Architecture		1	2024	1	2025	
Common Architecture		1	2025	4	2026	

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 7: Operational Systems Development						am Element 65A / Family	•					
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	-	1.073	0.797	0.590	-	0.590	1.601	1.636	1.672	1.709	Continuing	Continuing
DU2: Management Agency	-	1.073	0.797	0.590	-	0.590	1.601	1.636	1.672	1.709	Continuing	Continuing

A. Mission Description and Budget Item Justification

DU2 / Non-MIP Biometrics - Biometrics Enabling Capability 0 (BEC 0), aka DoD Automated Biometrics Identification System (DoD ABIS), is an Army information technology system supporting identity superiority by providing the critical core capability for Warfighters to identify known or suspected threat actors in Multi Domain Operations (MDO) to include peer adversaries, terrorists and third country nationals. BEC 0 is an Army Program of Record and DoD's only authoritative biometric repository, providing 24/7 operational support for the Warfighter and interagency partners to decide and act in near-real time with timely identification and identity verification of known or suspected threat actors across the full range of military operations. DoD ABIS enables actionable intelligence supporting offensive operations and preventing espionage, sabotage, terrorist operations and other coercive actions against US forces and partner nations. DoD ABIS enables the Army, all other DOD components, Interagency and International Partners to effectively impede adversary's ability to conceal their identity and intentions. DoD ABIS supports all three objectives of the National Defense Strategy to increase lethality, enhance International Cooperation, and improve business practices.

The Defense Forensics and Biometrics Agency (DFBA), under the Provost Marshal General, fulfills the Secretary of the Army's Executive Agent (EA) responsibilities for DoD forensics and biometrics activities. In addition, DFBA is the proponent to establish and maintain Research, Development, Test & Evaluation (RDT&E) and information management support throughout the Armed Services and DoD. DFBA leads and facilitates the development, improvement, and implementation of efficiencies to developed and deployed biometric technologies for Combatant Commands (CCMDs), Services, DoD, and Agencies; facilitates transition of capabilities that contribute to the enhancement of the biometric community; increases Joint Service interoperability; and empowers the warfighter by improving operational effectiveness on the battlefield. The DFBA strategy pursues technology opportunities through scientific discovery and makes investments responsive to specific requirements identified by combat developers.

Justification:

FY 2025 funding in the amount of \$.589 million for Project DU2 will provide DFBA the ability to actively manage research efforts to address DoD biometrics objectives and requirements. DFBA supports the conduct of biometric and forensics activities (e.g. standards conformance and interoperability assessments), provides guidance to the research and development community, assists DoD acquisition organizations, and coordinates efforts with DoD and interagency stakeholders. This level of engagement promotes information sharing across the biometrics community to maximize utility of RDT&E efforts.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	my			Date:	March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	2040: Research, Development, Test & Evaluation, Army I BA 7: Operational 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	1.114	0.797	0.589	-	0.589
Current President's Budget	1.073	0.797	0.590	-	0.590
Total Adjustments	-0.041	0.000	0.001	-	0.001
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.041	-			
 Adjustments to Budget Years 	-	-	0.001	-	0.001

Change Summary Explanation

Minor increase in FY25 funding from the previous PB to the current PB due to revised economic assumptions.

Exhibit R-2A, RDT&E Project Ju	stification	PB 2025 A	rmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7										Number/Name) anagement Agency		
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
DU2: Management Agency	-	1.073	0.797	0.590	-	0.590	1.601	1.636	1.672	1.709	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Defense Forensics and Biometrics Agency (DFBA), under the Provost Marshal General, fulfills the Secretary of the Army's Executive Agent (EA) responsibilities for all DoD forensics and biometrics activities. As the proponent, DFBA supports and provides oversight for Research, Development, Test & Evaluation (RDT&E) activities and information management throughout the Armed Services and DoD. DFBA leads and facilitates in the development of improvement and implementation of efficiencies to developed and deployed biometric technologies for Combatant Commands (CCMDs), Services, DoD, and Agencies; facilitates transition of capabilities that contribute to the enhancement of the biometric community; increases Joint Service interoperability; and empowers the warfighter by improving operational effectiveness on the battlefield. The DFBA strategy pursues technology opportunities through scientific discovery and makes investments responsive to specific requirements identified by combat developers.

Justification:

FY 2025 funding in the amount of \$.589 million for Project DU2 will provide DFBA the ability to actively manage research efforts to address DoD biometrics objectives and requirements. DFBA supports the conduct of biometric and forensics activities (e.g. standards conformance and interoperability assessments), provides guidance to the research and development community, assists DoD acquisition organizations, and coordinates efforts with DoD and interagency stakeholders. This level of engagement promotes information sharing across the biometrics community to maximize utility of RDT&E efforts.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Development and Implementation of Biometric Technologies	1.073	0.797	0.590
Description: Biometrics and Forensics Technologies Research			
FY 2024 Plans: FY 2024 funding in the amount of \$.797 million for Project DU2 will provide DFBA the ability to actively manage research efforts to ensure scientific merit, feasibility, and DFBA objectives and requirements are met. DFBA supports the conduct of biometric and forensics activities (e.g. standards conformance and interoperability assessments), support to DoD acquisition organizations, and provision of subject matter expertise to DoD and non-DoD government stakeholders.			
FY 2025 Plans: FY 2025 funding in the amount of \$.590 million for Project DU2 will provide DFBA the ability to actively manage research efforts to ensure scientific merit, feasibility, and DFBA objectives and requirements are met. DFBA supports the conduct of biometric and forensics activities (e.g. standards conformance and interoperability assessments), support to DoD acquisition organizations, and provision of subject matter expertise to DoD and non-DoD government stakeholders.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024				
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607665A <i>I Family of Biometrics</i>	Project (Number/Name) DU2 / Management Agency				
B. Accomplishments/Planned Programs (\$ in Millions) The reduction in FY25 RDT&E funding correlates to updated FY forensics capability development to planned acquisition activitie	FY 2023	FY 2024	FY 2025			
	Accomplishments/Planned Programs Su	btotals	1.073	0.797	0.590	

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

N/A

Remarks

D. Acquisition Strategy

DFBA uses a variety of existing contract vehicles to support the continued development of technology advancements for the fingerprint, face, iris, palm, DNA reference, and voice modalities. In addition to advancing the state of the art, these efforts enable DFBA to produce updated standards and architectures for the DoD Biometrics and Forensics Enterprise in support of interoperability objectives.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 20	025 Arm	у								Date:	March 20)24	
Appropriation/Budget Activity 2040 / 7							R-1 Program Element (Number/Name)Project (Number/Name)PE 0607665A / Family of BiometricsDU2 / Management Agency								
Product Development (\$ in Millions)			FY 2	2023	FY 2024		FY 2025 Base			2025 CO	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
DFBA RDTE efforts	MIPR	Various Activities : Various locations	16.093	1.073	Jun 2023	0.797		0.590		-		0.590	Continuing	Continuing	-
		Subtotal	16.093	1.073		0.797		0.590		-		0.590	Continuing	Continuing	N/A
advanced capabilities.			Prior Years	FV	2023	FY 2024		FY 2025 FY 2024 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	16.093	1.073		0.797		0.590		-			Continuing		
<u>Remarks</u>															

Exhibit R-4, RDT&E Schedule Profile: PB 2025.	Army					Date: March 202	24		
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name)Project (Number/Name)PE 0607665A I Family of BiometricsDU2 I Management Agency							
Г									
Event Name	FY 2023 1 2 3 4 1	FY 2024	FY 2025	FY 2026 1 2 3 4	FY 2027	FY 2028 1 2 3 4	FY 2029		
DFBA RDT&E Fingerprint, Face, Iris, Palm, and Voice									
DFBA Interoperability	DFE	3A RDTE Efforts							

xhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date:	March 2024	
ppropriation/Budget Activity 040 / 7		R-1 Program Element (Number/Name) PE 0607665A <i>I Family of Biometrics</i>			
	Schedule Details				
	S	art		End	
Events	Standarter	art Year	Quarter	-	
Events DFBA RDT&E Fingerprint, Face, Iris, Palm, and Voice		1	Quarter 4	-	

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army											Date: March 2024		
Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army I</i> BA 7: <i>Operational</i> <i>Systems Development</i>					-	am Elemen 65A / Patriot	•						
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	-	146.753	177.197	168.458	-	168.458	168.617	165.083	226.762	223.166	Continuing	Continuing	
DJ6: Effector Product Improvement	-	-	-	86.238	-	86.238	-	-	-	-	Continuing	Continuing	
DV8: Patriot Product Improvement	-	146.753	177.197	82.220	-	82.220	168.617	165.083	226.762	223.166	Continuing	Continuing	

Note

In Fiscal Year (FY) 2025, Project DJ6 / Effector Product Improvement efforts realigned within PE 0607865A / Patriot Product Improvement from Project DV8/Patriot Product Improvement.

A. Mission Description and Budget Item Justification

This funding line is a key enabler of the Army Modernization Priorities in support of the PATRIOT surface to air missile system. PATRIOT is an integral part of the Integrated Air and Missile Defense (IAMD) Architecture and enables the incremental fielding of the IAMD Battle Command System (IBCS) capability for Army Air and Missile Defense Battalions.

Beginning in FY25, Program Element 0607865A has two project numbers assigned. DJ6, Effector Product Improvement, supports PATRIOT Family of Missiles, M903 Launching Stations, and associated enduring efforts. DV8, Patriot Product Improvement, supports Patriot Ground Equipment, legacy radar, and associated efforts.

The PATRIOT Product Improvement Program (PIP) provides the upgrade of the PATRIOT System and as a component of the IAMD system through software improvements and individual materiel changes and upgrades to current force and IAMD-connected PATRIOT system components (interceptors, ground system equipment, launcher, and current radar) to address operational lessons-learned and necessary system performance improvements to include enhancements that support joint force interoperability and enable convergence with IBCS to ensure overmatch capability. As software and hardware improvements are developed, there is a continuing need for system level modeling, simulation, integration and testing. Modeling and Simulation (M&S) allow for performance assessment against emerging threats in a manner that is not practical to demonstrate with live fire flight tests alone due to cost, target availability, and range constraints. Flight testing is periodically required for validation of the modeling and simulation as well as satisfying Army Test and Evaluation Command/ Director, Operational Test and Evaluation (ATEC/DOTE) requirements of segment improvements.

This effort supports work with national agencies to evaluate, assess, and develop means to mitigate threat trends and specific threat developments potentially impacting system performance including effective detection, tracking, discrimination, and engagement. Specific improvements may be developed and fielded under this task if warranted. The effort maintains the Mission Tailoring Database and its responses to immediate tactical concerns. Database updates are fielded between major software upgrades as necessary.

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 7: Operational	PE 0607865A I Patriot Product Improvement	
Systems Development		

The PIP line also supports the identification, analysis, design, and test of materiel solutions to counter cyber security and electronic warfare shortcomings to all elements of the Lower Tier Battle Space.

FY 2025 base dollars in the amount of \$168.458 million support the continuance of critical software improvements for current force PATRIOT and Army IAMD integration, including Software Improvement for Threat Evolution, PAC-3 Seeker Software Improvement, Upper Tier Debris Mitigation, THAAD/PATRIOT Interoperability, Advanced Electronic Counter Measures (AECM), Combat ID enhancements, Tasks 2, 6, and 7 activities, program integration, modeling and simulation, acquisition of test assets and targets, Mobile Flight Mission Simulator (MFMS), PDB-8.1 and Patriot Component Software Build (PCSB) software, development and integration activities for Pacific Defense Initiative, Integrated Fires Architecture Fire Control Development, convergence with the IBCS and government and contractor support.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	152.312	177.197	138.120	-	138.120
Current President's Budget	146.753	177.197	168.458	-	168.458
Total Adjustments	-5.559	0.000	30.338	-	30.338
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-5.559	-			
 Adjustments to Budget Years 	-	-	30.338	-	30.338

Change Summary Explanation

For 677865DV8, Patriot Product Improvement, the FY25 funding in the amount of \$15.030 million is in support of the Pacific Defense Initiative for Project D Software Development.

For 677865DJ6, the FY25 increase of \$15.308 million supports the Effector Product Improvement.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Marc	ch 2024	
					R-1 Program Element (Number/Name)Project (Number/Name)PE 0607865A / Patriot Product ImprovemenDJ6 / Effector ProductttDJ6 / Effector Product					,	ent	
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
DJ6: Effector Product Improvement	-	-	-	86.238	-	86.238	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In Fiscal Year (FY) 2025, Project DJ6 / Effector Product Improvement efforts realigned within PE 0607865A / Patriot Product Improvement from Project DV8/Patriot Product Improvement.

A. Mission Description and Budget Item Justification

The DJ6 PIP Program upgrades lower tier effectors (interceptors and M903 launching stations) to address operational lessons learned, enhancements to joint force interoperability and communications, and other system performance improvements to provide overmatch capability against the emerging threat.

The PATRIOT system includes a family of hardware, software, interceptors (PAC-2, Guidance Enhanced Missiles, PAC-3 and PAC-3 Missile Segment Enhancement) and Ground Support Equipment. PATRIOT system components (interceptors, launcher, and radar) are integrated with current force PATRIOT and Army Integrated Air and Missile Defense (IAMD) components. DJ6 PIP activities support enduring components of the system as legacy PATRIOT Ground Equipment is sunset with fielding of Integrated Battle Command System (IBCS). As components, software, and hardware improvements are developed, there is a continuing need for system level modeling, simulation, integration and testing. Modeling and Simulation (M&S) allow for performance assessment against specific threats in a manner that is not practical to demonstrate with live fire flight tests alone due to cost, target availability, and range constraints. Flight testing is periodically required for M&S validation as well as satisfying ATEC/DOTE requirements of segment improvements.

In FY2025, DJ6 funding will support test and development of improvements to currently fielded PATRIOT Family of Missiles (PFoM) and launching stations to keep pace with current and emerging threats, support Guam Defense Systems efforts, and support integrated Fires Control for the Army's Integrated Air and Missile Defense. -Army Combat Capabilities Development Command Aviation and Missile Center (DEVCOM) and Other Government Agency (OGA) supports government labor for product development to keep pace with current threats.

-Government Program Management/SETA - U.S. Government and contractor support for DJ6 PIP efforts supporting system interceptors, launching stations, and associated materiel and provides studies and support to ensure these components continue to evolve to defeat emerging threats.

-DEVCOM and Other Agencies provide system engineering support for test and evaluation activities (includes planning, test event support, and data evaluation). -PAC-3 Seeker Software Improvement supports improved missile capability to counter electronic attack threats.

-Program Integration MSE provides required support for systems integration into the PATRIOT and IBCS systems from Prime Contractors, Lockheed Martin and Raytheon, for the PAC-3 Missile Segment (PAC-3 CRI, PAC-3 MSE).

-Targets/Threat Simulation supports planning, design, and acquisition of Targets for Lower Tier Interceptors (LTI) test events.

-Modeling and Simulation supports performance assessment activities against all threats that would not be possible in flight tests due to cost, target and range constraints.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date:	March 2024			
Appropriation/Budget Activity 2040 / 7		Project (Number/Name) en DJ6 / Effector Product Improvement				
-Contractor Test and Evaluation (T&E) provides funding for con- -Guam Defense Systems (GDS) funding supports GDS mission -Integrated PAC-3 Fire Control provides funding for requirement with IBCS.	and ensures capability will meet mission requirements.			ntegration		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025		
Title: Effector Product Improvement		-	-	86.23		
 FY 2025 Plans: Activities continued below were funded through project DV8 price-Continue program development through system level modeling threats -Continue test program to include utilization of targets/threat sime effectiveness -Continue supporting Integrated PAC-3 Fire Testing -Continue PATRIOT program M&S laboratory infrastructure main capability improvements -U.S. Government and contractor support to ensure force effect threats -Continue system integration activities, test and analysis, and th -Continue development of PAC-3 Fire Control and LoE FY 2024 to FY 2025 Increase/Decrease Statement: Funding increase represents realignment in the amount of \$86.2 	, simulation, integration and test support to address emerging nulators, flight simulator and modeling efforts to maintain ntenance as well as the conduct of M&S for hardware/software veness is maintained to keep pace with evolving and emerging reat analysis and modeling					
	Accomplishments/Planned Programs Subto	otals -	-	86.23		
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy The design objective of Lower Tier Interceptors is to provide effe Improvement Program (PIP) funds are utilized to minimize techn through planned upgrades of deployed systems. The DJ6 PIP F	nological risks and provide means of enhancing effector capab	ility to address ne	w and emerg	ing threats		

through planned upgrades of deployed systems. The DJ6 PIP Program upgrades lower tier effectors (interceptors and M903 launching stations) to address operational lessons learned, enhancements to joint force interoperability and communications, and other system performance improvements to provide overmatch capability against the emerging threat. Upgrades are implemented through individual hardware and software materiel changes and fielded incrementally. This program encompasses

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
		(umber/Name)
2040 / 7	PE 0607865A I Patriot Product Improvemen	DJ6 / Effec	ctor Product Improvement

several changes which will require the use of a variety of acquisition methods to develop, test, procure and field. Future hardware and software capabilities will be incorporated into PATRIOT Component Software Build (PCSB) releases and continue convergence efforts with IBCS. Developing, fabricating, and testing hit to kill surface to air missile and associated ground support equipment provides essential increases in battle space, accuracy, lethality and firepower to counter and destroy evolving air defense threats. These state-of-the-art capabilities and enhancements require ongoing demonstration through a series of flight tests and modeling and simulation activities to add survivability and resiliency in a denied environment. The lower tier effectors components are part of enduring system in integrated fires development efforts that include survivability, resiliency, and effectiveness improvements against advanced threats from near-peer adversaries. DJ6 effort includes integration with an evolving fire control mission command, common development tools and processes, MSE enhancements, threat modeling, and annual test and evaluation to provide data to support program assessments and progress toward closure of performance gaps.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Arm	у								Date:	March 2	024	
Appropriation/Budge 2040 / 7	et Activit	/				R-1 Program Element (Number/Name)Project (Number/Name)PE 0607865A / Patriot Product ImprovemenDJ6 / Effecttt								provement	
Management Service	es (\$ in N	lillions)		FY 2023		FY	2024	FY 2025 Base		FY 2 OC		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 Program Management	MIPR	RSA, AL : RSA, AL	-	-		-		0.927	Oct 2024	-		0.927	Continuing	Continuing	-
		Subtotal	-	-		-		0.927		-		0.927	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2023		FY	2024		2025 ase	FY 2 OC		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
SETA	Various	Multiple : Multiple	-	-		-		3.296	Oct 2024	-		3.296	Continuing	Continuing	-
DEVCOM and OGA	MIPR	RSA, AL : RSA, AL	-	-		-		6.644	Oct 2024	-		6.644	Continuing	Continuing	-
PAC-3 Seeker Software Improvement	Various	Multiple : Multiple	-	-		-		11.787	Feb 2025	-		11.787	Continuing	Continuing	-
Guam Defense Systems	Various	Multiple : Multiple	-	-		-		15.030	Jan 2025	-		15.030	Continuing	Continuing	-
Integrated PAC-3 Fire Control	Various	Multiple : Multiple	-	-		-		14.071	Apr 2025	-		14.071	Continuing	Continuing	-
		Subtotal	-	-		-		50.828		-		50.828	Continuing	Continuing	N/A
Test and Evaluation	(\$ in Mill	ions)		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
DEVCOM and Other Govt Agencies	MIPR	RDEC and OGAs : RSA, AL	-	-		-		4.613	Jan 2025	-		4.613	Continuing	Continuing	-
Program Integration MSE	Various	LMMFC and Raytheon : Dallas, TX and Waltham, MA	-	-		-		10.988	Feb 2025	-		10.988	Continuing	Continuing	-
Targets/Threat Simulation	MIPR	Various : Huntsville, AL	-	-		-		10.420	Jan 2025	-		10.420	Continuing	Continuing	-
Modeling and Simulation	MIPR	Various : Huntsville, AL	-	-		-		5.629	Jan 2025	-		5.629	Continuing	Continuing	-
Contractor T&E	Various	Multiple : Various	-	-		-		2.833	Jan 2025	-		2.833	Continuing	Continuing	-

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Arm	у								Date:	March 20)24	
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0607865A <i>I Patriot Product Improvemen</i> <i>t</i>						Project (Number/Name) n DJ6 / Effector Product Impro			t
Test and Evaluation (\$ in Millions)				FY 2023		FY 2	2024	FY 2 Ba	2025 Ise	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	-	-		-		34.483		-		34.483	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	-	-		-		86.238		-		86.238	Continuing	Continuing	g N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB	3 2025 Army						Date: March 20	24
Appropriation/Budget Activity 2040 / 7					ot Product Improve		lumber/Name) ctor Product Impi	rovement
Event Name	FY 2023	FY 202		FY 2025	FY 2026	FY 2027 2 3 4	FY 2028	FY 2029
DEVCOM and OGA		DEVCOM and OG						
Government Program Management		Government Progr	ram Manage	ement				
SETA		SETA						
DEVCOM and Other Agencies		DEVCOM and Oth	er Agencies	5				
PAC-3 Seeker Software Improvement		PAC-3 Seeker Sof	ftware Impro	ovement				
Program Integration MSE		Program Integratio	on MSE					
Targets/Threat Simulation		Targets/Threat Sin	nulation					
Modeling and Simulation		Modeling and Sim	ulation					
Contractor T&E		Contractor T&E						
Guam Defense Systems		Guam Defense Sy	/stems					
Integrated PAC-3 Fire Control		Integrated PAC-3	Fire Control					

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
	R-1 Program Element (Number/Name) PE 0607865A <i>I Patriot Product Improvemen</i> <i>t</i>	•	umber/Name) ctor Product Improvement	

Schedule Details

	Sta	art	E	nd
Events	Quarter	Year	Quarter	Year
DEVCOM and OGA	1	2024	4	2030
Government Program Management	1	2024	4	2030
SETA	1	2024	4	2030
DEVCOM and Other Agencies	1	2024	4	2030
PAC-3 Seeker Software Improvement	1	2024	4	2030
Program Integration MSE	1	2024	4	2030
Targets/Threat Simulation	1	2024	4	2030
Modeling and Simulation	1	2024	4	2030
Contractor T&E	1	2024	4	2030
Guam Defense Systems	1	2024	4	2027
Integrated PAC-3 Fire Control	1	2024	4	2030

<u>Note</u>

Activities displayed on schedule prior to FY25 were funded through project DV8.

Exhibit R-2A, RDT&E Project Ju	xhibit R-2A, RDT&E Project Justification: PB 2025 Army												
Appropriation/Budget Activity 2040 / 7								umber/Name) iot Product Improvement					
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	
DV8: Patriot Product Improvement	-	146.753	177.197	82.220	-	82.220	168.617	165.083	226.762	223.166	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

Note

FY25 PDI funding in the amount of \$15.030 million is in support of the Pacific Defense Initiative for Project D Software Development.

A. Mission Description and Budget Item Justification

The PATRIOT system includes a family of hardware, software, interceptors (PAC-2, Guidance Enhanced Missiles, PAC-3 and PAC-3 Missile Segment Enhancement) and Ground Support Equipment. PATRIOT system components (interceptors, launcher, and radar) are integrated with current force PATRIOT and Army Integrated Air and Missile Defense (IAMD) components, including IBCS. As PATRIOT system components software and hardware improvements are developed, there is a continuing need for system level modeling, simulation, integration and testing. Modeling and Simulation (M&S) allow for performance assessment against specific threats in a manner that is not practical to demonstrate with live fire flight tests alone due to cost, target availability, and range constraints. Flight testing is periodically required for M&S validation as well as satisfying ATEC/DOTE requirements of segment improvements.

-PATRIOT system components software and hardware improvements for threat evolution: Performs necessary analysis and development efforts to maintain PATRIOT system (interceptors, ground support equipment, and current radar) effectiveness against evolving threat technologies and capabilities, support convergence with the IBCS, and complete PATRIOT Component Software Builds (PCSB). This effort identifies evolving threats and threat characteristics that present a challenge to PATRIOT's current capabilities and develops initial concepts to maintain system effectiveness including detection, tracking, discrimination, and engagement relative to these threats. Additionally, evolving threat information is used to develop, integrate, and assess evolving lethality models in high-fidelity interceptor simulations supporting system level assessment of hit-to-kill and warhead interceptor performance.

-Advanced Electronic Counter Measures (AECM): This task investigates the implications of advanced technology Digital Radio Frequency Memory available on airborne platforms that enables new ECM techniques which could adversely degrade Air and Missile Defense System effectiveness. AECM efforts support PATRIOT system interceptors, ground support equipment, and current radar.

-Task 2: Implements improved ground system and interceptor capabilities (PATRIOT Advanced Capability-2/Guidance Enhanced Missiles, PATRIOT Advanced Capability-3, and Missile Segment Enhancement) to counter emerging Tactical Ballistic Missile threats.

-Task 6: Software improvements enhance ground support equipment and current radar discrimination of higher altitude Tactical Ballistic Missile Re-entry Vehicles (RVs) from associated objects to support the full engagement capabilities of the interceptor. Longer-range detection, track, and improved high-altitude discrimination are required to achieve the required lethality performance against the RV and to mitigate and reduce missile wastage against separation debris. This task leverages the signal processing capabilities of the Radar Digital Processor, and supports the high altitude engagements required by the PATRIOT Advanced Capability-3 (PAC-3) and PAC-3 Missile Segment Enhancement (MSE) missiles.

-Task 7: Performs analysis on existing and evolving Tactical Ballistic Missile (TBM) countermeasures to determine the effects on PATRIOT system effectiveness. Develops hardware and software concepts to address countermeasure effects to ensure the PATRIOT system maintains its effectiveness. Develops detailed system requirements to implement concepts; design/code/test software implementation leveraging Radar Digital Processor, Modernized Adjunct Processor, Enhanced Weapons

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A <i>I Patriot Product Improvemen</i> <i>t</i>		ict Improveme	
Control Computer - Emulator and Flight Solution Computer-Redesign processis system requirements. -Combat ID Enhancements: Develop and implement improvements to the Rad. Target Recognition techniques to further mitigate misclassification and fratricid mitigates detection, tracking, and engagement errors on friendly targets. -Upper-Tier Debris Mitigation (UTDM): Implements algorithms to mitigate syste Ballistic Missile Defense System (BMDS) environment. Debris from Upper Tier engagements and missile wastage on debris. -THAAD/PATRIOT Interoperability: Implements improvements to THAAD/PATR Tactical Ballistic Missile battle management and force/engagement operations. planning) and enhanced Tactical Digital Information Link - Joint interoperability -PAC-3 Seeker Software Improvements: Perform PAC-3 MSE Software improv engineering, prototyping, testing, and tactical software implementation of impro- -Program Integration MSE Lockheed Martin Missile and Fire Control (LMMFC) mission interceptor integration, and range safety tasks allowing execution of re -Mobile Flight Mission Simulator (MFMS) is a real-time system exerciser integr the simulation and testing infrastructure required to support fielded PATRIOT. -Development and Integration Activities in support of the Pacific Defense Initiat -Integrated Fires Architecture Fire Control Development: Perform Integrated Fi fielded threats providing analysis, engineering, prototyping, testing, and tactica -U.S. Government and contractor support for PIP efforts supporting system inte ensure the system and its components continue to evolve to defeat emerging t	ar Digital Processor-Capability Combat ID cap e risk, and to provide the Warfighter with impro- em impacts of debris from Upper Tier intercepts intercepts can cause significant radar loading RIOT Interoperability and addresses Joint Defe Efforts will be concentrated on joint, collabora error of the concentrated on joint, collabora error of th	abilities and addition oved situational awa s associated with op effects and the pote ative force operation I Electronic Attack the nalysis, test missile p signals into the rad	nal Non-Coop preness. This perating in the ential for error encies that im s (defense de preats providir preparation, fl ar. The MFMS	perative effort neous pact esign and ng analysis, light S is part of nd newly
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
 <i>Title:</i> PATRIOT Product Improvement <i>Description:</i> Patriot Product improvement line provides continuous improvement keep pace with and counter evolving and emerging threats. <i>FY 2024 Plans:</i> Continue Software Improvement for Threat Evolution and AECM to address er Continue Combat ID enhancements to reduce fratricide potential Continue Tasks 2, 6, and 7 activities to develop hardware and software to main Continue program development through system level modeling, simulation, int threats and convergence with IBCS 	nerging threats and convergence with IBCS ntain PATRIOT system effectiveness in the fie	146.753 to	177.197	82.220

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	/larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A <i>I Patriot Product Improvemen</i> <i>t</i>	Project (Number/ DV8 / Patriot Prode		ent
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
 -Continue test program to include utilization of targets/threat simulators, flight effectiveness -Continue supporting Integrated Fires Testing -Development and integration in support of the Pacific Defense Initiative -Continue PATRIOT program M&S laboratory infrastructure maintenance as w capability improvements -U.S. Government and contractor support to ensure force effectiveness is mainthreats -Continue PAC-3 Seeker Software Improvements to counter Electronic Attack -Continue MSS-2 laboratory support for high fidelity seeker data collection, metas and contractor support for high fidelity seeker data collection, metas - Continue Software Improvements to reduce fratricide potential -Continue Combat ID enhancements to reduce fratricide potential -Continue pagram development through system level modeling, simulation, in threats and convergence with IBCS -Continue supporting Integrated Fires Testing -Development and integration in support of the Pacific Defense Initiative -Continue Bullistic Missile Defense System (BMDS) Integration Testing -Continue supporting Integrated Fires Testing -Development and integration in support of the Pacific Defense Initiative -Continue PATRIOT program M&S laboratory infrastructure maintenance as w capability improvements -U.S. Government and contractor support to ensure force effectiveness is maintenance as w capability improvements -U.S. Government and contractor support of the Pacific Defense Initiative -Continue PATRIOT program M&S laboratory infrastructure maintenance as w capability improvements -Continue PATRIOT program M&S laboratory infrastructure maintenance as w capability improvements -Continue PATRIOT program M&S laboratory infrastructure maintenance as w capability improvements -U.S. Government and contractor support to ensure force effectiveness is maintenated. -Continue PA	vell as the conduct of M&S for hardware/softwar intained to keep pace with evolving and emergin and modeling odeling and analysis emerging threats and convergence with IBCS aintain PATRIOT system effectiveness in the fiel hegration and test support to address emerging simulator and modeling efforts to maintain syste well as the conduct of M&S for hardware/softwar intained to keep pace with evolving and emergin and modeling	e g d m		

Exhibit R-2A, RDT&E Project Jus	tification: PB	2025 Army							Date: Ma	arch 2024					
Appropriation/Budget Activity 2040 / 7					r ogram Ele n 07865A <i>I Pa</i>	•	ber/Name) t Improveme		Project (Number/Name) DV8 / Patriot Product Improvement						
B. Accomplishments/Planned Pr	ograms (\$ in I	<u>/lillions)</u>							FY 2023	FY 2024	FY 2025				
Funding decrease from FY 2024 to	FY 2025 is du	e to a reduc	tion in PDI -	Modernized	and Strengt	hened Pres	ence. In add	ition, FY							
2025 funds have realigned in the a	mount of \$86.2	38 million to	APE 67786	5DJ6/Effect	or Product In	nprovement									
				Accon	nplishments	s/Planned F	Programs Su	ubtotals	146.753	177.197	82.220				
C. Other Program Funding Sumn	nary (\$ in Milli	ons <u>)</u>													
	2 .		FY 2025	<u>FY 2025</u>	<u>FY 2025</u>					Cost To					
Line Item	FY 2023	<u>FY 2024</u>	Base	000	<u>Total</u>	<u>FY 2026</u>	FY 2027	FY 2028	<u>FY 2029</u>	Complete	Total Cost				
C50700: Patriot Mods	462.959	212.247	171.958	-	171.958	760.673	1,821.040	1,004.129	9 832.309	Continuing	Continuing				
Remarks										-	_				

The improvements/enhancements developed through the PATRIOT Product Improvement Program (PIP) are interrelated with the hardware kits that are procured and installed under the Missile Procurement, Army (MIPA) appropriation's PATRIOT Mods program and maximizes PAC-3 MSE capabilities.

FY25 PDI funding in the amount of \$15.030 million is in support of the Pacific Defense Initiative for Project D Software Development.

D. Acquisition Strategy

The design objective of the PATRIOT system was to provide a baseline system capable of modification to cope with continuing threat evolution. This program minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The PATRIOT Product Improvement Program upgrades the PATRIOT system and the Army IAMD system to address operational lessons learned, enhancements to joint force interoperability and communications, and other system performance improvements including detection, tracking, discrimination, and engagement to provide overmatch capability against the emerging threat. Upgrades are implemented through individual hardware and software materiel changes and fielded incrementally. This program encompasses several changes which will require the use of a variety of acquisition methods to develop, test, procure and field. Future hardware and software capabilities will be incorporated into Patriot Component Software Build (PCSB) releases and continue convergence efforts with IBCS. Developing, fabricating, and testing hit to kill surface to air missile and associated ground support equipment provides essential increases in battle space, accuracy, lethality and firepower to counter and destroy evolving air defense threats. These state-of-the-art capabilities and enhancements require ongoing demonstration through a series of flight tests and modeling and simulation activities to ad survivability and resiliency in a denied environment. The PATRIOT system 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.

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2025 Army	/							_	Date:	March 20	024	
Appropriation/Budge 2040 / 7	t Activity	/					-	•	umber/Na oduct Impi	-	Project (Number/Name) DV8 / Patriot Product Improvement				
Management Service	es (\$ in M	illions)	ſ	FY 2023		FY 2024		FY 2025 Base		FY 2 OC		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 Program Management	MIPR	RSA, AL : RSA, AL	23.946	4.515	Jan 2023	4.515	Jan 2024	2.325	Jan 2025	-		2.325	Continuing	Continuing	J –
U.S. Contracts	Various	Multiple : Multiple	13.270	1.770	Feb 2023	1.770	Feb 2024	0.911	Feb 2025	-		0.911	Continuing	Continuing	j –
		Subtotal	37.216	6.285		6.285		3.236		-		3.236	Continuing	Continuing	N/A
Product Development (\$ in Millions)			FY	2023	FY 2	2024		2025 Ise	FY 2 OC		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 Improvement for Threat Evolution	Various	Multiple : Multiple	78.135	6.529	Jan 2023	8.374	Jan 2024	6.625	Jan 2025	-		6.625	Continuing	Continuing	, –
Advanced Electronic Counter Measures (AECM)	Various	Multiple : Multiple	124.473	13.643	Jan 2023	14.808	Jan 2024	6.195	Jan 2025	-		6.195	Continuing	Continuing	, –
Task 2 Non-Ballistic Tactical Ballistic Missile (TBM)	Various	Multiple : Multiple	60.901	6.885	Feb 2023	6.515	Feb 2024	4.115	Feb 2025	-		4.115	Continuing	Continuing	J –
Task 6 Discrimination Improvements	Various	Multiple : Multiple	58.418	3.807	Feb 2023	4.072	Feb 2024	4.194	Feb 2025	-		4.194	Continuing	Continuing	, –
Task 7 TBM Countermeasures / Effectors	Various	Multiple : Multiple	64.476	16.923	Feb 2023	13.541	Feb 2024	8.741	Feb 2025	-		8.741	Continuing	Continuing	-
Assured PNT	Various	Multiple : Multiple	20.879	2.400	Jan 2023	4.524	Feb 2024	4.659	Feb 2025	-		4.659	Continuing	Continuing	- 1
Combat ID Enhancements	Various	Multiple : Multiple	66.226	10.807	Feb 2023	11.088	Feb 2024	6.250	Feb 2025	-		6.250	Continuing	Continuing	- I
Tactical Telemetry Ground Station	Various	Multiple : Multiple	0.250	2.000	Feb 2023	1.600	Feb 2024	1.648	Feb 2025	-		1.648	Continuing	Continuing	, –
PAC-3 Seeker SW Improvement	Various	Multiple : Multiple	37.538	2.000	Feb 2023	6.408	Feb 2024	-		-		-	Continuing	Continuing	J –
CDCC and OGAs	MIPR	RSA : RSA	1.636	0.850	Oct 2022	0.850	Oct 2023	0.876	Oct 2024	-		0.876	Continuing	Continuing	- I
Program Integration MSE LMMFC	Various	LMMFC : Dallas, TX	33.297	7.442	Feb 2023	8.130	Feb 2024	-		-		-	Continuing	Continuing	J –

EXINDIL R-3, RUI GE I	Project C	ost Analysis: PB 2	2025 Arm	y								Date:	March 20)24	
Appropriation/Budge 2040 / 7	et Activity	,							umber/Na oduct Impi		-	(Number Patriot Pro	,	ovement	
Product Developmer	nt (\$ in M	illions)		FY 2	2023	FY 2	2024				025 CO	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
MSE/PAC-3 Raytheon	Various	Raytheon : Watham, Massachusetts	12.500	2.500	Feb 2023	2.710	Feb 2024	-		-		-	Continuing	Continuing	-
SETA Contracts	Various	Multiple : Multiple	5.700	0.918	Feb 2023	1.010	Feb 2024	0.983	Feb 2025	-		0.983	Continuing	Continuing	-
Development and Integration for the Pacific Defense Initiative	TBD	Various : Various	-	-		20.000	Feb 2024	6.450	Feb 2025	-		6.450	0.000	26.450	-
Development and Integration for the Pacific Defense Initiative PCSB 1.0	TBD	Various : Various	-	-		26.340	Feb 2024	8.580	Feb 2025	-		8.580	0.000	34.920	-
					ļ ļ										
Remarks	Sole Source	Subtotal	564.429 Level of Effo	76.704	cludes Cost	129.970 Plus Fixed	Fee for mate	59.316 erial, ODC,	<u> </u>	-		59.316	Continuing	Continuing	N/A
Remarks The contract method type S FY25 PDI funding in the ar Test and Evaluation	nount of \$15	Various is Fixed Price I	Level of Effo	ort which inc	e Initiative fo	Plus Fixed	Software De	erial, ODC, evelopment FY 2	and travel.	- FY 2 00		59.316		Continuing	<u>N/A</u>
The contract method type S	nount of \$15	Various is Fixed Price I	Level of Effo	rt which inc	e Initiative fo	Plus Fixed or Project D	Software De	erial, ODC, evelopment FY 2	and travel. t. 2025	FY 2		FY 2025	Continuing Cost To Complete	Continuing Total Cost	N/A Target Value of Contract
The contract method type S FY25 PDI funding in the ar Test and Evaluation	nount of \$15 (\$ in Milli Contract Method	Warious is Fixed Price I 030 million is in suppo ONS) Performing	Level of Effo rt of the Pac Prior	ific Defense	e Initiative fo 2023 Award	Plus Fixed or Project D FY 2	Software De 2024 Award Date	erial, ODC, evelopment FY 2 Ba	and travel. t. 2025 ase Award Date	FY 2 OC	Award	FY 2025 Total Cost	Cost To	Total Cost	Target Value of Contract
The contract method type S FY25 PDI funding in the ar Test and Evaluation Cost Category Item CCDC and Other Govt	nount of \$15 (\$ in Milli Contract Method & Type	Various is Fixed Price I .030 million is in suppo ONS) Performing Activity & Location RDEC and OGA'S :	Level of Effo rt of the Pac Prior Years	rt which inc ific Defense FY 2 Cost	e Initiative fo 2023 Award Date Jan 2023	Plus Fixed or Project D FY 2 Cost 3.370	Software De 2024 Award Date	erial, ODC, evelopment FY 2 Ba Cost 1.735	and travel. t. 2025 ase Award Date	FY 2 OC Cost	Award	FY 2025 Total Cost 1.735	Cost To Complete	Total Cost	Target Value of Contract
The contract method type S FY25 PDI funding in the ar Test and Evaluation Cost Category Item CCDC and Other Govt Agencies	nount of \$15 (\$ in Milli Contract Method & Type MIPR	Various is Fixed Price I 0.030 million is in suppor ons) Performing Activity & Location RDEC and OGA'S : RSA, AL Various : Huntsville,	Level of Effo rt of the Pac Prior Years 20.746	rt which inc ific Defense FY 2 Cost 5.255 32.397	e Initiative fo 2023 Award Date Jan 2023	Plus Fixed or Project D FY 2 Cost 3.370 19.664	Software Do 2024 Award Date Jan 2024	erial, ODC, evelopment FY 2 Ba Cost 1.735	and travel. t. 2025 Ise Award Date Jan 2025 Jan 2025	FY 2 OC Cost	Award	FY 2025 Total Cost 1.735 2.550	Cost To Complete	Total Cost Continuing	Target Value of Contract -
The contract method type S FY25 PDI funding in the ar Test and Evaluation Cost Category Item CCDC and Other Govt Agencies Targets/Threat Simulation	nount of \$15 (\$ in Milli Contract Method & Type MIPR MIPR	Various is Fixed Price I 0.030 million is in suppo ons) Performing Activity & Location RDEC and OGA'S : RSA, AL Various : Huntsville, AL Various : Huntsville,	Level of Effo rt of the Pac Prior Years 20.746 48.881	rt which inc ific Defense FY 2 Cost 5.255 32.397 3.700	e Initiative fo 2023 Award Date Jan 2023 Jan 2023 Jan 2023	Plus Fixed or Project D FY 2 Cost 3.370 19.664 3.283	Software Do 2024 Award Date Jan 2024 Jan 2024	erial, ODC, evelopment FY 2 Ba Cost 1.735 2.550	and travel. t. 2025 ase Award Date Jan 2025 Jan 2025 Jan 2025	FY 2 00 Cost - -	Award	FY 2025 Total Cost 1.735 2.550 1.660	Cost To Complete Continuing Continuing	Total Cost Continuing Continuing	Target Value of Contract - -
The contract method type S FY25 PDI funding in the ar Test and Evaluation Cost Category Item CCDC and Other Govt Agencies Targets/Threat Simulation Modeling and Simulation	nount of \$15 (\$ in Milli Contract Method & Type MIPR MIPR MIPR	Various is Fixed Price I .030 million is in support Ons) Performing Activity & Location RDEC and OGA'S : RSA, AL Various : Huntsville, AL Various : Huntsville, AL	Level of Effo rt of the Pac Prior Years 20.746 48.881 6.722	rt which inc ific Defense FY 2 Cost 5.255 32.397 3.700 5.655	e Initiative fo 2023 Award Date Jan 2023 Jan 2023 Jan 2023	Plus Fixed or Project D FY 2 Cost 3.370 19.664 3.283 3.355	Software Do 2024 Award Date Jan 2024 Jan 2024 Jan 2024	erial, ODC, evelopment FY 2 Ba Cost 1.735 2.550 1.660 1.728	and travel. t. 2025 ase Award Date Jan 2025 Jan 2025 Jan 2025	FY 2 OC Cost - - -	Award	FY 2025 Total Cost 1.735 2.550 1.660 1.728	Cost To Complete Continuing Continuing	Total Cost Continuing Continuing Continuing	Target Value of Contract - - -
The contract method type S FY25 PDI funding in the ar Test and Evaluation Cost Category Item CCDC and Other Govt Agencies Targets/Threat Simulation Modeling and Simulation Contractor T&E	nount of \$15 (\$ in Milli Contract Method & Type MIPR MIPR MIPR Various	Various is Fixed Price I .030 million is in suppo Ons) Performing Activity & Location RDEC and OGA'S : RSA, AL Various : Huntsville, AL Various : Huntsville, AL Multiple : Various	Level of Effo rt of the Pac Prior Years 20.746 48.881 6.722 16.146	rt which inc ific Defense FY 2 Cost 5.255 32.397 3.700 5.655 10.843	e Initiative for 2023 Award Date Jan 2023 Jan 2023 Jan 2023 Jan 2023	Plus Fixed or Project D FY 2 Cost 3.370 19.664 3.283 3.355 1.590	Software Do 2024 Award Date Jan 2024 Jan 2024 Jan 2024 Jan 2024	erial, ODC, evelopment FY 2 Ba Cost 1.735 2.550 1.660 1.728 2.025	and travel. t. 2025 Ise Award Date Jan 2025 Jan 2025 Jan 2025 Jan 2025	FY 2 00 Cost - - -	Award	FY 2025 Total Cost 1.735 2.550 1.660 1.728 2.025	Cost To Complete Continuing Continuing Continuing	Total Cost Continuing Continuing Continuing Continuing	Target Value of Contract - - - - -

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20)24	
Appropriation/Budget Activity 2040 / 7											: (Numbe Patriot Pro		rovement		
Test and Evaluation	(\$ in Milli	ons)		FY 2	2023	FY 2	024	FY 2 Ba			2025 CO	FY 2025 Total]		
Cost Category Item	Contract Contract Method Performing Prior Cost Category Item & Type Activity & Location Years			Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	122.625	63.764		40.942		19.668		-		19.668	Continuing	Continuing	N/A
			Prior Years	FY 2	2023	FY 2	024	FY 2 Ba			2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
	Project Cost Totals 724.270 146.753					177.197		82.220		-		82.220	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army			Date: March 20	24					
Appropriation/Budget Activity 2040 / 7			R-1 Program Element (Number/Name)Project (Number/Name)PE 0607865A / Patriot Product ImprovementDV8 / Patriot Product Improvementtt							
Event Name	FY 2023	FY 202		FY 2026	FY 2027	FY 2028	FY 2029			
Software Build	Software Build (PDB 8.1/i	CSB V 1.0/IBCS C	onvergence Build)		· · ·					
Advanced Electronic Counter Measures (AECM)	AECM									
Software Improvement for Threat Evolution	Software Threat									
Combat ID Enhancements	Combat ID Enhancement	5								
Task 2 Non-Ballistic Tactical Ballistic Missile (TBM)	Task 2 Non-Ballistic TBM									
Task 6 Discrimination Improvements	Task 6 Discrimination Imp									
Task 7 TBM Countermeasures / Effectors	Task 7 TBM Countermeat									
Assured PNT	Assured PNT	sures								
PAC-3 Seeker Software Improvements	PAC-3 Seeker Software I	nprovements	-							
PATRIOT System Testing, Integration and Evaluation	PATRIOT System Testing	Integration and E	veluation							
Program Development, Integration, and Support	Program Development, In									
Testing, Targets, Modeling and Simulation										
Developmental/Operational Flight Testing	Testing, Targets, Modelin									
	Developmental/Operation	al Flight Testing								

Exhibit R-4, RDT&E Schedule Profile: PB 202	25 Army						Date: March 20	24
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name)Project (Number/Name)PE 0607865A / Patriot Product ImprovementDV8 / Patriot Product Improvementtt							
Event Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 2	027	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
Follow-On Flight Testing	Follow-On Flight Testing							
PDB 8.1 Material Release		Asteriel Release						
PCSB V 1.0 Material Release			PCSB V 1.0 M	laterial Release				
PCSB v 2.0 Material Release							3 PCSB v 2.0 Ms	sterial Release
PDB 8.1/PCSB Fieldings		-8.1/PCSB Fieldings						
	- 00	-o. I/FG3D Fieldings						

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024	
	R-1 Program Element (Number/Name)	Project (N	umber/Name)	
2040 / 7	PE 0607865A / Patriot Product Improvemen	DV8 I Patri	iot Product Improvement	
	t			

Schedule Details

	Sta	Er	nd	
Events	Quarter	Year	Quarter	Year
Software Build	4	2005	4	2029
Advanced Electronic Counter Measures (AECM)	1	2014	4	2029
Software Improvement for Threat Evolution	1	2014	4	2029
Combat ID Enhancements	1	2014	4	2029
Task 2 Non-Ballistic Tactical Ballistic Missile (TBM)	1	2015	4	2029
Task 6 Discrimination Improvements	1	2014	4	2029
Task 7 TBM Countermeasures / Effectors	1	2015	4	2029
Assured PNT	1	2020	4	2027
PAC-3 Seeker Software Improvements	2	2020	4	2024
PATRIOT System Testing, Integration and Evaluation	1	2016	4	2029
Program Development, Integration, and Support	1	2016	4	2029
Testing, Targets, Modeling and Simulation	1	2016	4	2029
Developmental/Operational Flight Testing	3	2020	4	2029
Follow-On Flight Testing	4	2022	4	2029
PDB 8.1 Material Release	4	2023	4	2023
PCSB V 1.0 Material Release	3	2025	3	2025
PCSB v 2.0 Material Release	3	2028	3	2028
PDB 8.1/PCSB Fieldings	4	2023	4	2029

Exhibit R-2, RDT&E Budget Iten	n Justificat	i on: PB 202	25 Army						Date: March 2024			
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0203728A I Joint Automated Deep Operation Coordination System (JADOCS)							;)
COST (\$ in Millions) Prior Years FY 2023 FY 2024 Base						FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	18.606	42.177	27.582	-	27.582	35.987	30.244	28.408	18.696	0.000	201.700
EF7: Precision Fires Warrior-3.2604.4297.27Dismounted & Mounted						7.275	8.519	8.330	8.567	8.539	0.000	48.919
EF8: AFATDS Increment 1	-	15.346	37.748	20.307	-	20.307	27.468	21.914	19.841	10.157	0.000	152.781

A. Mission Description and Budget Item Justification

Fire Support Command and Control (FSC2) funding lines directly align to the Army Long Range Precision Fires (LRPF) and Network modernization priorities.

Fire support is the effect of lethal and non-lethal weapons (fires) that directly support land, maritime, amphibious and special operations forces who engage enemy forces, combat formations and facilities in pursuit of tactical and operational objectives. FSC2 systems automate the planning and execution of fire support operations so appropriate munitions are paired with suitable weapons or group of weapons to adequately cover targets. These activities are crucial to supporting Army 2030/2040 initiatives through development to enable and execute long-range precision fires as part of the combined joint all-domain command and control capabilities that reinforce Joint All Domain Operations (JADO). As planning moves toward Army 2040, FSC2 will leverage artificial intelligence (AI)/machine learning (ML) to expand capabilities across a dispersed area of operations.

Precision Fires-Dismounted/Mounted (PF-D/M) and Advanced Field Artillery Tactical Data System (AFATDS) are software only programs that are adopting a Continuous Integration/Continuous Delivery (CI/CD) approach to software development and capability deployment. This includes utilizing modernized software development methodologies, tools/techniques (e.g., DevOps, etc.) and human-centered design processes (e.g., Soldier Touch Points [STPs], etc.) to iteratively deliver software to meet Warfighter priority needs. The CI/CD approach will feature continuous development and integration with testing and user engagements (STPs) as integral parts of the process to ensure delivered capability satisfies requirements and adds value for the Warfighter.

PF-D/M is a software application that provides the dismounted and mounted Forward Observer (FO) and Fire Support Teams (FISTs) the ability to execute fire missions. Operating on the Nett Warrior End User Device (EUD), PF-D offers the dismounted FO and FISTs the ability and functionality to locate ground targets accurately and rapidly process a Call for Fires, which is the act of requesting a fire mission against the identified ground target. PF-D answers the Mobile/Handheld Computing Environment (M/HH CE) requirement that all handheld applications reside on the Nett Warrior EUD. PF-M replaces the Lightweight Forward Entry Device's (LFED) Forward Observer Software (FOS) at the maneuver company FIST, allowing them to identify ground targets and request fire missions. PF-M answers the Mounted Computing Environment (MCE) requirement and will reside on the Mounted Family of Computing Systems (MFoCS) computer.

