Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army											Date: March 2024	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604121A *I Synthetic Training Environment Refinement & Prototyping*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	-	236.396	109.714	136.029	-	136.029	87.618	129.817	135.115	138.267	0.000	972.956
CR2: *STE Information Systems (TSS, TMT)*	-	107.209	49.616	37.955	-	37.955	36.852	34.692	34.929	35.278	0.000	336.531
CR3: *STE Live*	-	66.396	23.839	34.115	-	34.115	18.016	83.248	84.312	85.154	0.000	395.080
CR4: *STE One World Terrain (OWT)*	-	1.336	13.192	11.350	-	11.350	7.049	7.234	7.454	7.529	0.000	55.144
CR5: *STE Reconfigurable Virtual Trainer (RVCT)*	-	19.970	15.282	7.434	-	7.434	6.070	4.643	8.420	10.306	0.000	72.125
CR6: *STE Squad Immersive Virtual Trainer (SiVT)*	-	36.130	-	18.889	-	18.889	-	-	-	-	0.000	55.019
CR7: *STE Soldier Virtual Trainer (SVT)*	-	5.355	7.785	26.286	-	26.286	19.631	-	-	-	0.000	59.057

Note

STE-Software (STE-SW) was previously referred to as STE-Information System (STE-IS).

A. Mission Description and Budget Item Justification

These funding lines are directly aligned to the Army Synthetic Training Environment (STE) Modernization Priority.

The Synthetic Training Environment (STE) is the next generation holistic combined arms collective training capability that will enable leaders, Soldiers, and units from Squad through Army Service Component Command to train where they will fight, with the partners they will fight with, and in complex operational environments in support of Multi-Domain Operations (MDO). STE will revolutionize Army training by providing the repetition necessary at the Point of Need (PoN) for improved proficiency prior to live training or operations- improving Soldier lethality and survivability. The STE program has multiple Other Transaction Authority (OTA) contracts awarded, and will implement an incremental fielding approach leveraging the Software Acquisition pathway (SWP) and the Middle Tier of Acquisition (MTA) pathway. The STE will be available where training occurs (home station, combat training centers, armories, institutions, and deployed locations).

The STE is comprised of five main signature efforts: 1) STE-Software (STE-SW); 2) Reconfigurable Virtual Collective Trainers (RVCT); 3) Squad Immersive Virtual Trainer (SiVT, in partnership with Solider Lethality's Integrated Visual Augmentation System (IVAS) program); 4) STE Live; and 5) Solider Virtual Trainer. STE-SW is comprised of Synthetic Training Environment training capability consisting of One World Terrain (OWT), Training Simulation Software (TSS), and Training Management Tools (TMT). The RVCT will allow units to collectively train, using proponent developed Combined Arms Training Strategies (CATS), on a simulated, fully interactive, real-time battlefield. Squad Immersive Virtual Trainer (SiVT) is the immersive training capability delivered as part of the IVAS for the close combat Squads that enables

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604121A *I Synthetic Training Environment Refinement & Prototyping*

IVAS to be a fight, rehearse, and training platform. STE Live focuses on the development of twelve engagement types and five instrumentation enablers. The twelve engagement types are direct fire, counter-defilade fire, indirect fire, dropped objects, placed objects, thrown objects, guided weapons, autonomous weapons, cyber, directed energy, radiant energy, and plume; the five instrumentation enablers are calculations, networks, sensors, terrains, and transmitters. SVT will provide training to Soldiers Army wide by providing a Weapons Skills Development (WSD), Joint Fires Trainer (JFT) and Use of Force (UoF). A future STE line of effort includes Next Generation Constructive (NGC) that will be scaled up from what the vendor is able to deliver through the STE-SW platform. NGC, as part of STE-Software, will provide constructive training capability to echelons above brigade.

FY2025 Projects CR2 through CR7 Base RDTE dollars in the amount of $136.029 million funds significant development efforts in the STE-Software (STE-SW) which include Training Simulation Software/Training Management Tool (TSS/TMT) and One World Terrain (OWT), Reconfigurable Virtual Collective Trainer (RVCT), Squad Immersive Virtual Trainer (SiVT), Soldier Virtual Trainer (SVT), and STE Live.

