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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604715A I Non-System Training Devices - Eng Dev							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	33.888	43.575	49.436	-	49.436	26.382	17.609	19.727	16.191	Continuing	Continuing
241: Nstd Combined Arms	-	30.850	43.575	49.436	-	49.436	26.382	17.609	19.727	16.191	Continuing	Continuing
573: Program Executive Office Simulation, Training Spt	-	3.038	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.038

A. Mission Description and Budget Item Justification

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

FY 2019 Project 241 funds significant development efforts in support of U.S. Army Training and Readiness on the Combat Training Center Instrumentation Systems (CTC-IS), Instrumentable-Multiple Integrated Laser Engagement System (I-MILES), Home Station Instrumentation Training System (HITS), Common Training Instrumentation Architecture (CTIA), Target Modernization, Medical Simulation Training Center (MSTC), Live, Virtual, Constructive Integrating Architecture (LVC-IA), OPFOR Integrated Air Defense System (IADS), Soldier and Squad Virtual Trainer (S/SVT), OPFOR Surrogate Wheeled Vehicles (OSWV) a new start, and Suicide Prevention.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	35.807	43.575	46.260	-	46.260
Current President's Budget	33.888	43.575	49.436	-	49.436
Total Adjustments	-1.919	0.000	3.176	-	3.176
• Congressional General Reductions	-0.012	-	-	-	-
• Congressional Directed Reductions	-0.973	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-0.934	-	-	-	-
• Adjustments to Budget Years	-	-	3.176	-	3.176

UNCLASSIFIED

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<p><u>Change Summary Explanation</u> FY 2019 Project 241 funds increased due to the OPFOR Surrogate Wheeled Vehicles (OSWV) new start.</p>		

UNCLASSIFIED

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
241: Nstd Combined Arms	-	30.850	43.575	49.436	-	49.436	26.382	17.609	19.727	16.191	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Common Training Instrumentation Architecture (CTIA) program is the foundation architecture of the Live Training Transformation Family of Training Systems (LT2-FTS). The program contains critical core product-line architecture which provides commonality across training instrumentation systems and interoperability across Live, Virtual, Constructive Integrated Training Environment (LVC-ITE) and joint training systems. CTIA includes Army owned software components, architecture services, standards, protocols and governance used by domain-specific Live Training Transformation (LT2) and Live Training Systems (LTS) to include instrumented Force-On-Force (FOF) and Force-On-Target (FOT) training requirements. The CTIA also provides Post Deployment Software Support (PDSS) and technology refresh for the LT2 family of LTS supporting over 21 live instrumented training products which are fielded at over 200 CONUS and OCONUS sites across the Army.

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

The Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) program provides realistic, real-time casualty effects for force-on-force tactical engagement training scenarios and its ability to integrate into training instrumentation systems provide for high fidelity combined arms combat exercises supporting the 39th Chief of the Staff of the Army #1 priority of "Readiness". Due to their modular design, I-MILES is required for use at the Home Station, the Combat Training Centers (CTCs) and in theater of operations to meet force-on-force training requirements. I-MILES program funding provides the Development and Integration of new vehicle and dismount weapon systems meeting the Common Operating Environment (COE) requirements, as well as embedded Tactical Engagement Simulation (TES) development. This includes development efforts of the Live Training Engagement Composition (LTEC), increasing simulation of Probability of Kill (Pk) for training realism and improving integration on new weapon platforms (i.e. Joint Light Tactical Vehicle (JLTV), Armored Multi-Purpose Vehicle (AMPV), M4A2 plus Rifle and Stryker Engineering Change Proposal (ECP) with 30mm Gun).

The Home Station Instrumentation Training System (HITS) provides a high-fidelity deployable instrumented training capability to support platoon thru battalion level Live Force-on-Force Training. HITS tracks location of soldiers and vehicles and simulates weapons' effects and engagements, allowing units to "Train as they Fight" against live opponents. HITS provides accurate feedback to training units. HITS consists of light deployable components that can be rapidly assembled/disassembled and transported to support deployed training. HITS integrates with future and legacy MILES. HITS is a member of the Live Training Transformation (LT2) family of training systems and shares several hardware and software components with the Instrumentation Systems (IS). HITS provides the Live domain for Live-Virtual-Constructive (LVC) training integration.

UNCLASSIFIED

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<p>The Medical Simulation Training Center (MSTC) provides realistic medical training to both medical and non-medical Soldiers in the Active, Reserve, and National Guard. MSTCs provide hands-on instruction on the latest battlefield trauma and critical care techniques based on Army Medical Department (AMEDD) approved performance oriented Program of Instruction (POI). Medical treatment validation exercises simulate the high stress of performing medical interventions in combat. MSTC supports Unit Medical Readiness by validating Combat Medic (68W) Emergency Medical Technician (EMT) biennial recertification requirements and provides Combat Lifesaver (CLS) training to non-medical Soldiers.</p> <p>The Engagement Skills Trainer (EST) is the unit/institutional, indoor, multipurpose, multi-lane, small arms, crew-served and individual anti-tank training simulation that enables training across three different modes: individual marksmanship; small unit (collective) gunnery and tactical training; and judgmental use of force (shoot/don't shoot), which includes escalation of force/graduated response scenarios.</p> <p>The Call for Fire Trainer (CFFT) family of systems is a lightweight, rapidly deployable, observed fire training system that provides simulated battlefield training for Fire Support Specialists (FSS), Joint Fires Observers (JFO), and Soldiers. The system provides simulated battlefield training to conduct Indirect Fires, Close Air Support, Close Combat Attack, and Naval Surface Fire Support. The CFFT Immersive System provides the capability for Army, Joint, Multinational and Special Operations Forces to conduct advanced, complex and realistic fires training at the FIRES Center of Excellence, Ft Sill, OK. CFFT is a critical training enabler to support Warfighters in applying precision fires on target to prevent fratricide and minimize collateral damage.</p> <p>The Live, Virtual, Constructive Integrating Architecture (LVC-IA) provides a net-centric linkage that collects, retrieves and exchanges data among LVC Training Aids, Devices, Simulations, and Simulators (TADSS) (to include: AVCATT, CCTT, GFT, HITS, JLCCTC and SE Core) and Mission Command Systems. The LVC-IA defines "how" information is exchanged among the different LVC domains and the Mission Command Systems. The LVC-IA provides enterprise level tools for exercise control, after action review, and system information assurance. It develops hardware and software to interface the different Live, Virtual, Constructive and Gaming communication protocols and to provide a correlated common operating picture for the training audience on their organic Mission Command equipment. The integration of the LVC TADSS with the Mission Command equipment will enable larger and more robust training events, to better prepare U.S. Soldiers for their missions at an overall reduced cost. The end-state goal is to enable an LVC Integrated Training Environment that can replicate Operational Environments in a cost effective manner to provide a high level of value-added training and mission rehearsal opportunities to Army Commanders and their Soldiers. In FY18, the LVC-IA program will begin design and developmental activities for Version 4 which will allow for "cloud optimization"; inclusion of new simulations to the architecture; and concurrency with core system TADSS and Army Mission Command Systems. FY19 request will allow for the continued Version 4 developmental and integration activities as well as concurrency with mission command systems.</p> <p>The Target Modernization program provides a common open architectural framework, standards, specifications, and interfaces for live fire target devices, a common target control system for all range types, and innovative technologies to enhance training realism and reduce life cycle costs on the ranges. The Target Modernization primary goal is the development of trackless target systems, high fidelity dynamic infrared representations, non-contact ballistic hit detections, and augmented reality on live fire ranges; increasing training realism and lowering life cycle costs.</p>		

