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**Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	33.996	35.719	30.455	-	30.455	37.442	27.333	15.634	14.550	Continuing	Continuing
EF6: JADOCS	-	13.578	13.002	2.825	-	2.825	0.000	0.000	0.000	0.000	0.000	29.405
EF7: Pocket-Sized Forward Entry Device (PFED) Inc 2	-	3.370	3.494	1.966	-	1.966	4.537	3.926	0.000	0.000	Continuing	Continuing
EF8: AFATDS Increment 1	-	17.048	19.223	25.664	-	25.664	32.905	23.407	15.634	14.550	0.000	148.431

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

There are three developmental efforts that are being executed concurrently: Joint Automated Deep Operations Coordination System (JADOCS) (project code EF6); Pocket-sized Forward Entry Device (Increment II) (project code EF7) and Advanced Field Artillery Tactical Data System (AFATDS) (Increment I) (project code EF8).

Joint Automated Deep Operations Coordination System (JADOCS) is a Joint and Coalition targeting, coordination mission management software application. It links Command and Control (C2), Intelligence, and Air operations information with execution systems using real time collaborative targeting managers, customized for each service or specific functional area. JADOCS is used to significantly enhance the Joint Force and Component Command's capability to simultaneously develop, coordinate and execute Dynamic and Time Sensitive targets and fire missions, as well as battle space coordination, search and rescue, and disaster relief/recover operations worldwide. JADOCS provides coordination and de-confliction of targeting information at all levels of command structure for the military. JADOCS is used by Air, Ground, Maritime, and Special Operations forces. It provides horizontal (across Services) as well as vertical (within Services) coordination of missions to ensure a common picture of targeting operational status across the entire joint force. As a software application, JADOCS can be configured and customized for each user and location. The client and server software can be installed on typical Windows Operating System.

Pocket-sized Forward Entry Device (PFED) Increment II will be a software only application that operates on the Nett Warrior End User Device (EUD). It will provide the dismounted Forward Observer (FO) and Fire Support Teams (FISTs) the capability to accurately and rapidly locate ground targets and enable the Soldier wearing the NETT Warrior ensemble to digitally process a Call For Fire. PFED Increment II complies with the Mobile Handheld Computing Environment requirement that all handheld applications reside on the Nett Warrior End User Device.

The Advanced Field Artillery Tactical Data System (AFATDS) provides Army, Navy, and Marine Corps automated fire support command, control and communications. AFATDS is used to plan, execute, and deliver lethal and non-lethal effects. AFATDS provides Joint/Coalition capability 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 weapon systems; As a member of the Artillery System Cooperation Agreement (ASCA), AFATDS is interoperable with the German, French, Turkish, and Italian fire support systems. AFATDS automates the planning, coordination, and control of all fire support assets (field artillery, mortars, close air support, naval helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars).

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Army	<b>Date:</b> February 2016
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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	36.658	35.719	37.078	-	37.078
Current President's Budget	33.996	35.719	30.455	-	30.455
Total Adjustments	-2.662	0.000	-6.623	-	-6.623
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.268	-			
• SBIR/STTR Transfer	-1.394	-			
• Adjustments to Budget Years	-	-	-6.623	-	-6.623

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 2040 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				<b>Project (Number/Name)</b> EF6 / JADOCS			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
EF6: JADOCS	-	13.578	13.002	2.825	-	2.825	0.000	0.000	0.000	0.000	0.000	29.405
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Joint Automated Deep Operations Coordination System (JADOCS) is a Joint and Coalition targeting, coordination mission management software application. It links Command and Control (C2), Intelligence, and Air operations information with execution systems using real time collaborative targeting managers, customized for each service or specific functional area. JADOCS is used to significantly enhance the Joint Force and Component Command's capability to simultaneously develop, coordinate and execute Dynamic and Time Sensitive targets and fire missions, as well as battle space coordination, search and rescue, and disaster relief/recover operations worldwide. JADOCS provides coordination and de-confliction of targeting information at all levels of command structure for the military.

JADOCS is used by Air, Ground, Maritime, and Special Operations forces. It provides horizontal (across Services) as well as vertical (within Services) coordination of missions to ensure a common picture of targeting operational status across the entire joint force. As a software application, JADOCS can be configured and customized for each user and location. The client and server software can be installed on typical Windows Operating System.

