

UNCLASSIFIED

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

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCs)
--	---

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	-	18.606	42.177	27.582	-	27.582	35.987	30.244	28.408	18.696	0.000	201.700
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
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

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	
<p>(PrSM). AFATDS also provides Joint Targeting support to multi-domain operations (the Army's contribution to JADO) and will address emerging sensor-to-shooter initiatives.</p> <p>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.</p> <p>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, FOs, and fire support radars).</p> <p>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.</p> <p>FY 2025 funding in the amount of \$7.275 million is allocated to Project EF7: Precision Fires Warrior & Dismounted and will be utilized for continued development of PF-D/M 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 build the PF-M baseline to integrate with Mounted Mission Command-Software (MMC-S) and operate on the MFoCS within the MCE, as well as vehicle integration into the Fire Support Team HMMWV and Bradley-Fire Support Team (BFIST) platforms.</p> <p>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 deployment.</p>		

UNCLASSIFIED

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

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>
---	--

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.

UNCLASSIFIED

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 / Joint Automated Deep Operation Coordination System (JADOCS)				Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted			
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:			

UNCLASSIFIED

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 / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>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.</p> <p>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.</p> <p>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.</p>				
<p>Title: PF-D/M Software Development</p> <p>Description: PF-D/M Software Development.</p> <p>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.</p> <p>FY 2025 Plans: 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.</p> <p>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.</p>		2.773	3.522	5.419
<p>Title: Testing for PF-D/M</p> <p>Description: Conduct and Support Army Testing Activities for PF-D/M.</p> <p>FY 2024 Plans: Conduct Production Qualification and Functional Quality Testing (developmental), customer test (OT) and Army Interoperability Certification testing of PFDM 3.0 software.</p> <p>FY 2025 Plans:</p>		-	0.400	0.961

UNCLASSIFIED

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 / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted
--	---	--

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Internal Verification and Validation, Developmental Test and Soldier Touchpoint activities for both PF-D and PF-M to support Continuous Integration and Continuous Delivery (CI/CD) of software capabilities to meet Warfighter needs. FY 2024 to FY 2025 Increase/Decrease Statement: Increase due to additional resources for Internal Verification and Validation/Developmental Test and Soldier Touchpoint activities for both PF-D and PF-M.			
Title: Training (Interactive Electronic Technical Manuals) FY 2024 Plans: Additions and modifications to Administrator Interactive Electronic Technical Manuals (IETM) for Precision Fires-Mounted (PF-M). FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to the reallocation of training to software development as part of the Continuous Integration/Continuous Delivery approach.	0.319	0.332	-
Accomplishments/Planned Programs Subtotals	3.260	4.429	7.275

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• BZ9851: POCKET FORWARD ENTRY DEVICE (PFED)	2.140	2.213	2.695	-	2.695	4.065	4.568	4.753	4.625	Continuing	Continuing