UNCLASSIFIED

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<p>The Army identified an operational gap in the training strategy for the OPFOR Integrated Air Defense System (IADS). It's a collection of enemy weapons systems that engage Army aviation assets. Training Aircraft Survivability Equipment (ASE) Stimulation Suite (TASS) is a live training system consisting of aircraft components and ground emitters that replicate current and emerging enemy Air Defense systems. Its fidelity supports individual pilot training as well as the collective training requirements of the Brigade Combat Team to fully plan, prepare, execute and react against an enemy air defense weapons at the Combat Training Centers (CTC).</p> <p>The Digital Range Training System (DRTS) provides new and modern ranges capable of training, evaluating and stressing Soldiers and their modern equipment in a realistic train-as-you-fight environment. The system consists of four standard training ranges: Digital Multi-Purpose Range Complex (DMPRC), Digital Multi-Purpose Training Range (DMPTR), Battle Area Complex (BAX) and Digital Air Ground Integration Range (DAGIR) which utilize all available combat systems capabilities, and digitally integrate them to manage all forces undergoing individual and collective live-fire training and qualification. These training systems replace obsolete, inadequate training methods and equipment in order to simulate new weapon systems, challenge Soldiers, incorporate the modern digital force, and provide enhanced training data collection and After Action Review (AAR) capabilities. The system incorporates digital system training, as well as integrates multiple ranges and training environments for the training units.</p> <p>The Army identified a requirement for a Soldier and Squad Virtual Trainer (S/SVT) to replace the Engagement Skills Trainer (EST) II and Call for Fire Trainer (CFFT) III program capabilities, while also providing immersive collective training capability to maneuver squads. The S/SVT program will enable Army Readiness through dismounted collective maneuver capability; will provide individual and crew-served weapons skill development, will enable Joint fires training, and will exercise Use of Force decision making. The requirement will integrate with the Synthetic Training Environment (STE), which is the next generation holistic collective training capability that will train units at the point of need within the entire range of Multi-Domain Battle tasks in support of Unified Land Operations in a complex operational environment.</p> <p>OPFOR Surrogate Wheeled Vehicles (OSWV) provides a collection of wheeled vehicles, used as training aids to portray threat vehicles including tactical vehicles, technical vehicles, and Civilian on the Battlefield vehicles (COB-V). The program supports the CTC OPFOR/COE Pillar capability through technical vehicles, unique VISMODs, and COB-Vs. This capability provides for an accurate replication of OPFOR and COB-Vs environment that rotational units must train against.</p> <p>FY 2019 Project 241 funds significant development efforts in support of U.S. Army Training and Readiness on the Combat Training Center Instrumentation Systems (CTC-IS), Instrumentable-Multiple Integrated Laser Engagement System (I-MILES), Home Station Instrumentation Training System (HITS), Common Training Instrumentation Architecture (CTIA), Target Modernization, Medical Simulation Training Center (MSTC), Live, Virtual, Constructive Integrating Architecture (LVC-IA), OPFOR Integrated Air Defense System (IADS), Soldier Virtual Trainer Program (SVT), OPFOR Surrogate Wheeled Vehicles (OSWV) a new start, and Suicide Prevention.</p>				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Common Training Instrumentation Architecture (CTIA) program.		2.608	2.910	2.707
Description: Continue EMD phase contract activities for the CTIA program to provide common architecture capabilities.				
FY 2018 Plans:				

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Continue development of CTIA to provide the common architecture capabilities that are essential for development, fielding, technology and capability insertion for Live Training Systems (LTS) to include: the Combat Training Centers-Instrumentation Systems (CTC-IS), Integrated Military Operations in Urbanized Terrain Training System (IMTS),Home Station Instrumentation Systems (HITS), Digital Ranges Training System (DRTS) training instrumentation programs and the Live, Virtual, Constructive-Integrated Training Environment (LVC-ITE) interoperability initiatives. FY 2019 Plans: Continue development of CTIA to provide the common architecture capabilities that are essential for development, fielding, technology and capability insertion for Live Training Systems (LTS) to include: the Combat Training Centers-Instrumentation Systems (CTC-IS), Integrated Military Operations in Urbanized Terrain Training System (IMTS),Home Station Instrumentation Systems (HITS), Digital Ranges Training System (DRTS) training instrumentation programs and the Live, Virtual, Constructive-Integrated Training Environment (LVC-ITE) interoperability initiatives. FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 estimated costs for development, fielding, technology and capability efforts.				
Title: Government Program Management for the Common Training Instrumentation Architecture (CTIA) program. Description: Government Program Management for the CTIA program. FY 2018 Plans: Program Management for the Common Training Instrumentation Architecture (CTIA) program. FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), civilian manpower costs were transferred from RDTE to OMA SAG 435 effective FY2019.		0.276	0.283	-
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Combat Training Center Instrumentation System (CTC-IS). Description: Continue EMD phase contract activities for the CTC-IS. FY 2018 Plans: Combat Training Center Instrumentation System (CTC-IS) will fund the continued development of the existing Instrumentation Systems (IS) at the National Training Center (NTC), Joint Readiness Training Center (JRTC) and Joint Multinational Readiness Center (JMRC). Funding will also be used to establish a deliberate approach to Life Cycle Management (LCM) of Live Training Family of Systems, providing the framework for future Life Cycle Efforts for the Hardware Product Line Framework. FY 2019 Plans:		4.998	3.362	5.052