AFATDS provides the Army and Marine Corps automated fire support command, control and communications and supports Hypersonics and LRPF capabilities by 1) serving as the key sensor-to-shooter link for the Army and Marine Corps; and 2) providing fully automated support for planning, coordinating, controlling and executing fires and effects. The supported LRPF systems include Extended Range Guided Multiple Launch Rocket System (ER-GMLRS) and Precision Strike Missile System

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 7: Operational	PE 0203728A I Joint Automated Deep Operation Coordination System (JADOCS)
Systems Development	
(PrSM). AFATDS also provides Joint Targeting support to multi-domain operat initiatives.	ions (the Army's contribution to JADO) and will address emerging sensor-to-shooter
	l provides Joint/Coalition Situational Awareness for fires execution and mission battlefield systems, including Navy and Air Force command and control weapons systems.
	S is interoperable with Coalition partner fire support systems. The program is currently , and control of all fire support assets (field artillery, mortars, close air support, naval gical systems, FOs, and fire support radars).
postured for deployment to a variety of hosting environments (e.g., cloud, lapto enhance kill chain responsiveness, improve cyber security posture and optimiz	Artillery Execution Suites (AXS), will transition this capability to a data centric model op, tablet, server) that, in addition to setting the stage to enable Army 2030/2040, will ze future upgrades. Development will support new ballistic requirements, including apabilities, such as an enhanced user interface, embedded training, and Army Data Plan
D/M capabilities into the targeted computing environments, including Net-enab Warrior architecture changes for PF-D and adapting the PF-D software to build	recision Fires Warrior & Dismounted and will be utilized for continued development of PF- oled weapons capability with joint services. Funding also supports alignment with Nett d the PF-M baseline to integrate with Mounted Mission Command-Software (MMC-S) and Fire Support Team HMMWV and Bradley-Fire Support Team (BFIST) platforms.
	AFATDS Increment 1 and will be used for AFATDS software modernization to support nhancements to enable hypersonic capabilities and incorporate LRPF munition

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	rmy			Date:	March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	7: Operational	-	ement (Number/Name) loint Automated Deep C		System (JADOCS)
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	19.311	42.177	35.185	-	35.185
Current President's Budget	18.606	42.177	27.582	-	27.582
Total Adjustments	-0.705	0.000	-7.603	-	-7.603
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.705	-			
 Adjustments to Budget Years 	-	-	-7.603	-	-7.603

Change Summary Explanation

Decreased funding to support higher Army priorities.

Exhibit R-2A, RDT&E Project J	ustification	: PB 2025 A	vrmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203728A I Joint Automated Deep Ope ration Coordination System (JADOCS)Project (Number/Name) EF7 I Precision Fires Warrior Dismon 					nounted &		
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
EF7: Precision Fires Warrior Dismounted & Mounted	-	3.260	4.429	7.275	-	7.275	8.519	8.330	8.567	8.539	0.000	48.919
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Precision Fires-Dismounted/Mounted (PF-D/M) funding directly aligns to Network modernization priorities and supports Army 2030/2040 initiatives toward implementing multi- and joint all-domain operations in a dispersed battlefield.

Precision Fires-Dismounted/Mounted (PF-D/M) is a software only program that is adopting a Continuous Integration/Continuous Delivery (CI/CD) approach to software development and capability deployment. This includes utilizing modern software development methodologies, tools/techniques (e.g., DevOps, etc.) and human- centered design processes (e.g., Soldier Touch Points [STPs], etc.) to iteratively deliver software to meet Warfighter priority needs. The CI/CD approach will feature continuous development and integration with testing and user engagements (STPs) as integral parts of the process to ensure delivered capability satisfies requirements and adds value for the Warfighter.

Precision Fires-Dismounted/Mounted (PF-D/M) is a software application that provides the dismounted and mounted Forward Observer (FO) and Fire Support Teams (FISTs) the ability to execute fire missions. Operating on the Nett Warrior End User Device (EUD), PF-D provides the dismounted FO and FISTs the ability and functionality to locate ground targets accurately and rapidly process a Call for Fires, which is the act of requesting a fire mission against the identified ground target. PF-D answers the Mobile/Handheld Computing Environment requirement that all handheld applications reside on the Nett Warrior EUD. PF-M replaces the Lightweight Forward Entry Device's (LFED) Forward Observer Software (FOS) at the maneuver company FIST, allowing them to identify ground targets and request fire missions. PF-M answers the Mounted Computing Environment (MCE) requirement and will reside on the Mounted Family of Computing Systems (MfoCS) computer.

FY 2025 funding of \$7.275 million will be utilized for continued development of capabilities into the targeted computing environments, including net-enabled weapons capability with joint services. Funding also supports alignment with Nett Warrior architecture changes for PF-D and adapting the PF-D software to integrate with Mounted Mission Command-Software (MMC-S) and operate on the MFOCS within the MCE on fire support vehicles to include vehicle integration of HMMVV and BFIST.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Program Management Support Costs for PF-D/M	0.168	0.175	0.895
Description: Program support for Precision Fires Dismounted/Mounted (PF-D/M) software development efforts. This includes contractor and matrix support.			
FY 2024 Plans:			

PE 0203728A: Joint Automated Deep Operation Coordinat... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army	Date: N	larch 2024	
	ect (Number/N Precision Fire Inted		smounted &
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Continue to provide Matrix and Contractor/SETA support to Project Management Office for all aspects of the PF-D/M program including requirements decomposition, software development efforts of Block 3, logistics and business management support.			
FY 2025 Plans: Project management support to include government and contract personnel for management of systems integration, engineering development/integration, operations, and safety/information assurance.			
FY 2024 to FY 2025 Increase/Decrease Statement: Increased due to additional support required for information assurance and software integration management for iterative software deliveries of improved capabilities, as well incorporating guidance from the SECARMY's directive on software modernization and Army 2030 priorities.			
Title: PF-D/M Software Development	2.773	3.522	5.419
Description: PF-D/M Software Development.			
FY 2024 Plans: Modifications of PF-D software to align with Nett Warrior architecture changes for hosting on the EUD. Complete development of PF-M software for integration with MMC-S for hosting on the MFoCS on fire support platforms. Incorporate necessary changes to accommodate net-enabled weapons capability for joint services.			
<i>FY 2025 Plans:</i> Continued modifications to PF-D software to align with Nett Warrior architecture changes for hosting on the EUD. Continue PF-M software integration with MMC-S for hosting on the MFoCS on fire support platforms. Continue to incorporate necessary software changes to accommodate net-enabled weapons capability for joint service. Platform integration into HMMWV and BFIST.			
FY 2024 to FY 2025 Increase/Decrease Statement: Increased due to PF-M platform integration into HMMWV and BFIST vehicles and reallocation of training to software development as part of the Continuous Integration/Continuous Delivery approach.			
Title: Testing for PF-D/M	-	0.400	0.961
Description: Conduct and Support Army Testing Activities for PF-D/M.			
FY 2024 Plans: Conduct Production Qualification and Functional Quality Testing (developmental), customer test (OT) and Army Interoperability Certification testing of PFDM 3.0 software.			
FY 2025 Plans:			

PE 0203728A: Joint Automated Deep Operation Coordinat... Army

Exhibit R-2A, RDT&E Project Justif	ication: PB	2025 Army							Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7				PE 02	r ogram Eler 03728A / Jo Coordinatio	int Automate	d Deep Ope			lame) es Warrior Dis	smounted &
B. Accomplishments/Planned Prog Internal Verification and Validation, D Continuous Integration and Continuo	evelopmenta	al Test and S					⁻ -M to suppo		FY 2023	FY 2024	FY 2025
FY 2024 to FY 2025 Increase/Decre Increase due to additional resources for both PF-D and PF-M.			nd Validatio	n/Developme	ental Test ar	nd Soldier To	ouchpoint act	vities			
Title: Training (Interactive Electronic	Technical Ma	anuals)							0.319	0.332	-
FY 2024 Plans: Additions and modifications to Admin			onic Technic	cal Manuals	(IETM) for P	recision Fire	s-Mounted (F	PF-M).			
FY 2024 to FY 2025 Increase/Decree Decrease due to the reallocation of tr approach.			opment as pa	art of the Co	ntinuous Inte	egration/Cor	tinuous Deliv	ery			
				Accon	nplishment	s/Planned P	rograms Su	btotals	3.260	4.429	7.27
C. Other Program Funding Summa	ry (\$ in Milli	<u>ons)</u>	51/ 0005	51/ 0005						0	
Line Item	FY 2023	FY 2024	<u>FY 2025</u> Base	<u>FY 2025</u> OCO	<u>FY 2025</u> Total	FY 2026	FY 2027	FY 2028	5 FY 202	<u>Cost To</u> Complete	Total Cos
• BZ9851: POCKET FORWARD ENTRY DEVICE (PFED) Remarks	2.140	2.213	2.695	-	2.695	4.065	4.568	4.753			

D. Acquisition Strategy

Precision Fires-Dismounted/Mounted (PF-D/M) is an Acquisition Category III program established to satisfy requirements captured in the Pocket-sized Forward Entry Device (PFED) Inc 2 Capability Production Document (CPD), which was approved as an IT Box requirement in 2016. Future requirements that fall within the CPD's scope and that of the Advanced Field Artillery Tactical Data System Inc II Capability Development Document (CDD) will be approved by the Fires Support Command and Control (FSC2) Tactical Software Requirements Governance Board and be documented in Fire Support Change Requests (FSCRs), formerly referred to as Tactical Software Change Requests (TSCRs). The Milestone B approved in 2015 codified a blocking approach to provide structure for incremental capability development over time. PF-D/M is developed in partnership with a government integrator.

Beginning in FY24, PF-D/M is employing a Continuous Integration/Continuous Delivery (CI/CD) approach by iteratively updating fielded software to address user feedback and changes implemented by the host hardware (e.g., Nett Warrior End User Device [EUD]) for PF-D.) A similar process will be employed for PF-M, although the lengthy platform integration timeline may influence the PF-M feedback and response rates. Continuously delivering the PF-D/M capabilities is the goal; however, the

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A <i>I Joint Automated Deep Ope</i> <i>ration Coordination System (JADOCS)</i>	Project (Number/Name) EF7 <i>I Precision Fires Warrior Dismounted &</i> <i>Mounted</i>
actual optempo will be driven by the fielding plans and prioritization for Nett Wa in fires support vehicle variants.	arrior EUD (PF-D) and Mounted Mission Com	mand-Software (MMC-S) (PF-M) integration
PF-D/M Block 1 provided the baseline dismounted capability upon which subst investment by transitioning a software application that was developed and use (AEWE) and Bold Quest). Upon a successful Milestone B decision in FY15, this developmental and operational test and evaluation requirements. With both the foundation that operates on an Android Tactical Assault Kit (ATAK) software be coalesce to a new common operating environment. Reusable components and enhance the end user experience provided within the ATAK infrastructure. PF- integrator.	d in proponent experimentation events (e.g., s software application transitioned to PM Miss e Mobile/Handheld and Mounted computing e aseline, the PF-D software, operated on the N d services were taken from the S&T baseline t	Army Expeditionary Warrior Experiment sion Command (PMMC) to conduct all Army nvironments migrating toward a technical lett Warrior EUD was further adapted to o help satisfy operational requirements and
PF-D/M Block 2 focused on transitioning from a standalone Android application (PF-M) by adapting the PF-D software to the mounted environment. PF-D capa Link 16 network. PF-M replaces the Lightweight Forward Entry Devices (LFED is different from PF-D in that it resides on the mounted platforms and leverage operate with MMC-S, which will be hosted on the MFoCS in various vehicle platintegrator and will reuse previously developed components available under the Full Deployment Decision for Block 2 was approved with the Acquisition Decision	abilities include Sensor Interoperability, and D) Forward Observer Software (FOS) at the ma s the vehicle's interfaces. The first generation atforms. The PF-M software will continue to be ATAK architecture to serve as the mounted I	igitally Aided Close Air Support over the aneuver company Fire Support Team and of PF-M will be developed as a plugin to e developed in partnership with a government
PF-D/M Block 3 encompasses the continuation of PF-D software development integration of PF-M, an adaptation of the PF-D software for the mounted enviro Software (FOS) at the maneuver company Fire Support Team and is different interfaces. The first generation of PF-M will reside on the Mounted Family of C Like Nett Warrior, PdM Mounted Mission Command (MMC) (formerly Joint Bat MMC-Software to run the PF-M capabilities as a plugin. The PF-M will continue developed components available under the ATAK architecture to serve as the in Nov 2021.	onment. PF-M replaces the Lightweight Forwa from PF-D in that it resides on the mounted pl omputer Systems computer to meet the Mour tle Command - Platform (JBC-P)) will provide e to be developed in partnership with a govern	ard Entry Devices (LFED) Forward Observer atforms and leverages the vehicle's nted Computing Environment directive. an ATAK-based infrastructure called ment integrator and will reuse previously

Exhibit R-3, RDT&E	Project C	USI Allalysis. FB 2		у								Date.	March 20	724	
Appropriation/Budge 2040 / 7	et Activity					PE 020	3728A I J	oint Auto	umber/Na mated De m (JADOC	ep Ópe				rior Dismo	ounted &
Management Service	es (\$ in M	illions)		FY 2	2023	FY 2	2024	FY 2 Ba			2025 CO	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 for PF-D/M (Matrix)	IA	Various Mix Orgs (Govt) : APG, MD	0.759	0.168	Feb 2023	0.175	Feb 2024	0.298	Feb 2025	-		0.298	0.000	1.400	Continuin
Program Management Support for PF-D/M (Contract)	Option/ CPFF	GSA : APG, MD	-	-		-		0.597	Mar 2025	-		0.597	0.000	0.597	-
<u> </u>		Subtotal	0.759	0.168		0.175		0.895		-		0.895	0.000	1.997	N/A
Increased due to additiona incorporating guidance from	m the SECA	RMY's directive on softw			0	0				•		-	1		
	m the SECA	RMY's directive on softw		nization and	0	0		FY 2 Ba	2025	· FY 2	2025 CO	FY 2025 Total		[Target
incorporating guidance from	m the SECA	RMY's directive on softw		nization and	d Army 2030	priorities.		FY 2	2025	· FY 2	2025	FY 2025	Cost To Complete	Total Cost	Target Value of Contract
incorporating guidance from Product Development Cost Category Item PF-D/M Software	m the SECA nt (\$ in Mi Contract Method	RMY's directive on softw illions) Performing	vare moderr	nization and	2023 Award Date	Priorities. FY 2 Cost	2024 Award	FY 2 Ba Cost	2025 Ise Award	FY 2 OC	2025 CO Award	FY 2025 Total Cost	Complete		Value of Contract
incorporating guidance from	m the SECA nt (\$ in Mi Contract Method & Type	RMY's directive on softw Ilions) Performing Activity & Location DEVCOM C5ISR,	vare moderr Prior Years	FY 2 Cost	2023 Award Date	Priorities. FY 2 Cost	2024 Award Date	FY 2 Ba Cost	2025 Ise Award Date	FY 2 OC	2025 CO Award	FY 2025 Total Cost	Complete	Cost	Value of Contract
incorporating guidance from Product Development Cost Category Item PF-D/M Software Development efforts Training (Interactive Electronic Technical	m the SECA nt (\$ in Mi Contract Method & Type IA	RMY's directive on softw illions) Performing Activity & Location DEVCOM C5ISR, ESI : APG, MD TYAD : Tobyhanna,	vare moderr Prior Years	FY 2 Cost 2.773	2023 Award Date	FY 2 Cost 3.532	2024 Award Date	FY 2 Ba Cost	2025 Ise Award Date	FY 2 OC	2025 CO Award	FY 2025 Total Cost 5.419	Complete Continuing 0.000	Cost Continuing	Value of Contract Continuin
incorporating guidance from Product Development Cost Category Item PF-D/M Software Development efforts Training (Interactive Electronic Technical Manuals (IETM) Remarks Increased due to PF-M pla Continuous Delivery approx	the SECA nt (\$ in Mi Contract Method & Type IA IA IA IA	RMY's directive on softw illions) Performing Activity & Location DEVCOM C5ISR, ESI : APG, MD TYAD : Tobyhanna, PA Subtotal ation into HMMWV and E	Prior Years 22.146 - 22.146	FY 2 Cost 2.773 0.319 3.092	Army 2030 2023 Award Date Oct 2022	Cost 3.532 0.322 3.854	2024 Award Date Oct 2023	FY 2 Ba Cost 5.419 - 5.419	2025 Ise Award Date Oct 2024 s part of the 2025	FY 2 OC Cost - - Continuou	2025 CO Award Date	FY 2025 Total Cost 5.419 - 5.419	Complete Continuing 0.000	Cost Continuing 0.641	Value of Contract Continuin
incorporating guidance from Product Development Cost Category Item PF-D/M Software Development efforts Training (Interactive Electronic Technical Manuals (IETM) Remarks Increased due to PF-M pla	the SECA nt (\$ in Mi Contract Method & Type IA IA IA IA	RMY's directive on softw illions) Performing Activity & Location DEVCOM C5ISR, ESI : APG, MD TYAD : Tobyhanna, PA Subtotal ation into HMMWV and E	Prior Years 22.146 - 22.146	FY 2 Cost 2.773 0.319 3.092	Army 2030 2023 Award Date Oct 2022	FY 2 Cost 3.532 0.322 3.854	2024 Award Date Oct 2023	FY 2 Ba Cost 5.419 - 5.419 elopment a	2025 Ise Award Date Oct 2024 s part of the 2025	FY 2 OC Cost - - Continuou	2025 CO Award Date s Integratio 2025	FY 2025 Total Cost 5.419 - 5.419	Complete Continuing 0.000	Cost Continuing 0.641 Continuing	Value of Contract Continuin

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Exhibit R-3, RDT&E Appropriation/Budge 2040 / 7	-			,		PE 020	3728A / J	ement (N loint Auto ion Syster	mated De	eep Ópe		t (Numbe i Precision F			ounted &
Test and Evaluation	(\$ in Milli	ons)	ſ	FY	2023	FY 2	2024		2025 Ise		2025 CO	FY 2025 Total			
Cost Category Item					Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contrac
		-	1.761	-		0.400		0.961		-		0.961	-	Continuing	N/.
		Project Cost Totals	Prior Years 24.666	FY 3.260	2023	FY 2 4.429	2024		2025 Ise		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value o Contrao N
Remarks_		1			1	11		1	1	1	1	1	-		1

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	۲m	/																			D	ate:	Ма	rch 2	024				
Appropriation/Budget Activity 2040 / 7								R-1 I PE 0 ratio	203	728/	۱ <i>۱</i>	oint /	Auto	ma	ted I	Сеер	Öpe	E	EF7		ecisi			me) War	rior	Disn	างนท	nted	&
				_		_							1				1				—				-				
Event Name	1		(202 3		1	FY 2	(202 3		1	FY 2	202 3		1	F 1	Y 20		1		20	27	1		Y 20)28 3 4	1		Y 20)29 3 4	4
PF-D/M Continuous Software (SW) Development/Integration																													
PF-D/M Continuous Developmental, Operational and Soldier																													
PF-M HMMWV Integration																													
PF-M BFIST Integration																													
PF-M Stryker Integration																													
																	·				-1								

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	S ()	Project (Number/Name) EF7 <i>I Precision Fires Warrior Dismounted &</i> <i>Mounted</i>

Schedule Details

	Sta	art	E	nd
Events	Quarter	Year	Quarter	Year
Milestone B	3	2015	3	2015
Limited Deployment Decision (LDD)	4	2016	4	2016
Operational Test (OT)	4	2016	4	2016
Full Deployment Decision (FDD)	2	2017	2	2017
Initial Operational Capability (IOC)	3	2017	3	2017
Build Decision (BD) Block 2	2	2018	2	2018
PF-D SW Development Block 2	2	2019	1	2022
LDD Block 2	2	2021	2	2021
Operational Test and Evaluation (OT&E) Block 2	3	2021	3	2021
Build Decision (BD) Block 3	1	2022	1	2022
Full Deployment Decision Block 2	2	2022	2	2022
PF-D/M Continuous Software (SW) Development/Integration	1	2022	4	2030
PF-D/M Continuous Developmental, Operational and Soldier Touchpoint Testing	1	2024	4	2030
PF-M HMMWV Integration	1	2024	2	2025
PF-M BFIST Integration	2	2025	2	2028
PF-M Stryker Integration	2	2026	4	2028

Exhibit R-2A, RDT&E Project J	ustification	: PB 2025 A	rmy							Date: Mare	ch 2024	
Appropriation/Budget Activity 2040 / 7					PE 020372	am Elemen 28A I Joint A rdination Sy	utomated L	Сеер Оре	Project (N EF8 / <i>AF</i> A7		,	
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
EF8: AFATDS Increment 1	-	15.346	37.748	20.307	-	20.307	27.468	21.914	19.841	10.157	0.000	152.781
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Advanced Field Artillery Tactical Data System (AFATDS) funding directly aligns to the Army Long Range Precision Fires (LRPF) and Network modernization priorities.

AFATDS provides the Army and Marine Corps automated fire support command, control and communications and supports Hypersonics and LRPF capabilities by 1) serving as the key sensor-to-shooter link for the Army and Marine Corps; and 2) providing fully automated support for planning, coordinating, controlling and executing fires and effects. The supported LRPF systems include Extended Range Guided Multiple Launch Rocket System (ER-GMLRS) and Precision Strike Missile System (PrSM). AFATDS also provides Joint Targeting support to multi-domain operations and will address emerging sensor-to-shooter initiatives.

AFATDS is used to plan, execute, and deliver lethal and non-lethal effects and provides Joint/Coalition Situational Awareness for fires execution and mission management. The system interoperates and integrates with over 80 different battlefield systems, including Navy and Air Force command and control weapons systems. As a member of the Artillery System Cooperation Agreement (ASCA), AFATDS is interoperable with coalition partner fire support systems. The program is currently fielding the AFATDS 6.8 baseline, which automates the planning, coordination, and control of all fire support assets (field artillery, mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars).

A software only program, AFATDS is adopting a Continuous Integration/Continuous Delivery (CI/CD) approach to capability development and deployment. This includes enhancing modernized software development methodologies (e.g., agile, etc.), tools/techniques (e.g., DevOps, etc.) and human-centered design processes (e.g., Soldier Touch Points [STPs], etc.) to iteratively deliver software that meets Warfighter priority needs. The CI/CD approach will feature continuous development and integration with testing and user engagements (STPs) as integral parts of the process to ensure delivered capability satisfies requirements and adds value for the Warfighter.

AFATDS modernization efforts, which will be executed under the auspices of Artillery Execution Suites (AXS), will transition this capability to a data centric model postured for deployment to a variety of hosting environments (e.g., cloud, laptop, tablet, server) that, in addition to setting the stage to enable Army 2030/2040, will enhance kill chain responsiveness, improve cyber security posture and optimize future upgrades. Development will support new ballistic requirements, including upgrading precision calculation data to support Hypersonics, LRPF and new capabilities, such as an enhanced user interface, embedded training, and Army Data Plan implementation.

FY 2025 funding in the amount of \$20.307 million is allocated to Project EF8: AFATDS Increment 1 and will be used for AFATDS software modernization to support hosting environment flexibility and improve cybersecurity posture, as well as enhancements to enable hypersonic capabilities and incorporate LRPF munition improvements supporting ER-GMLRS and PrSM munition employment.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A <i>I Joint Automated Deep Ope</i> <i>ration Coordination System (JADOCS)</i>	Project (Number/ EF8 / AFATDS Incl	,	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Title: AFATDS software development efforts		12.256	27.392	15.350
Description: Development of AFATDS 7 software.				
FY 2024 Plans: Develop modernized software with the flexibility to accommodate a vetc.) to enable hypersonic capabilities and incorporates Long Range Range Canon Artillery (ERCA), Extended Range Guided Multiple La System (PrSM) enhancements. Development will also address user with CPCE, Link 16/digital radio enhancements, and Artillery System embedded training while enabling high tempo counter fire operations.	Precision Fires (LRPF) capabilities to include Extended unch Rocket System (ER-GMLRS), Precision Strike Miss interface upgrades based on Soldier feedback, a data br is Cooperation Activities (ASCA) needs and incorporate	sile		
FY 2025 Plans: Continue development of data centric capability postured for deployr tablet, server) to enhance kill chain responsiveness, improve cyber supgrades. Modernization development will support new ballistic requite to support Hypersonics and LRPF capabilities, while enhancing the limplementing the Army Data Plan.	security posture and reduce cost and timelines for future irrements, including upgrading precision calculation data	,		
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to reduced efforts of multiple hosting environments, cy Division-level Fire Support functions, and Army Data Plan implement		on		
Title: AFATDS Test		-	-	2.514
Description: Internal verification and validation testing, developmen Integration/Continuous Deployment of the software.	tal, Soldier Touch Points/exercises throughout the Contin	nuous		
FY 2025 Plans: Internal Verification and Validation, developmental and Soldier Touch Delivery (CI/CD) approach.	hpoint activities to support Continuous Integration/Contin	uous		
FY 2024 to FY 2025 Increase/Decrease Statement: AFATDS test efforts in FY25 and beyond are reflected in this catego approach for development and testing.	ry. Overall decrease from FY24 reflects adoption of the C	CI/CD		
Title: AFATDS 7 Test events		0.762	6.600	-

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Appropriation/Budget Activity		2025 Army							Date: M	arch 2024	
2040 / 7				PE 02	03728A I Jo	nent (Numb int Automate n System (JA	ed Deep Ópe		t (Number/N AFATDS Incre		
B. Accomplishments/Planned P	rograms (\$ in N	<u>/lillions)</u>							FY 2023	FY 2024	FY 2025
Description: AFATDS 7 Test Sup	oport.										
FY 2024 Plans: Conduct development, internal ver (OT). The program has a well-esta is being developed to verify the de carried into the formal development	ablished internal esign, validate is	l verification sues and/or	and validation	on process v	hich will be	conducted v	vhile the soft	ware			
FY 2024 to FY 2025 Increase/De All test support in FY25 and beyor decrease from FY24 to FY25 refle	nd is being captu	ured under tl			t accomplisł	nment. Overa	all, there is a				
Title: Program Management Cost	s for AFATDS s	oftware deve	elopment						2.328	3.756	2.44
Description: Provide program sup	pport for AFATE	S software	developmen	t efforts.							
FY 2024 Plans: Program Management Support to the AFATDS program including re support.											
FY 2025 Plans: Project management to include ma operations, ASCA, and safety/info			rm Fires sys	tems integra	tion, engine	ering develo	pment/integra	ation,			
FY 2024 to FY 2025 Increase/De Decrease due to reduced requirer			nent activitie	s associated	with the lev	el of develor	oment.				
				Accon	nplishment	s/Planned P	rograms Su	btotals	15.346	37.748	20.30
C. Other Program Funding Sum	<u>mary (\$ in Milli</u>	<u>ons)</u>									
			<u>FY 2025</u>	<u>FY 2025</u>	FY 2025					Cost To	-
		<u>FY 2024</u>	Base	000	Total	<u>FY 2026</u> 9.129	<u>FY 2027</u> 10.029	FY 202	<u>8 FY 2029</u>	<u>Complete</u>	
Line Item • B28620: MOD OF IN- SVC EQUIP, AFATDS	<u>FY 2023</u> 7.536	7.839	12.312	-	12.312	9.129	10.029	10.33	2 8.105	5 0.000	

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 7	PE 0203728A / Joint Automated Deep Ope	EF8 / AFA	TDS Increment 1
	ration Coordination System (JADOCS)		

D. Acquisition Strategy

AFATDS, based on the Jun 2011 Joint Requirements Oversight Council (JROC) validated AFATDS Inc 2 Capability Development Document (CDD), will modernize the underlying architecture of AFATDS leveraging current software development methodologies (e.g., agile) and techniques (i.e., DEVSECOPS) which will create baseline code that is easier to sustain than the legacy software. This approach was codified on 13 May 2015, when the Army Acquisition Executive (AAE) approved AFATDS as a modification to the existing program, continuing it as an Acquisition Category (ACAT) II defense acquisition program (DAP) (non-Automated Information System) with PEO C3T oversight. AFATDS software will be hosted on already fielded hardware used for legacy AFATDS software and is being postured for hosting to a wide variety of environments (e.g., laptop, server, cloud, etc.) in accordance with user needs at different echelons.

Beginning in FY24, Product Manager Fire Support Command and Control will utilize a Continuous Integration/Continuous Delivery (CI/CD) approach to modernize the AFATDS capabilities by leveraging automated software engineering and testing to the maximum extent. This effort will eliminate cyber vulnerabilities, update back-end code to a modern language, improve the user interface to reduce user workload and include embedded training to enable on-demand refresher training on key system capabilities for Soldiers 24/7/365. By migrating to an agile development approach, employing DevSecOps, and releasing software on an annual basis, the program will be more responsive to emerging user, hypersonic, and Long Range Precision Fires (LRPF) needs/munitions. Additionally, it maximizes flexibility to receive technology insertions to respond to new munitions and/or firing/hosting platforms.

The AFATDS 7 contract was awarded in 2017 via full and open competition; however, due to continual vendor schedule delays and projected cost overruns associated with the estimate at completion, a stop work order was issued in Jan 2023 and a Bilateral termination was completed in Mar 2023. An alternate strategy (under the auspices of the AFATDS Artillery Execution Suite (AXS)) has been implemented to continue software modernization, initially using a government developer/integrator. An Indefinite Delivery/Indefinite Quantity (ID/IQ) contract is being established to engage industry to facilitate the incorporation of best-of-breed solutions into the modernized AFATDS capability. The ID/IQ contract is intended to address Product Manager Fire Support Command and Control (FSC2) portfolio needs. This work will be performed under a series of task order awards under the ID/IQ contract to expedite capability development and deployment. The schedule (R-4) reflects the strategic changes and adoption of CI/CD approach This new strategy combines the modernization efforts with hypersonics/LRPF enhancements and is intended to support continuous delivery of modernized capabilities that address emerging munitions and firing platforms.

The AFATDS Inc 2 CDD was approved in 2011. JROC Memorandum (JROCM) 083-11 provided an additional flexibility by delegating approval authority for identifying and approving future capability requirements that fall within the CDD's scope to an established governance body, FSC2 Tactical Software Requirements Governance Board. This requirements strategy promotes evolutionary development by facilitating requirement refinement and the incorporation of the latest technology to address emerging threats.

Exhibit R-3, RDT&E I	•		025 Arm	y		1							March 20	24	
Appropriation/Budge 2040 / 7	et Activity	1				PE 020	3728A I J	oint Auto	lumber/Na mated De m (JADOC	ep Ópe	-	t (Numbe i FATDS In	r/Name) crement 1		
Management Service	es (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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 for AFATDS (Matrix)	IA	Various Matrix Orgs (Govt) : Aberdeen PG, MD	6.271	0.612	Oct 2022	1.503	Oct 2023	1.222	Oct 2024	-		1.222	0.000	9.608	-
Program Management Support for AFATDS (SETA Contr)	Various	GSA : Aberdeen PG, MD	6.979	1.716	Mar 2023	2.253	Mar 2024	1.221	Mar 2025	-		1.221	0.000	12.169	-
		Subtotal	13.250	2.328		3.756		2.443		-		2.443	0.000	21.777	N//
Product Developmer	Contract			FY 2	2023	FY 2	2024	Ba	ise	0		Total			Target
Cost Category Item	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	Value of Contrac
Software Development of AFATDS Version 7.0	IA	DEVCOM AC : Picatinny, NJ	166.227	12.256	Oct 2022	-		-		-		-	0.000	178.483	-
Software Modernization/ Development	IA	DEVCOM AC : Picatinny Arsenal, NJ	-	-		27.392	Oct 2023	15.350	Oct 2024	-		15.350	0.000	42.742	-
		Subtotal	166.227	12.256		27.392		15.350		-		15.350	0.000	221.225	N/.
Remarks Decrease due to reduced e Data Plan implementation. Test and Evaluation		· · ·	nts, cyber s					FY	2025	FY	2025	FY 2025]		
	-	•		FY 2	2023	FYZ	2024	Ва	ise	0		Total			Target
	Contract														
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Value of Contrac

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Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	y								Date:	March 20	24	
Appropriation/Budge 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Ope ration Coordination System (JADOCS)					Project (Number/Name) EF8 / AFATDS Increment 1									
Test and Evaluation (\$ in Millions)					FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO				
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
Internal Verification and Validation of AFATDS 7.x requirements	MIPR	Engility : Various Locations	2.266	-		4.620		-		-		-	0.000	6.886	-
AFATDS Continuous Test and Evaluation	IA	Various : Various	-	-		-		2.514	Jan 2025	-		2.514	0.000	2.514	-
		Subtotal	3.016	0.762		6.600		2.514		-		2.514	0.000	12.892	N/A
<u>Remarks</u> Decrease in overall T&E re	flects adopt	ion of the CI/CD approa	ch for devel	opment and	d testing.							-	1 1		
			Prior Years	FY 2	2023	FY 2	024	FY 2 Ba	2025 Ise		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	182.493	15.346		37.748		20.307		-		20.307	0.000	255.894	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army					Date: March 20	24			
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name) PE 0203728A I Joint Automated Deep Ope ration Coordination System (JADOCS)Project (Number/Name) EF8 I AFATDS Increment 1								
Event Name	FY 2023	FY 202	24 FY 2025	FY 2026	FY 2027	FY 2028 1 2 3 4	FY 2029			
Advanced Field Artillery Tactical Data System (AFATDS) D										
AFATDS Continuous Internal Verification Validation, deve										

xhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Da	ate: March	2024
D40/7 PE 0203	gram Element (Numbe 3728A / Joint Automated oordination System (JAI	Deep Ope	Project (Num EF8 / AFATDS		,
Sebedule [Dotaila				
Schedule [Jelans				
Schedule L		art		End	1
Events		art Year	Qua		l Year
	St		Qua		-

Note

Product Manager Fire Support Command and Control migrated to a government developer in 2nd Quarter FY 2023 and implemented continuous integration/continuous delivery approach that supports annual capability deliveries. Schedule changes reflect this new approach.

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 7: Operational Systems Development						am Elemen 35A I Comba							
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	-	187.377	146.635	272.926	-	272.926	380.386	193.662	163.119	154.831	Continuing	Continuing	
280: RECOV VEH IMPROV PROG	-	64.247	13.197	-	-	-	-	-	-	-	0.000	77.444	
330: Abrams Tank Improve Prog	-	58.971	96.240	246.475	-	246.475	366.247	179.373	148.671	140.239	Continuing	Continuing	
DD4: AMPV Improvement Program	-	-	12.354	12.325	-	12.325	-	-	-	-	Continuing	Continuing	
EE2: Stryker Improvement	-	64.159	24.844	14.126	-	14.126	14.139	14.289	14.448	14.592	Continuing	Continuing	

Note

280: The M88 Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) program is on-track to complete the M88A3 Engineering Change Proposals (ECP) development/integration in FY 2024.

A. Mission Description and Budget Item Justification

Program Element (PE) 0203735A Combat Vehicle Improvement Programs corrects vehicle deficiencies identified during Army operations; continues technical system upgrades to include the integration of applicable technologies on ground systems; addresses needed evolutionary enhancements to tracked combat vehicles; and develops technology improvements which have application to or insertion opportunities across multiple Ground Combat Systems vehicles. This PE provides combat effectiveness and Operating and Support (O&S) cost reduction enhancements for the Abrams tanks, Bradley Fighting Vehicles, Armored Multi-Purpose Vehicles, and the Stryker Family of Vehicles (FOVs) through a series of product improvements.

The Combat Recovery System/M88 HERCULES vehicle program is an Engineering Change Proposal (ECP) that will allow the current recovery vehicle to regain Single Vehicle Recovery (SVR) for the heaviest tracked combat vehicle as defined in the Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) Enhanced M88A2E1 Capability Production Document Increment 2 dated 20 January 2017. The fielded M88A2 HERCULES lacks the necessary power, weight, and braking ability to safely support the recovery of the M1A2SEPv2 as well as the M1A2SEPv3 in all situations. The M88A3 vehicles will bring back the operational capability of the single vehicle recovery. The increased winching and lifting capability accommodates all 80-ton Abrams variants. Without this increased capability, units must use two M88A2 Medium Recovery Vehicles to perform the necessary spectrum of recovery operations.

The Abrams M1A2SEPv2/v3 and M2/M3A3 Bradley Fighting Vehicles are at or exceed Space, Weight, and Power-Cooling (SWaP-C) limitations. In order to host and restore lost platform capability, the Abrams Tank and Bradley Fighting Vehicle programs will execute a series of ECPs to support the current embedded systems and to facilitate integration of technologies currently in development under other existing Programs of Record. The ECPs are not intended to exceed the operational capability outlined in current system requirements documents, but rather to ensure that the existing system performance is not further degraded and that Army mission equipment packages can be integrated on the Abrams and Bradley Platforms. The strategy for Abrams and Bradley will focus on incrementally delivering capability

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 7: Operational	PE 0203735A I Combat Vehicle Improvement Programs	
Systems Development		

to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future. This effort was approved by the Army Acquisition Executive in 3rd Quarter (QTR) Fiscal Year (FY) 2011.

The Abrams Main Battle Tank program has approved Engineering Change Proposals (ECPs) to restore lost capability, host inbound technologies, and to meet objective performance requirements called out in approved platform requirements documents. The strategy for Abrams will focus on incrementally delivering capability to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future. This approach was approved by the Army Acquisition Executive in 3rd Quarter (Q) Fiscal Year (FY) 2011 and revalidated in an Army Requirements Oversight Council (AROC) decision in 2018. The Army will modernize the tank fleet through a series of deliberate, incremental Engineering Change Proposals (ECPs). The current M1A2 SEPv3 tank (Engineering Change Proposal (ECP) 1A - Power) is in production and is designed to mitigate Space, Weight, and Power (SWaP) limitations as well as create additional margin for integration of future technologies being developed by existing Programs of Record (POR).

The Armored Multi-Purpose Vehicle (AMPV) is the materiel solution for replacement of the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV) within the Armored Brigade Combat Team (ABCT). It will mitigate current and future capability gaps in force protection, survivability, mobility, reliability, and interoperability across the Spectrum of Conflict. AMPV Improvement will address the development of Survivability, Lethality, Mobility, Network Lethality, and Communication, Command and Control (C3) improvements within the AMPV Family of Vehicles (FOVs). The strategy for AMPV Combat Vehicle Improvement line will focus on incrementally delivering capability to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future while transitioning material solutions for integration and implementation to the AMPV FOV fleet to increase combat capability. FY 2025 Base funding in the amount of \$12.325 million for Project DD4 supports funding for: Army requested changes and those stemming from the Initial Operational Test and initiates development and integration of Enhanced Driver Viewer System (EDVS), Composite Rubber Track (CRT), and Modular Turreted Mortar System (MTMS) on the AMPV FOV. The EDVS color camera system will provide the driver substantially improved situational awareness while driving in all weather conditions. The CRT offers significant advantages compared to traditional linked steel track currently utilized to include vehicle weight savings, improved fuel economy, improved track and road wheel durability, reduced Soldier maintenance. MTMS will provide added capabilities in 120mm caliber: low angle fires, fire on the move capability, increased range, and improved crew protection with turret.

Stryker Improvement will address the development of Lethality, Survivability, Mobility, Network Lethality, and Communication, Command and Control (C3) improvements within the Stryker Family of Vehicles (FOVs). Principal development efforts include upgrades associated with the Stryker Double V-Hull A1 (DVH A1) Engineering Change Proposal (ECP), Common Remotely Operated Weapon Station-Javelin (CROWS-J) ONS, Stryker Survivability Enhancement, and Stryker Lethality ECPs. DVH A1 ECP upgrades restore Stryker DVH Space, Weight, and Power-Cooling (SWaP-C) lost as a result of incorporating vehicle changes to counter threats encountered during deployment operations while allowing the future network to be hosted without further degradation in vehicle protection and mobility. The Stryker CROWS-J ONS efforts addressed Urgent Operational Need to increase the lethality of Stryker Infantry Carrier Vehicles (ICV) within the United States Army European Command (USAREUR). The Stryker Survivability Enhancements address evolving threats by assessing survivability improvements, to include but not limited to, 360 Situational Awareness, reactive armor tiles, and integration of emerging and existing technologies and other Stryker based platform solutions. The Stryker platform will also include future Mission Equipment Package (MEP) integration that includes but not limited to the Fire Direction Center (FDC) providing an on-the move capability that processes voice and digital data while maintaining contact with the indirect fire team over extended distances. Stryker Lethality ECP efforts (CROWS-J, Anti-Tank Guided Missile (ATGM), and other capabilities) focus on the integration of a suite of complementary MEP lethality upgrades that will improve the suppressive fire and armored vehicle

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 B	A 7: Operational	PE 0203735A / Combat Vehicle Improvement Programs									
Systems Development											
engagement capabilities across the Army's Stryker Brigade											
issues of the Remote Weapon Station (RWS) with the CRC											
System (MITAS), incorporating a far target locator and ena											
operating picture. The ATGM ECP also added the Embedd											
into the MITAS to provide anti-jam/anti-spoofing capabilitie											
following: Basic Skills Trainer, Card Rack Assembly that is											
Target Locator. Stryker Network Modernization will formali											
Upgrades of the Stryker flat-bottom hull and DVH variants											
Digitization of Stryker, Army Rapid Sustainment Improvement Army) and the Operator Tablet to support data transfers of					System - Anny	(GC33-					
				·							
B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	<u>FY 2025 OCO</u>	<u>FY 2025</u>						
Previous President's Budget	194.229	146.635	97.719	-		97.719					
Current President's Budget	187.377	146.635	272.926	-		72.926					
Total Adjustments	-6.852	0.000	175.207	-	17	75.207					
 Congressional General Reductions 	-	-									
 Congressional Directed Reductions 	-	-									
 Congressional Rescissions 	-	-									
Congressional Adds	-	-									
Congressional Directed Transfers	-	-									
Reprogrammings	-	-									
SBIR/STTR Transfer	-6.852	-	475 007			75 007					
 Adjustments to Budget Years 	-	-	175.207	-	17	75.207					
Congressional Add Details (\$ in Millions, and Inc	ludes General Red	uctions)		Γ	FY 2023	FY 2024					
Project: 280: RECOV VEH IMPROV PROG											
Congressional Add: Wireless Intercommunicatio	n System Encryptio	n		-	6.500						
-		(Congressional Add Subto	otals for Project 280	6.500						
		· · · · · ·			0.000						
			Congressional Add T	otals for all Proiects	6.500						
Change Summary Explanation											
Funding changes in FY2025 include funding increase	se to support the Ab	rams Modernizati	ion efforts ramp up in FY	2025. The focus is o	n advanced te	chnology					
						onnoiogy					

chibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024		
opropriation/Budget Activity	R-1 Program Element (Number/Name)			
40: Research, Development, Test & Evaluation, Army I BA 7: Operational stems Development	PE 0203735A / Combat Vehicle Improvement Programs	:		
Funding changes in FY2025 also include funding increase aligned to A of AMPV Platform related to emerging Army requirements impacting the		ent to increase current capabili		
0203735A: Combat Vehicle Improvement Programs UN	NCLASSIFIED			

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Mar	ch 2024			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name)FPE 0203735A / Combat Vehicle Improveme2nt Programs					Project (Number/Name) 280 / RECOV VEH IMPROV PROG			
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		
280: RECOV VEH IMPROV PROG	-	64.247	13.197	-	-	-	-	-	-	-	0.000	77.444		
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-				

Note

The M88 Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES) program is on-track to complete the M88A3 Engineering Change Proposals (ECP) development/integration in FY 2024.

A. Mission Description and Budget Item Justification

The M88 Heavy Equipment Recovery Combat Utility Lift and Evacuation System (HERCULES), designated as an Acquisition Category (ACAT) IC program on 15 Jun 2016, has been providing towing, winching, and hoisting operations to support battlefield recovery operations and evacuation of heavy tanks and other tracked combat vehicles since its production and deployment in 1998. The M88 HERCULES recovers tanks mired to different depths, removes M1 Abrams turrets and power packs, and uprights overturned heavy combat vehicles. Currently, the M88A2 is unable to safely perform Single Vehicle Recovery (SVR) of the Abrams tank in all conditions, due to added weight/survivability improvements made to the tank. To ensure single vehicle recovery is met, Project Manager-Mounted Armored Vehicle (PM-MAV) will develop and integrate Engineering Change Proposal (ECP) technologies for the M88A2 HERCULES through an initiative to meet its operational requirements of single vehicle recovery throughout its life cycle. This initiative is not intended to exceed current operational capability but will instead regain single vehicle recovery capability of the heaviest tracked combat vehicle.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Product Development	39.818	4.401	
Description: Design and Development of ECPs.			
FY 2024 Plans: The program begins ramping down the OTA project oversight, support for system level verification and test execution, as well as user touch points; begins preparation of production contract(s).			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding decrease is due to completion of the Design and Development of the ECP in FY 2024.			
Title: Test and Evaluation	15.585	6.408	
Description: The Army is conducting Developmental Test and Evaluation (DT&E) on (8) prototype M88A3 vehicles to confirm Single Vehicle Recovery capability for an 80T Main Battle Tank. Test data supports an evaluation of the M88A3 for use in a production decision in 1Q FY 2025. DT&E for the M88A3 includes safety testing, automotive performance, recovery,			

1 Program Element (Number/Name) 0203735A I Combat Vehicle Improveme Programs									
		Project (Number/Name) e 280 / RECOV VEH IMPROV PROG							
		FY 2023	FY 2024	FY 2025					
nterference (EMI), Cybersecurity, Surviva on, and Soldier Touch Point.	bility-								
2024.									
		2.344	2.388	-					
and in-house support Contractor salaries	, travel								
FY 2024 Plans: The FY 2024 program management office completes it's support towards the OTA project oversight, government systems engineering, logistics and test support at multiple sites as the program transitions into preparation of the M88A3 production contracting efforts. PMO support includes labor, training, travel, supplies, and equipment to effectively manage the program.									
l transition to the ramp up of M88A3 prod	uction								
complishments/Planned Programs Su	ototals	57.747	13.197	-					
FY 2023	FY 202	4							
6.50)	-							
ufacturer (OEM) and ption capability, leading to									
ongressional Adds Subtotals 6.50)	-							
	on, and Soldier Touch Point. both Aberdeen Test Center (ATC) and Y monstration occurring at the contractor fa 024. and in-house support Contractor salaries project oversight, government systems to preparation of the M88A3 production oment to effectively manage the program. transition to the ramp up of M88A3 prod complishments/Planned Programs Sul [FY 2023] 0.500 ufacturer (OEM) and ption capability, leading to	Interference (EMI), Cybersecurity, Survivability- on, and Soldier Touch Point. both Aberdeen Test Center (ATC) and Yuma monstration occurring at the contractor facility. 024. and in-house support Contractor salaries, travel project oversight, government systems not preparation of the M88A3 production oment to effectively manage the program. transition to the ramp up of M88A3 production complishments/Planned Programs Subtotals Image: FY 2023 FY 2023 for 2023 Image: FY 202 6.500	on, and Soldier Touch Point. both Aberdeen Test Center (ATC) and Yuma monstration occurring at the contractor facility. 024. 024. and in-house support Contractor salaries, travel project oversight, government systems to preparation of the M88A3 production oment to effectively manage the program. transition to the ramp up of M88A3 production complishments/Planned Programs Subtotals 57.747 FY 2023 FY 2023 FY 2024 6.500 - ufacturer (OEM) and bion capability, leading to	Interference (EMI), Cybersecurity, Survivability- bon, and Soldier Touch Point. Image: Support Contractor Point Point. both Aberdeen Test Center (ATC) and Yuma monstration occurring at the contractor facility. Image: Support Point Poin					

Exhibit R-2A, RDT&E Project Justifi	ication: PB	2025 Army						Date: March 2024			
Appropriation/Budget Activity 2040 / 7	PE 02	R-1 Program Element (Number/Name)Project (Number/Name)PE 0203735A / Combat Vehicle Improveme280 / RECOV VEH IMPROV PROGnt Programs280 / RECOV VEH IMPROV PROG									
C. Other Program Funding Summar	y (\$ in Milli	ons)	FY 2025	FY 2025	FY 2025					Cost To	
Line Item • GA0570: IMPROVED RECOVERY VEHICLE (M88 HERCULES)	<u>FY 2023</u> 179.150	<u>FY 2024</u> 41.058	<u>Base</u> 151.657	<u>0C0</u> -	<u>Total</u> 151.657	<u>FY 2026</u> 158.754	<u>FY 2027</u> 154.177	<u>FY 2028</u> 144.913	<u>FY 2029</u> 146.363	<u>Complete</u> 0.000	<u>Total Cos</u> 976.072

Remarks

D. Acquisition Strategy

The Project Manager (PM) for Mounted Armored Vehicles (MAV) is executing an Engineering Change Proposal (ECP) to regain single vehicle recovery capability of the M88A2 HERCULES vehicle. The strategy utilizes the Detroit Arsenal Automotive Other Transaction Authority (DA2 OTA) which competitively awarded a single contract to develop, integrate and produce (8) prototype vehicles entered in testing in FY 2023. After achieving OTA success criteria, a contract award using procurement dollars procures up to (70) initial production vehicles, as well as the procurement of hardware kits/components comprised of engines, transmissions, track and suspensions. Follow on M88A3 production will utilize a Federal Acquisition Regulation (FAR) based contract through the defined Army Acquisition Objective (AAO). The M88A2 HERCULES production vehicles continue fielding to units through FY 2026.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Army	y							_	Date:	March 20	24	
Appropriation/Budg 2040 / 7	Appropriation/Budget Activity 2040 / 7							•	lumber/N /ehicle Imp		Project (Number/Name) 280 / RECOV VEH IMPROV PROG				
Product Developme	ent (\$ in M	illions)		FY 2	2023	FY 2	2024	FY 2025 Base		FY 2 OC					
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	Various	BAE Systems : TBD	313.458	39.818	Oct 2022	4.401	Nov 2023	-		-		-	0.000	357.677	-
Wireless Intercommunication System Encryption	TBD	BAE Systems : York, PA	-	6.500	Mar 2023	-		-		-		-	0.000	6.500	-
		Subtotal	313.458	46.318		4.401		-		-		-	0.000	364.177	N/A
Support (\$ in Millior	ıs)		ſ	FY	2023	FY 2	2024		2025 ase	FY 2 OC		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 (PMO) Support	MIPR	PMO Support Offices, Ricardo Defense, DCS and Army Research Labs (ARL) : Various	8.832	2.344	Dec 2022	2.388	Dec 2023	-		-		-	0.000	13.564	-
		Subtotal	8.832	2.344		2.388		-		-		-	0.000	13.564	N/A
Test and Evaluation	(\$ in Milli	ons)	 [FY	2023	FY 2	2024		2025 ase	FY 2 OC		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	Various	Aberdeen Test Center (ATC), Yuma Test Center (YTC), CASCOM : Various	6.156	15.585	Feb 2023	6.408	Jan 2024	-		-		-	0.000	28.149	-
		Subtotal	6.156	15.585		6.408		-		-		-	0.000	28.149	N/A
			Prior Years	FY	2023	FY	2024		2025 ase	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
									1			1			N/A

PE 0203735A: Combat Vehicle Improvement Programs Army

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xhibit R-4, RDT&E Schedule Profile: PB 2025	Army						Date: March 202	4			
opropriation/Budget Activity 040 / 7			R-1 Pro PE 0203 nt Progr	3735A I Comb	nt (Number/Name) pat Vehicle Improveme		Project (Number/Name) 280 / RECOV VEH IMPROV PROG				
Event Name	FY 2023	FY 20	24	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			
M88A3 ECP Design/Develop Prototype Build/Component Qual	i.										
nitial Log- Technical Manual Validation											
Fest Readiness Review (TRR)	4										
188A3 ECP Government Test Program											
System Verification Review (SVR)			2								
og Demo Test											

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
2040/7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	 umber/Name) OV VEH IMPROV PROG

Schedule Details

	St	End		
Events	Quarter	Year	Quarter	Year
M88A3 ECP Design/Develop Prototype Build/Component Qualification	4	2019	3	2023
Initial Log- Technical Manual Validation	3	2023	2	2024
Test Readiness Review (TRR)	4	2023	4	2023
M88A3 ECP Government Test Program	4	2023	4	2024
System Verification Review (SVR)	3	2024	3	2024
Log Demo Test	2	2024	4	2024

Exhibit R-2A, RDT&E Project Ju	stification:	: PB 2025 A	rmy		Date: March 2024							
Appropriation/Budget Activity 2040 / 7						a m Elemen 35A / Comba as	•	,	Project (Number/Name) 330 I Abrams Tank Improve Prog			
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
330: Abrams Tank Improve Prog	-	58.971	96.240	246.475	-	246.475	366.247	179.373	148.671	140.239	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Army has approved Engineering Change Proposals (ECPs) for the Abrams Main Battle Tank to restore lost capability, host inbound technologies, and to meet objective performance requirements called out in approved platform requirements documents. The strategy for Abrams will focus on incrementally delivering capability to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future. This approach was approved by the Army Acquisition Executive in 3rd Quarter (Q) Fiscal Year (FY) 2011 and revalidated in an AROC decision in 2018.