JADOCS fires and targeting capabilities will migrate to AFATDS Version 7.0. JADOCS capabilities will be sustained until AFATDS meets the Joint Users requirements. JADOCS v 2.0 software is being developed by CECOM Life Cycle Management Command, Software Engineering Center (SEC).

FY17 funding in the amount of \$2.825 million will be used to complete development and test efforts on JADOCS version 2.0.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> JADOCS Software Development Efforts	11.838	11.902	1.329
<b>Description:</b> Software development of JADOCS v2.0 software.			
<b>FY 2015 Accomplishments:</b> Continued Software Development Process; including coordination with Joint stakeholders and development of requirements definition document. Completed engineering software release ER 1. Began activities required for materiel release (e.g. program protection plan, safety assessment, training analysis and documentations).			
<b>FY 2016 Plans:</b> Continue development of JADOCS v2.0 software. Complete software ER 2 and ER 3. Test each ER to meet all JADOCS 2.0 requirements. JADOCS 2.0 completes development in the fourth quarter FY16.			
<b>FY 2017 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF6 / JADOCS		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
Finalize JADOCS v2.0 software development including the Test Readiness Review (TRR), Formal Qualification Test (FQT) and delivery of JADOCS 2.0 software. Finalize and deliver JADOCS 2.0 documentation and training materials.				
<b>Title:</b> Program Support Costs for JADOCS Software Development Efforts		0.700	0.700	0.596
<b>Description:</b> Program support for JADOCS v2.0 software development efforts.				
<b>FY 2015 Accomplishments:</b> Continued program support for JADOCS version 2.0 software development.				
<b>FY 2016 Plans:</b> Continue program support for JADOCS version 2.0 software development.				
<b>FY 2017 Plans:</b> Continue program support for JADOCS version 2.0 through test and materiel release of the software. Finalize and deliver JADOCS 2.0 documentation and training materials.				
<b>Title:</b> Army and Joint Testing Activities		0.300	0.400	0.900
<b>Description:</b> Conduct and support Army and Joint Testing Activities.				
<b>FY 2015 Accomplishments:</b> Continued support of Army and Joint testing activities; conducted Independent Validation and Verification (IV&V) of the JADOCS version 2.0 software.				
<b>FY 2016 Plans:</b> Continue support of Army and Joint testing activities; conduct Independent Validation and Verification (IV&V) of the JADOCS version 2.0 software.				
<b>FY 2017 Plans:</b> Continue support of Army and Joint test planning activities; conduct IV&V of the JADOCS version 2.0 software. Finalize JADOCS v2.0 software development including Army Confidence Demo at Fort Sill, Ok, Joint development and operational test and Army Interoperability Certification (AIC) testing.				
<b>Title:</b> Contractor Management Services and Support		0.740	-	-
<b>Description:</b> Funds Systems Engineering and Technical Assistance support.				
<b>FY 2015 Accomplishments:</b>				

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	<b>Project (Number/Name)</b> EF6 / <i>JADOCS</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
Continued program support for JADOCS training activities.			
<b>Accomplishments/Planned Programs Subtotals</b>	13.578	13.002	2.825

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

<b>Line Item</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• B28504: <i>JOINT AUTOMATED DEEP OPNS COORDINATION SYSTEM</i>	-	-	1.969	-	1.969	1.722	-	-	-	0.000	3.691

**Remarks**

**D. Acquisition Strategy**

JADOCS v2.0 will be the last major version of JADOCS software. JADOCS v2.0 will interoperate with AFATDS. JADOCS v 2.0 will be maintained and sustained until the Joint Users requirements are met by AFATDS and other systems. JADOCS 2.0 is developed under agreement with the LCCE SEC.