The total cost of the STE Live (CR3) Middle Tier of Acquisition (MTA) effort is $360.9 million RDTE from FY2022 to FY2026.

The total cost of the STE RVCT (CR5) MTA effort is $119.1 million RDT&E from FY 2020 to FY 2024. The remainder of STE RVCT is fully funded across the Future Years Defense Program

The total cost of the SVT (CR7) Middle Tier of Acquisition effort is $108.8 million from FY2022 to FY2027, including RDT&E ($101.6M) and Procurement ($7.2M) of prototype units.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	242.468	109.714	87.684	-	87.684
Current President's Budget	236.396	109.714	136.029	-	136.029
Total Adjustments	-6.072	0.000	48.345	-	48.345
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.001	-			
• SBIR/STTR Transfer	-6.071	-			
• Adjustments to Budget Years	-	-	48.345	-	48.345

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: CR3: *STE Live*		
Congressional Add: *Congressional Add: STE Live electronic bullet*	20.000	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604121A *I Synthetic Training Environment Refinement & Prototyping*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Congressional Add: *Congressional Add: STE Live OTA acceleration*	20.000	-
Congressional Add Subtotals for Project: CR3	40.000	-
Project: CR6: *STE Squad Immersive Virtual Trainer (SiVT)*		
Congressional Add: *Congressional Add: Engineering, Support, Test & Evaluation for SiVT*	36.130	-
Congressional Add Subtotals for Project: CR6	36.130	-
Congressional Add Totals for all Projects	76.130	-

Change Summary Explanation

Increase of $2.464 million supports Project CR2, TSS/TMT, to continue with the DevSecOps approach, refinement of Brigade level training capability, and development of the Intel, Sustainment, Cyber, and Protection Warfighting Functions. Increase also reflects Program Management support cost that was realigned from OMA to RDTE.

Increase of $.696 million supports Project CR3, STE Live, development activities for Increment 3 for autonomous weapon, directed energy and radiant energy efforts.

Increase of $5.323 million supports Project CR4, One World Terrain, to continue development efforts to provide advanced capabilities that allow user-generated terrain captures to be incorporated into the OWT repository and standard commercial tools and technologies to be used for geospatial data editing. Increase also reflects Program Management support cost that was realigned from OMA to RDTE.

Increase of $7.434 million in Project CR5, STE Reconfigurable Virtual Trainer (RVCT), is to continue development on RVCT future variant kits and complete integration lab assets.

Increase of $18.889 million supports Project CR6, Squad Immersive Virtual Trainer (SiVT), to continue technology insertion into the SiVT system, including technologies that improve outdoor capability, increase the reliability and connectivity of the systems.

Increase of $13.539 million supports Project CR7, STE Soldier Virtual Trainer (SVT), development of Phase 3 Weapon Skills Development Increment 2, Joint Fires Training, and Use of Force capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR2 / *STE Information Systems (TSS, TMT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CR2: *STE Information Systems (TSS, TMT)*	-	107.209	49.616	37.955	-	37.955	36.852	34.692	34.929	35.278	0.000	336.531
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Training Simulation Software/Training Management Tools (TSS/TMT) provides 2 of the 3 core functions for the Synthetic Training Environment - Software (STE-SW). TSS/TMT converges our current live, virtual, gaming and constructive environments to provide a single, unified training & management environment from Soldier/Squad to Army Service Component Command (ASCC). TSS/TMT provides the ability to train in a single or multiple live, virtual, gaming and constructive environment simultaneously.

The Training Simulation Software (TSS), the core STE simulation engine, provides the physical and behavior models necessary to replicate the operational environment to enable collective training from Soldier/Squad through ASCC. The TSS provides entity, aggregate, and common services, as well as adjudicates interactions at the entity level (e.g., Computer-Generated Forces (CGF), and synthetic equipment). The Training Management Tool (TMT) enables units to quickly plan, prepare, execute, monitor, and assess collective training events for readiness. TMT provides an easy-to-use interface, combined with an Intelligent tutor to reduce help-desk support, time, and manpower currently required. TMT leverages training management (data) services and authoritative data sources to enable training on demand regardless of geographic location.