The Army will modernize the tank fleet through a series of deliberate, incremental Engineering Change Proposals (ECPs). The current M1A2 SEPv3 tank (Engineering Change Proposal (ECP) 1A - Power) is in production and is designed to mitigate Space, Weight, and Power (SWaP) limitations as well as create additional margin for integration of future technologies being developed by existing Programs of Record (POR).

In FY 2022, MBTS received a \$65 million Congressional Add for efforts to mature technology for the next Abrams/modernization program. The FY 2022 congressional add was received in 4th Quarter FY 2022 with work continuing through FY 2023. In FY 2024, a new cost element, Abrams Modernization, was added. This effort is ongoing and a continuation of work from the FY 2022 Congressional Add.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Abrams Lethality Engineering Change Proposal M1A2SEP V4/ECP 1B	4.000	12.446	-
Description: The Abrams SEP (System Enhancement Package) v4 program consists of lethality improvements primarily focused on the integration of 3rd Generation Forward Looking Infrared (FLIR). Additional improvements include a Laser Warning Receiver (LWR), Improved Thermal Management System (ITMS), and target acquisition sensor upgrades consisting of inclusion of color cameras, laser capabilities, image processing and embedded training enhancements.			
FY 2024 Plans: SEPv4 program will continue and complete Army developmental test and evaluation. Begin Army Live Fire Testing in Q4. Majority of contractor activities will focus on logistics products and resolving issues found in Army test and evaluation report.			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding decrease due to realignment of resources to Abram Modernization accomplishment within this project.			
Title: Program Management Office (PMO) Support	5.908	5.825	9.224

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	Project (Number/I 330 / Abrams Tank		g
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Description: PMO Support includes Systems Engineering and Government ar costs required to effectively manage the program.	nd Contractor salaries, travel and other suppor	t		
FY 2024 Plans: Continue Government Systems Engineering and Program Management office supplies, and equipment to effectively manage the program.	support. This will include labor, training, trave	,		
FY 2025 Plans: Continue Government Systems Engineering and Program Management (SEPM travel, supplies, and equipment to effectively manage the program.	 office support. This will include labor, training 	ng,		
FY 2024 to FY 2025 Increase/Decrease Statement: Increase in funding due to the ramp up of the Abrams Modernization program.				
Title: Test & Evaluation - Engineering Change Proposal M1A2SEP V4/ECP 1E	3	9.028	7.081	-
Description: Comprises government test and evaluation of the SEP (System E developmental, operational, and live fire test and evaluation. Government test is planning, and initial test site preparation are also included.				
FY 2024 Plans: Will continue and complete Army developmental test and evaluation activities.	Will begin Army Live Fire Testing in Q4.			
FY 2024 to FY 2025 Increase/Decrease Statement: No additional funding will be required as the Army Live Fire SEPv4 testing will be	conclude the end of second quarter FY 2025.			
Title: Lethality and Survivability Enhancements		40.035	8.150	9.703
Description: Enhances lethality primarily through integration of improved muni improvements, cannon improvements, image processing enhancements and a will focus on improved sensors, 360 Situational Awareness, active protection system defeat. Mobility enhancements will focus on efforts to reduce the weight	dvanced algorithms. Survivability enhanceme ystems, armor improvements, and unmanned	nts		
FY 2024 Plans: Abrams will continue integration of survivability enhancements and will further integration efforts.	nvestigate mature technologies for future			
FY 2025 Plans:				

Exhibit R-2A, RDT&E Project	lustification: PB	2025 Army							Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7				PE 02	r ogram Eler 03735A / Co grams	•	e r/Name) e Improveme	-	t (Number/N brams Tank	ame) Improve Pro	9
B. Accomplishments/Planned	Programs (\$ in I	<u>Millions)</u>							FY 2023	FY 2024	FY 2025
Abrams will continue integration integration efforts.	of survivability er	nhancement	s and will fur	ther investig	ate mature t	echnologies	for future				
FY 2024 to FY 2025 Increase/ Funding increase supports Abra priorities.			ised on adva	anced techno	ology matura	tion and sys	tem engineer	ing			
Title: Abrams Modernization									-	62.738	227.548
Description: Matures technolog not limited to, weight reduction t							im. Focus is o	on, but			
FY 2024 Plans: Will investigate, mature, and der	monstrate candida	ate technolo	gy options ir	accordance	e with Army S	Senior Leade	er guidance.				
FY 2025 Plans: Continuing efforts to investigate guidance.	, mature, and den	nonstrate ca	ndidate tech	nology optio	ns in accord	ance with Ar	my Senior Le	ader			
FY 2024 to FY 2025 Increase/E Funding increase supports Abra priorities.			ised on adva	anced techno	ology matura	tion and sys	tem engineer	ing			
				Accor	nplishment	s/Planned P	rograms Sub	ototals	58.971	96.240	246.47
C. Other Program Funding Su	<u>mmary (\$ in Milli</u>	ons)									
	EV 2022		FY 2025	FY 2025	FY 2025		EV 0007			Cost To	
<u>Line Item</u> • GA0750: Abrams Upgrade Program <u>Remarks</u>	<u>FY 2023</u> 1,238.743	<u>FY 2024</u> 800.323	<u>Base</u> 773.745	<u>000</u> -	<u>Total</u> 773.745	<u>FY 2026</u> 791.692	<u>FY 2027</u> 840.116	FY 2028 994.347		Complete Continuing	
D. Acquisition Strategy Abrams Modernization retains c efficiency.	urrent performan	ce requirem	ents and foc	uses on the	integration o	f new and d	eveloping tech	nnologies	to improve s	system and o	crew

Appropriation/Budg 2040 / 7	∍t Activity	,					3735A / C		umber/Na ehicle Imp		-	(Number brams Tar	,	e Prog	
Product Developme	nt (\$ in Mi	illions)	ſ	FY 2	2023	FY 2	2024	FY 2 Ba		FY 2	2025 CO	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
Abrams SEPV4	SS/CPIF	General Dynamics Land Systems : Sterling Heights, MI	405.056	4.000	Oct 2022	12.446	Nov 2023	-		-		-	0.000	421.502	-
Lethality and,Survivability Enhancements	Option/ Various	Various : Various	24.261	40.035	Jan 2023	8.150	May 2024	9.703	May 2025	-		9.703	Continuing	Continuing	Continuin
Abrams Modernization	TBD	TBD : TBD	-	-		62.738	May 2024	227.548	Jan 2025	-		227.548	Continuing	Continuing	Continuin
		Subtotal	429.317	44.035		83.334		237.251		-		237.251	Continuing	Continuing	N/A
Support (\$ in Million	IS)		[FY 2	2023	FY 2	2024	FY 2 Ba		FY 2 O		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 (PMO) Support	MIPR	PMO Support Offices : TACOM, GVSC, ARDEC, ARL, Picatinny	98.037	5.908	Dec 2022	5.825	Dec 2023	9.224	Dec 2024	-		9.224	Continuing	Continuing	Continuin
		Subtotal	98.037	5.908		5.825		9.224		-		9.224	Continuing	Continuing	N/A
Test and Evaluation	(\$ in Milli	ons)		FY 2	2023	FY 2	2024	FY 2 Ba		FY 2 O(FY 2025 Total			-
	Contract				A		Award		Award		Award		Cost To	Total	Target Value of
Cost Category Item	Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Date	Cost	Date	Cost	Date	Cost	Complete	Cost	Contract
Cost Category Item Government Testing / SEPV4	Method	U U						Cost -	Date	Cost -	Date	- Cost	0.000	Cost 83.996	Contract

Exhibit R-3, RDT&E Project Cost Analysis: PB 2	025 Army	у								Date:	March 20)24	
				· · · · · · · · · · · · · · · · · · ·			Project (Number/Name) 330 / Abrams Tank Improve Prog			e Prog			
	Prior Years	FY	2023	FY 2	:024	FY 2 Ba	2025 Ise	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	595.241	58.971		96.240		246.475		-		246.475	Continuing	Continuing	N//

Remarks

xhibit R-4, RDT&E Schedule Profile: PB 202	5 Army		1_				Date: March 202	24
ppropriation/Budget Activity)40 / 7)3735A I Com	nt (Number/Name) bat Vehicle Improve		(Number/Name) rams Tank Improve	Prog
	FY 2023	FY 2	024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Event Name	1 2 3 4			1 2 3 4		1 2 3 4		1 2 3
Original Equipment Manufacturer (OEM) Testing								
SEP V4 Developmental Testing								
SEP V4 Test Readiness Review								
SEP V4 Live Fire Testing								
Future Capability Enhancements/Modernization Efforts								
					1		1	

<u>Note</u>

SEP (System Enhancement Program)

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army	Date: March 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	Project (Number/Name) 330 I Abrams Tank Improve Prog
Future Capability Enhancements includes Lethality and Survivabili	ty Enhancements & Abrams Modernization Efforts.	
PE 0203735A: Combat Vehicle Improvement Programs		Volume 4b - 206

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hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Ma	arch 2024
propriation/Budget Activity 40 / 7	-	Element (Number I Combat Vehicle		Project (Number/N 330 / Abrams Tank /	
	Schedule Detail				
		Sta	art		End
Events		Quarter	Year	Quarter	Year
Events Original Equipment Manufacturer (OEM) Testing		Quarter 3	Year 2022	Quarter 3	
					Year
Original Equipment Manufacturer (OEM) Testing		3	2022	3	Year 2023
Original Equipment Manufacturer (OEM) Testing SEP V4 Developmental Testing		3 3	2022 2023	3 4	Year 2023 2024

<u>Note</u>

SEP (System Enhancement Program)

Future Capability Enhancements includes Lethality and Survivability Enhancements & Abrams Modernization Efforts.

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2025 A	Army							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt ProgramsProject (Number/Name) DD4 / AMPV Improvement Pro					,	im	
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
DD4: AMPV Improvement Program	-	-	12.354	12.325	-	12.325	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Armored Multi-Purpose Vehicle (AMPV) is the materiel solution for replacement of the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV) within the Armored Brigade Combat Team (ABCT). It will mitigate current and future capability gaps in force protection, survivability, mobility, reliability, and interoperability across the Spectrum of Conflict. AMPV Improvement will address the development of Survivability, Lethality, Mobility, Network Lethality, and Communication, Command and Control (C3) improvements within the AMPV Family of Vehicles (FOVs). The strategy for AMPV Combat Vehicle Improvement line will focus on incrementally delivering capability to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future while transitioning material solutions for integration and implementation to the AMPV FOV fleet to increase combat capability.

FY 2025 Base funding in the amount of \$12.325 million for Project DD4 supports funding for: Army requested changes and those stemming from the Initial Operational Test, and initiates development and integration of Composite Rubber Track (CRT), Enhanced Driver's Vision System (EDVS), Field Artillery and Engineering configurations, Terrestrial Layer System, and Modular Turreted Mortar System (MTMS) on the AMPV FOV. As required, support Army assessment, experimentation, testing efforts relating to emerging Army requirements impacting the AMPV design. CRT is a single continuous 'band' of track manufactured from multiple rubber compounds, Kevlar, steel reinforcement, and metallic composite stiffeners. The CRT offers significant advantages compared to traditional linked steel track currently utilized to include vehicle weight savings, improved fuel economy, improved track and road wheel durability, reduced Soldier maintenance. The EDVS color camera system will provide the driver high definition, low and visible light capability to provide the driver substantially improved situational awareness while driving in all weather conditions. Field Artillery and Engineering configurations will provide additional capabilities for AMPV FOV. MTMS will provide added capabilities in 120mm caliber: low angle fires, fire on the move capability, increased range, and improved crew protection with turret.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Armored Multi Purpose Vehicle (AMPV) Product Development	-	11.520	11.491
Description: Provides funding for the analysis, engineering, development, and integration to support Army directed inbound technologies as well as any additional fixes that resulted from AMPV Test and Evaluation. As required, support Army assessment, experimentation, and testing efforts relating to emerging Army requirements impacting the AMPV design.			
<i>FY 2024 Plans:</i> Conduct system level integration and engineering efforts to upgrade and design mobility, survivability, reliability, and lethality upgrades. Will conduct trade studies, market surveys, select and demonstrate capability for FCD and MTMS projects. CRT will start the design and related engineering changes, start track qualification, and begin logistical development packages for the			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	Project (I DD4 / AM		Name) ovement Progr	ram
B. Accomplishments/Planned Programs (\$ in Millions)		F	Y 2023	FY 2024	FY 2025
AMPV FOV. FDC will start the design and related engineering efforts to reconfunctions. MTMS will execute technology demonstration to provide body of kn integration on the AMPV vehicle.	•	•			
<i>FY 2025 Plans:</i> Conduct system level integration and engineering efforts to upgrade and des upgrades. Will conduct trade studies, market surveys, select and demonstrat configurations, CRT and MTMS projects. CRT and MTMS will continue to exit knowledge for future decisions on acquisition and integration on the AMPV value and MTMS insertion to increase current capability of AMPV Platform.	e capability for Engineering and Field Artillery, ecute technology demonstrations to provide bod	y of			
FY 2024 to FY 2025 Increase/Decrease Statement: Stable effort with a very slight decrease to engineering efforts.					
Title: Program Management Office (PMO) Support			-	0.834	0.834
Description: Program Office Support include systems engineering, governm support costs required to effectively manage the program.	ent and contractor salaries, travel, training, and	other			
FY 2024 Plans: Systems Engineering and Program Management support (labor, travel, traini Development, Test, & Evaluation (RDT&E) efforts related to emerging Army					
FY 2025 Plans: Systems Engineering and Program Management support (labor, travel, traini Development, Test, & Evaluation (RDT&E) efforts related to emerging Army					
	Accomplishments/Planned Programs Sub	totals	-	12.354	12.325
 C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy The AMPV program was initiated at Milestone B (MS B). The 22 December 2 Engineering and Manufacturing Development phase plus three Low Rate Initiated In					
basis. The Army Acquisition Executive (AAE) approved the Milestone C ADM					

Exhibit R-2A, RDT&E Project Justification: PB 2025 A	Army	Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	Project (Number/Name) DD4 I AMPV Improvement Program
ince been exercised. As a result of vehicle delivery dela 021. The program achieved a Full Rate Production De	ays, the AAE approved a revised Acquisition Program Baseline to a ecision in FY23.	djust the program schedule on January 7,

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Arm	ıy								Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7							o gram Ele 3735A / C rams	•		•	Project (Number/Name) DD4 I AMPV Improvement Program				1
Product Development (\$ in Millions)			FY 2	2023	FY 2	2024	FY 2 Ba		FY 2 OC		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	C/TBD	TBD : TBD	-	-		11.520	Nov 2023	11.491	Nov 2024	-		11.491	0.000	23.011	Continuin
		Subtotal	-	-		11.520		11.491		-		11.491	0.000	23.011	N/A
Support (\$ in Million	is)			FY 2	2023	FY 2	2024	FY 2 Ba		FY 2 O(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	RO	TBD : Warren, MI	-	-		0.834	Dec 2023	0.834	Dec 2024	-		0.834	0.000	1.668	Continuin
		Subtotal	-	-		0.834		0.834		-		0.834	0.000	1.668	N/A
			Prior Years	FY 2	2023	FY 2	2024	FY 2 Ba		FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	-	-		12.354		12.325		-		12.325	0.000	24.679	N/A

Remarks

<pre>khibit R-4, RDT&E Schedule Profile: PB 20 propriation/Budget Activity 40 / 7</pre>	025 Army		R-1 Program Element (Number/Name) Project (Number/Name) PE 0203735A / Combat Vehicle Improveme DD4 / AMPV Improvement Program nt Programs DD4 / AMPV Improvement Program									
Event Name	FY 2023	FY 202		FY 2025	FY 2026	FY 2027	FY 2028	FY 2029				
Product Development												
nhanced Drivers Vision System Improvement												
MPV Composite Rubber Track Improvement												
Modular Turreted Mortar System												

chibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: March	า 2024					
opropriation/Budget Activity 40 / 7		Element (Number I Combat Vehicle								
	Schedule Details	5								
		Sta	rt	End						
Events		Quarter	Year	Quarter	Year					
Draduat Davidanment		1	0004	4						
Product Development		1	2024	-	2029					
Enhanced Drivers Vision System Improvement		1	2024	4	2029 2026					
		1 1 1								

Exhibit R-2A, RDT&E Project Ju	xhibit R-2A, RDT&E Project Justification: PB 2025 Army											
Appropriation/Budget Activity 2040 / 7		-	35A I Comb	t (Number / at Vehicle Ir		Project (Number/Name) EE2 / Stryker Improvement						
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
EE2: Stryker Improvement	-	64.159	24.844	14.126	-	14.126	14.139	14.289	14.448	14.592	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Stryker Improvement will address the development of Lethality, Survivability, Mobility, Network Lethality, and Communication, Command and Control (C3) improvements within the Stryker Family of Vehicles (FOVs). Principal development efforts include upgrades associated with the Stryker Double V-Hull A1 (DVH A1) Engineering Change Proposal (ECP), Common Remotely Operated Weapon Station-Javelin (CROWS-J) ONS, Stryker Survivability Enhancement, and Stryker Lethality ECPs. DVH A1 ECP upgrades restore Stryker DVH Space, Weight, and Power-Cooling (SWaP-C) lost as a result of incorporating vehicle changes to counter threats encountered during deployment operations while allowing the future network to be hosted without further degradation in vehicle protection and mobility. The Stryker CROWS-J ONS efforts addressed Urgent Operational Need to increase the lethality of Stryker Infantry Carrier Vehicles (ICV) within the United States Army European Command (USAREUR). The Stryker Survivability Enhancements address evolving threats by assessing survivability improvements, to include but not limited to, 360 Situational Awareness, reactive armor tiles, and integration of emerging and existing technologies and other Stryker based platform solutions. The Stryker platform will also include future Mission Equipment Package (MEP) integration that includes but not limited to the Fire Direction Center (FDC) providing an on-the move capability that processes voice and digital data while maintaining contact with the indirect fire team over extended distances. Stryker Lethality ECP efforts (CROWS-J, Anti-Tank Guided Missile (ATGM), and other capabilities) focus on the integration of a suite of complementary MEP lethality upgrades that will improve the suppressive fire and armored vehicle engagement capabilities across the Army's Stryker Brigade Combat Teams (SBCTs). Additionally, the Lethality MEP upgrades will address existing obsolescence issues of the Remote Weapon Station (RWS) with the CROWS and CROWS-J upgrade. The ATGM ECP will upgrade the Modified Improved Target Acquisitions System (MITAS), incorporating a far target locator and enabling the dissemination of target acquirement information utilizing networked lethality, providing a common operating picture. The ATGM ECP also added the Embedded Training System Software (ETSS) and integrated the M-Code Global Positioning System (GPS) Receiver into the MITAS to provide anti-jam/anti-spoofing capabilities to the ATGM primary weapon system. Adding these capabilities addressed the obsolescence of the following: Basic Skills Trainer, Card Rack Assembly that is the controller of the ATGM primary weapon system, and SAASM GPS receiver of the MITAS Precision Far Target Locator. Stryker Network Modernization will formalize the system integration of the network modernization efforts, including Integrated Tactical Network (ITN). Upgrades of the Stryker flat-bottom hull and DVH variants were completed to mitigate known system deficiencies. In support of Readiness, Training-Rapid Fielding of Digitization of Stryker, Army Rapid Sustainment Improvement Process (RSIP) to develop two-way interface between Global Combat Support System - Army (GCSS-Army) and the Operator Tablet to support data transfers of maintenance work orders, parts ordering and updating of maintenance plans.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Stryker Lethality ECPs Development (Engineering/Protoypes)	2.091	-	7.387
Description: Lethality ECPs encompass the integration of a 30 millimeter (mm) (ICVVA1-30mm), under armor Javelin fire capability (Common Remotely Operated Weapon Station-Javelin (CROWS-J)), ATGM ETSS and M-Code Precision Far Target Locator (PFTL), improved optics and targeting systems, Inertial Navigation Unit (INU) sensor, Network Lethality capability, and other capabilities into the Stryker fleet. These improvements will provide for increased under armor fire capability, target			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	Project (Number/N EE2 / Stryker Impro		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
identification range, provide over-match against peer threats and support targeting and reconnaissance systems utilized on the Stryker FoV.	ting infantry assault, and address obsolescence with	in the		
FY 2025 Plans: Stryker Lethality ECPs development of sub-system level development ar including component hardware and software development, technical data support of incorporation onto the CROWS system.				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to the start of the sub-system level development effort for N system.	Network Lethality for incorporation onto the CROWS			
Title: Stryker Lethality ECPs Testing		1.762	-	-
Description: Government and Contractor Support for developmental, op including Inertial Navigation Unit (INU) sensor testing.	perational and live fire testing in support of Lethality I	ECPs,		
Title: Government Systems Engineering and Project Management		4.642	3.290	1.973
Description: Government Systems Engineering and Program Managem required to effectively manage all Research, Development, Test, & Evalu				
FY 2024 Plans: Government Systems Engineering and Program Management support (la Research, Development, Test, & Evaluation (RDT&E) efforts, including S Fire Direction Center development, and Stryker Network Modernization I	Survivability Enhancement, Non Primary Power Syste	ems,		
FY 2025 Plans: Government Systems Engineering and Program Management support (la Research, Development, Test, & Evaluation (RDT&E) efforts, including N Direction Center development, and Stryker Network Modernization Deve	Network Lethality, Survivability Enhancement, Fire			
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to reduction of development efforts reducing labor, travel,	training, supplies, and equipment.			
Title: Stryker Power System		3.554	3.024	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	-	Number/N ryker Impro	,	
B. Accomplishments/Planned Programs (\$ in Millions)		F	Y 2023	FY 2024	FY 2025
Description: Development and testing of a non-primary power solution for enhancement incorporates multiple components and capabilities, includin and interface kits.		PU)			
FY 2024 Plans: Completion of the non-primary power design effort and integration. Testin continues.	ng and logistics product development and execution				
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to the pausing of Non-Primary Power System efforts.					
Title: Stryker Platform Mission Equipment Packages Integration			7.942	0.270	1.163
Description: Development engineering of Mission Equipment Packages Direction Center MEP onto the DVH A1 platform.	(MEP) onto the Stryker platforms. Integration of the	e Fire			
FY 2024 Plans: Continue integration engineering for the Fire Direction Center MEP onto t	the DVHA1.				
FY 2025 Plans: Continue Fire Direction Center MEP development efforts, including logisti	ics products.				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to the engineering for logistics products to support the Fire I	Direction Center MEP.				
Title: Stryker Survivability Enhancements			5.905	4.232	1.405
Description: The Stryker Survivability Enhancements will develop strated integration of emerging technologies onto the Stryker Platforms. The Stry limited to, the fleet wide 360 degree Situational Awareness, hardware cor	yker Survivability Enhancements will include, but are				
FY 2024 Plans: Funding supports 360-degree Situational Awareness A-kit and B-kit non-r	recurring engineering (NRE).				
FY 2025 Plans: Continue support of the 360-degree Situational Awareness A-kit and B-kit analyses, including support of Vehicle Excursions with Universal 360 Situ					
FY 2024 to FY 2025 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date:	March 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improveme nt Programs	Project (Number EE2 / Stryker Imp	,	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Decrease due to the partial completion of non-recurring engineering (NRE) effort	orts.			
<i>Title:</i> Stryker Network Modernization Development (Engineering / Prototypes)		35.217	9.328	2.198
Description: Stryker Network Modernization will formally integrate the Integrat Augmentation System (IVAS) vehicle support kit, and Tactical Cloud Package ((MCS23) at the System of Systems level. Effort will prioritize the DVHA1 Platfor Vision 2028, and Army 2030 planning, the Network CFT has coordinated close PEO IEW&S to deliver a suite of capabilities as part of M-CS23 for DVHA1 and formations to provide Soldiers with a resilient and assured data transport networ time common tactical operating picture among friendly forces and ensure over	(TCP) as part of Mounted Capability Set 23 orm and include DVHA0. With the Army's Netw Iy with PEO C3T, PEO GCS, PEO Soldier, and I DVHA0. These capabilities are required in SE ork to the tactical edge, provide a robust and re	d BCT		
FY 2024 Plans: Continue integration engineering and procurement of prototype hardware, and on the DVHA1 and DVHA0.	initiate logistics product development for M-CS	\$23		
FY 2025 Plans: Continue integration engineering and complete logistics product development f	for M-CS23.			
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to the completion of M-CS23 prototype hardware.				
Title: Stryker Network Modernization Testing		2.922		-
Description: Government and Contractor support for developmental and opera (ITN), Integrated Visual Augmentation System (IVAS) vehicle support kit, and T		rk		
Title: Stryker Lethality ECPs Contractor Support to Test		0.124	· _	-
Description: Contractor support to Lethality ECPs upgrade testing, to include s prototypes during execution of tests, and Failure Analysis and Corrective Action		f		
Title: Stryker Predictive Logistics (Engineering/Prototypes)		-	4.700	-
Description: Readiness / Training-Rapid Fielding of Digitization of Stryker, Arr (RSIP). Develop two-way interface between Global Combat Support System - support data transfers of maintenance work order, parts ordering and updating incorporate health data elements from platform diagnostics.	Army (GCSS - Army) and the Operator Tablet			

Exhibit R-2A, RDT&E Project Jus	stification: PB	2025 Army							Date: M	arch 2024			
Appropriation/Budget Activity R-1 Program Element (Number/Name) 2040 / 7 PE 0203735A / Combat Vehicle Improveme nt Programs									•	umber/Name) ker Improvement			
B. Accomplishments/Planned Pr	rograms (\$ in I	<u>Millions)</u>						ſ	FY 2023	FY 2024	FY 2025		
FY 2024 Plans: Develop two-way interface betwee the Army's Prognostic and Predicti		•••	•	וע (GCSS - A	Army) and th	e Operator T	Tablet in supp	ort of					
FY 2024 to FY 2025 Increase/De Decrease due to the completion of - Army) and the Operator Tablet.		••••	ay interface	between Glo	obal Combat	Support Sy	stem - Army ((GCSS					
				Accon	nplishments	s/Planned P	rograms Sub	ototals	64.159	24.844	14.126		
C. Other Program Funding Sumr	<u>mary (\$ in Milli</u>	<u>ons)</u>											
			<u>FY 2025</u>	<u>FY 2025</u>	<u>FY 2025</u>					Cost To	<u>)</u>		
Line Item	<u>FY 2023</u>	<u>FY 2024</u>	<u>Base</u>	000	<u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 202</u>			Total Cos		
 GM0100: Stryker (Mod) 	-	-	52.471	-	52.471	80.732	87.328	60.4´	12 78.70	3 Continuing	Continuin		
 G85200: Stryker Upgrade 	1,210.848	614.282	402.840	-	402.840	496.935	457.614	450.96	69 250.65	3 Continuing	Continuin		
<u>Remarks</u>													
23 March 2018 Army Requiremen beginning in FY 2018 funded in St beginning in FY 2025.	-	•	,	-			-		-				

D. Acquisition Strategy

The Stryker ECP 1 effort will buy back the vehicle space, weight, and power margin lost due to the addition of numerous kits in response to eleven years of war (20combat rotations & 37+ million total miles), in order to allow integration of the future network (as directed by VCSA in August 2011) without further degrading the performance of the platform. In May 2012, Stryker ECP 1 program (Phase I) was approved, permitting preliminary design and integration efforts on both the Flat Bottom (FB) and DVH variants. In March 2013, Phase II was approved continuing design and integration of ECP 1 mechanical power, electrical power generation, chassis upgrades, and the in-vehicle network upgrades. Based on additional testing conducted in the summer of 2013, the decision was made to focus ECP 1 efforts on the DVH platform and defer efforts on flat-bottom Stryker vehicles. The effort has subsequently been renamed the Stryker DVH A1 ECP. The DVH A1 ECP Phase II contract, awarded November 25, 2013, continued development engineering, prototype build test and evaluation. The initial DVH A1 ECP production contract was awarded in October 2016 (Sole-Source Firm Fixed Price arrangement). A second and third buy of DVH A1 ECP vehicles was awarded as a Fixed Price Incentive Fee arrangement. A March 2018 AROC decision was made to pure fleet the Stryker brigades to DVH with the initial approval for 6 DVH A1 brigades. The objective acquisition strategy is to annually procure 1/2 of a brigade.

On July 2, 2015, Army Systems Acquisitions and Review Council (ASARC) authorization was granted to execute the Stryker 30mm ICVD ONS effort. 30mm ICVD Engineering, Manufacturing, and Development (EMD) contracts for Non-Recurring Engineering (NRE) and Logistics Products Development/Test Support were awarded

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		_	Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 7	PE 0203735A / Combat Vehicle Improveme	EE2 / Stryl	ker Improvement
	nt Programs		

in January 2016 and May 2016, respectively (Cost Plus Incentive-Fee basis). The 30mm ICVD ONS Production/Retrofit contract was awarded in May 2016 through an Undefinitized Contract Action (UCA). Definitization of the Fixed Price Incentive Fee (FPIF) Production contract occurred in March 2017.

The Stryker Lethality ECP efforts will focus on the integration of a suite of complementary Mission Equipment Package MEP lethality upgrades, which include the CROWS-J, ATGM target acquisition optics, integration of emerging and existing technologies such as the Fire Direction Center requirement, Integrated Visual Augmentation System (IVAS), and other Stryker-based platform solutions, as well as additional capabilities that will improve the suppressive fire and armored vehicle engagement capabilities across the Army's SBCTs. Army Acquisition Executive (AAE) approval to initiate the Stryker CROWS-J and ATGM ECP efforts was received in a September 30, 2016, Acquisition Decision Memorandum (ADM). A ICVVA1-30mm decision was made in March 2019. The ICVVA1-30mm effort awarded design studies to multiple vendors and evaluated the bid samples and awarded a production ready solution meeting requirements at the best value to the Army. To improve platform survivability fleet wide, 360 Situational Awareness is being developed by integrating existing technologies, for fleet wide installation to allow the occupants during both open and closed hatch operations to visualize their immediate surrounding while stationary and on the move in adverse weather conditions.

In 2016, the Army approved the FDC requirement and the Field Artillery Battalion TAC using excess Flat Bottom Hull (FBH) Stryker during Force Design Update (FDU) process. Following the March 2018 Pure fleet AROC decision, Force Design Division (FDD) identified the Double V Hull A1 (DVH A1) as the platform for the FDC.

Exhibit R-3, RDT&E F	-	*	2025 Arm	/		1					-		March 20)24	
Appropriation/Budge 2040 / 7	t Activity					R-1 Program Element (Number/Name)Project (Number/Name)PE 0203735A / Combat Vehicle ImprovementEE2 / Stryker Improvementnt ProgramsEE2 / Stryker Improvement									
Management Service	es (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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 Office (PMO)	MIPR	PEO GCS/TACOM : Various	73.538	4.642	Jan 2023	3.290	Jan 2024	1.973	Jan 2025	-		1.973	Continuing	Continuing	-
		Subtotal	73.538	4.642		3.290		1.973		-		1.973	Continuing	Continuing	N//
Product Developmen	nt (\$ in Mi	illions)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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
Stryker Lethality ECPs Development	C/Various	PM CSW; PM CCWS : Various	57.915	2.091	Jan 2023	-		7.387	Feb 2025	-		7.387	0.000	67.393	-
Stryker Survivability Enhancement	C/Various	US Army CCDC GVSC, Various : Various	1.771	5.905	Feb 2023	3.727	Feb 2024	1.405	Feb 2025	-		1.405	Continuing	Continuing	-
Stryker Power System Development	MIPR	US Army CCDC GVSC, Various : Various	17.666	1.207	Mar 2023	1.052	Mar 2024	-		-		-	0.000	19.925	-
Stryker Fire Direction Center Variant Development	Various	GDLS, Various : Sterling Heights, MI; Various	2.716	1.383	Jun 2023	0.270	Jun 2024	1.163	Apr 2025	-		1.163	Continuing	Continuing	-
Stryker Network Modernization Development	C/Various	US Army CCDC GVSC, Various : Various	1.099	35.217	Jan 2023	9.328	Jan 2024	2.198	Jan 2025	-		2.198	0.000	47.842	-
Stryker Predictive Logistics Development	C/Various	CECOM, Various : APG, MD; Various	-	-		4.700	Jan 2024	-		-		-	0.000	4.700	-
		Subtotal	81.167	45.803		19.077		12.153		-		12.153	Continuing	Continuing	N/A
Test and Evaluation	(\$ in Milli	ons)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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
Stryker Lethality ECPs Testing	MIPR	Army Test Centers : Various	34.348	1.762		-		-		-		-	0.000	36.110	-

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20)24	
Appropriation/Budget Activity 2040 / 7							R-1 Program Element (Number/Name)Project (Number/Name)PE 0203735A / Combat Vehicle ImprovementEE2 / Stryker Improvementnt ProgramsEE2 / Stryker Improvement								
Test and Evaluation (\$ in Millions)		ſ	FY	2023	FY 2	2024		2025 ase		2025 CO	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
Stryker Survivability Enhancement Testing	MIPR	Army Test Centers : Various	2.996	-		0.505	Dec 2023	-		-		-	Continuing	Continuing	-
Stryker Power System Testing	MIPR	Army Test Centers : Various	7.730	2.347	Dec 2022	1.972	Dec 2023	-		-		-	0.000	12.049	-
Stryker Fire Direction Center Variant Testing	MIPR	Army Test Centers : Various	-	6.559	Jul 2023	-		-		-		-	Continuing	Continuing	-
Stryker Network Modernization Testing	MIPR	Army Test Centers : Various	3.315	2.922	Apr 2023	-		-		-		-	0.000	6.237	-
Stryker Network Modernization Contractor Support to Test	MIPR	Army Test Centers : Various	0.212	-		-		-		-		-	0.000	0.212	-
Stryker Lethality ECPs Contractor Support to Test	MIPR	Army Test Centers : Various	11.345	0.124		-		-		-		-	0.000	11.469	-
		Subtotal	59.946	13.714		2.477		-		-		-	Continuing	Continuing	N/A
			Prior Years	FY	2023	FY	2024		2025 ase		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	214.651	64.159		24.844		14.126		-		14.126	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 /							Date: March 20	24		
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name)Project (Number/Name)PE 0203735A / Combat Vehicle ImprovementEE2 / Stryker Improvementnt ProgramsEE2 / Stryker Improvement								
Event Name	FY 2023 FY		2024 FY 2025		FY 20	26	FY 2027	FY 2028	FY 2029	
Eventivanie	1 2 3 4	1 2 3	3 4 1	2 3	4 1 2 3	4 1	2 3 4	1 2 3 4	1 2 3 4	
Stryker DVH A1 ECP Production (Phase III)	DVH A1 ECP Production	•								
Stryker CROWS-J ECP Design/Prototype/Logistic Products	CROWS-J ECP Des	ign/Prototype/Log	istics Products							
Stryker CROWS-J ECP Production/Retroft	CROWS-J ECP Producti	on/Retrofit								
Stryker ATGM ECP Production/Retrofit	ATGM ECP Product	ion/Retrofit								
Stryker ICVVA1-30mm Gun Production	ICVVA1-30mm Gun Pro	fuction								
Stryker ICVVA1-30mm Mission Equipment Package (MEP) Pro-										
Stryker ICVVA1-30mm Safety/Perf./Live Fire/Electronics T	ICVVA1-30mm Mission E			tion						
Stryker ICVVA1-30mm Fielding				ICVVA1-30mm	Fielding					
Stryker ICVVA1-30mm Design/Prototype/Logistic Products	ICVVA1-30mm Design/P	røtotype/Logistic F	Products							
Stryker Lethality ECP Inertial Navigation Unit Sensor De	Inertial Navigation Unit S	ensor Design/Prot	totypes/Logistic	5						
Stryker Lethality ECP Inertial Navigation Unit Sensor Te	Inertial N	svigation Unit Sen	isor Testing							
Stryker Power System	Power System Design/P	ototype/Logisitics	Products							
Stryker Fire Direction Center Variant (FDC) Design/Proto	FDC Design/Prototype/L	ogistics Products								

Exhibit R-4, RDT&E Schedule Profile: PB 2025 /	Army			Date: March 2024				
Appropriation/Budget Activity 2040 / 7		F	R-1 Program Elemen PE 0203735A / Comb nt Programs	Number/Name) yker Improvement				
Event Name	FY 2023	FY 202		FY 2026	FY 2027	FY 2028	FY 2029	
Stryker 360 Situational Awareness: Design/Test/Prod/Logi	360 Situational Awarenes				2 3 4		1 2 3 4	
Stryker Network Modernization Development		stion Development						
Stryker Network Modernization Testing	Network Mo	demization Testing						
Stryker Predictive Logistics Development		Stryker Pred	lictive Logistics Development					
Stryker Network Lethality (CROWS) Design/Prototype/Logis			Network Lethality	(CROWS) Design/Prototype/L	ogistic Products			

hibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: Marc		
40/7 P	R-1 Program Element (Numbe PE 0203735A / Combat Vehicle t Programs	Project (Number/Name) EE2 / Stryker Improvement			
Sche	dule Details				
	Sta	art	Er	nd	
Events	Quarter	Year	Quarter	Year	
Stryker DVH A1 ECP Production (Phase III)	1	2017	4	2030	
Stryker CROWS-J ECP Design/Prototype/Logistic Products	1	2019	3	2023	
Stryker CROWS-J ECP Production/Retroft	3	2019	4	2029	
Stryker ATGM ECP Production/Retrofit	1	2020	2	2025	
Stryker ICVVA1-30mm Gun Production	4	2020	4	2025	
Stryker ICVVA1-30mm Mission Equipment Package (MEP) Production	3	2021	1	2026	
Stryker ICVVA1-30mm Safety/Perf./Live Fire/Electronics Testing	4	2021	1	2025	
Stryker ICVVA1-30mm Fielding	2	2025	1	2028	
Stryker ICVVA1-30mm Design/Prototype/Logistic Products	2	2019	4	2025	
Stryker Lethality ECP Inertial Navigation Unit Sensor Development	3	2022	3	2024	
Stryker Lethality ECP Inertial Navigation Unit Sensor Testing	3	2023	2	2024	
Stryker Power System	2	2019	4	2024	
Stryker Fire Direction Center Variant (FDC) Design/Prototype/Logistics Produ	ucts 4	2022	4	2025	
Stryker 360 Situational Awareness: Design/Test/Prod/Logistics	3	2021	3	2026	
Stryker Network Modernization Development	2	2023	4	2025	
Stryker Network Modernization Testing	3	2023	4	2024	
Stryker Predictive Logistics Development	2	2024	1	2025	
Stryker Network Lethality (CROWS) Design/Prototype/Logistic Products	2	2025	4	2026	

Note

Schedule includes the major Stryker RDTE and Procurement (WTCV) funded activities.

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 7: Operational Systems Development						R-1 Program Element (Number/Name) PE 0203743A <i>I 155mm Self-Propelled Howitzer Improvements</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	
Total Program Element	-	112.257	122.902	55.205	-	55.205	111.517	68.246	69.006	69.696	0.000	608.829	
FF9: PIM Improvement Program	-	112.257	122.902	55.205	-	55.205	111.517	68.246	69.006	69.696	0.000	608.829	

A. Mission Description and Budget Item Justification

The Division Lethality Modernization effort improves self-propelled howitzer lethality through increased range and increased rate of fire, using mature technology to improve mobility, survivability, reliability, supportability, and lethality. This effort will analyze and evaluate new cannon technology, including existing and future artillery systems as well as technology to increase rate of fire and enable future platform autonomy. This effort will also develop requirements, release request for vendor proposals and evaluate vendor offerings. Funding also supports work being completed at the Watervliet Arsenal (WVA) in Watervliet, NY.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	116.510	122.902	149.968	-	149.968
Current President's Budget	112.257	122.902	55.205	-	55.205
Total Adjustments	-4.253	0.000	-94.763	-	-94.763
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-4.253	-			
 Adjustments to Budget Years 	-	-	-94.763	-	-94.763

Change Summary Explanation

Request decreased as a result of technical maturity issues requiring a pivot in acquisition strategy removing the developmental testing and user operational assessment in FY25.

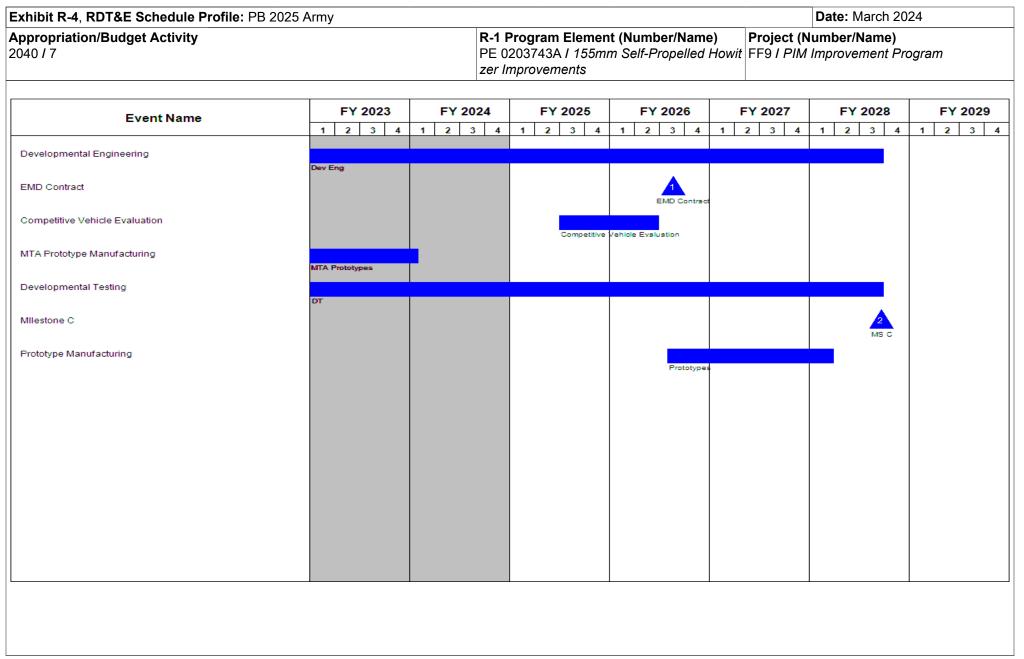
Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7						am Elemen 43A I 155mr rements			roject (Number/Name) F9 <i>I PIM Improvement Program</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
FF9: PIM Improvement Program	-	112.257	122.902	55.205	-	55.205	111.517	68.246	69.006	69.696	6 0.000	608.829
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Bud The Division Lethality Modernizat improve mobility, survivability, rel systems as well as technology to proposals and evaluate vendor of B. Accomplishments/Planned P	tion effort ir iability, sup increase ra fferings. Fu	nproves self portability, a ate of fire an nding also s	f-propelled h and lethality d enable fu supports wo	. This effort ture platfor	t will analyzo m autonomy	e and evalua y. This effor	ate new car t will also de	non techno evelop requ	ology, includ irements, re atervliet, N	ing existin lease requ (.	g and future	artillery
<i>Title:</i> ERCA Prototype Developm	•		<u>></u>						F I	75.683	76.563	2.272
<i>Description:</i> Funds support the c to the prototypes as informed by t <i>FY 2024 Plans:</i>	levelopmer	nt costs whic		•	improving	the design a	and impleme	enting chan	ges			
Continuation of developmental en support activities, rate of fire prep	• •			•	ents, Milesto	one C docur	nentation, F	irst Unit Iss	sued			
FY 2025 Plans: Continuation of developmental en	igineering e	efforts.										
FY 2024 to FY 2025 Increase/De Decrease due to the ramp down of			ies.									
Title: Program Management										13.152	13.861	9.763
Description: Funding is provided	for all Prog	gram Manag	ement effor	ts.								
FY 2024 Plans: Continue the development and ge Rate of Fire efforts.	enerate all r	required doc	uments, off	ice staff an	d engineerii	ng IPT deve	lopment for	Range and	1			
FY 2025 Plans: Continue development and gener	ate all requ	ired docum	ents, office s	staff and er	ngineering II	PT developr	nent.					

FY 2024 to FY 2025 Increase/Decrease Statement:

PE 0203743A: 155mm Self-Propelled Howitzer Improvemen... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024				
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name)Project (Number/Name)PE 0203743A I 155mm Self-Propelled HowitFF9 I PIM Improvement Programzer ImprovementsFF9 I PIM Improvement Program						
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025			
Decrease due to the ramp down of development activities.							
<i>Title:</i> Test and Evaluation		23.422	32.478	43.17			
Description: This funding supports all Testing and Evaluation in supp	ort of the Division Lethality Modernization.						
FY 2024 Plans: Conduct Developmental Testing in support of Root Cause Corrective A test execution, data collection, contractor and logistics support for safe		I					
FY 2025 Plans: Supports test site personnel, facilities, and ammunition required to con	nduct competitive vehicle evaluation.						
FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to the vehicle evaluation effort.							
	Accomplishments/Planned Programs Subto	tals 112.257	122.902	55.20			
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A <u>Remarks</u>							
D. Acquisition Strategy The Division Lethality Modernization effort will leverage an appropriate submissions for self-propelled howitzer technology to improve lethality			lable vendor				

Exhibit R-3, RDT&E	•	,	2025 Arm	У									March 20)24	
Appropriation/Budg 2040 / 7	et Activity	/				R-1 Program Element (Number/Name)Project (NPE 0203743A / 155mm Self-Propelled HowitFF9 / PIMzer ImprovementsFF9 / PIM					: (Numbe i IM Improv	,	rogram		
Product Developme	roduct Development (\$ in Millions)			FY	2023	FY 2	2024	FY 2025 Base			2025 CO	5 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 Contrac
Developmental Eng	Various	Various : Various Locations	241.356	47.391	Jan 2023	42.275	Jan 2024	2.272	Jan 2025	-		2.272	Continuing	Continuing	, Continuir
Prototype Build	Various	Various : Various Locations	166.700	28.292	Jan 2023	34.288		-		-		-	Continuing	Continuing	, Continuin
		Subtotal	408.056	75.683		76.563		2.272		-		2.272	Continuing	Continuing) N/A
Support (\$ in Millior	ıs)		ſ	FY	2023	FY 2	2024		2025 Ise		2025 CO	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/PEO Support	MIPR	PM/PEO PIM : Various	36.867	13.152	Oct 2022	13.861	Oct 2023	9.763	Oct 2024	-		9.763	Continuing	Continuing	Continuin
		Subtotal	36.867	13.152		13.861		9.763		-		9.763	Continuing	Continuing) N/A
Test and Evaluation	(\$ in Milli	ons)	ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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	Various - OGAs : Various	137.644	23.422	Oct 2022	32.478	Oct 2023	43.170	Oct 2024	-		43.170	Continuing	Continuing	Continuin
		Subtotal	137.644	23.422		32.478		43.170		-		43.170	Continuing	Continuing) N/A
			Prior Years	FY	2023	FY 2	2024		2025 ISE		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	582.567	112.257		122.902		55.205		-			0 11 1	Continuing	N/A



hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marcl	h 2024			
propriation/Budget Activity 40 / 7	R-1 Program Element (Number/Name)Project (Number/Name)PE 0203743A I 155mm Self-Propelled HowitFF9 I PIM Improvement Programzer ImprovementsFF9 I PIM Improvement Program							
	Schedule Details							
		Sta	art	End				
Events		Quarter	Year	Quarter	Year			
Developmental Engineering		2	2018	3	2028			
EMD Contract		3	2026	3	2026			
Competitive Vehicle Evaluation		3	2025	2	2026			
MTA Prototype Manufacturing		4	2018	1	2024			
Developmental Testing		1	2019	3	2028			
Mllestone C		3	2028	3	2028			
Prototype Manufacturing		3	2026	1	2028			

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army											Date: March 2024		
							R-1 Program Element (Number/Name) PE 0203752A I Aircraft Engine Component Improvement 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	
Total Program Element	-	0.148	0.146	0.142	42 - 0.142 0.142 0.143 0.145 0.146 0.000							1.012	
106: A/C Compon Improv Prog - 0.148 0.146 0.142 - 0.142 0.142 0.143 0.145								0.146	0.000	1.012			

A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) develops, tests, and qualifies improvements to aircraft engine components to correct service-revealed deficiencies, improve flight safety, enhance readiness and reduce operating and support (O&S) costs. In addition, CIP provides the test vehicles for the testing and qualification efforts required as a part of the Army's Critical Safety Item (CSI) program. Non-program specific Auxiliary Power Unit (APU) as well as Unmanned Aircraft Systems (UAS) safety and readiness issues are also addressed under this Program Element.

Work in this Project is performed by the United States Army Futures Command (AFC), U.S. Army Combat Capabilities Development Command (DEVCOM), Aviation & Missile Center (AvMC), Redstone Arsenal, AL

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.148	0.146	0.146	-	0.146
Current President's Budget	0.148	0.146	0.142	-	0.142
Total Adjustments	0.000	0.000	-0.004	-	-0.004
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-0.004	-	-0.004

Change Summary Explanation

Decrease in FY25 funding reflects an Army approved minor reduction.