**E. Performance Metrics**

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 7				PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				EF6 / JADOCS								
<b>Management Services (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	
Business/Technical Services	MIPR	Chenega Federal Systems : Alexandria, VA	0.000	0.740		-		-		-		-	0	0.740	0	
<b>Subtotal</b>			0.000	0.740		-		-		-		-	0.000	0.740	0.000	
<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Software Development	IA	CECOM LCMC SEC FD : Ft. Sill, OK	0.000	11.838	Feb 2015	11.902		1.329		-		1.329	0	25.069	0	
<b>Subtotal</b>			0.000	11.838		11.902		1.329		-		1.329	0.000	25.069	0.000	
<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	Various	PM Mission Command (MC) : APG, MD	0.000	0.700		0.700		0.596		-		0.596	0	1.996	0	
<b>Subtotal</b>			0.000	0.700		0.700		0.596		-		0.596	0.000	1.996	0.000	
<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	
Army and Joint Test Support	Various	Joint Service Testing : Various	0.000	0.300		0.400		0.900		-		0.900	0	1.600	0	
<b>Subtotal</b>			0.000	0.300		0.400		0.900		-		0.900	0.000	1.600	0.000	

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2017 Army</b>								<b>Date:</b> February 2016					
<b>Appropriation/Budget Activity</b> 2040 / 7				<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				<b>Project (Number/Name)</b> EF6 / JADOCS					
	<b>Prior Years</b>	<b>FY 2015</b>		<b>FY 2016</b>		<b>FY 2017 Base</b>		<b>FY 2017 OCO</b>		<b>FY 2017 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	0.000	13.578		13.002		2.825		-		2.825	0.000	29.405	0.000

**Remarks**

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF6 / JADOCS
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021																											
	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																								
Software Development v2.0																																																				
Independent Validation & Verification (IV&V) v2.0																																																				
(1) Test Readiness Review (TRR) - v2.0																																	▲ 1																			
Govt Confidence Demo (OT) - v2.0																																																				
Air Force Developmental Test - v2.0																																																				
Air Force Operational Test - v2.0																																																				
(2) Deployment Decision - v2.0																																									▲ 2											
(3) Initial Operational Capability (IOC) - v2.0																																									▲ 3											
Fielding - v2.0																																																	▲ 4			
(4) Full Operational Capability (FOC) - v2.0																																																	▲ 4			

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	<b>Project (Number/Name)</b> EF6 / JADOCS

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Development v2.0	3	2014	2	2017
Independent Validation & Verification (IV&V) v2.0	3	2015	2	2017
Test Readiness Review (TRR) - v2.0	4	2016	4	2016
Govt Confidence Demo (OT) - v2.0	1	2017	1	2017
Air Force Developmental Test - v2.0	1	2017	2	2017
Air Force Operational Test - v2.0	2	2017	3	2017
Deployment Decision - v2.0	4	2017	4	2017
Initial Operational Capability (IOC) - v2.0	4	2017	4	2017
Fielding - v2.0	1	2018	1	2020
Full Operational Capability (FOC) - v2.0	2	2020	2	2020

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 2040 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				<b>Project (Number/Name)</b> EF7 / Pocket-Sized Forward Entry Device (PFED) Inc 2			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
EF7: Pocket-Sized Forward Entry Device (PFED) Inc 2	-	3.370	3.494	1.966	-	1.966	4.537	3.926	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Pocket-sized Forward Entry Device (PFED) Increment II will be a software-only application that operates on the Nett Warrior End User Device (EUD). It will provide the dismounted Forward Observer (FO) and Fire Support Teams (FISTs) the capability and functionality to accurately and rapidly locate ground targets and digitally process a Call For Fire. PFED Increment II answers the Mobile Handheld Computing Environment requirement that all handheld applications reside on the Nett Warrior End User Device.

FY17 funding of \$1.966 million supports the evolutionary software development and testing of this handheld Fires Command and Control (C2) system.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>Title:</b> PFED INC II Software Development</p> <p><b>Description:</b> PFED INC II Software Development</p> <p><b>FY 2015 Accomplishments:</b> Milestone B decision. Transitioned and began Block 1 software development. Completed Milestone B statutory and regulatory requirements.</p> <p><b>FY 2016 Plans:</b> Continue software development for the Block 1 capability. Conduct developmental test events, operational test and evaluation events, and Independent Verification and Validation testing. Conduct a Preliminary Design Review for the Block 2 capability.</p> <p><b>FY 2017 Plans:</b> Complete software development for the Block 1 capability. Conduct a Full Deployment Decision in order to obtain a Full Materiel Release of the Block 1 capability. Develop the performance specification for Block 2 capabilities based on validated requirements. Begin development of Block 2 capability.</p>	2.667	2.634	1.453
<p><b>Title:</b> Program Support Costs for PFED Increment II Software Development Efforts</p> <p><b>Description:</b> Program support for PFED INC II software development efforts.</p> <p><b>FY 2015 Accomplishments:</b></p>	0.403	0.600	0.267