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
FY19 Base RDTE dollars in the amount of \$4.000 million will fund the Life Cycle Management (LCM) of Live Training Family of Systems, developing the architecture framework for future Life Cycle Efforts for the Hardware Product Line Framework.				
FY19 Base RDTE dollars in the amount of \$1.052 million will fund post deployment software support to pursue changes to current software to stimulate sensors, replicate counter measures that US forces will use against small Unmanned Aerial Systems (UAS), support selective jamming of GPS without impacting the instrumentation use of GPS, and selectively jam radars such as support for suppression of enemy Air Defense Artillery.				
FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 increase is due to the post deployment software support requirement which wasn't included in FY 2018.				
Title: Government Program Management for the Combat Training Center Instrumentation System (CTC-IS) program. Description: Government Program Management for the CTC IS program.		1.536	1.440	-
FY 2018 Plans: Program Management for the Combat Training Center Instrumentation System (CTC-IS) program.				
FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435.				
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Instrumentable-Multiple Integrated Laser Engagement System (I-MILES). Description: EMD phase contract activities for the I-MILES program.		1.041	2.611	2.525
FY 2018 Plans: RDTE funding will assist in analyzing, developing and testing the Live Training Engagement Composition (LTEC) and integration of the Tactical Engagement Simulation (TES) Componentized Architecture into existing and new I-MILES capabilities to improve training realism during Force on Force (FoF) training increasing performance and reducing overall lifecycle costs. RDTE reduces the risk of integration into vehicle weapon platforms and Vehicular Integration for C4ISR/EW Interoperability (VICTORY) Architecture while maintaining relevancy into emerging Weapon Systems (Joint Lite Tactical Vehicle (JLTV), Armored Multi-Purpose Vehicle (AMPV), Stryker Engineering Change Proposal (ECP) with 30mm Gun). RDTE will assist in maintaining I-MILES relevancy as the Army premier Live Force-on-Force training system. This is the second year of RDTE for the I-MILES program.				
FY 2019 Plans:				

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
RDTE funding will continue our efforts in analyzing, developing, testing, and implementing the Live Training Engagement Composition (LTEC). LTEC supports integration of the Tactical Engagement Simulation (TES) Componentized Architecture into existing and new I-MILES capabilities to improve training realism during Force on Force (FoF) training increasing performance and reducing overall lifecycle costs. RDTE supports the ability to provide Technical Refreshment for Tactical Vehicle System (TVS) and Combat Vehicle Tactical Engagement Simulation System (CVTESS) vehicle Software Updates, to include LTEC Pk updates. Requirements exist to continue Implementation integration into vehicle weapon platforms and vehicular Integration for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance/Electronic Warfare (C4ISR/EW) Interoperability to include the (VICTORY) Architecture while maintaining relevancy into emerging Weapon Systems: (Joint Light Tactical Vehicle (JLTV), Armored Multi-Purpose Vehicle (AMPV), Abrams, Bradley and small arms platform. FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 estimated cost for development.				
Title: Government Program Management for the Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) Program. Description: Government Program Management for the I-MILES program. FY 2018 Plans: Government Program Management cost for the Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) Program. This is the second year of RDTE for the I-MILES program. FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435.		0.304	0.319	-
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Home Station Instrumentation Training System (HITS) program. Description: EMD phase contract activities for the HITS program. FY 2018 Plans: Integrate and test the interface between HITS (v3 and V4) and the latest versions of the Live, Virtual and Constructive Integrating Architecture (LVC-IA 3.0) to sustain the Integrated Training Environment (ITE) at Home Stations. FY 2019 Plans: Continued integration and testing of the interface between HITS and the latest versions of the Live, Virtual and Constructive Integrating Architecture (LVC-IA), which ensures continued interoperability with other simulation system for combined arms,		1.683	1.646	1.044

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
collective training. Additionally, will improve HITS Exercise Planning and Scenario Development to assist the unit leader in being able to rapidly, readily and easily conduct exercise planning and scenario development through cloud based technologies for on demand and at point-of-need access. The cloud based access allows the unit leader to prepare for the training of over 1,000 Soldiers and vehicles before arriving at the site of training with HITS. FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 estimated cost for development.				
Title: Government Program Management for the Home Station Instrumentation System (HITS) program. Description: Government Program Management for the Home Station Instrumentation System (HITS) program. FY 2018 Plans: Program Management for the Home Station Instrumentation System (HITS) program. FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435.		0.307	0.316	-
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Medical Simulation Training Center (MSTC). Description: EMD phase contract activities for the MSTC program. FY 2018 Plans: Enhancement of the Instructor Support System (ISS) by improving the combat training environments to enhance the Soldier's training experience through more realistic training scenarios. FY 2019 Plans: Complete enhancement of the Instructor Support System (ISS) by improving the combat training environments to enhance the Soldier's training experience through more realistic training scenarios. FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 required costs to complete enhancement of Instructor Support System (ISS).		0.489	0.200	0.487
Title: Government Program Management for the Medical Simulation Training Center (MSTC) program. Description: Government Program Management for the MSTC program. FY 2018 Plans:		0.167	0.167	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Government Program Management for the Medical Simulation Training Center (MSTC) program. FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435.				
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Engagement Skills Trainer (EST) program. Description: EMD phase contract activities for the Engagement Skills Trainer (EST) program.		0.932	-	-
Title: Call For fire Trainer (CFFT) Program Government System Test and Evaluation. Description: Government System Test and Evaluation for the Call For fire Trainer (CFFT) Program.		1.242	-	-
Title: Soldier and Squad Virtual Trainer Program (S/SVT) Engineering, Support, Test & Evaluation Description: Engineering, support, and any related test and evaluation for the development of the S/SVT Program. FY 2019 Plans: Develop and demonstrate prototype designs to reduce technical risk, validate designs, validate cost estimates, evaluate processes, and refine requirements. Based on refined requirements and demonstrated prototype designs in User Assessments, integrated system design of the end-item system can be initiated. FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 is the first year of S/SVT acquisition development. This funding will provide for demonstrated prototype and integrated systems design of the end-item system.		-	-	5.540
Title: Government Program Management for the Soldier Virtual Trainer Program (SVT) Description: Government program management for SVT (New start in FY18). FY 2018 Plans: Government Program Management costs for the Soldier Virtual Trainer (SVT) Program which is a new start in FY18. FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435. Additionally, the SVT program has been incorporated into the S/SVT program in FY19.		-	0.051	-
Title: Live, Virtual, Constructive Integrating Architecture (LVC-IA) Engineering and Manufacturing Development (EMD) phase contract activity.		4.232	2.762	2.774