In FY 2021, TSS/TMT entered the Software Acquisition Pathway. TSS/TMT facilitates rapid and iterative delivery of its capabilities through a Development, Security, and Operations (DevSecOps) process to support Squad (Sq) to Brigade (BDE) level training through 4QFY2024.

FY 2025 Base RDTE dollars in the amount of $37.955 million for TSS/TMT will continue with the DevSecOps approach to continue refinement of Brigade level training capability. Funding will continue development of the Intel, Sustainment, Cyber, and Protection Warfighting Functions. Base funding will also continue the implementation of the DevSecOps process and software production pipeline to support STE-SW capability releases across STE lines of efforts [Reconfigurable Virtual Collective Trainer (RVCT), Soldier Virtual Trainer (SVT), Live Training System (Live)]. Base funding will also continue the development and integration of Avionics Software Emulation (AvSE) with TSS/TMT software baseline to support the Reconfigurable Virtual Collective Trainer (RVCT) Air capability.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Engineering, Support, Test & Evaluation for STE-IS	107.209	49.616	-
FY 2024 Plans: Funding supports the STE-IS TSS/TMT continued development of iterative incremental capability, testing and capability releases to enable Battalion to Brigade training. Continued development and testing will focus in the following areas:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR2 / *STE Information Systems (TSS, TMT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
-- Architecture: continue with the development of a scalable/flexible Modular Open System Approach (MOSA) architecture and Platform Development Kit (PDK). Continue development of open/common interface to support technology insertion and interoperability with STE programs. Development and support of the STE-IS core architecture and services to support the SVT and LTS use cases. -- TMT: continue with the development of the user interfaces that would enable Commanders and Leaders at the Company through Brigade echelons to Plan, Prepare, Execute and Assess (PPEA) training exercises/scenarios. Integrate new Authoritative Data Sources (ADS) and initiate development of intelligent tutoring system to simplify and streamline the PPEA process. Continue development of the enterprise management capability to enable equipment and software health monitoring, remote software patching, remote Risk Management Framework compliance audits. -- TSS: continue development of the STE core simulation/game engine. Initiate the development of the Cyber domain to support Multi-Domain Operations (MDO). -- Integration: Continue the integration of TSS, TMT, OWT, RVCT-Air, RVCT-Ground, RVCT-Soldier, Avionics Software Emulation (AvSE), Mission Command Information Systems (MCIS), and Live, Virtual, Constructive - Integration Architecture (LVC-IA) programs. Initiate integration of LTS and SVT core services into the STE-IS core. -- Test/Evaluation: Conduct evaluation of the TSS/TMT MVPs through technical assessments, Soldier Touch Points, test planning events, and Operational Assessments/Demonstration. -- Continue the implementation of the Development, Security, and Operations (DevSecOps) process and the Continuous Integration/Continuous Delivery (CI/CD) software production pipeline. Extend the DevSecOps environment to the other STE programs. -- Continue development and integration of AvSE with TSS/TMT software baseline to ensure that the RVCT-Air capability is concurrent with Aviation platform systems. -- Continue development and integration of Common Software Libraries (CSL) with the TSS/TMT software baseline to ensure that the RVCT-Ground capability is concurrent with Ground platform systems. -- Continue enhancing the TSS/TMT software baseline based on Soldier feedback collected at Soldier Touch Points, Operational Assessments/Demonstrations, and other test events. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease from FY2024 to FY2025 is due to the scaling down of developmental efforts to enable Battalion to Brigade training capability. Requirement title was changed from Engineering, Support, Test & Evaluation STE-IS to Engineering, Support, Test and Evaluation STE-SW.			
Title: Engineering, Support, Test & Evaluation for STE-SW	-	-	37.955
FY 2025 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR2 / *STE Information Systems (TSS, TMT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Funding supports the TSS/TMT continued development of iterative incremental capability, testing and capability releases to enable Battalion to Brigade training. Continued development and testing will focus in the following areas: -- Architecture: continue with the development of a scalable/flexible Modular Open System Approach (MOSA) architecture and Platform Development Kit (PDK). Continue development of open/common interface to support technology insertion and interoperability with STE programs. Development and support of the core architecture and services to support the SVT and LTS use cases. -- TMT: continue with the development of the user interfaces that would enable Commanders and Leaders at the Company through Brigade echelons to Plan, Prepare, Execute and Assess (PPEA) training exercises/scenarios. Integrate new Authoritative Data Sources (ADS) and initiate development of intelligent tutoring system to simplify and streamline the PPEA process. Continue development of the enterprise management capability to enable equipment and software health monitoring, remote software patching, remote Risk Management Framework compliance audits. -- TSS: continue development of the STE core simulation/game engine. Initiate the development of the Cyber domain to support Multi-Domain Operations (MDO). -- Integration: Continue the integration of TSS, TMT, OWT, RVCT-Air, RVCT-Ground, RVCT-Soldier, Avionics Software Emulation (AvSE), Mission Command Information Systems (MCIS), and Live, Virtual, Constructive - Integration Architecture (LVC-IA) programs. Continues integration of LTS and SVT core services into the STE-SW core. -- Test/Evaluation: Conduct evaluation of the TSS/TMT Minimal Viable Products (MVPs) through technical assessments, Soldier Touch Points, test planning events, and Operational Assessments/Demonstration. -- Continue the implementation of the Development, Security, and Operations (DevSecOps) process and the Continuous Integration/Continuous Delivery (CI/CD) software production pipeline. Extend the DevSecOps environment to the other STE programs. -- Continue development and integration of AvSE with TSS/TMT software baseline to ensure that the RVCT-Air capability is concurrent with Aviation platform systems. -- Continue development and integration of Common Software Libraries (CSL) with the TSS/TMT software baseline to ensure that the RVCT-Ground capability is concurrent with Ground platform systems. -- Continue enhancing the TSS/TMT software baseline based on Soldier feedback collected at Soldier Touch Points, Operational Assessments/Demonstrations, and other test events. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Change from FY2024 to FY2025 reflects requirement title change from Engineering, Support, Test & Evaluation STE-IS to Engineering, Support, Test and Evaluation STE-SW. Decrease from $49.616 million to $37.955 million due to the scaling down of developmental efforts to enable Battalion to Brigade training capability.			
Accomplishments/Planned Programs Subtotals	107.209	49.616	37.955