**UNCLASSIFIED**

**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Army **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF7 / Pocket-Sized Forward Entry Device (PFED) Inc 2
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017
Program support for PFED INC II software development. <b>FY 2016 Plans:</b> Continue program support for PFED INC II software development. <b>FY 2017 Plans:</b> Continue program support for PFED INC II software development.			
<b>Title:</b> Testing <b>Description:</b> Conduct and Support Army Testing Activities  <b>FY 2015 Accomplishments:</b> Conducted Developmental and Operational Testing and Evaluation of the Block 1 capability. <b>FY 2016 Plans:</b> Plan Developmental Testing and conduct Operational Testing and Evaluation of the Block 1 capability. <b>FY 2017 Plans:</b> Complete Operational Testing and Evaluation of the Block 1.0 capability. Begin test planning for Block 2 capabilities.	0.300	0.260	0.246
<b>Accomplishments/Planned Programs Subtotals</b>	3.370	3.494	1.966

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

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• BZ9851: BZ9851 POCKET FORWARD ENTRY DEVICE (PFED) - OPA	2.289	1.190	4.093	-	4.093	4.197	3.487	3.772	3.821	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**  
On 18 May 2015, the Milestone Decision Authority (PEO C3T) signed the Acquisition Decision Memorandum (ADM) approving the PFED Increment II Milestone B. The Acquisition Decision Memorandum (ADM) officially approved entry into the Development phase as an Acquisition Category (ACAT) III program.  
  
PFED Increment II leverages an Army Science and Technology investment by transitioning a software application that has been developed and used in proponent experimentation events (i.e. Army Expeditionary Warrior Experiment (AEWE) and Bold Quest). Upon a successful Milestone B decision in FY2015, this software application transitioned to PM Mission Command to conduct all Army developmental and operational test and evaluation requirements. PFED Increment II will be

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**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Army **Date:** February 2016

<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>	<b>Project (Number/Name)</b>
2040 / 7	PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	EF7 / <i>Pocket-Sized Forward Entry Device (PFED) Inc 2</i>

integrated onto the Nett Warrior End User Devices (EUDs) and will be fielded by PM Soldier Warrior (PM SWAR). Training on the PFED Increment II software will be conducted by PM Mission Command as units are fielded the capability.

PM Mission Command will continue to manage future capability Blocks of software development. PM Mission Command will continue to coordinate with PM Soldier Warrior to field and train future versions of the software, as described above.

**E. Performance Metrics**

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				EF7 / Pocket-Sized Forward Entry Device (PFED) Inc 2							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
PFED Increment II Software Development efforts	IA	AMRDEC : Redstone, AL	0.000	2.667	Jun 2015	2.634	Dec 2015	1.453	Dec 2016	-		1.453	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	2.667		2.634		1.453		-		1.453	-	-	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	Various	PM Mission Command (MC) : APG, MD	0.000	0.403	Jun 2015	0.600	Nov 2015	0.267	Nov 2016	-		0.267	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.403		0.600		0.267		-		0.267	-	-	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	Various	Testing : Various	0.000	0.300		0.260		0.246		-		0.246	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.300		0.260		0.246		-		0.246	-	-	-
<b>Project Cost Totals</b>			0.000	3.370		3.494		1.966		-		1.966	-	-	-
<b>Remarks</b>															





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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF7 / Pocket-Sized Forward Entry Device (PFED) Inc 2