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2025 A	Army							Date: Ma	arch 2024	
Appropriation/Budget Activity 2040 / 7		PE 02037	a m Elemen 52A I Aircra ent Progran	ft Engine Co		Project (N 106 / <i>A/</i> C (a me) mprov Prog				
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	
106: A/C Compon Improv Prog	-	0.148	0.146	0.142	-	0.142	0.142	0.143	0.145	0.14	6 0.00	0 1.012
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Buc The Aircraft Engine Component I deficiencies, improve flight safety qualification efforts required as a Systems (UAS) safety and readir Work in this Project is performed Missile Center (AvMC), Redstone	mprovement w, enhance f part of the ness issues by the Unit	nt Program readiness a Army's Criti are also ad ted States A	(CIP) develond reduce c cal Safety li ldressed.	perating ar tem (CSI) p	nd support (rogram. No	O&S) costs n-program s	. In addition specific Aux	, CIP provid iliary Powe	les the test r Unit (APU)	vehicles fo) as well a	or the testing s Unmanne	g and d Aircraft
B. Accomplishments/Planned F	Programs (\$ in Million	<u>s)</u>						FY	2023	FY 2024	FY 2025
Title: In-House Support										0.055	0.057	0.055
Description: In-house support fo	r the CIP e	ngineers. C	ontracting s	support for	CIP contrac	xts.						
<i>FY 2024 Plans:</i> Will continue to provide in-house	engineering	g support fo	r UAV engir	ne CIP prog	rams.							
<i>FY 2025 Plans:</i> Will continue to provide in-house	engineerin	g support fo	r UAV engir	ne CIP prog	rams.							
FY 2024 to FY 2025 Increase/De Funding decrease reflects planned												
Title: UAS Fuel System Compon	ent Evaluat	ion								0.093	0.089	0.087
Description: This program is to i failures.	mprove airc	craft readine	ess and relia	bility by mi	tigating the	root cause	of common	component				
FY 2024 Plans: UAS component investigations w Unmanned Aerial Vehicle (UAV) pressure fuel pumps) to determin FY 2025 Plans:	component	s (e.g., Full	Authority Di	gital Engine	e Controls (FADECs), f	uel injectors	, and high				

PE 0203752A: Aircraft Engine Component Improvement Pr... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			larch 2024				
Appropriation/Budget Activity 2040 / 7		Project (Number/N 106 / A/C Compon	t (Number/Name) /C Compon Improv Prog				
B. Accomplishments/Planned Programs (\$ in Millions)	 Demonent investigations will continue to support airworthiness, reliability and performance improvements of the critical ined Aerial Vehicle (UAV) components (e.g., Full Authority Digital Engine Controls (FADECs), fuel injectors, and high re fuel pumps) to determine root cause of occurrences which result in performance anomalies during aircraft operation. 24 to FY 2025 Increase/Decrease Statement: g decrease reflects planned lifecycle of the effort. 		FY 2024	FY 2025			
Unmanned Aerial Vehicle (UAV) components (e.g., Full Authority	y Digital Engine Controls (FADECs), fuel injectors, and high						
FY 2024 to FY 2025 Increase/Decrease Statement: Funding decrease reflects planned lifecycle of the effort.							
	Accomplishments/Planned Programs Subto	otals 0.148	0.146	0.14			
Improved designs will be implemented via Engineering Change improved hardware.	Proposal (ECP) and follow-on procurement or modification to a	a production contra	act to introduc	e the			
Improved designs will be implemented via Engineering Change	Proposal (ECP) and follow-on procurement or modification to a	a production contra	act to introduc	e the			
Improved designs will be implemented via Engineering Change	Proposal (ECP) and follow-on procurement or modification to a	a production contra	act to introduc	e the			

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Arm	y								Date:	March 20)24	
Appropriation/Budget Activity 2040 / 7							R-1 Program Element (Number/Name)Project (Number/Name)PE 0203752A I Aircraft Engine Component106 I A/C Compon Improv ProgImprovement Program106 I A/C Compon Improv Prog								
Management Servic	es (\$ in M	illions)		FY 2	2023	FY 2	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
In-house Engineering	Allot	US Army DEVCOM AvMC : Redstone Arsenal, AL	3.139	0.055	Oct 2022	0.057	Oct 2023	0.055	Oct 2024	-		0.055	Continuing	Continuing	Continuinç
		Subtotal	3.139	0.055		0.057		0.055		-		0.055	Continuing	Continuing	N/A
Product Developme	uct Development (\$ in Millions)		ſ	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
UAS Fuel System Component Evaluation	TBD	Army Research Lab : Aberdeen Proving Ground	0.039	0.093	Oct 2022	0.089	Oct 2023	0.087	Oct 2024	-		0.087	Continuing	Continuing	Continuinç
		Subtotal	0.039	0.093		0.089		0.087		-		0.087	Continuing	Continuing	N/A
			Prior Years	FY	2023	FY 2	2024	FY 2 Ba	2025 Ise		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	3.178	0.148		0.146		0.142		-		0.142	Continuing	Continuing	N/A

Remarks

<pre>khibit R-4, RDT&E Schedule Profile: PB propriation/Budget Activity 40 / 7</pre>	,	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203752A / Aircraft Engine Component 106 / A/C Compon Improv Prog Improvement Program 106 / A/C Compon Improv Prog							
Event Name		Y 2024 FY 2025 3 4 1 2 3 4		FY 2027		Y 2029			
UAS Fuel System Component Evaluation									

nibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: M	larch 2024
propriation/Budget Activity 40 / 7		Element (Number I Aircraft Engine C Program	Project (Number/Name) 106 / A/C Compon Improv Prog		
	Schedule Details	S			
		Sta	rt		End
Events		Quarter	Year	Quarter	Year
T700 Engine Spit Pit Testing		1	2011	4	2012
T700 Engine Temperature Survey		2	2014	4	2015
T55 Engine 1553 Engine Control Unit (ECU)		2	2012	1	2013
T55 Engine N1 Drive Line Redesign		1	2010	4	2012
T55 Engine ECU Block Upgrade		2	2013	4	2015
Auxiliary Power Units (APUs)		1	2014	4	2015
UAV Shadow Engine		2	2014	4	2021
T700 CSI Update		1	2017	4	2017
UAS Fuel System Component Evaluation		1	2022	4	2029

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 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0203758A <i>I Digitization</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
Total Program Element 1.515 1.50					-	1.562	1.563	1.608	1.625	1.641	Continuing	Continuing
374: HOR Battlefld Digitizn 1.515 1.56						1.562	1.563	1.608	1.625	1.641	Continuing	Continuing

A. Mission Description and Budget Item Justification

As the Army Equipping methodology transitions to the Army Modernization Enterprise or AME, the information technology used to support Army Equipping must grow and change. The development of an upgraded Army Equipping Enterprise System (AE2S) will integrate and share programming data (dollars and quantities) with information from Information Technology (IT) systems that support the Army Futures Command (AFC), ASA(ALT), ASA(FM&C) and Army G3/5/7. This data sharing will allow the AME to provide Army Senior Leaders with a complete picture of how well programs are executing, the impacts of programming decisions on Army current and future readiness and modernization, and help develop a road map needed to transition the current force to a fully modernize Army. The AE2S next generation capability requirements include a flexible data and software architectures that allows the user to integrate disparate data from differing architectures in order to develop new information that can be turned into actionable knowledge by senior leaders. The software architecture must have data visualization capabilities that allow the user to display data in ways that can articulate how AME decisions made impact warfighting effectiveness and plans.

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	1.515	1.559	-	1.559
Current President's Budget	0.000	1.515	1.562	-	1.562
Total Adjustments	0.000	0.000	0.003	-	0.003
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	0.003	-	0.003

Change Summary Explanation

Increased funding due to revised economic assumptions.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					-	am Elemen 58A / <i>Digitiza</i>	•		• `	umber/Nan Battlefld Di	,	
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
374: HOR Battlefld Digitizn	-	-	1.515	1.562	-	1.562	1.563	1.608	1.625	1.641	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As the Army Equipping methodology transitions to the Army Modernization Enterprise or AME, the information technology used to support Army Equipping must grow and change. The development of an upgraded Army Equipping Enterprise System (AE2S) will integrate and share programming data (dollars and quantities) with information from IT systems that support the Army Futures Command (AFC), ASA(ALT), ASA(FM&C) and Army G3/5/7. This data sharing will allow the AME to provide Army Senior Leaders with a complete picture of how well programs are executing, the impacts of programming decisions on Army current and future readiness and modernization, and help develop a road map needed to transition the current force to a fully modernize Army. The AE2S next generation capability requirements include a flexible data and software architectures that allows the user to integrate disparate data from differing architectures in order to develop new information that can be turned into actionable knowledge by senior leaders. The software architecture must have data visualization capabilities that allow the user to display data in ways that can articulate how AME decisions made impact warfighting effectiveness and plans.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Interoperability and Integration	-	0.315	0.325
Description: Conducts independent analyses of Army, joint, and multinational interfaces, adherence to standards, implementation profiles, and interoperability baselines.			
FY 2024 Plans: Contractor will continue to conduct independent analyses of Army, joint, and multinational interfaces, adherence to standards, implementation profiles, and interoperability baselines.			
FY 2025 Plans: Contractor will continue to conduct independent analyses of Army, joint, and multinational interfaces, adherence to standards, implementation profiles, and interoperability baselines.			
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 to FY 2025 funding increase represents minor increase due to economic assumptions.			
Title: Operational Capability Analysis and Evaluation	-	0.304	0.314
Description: Conducts iterative capability analyses and assessments consistent with CJCSI 3170 (JCIDS) and 6212 (Net Readiness) to ensure Army and joint program technical and operational requirements are consistent.			
FY 2024 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: N	larch 2024			
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / Digitization	-	oject (Number/Name) 4 / HOR Battlefld Digitizn				
B. Accomplishments/Planned Programs (\$ in Millions)		ſ	FY 2023	FY 2024	FY 2025		
Contractor will continue to conduct iterative capability analyses (Net Readiness) to ensure Army and joint program technical an and joint initiatives.							
FY 2025 Plans: Contractor will continue to conduct iterative capability analyses (Net Readiness) to ensure Army and joint program technical an and joint initiatives.							
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 to FY 2025 funding increase represents minor increas	e due to economic assumptions.						
Title: Systems Architecture Development			-	0.515	0.53		
Description: Conducts broad concept studies with emphasis o	n interoperability and joint coalition operations.						
FY 2024 Plans: Federally Funded Research and Development Center (FFRDC) emphasis on interoperability and joint coalition operations.) contractor will continue to conduct broad concept studies w	ith					
FY 2025 Plans: FFRDC contractor will continue to conduct broad concept studie	es with emphasis on interoperability and joint coalition opera	tions.					
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 to FY 2025 funding increase represents minor increas	e due to economic assumptions.						
Title: Technical Reviews and Technical Performance Analysis			-	0.243	0.25		
Description: Provides technology maturity assessments, preparand specific technologies of interest, including test and evaluate the G-8.							
FY 2024 Plans: Contractor will continue to provide technology maturity assesses Transformation and specific technologies of interest, including to simulations to the G-8.							

		Date: N	larch 2024	
R-1 Program Element (Number/Name) PE 0203758A <i>I Digitization</i>				
	ſ	FY 2023	FY 2024	FY 2025
due to economic assumptions.				
		-	0.138	0.142
to the integration of Army complex modeling, simulation, a	nd			
h resources to the integration of Army complex modeling,				
h resources to the integration of Army complex modeling,				
due to economic assumptions.				
Accomplishments/Planned Programs Su	btotals	-	1.515	1.562
ct.				
	PE 0203758A <i>I Digitization</i> nts, prepare technical recommendations in support of Arm t and evaluate network systems, and infrastructure model due to economic assumptions. to the integration of Army complex modeling, simulation, a h resources to the integration of Army complex modeling, h resources to the integration of Army complex modeling, due to economic assumptions. Accomplishments/Planned Programs Su Cost Plus or Fixed Price Incentive contracts that will delive	PE 0203758A / Digitization 37411 Ints, prepare technical recommendations in support of Army t and evaluate network systems, and infrastructure modeling and due to economic assumptions. and evaluate network systems, and infrastructure modeling and due to economic assumptions. to the integration of Army complex modeling, simulation, and h resources to the integration of Army complex modeling, h resources to the integration of Army complex modeling, due to economic assumptions. and evaluate network systems. Accomplishments/Planned Programs Subtotals Cost Plus or Fixed Price Incentive contracts that will deliver capate egy is to develop and optimize system capabilities while reducing resources while reducing resources while reducing resources while reducing resources for the integration of the integratinthe integration of the integration of the integratinth	R-1 Program Element (Number/Name) PE 0203758A / Digitization Project (Number/Name) 374 / HOR Battlefor nts, prepare technical recommendations in support of Army t and evaluate network systems, and infrastructure modeling and due to economic assumptions. - due to economic assumptions. - to the integration of Army complex modeling, simulation, and - h resources to the integration of Army complex modeling, - due to economic assumptions. - to the integration of Army complex modeling, simulation, and - h resources to the integration of Army complex modeling, - due to economic assumptions. - Cost Plus or Fixed Price Incentive contracts that will deliver capabilities in increasing is to develop and optimize system capabilities while reducing risk and streated and s	PE 0203758A / Digitization 374 / HOR Battlefid Digitizn FY 2023 FY 2024 Ints, prepare technical recommendations in support of Army t and evaluate network systems, and infrastructure modeling and due to economic assumptions. - due to economic assumptions. - 0.138 to the integration of Army complex modeling, simulation, and - 0.138 h resources to the integration of Army complex modeling, - 0.138 due to economic assumptions. - 1.515 Accomplishments/Planned Programs Subtotals - 1.515

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Arm	y								Date:	March 20	24			
Appropriation/Budg 2040 / 7	et Activity	1				R-1 Program Element (Number/Name)Project (Number/Name)PE 0203758A / Digitization374 / HOR Battlefld Digitizn											
Support (\$ in Millior	pport (\$ in Millions)		Millions)				2023	FY 2	:024				7 2025 FY 202 DCO Tota				
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		
Interoperability and Integration	Various	Various : Various	10.946	-		0.315		0.325		-		0.325	0.000	11.586	-		
Operational Capability Analysis and Evaluation	Various	Various : Various	10.215	-		0.304		0.314		-		0.314	0.000	10.833	-		
Academic Research	Various	Various : Various	3.618	-		0.138		0.142		-		0.142	0.000	3.898	-		
Systems Architecture Development	Various	Various : Various	8.817	-		0.515		0.531		-		0.531	0.000	9.863	-		
Technical Reviews and Technical Performance Analysis	Various	Various : Various	8.693	-		0.243		0.250		-		0.250	0.000	9.186	-		
		Subtotal	42.289	-		1.515		1.562		-		1.562	0.000	45.366	N/A		
			Prior Years	FY	2023	FY 2	2024	FY 2 Ba			2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract		
		Project Cost Totals	42.289	-		1.515		1.562		-		1.562	0.000	45.366	N/A		

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB Appropriation/Budget Activity 040 / 7	2025 Army		R-1 Pr PE 020	ogram)3758A	Elemer	nt (Nu	umbei 1	/Name	e)		ojec 4 / F	:t (N	umb	oer/N	lam		 	
					in Digitiz					0.			Dut		. 2.9			
Event Name	FY 2023	FY 20	I	FY	2025 3 4	1	FY 20)26 3 4	1		2027 3		1		202 8 3	I		2029 3
Interoperability and Integration										-				-			 -	
ote																		
lone.																		

xhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March	า 2024	
Appropriation/Budget Activity 040 / 7	R-1 Program Element (Number/N PE 0203758A <i>I Digitization</i>	Project (Number/Name) 374 / HOR Battlefld Digitizn			
	Schedule Details				
	Start		En	d	
Events	Quarter	Year	Quarter	Year	
Interoperability and Integration	1	2016	4	2023	
Operational Capability Analysis and Evaluation	1	2016	4	2022	
Systems Architecture Development 1.0	2	2015	2	2016	
Systems Architecture Development 2.0	3	2016	3	2017	
Systems Architecture Development 3.0	4	2017	4	2018	
Systems Architecture Development 4.0	1	2019	1	2020	
Systems Architecture Development 5.0	2	2020	4	2021	
Army Equipping Enterprise System (AE2S) Software SW 1.0	2	2015	2	2016	
Army Equipping Enterprise System (AE2S) Software SW 2.0	3	2016	3	2017	
Army Equipping Enterprise System (AE2S) Software SW 3.0	4	2017	4	2018	
Army Equipping Enterprise System (AE2S) Software SW 4.0	1	2019	1	2020	
Army Equipping Enterprise System (AE2S) Software SW 5.0	2	2020	4	2021	
Technical Reviews and Technical Performance Analysis	1	2015	4	2022	
Academic Research	3	2015	4	2022	

Exhibit R-2, RDT&E Budget Iter	Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army Appropriation/Budget Activity									Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development					R-1 Progra PE 020380		t 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
Total Program Element	0.000	2.996	4.520	1.511	0.000	1.511	1.513	0.000	0.000	0.000	0.000	10.540
038: Avenger PIP	-	2.996	4.520	1.511	-	1.511	1.513	-	-	-	0.000	10.540

A. Mission Description and Budget Item Justification

Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The system protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. It can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a .50 Caliber Machine Gun (M3P) for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 433 systems includes 169 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.

FY 2025 funding of \$1.511 million provides continued obsolescence mitigation (Avenger Product Improvement).

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	3.109	4.520	1.508	-	1.508
Current President's Budget	2.996	4.520	1.511	-	1.511
Total Adjustments	-0.113	0.000	0.003	-	0.003
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-0.113	-			
 Adjustments to Budget Years 	-	-	0.003	-	0.003

Change Summary Explanation

Increased funding due to revised economic assumptions.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					PE 020380		t (Number/ e/Air Defens	,		umber/Nan ger PIP	ne)	
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
038: Avenger PIP	-	2.996	4.520	1.511	-	1.511	1.513	-	-	-	0.000	10.540
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle. The system protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. It can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a .50 Caliber Machine Gun (M3P) for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 433 systems includes 169 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.

The Avenger Modification - Service Life Extension Program (MOD-SLEP) consists of Project 038: Avenger Production Improvement Program (PIP) and Program Element CE8710: Avenger MODS. The ongoing MOD-SLEP addresses obsolescence of Avenger components to ensure Avenger maintains operational capability through Fiscal Year (FY) 2031. Key MOD-SLEP components are: the Targeting Console (TC), the M3P, the Avenger Fire Control Computer (AFCC), the Mode 5 IFF, the Vehicle Internal Communications (VIC-5), and the Assured Positioning Navigation and Timing (A-PNT) capability. The AFCC and TC are fielded to the STC Avengers. All other components are fielded to the entire Avenger fleet.

FY 2025 funding of \$1.511 million provides continued obsolescence mitigation (Avenger Product Improvement).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Avenger MOD-SLEP	-	1.449	1.511
Description: The Avenger MOD-SLEP consists of development activities for platform integration, software upgrades, and capability enhancements. Develops and executes test requirements and conducts limited contractor and government testing. Performs technical assessments, concept studies, cost reduction, risk reduction and development documentation.			
FY 2024 Plans: The Avenger MOD-SLEP consists of development activities for platform integration, software upgrades, and capability enhancements. Develops and executes test requirements and conducts limited contractor and government testing. Performs technical assessments, concept studies, cost reduction, risk reduction and development documentation.			
FY 2025 Plans:			

Exhibit R-2A, RDT&E Project Just Appropriation/Budget Activity 2040 / 7				PE 02		ment (Numb issile/Air Defe gram		-	t (Number/N venger PIP	arch 2024 Iame)	
B. Accomplishments/Planned Pro	grams (\$ in N	<u> ////////////////////////////////////</u>							FY 2023	FY 2024	FY 2025
FY 2025 funding continues obsoleso funding also continues system testin							er available.	The			
FY 2024 to FY 2025 Increase/Decr FY 2024 to FY 2025 funding increas			ase due to ec	conomic ass	umptions.						
<i>Title:</i> A-PNT									2.996	3.071	-
Description: This effort consists of Positioning, Navigation and Timing (Advanced GPS Receiver (DAGR) D	A-PNT) capal	bility. The A-	PNT capabi	lity, including	g the Anti-Ja	im Antenna a	and Defense				
FY 2024 Plans: Funding continues integration, proto which will provide M-Code capability		sting of the A	A-PNT capat	pility, includir	ng the Anti-J	am Antenna	and DAGR	D3,			
FY 2024 to FY 2025 Increase/Decr Funding decrease represents compl			activities.								
				Accon	nplishment	s/Planned P	rograms Su	btotals	2.996	4.520	1.51
C. Other Program Funding Summa	ary (\$ in Milli	ons)									
Line Item • CE8710: AVENGER MODS	FY 2023	<u>FY 2024</u> 22.274	FY 2025 Base 2.321	<u>FY 2025</u> <u>OCO</u>	FY 2025 Total 2.321	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>B FY 202</u>	<u>Cost To</u> <u>Complete</u> 0.000	Total Cos
<u>Remarks</u> CE8710 Avenger MODS procures to program is an integral part of the Ar		^{>} componer	nts for the Av		m. This ens	ures that Ave	nger is viabl	e and sus	tainable thro		
D. Acquisition Strategy The Avenger MOD-SLEP addresses	s obsolescenc	ce of key cor	mponents ar	id ensures th	nat Avenger	is viable and	l sustainable	through F	Y 2031.		
The MOD-SLEP components are th attrition. The other MOD-SLEP com				VIC-5, the M	13P machine	e gun and A-	PNT. The M	3P machir	ne gun will b	e fielded thro	ugh

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 7	PE 0203801A I Missile/Air Defense Product	038 I Aven	ger PIP
	Improvement Program		
Development and testing of herdware and software modifications processory to	fully integrate the A DNIT equality into the A	الانتباعات والمتعاوية	he nemfermed by a completed term

Development and testing of hardware and software modifications necessary to fully integrate the A-PNT capability into the Avenger will be performed by a combination of Government and Original Equipment Manufacturer efforts, using the existing and new Engineering Service contracts. A-PNT modifications will be performed by Depot Maintenance teams.

Appropriation/Budge 2040 / 7	et Activity	1				PE 020		lissile/Ài	lumber/Na r Defense			(Numbe venger Pl			
Product Developmer	nt (\$ in Mi	illions)	ſ	FY 2	023	FY 2	2024		2025 ase	FY 2 OC		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
Avenger Modification Product Development	SS/ Various	Raytheon, The Boeing Company and others : Aberdeen Proving Grounds, MD and Huntsville, AL	10.367	2.697	Oct 2022	3.540	Oct 2023	1.511	Oct 2024	-		1.511	0.000	18.115	-
		Subtotal	10.367	2.697		3.540		1.511		-		1.511	0.000	18.115	N/A
Test and Evaluation	(\$ in Milli	ons)	ſ	FY 2	023	FY 2	2024		2025 ase	FY 2 OC		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Award Cost Date		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Avenger Modification Test Support	Various	The Boeing Company, U.S. Army Combat Capabilities Development Command Aviation and Missiles Center and others : Huntsville, AL and Redstone Arsenal, AL	8.018	0.299	Oct 2022	0.980	Oct 2023	-		-		-	0.000	9.297	
		Subtotal	8.018	0.299		0.980		-		-		-	0.000	9.297	N/A
			Prior Years	FY 2	023	FY 2	2024		2025 ase	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	18.385	2.996		4.520		1.511		-		1.511	0.000	27.412	N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	4rmy	/																			D	ate:	Ma	rch 2	024				
Appropriation/Budget Activity 2040 / 7							P	E 02	2038	301 <i>A</i>	A I N	e men Iissile gran	e/Àir					t (Proj 038	ect (I Ave	Nun enge	nber er Pll	r∕Na ⊳	me)					
Event Name		FY	2023			FY	2024	1		FY	202	25		FY	202	6		F	(20	27		F	Y 20	28		F	Y 2	029	,
Event Name	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	1	2	3	4
Materiel Release (MOD-SLEP)					Mate	eriel Re	elease																						
A-PNT Integration																													
	A-PN	T Inte	gration																										
Continuing Avenger Product Improvement / Evolving Threats	Conti	inuing	Product I	mpro	vemen	ıt																							

hibit R-4A, RDT&E Schedule Details: PB 2025 Army			C	Date: March	n 2024
propriation/Budget Activity 40 / 7	R-1 Program Element (Number/ PE 0203801A <i>I Missile/Air Defens</i> <i>Improvement Program</i>		Project (Nui 038 / Avenge		e)
	Schedule Details				
	Sta	-+		En	d
Events	Sta Quarter	rt Year	Qu	Ene	d Year
Events Materiel Release (MOD-SLEP)			Qu		-
	Quarter	Year	Qu		Year

<u>Note</u>

MOD-SLEP components are the TC, AFCC, IFF, VIC-5, M3P machine gun and A-PNT.

TC: Targeting Console

AFCC: Avenger Fire Control Computer

IFF: Identification Friend or Foe

MOD-SLEP: Modification - Service Life Extension Program

VIC: Vehicle Internal Communications

A-PNT: Assured Positioning, Navigation and Timing

Exhibit R-2, RDT&E Budget It	em Justificat	ion: PB 202	25 Army							Date: Mare	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Systems Development	•	ation, Army	I BA 7: Ope	erational			t (Number / Missile Proc		ement Prog	irams		
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	8.698	10.044	23.708	0.000	23.708	0.000	0.000	0.000	0.000	0.000	42.450
VV2: TOW	-	8.698	10.044	23.708	-	23.708	-	-	-	-	0.000	42.450
Program MDAP/MAIS Code: F	PRE			1					1	1	1	

Note

FY 2025 is the last year of funding for VV2, TOW efforts are on track for completion.

A. Mission Description and Budget Item Justification

VV2: TOW Weapon System includes the Improved Target Acquisition System (ITAS) and other TOW missile launchers, TOW missiles (BGM-71 series) and other missiles capable of being fired from TOW Missile launchers, and associated tactical training aids/devices. The TOW Weapon System provides long-range, lethal antiarmor and precision assault fires capability for Army Infantry Brigade Combat Teams (IBCT), Stryker Brigade Combat Teams (SBCT) and Armor Brigade Combat Teams (ABCT) within the Active, Reserve, and National Guard components. The United States Marine Corps (USMC) employs the TOW missile from its ITAS derived M41A7 Saber launchers and Anti-Tank Guided Missile (ATGM) vehicles.

The TOW Weapon System improvement program integrates U.S. Army missile and launcher modifications to improve missile safety and reliability, increase system survivability and lethality, and enhance system network capabilities. These capability improvements support Multi-Domain Operations (MDO) as a part of Joint All Domain Operations (JADO) and the Functional Concept for Movement and Maneuver by providing precise lethal capabilities in multiple domains against armored threat systems.

FY 2025 funding in the amount of \$23.708 million is for TOW missile obsolescence mitigation, system improvements, integration management, and countermeasure/ threat management.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	rmy			Date:	March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	7: Operational		ement (Number/Name) Other Missile Product In		
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	9.027	10.044	9.030	-	9.030
Current President's Budget	8.698	10.044	23.708	-	23.708
Total Adjustments	-0.329	0.000	14.678	-	14.678
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	0.001	-			
SBIR/STTR Transfer	-0.330	-			
 Adjustments to Budget Years 	-	-	14.678	-	14.678

Change Summary Explanation

Request increased to expand component, sub-system, and integrated system hardware builds in support of the associated test program.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	Army							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7				am Elemen)2A I Other Programs	•	,	Project (N VV2 / TOV	umber/Nar /	ne)			
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
VV2: TOW	-	8.698	10.044	23.708	-	23.708	-	-	-	-	0.000	42.450
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

<u>Note</u>

FY 2025 is the last year of funding for VV2, TOW efforts are on track for completion.

A. Mission Description and Budget Item Justification

VV2: TOW Weapon System includes the Improved Target Acquisition System (ITAS) and other TOW missile launchers, TOW missiles (BGM-71 series) and other missiles capable of being fired from TOW Missile launchers, and associated tactical training aids/devices. The TOW Weapon System provides long-range, lethal antiarmor and precision assault fires capability for Army Infantry Brigade Combat Teams (IBCT), Stryker Brigade Combat Teams (SBCT) and Armor Brigade Combat Teams (ABCT) within the Active, Reserve, and National Guard components. The United States Marine Corps (USMC) employs the TOW missile from its ITAS derived M41A7 Saber launchers and Anti-Tank Guided Missile (ATGM) vehicles.

The TOW Weapon System improvement program integrates U.S. Army missile and launcher modifications to improve missile safety and reliability, increase system survivability and lethality, and enhance system network capabilities. These capability improvements support Multi-Domain Operations (MDO) as a part of Joint All Domain Operations (JADO) and the Functional Concept for Movement and Maneuver by providing precise lethal capabilities in multiple domains against armored threat systems.

FY 2025 funding in the amount of \$23.708 million is for TOW missile obsolescence mitigation, system improvements, integration management, and countermeasure/ threat management.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: TOW Missile Obsolescence Mitigation and System Improvements	8.211	9.498	23.149
Description: These funds will be used for development and qualification of new components, associated parts, and sub-systems such as the Radio Frequency Data-Link (RF DL), Missile Computer (MC), and Short Wave Infra-Red (SWIR) beacon. These components will be cut into production via Engineering Change Proposal upon qualification.			
FY 2024 Plans: Continue the design engineering of the RF DL, MC, and SWIR beacon, and required software to facilitate integration into a tactical system. Continue the build and test of components at the component and sub-system level. FY 2024 engineering efforts culminate in the completion of Design Engineering, Component Critical Design Review (CDR), and System CDR.			
FY 2025 Plans:			

PE 0203802A: Other Missile Product Improvement Progra... Army

Exhibit R-2A, RDT&E Project Justif	ication: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7				PE 02	-		er/Name) Product Impr		Number/Na W	ame)	
B. Accomplishments/Planned Prog	rams (\$ in I	<u>Millions)</u>						F	Y 2023	FY 2024	FY 2025
Continue residual design engineering tactical system. Expand the build and engineering efforts result in compone and system level.	test of com	ponents at th	ne componei	nt, sub-syste	m, and integ	rated syster	n level. FY 2	025			
FY 2024 to FY 2025 Increase/Decree The increase in funds from FY 2024 t conduct the subsystem and system te	o FY 2025 is	s to expand o	component,	sub-system,	and integrat	ed system h	ardware buil	ds and			
Title: Integration and Counter Measu	re/Threat ma	anagement							0.487	0.546	0.55
Description: These funds will be use demonstrations, tests, and risk mitigation FY 2024 Plans: Perform technical assessments, analycapabilities.	tion efforts t	o address cu	urrent and er	merging threa	ats.						
FY 2025 Plans: Perform technical assessments, analy capabilities.	-	-	es against v	arious target	s to demons	trate current	and future				
FY 2024 to FY 2025 Increase/Decree FY 2024 to FY 2025 funding increase			ase due to eo	conomic assi	umptions.						
				Accon	nplishment	s/Planned P	rograms Su	btotals	8.698	10.044	23.708
C. Other Program Funding Summa	ry (\$ in Milli	<u>ons)</u>	FY 2025	FY 2025	FY 2025					Cost To	
Line Item	FY 2023	FY 2024	Base	000	<u>Total</u>	FY 2026	FY 2027	FY 2028	FY 2029	Complete	Total Cos
• C59300: TOW 2 System Summary	261.817	120.475	121.448	-	121.448	129.071	124.086	122.915	124.144	0.000	1,003.95
C61700: ITAS/TOW Mods	5.154	-	0.000	-	0.000	-	-	-	-	0.000	5.154
<u>Remarks</u>											
D. Acquisition Strategy											
TOW Missile obsolescence mitigation	n design eng	jineering, co	mponent hai	rdware build,	, and compo	nent system	s integration	will be cond	ducted throu	ugh Raytheo	n as the

PE 0203802A: Other Missile Product Improvement Progra... Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024	
	Project (N VV2 / <i>T</i> OИ	umber/Name) ⁄	

The Acquisition Strategy uses in-house expertise, Other Government Agencies (OGA), defense industry capabilities, and when appropriate Other Transaction Authority (OTA). The strategy allows the Government the ability to support urgent operational needs and unanticipated requirements, which require immediate and expert attention. This strategy allows the Government to maintain TOW Weapon System effectiveness and posture for emerging requirements while leveraging new authorities and incorporating new technologies.

Exhibit R-3, RDT&E	•		2025 Arm	/		1					1		March 20	24	
Appropriation/Budge 2040 / 7	et Activity	/				PE 020		other Miss	umber/Na sile Produ		Project VV2 / T	i (Numbe i OW	r/Name)		
Management Service	es (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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 Engr/Program Management, Govt	MIPR	Multiple : Redstone Arsenal, AL	2.261	0.792	Mar 2023	0.824	Mar 2024	0.857	Mar 2025	-		0.857	0.000	4.734	-
		Subtotal	2.261	0.792		0.824		0.857		-		0.857	0.000	4.734	N/A
Product Developme	nt (\$ in Mi	illions)		FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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
Component Design Engineering	SS/CPFF	Raytheon : Tucson, AZ	13.542	2.291	Mar 2023	2.698	Mar 2024	2.676	Mar 2025	-		2.676	0.000	21.207	-
Component Hardware Build	SS/CPFF	Raytheon : Tucson, AZ	3.129	3.707	Mar 2023	4.162	Mar 2024	15.653	Mar 2025	-		15.653	0.000	26.651	-
Integration and Counter Measure/Threat management	Various	Various : Various	0.665	0.428	Mar 2023	0.489	Mar 2024	0.559	Mar 2025	-		0.559	0.000	2.141	-
		Subtotal	17.336	6.426		7.349		18.888		-		18.888	0.000	49.999	N/A
Test and Evaluation	(\$ in Milli	ons)	ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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
Component/System Test and Evaluation	SS/CPFF	Raytheon : Tucson, AZ	1.527	1.480	Mar 2023	1.871	Mar 2024	3.963	Mar 2025	-		3.963	0.000	8.841	-
		Subtotal	1.527	1.480		1.871		3.963		-		3.963	0.000	8.841	N/A
			Prior Years	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	21.124	8.698		10.044		23.708		-		23.708	0.000	63.574	N/A

PE 0203802A: Other Missile Product Improvement Progra... Army

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5 Army					R-1	Prog	Iram	Eleme	nt (l	Num	ber	/Nam	e)	F	Proie	ct (l)24			
					PE 0)2038	802A	I Other																
	FY 202	3		FY 2	024		FY	2025		F	Y 20	26		F١	Y 202	27		FY	(20	28		FY	2029	9
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
		4																						
			3																					
				4	4																			
		FY 202	FY 2023	FY 2023	FY 2023 FY 2	R-1 PE (over FY 2023 FY 2024	FY 2023 FY 2024	R-1 Program PE 0203802A ovement Prog FY 2023 FY 2024	R-1 Program Element PE 0203802A / Other ovement Programs FY 2023 FY 2024 FY 2025	R-1 Program Element (I PE 0203802A / Other Mill ovement Programs FY 2023 FY 2024 FY 2025	R-1 Program Element (Num PE 0203802A I Other Missile ovement Programs FY 2023 FY 2024 FY 2025	R-1 Program Element (Number, PE 0203802A / Other Missile Pro ovement Programs FY 2023 FY 2024 FY 2025	R-1 Program Element (Number/Name PE 0203802A / Other Missile Product I ovement Programs FY 2023 FY 2024 FY 2025 FY 2026	R-1 Program Element (Number/Name) PE 0203802A I Other Missile Product Improvement Programs FY 2023 FY 2024 FY 2025 FY 2026	R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs FY 2023 FY 2024 FY 2023 FY 2024	R-1 Program Element (Number/Name) Proje PE 0203802A / Other Missile Product Impr VV2 / ovement Programs VV2 / FY 2023 FY 2024 FY 2025 FY 2026 FY 202	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A / Other Missile Product Improvement Programs VV2 / TOP FY 2023 FY 2024 FY 2025 FY 2026 FY 2027	R-1 Program Element (Number/Name) Project (Num PE 0203802A / Other Missile Product Improvement Programs VV2 / TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A I Other Missile Product Improvement Programs VV2 I TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A / Other Missile Product Improvement Programs VV2 / TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 20	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A / Other Missile Product Impr ovement Programs VV2 / TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 2028	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A / Other Missile Product Improvement Programs VV2 / TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 2028	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A / Other Missile Product Impr ovement Programs VV2 / TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 2028 FY	R-1 Program Element (Number/Name) Project (Number/Name) PE 0203802A I Other Missile Product Improvement Programs VV2 I TOW FY 2023 FY 2024 FY 2025 FY 2026 FY 2027 FY 2028 FY 2029

nibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Mar	ch 2024	
oropriation/Budget Activity 0 / 7		Element (Number I Other Missile Pro rams	Project (Number/Nar VV2 / TOW	ne)		
	Schedule Detail	S				
		Sta	art	End		
Events		Quarter	Year	Quarter	Year	
Component Design Engineering		2	2021	1	2026	
Component Hardware Build		2	2023	4	2025	
Component Testing		3	2023	1	2026	
Component Preliminary Design Review		3	2023	3	2023	
System Preliminary Design Review		4	2023	4	2023	
Component Critical Design Review		1	2024	1	2024	
System Critical Design Review		3	2024	3	2024	
System Test and Integration		2	2025	1	2026	
Integration and Counter Measure / Threat Management		2	2023	4	2025	

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army												Date: March 2024			
					R-1 Program Element (Number/Name) PE 0205412A <i>I Environmental Quality Technology - Operational System Dev</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			
Total Program Element	-	0.764	0.281	0.269	-	0.269	0.272	0.590	0.477	0.501	0.000	3.154			
EE6: Environmental Information Tech Modernization	-	0.764	0.281	0.269	-	0.269	0.272	0.590	0.477	0.501	0.000	3.154			

A. Mission Description and Budget Item Justification

The Environmental Information Technology Management (EITM) program includes support for the Defense Environment, Safety & Occupational Health Network Information Exchange (DENIX) defense business system, as well as its database and reporting application, the Knowledge Based Corporate Reporting System (KBCRS). This request for research, development, test and evaluation (RDTE) is to implement necessary enhancements to facilitate DENIX's Platform-as-a-Service capabilities, with additional modernizations that will improve the DoD's ESOH system of record and reporting tool set. This also includes upgrades to incorporate ongoing cybersecurity, cloud computing, and other information technology requirements.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.793	0.281	0.284	-	0.284
Current President's Budget	0.764	0.281	0.269	-	0.269
Total Adjustments	-0.029	0.000	-0.015	-	-0.015
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.029	-			
 Adjustments to Budget Years 	-	-	-0.015	-	-0.015

Change Summary Explanation

Decrease due to planned reduction of efforts.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	Army							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7					PE 020541	am Elemen 12A <i>I Enviro</i> perational S	nmental Qu		(Number/Name) nvironmental Information Tech ization			
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
EE6: Environmental Information Tech Modernization	-	0.764	0.281	0.269	_	0.269	0.272	0.590	0.477	0.501	0.000	3.154
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
The Environmental Information To and Information Exchange (DENI (KBCRS). This request for resea (PaaS) capabilities, with additional ongoing cybersecurity, cloud com B. Accomplishments/Planned P	X) defense rch, develo al moderniz nputing, and	business sy pment, test, ations that y d other inform	ystem, as w , and evalua will improve mation tech	ell as its da ition (RDTE the DoD's	atabase and E) is to imple ESOH syste	reporting a	pplication, t ssary enhar	he Knowled ncements to	lge Based C facilitate D . This also	Corporate F ENIX's Pla includes up	Reporting Sy tform-as-a-S	rstem Service
<i>Title:</i> Environmental Information	• •								F I	0.764	0.281	0.269
Description: Prototype, develop, the Defense Environment, Safety the Knowledge Based Corporate	and implen & Occupati	nent platforr ional Health	n enhancen Network ar									
FY 2024 Plans: In FY24, the DENIX program will t rules used by OSD for the enviror Environmental Management Revi KBCRS to predict anomalies and competed.	nmental dat ew). "Leari	a calls (Defended a calls (Defended a calls (Defended a calls a	ense Enviro formation w	nmental Pr ill pave the	ograms Anr way for the	nual Report prototyping	to Congres of a tool th	s and the at will allow				
FY 2025 Plans: In FY25, DENIX Program will cont the project to transition to a mode security risk due to its legacy code	rn software					•			•			
FY 2024 to FY 2025 Increase/De Decreased funding for DENIX pro												
					Accomplis	shments/Pl	anned Prog	grams Sub	totals	0.764	0.281	0.269

Exhibit R-2A, RDT&E Project Justi	fication: PB	2025 Army							Date: Ma	rch 2024		
Appropriation/Budget Activity 2040 / 7				PE 02	r ogram Elen 05412A I En / - Operation	vironmental	Quality Tech	Project (Number/Name) EE6 <i>I Environmental Information Tech</i> <i>Modernization</i>				
C. Other Program Funding Summa	ry (\$ in Milli	ons <u>)</u>										
Line Item • OMA - 432612000:	<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> Complete	<u>Total Cost</u>	

Information Mgmt - Automation

<u>Remarks</u>

Information Mgmt - Automation 43261200 - This is the associated OMA line that provides daily support for the DoD Environment, Safety & Occupational Health Network Information Exchange and associated applications. EITM is managed as a Defense Business System #3180.

D. Acquisition Strategy

The Deputy Assistant Secretary of the Army for Environment, Safety & Occupational Health is the designated Executive Agent for the Environmental Information Technology Management (EITM) program. Defined by the DoD Directive 4715.1E, the EITM mission is to ensure efficient use of enterprise environment, safety, and occupational health (ESOH) corporate information management processes by providing and sustaining requirement-driven ESOH corporate data management, Congressional-reporting, and public outreach tools to the DoD, and other DoD stakeholders. Funding provided for this program will allow EITM to continue to develop and modernize the platform to meet Army and DoD policy-driven cloud computing and cybersecurity requirements. Prior to funding being committed, DoD ESOH stakeholders and authoritative information technology organizations were consulted to determine necessary system interface upgrades to be incorporated. Expanding DENIX's architecture to create a Level 2 container separate from the current Level 4 container will not only provide a more secure, cybersecurity risk-adverse environment, but it will also optimize performance, capabilities, and mandatory reporting for ESOH stakeholders using a PaaS delivery model. This phased solution begins in FY 2018 by prototyping of system architecture optimization that improves user experience, enabling web conferencing in FY 2019 and applying machine learning concepts to improve data quality in FY 2020-2022.

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20	24		
Appropriation/Budget Activity 2040 / 7							PE 0205412A / Environmental Quality Tech E					Project (Number/Name) EE6 <i>I Environmental Information Tech</i> <i>Modernization</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	
System enhancements for required network interfaces to support EITM mission.	C/FFP	Delta Resources : Alexandria, VA	1.209	0.764		0.281		0.269		-		0.269	0.000	2.523	-	
		Subtotal	1.209	0.764		0.281		0.269		-		0.269	0.000	2.523	N/A	
Prior Years		FY	2023	FY 2024		FY 2025 Base		FY 2	2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract			
Project Cost Totals		1.209	0.764		0.281		0.269		-		0.269	0.000	2.523	N/A		

Remarks

chibit R-4, RDT&E Schedule Profile: PB 2025	Arr	ny																					D	ate	: Ma	rch	202	24		
opropriation/Budget Activity 40 / 7									PE	020)541	2A /	leme Envi ional	iron	mer	ntal C	Qua			E	E6	ect (I I Env erniz	<i>iro</i>	nme				atior	n Teo	ch
	Γ	F	- Y 2	201	6		FY	20 ²	17		FY	201	8		FY	201	9		F١	202	20		F	Y 2	021			FY 2	2022	2
		1	2	3	4	1	2	2 3	3 4	1	2	3	4	1	2	3	4	1		2 3	3	4 [·]	1	2	3	4	1	2	3	4
Split architecture prototype																										l				
User experience and containerization																														-
Webinars/virtual conferencing prototype and development																														
Machine learning algorithms																														
Machine learning protoype																														
				-		·												-												
		F	Y:	202	3		FY	202	24		FY	202	5	1	FY	202	6		F١	202	27		F	Y 2	028			FY 2	2029)
		1	2	3	4	1	2	2 3	3 4	1	2	3	4	1	2	3	4	1		2 3	3	4 [·]	1	2	3	4	1	2	3	4
Split architecture prototype												_																		
User experience and containerization																														_
Webinars/virtual conferencing prototype and development																														
Machine learning algorithms																														-
Machine learning algorithms																														

xhibit R-4A, RDT&E Schedule Details: PB 2025 Army				1	Date: March	n 2024
ppropriation/Budget Activity 040 / 7	PE 0205412A	Element (Numbe I Environmental (ational System De	Quality Tech	Project (Nu EE6 / Enviro Modernization	onmental In	e) formation Tech
	Schedule Detail	S				
		St	art		En	d
Events		Quarter	Year	Qı	uarter	Year
Split architecture prototype		2	2019		2	2020
User experience and containerization		3	2019		3	2021
Webinars/virtual conferencing prototype and development		1	2020		4	2020
Machine learning algorithms		1	2020		4	2021

4

Machine learning protoype

2020

4

2022

Exhibit R-2, RDT&E Budget It	em Justifica	tion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Systems Development		ation, Army	I ВА 7: Оре	erational		am Elemen 78A / Guide	•	,	et System	(GMLRS)		
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	-	19.443	75.952	20.590	-	20.590	20.643	20.770	41.265	41.678	0.000	240.341
EG2: GMLRS Alternative Warheads	-	-	25.264	-	-	-	-	-	-	-	0.000	25.264
EG3: Guided MLRS	-	19.443	50.688	20.590	-	20.590	20.643	20.770	41.265	41.678	0.000	215.077
Program MDAP/MAIS Code: 2	260											

Note

The project EG2 GMLRS Alternative Warheads (AW) efforts are zeroed in FY 2025 and beyond; GMLRS AW efforts are realigned to project EG3 Guided MLRS.

A. Mission Description and Budget Item Justification

Guided Multiple-Launch Rocket System (GMLRS) rockets are surface-to-surface artillery rockets fired from the Multiple Launch Rocket System (MLRS) and High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges. The GMLRS Program currently consists of multiple variants: GMLRS Unitary utilizes a 200-pound high explosive warhead to engage point targets with limited collateral damage; GMLRS Dual Purpose Improved Conventional Munition (DPICM) cluster munition to engage area or imprecisely located targets and GMLRS Alternative Warhead (AW) which has been developed as a non-cluster munition to engage the same target set as GMLRS DPICM. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary and AW are currently in full rate production.

The 26 October 2016 Deputy Secretary's Management Action Group (DMAG) directed the Army to define and execute an effort for GMLRS modifications that would extend the maximum range (Extended Range (ER) GMLRS) and integrate sensors and seekers into the rocket to engage complex targets with greater precision at greater ranges. These modifications to GMLRS were designated by the Army Acquisition Executive as an engineering change proposal (ECP) and not as a new program. The Army prioritized the development and integration of an Enhanced Alternative Warhead (EAW) over support for the seeker spiral.

The GMLRS program is a component of an integrated fires development effort that includes survivability, resiliency, and effectiveness improvements against advanced threats from near-peer adversaries. These efforts include 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.

The GMLRS program will continue to leverage ongoing Government and Industry research and development efforts to extend range, increase survivability, and enhance lethality. The Project EG3: Guided MLRS funding line supports GMLRS enhancements including ER GMLRS system development and qualification, EAW system development (hardware, rocket and launcher software) as well as component and system level qualification, integration, and test into standard range GMLRS rockets; development of Assured Positioning, Navigation, and Timing (APNT); and integration of EAW into ER GMLRS.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	rmy			Date:	March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	7: Operational	-	ement (Number/Name) Guided Multiple-Launch		?S)
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	20.180	75.952	45.549	-	45.549
Current President's Budget	19.443	75.952	20.590	-	20.590
Total Adjustments	-0.737	0.000	-24.959	-	-24.959
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.737	-			
 Adjustments to Budget Years 	-	-	-24.959	-	-24.959

Change Summary Explanation

Decrease in FY 2025 reflects transition of the Sensor Fuzed Weapon (SFW) development effort to Science and Technology Budget Activity 03 0603464A/Long Range Precision Fires Advanced Technology to mature the dispense mechanism and submunition form factor for future integration into GMLRS.

Exhibit R-2A, RDT&E Project J	ustification:	PB 2025 A	rmy						-	Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7					PE 020577	am Elemen 78A I Guide n (GMLRS)				Number/Na ILRS Altern	me) ative Warhe	ads
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
EG2: GMLRS Alternative Warheads	-	-	25.264	-	-	-	-	-	-	-	0.000	25.26
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
The U.S. Army initially funded th GMLRS Alternative Warheads p	roject code.	GMLRS AW	/ entered fu	ull rate prod	luction in 20	15. The 26	October 20	016 Deputy	Secretary's	Manageme	ent Action G	roup
(DMAG) directed the Army to de Enhanced Alternative Warhead (ange GMLF			ation of the	seeker spir	al (see EG3).			
	(EAW) into a	standard ra	-			ation of the s	seeker spir	al (see EG3	- 	Y 2023	FY 2024	FY 2025
Enhanced Alternative Warhead ((EAW) into a Programs (\$	standard ra	-			ation of the s	seeker spir	al (see EG3	- 	Y 2023 -	FY 2024 25.264	FY 2025
Enhanced Alternative Warhead (3. Accomplishments/Planned F	(EAW) into a Programs (\$ nead ernative Warh	standard ra in Millions	5) modifies the	RS rocket or	ver continua			·	- 	Y 2023 -		FY 2025 -
Enhanced Alternative Warhead (<u> 3. Accomplishments/Planned F</u> <i>Title:</i> Enhanced Alternative Wark Description: The Enhanced Alternative Market (Market)	(EAW) into a Programs (\$ nead ernative Wark nd medium a nt and qualifi	standard ra in Millions nead effort r armored targ	modifies the	RS rocket o	ver continua ead, proximi	ity sensor, a	and warhea	d fuze for	F	Y 2023 -		FY 2025
Enhanced Alternative Warhead (3. Accomplishments/Planned F Title: Enhanced Alternative Warh Description: The Enhanced Alternative I and the entry of the tenhanced Alternative Alternative I and the entry of the tenhanced Alternative I and the entry of tenhanced Alternative I and the entry of tenhanced Alternative I and tenhanced Alter	(EAW) into a Programs (\$ nead ernative Warf nd medium a nt and qualifi ilight software ecrease Sta	standard ra in Millions head effort r armored targ cation testin e. tement:	nodifies the gets. ng. Continu	RS rocket ov	ver continua ead, proximi nent and tes	ity sensor, a	and warhea	d fuze for	F	Y 2023 -		FY 2025
Enhanced Alternative Warhead (3. Accomplishments/Planned F Title: Enhanced Alternative Warh Description: The Enhanced Alternative Warh ncreased lethality against light a FY 2024 Plans: Continue component development software and rocket operational f FY 2024 to FY 2025 Increase/D	(EAW) into a Programs (\$ nead ernative Warf nd medium a nt and qualifi ilight software ecrease Sta	standard ra in Millions head effort r armored targ cation testin e. tement:	nodifies the gets. ng. Continu	RS rocket ov	ead, proximinent and tes	ity sensor, a sting of upda unding line.	and warhea ates to laur	d fuze for	ntrol	Y 2023 - -		FY 2025 -
Enhanced Alternative Warhead (3. Accomplishments/Planned F Title: Enhanced Alternative Warh Description: The Enhanced Alternative Warh ncreased lethality against light a FY 2024 Plans: Continue component development software and rocket operational f FY 2024 to FY 2025 Increase/D	(EAW) into a Programs (\$ nead ernative Warh nd medium a nt and qualifi light software ecrease Sta GMLRS has	standard ra in Millions head effort n armored targ cation testin e. tement: been realig	nodifies the gets. ng. Continu	RS rocket ov	ead, proximinent and tes	ity sensor, a sting of upda unding line.	and warhea ates to laur	nd fuze for ncher fire co	ntrol	Y 2023 - -	25.264	FY 2025 -
Enhanced Alternative Warhead (3. Accomplishments/Planned F Title: Enhanced Alternative Warh Description: The Enhanced Alternative Wark Description: The Enhanced Alternative Wark FY 2024 Plans: Continue component development Software and rocket operational f FY 2024 to FY 2025 Increase/Description Description: The Enhanced Alternative Wark Description: The Enhanced Alternative Wark Description: The Enhanced Alternative Wark Description: The Enhanced Alternative Wark Description: The Enhanced Alternative Wark FY 2024 Plans: Continue component development Software and rocket operational f FY 2024 to FY 2025 Increase/Description Content Program Funding Sundary Description: The Enhanced Alternative Wark Description: The Enhanced Alternative War	(EAW) into a Programs (\$ nead ernative Warh nd medium a nt and qualifi light software ecrease Sta GMLRS has hmary (\$ in I	standard ra in Millions head effort r armored targ ication testing tement: been realig	modifies the gets. ng. Continu	RS rocket ov e AW warhe le developn EG3/ Guid	ead, proximi ead, proximi nent and tes ed MLRS fu Accomplis	ity sensor, a sting of upda unding line. shments/PI	and warhea ates to laur anned Pro	nd fuze for Incher fire co	ntrol	-	25.264 25.264 <u>Cost To</u>	-
Enhanced Alternative Warhead (3. Accomplishments/Planned F Title: Enhanced Alternative Warh Description: The Enhanced Alternative Wark ncreased lethality against light a FY 2024 Plans: Continue component development software and rocket operational from the formation of the forma	(EAW) into a Programs (\$ nead ernative Warh nd medium a nt and qualifi light software ecrease Sta GMLRS has	standard ra in Millions head effort r armored targ cation testine. tement: been realig Millions) 23 FY 20	modifies the gets. ng. Continu gned to the	RS rocket ov e AW warhe le developn EG3/ Guid 2025 FY Base	ver continua ead, proximi nent and tes led MLRS fu Accomplis	ity sensor, a sting of upda unding line. shments/PI <u>(2025</u> <u>Total F</u>	and warhea ates to laur anned Pro	nd fuze for Incher fire co	Trol totals	- - FY 2029	25.264 25.264	- Total Cos

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Exhibit R-2/	A, RDT&E Project Justific	cation: PB 2	025 Army							Date: Ma	rch 2024	
Appropriation 2040 / 7	on/Budget Activity				PE 02	r ogram Elen 05778A I Gu stem (GMLR	ided Multiple	er/Name) e-Launch Roo		Number/Na ILRS Altern	,	ads
C. Other Pro	ogram Funding Summary	<mark>y (\$ in Millio</mark>	<u>ns)</u>									
Remarks	Line Item	FY 2023	FY 2024	<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> Complete	Total Cost

GMLRS missile procurement Army (MiPA) funding includes C65404 and C65406.