Remarks

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

UNCLASSIFIED

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>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF7 / <i>Precision Fires Warrior Dismounted & Mounted</i>
<p>actual optempo will be driven by the fielding plans and prioritization for Nett Warrior EUD (PF-D) and Mounted Mission Command-Software (MMC-S) (PF-M) integration in fires support vehicle variants.</p> <p>PF-D/M Block 1 provided the baseline dismounted capability upon which subsequent blocks have been built. It leveraged an Army Science and Technology (S&T) investment by transitioning a software application that was developed and used in proponent experimentation events (e.g., Army Expeditionary Warrior Experiment (AEWE) and Bold Quest). Upon a successful Milestone B decision in FY15, this software application transitioned to PM Mission Command (PMMC) to conduct all Army developmental and operational test and evaluation requirements. With both the Mobile/Handheld and Mounted computing environments migrating toward a technical foundation that operates on an Android Tactical Assault Kit (ATAK) software baseline, the PF-D software, operated on the Nett Warrior EUD was further adapted to coalesce to a new common operating environment. Reusable components and services were taken from the S&T baseline to help satisfy operational requirements and enhance the end user experience provided within the ATAK infrastructure. PF-D was developed and will continue to be developed in partnership with a government integrator.</p> <p>PF-D/M Block 2 focused on transitioning from a standalone Android application to a plugin on the ATAK architecture and initiated development of the mounted capability (PF-M) by adapting the PF-D software to the mounted environment. PF-D capabilities include Sensor Interoperability, and Digitally Aided Close Air Support over the Link 16 network. PF-M replaces the Lightweight Forward Entry Devices (LFED) Forward Observer Software (FOS) at the maneuver company Fire Support Team and is different from PF-D in that it resides on the mounted platforms and leverages the vehicle's interfaces. The first generation of PF-M will be developed as a plugin to operate with MMC-S, which will be hosted on the MFCs in various vehicle platforms. The PF-M software will continue to be developed in partnership with a government integrator and will reuse previously developed components available under the ATAK architecture to serve as the mounted baseline to satisfy mission requirements. A Full Deployment Decision for Block 2 was approved with the Acquisition Decision Memorandum signed in Mar 2022.</p> <p>PF-D/M Block 3 encompasses the continuation of PF-D software development with additional capabilities for the handheld environment and the development and integration of PF-M, an adaptation of the PF-D software for the mounted environment. PF-M replaces the Lightweight Forward Entry Devices (LFED) Forward Observer Software (FOS) at the maneuver company Fire Support Team and is different from PF-D in that it resides on the mounted platforms and leverages the vehicle's interfaces. The first generation of PF-M will reside on the Mounted Family of Computer Systems computer to meet the Mounted Computing Environment directive. Like Nett Warrior, PdM Mounted Mission Command (MMC) (formerly Joint Battle Command - Platform (JBC-P)) will provide an ATAK-based infrastructure called MMC-Software to run the PF-M capabilities as a plugin. The PF-M will continue to be developed in partnership with a government integrator and will reuse previously developed components available under the ATAK architecture to serve as the mounted baseline to satisfy mission requirements. A Block 3 Build Decision was approved in Nov 2021.</p>		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted
--	---	--

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support 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	Continuing
Program Management Support for PF-D/M (Contract)	Option/CPFF	GSA : APG, MD	-	-		-		0.597	Mar 2025	-		0.597	0.000	0.597	-
Subtotal			0.759	0.168		0.175		0.895		-		0.895	0.000	1.997	N/A

Remarks
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.

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PF-D/M Software Development efforts	IA	DEVCOM C5ISR, ESI : APG, MD	22.146	2.773	Oct 2022	3.532	Oct 2023	5.419	Oct 2024	-		5.419	Continuing	Continuing	Continuing
Training (Interactive Electronic Technical Manuals (IETM))	IA	TYAD : Tobyhanna, PA	-	0.319		0.322		-		-		-	0.000	0.641	-
Subtotal			22.146	3.092		3.854		5.419		-		5.419	Continuing	Continuing	N/A

Remarks
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.

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support (Engineering Release)	Various	Testing : Various	1.761	-		0.400	Oct 2023	0.961	Feb 2025	-		0.961	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted
--	---	--

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			1.761	-		0.400		0.961		-		0.961	Continuing	Continuing	N/A

Remarks
Increased cost for additional Internal Verification and Validation/Developmental Test and Soldier Touchpoint exercises for PF-D and PF-M.

	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	24.666	3.260	4.429	7.275	-	7.275	Continuing	Continuing	N/A

Remarks

UNCLASSIFIED

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 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted

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
PF-D/M Continuous Software (SW) Development/Integration	[Redacted]																											
PF-D/M Continuous Developmental, Operational and Soldier...	[Redacted]																											
PF-M HMMWV Integration	[Redacted]																											
PF-M BFIST Integration	[Redacted]																											
PF-M Stryker Integration	[Redacted]																											

UNCLASSIFIED

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 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted

Schedule Details

Events	Start		End	
	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

UNCLASSIFIED

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 / Joint Automated Deep Operation Coordination System (JADOCS)				Project (Number/Name) EF8 / AFATDS Increment 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
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.