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>Description: Continue EMD phase contract activities for the LVC-IA program.</p> <p>FY 2018 Plans: Live, Virtual, and Constructive ? Integrating Architecture (LVC-IA) program will complete system development, integration and demonstration of the LVC-IA Version 3 capability. Additionally, LVC-IA will perform concurrency activities in support of LVC-IA interoperability with TADSS and other Mission Command Systems. The program will begin design and development of LVC-IA Version 4 capability.</p> <p>FY 2019 Plans: Live, Virtual, and Constructive-Integrating Architecture (LVC-IA) program will continue system development, integration and demonstration of the LVC-IA Version 4 capability which includes the developmental activities for "cloud optimization"; inclusion of new simulations to the architecture; and concurrency with core system TADSS and Army Mission Command Systems.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase between FY18 to FY19 is due to supporting Version 4 development efforts.</p>				
<p>Title: Live, Virtual, Constructive Integrating Architecture (LVC-IA) Program Government System Test and Evaluation.</p> <p>Description: Government System Test and Evaluation for the LVC-IA Program.</p> <p>FY 2018 Plans: LVC-IA will finalize Federation Integration, Functional Verification and System Measurement of Performance (SMP) events, complete Test Readiness Review (TRR) and Government Acceptance Testing for Version 3; the program will begin efforts for Version 4 in FY18 once Version 3 efforts are completed. Additionally, LVC-IA will continue integration testing and evaluation activities in support of LVC-IA interoperability with TADSS and other Mission Command Systems.</p> <p>FY 2019 Plans: LVC-IA will perform Federation Integration, Functional Verification and System Measurement of Performance (SMP) events, and commence Test Readiness Review (TRR) and Government Acceptance Testing for Version 4. Additionally, LVC-IA will continue integration testing and evaluation activities in support of LVC-IA interoperability with TADSS and other Mission Command Systems.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease between FY18 to FY19 is due to the completion of test activities supporting Version 3.</p>		2.199	2.372	1.619
<p>Title: Government Program Management for the Live, Virtual, Constructive Integrating Architecture (LVC-IA) Program.</p> <p>Description: Government Program Management for the LVC-IA Program.</p>		1.782	1.679	0.803

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2017	FY 2018	FY 2019
FY 2018 Plans: Will provide program management, engineering and technical oversight, contract support, and travel for the LVC-IA Program.					
FY 2019 Plans: Will provide program management, engineering and technical oversight, contract support, and travel for the LVC-IA Program.					
FY 2018 to FY 2019 Increase/Decrease Statement: Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435.					
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Target Modernization program. Description: EMD phase contract activities for the Target Modernization program.			2.054	2.237	1.920
FY 2018 Plans: Finalization of the trackless moving type target effort initiated in FY16 via development and testing of Technology Readiness Level (TRL) 9 prototype systems. Prepare system for transition into low rate initial production, and eventual transition to various programs of record. Start the design and development of a dynamic infrared representation capability to display real-time posture based, high fidelity IR/thermal images on target silhouettes. Advance thermal threat images to match thermal sight capabilities. Removes thermal generation systems from line of fire on ranges. Bridge technology transition from an on-going SBIR effort that began in FY15.					
FY 2019 Plans: RDTE of \$.250 million provides for the design, development, and testing of the Trackless Moving Target - Vehicle (TMT-V) platform system. The TMT-V effort will design and prototype an inexpensive trackless vehicle/armor moving type target that can be utilized on unimproved terrain. The TMT-V is capable of replicating behaviors based on training doctrine, skills, readiness and style of learning to enhance realism and feedback for the trainee.					
RDTE of \$1.670 million provides for the design and development of the Dynamic Infrared Projection (DIRP) system. The DIRP system will provide for an inexpensive and ruggedized infrared projection system that can be utilized to create accurate real-time dynamic thermal representations on target silhouettes or other mediums based on training doctrine within the various live and virtual training applications to enhance realism and feedback for the trainee. The DIRP system technology would support the creation of a high fidelity, time and posture based, thermal replication system for live fire target systems. Current solutions are heating pads adhered to the target silhouette. The shapes are not accurate, get damaged with live fire engagements, and create thermal bleeding; the shapes are static with respect to time, and do not support changes in thermal intensity over time, movement or posture changes. The DIRP solution will remove the threat signature thermal generation from the line of fire (damage), and					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev	Project (Number/Name) 241 / Nstd Combined Arms		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
support the recognition of combat vehicles with high resolution imaging. The thermal images will support time or movement based increases in temperature, and enhanced thermal representation (muzzle flash, burning vehicle), resulting in enhanced training realism. The FY19 efforts include conducting a domain analysis, completing the detail design, and image modeling and development. FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 estimated cost for development				
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the Digital Range Training System (DRTS) Description: EMD Phase for the DRTS Program FY 2018 Plans: RDTE funding will be used to begin the development of a prototype for the Digital Range Training System (DRTS) at Ft. Benning of the Service Oriented Architecture (SOA) based Common Training Instrumentation Architecture (CTIA) version 4 software product line. Effort will focus on prototyping and validating the new software on IT equipment and demonstrating that the DRTS capabilities are still supported. In addition, funding will be used to develop a prototype Integrated Player Unit (IPU) for the DRTS system that combines the multiple boxes used today into one unit, makes the IPU more rugged to withstand the operational environment, and makes the system easier and faster to install. This will make the DRTS more usable by the training units and easier to support. This is the first year of RDTE for the DRTS program. FY 2018 to FY 2019 Increase/Decrease Statement: DRTS has no FY 2019 funding.		-	1.600	-
Title: Engineering and Manufacturing Development (EMD) phase contract activity for OPFOR Surrogate Wheeled Vehicles (OSWV) Description: EMD phase contract activities for the OSWV program. FY 2019 Plans: RDTE Funding will assist in technical vehicle studies, engineering, prototype design, technical integration, first article tests and integration tests of the Visual Modifications to the Tactical Vehicles. This is the first year of RDTE for the OSWV program. FY 2018 to FY 2019 Increase/Decrease Statement: OPFOR Surrogate Wheeled Vehicles (OSWV) is a new start.		-	-	3.226
Title: Engineering and Manufacturing Development (EMD) phase contract activity for the OPFOR Integrated Air Defense System (IADS)		4.812	15.946	9.597