D. Acquisition Strategy

The GMLRS EAW lethality enhancement will service the existing GMLRS targets while adding capability against light/medium armored targets. The lead system integrator will enhance GMLRS M30A2 lethality by integrating a modified alternative warhead, new ESAF, and modified legacy proximity sensor. System Preliminary Design Review (PDR) was conducted in 2nd Quarter FY 2023 and Critical Design Review (CDR) is scheduled for 3rd Quarter FY 2024. System integrator will conduct component and system level qualification testing (arena, ground, flight) and production line validation. Components will be qualified to both GMLRS and ER GMLRS standards (most stringent). The end state is a qualified munition with a new nomenclature, ready for production cut-in as an ECP, to the existing GMLRS production line after qualification is completed in FY 2026. Contract cut-in is planned for the FY 2026 Production Lot contract award. The strategy is to procure quantities annually to support the Army's Total Munition Requirement (TMR).

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Arm	у								Date:	March 20	24	
Appropriation/Budge 2040 / 7	t Activity	'				PE 020	o gram Ele 5778A I G tem (GML	Guided M				(Numbe GMLRS A	r/Name) Iternative V	Varhead.	s
Management Service	es (\$ in M	illions)		FY 2	2023	FY 2	2024	FY 2 Ba	2025 Ise	FY 2 OC		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 Program Management	Various	STORM Project Office : RSA	12.482	-		1.375	Jan 2024	-		-		-	0.000	13.857	-
		Subtotal	12.482	-		1.375		-		-		-	0.000	13.857	N/A
STORM-Strategic and Ope Product Developmen			Redstone A	Arsenal FY 2	2023	FY 2	2024		2025 Ise	FY 2 OC		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	MIPR	CCDC/AvMC : RSA	11.641	-		10.198	Jan 2024	-		-		-	0.000	21.839	-
Enhanced Alternative Warhead	C/CPFF	Kord : Huntsville, AL	25.309	-		6.310	Jan 2024	-		-		-	0.000	31.619	-
AWP Contracts (Multiple)	TBD	LMMCF : Dallas, TX	10.237	-		6.481	Jan 2024	-		-		-	0.000	16.718	-
		Subtotal	47.187			22.989		-		1			0.000	70.176	N/A
						22.000		-		-		-	0.000		IN/ <i>F</i>
Remarks AWP-Alternative Warhead Aviation and Missile Center Texas; AL-Alabama	r; RSA-Reds	stone Arsenal; NGDS-No				s Fixed Fee;		nbat Capal IFC-Lockhe		opment Co	ire Control]		N/F
AWP-Alternative Warhead Aviation and Missile Center	r; RŠA-Reds (\$ in Milli	stone Arsenal; NGDS-No			nse System	s Fixed Fee;	nesota; LMM	nbat Capal IFC-Lockhe FY 2	ed Martin M	opment Co lissile and F	ire Control	; TX- -			1
AWP-Alternative Warhead Aviation and Missile Center Texas; AL-Alabama	r; RSA-Reds	stone Arsenal; NGDS-No		mman Defe	nse System	s Fixed Fee; ns; MN-Minn	nesota; LMM	nbat Capal IFC-Lockhe FY 2	ed Martin M 2025	lopment Co lissile and F	ire Control	; TX- - FY 2025	Cost To Complete	Total Cost	Target Value of Contract
AWP-Alternative Warhead Aviation and Missile Center Texas; AL-Alabama	r; RŠA-Reds (\$ in Milli Contract Method	stone Arsenal; NGDS-No ons) Performing	Prior	mman Defe	nse System 2023 Award	s Fixed Fee; ns; MN-Minn FY 2	2024 Award Date	nbat Capal IFC-Lockhe FY 2 Ba	eed Martin M 2025 Ise Award	opment Coo lissile and F FY 2 OC	ire Control 025 CO Award	; TX- - - FY 2025 Total	Cost To	Total	Target Value of Contract

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vroject C	ost Analysis: PB 2	2025 Army	/								Date:	March 20	24	
t Activity	,				PE 020	5778A / G	Guided M						Varhead	s
(\$ in Milli	ons)	ſ	FY 2	2023	FY 2	024					FY 2025 Total]		
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 Contrac
		Prior									FY 2025	Cost To	Total	Target Value of
	Ducia et Calet Totale			2023		024		ase		:0	Total	+ · · · · · · · · · · · · · · · · · · ·		Contrac N/
	et Activity (\$ in Milli Contract Method & Type le Range; Ni er; Redstone es Center; R	et Activity (\$ in Millions) Contract Method & Type Activity & Location le Range; NM-New Mexico er; Redstone Arsenal, AL es Center; Redstone Arsenal, AL	et Activity (\$ in Millions) Contract Method Performing & Type Activity & Location Prior Years es Range; NM-New Mexico er; Redstone Arsenal, AL es Center; Redstone Arsenal, AL support is for efforts prior to Seeker Test Suppor Prior Years	et Activity (\$ in Millions) FY 2 Contract Method & Type Performing Activity & Location Prior Years Cost le Range; NM-New Mexico er; Redstone Arsenal, AL es Center; Redstone Arsenal, AL support is for efforts prior to Seeker Test Support Prior Years FY 2	(\$ in Millions) FY 2023 Contract Method & Type Performing Activity & Location Prior Years Award Cost le Range; NM-New Mexico er; Redstone Arsenal, AL es Center; Redstone Arsenal, AL support is for efforts prior to Seeker Test Support Prior Years FY 2023	et Activity R-1 Propriod PE 0202 ket System (\$ in Millions) FY 2023 Contract Performing Method Performing Activity & Location Years Cost Date Cost Date Cost Cost Prior Redstone Arsenal, AL es Center; Redstone Arsenal, AL support is for efforts prior to Seeker Test Support Prior Years Prior Years Prior FY 2023 Prior Years Prior Years Prior FY 2023	et Activity R-1 Program Ele PE 0205778A / C ket System (GML (\$ in Millions) FY 2023 (\$ in Millions) FY 2023 Contract Method & Type Performing Activity & Location Prior Years Award Cost Date Cost Date Date Prior FY 2023 FY 2024 Prior FY 2024 Prior Prior Years Prior Years FY 2023 Prior Years FY 2023	et Activity R-1 Program Element (N PE 0205778A I Guided M ket System (GMLRS) (\$ in Millions) FY 2023 FY 2024 Contract Performing Activity & Location Prior Years Cost Date Cost Date Cost Date Cost Date Cost Prior Redstone Arsenal, AL es Center; Redstone Arsenal, AL support is for efforts prior to Seeker Test Support Prior FY 2023 FY 2024 FY Prior FY 2023 Prior FY 2024 Bate FY 2024	Pet Activity R-1 Program Element (Number/Name PE 0205778A / Guided Multiple-Laure ket System (GMLRS) (\$ in Millions) FY 2023 FY 2024 Base Contract Method Performing Prior Award Award Award & Type Activity & Location Years Cost Date Cost Date le Range; NM-New Mexico er; Redstone Arsenal, AL es Center; Redstone Arsenal, AL FY 2023 FY 2024 FY 2025 upport is for efforts prior to Seeker Test Support FY 2023 FY 2024 FY 2025 Base	Activity R-1 Program Element (Number/Name) PE 0205778A / Guided Multiple-Launch Roc ket System (GMLRS) (\$ in Millions) FY 2023 FY 2024 Base OC Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Award Cost Award Date Award Cost Award Date Cost le Range; NM-New Mexico or; Redstone Arsenal, AL es Center; Redstone Arsenal, A	Activity R-1 Program Element (Number/Name) PE 0205778A / Guided Multiple-Launch Roc ket System (GMLRS) Project EG2 / G (\$ in Millions) FY 2023 FY 2024 Base OCO Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Cost Date Cost Cost Cost Cost	Project (Number/Name) Project (Number/Name) PE 0205778A / Guided Multiple-Launch Rocket System (GMLRS) Project (Number/EG2 / GMLRS A) (\$ in Millions) FY 2023 FY 2024 Base OCO FY 2025 Contract Performing Prior Award Award Award Award Award Cost Date Cost	Pt Activity R-1 Program Element (Number/Name) PE 0205778A / Guided Multiple-Launch Rock ket System (GMLRS) Project (Number/Name) EG2 / GMLRS Alternative V (\$ in Millions) FY 2023 FY 2024 Base OCO FY 2025 Total Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Award Cost Award Date Award Cost Award Date Cost Cost<	Pet Activity R-1 Program Element (Number/Name) PE 0205778A / Guided Multiple-Launch Roc ket System (GMLRS) Project (Number/Name) EG2 / GMLRS Alternative Warhead (\$ in Millions) FY 2023 FY 2024 Base OCO FY 2025 (\$ in Millions) FY 2023 FY 2024 Base OCO FY 2025 Contract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Award Cost Award Date Award Cost Cost To Cost Cost To Complete Cost Ie Range; NM-New Mexico er; Redstone Arsenal, AL export is for efforts prior to Seeker Test Support FY 2023 FY 2024 FY 2025 FY 2025 FY 2025 Cost To Cost To Complete Cost To Cost

khibit R-4, RDT&E Schedule Profile: PB 20 ppropriation/Budget Activity)40 / 7	J25 Army		R-1 Pro PE 0205 ket Syst	5778/	A I Gui	ded						lum	ber/	Nam			ead	 S	
Event Name	FY 2023	FY 20			2025 3		 FY 2	2 026 3	1	FY 2	202	1	FY 2	202 3	8	1	FY 2	202 3	
EAW development, integration, and test activities																			
ote																			

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xhibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date	e: March 2024
ppropriation/Budget Activity 040 / 7			,	Project (Numbe EG2 / GMLRS A	e r/Name) Alternative Warheads
	Schedule Details	5			
		Sta	rt		End
Events		Quarter	Year	Quarte	er Year
EAW development, integration, and test activities		2	2020	4	2024

<u>Note</u>

Project EG2 efforts transition to EG3 in FY 2025 and beyond.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					-	am Elemen 78A / Guideo n (GMLRS)	•	,		umber/Nan ded MLRS	ne)	
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
EG3: Guided MLRS	-	19.443	50.688	20.590	-	20.590	20.643	20.770	41.265	41.678	0.000	215.077
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Starting in FY2025, Project EG2 GMLRS Alternative Warheads efforts are realigned to project EG3 Guided MLRS. Transition of the Sensor Fuzed Weapon (SFW) development effort to Science and Technology Budget Activity 03 0603464A/Long Range Precision Fires Advanced Technology to mature the dispense mechanism and submunition form factor for future integration into GMLRS, leaving a balance of \$20.590 in project EG3.

A. Mission Description and Budget Item Justification

The U.S. Army continues to explore ways to enhance Guided Multiple Launch Rocket System (GMLRS) rockets and common components under Project EG3: Guided MLRS. The Army is requesting funding for GMLRS Research, Development, Test and Evaluation (RDT&E) development, integration, and test activities to enhance operational capabilities including increased range, improved lethality and survivability, enhanced flight performance, and Assured Positioning, Navigation and Timing (APNT).

FY 2025 dollars in the amount of \$20.590 million will support:

- (1) EAW component and system level qualification efforts
- (2) Evaluation of next generation receivers technology and Anti-Jamming applique solution for ER GMLRS
- (3) Integration of Enhanced Alternative Warhead into an ER GMLRS

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: GMLRS enhancements	6.968	-	14.606
Description: The Enhanced Alternative Warhead effort modifies the AW warhead, proximity sensor, and warhead fuze for increased lethality against light and medium armored targets.			
<i>FY 2025 Plans:</i> Completion of component qualification will allow the program to transition to integration activities supporting ground and flight qualification tests. Software testing and materiel release activities will be ongoing for required Type Classification (TC) and Full Materiel Release (FMR) package submission supporting EAW production.			
FY 2024 to FY 2025 Increase/Decrease Statement: Funding increase represents EAW effort funded on the EG2/GMLRS Alternative Warheads line in FY2024.			
Title: GMLRS Assured Position Navigation and Timing (APNT)	2.405	3.077	4.290

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		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A <i>I Guided Multiple-Launch Roc</i> <i>ket System (GMLRS)</i>	Project (Number/N EG3 / Guided MLR		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Description: Address GMLRS munition-specific requirements related to minimproving accuracy over longer ranges, and compliance with statutory GPS	• •			
FY 2024 Plans: Initiate development of a next generation guidance set for the GMLRS syst select Increment-2 M-Code receiver and antennas supporting anti-jam capa facilitate guidance set requirements development.				
FY 2025 Plans: Continues development of the Next Generation Guidance Set. The US Arm (CCDC) Aviation and Missile Center (AvMC) will compare receiver solution investigate Anti-Jamming applique solutions for Extended and Standard Ra of applique solutions.	s against operational and technical requirements a			
FY 2024 to FY 2025 Increase/Decrease Statement: Increase in funding required to support Next Generation Guidance Set hard	lware and software prototyping.			
Title: Extended Range (ER) GMLRS and complementary rocket pod develo	opment	2.561	-	-
Description: Complete rocket pod development and conduct system level	ground and flight tests.			
<i>Title:</i> Extended Range (ER) GMLRS development		2.993	-	-
Description: Qualification and integration of ER GMLRS.				
Title: EAW Integration into ER GMLRS		4.516	17.453	1.694
Description: Integration of the Enhanced Alternative Warhead into the ER against targets at extended ranges.	GMLRS will provide medium to light armor capabi	lity		
FY 2024 Plans: Begin acquisition of long lead hardware items to support test schedule, mer GMLRS, and development of software.	chanical and electrical integration of EAW into ER			
FY 2025 Plans: Support design and integration activities including Interface Control Docum integration of EAW into ERG.	ents and specification analysis to prepare for			
FY 2024 to FY 2025 Increase/Decrease Statement:				

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army				Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7		e ment (Number/Name) Guided Multiple-Launch _RS)		ct (Number/N Guided MLRS		
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2023	FY 2024	FY 2025
Decrease in FY 2024 to FY 2025 represents decrease in costs for design a hardware for development of prototypes.	activities than previous	ly planned acquisition o	f			
Title: Sensor Fuzed Weapon (SFW) Payload				-	30.158	-
 Description: The Sensor Fuzed Weapon (SFW) will provide capability to e the ER GMLRS as the delivery vehicle. The Army will conduct a study dete targets and to develop and field this capability no later than FY 2030. The S multiple submunitions. These submunitions will independently acquire, idea The Sensor Fuzed Weapon effort is transitioning from the US Army STORI Development Command (CCDC) Aviation & Missile Center (AvMC) to furth factor for integration into GMLRS. FY 2024 Plans: Award an Other Transactional Authority contract to support an initial system to develop the design leading up to Interim Design Review #1. This effort w payload munitions, and hardware for dispensing mechanisms needed to su 2025. Additionally, FY 2024 also funds efforts to assess SFW qualification component level testing. 	ermining the appropria SFW will consist of a r ntify, and engage thes M Project Office to US her mature dispense m m requirement review vill also start procurem upport integration and	te SFW to utilize agains nunition dispenser conta e targets. Army Combat Capabilit echanism and submuni with the payload vendor ent of GMLRS rockets, testing efforts starting ir	t these aining ties tion form SFW 5FW			
Utilize Aviation and Missile Center to support system analysis and trade sta and launcher), and requirements development for payload and dispensing integrate the SFW payload into a GMLRS form-factor.						
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease from FY 2024 to FY 2025 due to transition of the Sensor Fuzed V Technology Budget Activity 03 0603464A/Long Range Precision Fires Adv	• • • •	opment effort to Science	and			
	Accomplishmer	ts/Planned Programs	Subtotals	19.443	50.688	20.590
C. Other Program Funding Summary (\$ in Millions) FY 2025	FY 2025 FY 2025				<u>Cost To</u>	
Line Item FY 2023 FY 2024 Base • C64400: Guided 2,170.188 942.280 1,219.775 MLRS Rocket (GMLRS) 2 2 2	<u>OCO Tota</u> - 1,219.775				Complete Continuing	

PE 0205778A: *Guided Multiple-Launch Rocket System (GM...* Army

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D40 / 7 PE 0205778A / Guided Multiple-Launch Roc ket System (GMLRS) EG3 / Guided MLRS . Other Program Funding Summary (\$ in Millions) FY 2025 FY 2025 FY 2025 Line Item FY 2023 FY 2024 Base OCO Total FY 2026 FY 2027 FY 2028 FY 2029 Complete Total C • EG2: GMLRS - 25.264 0.000 - 0.000 0.000 25. Alternative Warheads 0.000 0.000 25. emarks	2040 / 7 PE 0205778A / Guided Multiple-Launch Roc ket System (GMLRS) EG3 / Guided MLRS C. Other Program Funding Summary (\$ in Millions) FY 2025 FY 2025 FY 2025 Line Item FY 2023 FY 2024 Base OCO Total FY 2026 FY 2027 FY 2028 FY 2029 Complete Total Co • EG2: GMLRS - 25.264 0.000 - 0.000 - - - - 0.000 25.264	Exhibit R-2A, RDT&E Project Just	tification: PB	2025 Army							Date: Ma	rch 2024	
FY 2025 FY 2026 FY 2027 FY 2028 FY 2029 Complete Total Cost To • EG2: GMLRS - 25.264 0.000 - 0.000 - - - - 0.000 25. Alternative Warheads - - 0.000 - 0.000 - - - 0.000 25. emarks - - - - - - 0.000 25. SMLRS Procurement funding includes C65404 and C65406. - - - - - 0.000 25. Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. -	Line ItemFY 2023FY 2024Base BaseOCOTotal TotalFY 2026FY 2027FY 2028FY 2029Cost To Complete• EG2: GMLRS 	Appropriation/Budget Activity 2040 / 7		PE 0205778A / Guided Multiple-Launch Roc EG3 / Guided MLRS									
Line Item FY 2023 FY 2024 Base OCO Total FY 2026 FY 2027 FY 2028 FY 2029 Complete Total CO • EG2: GMLRS - 25.264 0.000 - 0.000 - - - 0.000 25. Alternative Warheads - - 0.000 - 0.000 - - - 0.000 25. emarks - - - - - 0.000 25. GMLRS Procurement funding includes C65404 and C65406. - - - - 0.000 25. Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: - </th <th>Line Item FY 2023 FY 2024 Base OCO Total FY 2026 FY 2027 FY 2028 FY 2029 Complete Total Cr • EG2: GMLRS - 25.264 0.000 - 0.000 - - 0.000 25.2 Alternative Warheads - - 0.000 - 0.000 - - 0.000 25.2 Remarks GMLRS Procurement funding includes C65404 and C65406. Description State of the state</th> <th>C. Other Program Funding Summ</th> <th>nary (\$ in Milli</th> <th>ons)</th> <th></th> <th> I</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Line Item FY 2023 FY 2024 Base OCO Total FY 2026 FY 2027 FY 2028 FY 2029 Complete Total Cr • EG2: GMLRS - 25.264 0.000 - 0.000 - - 0.000 25.2 Alternative Warheads - - 0.000 - 0.000 - - 0.000 25.2 Remarks GMLRS Procurement funding includes C65404 and C65406. Description State of the state	C. Other Program Funding Summ	nary (\$ in Milli	ons)		I							
 EG2: GMLRS - 25.264 0.000 - 0.000 0.000 25. Alternative Warheads emarks GMLRS Procurement funding includes C65404 and C65406. Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: 1) Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS tandards 2) APNT activities to improve overall system performance in contested environments 3) Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges. 	 EG2: GMLRS - 25.264 0.000 - 0.000 0.000 0.000 25.2 Alternative Warheads Remarks GMLRS Procurement funding includes C65404 and C65406. D. Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: (1) Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS standards (2) APNT activities to improve overall system performance in contested environments (3) Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges. (4) The Sensor Fuzed Weapon effort is transitioning to the US Army Aviation and Missile Center to mature the dispense mechanism and submunition form factor for 												
Alternative Warheads emarks GMLRS Procurement funding includes C65404 and C65406. Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: 1) Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS tandards 2) APNT activities to improve overall system performance in contested environments 3) Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges.	Alternative Warheads		<u>FY 2023</u>			000		<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>		
emarks GMLRS Procurement funding includes C65404 and C65406. Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: 1) Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS tandards 2) APNT activities to improve overall system performance in contested environments 3) Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges.	Remarks GMLRS Procurement funding includes C65404 and C65406. D. Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: (1) Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS standards (2) APNT activities to improve overall system performance in contested environments (3) Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges. (4) The Sensor Fuzed Weapon effort is transitioning to the US Army Aviation and Missile Center to mature the dispense mechanism and submunition form factor for		-	25.264	0.000	-	0.000	-	-	-	-	0.000	25.26
Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: 1) Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS tandards 2) APNT activities to improve overall system performance in contested environments 3) Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges.	 Acquisition Strategy Project EG3: Guided MLRS supports the development of materiel changes that improve the GMLRS family of munitions and address emerging requirements. Supported efforts include: Continuing development and integration of the Enhanced Alternative Warhead into Standard Range GMLRS, qualify components to both GMLRS and ER GMLRS standards APNT activities to improve overall system performance in contested environments Leveraging the Enhanced Alternative Warhead capability by integrating it with the ER GMLRS rocket for improved effects at greater ranges. The Sensor Fuzed Weapon effort is transitioning to the US Army Aviation and Missile Center to mature the dispense mechanism and submunition form factor for 	emarks	ides C65404 a	nd C65406									
		Project EG3: Guided MLRS suppor Supported efforts include: 1) Continuing development and int tandards 2) APNT activities to improve over 3) Leveraging the Enhanced Altern	tegration of the all system per native Warhea	e Enhanced A formance in d d capability b	Alternative V contested e by integratin	Varhead into nvironments g it with the l	Standard F	ange GMLR rocket for im	S, qualify co	omponents to	o both GML r ranges.	RS and ER	

	Project Co	ost Analysis: PB 2	2025 Arm	у							_	Date:	March 20)24	
Appropriation/Budge 2040 / 7	et Activity					PE 020	•	Guided M	lumber/Na lultiple-Lau	,	-	(Numbe Guided ML			
Management Service	es (\$ in M	illions)		FY	2023	FY	2024		2025 ase	FY 2 OC		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 Program Management	Various	Various : RSA	20.502	2.219	Jan 2023	2.758	Jan 2024	2.351	Jan 2025	-		2.351	Continuing	Continuing	Continuin
	-	Subtotal	20.502	2.219		2.758		2.351		-		2.351	Continuing	Continuing	N/A
Product Developme	nt (\$ in Mi	llions)		FY	2023	FY	2024		2025 ase	FY 2 OC		FY 2025 Total]		
									400			iotui			
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
Cost Category Item Unitary Contracts/Multiple		Performing Activity & Location LMMFC : Dallas, TX	Prior Years 67.387	Cost 0.945	Award Date Jan 2022	Cost	Award Date	Cost 1.655	Date	Cost -	Award Date	Cost 1.655	Complete	Total Cost	Value of Contract
0,	Method & Type	Activity & Location	Years	0.945	Date	-			Date Jan 2025				Complete	Cost Continuing	Value of Contract Continuing
Unitary Contracts/Multiple Other Government	Method & Type SS/FPIF	Activity & Location LMMFC : Dallas, TX	Years 67.387	0.945	Date Jan 2022	-	Date Jan 2024	1.655	Date Jan 2025	-		1.655	Complete Continuing	Cost Continuing 60.157	Value of Contract Continuing Continuing
Unitary Contracts/Multiple Other Government Agencies Sensor Fuzed Weapon	Method & Type SS/FPIF MIPR	Activity & Location LMMFC : Dallas, TX Various : Various	Years 67.387	0.945 9.206	Date Jan 2022	- 10.500 19.667	Date Jan 2024	1.655 2.718	Date Jan 2025	-		1.655 2.718	Complete Continuing 0.000	Cost Continuing 60.157 19.667	Value of Contract Continuing Continuing
Unitary Contracts/Multiple Other Government Agencies Sensor Fuzed Weapon Competitive Contracts Next Generation M-Code	Method & Type SS/FPIF MIPR C/TBD	Activity & Location LMMFC : Dallas, TX Various : Various TBD : TBD	Years 67.387 37.733 -	0.945 9.206 -	Date Jan 2022	- 10.500 19.667	Date Jan 2024 Jan 2024	1.655 2.718 - -	Date Jan 2025	-		1.655 2.718 -	Complete Continuing 0.000 0.000	Cost Continuing 60.157 19.667	Value of Contract Continuing Continuing Continuing
Unitary Contracts/Multiple Other Government Agencies Sensor Fuzed Weapon Competitive Contracts Next Generation M-Code Receiver Enhanced Alternative	Method & Type SS/FPIF MIPR C/TBD C/CPFF	Activity & Location LMMFC : Dallas, TX Various : Various TBD : TBD TBD : TBD	Years 67.387 37.733 - -	0.945 9.206 - -	Date Jan 2022	- 10.500 19.667 2.910 -	Date Jan 2024 Jan 2024	1.655 2.718 - - 8.694	Date Jan 2025 Jan 2025	-		1.655 2.718 - -	Complete Continuing 0.000 0.000 0.000	Cost Continuing 60.157 19.667 2.910 8.694	Value of Contract Continuin Continuin Continuin
Unitary Contracts/Multiple Other Government Agencies Sensor Fuzed Weapon Competitive Contracts Next Generation M-Code Receiver Enhanced Alternative Warhead EAW Integration into ER	Method & Type SS/FPIF MIPR C/TBD C/CPFF SS/CPFF	Activity & Location LMMFC : Dallas, TX Various : Various TBD : TBD TBD : TBD Kord : Huntsville, AL Lockheed Martin : Camden, AR and	Years 67.387 37.733 - -	0.945 9.206 - -	Date Jan 2022	- 10.500 19.667 2.910 -	Date Jan 2024 Jan 2024 Apr 2024	1.655 2.718 - - 8.694	Date Jan 2025 Jan 2025 Mar 2025	-		1.655 2.718 - - 8.694	Complete Continuing 0.000 0.000 0.000	Cost Continuing 60.157 19.667 2.910 8.694	Value of Contract Continuing Continuing Continuing Continuing

Remarks

SS/FPIF-Sole Source/Fixed-Price Incentive Firm; LMMFC - Lockheed Martin Missile and Fire Control; TX - Texas; C/CPFF- Competitive/Cost Plus Fixed Fee; C/FPIF - Competitive/Fixed-Price Incentive Firm; WV - West Virginia; VA - Virginia; TBD - To Be Determined The Enhanced Alternative Warhead effort will provide increased lethality against medium to light armored targets serviced by GMLRS; the EAW Integration into ER GMLRS will

provide this same capability at extended ranges against targets serviced by ER GMLRS

Appropriation/Budge	•	ost Analysis: PB 2 /	2025 Army			R-1 Program Element (Number/Name)Project (Number/Name)PE 0205778A / Guided Multiple-Launch RocEG3 / Guidedket System (GMLRS)EG3 / Guided					(Numbei)24		
Test and Evaluation	(\$ in Milli	ons)		FY	2023	FY 2	2024		2025 Ise	FY 2 OC		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	MIPR	Various : Various	50.872	2.269		-		-		-		-	Continuing		
Enhanced Alternative Warhead	MIPR	Various : Various	1.607	0.804		-		4.471	Jan 2025	-		4.471	0.000	6.882	-
	1	Subtotal	52.479	3.073		-		4.471		-		4.471	Continuing	Continuing	N/A
			Prior						2025	FY 2		FY 2025	Cost To	Total	
Remarks		Project Cost Totals	Years 178.101	FY 2 19.443	2023	FY 2 50.688	2024		ise	FY 2 OC -		Total	Complete Continuing	Cost	Value of Contract N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	Army						Date: March 20	24
Appropriation/Budget Activity 2040 / 7		PE 0		t (Number/Name d Multiple-Launch			lumber/Name) ded MLRS	
Event Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 202		FY 2028	FY 2029
Enhanced Alternative Warhead	1 2 3 4		1 2 3 4	1 2 3 7	1 2 3	4	1 2 3 4	1 2 3 4
Enhanced Alternative Warhead into Standard Range GMLRS								
Component Level Design through CDRs								
EDT Flight Testing								
Component Qualification Testing								
System Level CDR		3						
System Level Integration and Qualification Flight Testing								
Assured Position, Navigation, and Timing								
System Engineering								
Prototype Builds								
Next Generation Guidance Set Development								
ER GMLRS								
Extended Range GMLRS Development and Qualification								
L			1	<u> </u>			1	J

hibit R-4, RDT&E Schedule Profile: PB 2025 propriation/Budget Activity 40 / 7	Army	R-1 Program Element (Number/Name) Project (Number/Name) PE 0205778A / Guided Multiple-Launch Roc EG3 / Guided MLRS								
		ket S	ystem (GMLRS)							
Event Name	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029			
ER GMLRS System Qualification (Ground) Testing	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			
ER GMLRS System Qualification Flight Testing										
ER GMLRS Operational Testing		•								
Engineering Change Proposal (ECP) Cut-in Decision		4								
ER GMLRS Functional Configuration Audit		2								
AW Integration into ER GMLRS										
EAW Integration and Delta Qualification for ER GMLRS										
ote							<u> </u>			
o <u>re</u> R GMLRS schedule slip into FY 2024 due to teo	hnical issues on th	e Side Mounted	Provimity Sensor	r which delayed cor	nnletion of Sve	tem Qualification	Flight Testin			

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity			umber/Name)
2040 / 7	PE 0205778A I Guided Multiple-Launch Roc ket System (GMLRS)	EG3 / Guid	ded MLRS

Schedule Details

	Sta	art	En	d
Events	Quarter	Year	Quarter	Year
Enhanced Alternative Warhead	1	2022	2	2026
Enhanced Alternative Warhead into Standard Range GMLRS	1	2023	2	2026
Component Level Design through CDRs	1	2022	4	2024
EDT Flight Testing	1	2024	3	2024
Component Qualification Testing	4	2023	2	2025
System Level CDR	4	2024	4	2024
System Level Integration and Qualification Flight Testing	4	2024	2	2026
Assured Position, Navigation, and Timing	3	2021	4	2033
System Engineering	3	2021	2	2023
Prototype Builds	4	2022	2	2023
Next Generation Guidance Set Development	2	2024	4	2032
ER GMLRS	2	2018	2	2024
Extended Range GMLRS Development and Qualification	2	2018	2	2024
Preliminary Design Review	3	2019	3	2019
ER GMLRS Design Verification Testing	3	2020	2	2021
ER GMLRS Engineering Development Testing	1	2021	3	2021
Delta Preliminary Design Review	1	2021	1	2021
ER GMLRS System Qualification (Ground) Testing	3	2021	4	2023
Critical Design Reviews	3	2021	3	2021
ER GMLRS System Qualification Flight Testing	3	2022	1	2024
ER GMLRS Operational Testing	2	2024	2	2024
Engineering Change Proposal (ECP) Cut-in Decision	2	2024	2	2024

PE 0205778A: *Guided Multiple-Launch Rocket System (GM...* Army

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xhibit R-4A, RDT&E Schedule Details: PB 2025 Army					Date: Marc	h 2024
ppropriation/Budget Activity 040 / 7	Budget Activity R-1 Program E PE 0205778A ket System (Gl				lumber/Nam ded MLRS	ie)
		Sta	art		Er	nd
Events		Quarter	Year	(Quarter	Year
ER GMLRS Functional Configuration Audit		2	2024		2	2024
EAW Integration into ER GMLRS		2	2024		4	2029
EAW Integration and Delta Qualification for ER GMLRS		2	2024		4	2029

Exhibit R-2, RDT&E Budget Iten	n Justificati	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ition, Army	I BA 7: Ope	rational	R-1 Program Element (Number/Name) PE 0208053A <i>I Joint Tactical Ground System</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
Total Program Element	0.000	8.813	0.203	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.016
635: Joint Tact Grd Station-P3I	-	8.813	0.203	-	-	-	-	-	-	-	0.000	9.016

A. Mission Description and Budget Item Justification

JTAGS transitions to US Space Force in Fiscal Year 2024 (FY2024). The Joint Tactical Ground Station (JTAGS) is a post-production, Acquisition Category (ACAT) III program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades.

JTAGS disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four outside the continental United States (OCONUS) deployed JTAGS units, which are deployed in three theaters (United States Pacific Command (PACOM), United States Central Command (CENTCOM), United States European Command (EUCOM)), constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is used as an institutional trainer but is available as a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES), supporting all Theater Missile Defense pillars, affording the shortest sensor-to-shooter connectivity. On 14 January 2016, the Army Acquisition Executive designated the JTAGS Pre-Planned Product Improvement (JTAGS P3I) program as a separate ACAT III modification program.

The JTAGS Program Element (PE) supports development and testing of the JTAGS Block II Preplanned Product Improvements (P3I) program based on the JTAGS Operational Requirements Document (ORD), additive Joint Requirements Oversight Council - Memorandum (JROC-M) requirements, and the formal JTAGS Block II Capability Development Document (CDD) thresholds. P3I upgraded JTAGS to a Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and improved warning tactical parameters and timeliness. The JTAGS Block II P3I program based on the 2009 JTAGS ORD is on contract as a two-phase development effort. JTAGS Block II P3I Phase 1 is complete. The final developmental efforts of JTAGS Block II P3I Phase 2 to achieve 2009 ORD requirements completed in FY2022. Follow-on Test and Evaluation (FOTE) completed in FY2022 with Materiel Release efforts to be conducted in FY2023. The JTAGS Block II CDD addresses evolving User-driven needs such as emerging threats and interface efforts that were not known at the time the JTAGS ORD was validated.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Ar	my			Date:	March 2024
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	7: Operational	-	ement (Number/Name) Joint Tactical Ground Sy		
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	8.813	0.203	0.209	-	0.209
Current President's Budget	8.813	0.203	0.000	-	0.000
Total Adjustments	0.000	0.000	-0.209	-	-0.209
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-0.209	-	-0.209

Change Summary Explanation

JTAGS transitions to the US Space Force in FY2024. The reduction in funds reflects the transition of the program and no funding requested in FY2025.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7					-		it (Number / Tactical Gro	,	Project (N 635 / Joint			
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
635: Joint Tact Grd Station-P3I	-	8.813	0.203	-	-	-	-	-	-	-	0.000	9.016
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

JTAGS is scheduled to transition to US Space Force in Fiscal Year 2024 (FY2024). The Joint Tactical Ground Station (JTAGS) is a post-production, Acquisition Category (ACAT) III program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades.

JTAGS disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units, which are deployed in three theaters (United States Pacific Command (PACOM), United States Central Command (CENTCOM), United States European Command (EUCOM)), constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is used as an institutional trainer but is available as a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES), supporting all Theater Missile Defense pillars, affording the shortest sensor-to-shooter connectivity. On 14 January 2016, the Army Acquisition Executive designated the JTAGS Pre-Planned Product Improvement (JTAGS P3I) program as a separate ACAT III modification program.

The JTAGS Program Element (PE) supports development and testing of the JTAGS Block II Preplanned Product Improvements (P3I) program based on the JTAGS Operational Requirements Document (ORD), additive Joint Requirements Oversight Council - Memorandum (JROC-M) requirements, and the formal JTAGS Block II Capability Development Document (CDD) thresholds. P3I upgraded JTAGS to a Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and improved warning tactical parameters and timeliness. The JTAGS Block II P3I program based on the 2009 JTAGS ORD is on contract as a two-phase development effort. JTAGS Block II P3I Phase 1 is complete. The final developmental efforts of JTAGS Block II P3I Phase 2 to achieve 2009 ORD requirements completed in FY2022. Follow-on Test and Evaluation (FOTE) completed in FY2022 with Materiel Release efforts to be conducted in FY2023.

The Joint Tactical Ground Station (JTAGS) transitions to US Space Force in FY2024.

There is no funding requested in FY2025 in this PE.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Development and Test of Block II CDD requirements	6.122	0.203	-
Description: JTAGS Block II program continues to focus on development/integration of evolving cyber hardening advances, defense against emerging threats, and JTAGS Capability Development Document (CDD) threshold requirements. JROC-Memos			

Exhibit R-2A, RDT&E Project Jus	tification: PB	2025 Army							Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7					r ogram Eler 08053A / Jo	•		-	et (Number/N loint Tact Gro		
B. Accomplishments/Planned Pro 197-12, 113-13, and 042-19 and Pl capabilities as soon as possible.			ional Defens	se Authorizat	tion Act for F	Y2011) requ	iire fielding c	of these	FY 2023	FY 2024	FY 2025
FY 2024 Plans: The \$.203 million supports one mail	n year of effort	at SMDC.									
FY 2024 to FY 2025 Increase/Dec Funding decrease due to JTAGS se			S Space For	ce in Fiscal `	Year 2024.						
Title: JTAGS Test and Evaluation	Support								2.691	-	-
Description: Test and evaluation s	support for the	JTAGS prog	ıram.								
				Accon	nplishment	s/Planned P	rograms Su	btotals	8.813	0.203	-
C. Other Program Funding Summ	nary (\$ in Milli	<u>ons)</u>	FY 2025	FY 2025	FY 2025					Cost To	
Line Item • BZ8420: JOINT TACTICAL GROUND STATION MODS (JTAGS) <u>Remarks</u>	<u>FY 2023</u> 0.349	<u>FY 2024</u> -	<u>Base</u> 0.000	000	<u>Total</u> 0.000	<u>FY 2026</u> -	<u>FY 2027</u> -	<u>FY 202</u>	<u>8 FY 2029</u> -	<u>Complete</u> 0.000	<u>Total Cos</u> 0.349

D. Acquisition Strategy

This program element develops critical software intensive improvements, while continuing to make maximum use of Non-Developmental Items (NDI)/Commercial Off the Shelf (COTS) components and Government Furnished Equipment (GFE). After design and integration, the system will be subject to thorough developmental and validation/verification testing to verify performance, operational effectiveness and suitability. The JTAGS Block II Pre-planned Product Improvement (P3I) program was initiated based on a 2009 JTAGS Operational Requirements Document (ORD) and upgrades JTAGS to a Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, improving warning tactical parameters and timeliness. The JTAGS Block II P3I contract was a full and open competition, but only the incumbent JTAGS contractor submitted a proposal, resulting in a sole-source contract on 26 Aug 2012. The contract's development options are Cost Plus Incentive Fee; its production options are Firm Fixed Price, and its Sustainment options are Cost Plus Fixed Fee. The JTAGS Block II contract's period of performance was 1 October 2012 through 30 September 2021 with a contract extension to April 2022. As threats continue to evolve and change as well as new satellite sensors become available, the JTAGS Users in conjunction with the Army Capabilities Manager have developed a JTAGS Block II Capability Development Document (CDD), requiring JTAGS to address new/changing threats that were not addressed in the 2009 JTAGS ORD. The acquisition of the continued JTAGS Block II efforts based on the JTAGS Block II CDD will be performed under a sole source follow-on contract awarded May 2022 to the current JTAGS contractor.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March	2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground Syst em	Project (Number/Name 635 / Joint Tact Grd Sta	≥) tion-P3I
The Joint Tactical Ground Station (JTAGS) transitions to US Space Force in F	Y2024, which is the last year of Army funding.		
PE 0208053A: Joint Tactical Ground System UN Army	NCLASSIFIED Page 5 of 9 R-1 Line #:	217	Volume 4b - 287

Appropriation/Budge 2040 / 7	et Activity	1							lumber/N ical Grour			(Numbe bint Tact G	r/Name) Grd Station	-P3I	
Management Service	es (\$ in M	illions)		FY	2023	FY 2	2024		2025 ase		2025 CO	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 Program Management	Allot	Various (AMC, AMCOM, CCDC, SMDC ROC) : Redstone Arsenal, AL	2.327	1.166	Oct 2022	0.203	Oct 2023	-		-		-	0.000	3.696	-
		Subtotal	2.327	1.166		0.203		-		-		-	0.000	3.696	N//
Product Developme	nt (\$ in M	illions)		FY	2023	FY 2	2024		2025 ase		2025 CO	FY 2025 Total			Target
	Contract Method	Performing	Prior		Award	112	Award		Award		Award	Total	Cost To	Total	Target Value of
Cost Category Item	& Type	Activity & Location	Years	Cost	Date	Cost	Date	Cost	Date	Cost	Date	Cost	Complete	Cost	Contract
Development and Test Block II CDD requirements	SS/UCA	Northrop-Grumman : Colorado Springs, Co	6.407	4.028	Nov 2022	-		-		-		-	0.000	10.435	-
System Engineering Support	C/CPFF	Intrepid : Huntsville, AL	1.008	0.569	Jan 2023	-		-		-		-	0.000	1.577	-
		Subtotal	7.415	4.597		-		-		-		-	0.000	12.012	N//
Remarks Continues development of Support (\$ in Million		Block II capabilities base	ed on the JT		< II Capabilit	y Developm		FY	2025 ase		2025 CO	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
	C/CPFF	Intrepid : Huntsville, AL	1.489	0.754	Jan 2023	-		-		-		-	0.000	2.243	-
System Engineering Techinal Assistance															

			,								Date:	March 20	24		
Activity						-	•	lumber/Na ical Groun		-	(Numbe bint Tact C		-P3I		
			FY 2	2023	FY 2	2024					FY 2025 Total				
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	
in implem	penting the JTAGS Bloc														
·			FY 2	2023	FY	2024					FY 2025 Total				
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	
Allot	Various (ATEC, AIC, JITC) : Various locations	5.257	2.296	Oct 2022	-		-		-		-	0.000	7.553	-	
Į	Subtotal	5.257	2.296		-		-		-		-	0.000	7.553	N/A	
ock II dev	elopment efforts based	on the JTAG			FY 2	2024					FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract	
	Project Cost Totals	16.488	8.813		0.203		-		-		-	0.000	25.504	N/A	
	Method & Type in implem in Millio contract Method & Type Allot	Method & Type Performing Activity & Location in implementing the JTAGS Block in Millions) contract Wethod & Type Performing Activity & Location Allot Various (ATEC, AIC, JITC) : Various locations Subtotal	Method & Type Performing Activity & Location Prior Years in implementing the JTAGS Block II CDD in Millions) contract Wethod & Type Performing Activity & Location Prior Years Allot Various (ATEC, AIC, JITC) : Various locations 5.257 Subtotal 5.257 bck II development efforts based on the JTAGS	Contract Method & Type Performing Activity & Location Prior Years Cost in implementing the JTAGS Block II CDD In CDD FY 2 in Millions) FY 2 contract Method & Type Performing Activity & Location Prior Years FY 2 contract Method & Type Performing Activity & Location Prior Years Cost Allot Various (ATEC, AIC, JITC) : Various locations 5.257 2.296 Subtotal 5.257 2.296 bck II development efforts based on the JTAGS Block II Prior Years FY 2	Method & Type Performing Activity & Location Prior Years Cost Award Date in implementing the JTAGS Block II CDD FY 2023 in Millions) FY 2023 contract Method & Type Performing Activity & Location Prior Years Award Cost Various (ATEC, Allot Various (ATEC, AIC, JITC) : Various locations 5.257 2.296 Oct 2022 Subtotal 5.257 2.296	em FY 2023 FY 2023 FY 2023 Sontract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Cost in implementing the JTAGS Block II CDD FY 2023 FY 2023 FY 2023 in Millions) FY 2023 FY 2023 FY 2023 contract Method & Type Performing Activity & Location Prior Years Award Cost FY 2023 contract Method & Type Various (ATEC, AIC, JITC) : Various locations 5.257 2.296 Oct 2022 - Subtotal 5.257 2.296 Oct 2022 - bock II development efforts based on the JTAGS Block II CDD. FY 2023 FY 2023	em FY 2023 FY 2024 Sontract Method & Type Performing Activity & Location Prior Years Award Cost Award Date Award Cost Award Date in implementing the JTAGS Block II CDD FY 2023 FY 2024 contract Method & Type Performing Activity & Location Prior Years FY 2023 FY 2024 contract Method & Type Performing Activity & Location Prior Years Cost Award Date Award Cost Award Date Various (ATEC, Allot Various (ATEC, AlC, JITC) : Various locations 5.257 2.296 Oct 2022 - Subtotal 5.257 2.296 - -	em FY 2023 FY 2024 FY 2024 Sontract Wethod & Type Activity & Location Prior Years Award Date Cost Award Date Cost in Millions) FY 2023 FY 2024 FY 2024 in Millions) FY 2023 FY 2024 FY 2024 Sontract Wethod Performing Activity & Location Prior Years Award Date Cost Award Date Cost Iontract Wethod Performing Activity & Location Prior Years Award Date Cost Award Date Cost Allot Na(c, JITC): Various Iocations 5.257 2.296 Oct 2022 - - - Subtotal 5.257 FY 2023 FY 2024 FY Prior Years FY 2023 FY 2024 FY	em FY 2023 FY 2024 FY 2025 Gontract Method & Type Prior Activity & Location Years Award Date Cost Award Date Award Cost Award Date FY 2023 FY 2025 Base in implementing the JTAGS Block II CDD FY 2023 FY 2024 Award Base Ontract Wethod & Type Award Cost Award Date Cost Award Date Ontract Wethod & Type Performing Activity & Location Years Cost Award Date Cost Award Date Yarious (ATEC, Allot Yarious (ATEC, Alc, JTC): Various locations 5.257 2.296 Oct 2022 - - Subtotal FY 2023 FY 2024 FY 2025 Prior Years FY 2023 FY 2024 FY 2025 Prior Years FY 2023 FY 2024 FY 2025	Image: Second and the	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	em FY 2023 FY 2024 FY 2025 FY 2025 <th colspa<="" td=""></th>	

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	٩rm	у																			Da	te: N	/larc	h 20	24			
Appropriation/Budget Activity 2040 / 7							F						t (Nu Factic								luml t Tac				-P3I			
Event Name		F١	202	3		FY	202	4		FY	2025	5		FY	2026	;		FY	202	7		FY	202	8		FY 2	029	•
Event Name	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
JTAGS Block II CDD driven emerging threats and cyber har	JTA	GS Blo	ck II CD	D Eme	rging '	Threat	s Deve	lopmer	ıt																			
JTAGS Block II Engineering Service Follow-On Contract	JTA	3S Blo	sk II Foll	ow-On	Contr	act																						
Limited User Test of Block II CDD Emerging Threat Capabi			Limite	d User	Test																							
Continued Block II CDD Emerging Threats and Future Senso				Block) Emer	rging Th	hreats :	and Ne	ext Ge	neration	n GEC	Develo	pmen	t													
																1					-							1

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208053A <i>I Joint Tactical Ground Syst</i> <i>em</i>	 umber/Name) Tact Grd Station-P3I

Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
JTAGS Follow-on Operational Test and Evaluation	2	2022	3	2022
JTAGS Block II CDD driven emerging threats and cyber hardening	1	2022	2	2023
JTAGS Block II Engineering Service Follow-On Contract	3	2022	4	2024
Limited User Test of Block II CDD Emerging Threat Capabilities	3	2023	3	2023
Continued Block II CDD Emerging Threats and Future Sensor Integration	4	2023	4	2024

Exhibit R-2, RDT&E Budget Iten	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ntion, Army	I BA 7: Ope		R-1 Progra PE 030302		t (Number/ ty and Intell	,	vities			
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	0.000	0.301	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.301
FG2: Counterintelligence & Human Intel Modernization	-	-	0.301	-	-	-	-	-	-	-	0.000	0.301

A. Mission Description and Budget Item Justification

Funding supports the U.S. Army Intelligence and Security Command's (INSCOM) RDTE program, which provides the Army with low-density, high-demand, extremely advanced offensive cyberspace technologies designed to degrade, deny, disrupt, or destroy adversary Command, Control, Communications, Computers and Intelligence (C4I) and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power.

INSCOM conducts RDTE of offensive Cyberspace technologies in direct support of the full range of missions called for in the National Defense Strategy, Comprehensive National Cyber-Security Initiative, National Security Strategy, National Defense Guidance, National Security Presidential Directive (NSPD)-38, NSPD-54 and Homeland Security Presidential Directive (HSPD)-23.

HQDA G-2 and the Intelligence and Security Command (INSCOM) Security Operations Center (ISOC) are charged with integrating, informing, and leveraging security and counterintelligence authorities in support of the Department of the Army Insider Threat Program mission to continuously deter, detect, and mitigate insider threats to Army information, networks, facilities, and personnel.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	0.301	0.302	-	0.302
Current President's Budget	0.000	0.301	0.000	-	0.000
Total Adjustments	0.000	0.000	-0.302	-	-0.302
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-0.302	-	-0.302
Change Summary Explanation					
Decrease due to completion of planned activities.					
PE 0303028A: Security and Intelligence Activities					

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	Army							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7					R-1 Progra PE 030302 <i>tivities</i>		•	lumber/Name) Interintelligence & Human Intel Ition				
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
FG2: Counterintelligence & Human Intel Modernization	-	-	0.301	-	-	-	-	-	-	-	0.000	0.301
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

All existing systems are in sustainment with no further development occurring.

A. Mission Description and Budget Item Justification

HQDA G-2 and the Intelligence and Security Command (INSCOM) Security Operations Center (ISOC) are charged with integrating, informing, and leveraging security and counterintelligence authorities in support of the Department of the Army Insider Threat Program mission to continuously deter, detect, and mitigate insider threats to Army information, networks, facilities, and personnel.