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B	3	2015	3	2015
Software Development & Testing Block 1	3	2015	1	2017
Developmental Test (DT) Block 1	2	2016	3	2016
Limited Deployment Decision (LDD) Block 1	2	2016	2	2016
Operational Test (OT) Block 1	2	2016	3	2016
Full Deployment Decision (FDD) Block 1	1	2017	1	2017
Initial Operational Capability (IOC) Block 1	3	2017	3	2017
Fielding Block 1 (OPA Funded)	2	2017	3	2018
Software Development & Testing Block 2	2	2017	1	2019
Developmental Test (DT) Block 2	2	2018	2	2018
Limited Deployment Decision (LDD) Block 2	3	2018	3	2018
Operational Test (OT) Block 2	4	2018	4	2019
Full Deployment Decision (FDD) Block 2	2	2019	2	2019
Fielding Block 2 (OPA Funded)	2	2019	4	2020
Software Development & Testing Block 3	3	2019	1	2021
Developmental Test (DT) Block 3	2	2020	2	2020
Limited Deployment Decision (LDD) Block 3	3	2020	3	2020
Operational Test (OT) Block 3	3	2020	4	2020
Full Deployment Decision (FDD) Block 3	2	2021	2	2021

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**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Army **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
EF8: AFATDS Increment 1	-	17.048	19.223	25.664	-	25.664	32.905	23.407	15.634	14.550	0.000	148.431
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Advanced Field Artillery Tactical Data System (AFATDS) provides Army, Navy, and Marine Corps automated fire support command, control and communications. AFATDS is used to plan, execute, and deliver lethal and non-lethal effects. AFATDS provides Joint/Coalition 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 weapon systems; As a member of the Artillery System Cooperation Agreement (ASCA), AFATDS is interoperable with the German, French, Turkish, and Italian fire support systems. AFATDS automates the planning, coordination, and control of all fire support assets (field artillery, mortars, close air support, naval helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars

FY17 funding in the amount of \$25.664 million will be used to continue development efforts on AFATDS version 7.0.

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

	FY 2015	FY 2016	FY 2017
<p><b>Title:</b> Program Support Costs for AFATDS software development</p> <p><b>Description:</b> Provide program support for AFATDS software development efforts.</p> <p><b>FY 2015 Accomplishments:</b> Provided matrix support and Program Management Office (PMO) efforts. Conducted Risk Reduction Analysis, Solution Refinement, Requirements Development, and Request for Proposal (RFP) Development. Continued development and testing of V6.8.1.1.</p> <p><b>FY 2016 Plans:</b> Provide matrix support and Program Management Office (PMO) efforts. Continue development and testing of V6.8.1.1. Conduct Risk Reduction Analysis, Solution Refinement, Requirements Development, Request for Proposal (RFP) Evaluation and award of V7.0 contract. Initiate V7.0 SW development.</p> <p><b>FY 2017 Plans:</b> Provides Program Management Office (PMO) support (Core, Matrix, and SETA) for all aspects of the AFATDS program including requirements development, software development efforts, logistics, and business management support.</p>	1.247	4.140	2.350
<p><b>Title:</b> AFATDS software development efforts</p> <p><b>Description:</b> Development of AFATDS software - including V6.8.1.1 and V7.0</p>	12.600	14.733	21.791

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>FY 2015 Accomplishments:</b> Continued the development on V6.8.1.1. This completes the addition of further Joint Automated Deep Operation Coordination System (JADOCS)-like requirements/capabilities into AFATDS.</p> <p><b>FY 2016 Plans:</b> Initiate the development of V7.0. V7.0 will focus on architecture modernization to provide role/duty-based functionality for Fire Support, Fire Control, and Fire Direction Capabilities, support for net-centric operations, web-enabled network interoperability, execution of Joint critical operational activities, embedded training, and exploitation of Army Common Operating Environment (COE) Computing Environment. Complete development and testing of V6.8.1.1.</p> <p><b>FY 2017 Plans:</b> Continue the development on V7.0. V7.0 will focus on architecture modernization to provide role/duty-based functionality for Fire Support, Fire Control, and Fire Direction Capabilities, support for net-centric operations, web-enabled network interoperability, execution of Joint critical operational activities, embedded training, and exploitation of Army Common Operating Environment (COE) Computing Environment.</p>				
<p><b>Title:</b> Network Assisted Global Position System (GPS) for Precision Fires</p> <p><b>Description:</b> Define system architecture and standardize tactical GPS Satellite data exchange solutions. Initiate WAN and LAN based system-of-systems Network Assisted GPS capability for PGMs.</p> <p><b>FY 2015 Accomplishments:</b> Developed and tested Network-Assisted (NA) GPS for Precision Fires Capability as part of AFATDS COE v2 software: Verification component system's software interoperability in the network, algorithmic corrections to supplement the ephemeris navigation data incorporated into M777A2 Towed Howitzer Digital Fire Control System and Mortar Fire Control System software, conduct field test demonstration on standard message exchange of navigation data from the Air Force GPS Operations Center through all NA GPS capable systems, develop Capability Insertion Plan to document the results of developing and testing the system of systems Network Assisted GPS capability for Precision Fires.</p>		1.000	-	-
<p><b>Title:</b> Defensive Cyber Tools</p> <p><b>Description:</b> Integration of Tactical Public Key Infrastructure (T-PKI) defensive cyber tools into AFATDS v7.0</p> <p><b>FY 2017 Plans:</b> Engineer and integrate the software architecture and system design of Tactical Public Key Infrastructure (T-PKI) defensive cyber tools into AFATDS v7.0.</p>		-	-	1.100
<b>Title:</b> Operational and Developmental Testing		2.201	0.350	0.423