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>	Project (Number/Name) 241 / <i>Nstd Combined Arms</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018
Description: EMD phase contract activities for the IADS Program FY 2018 Plans: RDTE funding will support the ongoing modification of the Apache Helicopter capability to train against the OPFOR Integrated Air Defense System (IADS). Funding will also support the addition of embedded software to model the Aircraft Survivability Equipment (ASE) and stimulate the helicopter display to inform pilots of opposing threats. Modification efforts will also expand the capability to the Blackhawk and Chinook Helicopters while integrating the software into the Combat Training Centers (CTC), to support force on force collective training exercises. FY 2019 Plans: RDTE funding will support the continuing development, integration, test and evaluation of the IADS embedded software to model the Aircraft Survivability Equipment (ASE) and stimulate the helicopter display to inform pilots of opposing threats, and for the Ground Threat Emitter (GTE) to simulate Threat air defense weapons. Modification efforts will also integrate the software into the Combat Training Centers (CTC) Instrumentation System (IS) to support force on force collective training exercises. FY 2018 to FY 2019 Increase/Decrease Statement: The FY19 decrease in RDTE is due to transitioning from a high intensity development year to the testing phase in FY19.			
Title: Radar Signal Emulator Development for Integrated Air Defense Systems (IADS) FY 2019 Plans: Engineering and development of a dedicated SAM/HIMAD threat solution for the Combat Training Center (CTCs), supporting multiple threat configurations. This funding will develop four Radar Signal Emulators (RSEs) fully integrated with CTC Instrumentation System (IS) providing a fielded capability for replicating an enemy multi-layered, short-range, medium and high altitude air-defense system to execute unified land operations against a current and projected peer/near peer threat in accordance with current and emerging doctrine. FY 2018 to FY 2019 Increase/Decrease Statement: This is the first year of RDTE funding for the Radar Signal Emulators (RSEs) requirement which is included in the IADS program.		-	-
Title: Government Program Management for the OPFOR Integrated Air Defense System (IADS) Program FY 2018 Plans: Will provide program management, engineering and technical oversight, contract support, and travel for the IADS Program. FY 2018 to FY 2019 Increase/Decrease Statement:		0.188	0.554
			9.893
			-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2017	FY 2018	FY 2019
Per Office of the Under Secretary of Defense (Comptroller), the civilian manpower was transferred in FY 2019 from RDTE to OMA SAG 435.												
Title: Suicide Prevention Program										-	2.228	2.249
FY 2018 Plans: Dollars belong to the Suicide Prevention Program.												
FY 2019 Plans: Dollars belong to the Suicide Prevention Program.												
FY 2018 to FY 2019 Increase/Decrease Statement: new cost estimate												
Title: Soldier Fitness Program										-	0.892	-
Description: Dollars belong to the Soldier Fitness Program.												
FY 2018 Plans: Dollars belong to the Soldier Fitness Program.												
FY 2018 to FY 2019 Increase/Decrease Statement: The Soldier Fitness Program doesn't have any RDTE in FY 2019.												
Accomplishments/Planned Programs Subtotals										30.850	43.575	49.436
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost	
• MA6600: Combat Training Centers Support	75.359	88.888	123.228	-	123.228	139.436	87.750	99.611	72.707	0.000	686.979	
• NA0100: Training Devices, Nonsystem	253.050	288.689	228.598	-	228.598	205.008	173.434	183.879	192.551	0.000	1,525.209	
Remarks												
D. Acquisition Strategy												
Competitive development efforts based on performance specifications.												
1. In FY17, Combat Training Center Instrumentation Systems (CTC-IS) System RDTE funded the development of a Cross Domain Solution (CDS) needed due to new IA requirements; awarded a new delivery order (DO) to General Dynamics Missions Systems under the Live Training Transformation Consolidated Product-line												