Funding supports personnel security-related capabilities for identifying, reporting and responding to potential personnel security information of concern. These tools are key enablers of the Army Insider Threat Program. These tools provide statistical models to assess risk, centralized analysis, reporting and response capabilities, and reporting mechanisms for relevant insider threat data.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Insider Threat CE Support	-	0.301	-
Description: HQDA G-2 and the Intelligence and Security Command (INSCOM) Security Operations Center (ISOC) are charged with integrating, informing, and leveraging security and counterintelligence authorities in support of the Department of the Army Insider Threat Program mission to continuously deter, detect, and mitigate insider threats to Army information, networks, facilities, and personnel.			
<i>FY 2024 Plans:</i> Continue personnel security-related capabilities for identifying, reporting and responding to potential personnel security information of concern. These tools are key enablers of the Army Insider Threat Program. These tools provide statistical models to assess risk, centralized analysis, reporting and response capabilities, and reporting mechanisms for relevant insider threat data.			
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to completion of planned Insider Threat CE Support efforts.			
Accomplishments/Planned Programs Subtotals	-	0.301	-

	Date: March 2024
R-1 Program Element (Number/Name) PE 0303028A <i>I Security and Intelligence Ac</i> <i>tivities</i>	Project (Number/Name) FG2 / Counterintelligence & Human Intel Modernization
	PE 0303028A I Security and Intelligence Ac

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	,								Date:	March 20	24	
Appropriation/Budge 2040 / 7			-	ement (N Security a	(Numbe Counterint ization	r/Name) elligence &	& Human	Intel							
Management Service	es (\$ in M	illions)		FY	2023	FY 2	2024		2025 ase	FY 2 OC		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
Insider Threat CE Support	TBD	To Be Determined : To Be Determined	4.134	-		0.301		-		-		-	0.000	4.435	4.167
		Subtotal	4.134	-		0.301		-		-		-	0.000	4.435	N/A
			Prior Years	FY	2023	FY 2	2024		2025 ase	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
l		Project Cost Totals	4.134	-		0.301		-		-		-	0.000	4.435	N/A

Remarks

hibit R-4, RDT&E Schedule Profile: Pl	B 2025 Army											Da	ate: N	March	h 20	24		
propriation/Budget Activity 40 / 7		R-1 Program Element (Number/Name) PE 0303028A / Security and Intelligence Ac tivitiesProject (Number/Name) FG2 / Counterintelligence & Human Int 												ntel				
Event Name	FY 2023	FY 20			2025			2026		FY 20				202			Y 20	
	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
Army Security Response Tool																		
	Per direction of Army G-2 s	and INSCOM Se	nior leaders, a	all existin	ig systems ar													
						1												

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	ch 2024		
propriation/Budget Activity 40 / 7		n Element (Number A I Security and Inte	Project (Number/Name) FG2 / Counterintelligence & Human In Modernization				
	Schedule Deta	ils					
		Sta	E	nd			
Events		Quarter	Year	Quarter	Year		
Army Security Response Tool		1	2018	4	2024		

Exhibit R-2, RDT&E Budget Iten	Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army											
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development						am Elemen 40A I Inform						
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	-	15.554	15.323	15.733	-	15.733	15.755	15.843	15.936	16.019	Continuing	Continuing
491: Information Assurance Development	-	7.816	7.035	7.595	-	7.595	7.609	7.610	7.610	7.610	Continuing	Continuing
DV4: Key Management Infrastructure (KMI)	-	0.268	-	-	-	-	-	-	-	-	0.000	0.268
DV5: Crypto Modernization (Crypto Mod)	-	7.470	8.288	8.138	-	8.138	8.146	8.233	8.326	8.409	Continuing	Continuing

<u>Note</u>

In Fiscal Year 2025 (FY25), the funding in PE 0303140A, Project DV4 transitions to PE 0605144A, Project BY6 to support increased NSA requirements for Next Generation Load Device-Medium (NGLD-M).

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 the Communications Security (COMSEC) Key Management Infrastructure (KMI) program.

Project 491: Army Chief Information Officer/Deputy Chief of Staff, G-6 manages Information Assurance Development.

Project 491: IA Development. Supports the implementation of the National Security Agency (NSA) developed Communications Security (COMSEC) Modernization and Key Management (KM) technologies within the Army. This includes current and next generation encryption techniques, current and future Key Management Infrastructure (KMI) and technology migrations. This program provides oversight in developing policies, guidance, standard operating procedures and recommendations in integrating COMSEC and KM techniques into specific systems in support of securing the Army Tactical and Enterprise Networks. This entails architecture studies, system integration and testing, developing installation kits, and technological collaborations with NSA, DISA and other Services for enterprise and last mile implementations. The program assesses, develops and integrates Cyber Security (CS)/COMSEC tools (hardware and software) which provide protection for fixed infrastructure post, camp and station networks as well as tactical networks. The cited work is consistent with Strategic Planning Guidance (SPG) and the Army Modernization and Strategy Plan (AMSP).

IA Development funding implements and establishes functional and technical boundaries of cryptographic, key management and IA capabilities in coordination with the NSA, the DISA, and Joint Services, to secure National Security Systems (NSS), and National Security Information (NSI). Technical evaluations assess the security, operational effectiveness and network interoperability of advanced concept technologies to develop policies, standards, and fundamental building blocks for Army COMSEC capabilities that reduce the risk of future material solutions that could underperform and disrupt classified operations. Develop and publish the COMSEC Implementation Planning Guidance to identify, standardize, and govern the insertion of CS capabilities to bridge operational gaps and support the DoD and NSA

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 7: Operational	PE 0303140A I Information Systems Security Program
Systems Development	
	e information exchange of voice, video, and data in accordance with the Army Network ards testing, and CS, System of System Network Vulnerability Assessments (SoS NVA) for tactical and fixed infrastructure post, camp, and station networks.
Capabilities (ACC) updates and replacements of existing devices and systems technologies to support DoD Cryptographic Moderation 2 (CM2) Army implement tactical network/architecture future Capability Set developments. Provide proc and implementation guidance to meet Army's operational requirements. Conti key management capabilities developed by DoD joint KMI program for Army fi interoperability issues for both embedded and standalone systems. This fundi products prior to insertion for Army use. Provide timely test and evaluate result	my's COMSEC Modernization initiatives including major Advanced Cryptographic to meet NSA mandates. Continue to support the evaluation and testing of new entations including Transmission Security (TRANSEC), EKMS to KMI migration and of concepts to provide updated end-to-end, tactical-to-strategic COMSEC standardization uous funding will enable the evaluations and maturity assessment of new COMSEC and elding to protect and strengthen the Army Network posture, with reduced cryptographic or also supports the risk reduction testing to document operational value of commercial s to enable the Army to make sound investment strategic decisions and to reduce or posture Army's operations to implement innovative cryptographic and key management
cyberspace capabilities and protect data, networks, net-centric capabilities, ar capable of ingesting structured, semi-structured, and unstructured data from n systems, intrusion prevention systems, network device log files, trouble tickets	ties that enable passive and active cyberspace defense operations to preserve friendly d other designated systems. Big Data Pilot provides an advanced analytics capability ultiple data sources (e.g., Joint Regional Security Stacks (JRSS), intrusion detection firewalls, proxies, web and applications server log files, etc) and proves situational provider with common analytic platform which informs and reduces risk associated with

Project DV4: Key Management Infrastructure (KMI) & Project DV5: Crypto Modernization (Crypto Mod). COMSEC is governed by the Chairman of the Joint Chiefs of Staff Instruction (CJCSA) 6510. In order to ensure Warfighters continue to have secured communications (i.e., encrypted data and voice), Army communications systems are required to support modern cryptographic capabilities by implementing modern algorithms. These efforts are consistent with Strategic Planning Guidance (SPG). These funding lines are key enablers of the Army Modernization in support of Army 2030/2040.

Project DV4: KMI. The Army Key Management Infrastructure (AKMI) is the Army's implementation of the National Security Agency (NSA) KMI ACAT IAM program, automating the functions of COMSEC electronic key management, control, planning, and distribution. AKMI supports the Army's ability to communicate and distribute Cryptographic data on the Army's tactical and strategic networks by limiting adversarial access to and reducing the vulnerability of, Army Command, Control, Communications, Computers, Cyber, Intelligence (C5I) systems. AKMI devices receive, store, manage, and transfer electronic key through the network to be loaded

analyze, and mitigate threats to and vulnerability of DoD networks and systems.

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 7: Operational	PE 0303140A I Information Systems Security Program	
Systems Development		

into communication devices such as radios and satellites to secure the network. Without this technology Warfighters are required to manually receive their cryptographic products by traveling to COMSEC account locations (which may not be co-located) and manually fill their devices.

Project DV5: Crypto Modernization (Crypto Mod). Crypto Mod performs test, evaluation, development, and configuration management for cryptographic devices that receive key through fill devices and allow for secure communication through Army devices such as radios and satellite terminals. This program utilizes National Security Agency (NSA) developed Communications Security (COMSEC) technologies within the Army providing encryption, trusted software, or standard operating procedures, and integrating these mechanisms into specified systems in support of securing the Army Tactical and Enterprise Networks. The effort supports network operations from end-to-end throughout the force thus mitigating networked vulnerabilities to Army information security systems. In order to ensure Warfighters continue to have secured communications (i.e., encrypted data and voice), Army communications systems are required to be upgraded to modern algorithms to meet emerging threat developed by our adversaries. Crypto Modernization necessitates the utilization of the latest NSA cryptographic capabilities in order to defeat adversarial efforts to decrypt, disrupt, or exploit US Army networks. COMSEC is the Army's implementation of NSA protections to create a unified network that is protected, resilient, and survivable.

Project DV4: KMI has no funding request in FY 2025.

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	17.209	15.323	17.786	-	17.786
Current President's Budget	15.554	15.323	15.733	-	15.733
Total Adjustments	-1.655	0.000	-2.053	-	-2.053
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-1.655	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-2.053	-	-2.053

Change Summary Explanation

Fiscal Year 2025 (FY25) funding decrease of \$2.053 million results from a processed realignment to support increased NSA requirements from PE 0303140A, Project DV4 to PE 0605144A, Project BY6.

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Marc	h 2024	
Appropriation/Budget Activity 2040 / 7					-	am Element 10A / Informa 1	•	,	Project (N 491 / Inforr			elopment
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
491: Information Assurance Development	-	7.816	7.035	7.595	-	7.595	7.609	7.610	7.610	7.610	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 491: Information Assurance (IA) Development. Supports the implementation of National Security Agency (NSA) developed Communications Security (COMSEC) technologies within the Army enterprise and tactical networks by ensuring COMSEC devices/systems are cryptographically interoperable and standard based. This entails architecture studies, technology assessments, secured devices testing, system integration and installation kits development to provide protections for fixed infrastructure post, camps and station networks as well as tactical networks. The cited work is consistent with Army's Mission Command Implementation Plan LOE 1, Network Enable Functions.

IA Development funding Implements, establishes functional and technical boundaries of cryptographic, key management and IA capabilities In Coordination With (ICW) the NSA, the Defense Information Systems Agency (DISA), and Joint Services, to secure National Security Systems (NSS), and National Security Information (NSI). Technical evaluations assess the security, operational effectiveness and network interoperability of advanced concepts/technologies to develop policies, standards, and fundamental building blocks for Army COMSEC capabilities that reduce the risk of future materiel solutions that could underperform and disrupt classified operations.

Develop and publish COMSEC and key management implementation planning guidance to identify, standardize, and govern the insertion of IA capabilities that will bridge operational gaps and support the DoD and NSA mandated requirements to enhance network capacity while providing secure information exchange of voice, video, and data IAW the Army Network Campaign Plan. This will be accomplished by interoperability test and evaluation, standards development, technology roadmap development and System of System Network Vulnerability Assessments (SoS NVA) to provide protections for the Army Integrated Tactical Networks.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
<i>Title:</i> Oversight and implementation guidance of emerging Cryptographic and CS capabilities to ensure interoperability to maintain compliance with DoD, NSA, and Army policies and regulations. (CIO/G-6)	7.816	7.035	7.595
Description: The program provides oversight and guidance for technical research and evaluation of Cryptographic Modernization (CM) and Key Management (KM) capabilities to ensure IA compliance and interoperability. This effort improves operational effectiveness, ensures efficient implementation, and enhances network performance by deploying standardized COMSEC capabilities that are interoperable and supportable in Army, coalition and Joint operating environments. This program enables the Army to collaborate and participate in Joint and Army capability and technology evaluations efforts to define, improve, develop and publish Cyber Security (CS) standards for new/modernized technology insertion to support the Army future networks and key management enterprise. This effort assesses and defines risk mitigation of CS network vulnerabilities in end-to-end Army network operations and Common Operating Environment. (CIO and G-6)			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A <i>I Information Systems Securi</i> <i>ty Program</i>	-	formation A	Name) ssurance De	velopment
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
FY 2024 Plans: Continue to provide oversight for the executions of the Army's Communication including major Advanced Cryptographic Capabilities (ACC) and Cryptographic of existing devices and systems. Continue to evaluate and test emerging techn Transmission Security (TRANSEC) Initial Capabilities Document (ICD), Electroc Key Management Infrastructure (KMI) migration, Army last mile advanced key Operations (MDO) security architecture implementation. Continue to provide u standardization and implementation guidance to meet Army's operational requirechnologies developed by NSA's KMI program to determine the maturity for A Unified Network posture. Continue to work with DoD CIO, Joint Staff, NSA, DIS interoperability issues for both embedded and standalone cryptographic device of commercial cryptographic products prior to insertion into Army for use to inco operational value and rapid integration. Provide timely test and evaluation resu investment decisions and to reduce or eliminate duplications. Participate in operational capability Technology Demonstrations to align new technolog and requirements for protecting National Security Systems and National Security policies to posture Army's operations to implement innovative cryptographic army of the security of the security systems and National Security policies to posture Army's operations to implement innovative cryptographic army of the security of the security systems and National Security policies to posture Army's operations to implement innovative cryptographic army of the security security of the secur	c Modernization 2 (CM2) updates and replacer hologies for Army implementation in support of onic Key Management System (EKMS) Tier 1 t distribution concept development and Multi-Do pdated end-to-end, tactical-to-strategic COMS irements. Continue to assess new key manage army fielding to protect and strengthen the Arm SA and other Services to resolve cryptographic es/systems and perform risk reduction testing trease operational availability with documented ults to enable the Army to make sound strategie erational assessment of NSA, DoD, Joint Staff gies to documented Army and DoD capability grity Information. Continue to update and develo	ments o omain EC ement y c and gaps			
FY 2025 Plans: Continue to provide oversight for the executions of the Army's Communication including major Advanced Cryptographic Capabilities (ACC) and Cryptographic of existing devices and systems. Continue to evaluate and test emerging techn Transmission Security (TRANSEC) Initial Capabilities Document (ICD), Electroc Key Management Infrastructure (KMI) migration, Army last mile advanced key Operations (MDO) security architecture implementation. Continue to phasing of meet the new security standards in order to meet Army's operational requirement DoD/NSA mandates. Continue to assess new key management technologies of maturity for Army fielding to protect and strengthen the Army Unified Network protect coordination with the DoD CIO, Joint Staff, NSA, DISA and oth issues for both embedded and standalone cryptographic devices/systems and cryptographic products prior to insertion into Army for use to increase operation and rapid integration. Provide timely test and evaluation results to enable the <i>A</i> and to reduce or eliminate duplications. Participate in operational assessment Capability Technology Demonstrations to align new technologies to document.	c Modernization 2 (CM2) updates and replacer hologies for Army implementation in support of pric Key Management System (EKMS) Tier 1 to distribution concept development and Multi-Do put legacy non-scalable COMSEC that will not ents IAW Army Unified Network Plan (AUNP) a developed by NSA's KMI program to determine posture to enable global end-to-end connectivities perform risk reduction testing of commercial nal availability with documented operational va Army to make sound strategic investment decision of NSA, DoD, Joint Staff and Service-led Joint	ments o omain and e the ty. ability llue sions			

Exhibit R-2A, RDT&E Project	Justification: PB	2025 Army							Date: N	larch 2024	
Appropriation/Budget Activit 2040 / 7	y				03140A I In	ment (Numb formation Sy	er/Name) stems Securi	-	t (Number/I formation A	Name) ssurance De	velopment
B. Accomplishments/Planned for protecting National Security Army's operations to implement implement a framework to mod and evaluated in order to becom	Systems and Nati t innovative crypto ernize Army's secu	onal Securit graphic and urity path to	key manage ensure techr	ement tools a	nd services	. All efforts	are critical to		FY 2023	FY 2024	FY 2025
FY 2024 to FY 2025 Increase/ Increase in FY25 was necessa and Encryptions to the new sta aggressive implementation plan will deploy defensive Cyber cap mandates.	ry to fund critical C ndards avoiding fu n to ensure our Arr	OMSEC rec ture interope ny is posture	erability/capa ed to be an N	ability issues //DO -capabl) that establ e force by 2	ishes the fou 2028. In addi	indation for a tion, the incre	n			
				Accon	nplishment	s/Planned F	rograms Su	btotals	7.816	7.035	7.595
<u>C. Other Program Funding Su</u> Line Item	ummary (\$ in Milli FY 2023	<u>ons)</u> FY 2024	<u>FY 2025</u> Base	<u>FY 2025</u> OCO	<u>FY 2025</u> Total	FY 2026	FY 2027	FY 202	3 FY 202	<u>Cost To</u> 9 Complete	o Total Cost

Line Item	<u>FY 2023</u>	<u>FY 2024</u>	<u>Base</u>	<u>000</u>	<u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	FY 2029 Complete To	otal Cost
• DV5: Crypto	7.470	8.288	8.138	-	8.138	8.146	8.233	8.326	8.409 Continuing C	ontinuing
Modernization (Crypto Mod)										
B96002: CRYPTOGRAPHIC	50.151	87.423	66.420	-	66.420	56.568	56.596	56.171	56.732 Continuing Co	ontinuing
SYSTEMS (CRYPTO SYS)										_
• BS9716: NON PEO-SPARES	4.014	3.667	3.887	-	3.887	3.901	3.903	3.906	3.945 Continuing Co	ontinuing
									-	-

<u>Remarks</u>

D. Acquisition Strategy

The objective of the Cryptographic Systems program is to provide adaptive, flexible, and programmable cryptographic solutions using best practices, lessons learned and programmatic management to meet the challenge of modernizing the Army's aging cryptographic systems. Associated documents include CDD, approved by CIO/ G6, 15 Jul 2010; ICD, approved by JROC, 25 Mar 2011; AAO; approved by G3, 15 Dec 2011 and revised and approved, 19 Jun 2015.

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20	24		
Appropriation/Budge 2040 / 7	ion/Budget Activity R-1 Program Element (Number/Name) Pro									Project (Number/Name) 491 I Information Assurance Developmer						
Test and Evaluation	(\$ in Milli	ons)	ſ	FY	2023	FY 2	2024		2025 Ise	FY 2 O		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 (CIO/ G-6)	C/FP	CACI : APG, MD	27.740	3.600	Oct 2022	3.856	Oct 2023	4.075	Oct 2023	-		4.075	0.000	39.271	-	
System Engineering (CIO/ G-6)	SS/LH	AFC C5ISR : APG, MD	14.259	2.345	Oct 2022	2.575	Oct 2023	2.752	Oct 2023	-		2.752	0.000	21.931	-	
Engineering Support (CIO/ G-6)	C/CPFF	booz Allen Hamiton : APG, MD	12.115	1.480	Oct 2022	0.604	Oct 2023	0.768	Oct 2023	-		0.768	0.000	14.967	-	
Service (CIO-G-6)	SS/LH	ARL/SLAD : White Sand Missile Range (WSMR)	8.474	0.391	Oct 2022	-		-		-		-	0.000	8.865	-	
		Subtotal	62.588	7.816		7.035		7.595		-		7.595	0.000	85.034	N/A	
			Prior Years	FY	2023	FY 2	2024		2025 Ise	FY 2 O(FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract	
		Project Cost Totals	62.588	7.816		7.035		7.595		-		7.595	0.000	85.034	N/A	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	٢m	у																			Da	ite:	Ма	rch 2	2024	ŧ		
Appropriation/Budget Activity 2040 / 7								PE	Pro 0303 Progr	314(m E)A /	leme Inforr	nt (N natic	lum on S	ber yste	Nam ms S	e) Securi							i me) suran	nce	Deve	elopr	ment
Event Name		F	Y 2	023		F	=Y 2	024	Τ	F	Y 20)25		F١	Y 20	26		FY	202	7		F	Y 20	028	Т	F	Y 20	029
Lvent Name	1	2	2	3 4	1 1		2	3 4	1	2	2	3 4	1	2	3	4	1	2	3	4	1	2	2	3 4	ı –	1 2	2 :	3 4
TECHNOLOGY TEST & EVALUATION (CIO/G6)																												
DEFINE SECURITY & INTEROPERABILITY STANDARDS (CIO/																												
COMSEC STRATEGY & CRYPTO TECHNOLOGY ROADMAP (

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A <i>I Information Systems Securi</i>	 umber/Name) mation Assurance Development
	ty Program	

Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
TEST & EVALUATION OF CRYPTOGRAPHIC SYSTEMS (PL Net E)	1	2014	4	2014
STUDY OF CURRENT AND EMERGING CRYPTO ALGORITHMS AND TECHNOLOGIES (PL Net E)	1	2015	2	2015
TEST OF INE AND WIRELESS SOLUTION (PL Net E)	1	2016	4	2018
BIG DATA PILOT (PD ES-CYBER)	1	2016	4	2016
TECHNOLOGY TEST & EVALUATION (CIO/G6)	1	2017	4	2027
DEFINE SECURITY & INTEROPERABILITY STANDARDS (CIO/G6)	1	2017	4	2027
COMSEC STRATEGY & CRYPTO TECHNOLOGY ROADMAP (CIO/G6)	1	2014	4	2027

Exhibit R-2A, RDT&E Project Just	stification:	PB 2025 A	Army							Date: Ma	arch 2024	
Appropriation/Budget Activity 2040 / 7								e r/Name) stems Securi		(Number/Na ey Managen	ame) nent Infrastru	cture (KMI)
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 202 OCO			6 FY 2027	FY 202	8 FY 2029	Cost To Complete	Total Cost
DV4: Key Management Infrastructure (KMI)	-	0.268	-	-		-	-				- 0.000	0.268
Quantity of RDT&E Articles	-	-	-	-		-	-				-	
Communications Security (COMS secured communications (i.e., end modern algorithms. The Reprogrammable Single Chip modern algorithms to encrypt and	crypted data	a and voice Encryptor (), Army con RESCUE) i	nmunicatio is a govern	ns syster	ns are requi	red to supp	ort modern c	ryptograph	ic capabilitie	es by implem	enting
B. Accomplishments/Planned Pl	<u>ograms (\$</u>	in Million	<u>s)</u>							FY 2023	FY 2024	FY 2025
Title: Reprogrammable Cryptogra	phic Chip D	evelopmer)	nt and Evalu	uation						0.268	-	-
Description: The Reprogrammab incorporates KMI functionality and is built upon a modular architectur. This effort creates a government of devices.	modern alg e to enable	orithms to tailoring of	encrypt and the chip to	d decrypt n meet the s	nessages pecific re	for the emb equirements	edding dev of the embe	ce. The RES	SCUE			
					Accom	plishments	/Planned P	rograms Sul	ototals	0.268	-	-
C. Other Program Funding Sum	marv (\$ in	Millions)										
Line Item • B96004: KEY MANAGEMENT INFRASTRUCTURE Remarks Line Item & Title: B96004: Key Management Infrast	FY 20 75.5	23 FY 2 41 72.	024 E	2025 FY 3ase .585	<u>2025</u> OCO -	<u>FY 2025</u> <u>Total</u> 31.585	<u>FY 2026</u> 31.760	<u>FY 2027</u> 28.753	FY 2028 24.097	<u>FY 2029</u> 24.337		<u>Total Cost</u> 288.362
		_										

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 7	PE 0303140A I Information Systems Securi	DV4 I Key	Management Infrastructure (KMI)
	ty Program		

D. Acquisition Strategy

Army Key Management Infrastructure (AKMI) acquisition strategy consisted of Army, Air Force, and NSA Programs of Record (POR). AKMI is the Army's implementation of the National Security Agency (NSA) Key Management Infrastructure (KMI) ACAT IAM Program of Record. The AKMI allows the Army to manage, control, plan, and distribute electronic key for the ~1.5 million End Cryptographic Units (ECU)s necessary to communicate and distribute data on the Army's tactical and strategic networks such as radios, secure phones, and satellite terminals.

The AKMI Program includes the Simple Key Loader (SKL) and Automated Communications Engineering Software (ACES) workstation contracts managed by the Army, Tactical Key Loader (TKL) contract by the US Air Force, and the Management Clients (MGC) nodes by NSA.

The AKMI program funded development of a KMI compliant cryptographic engine, the government owned Reprogrammable Single Chip Universal Encryptor (RESCUE).

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20	24	
Appropriation/Budge 2040 / 7	et Activity	/				3140A / /	•	lumber/N on System	•	-	(Numbe Yey Manag	r/Name) gement Ini	irastructu	ıre (KMI)	
Product Developmer	nt (\$ in M	illions)		FY	2023	FY 2	2024		2025 ase	FY 2 OC		FY 2025 Total]		
Cost Category Item	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract		
KMI Awareness (RESCUE Dynamics Research Development and NSA C/CPFF Corporation/Engility : 17.51 Certification APG, MD APG, MD				0.268	Jul 2023	-		-		-		-	0.000	17.787	-
		Subtotal	17.519	0.268		-		-		-		-	0.000	17.787	N/A
			Prior Years	FY	2023	FY 2024			2025 ase	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
	Project Cost Totals 1					als 17.519 0.268							0.000	17.787	N/A

Remarks

Project DV4 has no funding request in FY 2025.

Appropriation/Budget Activity R-1 Program Element (Number/Name) PE 0303140A / Information Systems Securi ly Program Project (Number/Name) DV4 / Key Management Infrastructure (KMI) Event Name FY 2023 FY 2024 FY 2026 FY 2027 FY 2028 FY 2029 Regrogrammable Cryptographic Chip Development (RESCUE) I 2 3 4 2 3 4 2 3 4 2 3 4 2 3 4 2 3 4 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 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 3 4 1 2 </th <th>Exhibit R-4, RDT&E Schedule Profile: PB 2025</th> <th>Arm</th> <th>ıy</th> <th></th> <th>Date</th> <th>: Ma</th> <th>arch 2</th> <th>202</th> <th>4</th> <th></th> <th></th>	Exhibit R-4, RDT&E Schedule Profile: PB 2025	Arm	ıy																		Date	: Ma	arch 2	202	4		
Event Name 1 2 3 4 1	Appropriation/Budget Activity 2040 / 7	PE 0303140A I Information Systems Securi DV4 I Ke								(Number/Name) ey Management Infrastructure (KMI)																	
Event Name 1 2 3 4 1			F	Y 20)23		FY	(202	24		FY	202	5		FY	(20	26	FY 2	2027		F	Y 2	028		F	Y 20)29
Reprogrammable Cryptographic Chip Development (RESCUE)	Event Name	1				1				1				1						4							
	Reprogrammable Cryptographic Chip Development (RESCUE																										

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: March	า 2024
opropriation/Budget Activity 40 / 7	R-1 Program PE 0303140/ <i>ty Program</i>	Element (Number A I Information Syste	/Name) ems Securi	Project (Number/Nam DV4 / Key Managemen	e) t Infrastructure (KMI
	Schedule Deta	ils			
		Sta	rt	En	d
Events		Quarter	Year	Quarter	Year
Reprogrammable Cryptographic Chip Development (RESCUE)		1	2019	4	2023

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7					R-1 Progra PE 030314 ty Program	n e) zation (Cryp	oto Mod)					
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
DV5: Crypto Modernization (Crypto Mod)	-	7.470	8.288	8.138	-	8.138	8.146	8.233	8.326	8.409	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project DV5, Cryptographic Modernization (Crypto Mod) is a key enabler of the Army Modernization Priorities in support of Army 2030/2040. Communications Security (COMSEC) is governed by the Chairman of the Joint Chiefs of Staff Instruction (CJCSA) 6510.

Crypto Mod performs test, evaluation, development, and configuration management for cryptographic devices that receive key through fill devices and allow for secure communication through Army devices such as radios and satellite terminals. In order to ensure Warfighters continue to have secured communications (i.e., encrypted data and voice), Army communications systems are required to be upgraded to modern algorithms to meet emerging threat developed by our adversaries. Crypto Modernization necessitates the utilization of the latest National Security Agency (NSA) cryptographic capabilities in order to defeat adversarial efforts to decrypt, disrupt, or exploit US Army networks. Communications Security (COMSEC) is the Army's implementation of NSA protections to create a unified network that is protected, resilient, and survivable.

To accomplish this multi-faceted effort, consistent with Strategic Planning Guidance and the Army Modernization and Strategy Plan, Crypto Mod performs evaluation of emerging threats, development of advances protections to defeat these threats, testing of commercial and government off the shelf applications developed to provide protections against identified threats, and assessment of new software and hardware updates to these end user devices and software to ensure they remain hardened against cyber-attack. This ensures that all endpoints from workstations in the strategic Enterprise to Tactical vehicles and equipment utilized by dismounted personnel forward deployed in hot zone are protected when processing the critical mission and voice data that provides the strategic overmatch required to accomplish the Army's mission.

FY 2025 funds in the amount of \$8.138 million will support the testing of all existing and emerging encryptors for Functionality, Security, and Interoperability. The program will continue testing and evaluation of COMSEC devices to confirm capability and interoperability on Army networks and tactical systems as well as identifying risk areas for compliance with COMSEC regulations and procedures.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: VINSON/ANDVT (Advanced Narrowband Digital Voice Terminal) Cryptographic Modernization (VACM) program	0.329	0.332	0.335
Description: This program researches, assesses, tests, plans and works to integrate VACM products for the Army. The VACM program is a NSA mandated program established to replace legacy external cryptographic devices such as the KY-57, KY-99A, KY-58, KY-99, KY-100 and CV- 3591 / KYV-5. In order to ensure the confidentiality, integrity and availability of classified			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: M	arch 2024	
	R-1 Program Element (Number/Name) PE 0303140A <i>I Information Systems Securi</i> <i>ty Program</i>		t (Number/N Crypto Mode	lame) rnization (Cry	rpto Mod)
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2023	FY 2024	FY 2025
communications, the cryptographic modules must be tested for interoperability software release will require testing to insure comparability and interoperability.	•	ich			
FY 2024 Plans: The program continues to test and evaluate new software update to VACM devinteroperability on Army networks and different tactical platforms as well as ider COMSEC regulations and procedures. Development activities are ongoing as p and installing at both CONUS and OCONUS locations.	ntifying new risk areas for compliance with	veys			
FY 2025 Plans: The program continues to test and evaluate new software update to VACM devinteroperability on Army networks and different tactical platforms as well as ider COMSEC regulations and procedures.	· ·				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to continuous effort to test and evaluate new software update to V	ACM devices.				
Title: Cryptographic Systems Test and Evaluation			5.358	5.530	5.371
Description: This program supports the Army Cryptographic Modernization. The capabilities to the COMSEC community in order to assess emerging technologi use; testing will be performed on hardware, software and network systems.					
<i>FY 2024 Plans:</i> Continue to conduct testing and evaluation of COMSEC devices to confirm cap and tactical systems as well as identifying risk areas for compliance with COMS emphasis on the Advanced Cryptographic Capabilities (ACC) program lead by to Crypto Systems compliant devices, Suite B IPSec devices built on commercial s (CHVP), and new software releases to HAIPE 4.X devices in accordance with A devices provide the critical security backbone for all NIPRNET, SIPRNET, JWIC and Enterprise networks. The program tests interoperability and provides ways (DIT) technology within the existing and future network infrastructure to defend	SEC regulations and procedures, with particula the NSA. The program will test and evaluate standards, Cryptographic High Value Product AR 700-142 Revision dated 8 June 2018. The CS and Intelligence networks in both the Tacti to insert data at rest (DAR) and data in transi	se cal			
FY 2025 Plans: Continue to conduct testing and evaluation of COMSEC devices to confirm cap and tactical systems as well as identifying risk areas for compliance with COMS emphasis on the Advanced Cryptographic Capabilities (ACC) program lead by	SEC regulations and procedures, with particula	ar			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	Project (Number/N DV5 / Crypto Mode	/Name) dernization (Crypto Mo		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Crypto Systems compliant devices, Suite B IPSec devices built on (CHVP), and new software releases to HAIPE 4.X devices in acco program tests interoperability and provides ways to insert data at r existing and future network infrastructure to defend against adverse	rdance with AR 700-142 Revision dated 8 June 2018. The est (DAR) and data in transit (DIT) technology within the			
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to the reduced requirement for lab equipment.				
Title: High Assurance Internet Protocol Encryption (HAIPE) extens	sion manager	1.078	1.714	1.71
Description: A management tool to configure the new extensions provide early indications of cyber-attacks.	to the HAIPE standard and process the resulting data to			
FY 2024 Plans: Continue software development efforts that will provide configurati interface for collecting and analyzing the data that results from imp software feature and new devices will be implemented.				
FY 2025 Plans: Continue software development efforts that will provide configurati interface for collecting and analyzing the data that results from implemented.				
FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to increased NSA requirements of software developr	nent efforts and user interface of the HAIPE extensions.			
Title: Program Management Office Support		0.705	0.712	0.71
Description: Program management includes overall management execution, contract management, and logistical support. Includes preetings.		am		
FY 2024 Plans: FY 2023 funds will provide overall management and oversight to in configuration management for cryptographic devices - to include M				
configuration management for cryptographic devices - to include in				

Exhibit R-2A, RDT&E Project Just	ification: PB	2025 Army							Date: Ma	arch 2024	
Appropriation/Budget Activity 2040 / 7						•	er/Name) stems Securi		Number/Na ypto Moder	ame) nization (Cry	pto Mod)
B. Accomplishments/Planned Pro	grams (\$ in I	<u>/lillions)</u>						F	Y 2023	FY 2024	FY 2025
FY 2025 funds will provide overall m	nanagement a	nd oversight	t to impleme	nt Crypto Mo	od test, evalu	ation, devel	opment and				
configuration management for crypt	ographic devi	ces - to inclu	de Matrix ar	nd Contracto	r support.						
FY 2024 to FY 2025 Increase/Deci Increase due to continuous effort to			ent and over	rsight suppor	rt.						
				Accon	nplishments	s/Planned P	rograms Sub	ototals	7.470	8.288	8.138
C. Other Program Funding Summ	ary (\$ in Milli	<u>ons)</u>	<u>FY 2025</u>	<u>FY 2025</u>	<u>FY 2025</u>					<u>Cost To</u>	
Line Item	FY 2023	FY 2024	Base	000	<u>Total</u>	FY 2026	FY 2027	FY 2028	FY 2029	<u>Complete</u>	Total Cos
 B96002: CRYPTOGRAPHIC SYSTEMS (CRYPTO SYS) 	50.151	87.423	66.420	-	66.420	56.568	56.596	56.171	56.732	Continuing	Continuing
• BS9716: NON PEO-SPARES	4.014	3.667	3.887	-	3.887	3.901	3.903	3.906	3.945	Continuing	Continuing
<u>Remarks</u> Line Item & Title: B96002 - Cryptographic Systems - BS9716 - NON PEO-SPARES - OI											
D. Acquisition Strategy											
The Cryptographic Systems procure Functionality, Security, Interoperable			•		•	•	• • • •				

Functionality, Security, Interoperability, and backward compatibility on software and hardware for both Tactical and Enterprise systems to ensure they remain hardened against cyberattack. CDD, approved by CIO/G6, 15 Jul 2010; ICD, approved by JROC, 25 Mar 2011; AAO; approved by G-3, 15 Dec 2011 and revised and approved, 19 Jun 2015.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20)24	
Appropriation/Budg 2040 / 7	et Activity	1					3140A / <i>Iı</i>	•	lumber/Na on Systems	,		: (Numbe i Crypto Mod		n (Crypto) Mod)
Management Servic	es (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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	PEO C3T & CECOM : Various; APG, MD	1.301	0.705	Dec 2022	0.712	Dec 2023	0.714	Dec 2024	-		0.714	Continuing	Continuing	Continuin
		Subtotal	1.301	0.705		0.712		0.714		-		0.714	Continuing	Continuing	n/A
Product Developme	ent (\$ in M	illions)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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	SS/LH	CCDC C5ISR S&TCD : APG, MD	8.660	1.107	Nov 2022	1.086	Nov 2023	1.091	Nov 2024	-		1.091	Continuing	Continuing	Continuin
Engineering Support	C/CPFF	CACI : Aberdeen Maryland	9.069	0.990	Feb 2023	0.960	Feb 2024	0.962	Feb 2025	-		0.962	Continuing	Continuing	Continuin
		Subtotal	17.729	2.097		2.046		2.053		-		2.053	Continuing	Continuing	g N/A
Test and Evaluation	(\$ in Milli	ons)		FY 2	2023	FY 2	2024		2025 ase		2025 CO	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 & Evaluation	SS/LH	CCDC C5ISR S&TCD : APG, MD	3.841	1.505	Nov 2022	1.789	Nov 2023	1.797	Nov 2024	-		1.797	Continuing	Continuing	Continuin
Test & Evaluation	C/CPFF	CACI : APG, MD	11.325	3.163	Feb 2023	3.741	Feb 2024	3.574	Feb 2025	-		3.574	Continuing	Continuing	Continuin
		Subtotal	15.166	4.668		5.530		5.371		-		5.371	Continuing	Continuing	g N/A
			Prior						2025		2025	FY 2025	Cost To	Total	Target Value of
			Years	FY 2	2023	FY 2	2024	Ba	ise	0	0	Total	Complete	Cost	Contract

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Ar	my					Date: March 202	24	
Appropriation/Budget Activity 2040 / 7		PE 0	Program Elemen 303140A / Inform ogram		ct (Number/Name) Crypto Modernization (Crypto Mod)			
Event Name	FY 2023	FY 2024	FY 2025		FY 2027 2 3 4	FY 2028	FY 2029	
VINSON/ANDVT Crytographic Modernization (VACM) INTEROP								
TEST AND EVALUATION OF SECURE VOICE SW & HW								
TEST AND EVALUATION OF INE SW & HW								
HAIPE EXTENSION MANAGER								

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A <i>I Information Systems Securi</i> <i>ty Program</i>	 umber/Name) oto Modernization (Crypto Mod)

Schedule Details

	St	art	End		
Events	Quarter	Year	Quarter	Year	
VINSON/ANDVT Crytographic Modernization (VACM) INTEROPERABILITY	1	2016	4	2035	
TEST AND EVALUATION OF SECURE VOICE SW & HW	4	2013	4	2035	
TEST AND EVALUATION OF INE SW & HW	1	2017	4	2035	
HAIPE EXTENSION MANAGER	1	2017	4	2035	

Exhibit R-2, RDT&E Budget Item	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 7: Operational Systems Development				-	am Elemen 1A / Globai	•	em						
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2029	Cost To Complete	Total Cost				
Total Program Element	-	21.775	13.082	2.566	-	2.566	2.601	2.637	2.674	2.674	0.000	48.009	
083: Global Combat Support Sys - Army	-	21.775	13.082	2.566	-	2.566	2.601	2.674	2.674	0.000	48.009		

A. Mission Description and Budget Item Justification

GCSS-Army gives combat forces a decisive edge by providing soldiers a seamless flow of timely, accurate, accessible, and secure logistics information to get combat power at the right place, at the right time. The GCSS-Army program is an information and communications technology investment that provides key enabling support to the transformation of the Army into a network-centric, knowledge-based future force. The GCSS-Army approved Capability Development Document (CDD) and Capability Production Document (CPD) require an enterprise approach to replace current logistics and maintenance Standard Army Management Information Systems (STAMIS) to include supply, maintenance, ammunition, aviation, and property book. GCSS-Army implements best business practices to streamline supply, accountability, maintenance, distribution, and reporting procedures in support of the future force transition path of The Army Campaign Plan.

GCSS-Army must take critical steps towards integration and implementation of the next generation of Enterprise Business Systems capabilities. This effort will address the obsolescence of existing SAP Enterprise Resource Planning (ERP) logistics and financial management platforms. GCSS-Army's modernization work sets the conditions for development of a converged, post-modern Defense Business System that streamlines and integrates the Army's core business functions.

GCSS-Army must identify redundant processes as candidates for business process re-engineering. Funding will support the 1) market research of Industry best practices, 2) Initiation of an Army Enterprise Development Environment to enable prototyping which reduces risk by aiding the requirements development. This environment includes: Cloud-hosted infrastructure, applications, and programs and tools, 3) government Program Management and Systems Engineering and Technical Assistance (SETA) contractors needed to plan for and manage the initiation of the post-modern system implementation effort.

The funds in the GCSS-Army Research Development Test & Evaluation (RDT&E) line are for building the software solution for disconnected supply, ground maintenance and accountability, and Store and Forward Capability.

Enterprise Resource Plan (ERP) modernization supported EBS-C in FY 2023 before full transition of efforts to EBS-C in FY 2024.

GCSS-Army Project EK2 (Aviation logistics) completed in FY 2023. The Aviation sustainment effort has been rolled into the GCSS-Army Capability Support using mostly OMA.

In FY 2024 after transition to capability support, RDT&E funding for Continuous Enhancements will be used to execute system change requests (SCRs) to enhance sustainment activities, accountability, auditability, and calculations of total cost of ownership. Implementation of SCRs enhance capability support and effectiveness by synchronizing system data and utilizing enterprise interface tools to eliminate input errors.

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 7: Operational	PE 0303141A / Global Combat Support System
Systems Development	
FY 2025 Base dollars in the amount of \$2.566 million will continue to support C	GCSS-Army Audit related fixes and Cyber updates. Other planned FY 2025 enhancements

include: G-Invoicing, Enhancement Pack 8, and follow-on Identity, Credential, and Access Management (ICAM) to include privilege user access management and zero trust. The FY 2025 RDT&E funds will also be used to complete the software solution for disconnected supply, ground maintenance and accountability, and Store and Forward Capability.

GCSS-Army Enterprise Aviation is integrating the Aircraft Notebook (ACN) data into GCSS-Army via an interface with the Enterprise Aviation Middleware components.

Advanced Manufacturing (AdvM) Data Repository (DR) is an Army priority. AdvM DR will fully integrate AdvM capabilities and enable Digital Thread (DT) within the Army ERPs. It will integrate the AdvM DR with the Army Futures Command (AFC) Enterprise Product Management (ePDM) system providing a fully automated capability for the transfer of the AdvM product configuration data to the AdvM DR. Capability will reduce manual efforts to transfer configuration data to the AdvM DR ensuring accuracy and maintaining configuration of AdvM print data.

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	22.600	13.082	2.561	-	2.561
Current President's Budget	21.775	13.082	2.566	-	2.566
Total Adjustments	-0.825	0.000	0.005	-	0.005
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.825	-			
 Adjustments to Budget Years 	-	-	0.005	-	0.005

Change Summary Explanation

Increased funding due to revised economic assumptions.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army											Date: March 2024			
Appropriation/Budget Activity 2040 / 7							t (Number/ I Combat Sເ	lumber/Name) oal Combat Support Sys - Army						
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2029	Cost To Complete	Total Cost				
083: Global Combat Support Sys - Army	-	21.775	13.082	2.566	-	2.566	2.601	2.637	2.674	2.674	0.000	48.009		
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-				

A. Mission Description and Budget Item Justification

GCSS-Army provides critical Army sustainment support to the soldier with a seamless flow of timely, accurate, accessible, and secure information management that gives combat forces a decisive edge and is essential for combat readiness. The GCSS-Army approved Capability Development Document (CDD) and Capability Production Document (CPD) require an enterprise approach to replace current logistics and maintenance Standard Army Management Information Systems (STAMIS) to include supply, maintenance, ammunition and property book. GCSS-Army implements best business practices to streamline supply, accountability, maintenance, distribution, and reporting procedures in support of the future force transition path of The Army Campaign Plan. GCSS-Army is financially compliant and is a key component for the Army Enterprise Strategy to be financially auditable.

FY 2023 RDT&E funds for ERP Modernization supported EBS-C efforts until the efforts transition to EBS-C program in FY 2024.

The FY 2024 funds in the GCSS-Army Research Development Test & Evaluation (RDT&E) line are for building the software solution for disconnected supply, maintenance and accountability, and Store and Forward capability. The Army requires a disconnected operations architecture for GCSS-Army to support ground mission. Currently the Army has battlefield gaps without network connectivity: inability to maintain or regenerate combat power, order/process spare parts, track battle losses, or conduct maintenance. The disconnected operations architecture will alleviate these problems when there are disruptions in communications or cyber-attacks. The FY 2024 funding also supports critical change requests in each fiscal year, coming from the warfighter and prioritized by the Combat Developer, for the baseline system. Implementation of SCRs enhance capability support and effectiveness by synchronizing system data and utilizing enterprise interface tools to eliminate input errors.

Also in FY 2024, RDT&E funds will support Advanced Manufacturing (AdvM) Data Repository (DR). AdvM DR will fully integrate AdvM capabilities and enable the Digital Thread (DT) within the Army ERPs. It will integrate the AdvM DR with the Army Futures Command (AFC) Enterprise Product Management (ePDM) system providing a fully automated capability for the transfer of AdvM product configuration data to the AdvM DR. Capability will reduce manual efforts to transfer configuration data to the AdvM DR. Capability will reduce manual efforts to transfer configuration data to the AdvM DR ensuring accuracy and maintaining configuration control of AdvM print data.

FY 2025 Base dollars in the amount of \$2.566 million will continue to support GCSS-Army Audit related fixes and Cyber updates. Other enhancements include: G-Invoicing, Enhancement Pack 8, and follow-on ICAM to include privilege user access management and zero trust. The FY 2025 RDT&E funds will also be used to complete the software solution for disconnected supply, ground maintenance and accountability, and Store and Forward Capability.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Product Development	-	7.800	0.853

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name)ProjectPE 0303141A / Global Combat Support Syst083 / 0em	ct (Number/N Global Comb		/s - Army
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Description: The funds in the GCSS-Army RDT&E line are for building the soft maintenance and accountability, and Store and Forward capability. The Army reGCSS-Army to support ground mission. The FY 2024 funding continues the desupply, ground maintenance and accountability.	equires a disconnected operations architecture for			
FY 2024 Plans: The FY 2024 RDT&E funds are for building the software solution for disconnect Store and Forward capability. The Army requires a disconnected operations are mission.				
FY 2025 Plans: The FY 2025 funding completes the development of the software solution for di accountability.	sconnected supply, ground maintenance and			
FY 2024 to FY 2025 Increase/Decrease Statement: RDT&E funding decreases by \$6.947 million from FY 2024 to FY 2025 due to c test and product development in FY 2024.	completing the majority of Disconnected Operations			
Title: Product Development and Modernization		8.829	-	-
Description: RDT&E funding in FY 2023 to support ERP Modernization focuse prototype(s) demonstrating key Audit, Finance and Logistics capabilities, applic phases of the ERP modernization. In support of this, government Program Mar Assistance (SETA) contractors were used to plan for and manage the initiation to develop a cloud prototype(s) environment(s) was performed to support the d capabilities in compliance with Impact Level 4 (IL4) and Impact Level 6 (IL6) re- Business Process Re-engineering was performed to end processes based on of support limited to no customization approach and produce a solution that is cor	cation and technical architecture to support the next nagement and Systems Engineering and Technical of the ERP systems implementation effort. Work evelopment of modernized finance and logistics quirements. In addition, significant and continuous commercial off the shelf software best practices to			
Title: ERP Modernization Program Management Support		8.570	-	-
Description: RDT&E funding in FY 2023 to support ERP Modernization focuse analysis and prototype(s) demonstrating key Audit, Finance and Logistics capa to support the next phases of the ERP modernization. In support of this, govern Engineering and Technical Assistance (SETA) contractors were needed to plan implementation effort. A cloud prototype(s) environment(s) was established to s and logistics capabilities in compliance with Impact Level 4 (IL4) and Impact Level	bilities, application and technical architecture ment Program Management and Systems of for and manage the initiation of the ERP systems support the development of modernized finance			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	arch 2024	
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name)ProjePE 0303141A / Global Combat Support Syst083 /em	ct (Number/N Global Comb		rs - Army
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
continuous Business Process Re-engineering was performed to develop end to software best practices to support limited to no customization approach and promilitary as necessary.	•			
Title: Cloud Support Development		4.376	-	-
Description: RDT&E funding in FY 2023 to support ERP Modernization focuse analysis and prototype(s) demonstrating key Audit, Finance and Logistics capa to support the next phases of the ERP modernization. In support of this, govern Engineering and Technical Assistance (SETA) contractors were used to plan for implementation effort. A cloud prototype(s) environment(s) was being establish finance and logistics capabilities in compliance with Impact Level 4 (IL4) and Im significant and continuous Business Process Re-engineering was required to d off the shelf software best practices to support limited to no customization appro- possible and military as necessary.	bilities, application and technical architecture ment Program Management and Systems or and manage the initiation of the ERP systems ed to support the development of modernized npact Level 6 (IL6) requirements. In addition, evelop end to end processes based on commercial			
Title: Advanced Manufacturing Data Repository		-	3.610	-
Description: Advanced Manufacturing (AdvM) Data Repository (DR) is an Arm capabilities and enable the Digital Thread (DT) within the Army ERPs. It will into Command (AFC) Enterprise Product Management (ePDM) system providing a product configuration data to the AdvM DR. Capability will reduce manual effort ensuring accuracy and maintaining configuration control of AdvM print data.	egrate the AdvM DR with the Army Futures fully automated capability for the transfer of AdvM			
FY 2024 Plans: Planned accomplishments FY 2024: Commence work developing integration w Product Data Management (ePDM) system eliminating manual processes and				
FY 2024 to FY 2025 Increase/Decrease Statement: No funding in FY 2025 due to integration effort complete by end of FY 2024.				
Title: Continuous Enhancements		-	1.672	1.713
Description: The funds in the GCSS-Army RDT&E line are for continuous enhance su RDT&E funding will be used to execute system change requests to enhance su calculations of total cost of ownership.				

Exhibit R-2A, RDT&E Project Justif	ication: PB	2025 Army							Date: M	arch 2024			
Appropriation/Budget Activity 2040 / 7		t (Number/N Global Comba		rs - Army									
B. Accomplishments/Planned Prog	rams (\$ in I	<u>Millions)</u>						Γ	FY 2023	FY 2024	FY 2025		
FY 2024 Plans: The funds will support GCSS-A Audit change requests, coming from the Co							unds are for	critical					
<i>FY 2025 Plans:</i> The funds will continue to support GC Enhancement Pack 8, and follow-on							clude: G-Inv	voicing,					
FY 2024 to FY 2025 Increase/Decree Funding increase in FY 2025 due to e													
				Accon	nplishments	s/Planned P	rograms Su	ıbtotals	21.775	13.082	2.566		
C. Other Program Funding Summa	rv (\$ in Milli	ons)											
Line Item	FY 2023	FY 2024	<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 202</u>	8 FY 2029		Total Cos		
• W11011: GCSS-Army Increment 2 • OMA - GCSS-ARMY APE 432612000: GCSS-ARMY OMA	4.102 50.582	1.987 70.095	4.103 52.119										
<u>Remarks</u>													

D. Acquisition Strategy

GCSS-Army will design and develop the software solution for disconnected ground operations. The program will design and build user screens for disconnected supply, ground maintenance, and accountability. The Army will use a disconnected operations architecture for GCSS-Army to support the ground missions. In FY 2021, the program office awarded the initial contract supporting disconnected prototyping. In FY 2023 and FY 2024, the program will complete the OTA and prepare for production decision.

FY 2025 will include continuous enhancements to support GCSS-Army Audit related fixes and Cyber updates as well as G-Invoicing, Enhancement Pack 8, and followon ICAM to include privilege user access management and zero trust. The FY 2025 RDT&E funds will also be used to complete the software solution for disconnected supply, ground maintenance and accountability, and Store and Forward Capability.