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>Description:</b> Conduct and support test activities for AFATDS development.</p> <p><b>FY 2015 Accomplishments:</b> For AFATDS Version V6.8.1.1, prepared for: Army Interoperability Certification (AIC); Government Confidence Demonstration (GCD); Network Integration Evaluation (NIE); and Air Force Operation Testing. Conducted: Development Testing (DT); Independent Verification and Validation (IV&amp;V); System-of-system (SoS) testing; and Air Force Developmental Testing.</p> <p><b>FY 2016 Plans:</b> For AFATDS Version V6.8.1.1, conduct: Army Interoperability Certification (AIC); Government Confidence Demonstration (GCD); Network Integration Evaluation (NIE); and Air Force Operation Testing. For V7.0, conduct: Development Testing (DT); Independent Verification and Validation (IV&amp;V); and Air Force Developmental Testing.</p> <p><b>FY 2017 Plans:</b> For AFATDS Version 7.0, prepare for: Army Interoperability Certification (AIC); Development Testing (DT); and Army Warfighting Assessment (AWA).</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	17.048	19.223	25.664

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• B28620: MOD OF IN-SVC EQUIP, AFATDS	8.163	0.048	2.598	-	2.598	2.765	11.250	18.857	12.387	0.000	56.068

**Remarks**

**D. Acquisition Strategy**  
AFATDS version 6.8.0.1 is the current fielded version of software. AFATDS version 6.8.1.1 remains under development with a Full Materiel Release projected for 4QFY2016.

Per Memorandum for Under Secretary of Defense (Acquisition, Technology and Logistics) dated 13 May 2015, the Army Acquisition Executive (AAE) determined that AFATDS Increment II is a modernization of the existing software code to provide Army Common Operating Environment (COE) standards to be executed as AFATDS 7.0. The PM will re-design AFATDS version 7.0 to provide the operator role/duty-based interaction, a dynamic embedded training capability, integration of COE compliant architectures and allowance for more efficient insertion of future capabilities.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	<b>Project (Number/Name)</b> EF8 / <i>AFATDS Increment 1</i>
Development of future AFATDS capabilities will be considered based on requirements approved through the Fires Center of Excellence (FCoE) Tactical Software Requirements Governance Board.		
<b>E. Performance Metrics</b> N/A		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1
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<b>Management Services (\$ in Millions)</b>				<b>FY 2015</b>		<b>FY 2016</b>		<b>FY 2017 Base</b>		<b>FY 2017 OCO</b>		<b>FY 2017 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Program Management Support for AFATDS (Core)	Sub Allot	PM Mission Command (MC) : APG, MD	0.000	1.247		1.244		0.707		-		0.707	0	3.198	0
Program Management Support for AFATDS (Matrix)	IA	Various Matrix Orgs (Govt) : Aberdeen PG, MD	0.000	-		0.890		0.900		-		0.900	0	1.790	0
Program Management Support for AFATDS (SETA Contr)	C/FFP	CSC : Aberdeen PG, MD	0.000	-		0.500		0.743		-		0.743	0	1.243	0
Risk Reduction Analysis, Solution Refinement, Requirements Development, RFP Development.	TBD	PM Mission Command (MC) : APG, MD	0.000	-		1.506		-		-		-	0	1.506	0
<b>Subtotal</b>			0.000	1.247		4.140		2.350		-		2.350	0.000	7.737	0.000