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR2 / *STE Information Systems (TSS, TMT)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• NA2016: *STE INFO SYSTEMS (TSS/TMT)*	9.722	9.648	24.499	-	24.499	24.712	18.181	28.640	27.070	0.000	142.472

Remarks

Procurement dollars for Training Simulation Software/Training Management Tools (TSS/TMT) provides Interim Contractor Support to conduct software updates, modifications, Risk Management Framework (RMF) concurrency, Problem Troubleshoot Reports (PTRs), and help desk support for fielded TSS/TMT capability.

D. Acquisition Strategy

The Training Simulation Software/Training Management Tools (TSS/TMT) uses the Software Acquisition Pathway. To ensure speed and agility to deliver and modernize STE, a modular open systems architecture (MOSA) is also used to enable the Army to exploit rapid advancements in cutting-edge commercial technologies. Other acquisition elements such as testing, contracting, and technology transition will consider any and all means available to innovate and incorporate complementary support to add momentum in this approach.

The TSS/TMT requirements are codified in the Abbreviated Capabilities Development Document (A-CDD) version 2, approved 2 June 2020. TSS/TMT was one of five (5) Other Transaction Authority (OTAs) awarded in FY 2019 in support of the STE prototype initiatives which include: TSS/TMT, One World Terrain (OWT), Reconfigurable Virtual Collective Trainer (RVCT), Live Training Systems (market research only), and Soldier Virtual Trainer (SVT) Weapons Optimization (market research only). Prime(s) and Sub-vendors will execute the STE agreement(s) through an Agile development process with established success criteria and their Development, Security, and Operations (DevSecOps) processes. Vendors will continually include the Government and all stakeholders (Internal and external) in the Agile development process. This process will ensure all parties have transparency and early input into the modular design effort to support success of the product(s) being developed for the STE.