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>	Project (Number/Name) 241 / <i>Nstd Combined Arms</i>
<p>Management Next (LT2 CPM Next) contract. CPM Next was completed as a Competitive 5 year Single Award Indefinite-Delivery/Indefinite-Quantity (IDIQ) Contract, the DO will have a one-year base and four single-year option period.</p> <p>FY18 and FY19, will be used to fund a Life Cycle Product-line Management (LCPM) contract structured as a 5 year Single Award Indefinite-Delivery/Indefinite-Quantity (IDIQ) for the implementation of a Hardware Product Line (HPL), the contractor is to be selected. The strategy is to establish a deliberate approach to Life Cycle Management (LCM) of Live Training Family of Systems, providing the framework for future Life Cycle Efforts for the Hardware Product Line Framework.</p> <p>2. In FY17, Instrumentable-Multiple Integrated Laser Engagement System (I-MILES) awarded a new delivery order (DO) to General Dynamics Mission Systems on the Live Training Transformation Consolidated Product-line Management Next (LT2 CPM Next) contract which will provide flexibility for unknown requirements and will address the known requirements that fall within multiple categories: Architecture Maturation; Common Operating Environment (COE); Embedded Training; System level testing of existing and future Live Training Engagement Composition (LTEC) services for dismount and vehicle use cases; Architecture Verification/Validation of LTEC and a componentized architecture; Retrofitting I-MILES systems (Individual Weapons System 1 & 2 (IWS), Tactical Vehicle System (TVS), Combat Vehicle Tactical Engagement Simulation System (CVTESS)) with LTEC and Live Player Area Network (LPAN); Development, Integration, Form, Fit & Function for new vehicles/systems platforms. In FY18, I-MILES will award a new Competitive 5 year Single Award Indefinite-Delivery/Indefinite-Quantity (IDIQ) Contract for relevancy.</p> <p>3. In FY16, the Home Station Instrumentation Training System (HITS) program awarded a delivery order (DO) to General Dynamics Missions Systems under the LT2 CPM Next contract. The DO has a one-year base and four single-year option periods beginning in January 2016.</p> <p>4. In FY15, the Common Training Instrumentation Architecture (CTIA) program awarded a contract to General Dynamics Mission Systems which has a one-year base and four single-year option periods through FY20.</p> <p>5. In FY17, the Target Modernization (Target Mod) program incrementally funded the Phase III SBIR contract to Pratt and Miller Engineering Trackless Moving Target (TMT) contract which has a one year base and two year options periods. The contract provides for the continued product development (from TRL 7 to TRL 9). The original effort was initiated under a Small Business Innovation Research (SBIR) contract. In FY18, Target Mod will award a Phase III SBIR to JRM Enterprises to initiate the maturation of the Dynamic Infrared Representation system (TRL 7 to TRL 9).</p> <p>6. The LVC-IA Enhanced Capability contract is the competitively awarded follow-on effort awarded in 3rd Quarter FY16. This contract has a two-year base and four single-year option periods to provide the additional capabilities for Versions 3, 4 and beyond. The contract was awarded to Cole Engineering and Science, Inc. (CESI) to provide for the development, fielding and training of each version capability for the designated Basis of Issue Plan (BOIP) sites and provide Post-Deployment Software Support (PDSS) for all currently fielded versions.</p> <p>7. The Soldier and Squad Virtual Trainer (S/SVT) program will employ an incremental acquisition strategy where the full capability will occur in multiple increments as new capability is developed and delivered. Competitive prototyping development efforts will be conducted through Other Transactional Authority.</p> <p>8. Digital Range Training System (DRTS) will award two standalone delivery orders (DO) to General Dynamics Mission Systems which will be 12-month prototyping efforts. This is the first year of RDTE for this program.</p> <p>9. In FY17, OPFOR Integrated Air Defense System (IADS) awarded a new standalone contract with a base, plus 4 option year periods.</p> <p>10. As of FY17, the Medical Simulation Training Center (MSTC) team will be performing TC3 Sim concurrency and ISS enhancement efforts using other Army agency fixed price contracts.</p> <p>11. In FY19, OPFOR Surrogate Wheeled Vehicles (OSWV) will pursue an organic solution to develop, integrate and test Visual Modifications for Tactical and Technical Vehicles.</p> <p>E. Performance Metrics N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
OneTESS Program Management	Various	PEO STRI : Orlando, FL	8.046	-		-		-		-		-	0.000	8.046	8.046
OneTESS Program Management	Various	PEO STRI, : Orlando, FL	2.040	-		-		-		-		-	0.000	2.040	2.040
HITS Program Management	Various	PEO STRI : Orlando, FL	0.800	0.307	Jan 2017	0.316	Nov 2017	-		-		-	0.000	1.423	1.423
CTC-IS Program Management	Various	PEO STRI : Orlando, FL	6.225	1.536	Dec 2016	1.440	Nov 2017	-		-		-	0.000	9.201	9.201
MSTC Program Management	Various	PEO STRI : Orlando, FL	0.632	0.167	Mar 2017	0.167	Nov 2017	-		-		-	0.000	0.966	0.966
I-MILES Program Management	Various	PEO STRI : Orlando, FL	-	0.304	Dec 2016	0.319	Oct 2017	-		-		-	0.000	0.623	0.623
EST Program Management	Various	PEO STRI : Orlando, FL	0.214	-		-		-		-		-	0.000	0.214	0.214
LVC-IA Program Management	Various	PEO STRI : Orlando, FL	7.005	1.782	Dec 2016	1.679	Nov 2017	0.803	Nov 2018	-		0.803	Continuing	Continuing	Continuing
Target Modernization	Various	PEO STRI : Orlando, FL	0.614	-		-		-		-		-	0.000	0.614	0.614
ETC-IS Program Management	Various	PEO STRI : Orlando, FL	0.164	-		-		-		-		-	0.000	0.164	0.164
CTIA	Various	PEO STRI : ORLANDO, FL	0.364	0.276	Oct 2016	0.283	Oct 2017	-		-		-	0.000	0.923	0.923
Soldier Fitness Program	TBD	Multiple : Various	1.254	-		0.892	Jun 2018	-		-		-	0.000	2.146	2.146
Suicide Prevention	TBD	Multiple : Various	-	-		2.228	Jun 2018	2.249	Jun 2019	-		2.249	Continuing	Continuing	Continuing
SVT Program Management	Various	PEO STRI : Orlando, FL	-	-		0.051	Oct 2017	-		-		-	0.000	0.051	0.051
OPFOR Integrated Air Defense System (IADS) Program Management	Various	PEO STRI : Orlando, FL	-	0.188	Aug 2017	0.554	Oct 2017	-		-		-	0.000	0.742	0.742
Subtotal			27.358	4.560		7.929		3.052		-		3.052	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
OneTESS	SS/CPFF	General Dynamics : Fairfax, VA	124.769	-		-		-		-		-	0.000	124.769	124.769
OneTESS	SS/CPFF	General Dynamics C4 Systems : Orlando, FL 32826	10.430	-		-		-		-		-	0.000	10.430	10.430
CTIA	Option/ IDIQ	General Dynamics Mission Systems : Orlando, FL	13.489	2.608	Jan 2017	2.910	Jan 2018	2.707	Jan 2019	-		2.707	Continuing	Continuing	Continuing
CTIA	C/CPFF	Lockheed Martin Inc. : Orlando, FL	57.091	-		-		-		-		-	0.000	57.091	57.091
I-MILES	Option/ IDIQ	General Dynamics Mission Systems : Orlando, FL	-	1.041	Mar 2017	-		0.511	May 2019	-		0.511	Continuing	Continuing	Continuing
I-MILES RELEVANCY	SS/IDIQ	TBD : Orlando, FL	-	-		2.611	May 2018	2.014	May 2019	-		2.014	Continuing	Continuing	Continuing
CTC-IS	C/IDIQ	General Dynamics Mission Systems : Orlando, FI	35.146	2.232	Jan 2017	-		1.052	Mar 2019	-		1.052	Continuing	Continuing	Continuing
CTC-IS	C/IDIQ	TBS : Orlando, FL	-	2.766	Jul 2017	3.362	Jul 2018	4.000	Mar 2019	-		4.000	Continuing	Continuing	Continuing
HITS	C/FFP	Riptide : Orlando, FL	1.379	-		-		-		-		-	0.000	1.379	1.379
HITS	C/IDIQ	General Dynamics Mission Systems : Orlando, FL 32826	3.109	-		-		-		-		-	0.000	3.109	3.109
HITS	Option/ IDIQ	General Dynamics Mission Systems (GDMS) : Orlando, FL 32826	-	1.683	Jan 2017	1.646	Jan 2018	1.044	Jan 2019	-		1.044	Continuing	Continuing	Continuing
MSTC Development	C/FP	Multiple : Various	4.439	0.489	Mar 2017	0.200	Mar 2018	0.487	Jun 2019	-		0.487	Continuing	Continuing	Continuing
EST Development	C/FP	Cubic Simulation Systems, Inc. : Orlando, FL 32809-3813	1.528	-		-		-		-		-	0.000	1.528	1.528