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20	24	
Appropriation/Budge 2040 / 7	Appropriation/Budget Activity 2040 / 7								umber/Na mbat Sup			(Numbei lobal Corr		ort Sys -	Army
Product Developmen	nt (\$ in Mi	illions)		FY	2023	FY	2024		2025 Ise		2025 CO	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
Enterprise Resource Planning (ERP) design and development	C/Various	Accenture Federal LLC : Arlington, VA 22203	467.058	-		1.672	Dec 2023	1.713	Dec 2024	-		1.713	0.000	470.443	457.056
Disconnected Operations Solution	SS/TBD	Ernst & Young : Arlington VA	35.271	-		7.800	Jan 2024	0.853	Jan 2025	-		0.853	0.000	43.924	-
ERP Modernization SW Development	Option/ Various	Various : Various	-	8.829	Aug 2023	-		-		-		-	0.000	8.829	-
ERP Modernization Cloud Support Development	Option/ Various	Various : Various	-	4.376	Aug 2023	-		-		-		-	0.000	4.376	-
Advanced Manufacturing Data Repository	C/CPFF	Accenture : Springfield VA	-	-		3.610	Dec 2023	-		-		-	0.000	3.610	-
		Subtotal	502.329	13.205		13.082		2.566		-		2.566	0.000	531.182	N/A
Support (\$ in Millions	s)		[FY	2023	FY 2	2024	FY 2 Ba	2025 Ise		2025 CO	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
ERP Modernization Program Management	C/T&M	Logistics Management Institute : Tysons VA	-	8.570	Aug 2023	-		-		-		-	0.000	8.570	-
		Subtotal	-	8.570		-		-		-		-	0.000	8.570	N/A
			Prior Years	FY	2023	FY	2024		2025 Ise	FY 2 OC	2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	502.329	21.775		13.082		2.566		-		2.566	0.000	539.752	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025	Army									Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7							mber/Nam abat Suppor		Project (N 083 / Glok			ort Sys	- Army
Event Name	FY 2023	FY 20	024	FY	2025		FY 2026	F	Y 2027	F	Y 2028	F	Y 2029
Continuous Enhancements (Design and Development)	1 2 3 4	1 2 3	3 4	1 2	3 4	1	2 3 4	1	2 3 4	1 2	3 4	1 :	2 3 4
Disconnected Operations Solution (Test and Development)													
Disconnected Operations Solution (Deployment)													
Disconnected Operations Solution Full Deployment					4	3							
ERP Modernization Prototype Award 1	A												
ERP Modernization Capability Build 1													
ERP Modernization transition to EBS-C		2											
Advanced Manufacturing Data Repository													

Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name)	Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army			Date: March 2024
2040 / 7 PE 0303141A / Global Combat Support Syst 083 / Global Combat Support Sys - Allem	Appropriation/Budget Activity 2040 / 7	PE 0303141A / Global Combat Support Syst 08	(

Schedule Details

	Sta	End		
Events	Quarter	Year	Quarter	Year
Seg 2 Contract Award	1	2008	1	2008
Increment 1 - Acquisition Review	2	2008	2	2008
Increment 1/Segment 1 Operational Assessment	1	2008	3	2010
Increment 1 - Milestone B	4	2008	4	2008
Increment 1/Release 1.1 DTOE	3	2010	4	2010
GCSS-Army Release 1.1 Design, Build, Test & Stabilize	1	2011	3	2011
Increment 1 - Milestone C	4	2011	4	2011
Release 1.1 Initial Operational Test and Evaluation (IOT&E)	1	2012	1	2012
Release 1.1 Stabilization	2	2011	1	2013
Lead Site Verification	1	2013	1	2013
Release 1.1 Full Deployment Decision	1	2013	1	2013
Field Wave 1	1	2013	1	2016
GCSS-Army Release 1.2 (Wave 2) Plan, Analyze, Design, Build & Test	3	2011	4	2015
Release 1.2 (Wave 2) Lead Site Verification Test	3	2015	3	2015
Release 1.2 (Wave 2) In Progress Review	4	2015	4	2015
Field Release 1.2 (Wave 2)	1	2015	1	2018
Continuous Enhancements (Design and Development)	1	2018	4	2029
Disconnected Operations Solution (Test and Development)	1	2021	1	2025
Disconnected Operations Solution (Deployment)	2	2025	4	2025
Disconnected Operations Solution Full Deployment	1	2026	1	2026
ERP Modernization Functional Requirements ATP	4	2021	4	2021
ERP Modernization Risk Reduction Acquisition Decision Memorandum	1	2022	1	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Mar	rch 2024
Appropriation/Budget Activity 2040 / 7	Element (Numbe / Global Combat S		Project (Number/Name) t 083 / Global Combat Support Sys - Ar		
		St	art	E	End
Events		Quarter	Year	Quarter	Year
ERP Modernization Other Transaction Authority Start		3	2022	3	2022
ERP Modernization Prototype Award 1		1	2023	1	2023
ERP Modernization Capability Build 1		1	2023	4	2023
ERP Modernization transition to EBS-C		4	2023	4	2023
Advanced Manufacturing Data Repository		1	2024	4	2024

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army									Date: March 2024			
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	Research, Development, Test & Evaluation, Army I BA 7: Operational PE 0303142A I SATCOM Ground Environment (SPACE											
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	-	14.551	26.838	26.643	-	26.643	36.166	12.389	12.530	12.655	Continuing	Continuing
253: Dscs-Dcs (Phase II)	-	4.523	11.902	4.794	-	4.794	4.800	4.850	4.906	4.955	Continuing	Continuing
456: MILSATCOM System Engineering	-	2.813	1.776	1.769	-	1.769	2.415	2.470	2.498	2.523	0.000	16.264
CO7: Protected Tactical Satellite Communications	-	7.215	13.160	20.080	-	20.080	28.951	5.069	5.126	5.177	0.000	84.778

A. Mission Description and Budget Item Justification

Project 253, Dscs-Dcs (Phase II), SATCOM Ground Environment (SPACE) - A portion of this funding line is directly aligned to support the Army Network Modernization Strategy.

FY 2025 Base funding in the amount of \$4.794 million develops Satellite Communication (SATCOM) ground subsystem equipment and software in support of Joint Chiefs of Staff (JCS) validated Mission Command Network and Systems requirements for the worldwide Defense Enterprise Wideband SATCOM System (DEWSS). DEWSS is composed of the Super High Frequency (SHF) Wideband Global SATCOM (WGS) programs, which supports legacy, interim and emerging communication space architectures and future force requirements. Expansion of the WGS constellation and upgrades to WGS capabilities are vital to support the Army's emerging power projection and rapid deployment mission. WGS provides high-capacity tactical end-to-end connectivity and interoperability with strategic networks and national decision-makers, satisfying JCS network operations in support of the President, JCS, combatant commanders, military departments, Department of State and other government departments and agencies. This requirement supports the Army 2030 / 2040 Strategic Plan.

Project 456, MILSATCOM System Engineering is directly aligned to Army Network Modernization Strategy.

FY 2025 base funding in the amount of \$1.769 million supports MILSATCOM System Engineering (MSE). MSE assures the tactical Army satellite communications (SATCOM) and SATCOM On-the-Move (SOTM) systems are engineered to legally and efficiently operate worldwide. MILSATCOM System Engineering shapes Joint SATCOM systems' design efforts, standards development and planning processes. MILSATCOM System Engineering represents the Army's tactical interests within Department of Defense (DoD), Commercial and International forums to ensure affordable and scalable future SATCOM capabilities for maneuver forces. These efforts are synchronized with the Space Force and DoD's plans for Protected Tactical Waveforms (PTW) on Wideband Global SATCOM (WGS), the Protected Tactical Satellite (PTS), and commercial SATCOM systems. These efforts also ensure that the Army continues to evaluate evolving technologies for the planning and designing of SATCOM solutions that reduce technical and programmatic impacts. MILSATCOM System Engineering expertise supports obtaining SATCOM modem and terminal certifications for Tactical Network systems to operate on the network, provides SATCOM spectrum management and lab support, and supports testing and integration of Assured Position Navigation and Timing (APNT) capabilities.

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 7: Operational	PE 0303142A / SATCOM Ground Environment (SPACE)
Systems Development	
MILSATCOM System Engineering also provides the technical and programm	natic expertise to facilitate the Unified Network Capabilities and Integration (UNCI)
	chnologies within the Tactical Network portfolio. MILSATCOM SE provides the programmati
and technical expertise to coordinate the UNCI mission to align and integrate	e elements of the Tactical Network portfolio in support of units such as the Expeditionary
Signal Battalion (ESB) and Multi Domain Task Force (MDTF). MILSATCOM	System Engineering expertise supports the evaluation and integration of commercial
SATCOM (COMSATCOM) capabilities with MILSATCOM and Tactical Netwo	ork systems in support of pathway diversity and other modernization efforts. MILSATCOM
System Engineering supports the development of the Network Centric Wave	eform Technology (NCW-T) to support regional SATCOM planning and management.
MILSATCOM System Engineering expertise with lab testing and analysis sup	pports future efforts to support One Network Service Support Center and the ability to
evaluate Low Probability of Intercept (LPI), Low Probability of Detection (LPD	D), Transmission Security (TRANSEC), and resiliency capabilities of current and emerging
technologies.	
Project CO7 Protected Anti, Jam Tactical SATCOM is directly aligned to the	Army Network Modernization Priority and supports the Army of 2030 and 2040 initiatives.
Froject COT, Frotected Anti-Jam Tactical SATCOM is directly aligned to the	Anny Network Modernization Phonty and supports the Anny of 2050 and 2040 initiatives.
Project CO7, Protected Anti-Jam Tactical SATCOM funding supports develop	opment of the Army's Resilient Anti-Jam modem (RAM previously referred to as Block II
	nd program management. Funding supported the prior development of the Air Force/Army
Anti-Jam Modem (A3M) (previously referred to as Block I Large Form Factor	
	mmunications gap for Anti-Jam SATCOM capability for mobile ground forces conducting
	es the ability for the Army tactical terminals to be resilient in a contested environment and
protect against catastrophic loss of situational awareness and command and	d control during critical battle movement with Anti-Jam capabilities. A3M will offer tactical
	I. These DoD Joint efforts are synchronized with United States Space Force (USSF) and
Army for execution of Protected Tactical Waveforms (PTW) on Wideband Gle	lobal SATCOM (WGS), Protected Tactical Satellites (PTS), and commercial SATCOM
systems.	
Protected SATCOM supports initial development, testing and certification of	production representative Protected Tactical Waveform (PTW) modems, incorporating Arm
	communications capabilities to address resiliency in jamming environments. The Protected/
Resilient SATCOM Abbreviated - Capabilities Development Document (A-CE	
FY 2025 funding in the amount of \$20.080 million will support development of	of Army RAM, contactor and government system engineering and program management
(SEPM), test and certification, logistics support and data development and of	other associated activities as required.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	Date:	Date: March 2024					
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA Systems Development	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)						
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total		
Previous President's Budget	18.297	26.838	11.731	-	11.731		
Current President's Budget	14.551	26.838	26.643	-	26.643		
Total Adjustments	-3.746	0.000	14.912	-	14.912		
 Congressional General Reductions 	-	-					
 Congressional Directed Reductions 	-	-					
 Congressional Rescissions 	-	-					
 Congressional Adds 	-	-					
 Congressional Directed Transfers 	-	-					
Reprogrammings	-3.079	-					
SBIR/STTR Transfer	-0.667	-					
 Adjustments to Budget Years 	-	-	14.912	-	14.912		

Change Summary Explanation

FY2025 increase of \$14.912 million supports the Army development and testing of the Resilient Anti-Jam Modem (RAM).

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army									Date: March 2024			
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environm ent (SPACE)				Project (Number/Name) 253 / Dscs-Dcs (Phase II)			
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
253: Dscs-Dcs (Phase II)	-	4.523	11.902	4.794	-	4.794	4.800	4.850	4.906	4.955	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 253, Dscs-Dcs (Phase II), SATCOM Ground Environment (SPACE) supports the Army's 2030 / 2040 Strategic Plan and network modernization strategy.

FY 2025 Base dollars in the amount of in the amount of \$4.794 million develops Satellite Communication (SATCOM) ground subsystem equipment and software in support of Joint Chiefs of Staff (JCS) validated Mission Command Network and Systems requirements for the worldwide Defense Enterprise Wideband SATCOM System (DEWSS). DEWSS is composed of the Super High Frequency (SHF) Wideband Global SATCOM (WGS) programs, which supports legacy, interim and emerging communication space architectures and future force requirements. Expansion of the WGS constellation and WGS capabilities are vital to support the Army's emerging power projection and rapid deployment mission. WGS provides high capacity tactical end-to-end connectivity and interoperability with strategic networks and national decision-makers, satisfying JCS network operations in support of the President, JCS, combatant commanders, military departments, Department of State and other government departments and agencies.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: SATCOM Terminal Digital Intermediate Frequency Implementation Analysis	3.684	4.151	4.794
Description: SATCOM Terminal Digital Intermediate Frequency (IF) implementation analysis and experimentations aimed at improving bandwidth efficiency of gateway terminals while providing an additional layer of resiliency through terminal redundancy. These analyses and experimentations include various evaluations for digital terminal components to replace current, less efficient, analog components. These analyses also include assessment of terrestrial connectivity among SATCOM terminals to enable Continuity of Operations (COOP) and failover scenarios required for resiliency.			
FY 2024 Plans: Continue to integrate Digital IF Solutions for the Interconnect Facility (ICF) Replacement Wideband Signal Processors (WSP), COTS LAN Switches and Routers and High Speed Fiber Optics into the Prototyping, Integration, Test, Training (PITT) facility at Tobyhanna Army Depot (TYAD). Perform technical assessments and Wideband Global SATCOM (WGS) delta certification tests.			
FY 2025 Plans: Continue to integrate digital IF solutions, including COTS LAN Switches and Routers, High Speed Fiber Optics, and additional Wideband Signal Processors (WSP) solutions into the Prototyping, Integration, Test, and Training facility at Tobyhanna Army Depot (TYAD). Perform technical assessments and Wideband Global SATCOM (WGS) certification and Risk Management Framework (RMF) accreditation tests.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Appropriation/Budget Activity 2040 / 7 B. Accomplishments/Planned Programs (\$ in Millions) Increase due to continued integration of Digital IF Solutions. Title: Electromagnetic Interference Mitigation Analysis Description: Completed assessments of emerging radio frequency	PE 03		nent (Numbo ATCOM Grou		-	t (Number/N Dscs-Dcs (Ph	ase II)	
Increase due to continued integration of Digital IF Solutions. <i>Title:</i> Electromagnetic Interference Mitigation Analysis Description: Completed assessments of emerging radio frequency					Г	EV 2023		
<i>Title:</i> Electromagnetic Interference Mitigation Analysis Description: Completed assessments of emerging radio frequency						112025	FY 2024	FY 2025
Description: Completed assessments of emerging radio frequency								
						0.400	-	-
effectiveness in improving reliability/resiliency of strategic and tactic firmware that will improve protected SATCOM modem/terminal perf environment. Technology will also improve terminal performance ag	cal satellite commu formance in electro	nications. M -magnetic ir	ature technol Iterference co	ogy to softwa ontested				
Title: Enterprise Digital IF Multi-carrier (EDIM) Modem	erprise Digital IF Multi-carrier (EDIM) Modem 0.43							
ife legacy modem currently fielded at all DoD Gateways. New techn MILSATCOM capacity demands in support of JADC2, Digital IF to e Cancellation to improve reliability of SATCOM communication links. Degin First Article Test and Wideband Global SATCOM (WGS) syst FY 2024 Plans:								
Continue Non-Recurring Engineering (NRE) efforts to integrate, tes	st and certify the ED	DIM Modem	Platform.					
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease reflects completion of Non-Recurring Engineering (NRE)	efforts in FY 2024.							
	Accor	nplishment	s/Planned Pi	rograms Sul	ototals	4.523	11.902	4.79
C. Other Program Funding Summary (\$ in Millions)								
	2025 FY 2025	<u>FY 2025</u>					<u>Cost To</u>	
	Base OCO 7.058 -	<u>Total</u> 87.058	<u>FY 2026</u> 90.512	<u>FY 2027</u> 90.556	<u>FY 202</u> 90.63		 <u>Complete</u> Continuing 	

This finances technical maturation, systems engineering, modem risk mitigation, and risk management framework support. Funding provides for SATCOM terminal upgrades, enhancement of baseband throughput capabilities, technology insertion and upgrades which improves SATCOM gateway resiliency while allowing for full utilization of Wideband Global SATCOM (WGS) capabilities. Both the Wideband SATCOM Operational Management System (WSOMS) and the Enterprise Wideband SATCOM Terminal System (EWSTS) Capability Production Documents (CPDs) contain Netcentric-Ready Key Performance Parameters (NR-KPPs) as required by

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		_	Date: March 2024
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 7	PE 0303142A / SATCOM Ground Environm	253 I Dscs	e-Dcs (Phase II)
	ent (SPACE)		

CJCSI 6212.01C. Netcentric efforts are required to facilitate the migration from the current trunk-based communications systems to Internet Protocol (IP) based systems and to engineer, test and integrate IP based capabilities into WSOMS and EWSTS systems. Studies, risk mitigation, system integration and advanced demonstrations for Netcentric baseband and policy-based control will accommodate technology insertion, data sharing, remote operations, architecture efforts and use of commercial technology, thus ensuring the life of the Defense Enterprise Wideband Satellite System (DEWSS) terminal family beyond 2035 and reducing lifecycle costs and enterprise requirements on the WGS satellites in the future. Contracting approach for new technology is through the use of Broad Agency Announcements (BAA) and Other Transaction Authority (OTA) contracts. SATCOM Terminal Digital Intermediate Frequency (IF) demonstrations with multi-vendor equipment will be conducted using live satellite links between Tobyhanna Army Depot (TYAD) and Joint SATCOM Engineering Center (JSEC) at Aberdeen Proving Grounds. All components demonstrated will be at Technology Readiness Level (TRL) 6. Electromagnetic Interference Algorithms at TRL 6 will be hosted on a stand-alone hardware platform and tested at JSEC using live satellite links. All verified algorithms and performance specifications will transition to the Enterprise Digital IF Multi-Carrier (EDIM) modem program during 4Q FY 2023.

Appropriation/Budge 2040 / 7	t Activity	1	2025 Army	<u>.</u>		R-1 Program Element (Number/Name) Project (Number/Name) PE 0303142A / SATCOM Ground Environm 253 / Dscs-Dcs (Phase II) ent (SPACE) 253 / Dscs-Dcs (Phase II)									
Product Developmen	nt (\$ in Mi	illions)	ſ	FY	2023	FY	2024	FY 2 Ba		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
SATCOM Terminal Digital IF Implementation Analysis	MIPR	Aberdeen Proving Ground : MD	3.010	2.732	Jan 2023	3.336	Jan 2024	4.374	Jan 2025	-		4.374	Continuing	Continuing	Continuin
Electromagnetic Interference Mitigation Analysis	MIPR	Aberdeen Proving Ground : MD	2.910	0.400	Jan 2023	-		-		-		-	Continuing	Continuing	Continuin
Enterprise Digital IF Multi- carrier (EDIM) Modem System Engineering Analysis	MIPR	ACC - Rock Isand : IL	-	0.439	Jan 2023	7.751	Jan 2024	-		-		-	Continuing	Continuing	Continuinç
		Subtotal	5.920	3.571		11.087		4.374		-		4.374	Continuing	Continuing	N/A
Support (\$ in Millions	s)			FY	2023	FY 2	2024	FY 2 Ba			2025 CO	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
In-house Support	Allot	PdM WESS : Ft. Belvoir, VA	0.105	0.060		0.015		0.020		-		0.020	Continuing	Continuing	Continuin
Contractor Support	MIPR	ACC : Rock Island, IL	1.151	0.892	Jan 2023	0.800	Feb 2024	0.400	Feb 2025	-		0.400	Continuing	Continuing	Continuin
		Subtotal	1.256	0.952		0.815		0.420		-		0.420	Continuing	Continuing	N/A
			Prior Years	FY	2023	FY 2	2024	FY 2 Ba			2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	7.176	4.523		11.902		4.794		-		4.794	Continuing	Continuing	N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	vrmy					Date: March 20	24
Appropriation/Budget Activity 2040 / 7		PE	1 Program Elemer 0303142A / SATC t (SPACE)	nt (Number/Nam COM Ground Envi	e) Project (N ironm 253 I Dsc	Number/Name) s-Dcs (Phase II)	
Event News	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Event Name	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
SATCOM Terminal Digital Intermediate Frequency (IF) Impl							
Electromagnetic Interference Mitigation Analysis							
Enterprise Digital IF Multi-carrier (EDIM) Modem System							

hibit R-4A, RDT&E Schedule Details: PB 2025 Army					Date: March	h 2024
propriation/Budget Activity 40 / 7	R-1 Program Element PE 0303142A / SATCO ent (SPACE)			Project (N 253 / Dscs	,	
ç	Schedule Details					
		Sta	rt		En	ıd
Events		Sta arter	rt Year	C	En Quarter	ıd Year
	Qua			C		
Events	Qua		Year	C		Year

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Mare	ch 2024		
Appropriation/Budget Activity 2040 / 7											Number/Name) SATCOM System Engineering		
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	
456: MILSATCOM System Engineering	-	2.813	1.776	1.769	-	1.769	2.415	2.470	2.498	2.523	0.000	16.264	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

A. Mission Description and Budget Item Justification

Project 456, MILSATCOM System Engineering is directly aligned to the Army Network Modernization Strategy.

FY 2025 Base funding in the amount of \$1.769 million - MILSATCOM System Engineering assures the tactical Army satellite communications (SATCOM) and SATCOM On-the-Move (SOTM) systems are engineered to legally and efficiently operate worldwide. MILSATCOM System Engineering shapes Joint SATCOM systems' design efforts, standards development and planning processes. MILSATCOM System Engineering represents the Army's tactical interests within Department of Defense (DoD), Commercial, and International forums to ensure affordable and scalable future SATCOM capabilities are available for maneuver forces. These efforts are synchronized with the Space Force and DoD's plans for Protected Tactical Waveforms (PTW) on Wideband Global SATCOM (WGS), the Protected Tactical Satellite (PTS), and commercial SATCOM systems. These efforts also ensure that the Army continues to evaluate evolving technologies for the planning and designing of SATCOM solutions that reduce technical and programmatic impacts. MILSATCOM System Engineering expertise supports obtaining SATCOM modem and terminal certifications for Tactical Network systems to operate on the network, provides SATCOM spectrum management and lab support, and supports testing and integration of Assured Position Navigation and Timing (APNT) capabilities.

MILSATCOM System Engineering also provides the technical and programmatic expertise to facilitate the Unified Network Capabilities and Integration (UNCI) integration mission of transport convergence and integration of emerging technologies within the Tactical Network portfolio. MILSATCOM System Engineering provides the programmatic and technical expertise to coordinate the UNCI mission to align and integrate elements of the Tactical Network portfolio in support of units such as the Expeditionary Signal Battalion (ESB), Multi Domain Task Force (MDTF), and Security Force Assistance Brigade (SFAB). MILSATCOM System Engineering expertise supports the evaluation and integration of commercial SATCOM (COMSATCOM) capabilities with MILSATCOM and Tactical Network systems in support of pathway diversity and other modernization efforts. MILSATCOM System Engineering supports the development of the Network Centric Waveform (NCW) Technology to support SATCOM planning and management. MILSATCOM System Engineering expertise with lab testing and analysis supports future efforts to support One Network Service Support Center and the ability to evaluate Low Probability of Intercept (LPI), Low Probability of Detection (LPD), Anti-Jam (AJ), Transmission Security (TRANSEC), and resiliency capabilities of current and emerging technologies.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Protected communications system engineering and WGS communications	0.484	0.253	0.253
Description: Provides systems engineering support for technology maturation, development and planning associated with joint SATCOM development efforts, and supports testing and integration of Assured Position Navigation and Timing (APNT) capabilities.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024				
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environm ent (SPACE)		Project (Number/Name) 456 / MILSATCOM System Engine				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025			
FY 2024 Plans: Continue to support systems engineering and analysis for Protect development and technology maturation of NCW-T.	ted Communications and WGS Communications, as well as						
FY 2025 Plans: Continue to support systems engineering and analysis for Protect development and technology maturation of NCW-T.	ted Communications and WGS Communications, as well as						
Title: Systems architecture and analysis support		1.511	0.510	0.510			
Description: Provides systems engineering support relating to the SATCOM efforts. These efforts, such as research, analysis, technand future technology insertions, impact Army use of military and technologies. Provides SATCOM spectrum management and support and suppor	nical engineering and integration services for bandwidth stud commercial satellite constellations and integration of enabli oports Joint/DoD standards development and strategic plan	ng					
Provides additional programmatic support across the tactical net	work.						
<i>FY 2024 Plans:</i> Continue to support in house engineering support, contractor sup	pport, and system architecture and analysis.						
FY 2025 Plans:							
Continue to support in house engineering support, contractor sup <i>Title:</i> Testing and certification of critical SATCOM and SATCOM		0.578	0.761	0.754			
Description: Provides support for testing and certification of the communication and network technologies.		0.570	0.701	0.75-			
FY 2024 Plans: Continue to support continued testing and certification of critical S	SATCOM and SOTM communication and network technolog	ies.					
<i>FY 2025 Plans:</i> Continue to support continued testing and certification of critical S	SATCOM and SOTM communication and network technolog	ies.					
FY 2024 to FY 2025 Increase/Decrease Statement: FY25 decrease driven by minor reduction in funding for effort.							
Title: Unified Network Capabilities and Integration Program Mana		0.240	0.252				

		Date: N	larch 2024	
R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environm ent (SPACE)			,	ineering
	F	Y 2023	FY 2024	FY 2025
eering test, evaluation, and integration in supp	ort of			
ICW Technology development and test as wel	as			
ICW Technology development and test as wel	as			
Accomplishments/Planned Programs Sub	otals	2.813	1.776	1.769
	PE 0303142A / SATCOM Ground Environm ent (SPACE)	PE 0303142A / SATCOM Ground Environm 456 / MIL ent (SPACE)	R-1 Program Element (Number/Name) Project (Number/Name) PE 0303142A / SATCOM Ground Environm 456 / MILSATCOM ent (SPACE) FY 2023 reering test, evaluation, and integration in support of FY 2023 NCW Technology development and test as well as SCW Technology development and test as well as	PE 0303142A / SATCOM Ground Environm 456 / MILSATCOM System Engi ent (SPACE) FY 2023 FY 2024 reering test, evaluation, and integration in support of Second Se

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

N/A

<u>Remarks</u>

D. Acquisition Strategy

MILSATCOM System Engineering provides advanced systems engineering, research, development, test, and evaluation (RDTE) and integration of new and emerging technologies to optimize terminal performance and communications control. Once the technologies are mature and deemed feasible, funding and management responsibility for implementation and integration of the technology will transition to Tactical Network and related Programs of Record.

Exhibit R-3, RDT&E F	Project C	ost Analysis: PB 2	2025 Army	y								Date:	March 20	24	
Appropriation/Budge 2040 / 7	et Activity	1				R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environm ent (SPACE)						Project (Number/Name) n 456 I MILSATCOM System Engineerin			
Product Developmen	nt (\$ in Mi	illions)		FY 2023		FY 2024		FY 2025 Base		FY 2 OC	2025 CO	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
Protected Communications and WGS Communications		Various : APG, MD	1.504	0.484	Apr 2023	0.253	Apr 2024	0.252	Apr 2025	-		0.252	0.000	2.493	-
		Subtotal	1.504	0.484		0.253		0.252		-		0.252	0.000	2.493	N/A
Support (\$ in Millions)				FY 2	2023	FY 2	2024		2025 Ise	FY 2 OC	2025 CO	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 Architecture and Analysis Support	MIPR	C5ISR Center : APG, MD	1.023	1.511	Dec 2022	0.510	Dec 2023	0.508	Dec 2024	-		0.508	0.000	3.552	-
Unified Network Capabilities and Integration Program Management and Support	C/T&M	Various : APG	-	0.240		0.252	Dec 2023	0.251	Dec 2024	-		0.251	0.000	0.743	-
		Subtotal	1.023	1.751		0.762		0.759		-		0.759	0.000	4.295	N/A
Test and Evaluation ((\$ in Milli	ons)		FY 2	2023	FY 2	2024		2025 Ise	FY 2 OC	2025 CO	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 Certification	MIPR	C5ISR Center : APG, MD	0.466	0.578	Dec 2022	0.761	Dec 2023	0.758	Dec 2024	-		0.758	0.000	2.563	-
		Subtotal	0.466	0.578		0.761		0.758		-		0.758	0.000	2.563	N/A
			Prior Years	FY	2023	FY	2024		2025 Ise	FY 2 OC		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	2.993	2.813		1.776		1.769		-		1.769	0.000	9.351	N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	Army							Date: March 20	24	
Appropriation/Budget Activity 2040 / 7			PE 0	Program Elemen 303142A / SATC SPACE)	Number/Name) SATCOM System Engineering					
	FY 2023	FY 20	24	FY 2025	FY 2026 F		FY 2027 FY 2028		FY 2029	
Event Name	1 2 3 4	1 2 3		1 2 3 4	1 2 3 4		2 3 4	1 2 3 4	1 2 3 4	
Protected Communications and WGS Communications	Protected Communication	s and WGS Com	municatio	ons						
System Architecture and Analysis Support	System Architecture and a									
Test and Certification	Test and Certification									
Unified Network Capabilities and Integration Program Man	Unified Network Capabiliti	es and Integration	Program	n Management Support						
		•								

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024		
propriation/Budget Activity 40 / 7							
	/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) PE 0303142A / SATCOM Ground Environm 456 / MILSATCOM System						
	٢				End		
		Sta	art	En	d		
Events				r	id Year		
Events Protected Communications and WGS Communications				r	-		
			Year	Quarter	Year		
Protected Communications and WGS Communications			Year 2023	Quarter 4	Year 2029		

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	Army							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7						am Elemen 42A / SATC E)			Project (N CO7 I Prot Communic)		
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
CO7: Protected Tactical Satellite Communications	-	7.215	13.160	20.080	-	20.080	28.951	5.069	5.126	5.177	0.000	84.778
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
 A. Mission Description and Bud Project CO7, Protected Anti-Jam Protected Anti-Jam Tactical SATC against catastrophic loss of situat (RAM) (previously referred to as I the highest levels of protected co that is either intentional or uninter a requirement for RAM. Protected SATCOM supports initia requirements, to support continue Resilient SATCOM Abbreviated - FY 2025 funding in the amount of (SEPM), test and certification, log 	Tactical SA COM (Prote ional aware Block II Sm mmunication ntional. A3M al developr ed spiral de Capabilitie \$20.080 m jistics supp	ATCOM is d ected SATC eness and c all Form Fa ons in multion d is a Joint ment, testing velopment of s Development illion will su ort and data	irectly align OM) provide command ar ctor (SFF)) domain ope Effort betwe g and certifi of critical pro- nent Docum upport developme	es the abilit nd control d will provide erations. Air een the Arm cation of pr otected con lent (A-CDE	ty for the Arn luring critica e on the mov Force/Army by and US S roduction rep nmunication D) was valid Army RAM,	my tactical t I battle mov ve and early y Anti-Jam N pace Force presentative is capabilitie ated and ap contactor a	erminals to rement with rentry satel Modem (A3I (USSF). R Protected es to addres proved in J nd governm	be resilient Anti-Jam c lite terminal M) offers ta AM is an Ar Tactical Wa ss resiliency une 2021.	in a contes apabilities. ⁻ s with adap ctical Army my only req aveform (PT r in jamming	ted environ The Resilie tive, anti-ja protection a juirement a W) modem g environme g and prog	ment and p nt Anti-Jam m commun against inte s USSF do s, incorpor- ents. The P ram manag	orotect Modem ications for rference esn't have ating Army rotected/ ement
B. Accomplishments/Planned P	• ·	in Million	<u>s)</u>						FY		FY 2024	FY 2025
<i>Title:</i> PTW Block I Modem Develo <i>Description:</i> PTW Development Army requirements for the PTW n	of Air Force						oment and e	engineering	of	1.300	-	-
Title: Government System Engine	eering and	Program Ma	anagement	Support (S	EPM)					0.935	1.004	1.351
Description: Funding supports G programmatic personnel, and other labor and travel requirements. This management, and fielding support	er related a is includes	dministrativ	e costs. Go	vernment F	Program Ma	nagement c	onsists of n	natrix perso	nnel			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024				
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environm ent (SPACE)	Project (Number/Name) n CO7 I Protected Tactical Satellite Communications					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025			
FY 2024 Plans: Funding supports programmatic activities related to completing A Army network systems architecture and analysis.	3M development and initiating RAM development. This incl	udes					
<i>FY 2025 Plans:</i> Funding supports programmatic activities related to protected more architecture and analysis.	dem development. This includes Army network systems						
FY 2024 to FY 2025 Increase/Decrease Statement: FY2024 to FY2025 Government SEPM increased due to required (PDR) and preparing for Critical Design Review (CDR) objectives		w					
Title: Contractor System Engineering and Program Management	: Support (SEPM)	2.785	1.457	1.64			
Description: Funding supports Contractor System Engineering a personnel (program analyst, budget analyst, engineer), and other		natic					
FY 2024 Plans: Funding supports programmatic activities related to completing A development. This includes Army network systems architecture a							
FY 2025 Plans: Funding supports programmatic activities related to protected mo architecture and analysis.	odem development. This includes Army network systems						
FY 2024 to FY 2025 Increase/Decrease Statement: FY2024 to FY2025 Contractor SEPM increased due to required r objectives for RAM.	nanpower oversight to complete PDR and preparing for CDI	۲					
Title: Test and Certification		2.195	-	-			
Description: Funding for Government support for testing and certain	rtification.						
Title: Resilient Anti-Jam Modem Development (RAM)		-	10.699	17.08			
Description: Funding supports development of a small form fact engineering of Army requirements for PTW modems in protected							
FY 2024 Plans:							

Exhibit R-2A, RDT&E Project Jus	tification: PB	2025 Army							Date: Ma	arch 2024	
Appropriation/Budget Activity 2040 / 7					03142A / SA	nent (Numb \TCOM Grou	er/Name) und Environm	CO7 / /	t (Number/N Protected Tac unications		9
B. Accomplishments/Planned Pro	•	,	ent Anti-Jam	Modem (RA	λM).				FY 2023	FY 2024	FY 2025
FY 2025 Plans: The Army will continue development	nt of a small for	m factor Re	silient Anti-J	am Modem ((RAM).						
FY 2024 to FY 2025 Increase/Dec FY24 to FY25 funding increases fo preparing for CDR.			RAM devel	opment focu	s objectives	to complete	PDR and				
				Accon	nplishments	s/Planned P	rograms Sul	ototals	7.215	13.160	20.08
C. Other Program Funding Sumn Line Item • B34002: Protected Anti Jam Tactical SATCOM	nary (\$ in Milli FY 2023 5.853	ons) FY 2024 19.122	FY 2025 Base 16.028	<u>FY 2025</u> <u>OCO</u> -	FY 2025 <u>Total</u> 16.028	<u>FY 2026</u> 10.316	<u>FY 2027</u> 34.216	FY 202 34.24			Total Cos

<u>Remarks</u>

Production to support procurement and fielding of Protected Anti-Jam Tactical SATCOM capability. This funding line procures 63 A3M modems in FY23 and procures 297 A3M modems in FY24. In FY25, Army will procure an additional 232 A3M modems.

D. Acquisition Strategy

The Protected Anti-Jam Tactical SATCOM (Protected SATCOM) Acquisition Strategy for Resilient Anti-Jam Modem (RAM) development will leverage successfully tested technology from the A3M (Block I) effort and is an Army only requirement. RAM is designed to provide resilient and anti-jam capability for Army SATCOM terminals and will coordinate modem development with Army tactical terminal program offices. The program will leverage an existing IDIQ contract established by USSF for the development of RAM. Protected SATCOM capability is a Joint requirement. The large form factor A3M (previously known as Block I) was a Joint development effort between the United States Space Force (USSF) and the Army. The small form factor RAM (previously known as Block II) is an Army only requirement and is being developed by the Army.

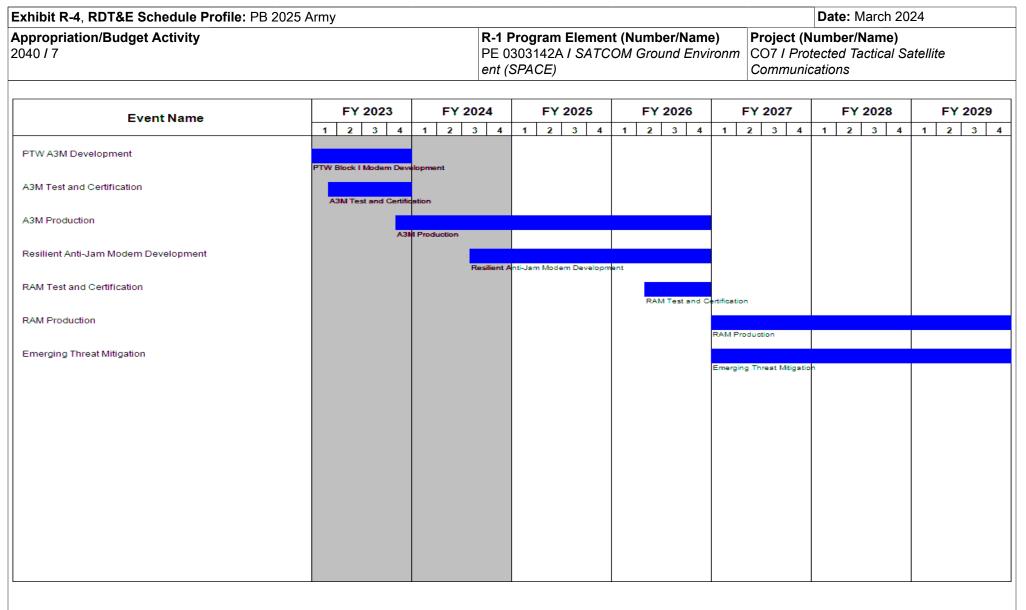
Exhibit R-3, RDT&E F Appropriation/Budge	-			,		D 1 Dr	ogram Ele	mont (N	umbor/N	2mo)	Project	: (Numbei	March 20		
2040 / 7							3142A / S				CO7 / F	•	Tactical Sa	atellite	
Management Service	es (\$ in M	illions)		FY	2023	FY 2	2024		2025 Ise	FY 2 OC	2025 CO	FY 2025 Total			
Cost Category Item	Contract 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 System Enginnering and Program Management	MIPR	Various : APG	-	0.935	Dec 2022	1.004	Dec 2023	1.351	Dec 2024	-		1.351	0.000	3.290	-
Contractor Systems Engineering and Program Support	C/T&M	Various : APG	-	2.785	Dec 2022	1.457	Dec 2023	1.649	Dec 2024	-		1.649	0.000	5.891	-
		Subtotal	-	3.720		2.461		3.000		-		3.000	0.000	9.181	N//
Product Developmer	nt (\$ in Mi	illions)		FY :	2023	FY 2	2024		2025 Ise		2025 CO	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
PTW Development of A3M	C/FPIF	L3 Harris : Salt Lake City, Utah, Camden, NJ	-	1.300	Oct 2022	-		-		-		-	0.000	1.300	-
Resilient Anti-Jam Modem Dev	C/FPIF	L3 Harris : Salt Lake City, Utah, Camden, NJ	-	-		10.699	Dec 2023	17.080	Dec 2024	-		17.080	0.000	27.779	-
		Subtotal	-	1.300		10.699		17.080		-		17.080	0.000	29.079	N/A
Test and Evaluation	(\$ in Milli	ons)		FY :	2023	FY 2	2024		2025 Ise		2025 CO	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 Certification	MIPR	JSEC : APG, MD	-	2.195	Nov 2022	-		-		-		-	0.000	2.195	-
		Subtotal	-	2.195		-		-		-		-	0.000	2.195	N/A
		ſ	Prior Years	FY	2023	FY	2024		2025 ISE		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	-	7.215		13.160		20.080		-		20.080	0.000	40.455	N/A

PE 0303142A: SATCOM Ground Environment (SPACE) Army

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	025 Army	/					Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7			-	lement (Number/I SATCOM Ground	•	Project (Nu CO7 I Prote Communica	cted 7	,	atellite	
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2 OC		2025 otal	Cost To Complete	Total Cost	Target Value of Contract

Remarks



hibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	ch 2024
propriation/Budget Activity 40 / 7		Element (Number I SATCOM Ground		Project (Number/Nan CO7 I Protected Tactio Communications	
	Schedule Details	5			
	[Sta	art	E	nd
Events		Quarter	Year	Quarter	Year
PTW A3M Development		2	2020	4	2023
A3M Test and Certification		1	2023	4	2023
A3M Production		4	2023	4	2026
Resilient Anti-Jam Modem Development		3	2024	4	2026
RAM Test and Certification		2	2026	4	2026
RAM Production		1	2027	4	2031
Emerging Threat Mitigation		1	2027	4	2033

Exhibit R-2, RDT&E Budget Iten	n Justificat	i on: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope				t (Number / ated Broadc		(IBS)			
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	-	9.426	9.456	5.701	-	5.701	1.672	1.691	1.710	1.727	Continuing	Continuing
EF4: Integrated Broadcast System	-	9.426	9.456	5.701	-	5.701	1.672	1.691	1.710	1.727	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Program Office (JPO) for Integrated Broadcast Service (IBS) Terminals supports the Joint Services and the Special Operations Command (SOCOM). The JPO is responsible for coordinating modernization and sustainment of IBS terminals compatible with the UHF SATCOM IBS broadcasts in support of Air and Missile Defense, Long Range Precision Fires, Soldier Lethality, and Network Command, Control, Communications and Intelligence Cross Functional Teams, and Tactical Intelligence Targeting Access Node. The IBS transmits worldwide time-sensitive tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The Joint Tactical Terminal (JTT) is the official IBS system and ensures continued IBS interoperability to a variety of tactical producers and consumers across the Joint Services. The transmit/receive-capable JTT systems currently consist of the JTT-Senior and JTT-IBS configurations. The JPO is executing updates to the JTT terminal to incorporate Mobile User Objective System (MUOS)-Wideband Code Division Multiple Access (WCDMA) elements based on modernization requirements.

B. Program Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	9.926	9.456	5.835	-	5.835
Current President's Budget	9.426	9.456	5.701	-	5.701
Total Adjustments	-0.500	0.000	-0.134	-	-0.134
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-0.500	-			
SBIR/STTR Transfer	-	-			
 Adjustments to Budget Years 	-	-	-0.134	-	-0.134

Change Summary Explanation

The FY25 funding change from the previous PB to the current PB reflects an Army approved minor reduction.

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2025 A	vrmy							Date: Mare	ch 2024	
Appropriation/Budget Activity 2040 / 7					R-1 Progr a PE 030517 <i>ce (IBS)</i>		•	,	Project (N EF4 / Integ		ne) dcast Syster	n
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
EF4: Integrated Broadcast System	-	9.426	9.456	5.701	-	5.701	1.672	1.691	1.710	1.727	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Program Office (JPO) for Integrated Broadcast Service (IBS) Terminals supports the Joint Services and the Special Operations Command (SOCOM). The JPO is responsible for coordinating modernization and sustainment of IBS terminals compatible with the UHF SATCOM IBS broadcasts in support of Air and Missile Defense, Long Range Precision Fires, Soldier Lethality, and Network Command, Control, Communications and Intelligence Cross Functional Teams and Tactical Intelligence Targeting Access Node. The IBS transmits worldwide time-sensitive tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The Joint Tactical Terminal (JTT) is the official IBS system and ensures continued IBS interoperability to a variety of tactical producers and consumers across the Joint Services. The transmit/receive-capable JTT systems currently consist of the JTT-Senior and JTT-IBS configurations. The JPO is executing updates to JTT systems to incorporate Mobile User Objective System-Wideband Code Division Multiple Access (MUOS-WCDMA) based on modernization requirements. The IBS network uses Type-1 encryption, Common Interactive Broadcast (CIB), and Common Message Format (CMF).

FY 2025 RDTE Dollars in the amount of \$5.701 million will be used for the continuation of Vendor terminal software development and porting, vendor testing and evaluation, independent testing, integration and certification by government and contracting agencies (JITC, NSA, Navy, General Dynamics) in support of IBS and MUOS-WCDMA modernization efforts.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Program Management	0.575	0.617	0.653
Description: Management Support			
FY 2024 Plans: Managerial oversight of ongoing JTT-NG activities, to include testing and certification, validated production and ordering, to ensure adherence to schedule, cost and performance.			
FY 2025 Plans: Continued managerial oversight of JTT-NG software modernization activities, to include verification and validation testing, engineering support, certification, and software deployment planning to ensure adherence to schedule, cost and performance.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Ju	stification: PB	2025 Army		1					Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7					05179A I Int	nent (Numb regrated Broa		-	ct (Number/N Integrated Br	,	em
B. Accomplishments/Planned P	rograms (\$ in N	<u>/lillions)</u>							FY 2023	FY 2024	FY 2025
FY2025 level of effort anticipated	to remain stable										
Title: Test and Certification									1.926	1.626	1.503
Description: Engineering and Tes	sting Support										
FY 2024 Plans: Will continue engineering and test PAC, and NSA	ting support to o	btain operat	ional certifica	ation from ex	kternal agen	cies to includ	le JITC, Nav	y SSC			
<i>FY 2025 Plans:</i> Will conclude engineering and tes PAC, and NSA.	ting support to c	obtain opera	tional certific	ation from e	xternal ager	ncies to inclu	de JITC, Nav	vy SSC			
FY 2024 to FY 2025 Increase/De Funding change is consistent with			effort.								
Title: Modernization Efforts									6.925	7.213	3.54
Description: Joint Tactical Termin	nal (JTT) and In	tegrated Bro	adcast Serv	ices (IBS) m	odernizatior	n efforts.					
<i>FY 2024 Plans:</i> Funds are required to continue Jo to include design reviews, MUOS management, IBS-LEO/IBS-Alt pa	SW development	nt and portir	ng, SW proto	typing, integ	ration and te	esting, SW co	onfiguration				
FY 2025 Plans:											
Funds are required to conclude Jo to include design reviews, MUOS management, IBS-LEO/IBS-Alt pa	SW developme	nt and portir	ng, SW proto	typing, integ	ration and te	esting, SW co	onfiguration	5			
FY 2024 to FY 2025 Increase/De Funding decrease for modernizati			of contracted	engineering	requiremen	ts.					
				Accon	nplishment	s/Planned P	rograms Su	btotals	9.426	9.456	5.70
C. Other Program Funding Sum	mary (\$ in Milli	ons)									
			FY 2025	FY 2025	FY 2025					Cost To	
Line Item • V29600: JTT/CIBS-M	<u>FY 2023</u> 2.352	<u>FY 2024</u> 8.543	<u>Base</u> 9.221	<u>000</u> -	<u>Total</u> 9.221	<u>FY 2026</u> 7.212	<u>FY 2027</u> 6.904	FY 202 0.49		 <u>Complete</u> Continuing 	
PE 0305179A: Integrated Broadca				UNCLAS							
Army				Page 3			R-1 Line	¥226		Volu	me 4b - 353

Exhibit R-2A, RDT&E Project J	ustification: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7					05179A I Int	n ent (Numb egrated Broa	e r/Name) adcast Servi		Number/Na grated Broa	i me) adcast Syste	em
C. Other Program Funding Sun	nmary (\$ in Milli	ons <u>)</u>									
			FY 2025	FY 2025	<u>FY 2025</u>					Cost To	
Line Item	FY 2023	FY 2024	Base	000	<u>Total</u>	FY 2026	FY 2027	FY 2028	FY 2029	Complete	Total Cost
Demente											

<u>Remarks</u>

FY 2025 Base procurement dollars in the amount of \$9.221 million supports transition to organic hardware facilitization and sustainment, software deployment support, contractor engineering, logistics support and fielding support documentation for all terminals.

D. Acquisition Strategy

The Integrated Broadcast Service (IBS) was designed to consolidate legacy broadcasts into an interoperable set of broadcasts that can carry threat warning and situational data to both users and producers. The requirement for IBS is documented in the IBS Operational Requirements Document (ORD) (6 June 2018) and the JTT ORD (25 April 2018). Subsequently, the IBS and JTT ORDs were consolidated into one document, the IBS Information Systems- Capability Development Document (IS-CDD) on 4 Feb 2021. The JTT program is an acquisition effort to provide common tactical terminals capable of receiving and transmitting into the IBS UHF broadcasts. The JTT-Next Generation (JTT-NG) Block 1 effort establishes the necessary hardware and software to meet upgraded technological standards. To support continued IBS architecture modernization efforts, JTT-NG will incorporate MUOS and IBS upgrades into the software baseline to keep pace with evolving SATCOM requirements, IBS operational needs, and obsolescence via the developmental Block 2 effort. Additional requirements from the IBS Executive Agent include enhancements to JTT-NG software and firmware to mitigate from legacy to updated SATCOM constellations, while also enhancing the IBS-A broadcast to modify the modulation, Communication Security (COMSEC), waveform, and support for Low Earth Orbiting (LEO) SATCOM integration.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	y							_	Date:	March 20)24	
Appropriation/Budge 2040 / 7	et Activity	y					5179A / Ir		umber/Na Broadcas			tegrated		t System	
Management Service	es (\$ in N	lillions)	ſ	FY 2	2023	FY 2	024		2025 Ise		2025 CO	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 Support	Allot	PM IS&A : APG, MD; Fort Huachuca, AZ	0.150	0.575	Nov 2022	0.617	Nov 2023	0.653	Nov 2024	-		0.653	Continuing	Continuing	-
		Subtotal	0.150	0.575		0.617		0.653		-		0.653	Continuing	Continuing	N/A
Product Developme	nt (\$ in M	illions)	ſ	FY 2	2023	FY 2	:024	FY 2 Ba	2025 Ise		2025 CO	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
IBS Modernization	SS/CPFF	DRS; Dayton, OH : DRS; Dayton, OH	5.378	6.925		7.213	Feb 2024	3.545	Feb 2025	-		3.545	Continuing	Continuing	-
		Subtotal	5.378	6.925		7.213		3.545		-		3.545	Continuing	Continuing	N/A
Test and Evaluation	(\$ in Mill	ions)	ſ	FY 2	2023	FY 2	:024	FY 2 Ba	2025 Ise		2025 CO	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
Integration and Testing of JTT fleet Modernization	MIPR	JITC : Fort Huachuca, AZ; APG,MD, SSC PAC, GD-Scottsdale	1.970	1.926	Jan 2023	1.626	Jan 2024	1.503	Jan 2025	-		1.503		Continuing	-
		Subtotal	1.970	1.926		1.626		1.503		-		1.503	Continuing	Continuing	N/A
			Prior Years	FY 2	2023	FY 2	024		2025 Ise		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	7.498	9.426		9.456		5.701		-		5 701	Continuing	Continuing	N//

xhibit R-4, RDT&E Schedule Profile: PB 202 ppropriation/Budget Activity 040 / 7					at (Number/Name ated Broadcast S		Project (N EF4 / Integ	lumb	e: March 20 er/Name) d Broadcas	
Event Name	FY 2023	FY 202		2025	FY 2026		FY 2027		FY 2028	FY 2029
Next Gen: JITC Testing and Certification	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
Next Gen: NSA Testing and Certification										
Next Gen IBS Terminals HW and Initial SW Delivery										
BS Modernization Development										
BS Modernization Testing and Certification										
BS Modernization SW Delivery										
Transition to Sustainment										

xhibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Mare	ch 2024
ppropriation/Budget Activity 040 / 7		Element (Number I Integrated Broad	•	Project (Number/Nar EF4 / Integrated Broad	
	Schedule Details	5			
		Sta	art	E	nd
Events		Quarter	Year	Quarter	Year
Next Gen: JITC Testing and Certification		2	2024	2	2024
Next Gen: NSA Testing and Certification		3	2024	3	2024
Next Gen IBS Terminals HW and Initial SW Delivery		3	2024	3	2024
IBS Modernization Contract Award		4	2022	4	2022
IBS Modernization Development		4	2022	4	2025
IBS Modernization Testing and Certification		1	2023	4	2029
IBS Modernization SW Delivery		4	2025	4	2025
Transition to Sustainment		3	2022	1	2028

2

Prototype

2030

2

2031

Exhibit R-2, RDT&E Budget Item	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope		R-1 Progra PE 030520		•	Name) d Aerial Vel	hicles			
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	4.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.500
11A: Advanced Payload Develop & Spt	-	4.500	-	-	-	-	-	-	-	-	0.000	4.500

A. Mission Description and Budget Item Justification

Project 11A Advanced Payload Develop & Spt: The Advanced Payloads Development project is a shared funding line between multiple payload programs. These payload programs support the Army's transformation by developing Reconnaissance, Surveillance and Target Acquisition (RSTA) and Intelligence, Surveillance and Reconnaissance (ISR) payload systems for Brigade Combat Teams, Divisions, and Corps Unmanned Aircraft Systems (UAS). This is in accordance with Headquarters Department of the Army (HQDA) and Training and Doctrine Command (TRADOC) UAS priorities. Additionally, this Program Element (PE) supports Future Advanced Payloads for Army UAS systems.