UNCLASSIFIED

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 / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>Title: AFATDS software development efforts</p> <p>Description: Development of AFATDS 7 software.</p> <p>FY 2024 Plans: Develop modernized software with the flexibility to accommodate a variety of hosting environments (e.g., laptop, server, cloud, etc.) to enable hypersonic capabilities and incorporates Long Range Precision Fires (LRPF) capabilities to include Extended Range Canon Artillery (ERCA), Extended Range Guided Multiple Launch Rocket System (ER-GMLRS), Precision Strike Missile System (PrSM) enhancements. Development will also address user interface upgrades based on Soldier feedback, a data bridge with CPCE, Link 16/digital radio enhancements, and Artillery Systems Cooperation Activities (ASCA) needs and incorporate embedded training while enabling high tempo counter fire operations.</p> <p>FY 2025 Plans: Continue development of data centric capability postured for deployment in multiple hosting environments (e.g., cloud, laptop, tablet, server) to enhance kill chain responsiveness, improve cyber security posture and reduce cost and timelines for future upgrades. Modernization development will support new ballistic requirements, including upgrading precision calculation data to support Hypersonics and LRPF capabilities, while enhancing the User Interface and providing embedded training, and implementing the Army Data Plan.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to reduced efforts of multiple hosting environments, cyber security posture, embedded training, specific focus on Division-level Fire Support functions, and Army Data Plan implementation.</p>		12.256	27.392	15.350
<p>Title: AFATDS Test</p> <p>Description: Internal verification and validation testing, developmental, Soldier Touch Points/exercises throughout the Continuous Integration/Continuous Deployment of the software.</p> <p>FY 2025 Plans: Internal Verification and Validation, developmental and Soldier Touchpoint activities to support Continuous Integration/Continuous Delivery (CI/CD) approach.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: AFATDS test efforts in FY25 and beyond are reflected in this category. Overall decrease from FY24 reflects adoption of the CI/CD approach for development and testing.</p>		-	-	2.514
Title: AFATDS 7 Test events		0.762	6.600	-

UNCLASSIFIED

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 / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
<p>Description: AFATDS 7 Test Support.</p> <p>FY 2024 Plans: Conduct development, internal verification & validation, Army Interoperability Certification testing and begin operational testing (OT). The program has a well-established internal verification and validation process which will be conducted while the software is being developed to verify the design, validate issues and/or identify new issues to be addressed to ensure stable designs are carried into the formal developmental testing and OT.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: All test support in FY25 and beyond is being captured under the AFTADS Test support accomplishment. Overall, there is a decrease from FY24 to FY25 reflecting the adoption of the CI/CD approach.</p>			
<p>Title: Program Management Costs for AFATDS software development</p> <p>Description: Provide program support for AFATDS software development efforts.</p> <p>FY 2024 Plans: Program Management Support to include: Matrix and Systems Engineering and Technical Assistance (SETA) for all aspects of the AFATDS program including requirements analysis, software development efforts, testing, logistics and business management support.</p> <p>FY 2025 Plans: Project management to include matrix and contractor to perform Fires systems integration, engineering development/integration, operations, ASCA, and safety/information assurance.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Decrease due to reduced requirements for program management activities associated with the level of development.</p>	2.328	3.756	2.443
Accomplishments/Planned Programs Subtotals	15.346	37.748	20.307

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• B28620: MOD OF IN-SVC EQUIP, AFATDS	7.536	7.839	12.312	-	12.312	9.129	10.029	10.332	8.105	0.000	65.282
Remarks											

UNCLASSIFIED

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>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF8 / <i>AFATDS Increment 1</i>

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.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1
--	---	--

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support 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/A

Remarks
Decrease due to reduced requirements for program management activities associated with the level of development.

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
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/A

Remarks
Decrease due to reduced efforts of multiple hosting environments, cyber security posture, embedded training, specific focus on Division-level Fire Support functions, and Army Data Plan implementation.

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Testing for AFATDS v7.x	IA	Multiple Govt Test Agencies (ATEC, ATC, OTC) : Multiple	0.750	0.762		1.980	Oct 2023	-		-		-	0.000	3.492	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation 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		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
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

Remarks
Decrease in overall T&E reflects adoption of the CI/CD approach for development and testing.

	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	182.493	15.346	37.748	20.307	-	20.307	0.000	255.894	N/A

Remarks

UNCLASSIFIED

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 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)		Project (Number/Name) EF8 / AFATDS Increment 1	

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
Advanced Field Artillery Tactical Data System (AFATDS) D...	[Redacted]																											
AFATDS Continuous Internal Verification Validation, deve...	[Redacted]																											

UNCLASSIFIED

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 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Advanced Field Artillery Tactical Data System (AFATDS) Development	1	2023	4	2030
AFATDS Continuous Internal Verification Validation, developmental, Soldier Touchpoint testing/Exercises	3	2023	1	2031

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.