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
EST	C/FP	Nova Technologies : Panama City, FL 32404-6747	0.609	-		-		-		-		-	0.000	0.609	0.609
EST Enhanced Capabilities	C/FFP	Meggitt Training Systems, Inc. : Suwanee, GA 30024-1247	1.143	0.932	Mar 2017	-		-		-		-	0.000	2.075	2.075
EST Enhanced Capabilities Adaptive Marksmanship and Intelligent Tutoring	C/FFP	Dignitas Technologies : Orlando, FL 32817	0.776	-		-		-		-		-	0.000	0.776	0.776
CFFT Enhanced Joint Fires Observer (JFO) Training and Certification Requirements	C/IDIQ	Nova Technologies : Panama City, FL 32404-6747	-	1.242	Apr 2017	-		-		-		-	0.000	1.242	1.242
LVC-IA Development	C/CPFF	Cole Engineering Services, Inc : Orlando, FL	29.822	-		-		-		-		-	0.000	29.822	29.822
LVC-IA Enhanced Capability	C/CPFF	Cole Engineering Services, Inc (CESI) : Orlando, FL	5.706	-		-		-		-		-	0.000	5.706	5.706
LVC-IA Enhanced Capability	Option/ CPFF	Cole Engineering Services, Inc (CESI) : Orlando, FL	-	4.232	Feb 2017	2.762	Nov 2017	2.774	Nov 2018	-		2.774	Continuing	Continuing	Continuing
Target Modernization	C/IDIQ	Pratt and Miller Engineering : Orlando, FL	6.600	-		-		-		-		-	0.000	6.600	6.600
Target Modernization	Option/ IDIQ	Pratt and Miller Engineering (P&M) : Orlando, FL	-	2.054	Feb 2017	1.000	Feb 2018	-		-		-	0.000	3.054	3.054
Target Modernization	C/CPFF	JRM Enterprises : Fredericksburg, VA	-	-		1.237	Jul 2018	0.250	Oct 2018	-		0.250	Continuing	Continuing	Continuing
Target Modernization	C/CPFF	JRM Technologies : Orlando	-	-		-		1.670	Dec 2018	-		1.670	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 241 / Nstd Combined Arms					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Congressional Add Center of Excellence for Military Operations in Urban Terrain and Cultural Trn	C/FP	Multiple : Various	2.996	-		-		-		-		-	0.000	2.996	2.996
ETC-IS	SS/CPFF	General Dynamics C4 Systems : Orlando, FL 32826	4.836	-		-		-		-		-	0.000	4.836	4.836
Digital Range Training System (DRTS)	C/FFP	General Dynamics Mission Systems : Orlando, FL	-	-		1.600	Mar 2018	-		-		-	0.000	1.600	1.600
OPFOR Integrated Air Defense System (IADS)	MIPR	PEO IEWS, PM Aircraft Survivability Equipment (ASE) : Huntsville, AL	-	2.046	Sep 2017	14.346	Jan 2018	6.628	Feb 2019	-		6.628	Continuing	Continuing	Continuing
OPFOR Integrated Air Defense System (IADS)	MIPR	Target Systems Management Office, PEO STRI, PEO STRI : Huntsville, AL	-	0.915	Nov 2017	-		-		-		-	0.000	0.915	0.915
Radar Signal Emulator Development for IADS	C/TBD	To Be Determined : Orlando, FL	-	-		-		9.893	Feb 2019	-		9.893	Continuing	Continuing	Continuing
Soldier and Squad Virtual Trainer (S/SVT) Program	C/TBD	PEO STRI : Orlando, FL	-	-		-		5.540	Apr 2019	-		5.540	Continuing	Continuing	Continuing
OPFOR Surrogate Wheeled Vehicles (OSWV)	SS/ Various	TBD : TBD	-	-		-		3.226	Mar 2019	-		3.226	Continuing	Continuing	Continuing
Subtotal			303.868	22.240		31.674		41.796		-		41.796	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
OneTESS	Various	Various : Orlando, FL	6.596	-		-		-		-		-	0.000	6.596	6.596
OneTESS	Various	Various : Various	0.262	-		-		-		-		-	0.000	0.262	0.262