The Common Sensor Payload (CSP) is an Electro Optical / Infrared / Laser Designator (EO/IR/LD) payload that provides High Definition (HD) Full Motion Video (FMV) in both the EO and Mid Wave IR (MWIR) spectrums with day/night capability to collect and display continuous imagery and the ability to designate targets of interest for attack by laser guided precision weapons. CSP is the EO/IR/LD sensor for the Gray Eagle UAS which supports force applications, battlespace awareness, force protection, and net-centric operations across the battlefield to provide wide area, near real time RSTA capabilities. Current product improvements continue to focus on the development and implementation of technologies that directly support emerging requirements of the Army's Current and Future Force. CSP Version 3 (v3) is the next procurable solution of CSP and resolves obsolescence issues present on legacy (v1 & v2) CSP configurations. Target Location Accuracy (TLA) is a software capability specific to CSP v3 that improves target mensuration. The Army Acquisition Objective (AAO) for CSP is based on aircraft/ platform quantities; specifically, one CSP per Gray Eagle UAS plus spares.

0305204A 11A has no Fiscal Year (FY) 2025 funding request.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	4.500	0.000	0.000	-	0.000
Current President's Budget	4.500	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	vrmy							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7										umber/Name) anced Payload Develop & Spt		
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
11A: Advanced Payload Develop & Spt	-	4.500	-	-	-	-	-	-	-	-	0.000	4.500
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Advanced Payloads Development project is a shared funding line between multiple payload programs. These payload programs support the Army's transformation by developing Reconnaissance, Surveillance and Target Acquisition (RSTA) and Intelligence, Surveillance and Reconnaissance (ISR) payload systems for Brigade Combat Teams, Divisions, and Corps Unmanned Aircraft Systems (UAS). This is in accordance with Headquarters Department of the Army (HQDA) and Training and Doctrine Command (TRADOC) UAS priorities. Additionally, this Program Element (PE) supports Future Advanced Payloads for Army UAS systems.

The Common Sensor Payload (CSP) is an Electro Optical / Infrared / Laser Designator (EO/IR/LD) payload that provides High Definition (HD) Full Motion Video (FMV) in both the EO and Mid Wave IR (MWIR) spectrums with day/night capability to collect and display continuous imagery and the ability to designate targets of interest for attack by laser guided precision weapons. CSP is the EO/IR/LD sensor for the Gray Eagle UAS which supports force applications, battlespace awareness, force protection, and net-centric operations across the battlefield to provide wide area, near real time RSTA capabilities. Current product improvements continue to focus on the development and implementation of technologies that directly support emerging requirements of the Army's Current and Future Force. CSP Version 3 (v3) is the next procurable solution of CSP and resolves obsolescence issues present on legacy (v1 & v2) CSP configurations. Target Location Accuracy (TLA) is a software capability specific to CSP v3 that improves target mensuration. The Army Acquisition Objective (AAO) for CSP is based on aircraft/ platform quantities; specifically, one CSP per Gray Eagle UAS plus spares.

0305204A 11A has no Fiscal Year (FY) 2025 funding request.

B. Accomplishments/Planned P	<u> rograms (\$ in I</u>	<u> Millions)</u>							FY 2023	FY 2024	FY 2025
Title: CSP Increased Usability an	nd Lethality								4.500	-	-
Description: Software and Hardwon the Warfighter.	ware developme	nts to increa	se lethality a	ind usability	of the CSP v	while reducir	ng cognitive bi	urden			
				Accon	nplishments	/Planned P	rograms Sub	ototals	4.500	-	-
C. Other Program Funding Sum	<u>ımary (\$ in Milli</u>	ons <u>)</u>									
			<u>FY 2025</u>	<u>FY 2025</u>	<u>FY 2025</u>					<u>Cost To</u>	

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Exhibit R-2A, RDT&E Project Ju	stification: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7					05204A / Ta	n <mark>ent (Numb</mark> ctical Unmar	,	Project (N 11A / Adva		a me) load Develop	o & Spt
C. Other Program Funding Sum	<u>mary (\$ in Milli</u>	ons <u>)</u>									
Line Item Remarks	FY 2023	FY 2024	<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> Complete	<u>Total Cost</u>

D. Acquisition Strategy

The Enhanced Electro-Optical (EO)/Infrared (IR) Capability Production Document, approved 19 December 2016, defines additional Key Performance Parameter (KPP) requirements for the Full Motion Video (FMV) sensor on the Gray Eagle platform. The first KPP increases detection, recognition, and identification requirements which can only be met with the High Definition (HD) v2 variation of the Common Sensor Payload (CSP). Currently, units are being fielded with CSP v2s, with additional CSP v2s in production and retrofit. The FY 2023 acquisition strategy for CSP includes the completion of testing supporting CSP v3 development. FY23 is the last year of RDTE funding. APA funds on line A01005 are procuring v3 payloads from FY23 forward.

Exhibit R-3, RDT&E	•	y	2025 Army	/					".	`	.		March 20	24	
Appropriation/Budg 2040 / 7	jet Activity	/					5204A / 7	•	lumber/N Inmanned		Project (Number/Name) 11A / Advanced Payload Develop & Sj			& Spt	
Management Servic	ces (\$ in M	illions)	[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
CSP Program Management	MIPR	PM EOIR : Fort Belvoir, VA	8.356	0.290	Dec 2022	-		-		-		-	0.000	8.646	-
		Subtotal	8.356	0.290		-		-		-		-	0.000	8.646	N//
Product Developme	ent (\$ in M	illions)	[FY	2023	FY	2024		2025 ase		2025 CO	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
Training Development	C/CPFF	i3 : Huntsville, AL	0.878	0.640	Apr 2023	-		-		-		-	0.000	1.518	-
		Subtotal	0.878	0.640		-		-		-		-	0.000	1.518	N/A
Test and Evaluation	ı (\$ in Milli	ons)	[FY	2023	FY	2024		2025 ase		2025 CO	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
CSP Testing (TLA)	MIPR	Various : Various	0.583	3.570	Nov 2022	-		-		-		-	0.000	4.153	-
		Subtotal	0.583	3.570		-		-		-		-	0.000	4.153	N//
			Prior Years	FY	2023	FY	2024		2025 ase		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
											1	1			N//

khibit R-4, RDT&E Schedule Profile: PE ppropriation/Budget Activity)40 / 7		R-1 Program Element (Number/Name) Project (Number/Name) PE 0305204A / Tactical Unmanned Aerial V 11A / Advanced Payload Develop & Spt ehicles 11A / Advanced Payload Develop & Spt								
Event Name	FY 2023 FY 2 1 2 3 4 1 2	024 FY 2025 3 4 1 2 3 4	FY 2026	FY 2027	FY 2028	FY 2029				
CSP v3 Testing	CSP v3 Testing	J 4 I Z J 4	I Z J 4	1 2 3 4	I Z J 4					
CSP v3 Integration	CSP v3 Integratio									
CSP TLA NGA Validation		CSP TLA NGA Validation								
CSP v3 Production Decision	CSP v3 Production Decision									
CSP v3 Procurement										
	CSP v3 Procurement									

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
2040 / 7	R-1 Program Element (Number/Name)ProjectPE 0305204A / Tactical Unmanned Aerial V11A / Aehicles11	(Number/Name) dvanced Payload Develop & Spt

Schedule Details

	Sta	End		
Events	Quarter	Year	Quarter	Year
CSP HD (EO/IR/LD) Production	2	2013	4	2022
CSP HD Retrofit (Proc)	4	2013	4	2022
CSP HW/SW Improvements Reduce Cognitive Burden Development	1	2016	4	2021
CSP HW/SW Improvements Reduce Cognitive Burden Testing / Integration	3	2017	4	2020
CSP TLA Development	4	2018	4	2022
CSP TLA PDR/CDR	1	2020	1	2020
CSP v3 Testing	1	2022	3	2023
CSP v3 Integration	4	2023	3	2024
CSP TLA NGA Validation	3	2024	3	2025
CSP v3 Production Decision	4	2023	4	2023
CSP v3 Procurement	3	2023	4	2026

Exhibit R-2, RDT&E Budget Iten	n Justificat	ion: PB 202	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operation Systems Development					R-1 Progra PE 030520		t (Number / ne Reconna	stems				
COST (\$ in Millions) Prior FY 2023 FY 2024 Bas					FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	0.000	6.402	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.402
EH2: EMARSS ADV DEV	-	0.933	-	-	-	-	-	-	-	-	0.000	0.933
EH3: EMARSS Payloads ADV DEV	-	5.469	-	-	-	-	-	-	-	-	0.000	5.469

A. Mission Description and Budget Item Justification

Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) will be divested by Fiscal Year (FY) 2025. EMARSS is C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICOE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT). Budget Item Justification is addressed in each Project.

Airborne Reconnaissance Low - Enhanced (ARL-E) was terminated in FY 2022.

The Guardrail Common Sensor (GRCS) will be divested by FY 2025. The RC-12X GRCS is a fixed-wing, airborne COMINT and Electronic Intelligence (ELINT) collection and precision targeting location system. GRCS provides a persistent capability to detect, locate and classify/identify high value targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army INSCOM Aerial Exploitation Battalions providing AISR support to combatant commanders. The Army's Acquisition Objective/Army's Procurement Objective is 19 RC-12X; seven (7) fielded to 3rd Military Intelligence Battalion (MI BN); and seven (7) fielded to the 204th MI BN, and five (5) trainers within TRADOC and INSCOM. Budget Item Justification is addressed in each Project.

Research Development Technology & Evaluation (RDT&E) and procurement funding currently planned will address obsolescence issues for critical SIGINT and Electronic Intelligence (ELINT) capabilities on the GRCS platform. These investments ensure GRCS AISR support in the A2AD environment is not impacted, which would prevent critical intelligence collection at large standoff which is needed to address long range targeting of peer threats and maintain system relevancy.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 A	rmy			Date:	March 2024
Appropriation/Budget Activity		R-1 Program Ele	ement (Number/Name)		
2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development		PE 0305206A / A	Airborne Reconnaissand	e Systems	
B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	17.165	0.000	0.000	-	0.000
Current President's Budget	6.402	0.000	0.000	-	0.000
Total Adjustments	-10.763	0.000	0.000	-	0.000
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-10.763	-			
SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7							nt (Number/ The Reconna	•	Project (Number/Name) EH2 / EMARSS ADV 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
EH2: EMARSS ADV DEV	-	0.933	-	-	-	-	-	-	-	-	0.000	0.933
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Project EH2 has no budget request for Fiscal Year (FY) 2025. FY 2023 is the last year of funding for this effort due to divestiture.

A. Mission Description and Budget Item Justification

Line Item

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army INSCOM Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

0305206A EH2 has no Fiscal Year (FY) 2025 funding request due to Army decision to no longer invest in legacy aircraft.

8. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Fitle: Non-Recurring Engineering	0.933	-	
Description: This funding line supports non-recurring engineering (NRE), development of type certificates (TC), testing, ntegration of Modifications in Service of current or future EMARSS Army Aerial, Intelligence, Surveillance and Reconnaissance AISR) systems. Funding provides for the integration of Department of Defense (DoD) mandated safety equipment to meet surrent and evolving International Standards. It also enhances aircraft communications, navigations and surveillance (CNS); ircraft survivability equipment (ASE) to include integration of Air Launched Effects onto Army fixed wing platforms; integration of AISR mission equipment package (MEP); as well as solving obsolescence issues and increasing commonality across EMARSS ircraft.			
Accomplishments/Planned Programs Subtotals	0.933	-	
. Other Program Funding Summary (\$ in Millions)			
<u>FY 2025</u> <u>FY 2025</u>		<u>Cost To</u>)

000

Total

FY 2026

• A02112: EMARSS SEMA MODS	1.591	-	0.000	- (0.000	-	-
PE 0305206A: Airborne Reconnaissand	ce Systems		U	NCLASSIFII	ED		
Army				Page 3 of 12			R-1 Line #

Base

FY 2024

FY 2023

R-1 Line #228

FY 2028

FY 2027

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Continuing Continuing

FY 2029 Complete Total Cost

-

Exhibit R-2A, RDT&E Project Justi	fication: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity 2040 / 7					05206A I Aiı	nent (Numb rborne Reco	•		Number/Na IARSS ADV		
C. Other Program Funding Summa	ary (\$ in Milli	ons <u>)</u>									
			<u>FY 2025</u>	<u>FY 2025</u>	<u>FY 2025</u>					<u>Cost To</u>	
Line Item	FY 2023	FY 2024	Base	000	Total	FY 2026	FY 2027	FY 2028	FY 2029	Complete	Total Cost
• AZ2054: EMARSS PAYLOADS	-	_	-	-	-	-	-	_	-		
• EH3: EMARSS Payloads ADV DEV	5.469	-	0.000	-	0.000	-	-	-	-	0.000	5.469

<u>Remarks</u>

The EMARSS Research Development Technology & Evaluation (RDT&E) efforts are found in the following two project lines; 0305206AEH2 EMARSS ADV DEV (Fixed Wing Project Office) and 0305206AEH3 EMARSS Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting Aircraft Procurement Army (APA lines are A02112 (P-1 Line #20) for Fixed Wing and AZ2054 (P-1 Line #15) for Aerial Intelligence. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

D. Acquisition Strategy

The acquisition strategy, supported by the EMARSS Capabilities Production Document (CPD), is to design, test and field 24 systems as well as provide enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); Communications Intelligence (COMINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar; line-of-site (LOS) and beyond line-of-site (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations. The EMARSS fleet of 23 systems consists of the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); seven (7) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT); one (1) aircraft was damaged beyond economical repair.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Army	/								Date:	March 20	24	
Appropriation/Budge 2040 / 7	et Activity	1					5206A / A		lumber/N Reconnais		-	(Number MARSS /	r/ Name) ADV DEV		
Management Service	es (\$ in M	illions)	ſ	FY 2	2023	FY :	2024		2025 ase		2025 CO	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
РМО	RO	FW PO/ PM SAI : Huntsville, AL/ Aberdeen, MD	0.965	0.079	Jan 2023	-		-		-		-	0.000	1.044	-
	-	Subtotal	0.965	0.079		-		-		-		-	0.000	1.044	N/A
Test and Evaluation	(\$ in Milli	ons)		FY 2	2023	FY	2024		2025 ase		2025 CO	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	AFTD RTC;MIT;TDD- A : Eglin, AFB, FL;Lexington, MA	1.636	0.854	May 2023	-		-		-		-	0.000	2.490	-
		Subtotal	1.636	0.854		-		-		-		-	0.000	2.490	N/A
			Prior Years	FY 2	2023	FY	2024		2025 ase		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	2.601	0.933		-		-		-		-	0.000	3.534	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 A	rmy						Date: March 20	24
Appropriation/Budget Activity 2040 / 7				305206A I Airbor	n t (Number/Nam o ne Reconnaissar		lumber/Name) ARSS ADV DEV	
	FY 2023	FY 20	24	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Event Name	1 2 3 4		4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Army Testing								
Developmental Initiatives for Performance Enhancements								
<u>Note</u> FY21 \$1.998 FY22 \$1.834 FY23 \$2.096						<u> </u>		

hibit R-4A, RDT&E Schedule Details: PB 2025 Army					Date: Marc	h 2024
propriation/Budget Activity 40 / 7						
	Schedule Details					
	Γ	St	art		Er	nd
Events		St Quarter	art Year		Er Quarter	nd Year
Events Non-Recurring Engineering			1			
			Year		Quarter	Year

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Mar	ch 2024			
Appropriation/Budget Activity 2040 / 7					-	am Elemen)6A I Airbori	•	,		oject (Number/Name) 13 / EMARSS Payloads ADV 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		
EH3: EMARSS Payloads ADV DEV	-	5.469	-	-	-	-	-	-	-	-	0.000	5.469		
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-				

A. Mission Description and Budget Item Justification

Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) will be divested by Fiscal Year (FY) 2025. EMARSS is C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

This funding line supported critical enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Communications Intelligence (COMINT); Signals Intelligence (SIGINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR); Line-Of-Site (LOS) and Beyond Line-Of-Sight (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations.

0305206A EH3 has no Fiscal Year (FY) 2025 funding request due to Army decision to no longer invest in legacy aircraft.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: EMARSS - Sensor Enhancement	4.481	-	-
Description: Enhancement of EMARSS Joint All-Domain Operations (JADO) SIGINT capabilities to decrease target identification time, increase probability of intercept, and increased signal simultaneity. Efforts include software porting and design analysis of modular open system architecture.			
Title: EMARSS - Sensor Engineering Support	0.905	-	-
Description: Matrix engineering support for sensor enhancements.			
Title: Program Management Support	0.083	-	-

Exhibit R-2A, RDT&E Project Justif	ication: PB	2025 Army							Date: M	arch 2024	
Appropriation/Budget Activity 2040 / 7			rogram Eler 05206A I Air ms	•	,		t (Number/N EMARSS Pa	lame) yloads ADV D)EV		
B. Accomplishments/Planned Prog	rams (\$ in N	<u>lillions)</u>							FY 2023	FY 2024	FY 2025
Description: Program Management (SETA) support.	Office (PMO) support an	d travel, as v	vell as Syste	ems Enginee	ring and Teo	chnical Assist	ance			
				Accor	nplishments	s/Planned P	rograms Sul	btotals	5.469	-	-
C. Other Program Funding Summa	ry (\$ in Milli	ons)									
			FY 2025	<u>FY 2025</u>	FY 2025					<u>Cost To</u>	
Line Item	<u>FY 2023</u>	<u>FY 2024</u>	<u>Base</u>	000	<u>Total</u>	<u>FY 2026</u>	FY 2027	<u>FY 202</u>	<u>8 FY 202</u>	<u>Complete</u>	Total Cost
• A02112: EMARSS SEMA MODS	1.591	-	0.000	-	0.000	-	-	-	-	Continuing	Continuing
 AZ2054: EMARSS PAYLOADS 	-	-	-	-	-	-	-	-	-		
• EH2: EMARSS ADV DEV	0.933	-	0.000	-	0.000	-	-	-	-	0.000	0.933

<u>Remarks</u>

The EMARSS Research Development Technology & Evaluation (RDT&E) efforts are found in the following two (2) project lines; 0305206AEH2 EMARSS ADV DEV (Fixed Wing Project Office) and 0305206AEH3 EMARSS Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting procurement lines are A02112 and AZ2054. AZ2054 funding supports subsequent procurement and integration of the RDTE funded sensor enhancements. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

D. Acquisition Strategy

EMARSS will be divested by Fiscal Year 2025. The acquisition strategy, supported by the EMARSS CPD, was to provide critical enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Electro-Optical (EO)/Infrared (IR) Full-Motion Video (FMV), Communications Intelligence (COMINT); Signals Intelligence (SIGINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR); Line-Of-Site (LOS) and Beyond Line-Of-Sight (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations. The EMARSS fleet of 24 systems consists of the following variants: eight EMARSS-G (Geo-INT); four EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight EMARSS-M (Multi-INT); and four EMARSS-S (SIGINT). Loss of an EMARSS-M in 2020 reduced the operational fleet to 23 aircraft.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2025 Army	/								Date:	March 20	24				
Appropriation/Budg 2040 / 7	et Activity	/	R-1 Program Element (Number/Name) PE 0305206A <i>I Airborne Reconnaissance</i> <i>Systems</i>							(Numbe MARSS I	r/ Name) Payloads A	ADV DEN	/					
Management Servic	es (\$ in M	illions)	ſ	FY 2	2023	FY	2024		2025 Ise		2025 CO	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			
РМО	C/CR	PEO IEW&S, PM SAI : APG, MD	1.110	0.192	Nov 2022	-		-		-		-	0.000	1.302	-			
		Subtotal	1.110	0.192		-		-		-		-	0.000	1.302	N/A			
Product Developme	ent (\$ in M	illions)	ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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			
SIGINT Sensor Enhancement	C/CPFF	AASKI : Tinton Falls, NJ	17.149	4.987	Jan 2023	-		-		-		-	0.000	22.136	-			
		Subtotal	17.149	4.987		-		-		-		-	0.000	22.136	N/A			
Support (\$ in Million	ıs)		ſ	FY 2	2023	FY 2	2024		2025 Ise		2025 CO	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			
Sensor Engineering Support	MIPR	CCDC : APG, MD	1.123	0.290	Dec 2022	-		-		-		-	0.000	1.413	-			
		Subtotal	1.123	0.290		-		-		-		-	0.000	1.413	N/A			
			Prior Years	FY 2	2023	FY	2024		2025 Ise		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract			
		Project Cost Totals	19.382	5.469		-		-		-		-	0.000	24.851	N/A			

oppropriation/Budget Activity 040 / 7			R-1 Prog PE 03052 Systems	206A I Airbo	nt (Number/Name rne Reconnaissand) ce	Date: March 2024 Project (Number/Name) e EH3 / EMARSS Payloads ADV DEV					
Event Name	FY 2023	FY 202		FY 2025	FY 2026		FY 2027		Y 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		

Execution of FY 2023 funding continues into FY 2024 due to non-severable contract.

whibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	h 2024
opropriation/Budget Activity 40 / 7		Element (Number I Airborne Reconn		Project (Number/Nam EH3 / EMARSS Payloa	
	Schedule Details				
		Sta		Er	
Events		Quarter	Year	Quarter	Year
QRC to EMARSS POR Modification and Conversion		2	2015	4	2019
		•	0017	4	
EMARSS Fielding		3	2017	4	2019
Advanced LiDAR Development		3 2	2017	2	2019 2020
Advanced LiDAR Development		2	2018	2	2020

Note

Execution of FY 2023 funding continues into FY 2024 due to non-severable contract.

	em Justificat	ion: PB 20	25 Army							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040: Research, Development, Systems Development		ation, Army	/ BA 7: Ope	erational		am Elemen 9A / <i>M</i> Q-1	•	,				
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	-	-	6.629	6.681	-	6.681	6.785	6.890	7.094	7.165	Continuing	Continuing
MQ2: MQ-1C Gray Eagle Modifications	-	-	6.629	6.681	-	6.681	6.785	6.890	7.094	7.165	Continuing	Continuing
Program MDAP/MAIS Code: 4	20	I	1	I	1	1				1	,	
(EO/IR/LD), Synthetic Aperture	Radar/Movin	a Target In	dicator (SAI		nale Intellige	nnon (SICIN	T) and HE	I EIDE mic	alloar provid	-l'	all woothor	minging
capability. MQ-1C Gray Eagle is Operations Command in suppo FY2025 RDTE dollars, in the ar platforms. This complementary denied/contested environments	s a dedicated rt of the comr nount of \$6.6 navigation s	, assured, r mander's wa 81 million, s olution supp	multi-missio arfighting pr supports de ports the ab	n UAS, field iorities with velopment o ility of the p	led to Active in multi-don efforts requi latform to se	e Componen nain operati red for integ urvive, pers	nts, Intellige ons. gration of Vi ist, and ope	nce and Se sion Based	curity Com	(VBN) onto	Army Specia MQ-1C Gr	ıl ay Eagle
capability. MQ-1C Gray Eagle is Operations Command in suppo FY2025 RDTE dollars, in the ar platforms. This complementary denied/contested environments	s a dedicated rt of the comm nount of \$6.6 navigation s (emerging G	, assured, r mander's wa 81 million, s olution supp PS threats)	multi-missio arfighting pr supports de ports the ab	n UAS, field iorities with velopment o ility of the p ransition is	led to Active in multi-don efforts requi latform to so required by	e Componen nain operati red for integ urvive, pers public law	nts, Intellige ons. gration of Vi ist, and ope 111-383.	nce and Se sion Based rate effectiv	curity Com Navigation vely in Glob	mand and A (VBN) onto al Positionin	Army Specia o MQ-1C Gr ng System (ıl ay Eagle GPS)
capability. MQ-1C Gray Eagle is Operations Command in suppo FY2025 RDTE dollars, in the ar platforms. This complementary	s a dedicated rt of the comm nount of \$6.6 navigation s (emerging G (s in Million dget get General Red Directed Rec Rescissions Adds Directed Tran gs	, assured, r mander's wa 81 million, s olution supp PS threats) <u>s)</u> uctions Juctions	multi-missio arfighting pr supports de ports the ab	n UAS, field iorities with velopment o ility of the p	led to Active in multi-don efforts requi latform to se	e Componen nain operati red for integ urvive, pers public law 29 29	nts, Intellige ons. gration of Vi ist, and ope	nce and Se sion Based rate effectiv <u>se </u> 38 31	curity Com	mand and A (VBN) onto al Positionin	Army Specia o MQ-1C Gr ng System (<u>FY 2025 Tc</u> 6.8	ay Eagle GPS) <u>otal</u> 338 581

Change Summary Explanation

The decrease from PB24 to PB25 reduces funding in FY25 and reduces the investment in A-PNT development efforts.

Exhibit R-2A, RDT&E Project Ju		Date: March 2024										
Appropriation/Budget Activity 2040 / 7					-	am Element 9A / MQ-1	•			umber/Nan -1C Gray Ea	ations	
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
MQ2: MQ-1C Gray Eagle Modifications	-	-	6.629	6.681	-	6.681	6.785	6.890	7.094	7.165	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The MQ-1C Gray Eagle provides the Army with an Extended Range, Multi-Purpose (ERMP) Uncrewed Aircraft System (UAS); capable of executing reconnaissance, security, attack, and intelligence collection missions in the Range of Military Operations (ROMO). Sensors/payloads include an Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Signals Intelligence (SIGINT), and HELLFIRE missiles; providing a near all-weather mission capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission UAS, fielded to Active Components, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities within multi-domain operations.

FY2025 RDTE dollars, in the amount of \$6.681 million, supports development efforts required for integration of Vision Based Navigation (VBN) onto MQ-1C Gray Eagle platforms. This complementary navigation solution supports the ability of the platform to survive, persist, and operate effectively in Global Positioning System (GPS) denied/contested environments (emerging GPS threats). M-Code transition is required by public law 111-383.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Assured Positioning, Navigation, & Timing	-	6.629	6.681
FY 2024 Plans: FY2024 RDTE dollars, in the amount of \$6.629M, supports development efforts required for integration of vision based navigation (VBN) onto MQ-1C Gray Eagle platforms. This complementary navigation solution supports the ability of the platform to Survive, Persist, and Thrive (continue mission) in GPS denied/contested environments (emerging GPS threats).			
FY 2025 Plans: FY2025 RDTE dollars, in the amount of \$6.681 million, supports development efforts required for integration of vision based navigation (VBN) onto MQ-1C Gray Eagle platforms. This complementary navigation solution supports the ability of the platform to survive, persist, and operate effectively in Global Positioning System (GPS) denied/contested environments (emerging GPS threats). M-Code transition is required by public law 111-383.			
FY 2024 to FY 2025 Increase/Decrease Statement: Increased funding from FY24 to FY25 is due to revised economic assumptions and further supports continued prioritization and investment in A-PNT development efforts.			
Accomplishments/Planned Programs Subtotals	-	6.629	6.681

Exhibit R-2A, RDT&E Project Just	tification: PB	2025 Army							Date: Ma	rch 2024	
Appropriation/Budget Activity					-	nent (Numb		(Number/Name)			
2040 / 7				PE 03	05219A / M	Q-1 Gray Ea	gle UAV	MQ2 / MC	Q-1C Gray I	Eagle Modific	cations
C. Other Program Funding Summ	ary (\$ in Milli	<u>ons)</u>									
			<u>FY 2025</u>	<u>FY 2025</u>	<u>FY 2025</u>					<u>Cost To</u>	
Line Item	<u>FY 2023</u>	<u>FY 2024</u>	Base	000	<u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>		<u>Complete</u>	
AA6601: Gray Eagle Mods2	133.038	14.959	23.865	-	23.865	5.021	5.539	10.536	10.641	Continuing	Continuing
• A00005: <i>MQ-1 UAV</i>	350.000	-	0.000	-	0.000	-	-	-	-	0.000	350.000

<u>Remarks</u>

D. Acquisition Strategy

An Extended Range, Multi-Purpose (ERMP) Operational Requirement Document (ORD) was approved by the Joint Requirement Oversight Council (JROC) 6 Apr 2005. Milestone B occurred on 20 Apr 2005, and the System Development and Demonstration contract was awarded 8 Aug 2005, as a result of a competitive solicitation which included a vendor system capabilities demonstration. A Capabilities Production Document (CPD) was approved 14 Mar 2009. MQ-1C Gray Eagle completed Follow-On Test and Evaluation (FOTE) on 12 Jun 2015.

This RDTE effort funds development/integration and test of key Assured Positioning Navigation and Timing (A-PNT) efforts for Gray Eagle. These include Vision Based Navigation (VBN), which will provide a "non-GPS" based navigation solution on the Gray Eagle aircraft. VBN provides an alternate means of estimating aircraft position during GPS denial/outage by tracking aircraft movement using video imagery. Additionally, the RDTE effort will fund integration of an independent timing source to maintain functionality of time dependent components on the aircraft. Outyear RDTE will fund the selection and integration of an M-Code compatible/capable 3rd Navigator to replace the current obsolete Athena 511 GPS receiver, and also fund the development of other complementary/alternate A-PNT systems. The inclusion of these capabilities on the Gray Eagle aircraft increases survivability and helps ensure operators can continue mission in GPS contested environments. M-Code transition is required by public law 111-383.

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Arm	у								Date:	March 20)24	
Appropriation/Budg 2040 / 7	et Activity			R-1 Program Element (Number/Name)Project (Number/NPE 0305219A / MQ-1 Gray Eagle UAVMQ2 / MQ-1C Gray								Modificat	tions		
Product Developme	ent (\$ in Mi	llions)		FY	2023	FY 2	2024		2025 ase		2025 CO	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	Target Value of Contract	
Assured Positioning, Navigation, & Timing	SS/CPFF	General Atomics, ASI : San Diego, CA	-	-		6.629	Mar 2024	6.681	Mar 2025	-		6.681	Continuing	Continuing	
		Subtotal	-	-		6.629		6.681		-		6.681	Continuing	Continuing) N/A
			Prior Years	FY	2023	FY 2	2024		2025 ase		FY 2025 OCO Total Cost To Cost To Cost				
	Project Cost Totals - - 6.629 6.681 - 6.681 Continuing Continuing									Continuing	N/A				

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 202	5 Army					Date: March 20	24						
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name)Project (Number/Name)PE 0305219A / MQ-1 Gray Eagle UAVMQ2 / MQ-1C Gray Eagle Modifications											
						_							
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						
Assured Positioning, Navigation & Timing													
		A-PNT (M-code	and VBN)										
L													
L													

opropriation/Budget Activity 40 / 7	Activity R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV			Project (Number/Name) MQ2 / MQ-1C Gray Eagle Modification		
	Schedule Details					
		art	E	nd		
Events		art Year	Eı Quarter	nd Year		

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army					1				Date: March 2024			
Appropriation/Budget Activity 2040: Research, Development, Te Systems Development	est & Evalua	ation, Army	I BA 7: Ope	rational	-	am Elemen I5A / End Ite	•	Name) al Preparedr	ness Activiti	ies		
COST (\$ in Millions)	COST (\$ in Millions) Prior Years FY 2023 FY 2024 Base OCO Total FY 2026 FY 2027 FY 2028 FY 2028						FY 2029	Cost To Complete	Total Cost			
Total Program Element	-	128.617	75.317	67.187	-	67.187	67.261	67.978	68.721	69.408	0.000	544.489
E25: Mfg Science & Tech	-	87.617	75.317	67.187	-	67.187	67.261	67.978	68.721	69.408	0.000	503.489
EA2: MANTECH INITIATIVES (CA)	-	41.000	-	-	-	-	-	-	-	-	0.000	41.000

A. Mission Description and Budget Item Justification

This Program Element (PE) develops, demonstrates, and transitions manufacturing technologies and processes that enable improvements in producibility and affordability of emerging and enabling components and subsystems of Army ground and air platforms, Soldier systems, weapons systems, air & missile defense systems, as well as sensors and electronics. Initiatives within the PE result in cost savings and reduced risk of transitioning military-unique manufacturing processes into production. Project E25 fosters the transfer of new/improved manufacturing technologies to the industrial base, including manufacturing efforts that have potential for high payoff across the spectrum of Army systems.

Work in this PE is performed by the United States (U.S.) Army laboratories and research centers, U.S. Army Program Executive Offices and Program Management Offices, and U.S. Army depots and arsenals.

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

rogram Change Summary (\$ in Millions)	FY 2023	<u>FY 2024</u>	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	132.270	75.317	67.048	-	67.048
Current President's Budget	128.617	75.317	67.187	-	67.187
Total Adjustments	-3.653	0.000	0.139	-	0.139
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-0.516	-			
SBIR/STTR Transfer	-3.137	-			
 Adjustments to Budget Years 	-	-	0.139	-	0.139
Congressional Add Details (\$ in Millions, and Inclu	ides General Redu	<u>ictions)</u>			FY 2023 FY 2024
Project: EA2: MANTECH INITIATIVES (CA)					

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	D	ate: March 2024	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0708045A <i>I End Item Industrial Preparedness Activities</i>		
Congressional Add Details (\$ in Millions, and Includes General Re	ductions)	FY 2023	FY 2024
Congressional Add: Liquid Hydrogen Refueling Systems		10.000	
Congressional Add: N2O5		10.000	
Congressional Add: Lightweight Transparent Film Armor		5.000	
Congressional Add: Improved Additive Manufacturing Qualification	s Methods for Army Aviation	10.000	
Congressional Add: Isostatic Pressure Armor		6.000	
	Congressional Add Subtotals for Project: EA	41.000	
	Congressional Add Totals for all Project	ets 41.000	
Change Summary Explanation Increased funding due to revised economic assumptions.			

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Marc	ch 2024	
Appropriation/Budget Activity 2040 / 7 Brion				R-1 Progra PE 070804 edness Act	5A I End Ite	•		Project (Number/Name) E25 / Mfg Science & Tech				
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
E25: Mfg Science & Tech	-	87.617	75.317	67.187	-	67.187	67.261	67.978	68.721	69.408	0.000	503.489
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project develops and demonstrates manufacturing technologies and processes that enable improvements in producibility and affordability of emerging and enabling components and subsystems of Army ground and air platforms, Soldier systems, weapons systems, air & missile defense systems, and sensors and electronics. Work is performed to advance the state of the art in manufacturing processing and fabrication techniques for coatings, multifunctional materials, and structural elements for Army specific applications.

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

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Networks and Command, Control, Communications and Intelligence	9.369	21.575	15.339
Description: ManTech efforts focused on an integrated system of hardware, software and infrastructure that is sufficiently mobile, reliable, user-friendly, discreet in signature, expeditionary and appropriate for any environment where the electromagnetic spectrum is denied or degraded. It also focuses on dependable communication or assured position, navigation, and timing; tactical space; navigation warfare; and Cyber operations. Additionally, it covers virtual and immersive Common Operation Environments in support of faster decision making. These efforts support the Army modernization priority for assured positioning, navigation, and timing. Efforts are aligned to programs within the executive offices of Intelligence Electronic Warfare & Sensors and Command Control Communications-Tactical.			
FY 2024 Plans: Continue to develop and advance manufacturing processes and capabilities supporting command and control systems/ subsystems and position, navigation, and timing systems. Specific plans include continued super optical improvement supporting 3rd Gen Dewar; continued support to the Low Chip Scale Atomic Clock; and planned efforts to support the modernization of Silicone Foundry Processes for the production of read out integrated circuits.			
FY 2025 Plans: Program plans will continue to develop and advance manufacturing processes and capabilities supporting command and control systems/subsystems and position, navigation, and timing systems. Specific plans include continued support to the Low Chip Scale Atomic Clock and initiate efforts to lower production cost and scalability of small SWAP Sensing for Velocimetry for			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	March 2024		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A <i>I End Item Industrial Prepar</i> <i>edness Activities</i>	Project (Number/Name) E25 / Mfg Science & Tech			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025	
ground vehicles. Additionally, initiate efforts to support the modern generation sensor read out circuits to improve Warfighter situation		next			
FY 2024 to FY 2025 Increase/Decrease Statement: The decrease in funding is a result of the super optical improveme for Dewar Cooler Bench integration. Funding will shift to ground ef Battle Tank and soldier for the Low-Cost Flame Resistant textiles.					
<i>Title:</i> Weapon Systems		43.280	28.622	22.47	
Description: Manufacturing technology efforts focused on current which include munitions and formations that improve range, lethalic capabilities within multi-domain operations. Additionally, these effor precision fires (LRPF) as well as air and missile defense (AMD). L capabilities, and extended range cannon artillery. AMD includes dia maneuverability for short range air defense, and indirect fire protect executive office of Missile and Space, and the joint executive office. Formerly titled Long Range Precision Fires and Air & Missile Defe both current and future acquisition systems.	ity, mobility, precision, target acquisition and force protection orts support the Army modernization priorities for long-rang RPF is focused on strategic fires, precision strike missile irected energy systems and interceptors focused on provid ction capabilities. Efforts are aligned to programs within the e Armaments & Ammunition.	e ing			
FY 2024 Plans: Continue to develop and advance manufacturing processes for we the affordability and producibility of advanced energetics, warhead supports air and missile defense capabilities focused on the afford missiles and seekers, guidance and control, advanced aero structulaser weapons systems, short range air defense, long range munitin place for multi-platform cannon tube production optimization me compacity, and fielding goals.	Is, propulsion, guidance and navigation technology. Addition lability and producibility of directed energy systems, advan ures / propulsion, air defense radar technologies, high ene tions, and indirect fire protection capability. Integrated plan	onally ced rgy s are			
FY 2025 Plans: Program plans will continue to develop and advance manufacturin fires resulting in the affordability and producibility of advanced energy content technology. Additionally, effort will support air and missile defense directed energy systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems, advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems advanced missiles and seekers, guidance defense radar technologies, high energy laser weapons systems advanced missiles advance	rgetics, warheads, propulsion, guidance and navigation capabilities focused on the affordability and producibility o ce and control, advanced aero structures / propulsion, air	f			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: M	arch 2024		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / End Item Industrial Prepar edness Activities	Project (Number/Name) E25 / Mfg Science & Tech			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025	
fire protection capability. Integrated plans are in place for multi- executive office ground combat system's cost, capacity, and fie radar components to support Army acquisition performance an	elding goals. Initiate efforts focusing on producibility of high po				
FY 2024 to FY 2025 Increase/Decrease Statement: The decrease in funding is due to the completion of the improvitansition and be implemented for ground applications.	ed manufacturing of smooth bore cannon tubes effort which w	ill			
Title: Ground Systems		4.971	7.475	9.26	
Description: ManTech efforts focused primarily focused on Ar efforts support the Army's ability to gain positions of relative ad impose a tempo of event and multiple simultaneous dilemmas mobility. Additionally, these efforts support the Army's moderni other close combat capabilities in manned and unmanned tear conjunction with improved firepower, protection, mobility and p force projection and force protection technologies to enable the within the executive offices of Ground Combat Systems; Comb	vantage, overmatch the enemy, protect Soldiers from harm, a on the enemy to overwhelm enemy effectiveness through grou zation priority for Next Generation Combat Vehicles which inte- ning, leveraging semi-autonomous and autonomous platforms ower generation capabilities. The ground portfolio also suppor e Army to realize close combat. Efforts are aligned to program	nd und ggrate in ts			
Formerly titled Next Generation Combat Vehicle. This effort is acquisition systems.	not new; it has been retitled to better align to both current and	future			
FY 2024 Plans: Continue to develop and advance manufacturing processes an technology with an emphasis on providing affordable and timel capabilities as well as the advanced processing of high perform	y solutions. Efforts will include advances in digital thread	lable			
FY 2025 Plans: Program plans will continue efforts advancing digital thread caphigh performance / lower weight armor materials.	pabilities and addressing advanced manufacturing processes	for			
FY 2024 to FY 2025 Increase/Decrease Statement: The increase in funding will be used to increase the scope of A platforms.	dvanced Materials for Main Battle Tank and other ground				

PE 0708045A: *End Item Industrial Preparedness Activit...* Army

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: N	larch 2024	
Appropriation/Budget Activity 2040 / 7	-	Project (Number/I E25 / Mfg Science	,	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Description: ManTech efforts focused on Army manned and unmanned aviation speed, payload capacity, mission systems, survivability, reliability, and reduced support the Army Future Vertical Lift modernization priority through manufacture vertical lift aircraft for the Army. Efforts are aligned to programs within the programs within the programs within the programs within the programs.	l logistical footprint. Additionally, these efforts ring technologies that provide next generation of			
Formerly titled Future Vertical Lift. This effort is not new; it has been retitled to systems.	better align to both current and future acquisition	n		
FY 2024 Plans: Continue to develop and advance manufacturing processes and capabilities su attack, reconnaissance and long range assault capabilities, and air launched e efforts supporting leading edges; multi-laser stitching additive manufacturing; a manufacturing.	ffects. Efforts will include additive manufacturin			
FY 2025 Plans: Program plans will continue to develop and advance manufacturing processes for future attack, reconnaissance and long range assault capabilities, and air la efforts supporting leading edges (rotary aircraft advanced blades) production c	unched effects. Continue additive manufacturi	ng		
FY 2024 to FY 2025 Increase/Decrease Statement: The decrease in funding reflects a scale down of the multi-laser stitching additi for aviation systems efforts, which will transition to PM Advanced Turbine Engine Explosive Slurry Loading for Initiators effort within the Soldier portfolio.		d		
Title: Soldier Systems		13.759	3.370	9.274
Description: ManTech efforts focused primarily on integrated Soldier and Squ manufacturing solutions that enhance integrated Soldier capabilities through th protection, and communication. Additionally, this effort supports the Soldier Let programs within the executive offices of Soldier; Combat Support and Combat and Nuclear Defense; and the joint program office for armaments and ammunit	eir equipment, personal sustainment, performa thality modernization priority. Efforts are aligne Service Support; Chemical Biological Radiolog	l to		
Formerly titled Soldier Lethality. This effort is not new; it has been retitled to be systems.	tter align to both current and future acquisition			
FY 2024 Plans:				

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: M	larch 2024		
Appropriation/Budget Activity 2040 / 7		oject (Number/Name) 25 / Mfg Science & Tech			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025	
Increase the capability of individual Soldier weapons, provide Soldie and ability to respond to emerging situations through advanced man greater affordability and producibility with a concentration on next g power, enhanced protective materials and systems, and sensor dev improvements for superior vision protection; advanced processes for and advanced transceiver optical module production.	nufacturing technology and processes. Efforts will result in generation squad weapons and ammunition, Soldier borne velopment. Effort includes continued production processes				
FY 2025 Plans: Efforts will result in greater affordability and producibility with a cond Soldier borne power, enhanced protective materials and systems, a processes improvements for superior vision protection and advance	and sensor development. Efforts include continued production				
FY 2024 to FY 2025 Increase/Decrease Statement: The increase in funding will be used to accelerate efforts to improve automate manufacturing of explosive slurry loading for initiators.	e cost and performance of flame-resistant textiles as well as to				
	Accomplishments/Planned Programs Subtotals	87.617	75.317	67.18	
 C. Other Program Funding Summary (\$ in Millions) N/A Remarks Not applicable for this item. D. Acquisition Strategy Not applicable for this item. 					

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Arm	/								Date:	March 20	24	
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0708045A <i>I End Item Industrial Prepar</i> <i>edness Activities</i>				Project (Number/Name) E25 / Mfg Science & Tech					
Product Development (\$ in Millions)				FY 2	2023	FY 2	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
Mfg Science & Tech	Various	TBD : TBD	624.638	87.617		75.317		67.187		-		67.187	0.000	854.759	-
		Subtotal	624.638	87.617		75.317		67.187		-		67.187	0.000	854.759	N/A
			Prior Years	FY 2	2023	FY 2	2024	FY 2 Ba			2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	624.638	87.617		75.317		67.187		-		67.187	0.000	854.759	N/A

Remarks

xhibit R-4, RDT&E Schedule Profile: PE ppropriation/Budget Activity)40 / 7			5A I End I	n t (Number/Name) tem Industrial Prepa	Project E25 / Mi	Date: March 2024 Project (Number/Name) E25 / Mfg Science & Tech				
Event Name	FY 2023 1 2 3 4	FY 202	Y 2025	FY 2026 1 2 3 4	FY 2027	FY 2028	FY 2029			
N/A										

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army				Date: Marc	
Appropriation/Budget Activity 040 / 7	R-1 Program PE 0708045/ edness Activ	Element (Number A I End Item Industri ities	/ Name) al Prepar	Project (Number/Nam E25 / Mfg Science & Te	
	Schedule Deta	ils			
		Sta	rt	En	nd
Events		Quarter	Year	Quarter	Year
N/A		1	2025	4	2028

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2025 A	rmy							Date: Mar	ch 2024	
Appropriation/Budget Activity 2040 / 7					R-1 Progra PE 070804 edness Ac	5A I End Ite	•	,	Project (N EA2 / MAN		ne) TATIVES (CA	4)
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
EA2: MANTECH INITIATIVES (CA)	-	41.000	-	-	-	-	-	-	-	-	0.000	41.000
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Congressional Interest Item funding provided for ManTech Initiatives.

A. Mission Description and Budget Item Justification

Congressional Interest Item funding provided for ManTech Initiatives.

This effort accelerates manufacturing technology for more affordable electronic warfare, communications and sensors systems components and subsystems to include radio frequency amplifiers, antennas, and focal plane arrays. This effort accelerates and supplements manufacturing technology for more affordable components and subsystems for tactical and combat vehicles and weapon systems. Work focuses benefit from working to develop and scale up the manufacturing process for nano-tungsten carbide powders and high-volume single-crystal tungsten rod manufacturing processes. This effort accelerates and supplements manufacturing technology for more advanced manufacturing and enterprise solutions. Work focuses on accelerating model based manufacturing to specific organic Army facilities and novel ways of applying additive manufacturing and monitoring material powder beds and process controls during additive manufacturing part build for weapon system components.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024
Congressional Add: Liquid Hydrogen Refueling Systems	10.000	-
FY 2023 Accomplishments: Furthers efforts executed under FY22 \$10,000K for liquid hydrogen refueling systems. Used advanced manufacturing and lighter weight materials to fabricate cost-effective high-quality diamond materials for use in cryogenic quantum system payload development, improve integrated liquid hydrogen aircraft and cryogenic quantum system payload performance, and portable liquid hydrogen refueling Ground Support Equipment (GSE) System for Unmanned Aerial Vehicles carrying advanced cryogenic quantum systems payloads at an Army base for flight demonstration. Will characterize the quantum diamond materials using the most advanced Positron Annihilation Spectroscopy. Assembled and tested advanced diamond-based cryogenic quantum system payload. Effort also conducted aircraft and quantum systems payload to validate advanced manufacturing methods and techniques.		
Congressional Add: N2O5	10.000	-
FY 2023 Accomplishments: Furthers efforts executed under FY22 \$10,000K Program Increase "N2O5" to develop continuous and on demand supply of dinitrogen pentoxide (N2O5) nitration technology for manufacture		

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			, l	Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/I PE 0708045A <i>I End Item Industria</i> <i>edness Activities</i>			umber/Name) TECH INITIATIVES (CA
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	
of RDX & HMX. Designed and demonstrated separate pilot scale continuous terminated Polybutadiene (HTPB) leveraging previous investment and lesso Hydroxyl-Terminated Polybutadiene (HTPB) was utilized to coat energetics p for various DoD Propellant (Rocket and Gun) and HE applications. Successf impacted the following Army programs of record: 155mm Artillery HE XM111 XM1210 Projectile; (ERCA)155mm Artillery HE XM1128 Projectile; 155mm H (ERCA);BLU-111 / Mk 84; BLU-117 B/B; BLU-121 A/B; BLU-122/B; M1061 6 Propellant).	ns learned from N2O5 work. produced via N2O5 technology ful development of this effort I3 Projectile; 155mm Artillery HE HE M982A1 Excalibur Projectile;			
Congressional Add: Lightweight Transparent Film Armor		5.000	-	
FY 2023 Accomplishments: Further efforts executed under FY22 \$4,000K. of a new transparent film material focusing on resin processing and sheet ex and environmental properties. Continued development of new transparent filighter, thinner transparent armor for face shields, visors, and vehicle armor. was for PM Soldier Protective Equipment for the Cupola? protective ensemble	trusion to optimize optical, ballistic, Im material for integration into The transition path for this effort			
Congressional Add: Improved Additive Manufacturing Qualifications Metho	ds for Army Aviation	10.000	-	
FY 2023 Accomplishments: This effort developed a statistically-backed, me framework will reduce the need for additional fabrications/tests for qualification validated equivalency structure. Evaluated how data generated by a single a can be transmitted to a separate AM machine to increase qualification efficient backed, model-based, and data-driven framework will reduce the need for an qualification of separate machines through the validated equivalency structur and improve on current standards, which allow a more efficient data sharing and defense contractors. With the improvement of AM Qualification Methods switching between legacy aircraft components (i.e. UH-60, etc.) or FVL will b readiness.	on of separate machines through the additive manufacturing (AM) platform ency. Developed a statistically- dditional fabrications/tests for re. New standards will be generated and qualification practice with DoD s, standing up AM machines or			
Congressional Add: Isostatic Pressure Armor		6.000	-	
FY 2023 Accomplishments: This effort accelerated the development of advapplications to Soldier and Vehicle protection.	vance armor composites with			
	Congressional Adds Subtotals	41.000	_	

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A <i>I End Item Industrial Prepar</i> <i>edness Activities</i>	Project (Number/Name) EA2 / MANTECH INITIATIVES (CA)
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	025 Arm	y								Date:	March 20	24	
Appropriation/Budge 2040 / 7	et Activity	1				PE 070	-	End Item	lumber/N Industrial		-	(Number IANTECH	r /Name) INITIATI\	/ES (CA,)
Product Developme	nt (\$ in Mi	illions)		FY 2	2023	FY :	2024		2025 ase		2025 CO	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
Mfg Science & Tech	TBD	TBD : TBD	240.561	41.000		-		-		-		-	0.000	281.561	-
		Subtotal	240.561	41.000		-		-		-		-	0.000	281.561	N/A
		ſ	Prior Years	FY 2	2023	FY	2024		2025 ase		2025 CO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	240.561	41.000		-		-		-		-	0.000	281.561	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: Pl	B 2025 Arm	у																			Dat	e: N	March	ו 20	24		
Appropriation/Budget Activity 2040 / 7								PE (0708		AIE	nd		Num Ind							(Numb ANTEC				/ES	(CA)	
		FY	201	6		FY	2017	7		FY 2	2018			FY 2	019		F	Y 2	020		FY	202	21		FY	2022	
	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
N/A																											
		EV	202	2		EV	2024			FY 2	0.25			FY 2	026		E	V 2	027		FY	202	00	1	EV	2029	
			-	-	_	1	-	•		1				1					-					_			
	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
N/A																											

hibit R-4A, RDT&E Schedule Details: PB 2025 Army				D	ate: March	2024
propriation/Budget Activity 40 / 7		Element (Number I End Item Industr ties		Project (Nun EA2 / MANT		
	Schedule Detail	S				
	Schedule Detail	S Sta	ırt		End	
Events	Schedule Detail		irt Year	Qua	End	Year