Lessons learned and revisions to the A-CDD, form the basis of the TSS/TMT OTA awarded in June 2021. The TSS/TMT OTA will continue development and evaluation iterative software releases through technical assessments, Soldier Touch Points, test planning events, and Operational Assessments/Demonstrations to provide a Squad (Sq) to Brigade (BDE) training capability, in addition to, providing Minimum Viable Capability Release (MVCR) in support of RVCT Soldier, Ground, Solider Dismounted and Air capability. This OTA will also continue to address Soldier feedback to provide a more robust Brigade and below collective training capability.

STE Increment 1 IOC implements TSS and TMT, two of the three foundational capabilities of the STE, which is planned for 4QFY2024, and is defined as the first fielding and acceptance of the capability at installations identified in accordance with the distribution plan. Increment 1 fielded STE systems will deliver software in support of RVCT Soldier, Ground and Air platforms and meet Risk Management Framework (RMF) requirements, and the ability to provide initial sustainment via Interim Contractor Support (ICS). TSS/TMT will continue to implement capability enhancement via follow-on STE Increments.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR2 / *STE Information Systems (TSS, TMT)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TSS/TMT Program Management	Various	PEO STRI : Orlando, FL	-	-		-		3.518	Oct 2024	-		3.518	0.000	3.518	-
		Subtotal	-	-		-		3.518		-		3.518	0.000	3.518	N/A

Remarks

TSS/TMT Program Management - FY2025 Base RDTE will provide program management, engineering and technical oversight, and travel for the TSS/TMT Program.

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TSS/TMT Prototype Development	Option/ FFP	Cole Engineering Services : Orlando, FL	89.272	93.163	Oct 2022	6.210	Oct 2023	-		-		-	Continuing	Continuing	Continuing
AvSE Development/ Integration	Various	CCDC AvMC/ PEO Aviation : Redstone Arsenal, AL	7.310	6.596	Jan 2023	-		6.700	Jan 2025	-		6.700	0.000	20.606	Continuing
TSS/TMT Prototype Development (OTA Extension)	Option/ FFP	Cole Engineering Services : Orlando, FL	-	3.471	Dec 2023	41.348	Oct 2023	25.906	Oct 2024	-		25.906	Continuing	Continuing	Continuing
		Subtotal	96.582	103.230		47.558		32.606		-		32.606	Continuing	Continuing	N/A

Remarks

FY2024/2025 BASE RDTE will exercise options on current prototype OTA to perform software improvement of Squad to Brigade Capability and continue development of the Intel, Sustainment, Cyber, and Protection Warfighting Functions.

TSS/TMT Development: FY2024 Base RDTE funding in the amount of $41.348 million supporting TSS/TMT Development was shifted to TSS/TMT Prototype Development (Amount - $40.158 million) and AvSE Development/Integration (Amount - $1.190 million); these revisions will be updated in next available cycle.

AVSE Development: Decrease in AvSE Development/Integration from FY2023 to FY2024 is due to scaling down efforts to ensure that the RVCT-Air capability is concurrent with Aviation platform systems. NOTE - FY2024 RDTE in amount of $1.190M will support effort for integration of Apache v6.0; this revision will be updated in the next available cycle. FY2025 Base RDTE funding continues integration efforts of Apache v6.0.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR2 / *STE Information Systems (TSS, TMT)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MVCR Update	Various	Multiple : Orlando, FL	1.163	2.479	Jan 2023	1.226	Jan 2024	0.982	Jul 2025	-		0.982	Continuing	Continuing	Continuing
TSS/TMT Test Support	Various	ATEC : Orlando, FL	0.437	1.500	Feb 2023	0.832	Nov 2023	0.849	Nov 2024	-		0.849	Continuing	Continuing	Continuing
		Subtotal	1.600	3.979		2.058		1.831		-		1.831	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	98.182	107.209		49.616		37.955		-		37.955	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR2 / *STE Information Systems (TSS, TMT)*