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>						Project (Number/Name) 241 / <i>Nstd Combined Arms</i>			
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
CTIA	Various	Various : Various	12.844	-		-		-		-		-	0.000	12.844	12.844
Target Modernization	Various	Various : Various	0.192	-		-		-		-		-	0.000	0.192	0.192
Subtotal			19.894	-		-		-		-		-	0.000	19.894	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
OneTESS Development & Test	Various	Multiple : Orlando, FL	4.162	-		-		-		-		-	0.000	4.162	4.162
OneTESS Test Support	Various	Multiple : Orlando, FL	1.280	-		-		-		-		-	0.000	1.280	1.280
HITS	Various	Various : Orlando, FL	0.740	-		-		-		-		-	0.000	0.740	0.740
LVC-IA Test Support	Various	Multiple : Orlando, FL	5.302	2.199	Feb 2017	2.372	Nov 2017	1.619	Nov 2018	-		1.619	Continuing	Continuing	Continuing
IEDES	Various	Multiple : Orlando, FL	0.519	-		-		-		-		-	0.000	0.519	0.519
OPFOR Integrated Air Defense System (IADS)	SS/CPFF	Inter-Coastal Electronics, Inc. : Mesa, AZ	-	1.851	Sep 2017	1.600	Jul 2018	2.969	Aug 2019	-		2.969	Continuing	Continuing	Continuing
Subtotal			12.003	4.050		3.972		4.588		-		4.588	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			363.123	30.850		43.575		49.436		-		49.436	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army **Date:** February 2018

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>	Project (Number/Name) 241 / <i>Nstd Combined Arms</i>
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Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CTIA Development and Architectural Evolution																												
CTC IS Development																												
I-MILES Development																												
I-MILES RELEVANCY																												
HITS Development																												
MSTC MT-C2 Development																												
MSTC Trainer Developments																												
EST Enhanced Capabilities																												
CFFT Enhanced Joint Fires Observer (JFO) Training and Certification Rec																												
LVC-IA - Version 3 (Development, Integration, Demonstration and Testing)																												
LVC-IA - Version 4 (Development, Integration, Demonstration and Testing)																												
LVC-IA - Concurrency with Mission Command Systems																												
Target Modernization Development																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>		Project (Number/Name) 241 / <i>Nstd Combined Arms</i>	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
S/SVT - Development																												
Digital Range Training System (DRTS)																												
OPFOR Integrated Air Defense System (IADS)																												
OPFOR Surrogate Wheeled Vehicles (OSWV)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>	Project (Number/Name) 241 / <i>Nstd Combined Arms</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
OneTESS Development	1	2013	4	2014
CTIA Development and Architectural Evolution	1	2012	4	2024
CTC IS Development	1	2010	4	2023
I-MILES Development	2	2017	4	2021
I-MILES RELEVANCY	2	2018	4	2024
HITS Development	3	2012	4	2024
MSTC MT-C2 Development	2	2016	3	2018
MSTC Trainer Developments	2	2017	4	2023
EST Enhanced Capabilities Adaptive Marksmanship and Intelligent Tutoring	3	2015	2	2016
EST Enhanced Capabilities	3	2016	2	2018
CFFT Enhanced Joint Fires Observer (JFO) Training and Certification Requirements	2	2017	3	2018
LVC-IA - Version 2 (Development, Integration, Demonstration and Testing)	1	2014	3	2016
LVC-IA - Version 3 (Development, Integration, Demonstration and Testing)	4	2016	3	2018
LVC-IA - Version 4 (Development, Integration, Demonstration and Testing)	4	2018	3	2020
LVC-IA - Concurrency with Mission Command Systems	4	2020	4	2023
Target Modernization Development	1	2016	4	2023
CSF2	1	2015	4	2016
S/SVT - Development	3	2019	4	2021
Digital Range Training System (DRTS)	2	2018	2	2019
OPFOR Integrated Air Defense System (IADS)	4	2017	4	2024
OPFOR Surrogate Wheeled Vehicles (OSWV)	2	2019	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev				Project (Number/Name) 573 / Program Executive Office Simulation, Training Spt			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
573: Program Executive Office Simulation, Training Spt	-	3.038	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.038
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note .												
A. Mission Description and Budget Item Justification In support of Non-System Training Devices (NSTD), this project funds the US Army Program Executive Officer Simulation, Training and Instrumentation (PEO STRI) core operations supporting development of Army training devices and simulations by PEO STRI project managers (PM TRADE, PM ITTS, and PM ITE). FY 2018, per Program Decision Memorandum (PDM) directed Major Army Headquarters Realignment, is the first year that realigns Government authorizations and associated funding to an Army Management Headquarter Account (AMHA), which zeroed out the funding in FY 2018.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2017	FY 2018	FY 2019
Title: Government Program Management to support PEO STRI.										3.038	-	-
Description: Government Program Management to support PEO STRI.												
Accomplishments/Planned Programs Subtotals										3.038	-	-
C. Other Program Funding Summary (\$ in Millions) N/A												
Remarks N/A												
D. Acquisition Strategy N/A												
E. Performance Metrics N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604715A / <i>Non-System Training Devices - Eng Dev</i>				Project (Number/Name) 573 / <i>Program Executive Office Simulation, Training Spt</i>					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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- PEO STRI	Various	PEO STRI : Orlando, FL	24.227	3.038	Oct 2016	-		-		-		-	0.000	27.265	27.265
Subtotal			24.227	3.038		-		-		-		-	0.000	27.265	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			24.227	3.038		0.000		-		-		-	0.000	27.265	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army																Date: February 2018												
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev								Project (Number/Name) 573 / Program Executive Office Simulation, Training Spt										
Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
Government Program Management	<div>Government Program Management</div>																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604715A / Non-System Training Devices - Eng Dev	Project (Number/Name) 573 / Program Executive Office Simulation, Training Spt

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Government Program Management	1	2010	4	2017