<b>Product Development (\$ in Millions)</b>				<b>FY 2015</b>		<b>FY 2016</b>		<b>FY 2017 Base</b>		<b>FY 2017 OCO</b>		<b>FY 2017 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Network Assisted GPS for Precision Fires Development	IA	PM Combat Ammunition Systems, PM Mission Command, and various Army agencies : Various Locations	0.000	1.000		-		-		-		-	0	1.000	0
Software Development of AFATDS Version 6.8.1	C/CPFF	Raytheon Systems Corp. : Ft. Wayne, IN	0.000	12.600		-		-		-		-	0	12.600	33.188
Software Development of AFATDS Version 7.0	C/CPFF	TBD : TBD	0.000	-		14.733		20.791		-		20.791	0	35.524	0
<b>Subtotal</b>			0.000	13.600		14.733		20.791		-		20.791	0.000	49.124	33.188

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				EF8 / AFATDS Increment 1							
<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Information Assurance and Engineering Support for AFATDS requirements	C/CPFF	CSC : Various Locations	0.000	1.060		-		-		-		-	0.000	1.060	0
Defensive Cyber Tools (T-PKI)	TBD	TBD : TBD	0.000	-		-		1.100		-		1.100	0	1.100	0
<b>Subtotal</b>			0.000	1.060		-		1.100		-		1.100	0.000	2.160	0.000
<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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 Confidence Demo for AFATDS V6.8.x requirements.	IA	Army Test & Evaluation Command (ATEC)/Fires Test Directorate (FTD) : Various Locations	0.000	0.626		-		-		-		-	0	0.626	0
Independent Verification and Validation of AFATDS V7.0 requirements	C/CPFF	Engility : Various Locations	0.000	0.515		-		1.023		-		1.023	0	1.538	0
Developmental Testing for AFATDS v7.0	IA	Multiple Govt Test Agencies (ATEC, ATC, EPG) : Multiple	0.000	-		0.350		0.400		-		0.400	0	0.750	0
<b>Subtotal</b>			0.000	1.141		0.350		1.423		-		1.423	0.000	2.914	0.000
<b>Project Cost Totals</b>			0.000	17.048		19.223		25.664		-		25.664	0.000	61.935	33.188
<b>Remarks</b>															

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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Development and Testing V6.8.1.1																												
(1) Materiel Release V6.8.1.1																												
(2) V6.8.1.1 Customer Test																												
Fielding V6.8.1.1 (OPA Funding)																												
V7.0 Request For Proposal																												
(3) V7.0 Development (Primary) Contract Award																												
V7.0 Development (Base Period)																												
(4) V7.0 Independent Verification and Validation																												
V7.0 Test for Record																												
V7.0 Developmental/Operational Test																												
V7.0 Logistics and Training																												
V7.0 Fielding & New Equipment Training (OPA Funded)																												
(5) V7.0 Development (Option) Contract Award																												

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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
V7.0 Development (Option Period)																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Army		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	<b>Project (Number/Name)</b> EF8 / AFATDS Increment 1

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development and Testing V6.8.1.1	3	2014	2	2016
Materiel Release V6.8.1.1	4	2016	4	2016
V6.8.1.1 Customer Test	2	2016	2	2016
Fielding V6.8.1.1 (OPA Funding)	1	2017	3	2017
V7.0 Request For Proposal	2	2016	2	2016
V7.0 Development (Primary) Contract Award	3	2016	3	2016
V7.0 Development (Base Period)	4	2016	1	2019
V7.0 Independent Verification and Validation	2	2017	3	2018
V7.0 Test for Record	3	2018	3	2018
V7.0 Developmental/Operational Test	3	2018	1	2019
V7.0 Logistics and Training	3	2018	1	2019
V7.0 Fielding & New Equipment Training (OPA Funded)	3	2019	3	2020
V7.0 Development (Option) Contract Award	4	2018	4	2018
V7.0 Development (Option Period)	1	2019	3	2021

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