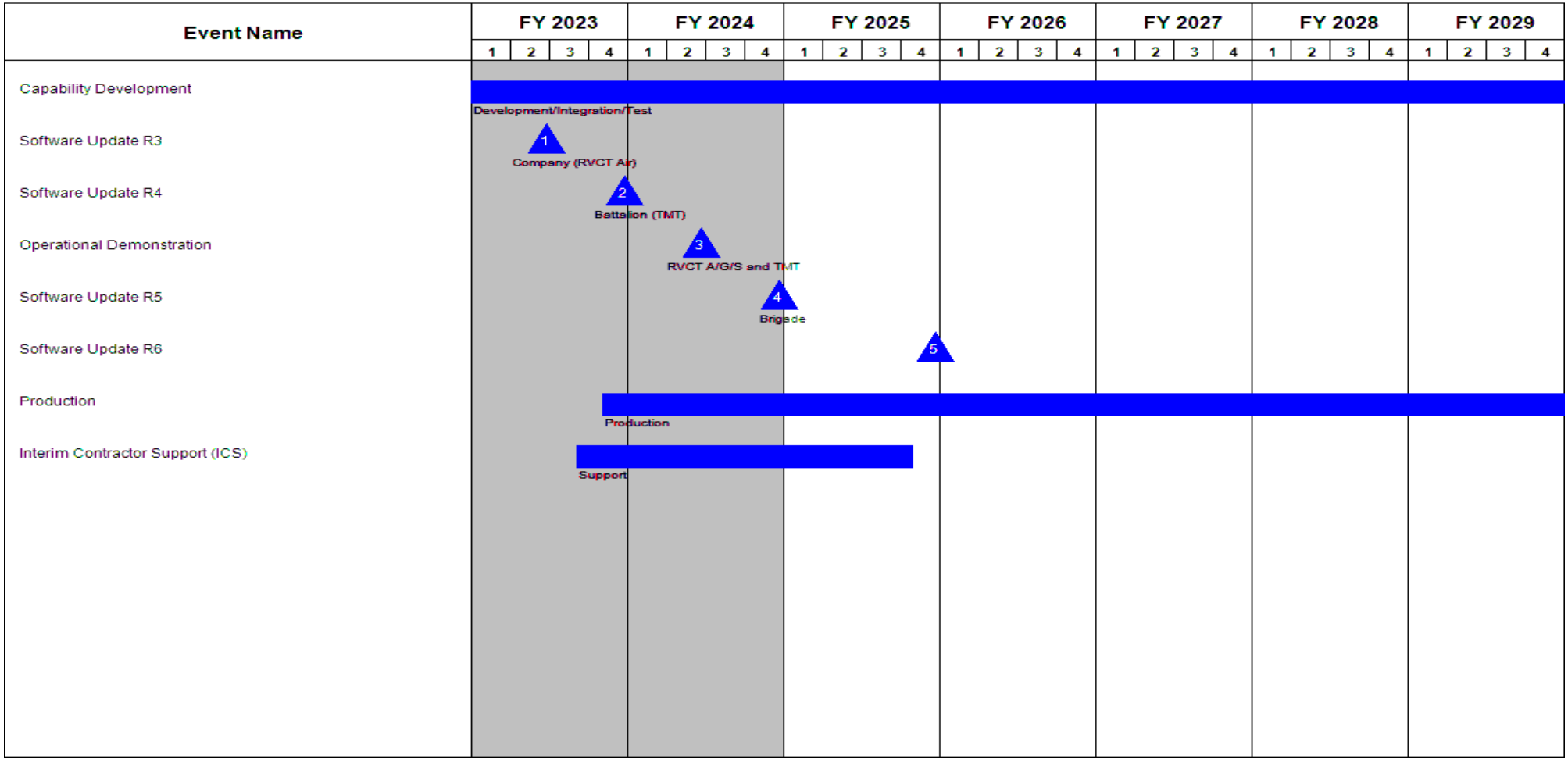

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR2 / *STE Information Systems (TSS, TMT)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Revised A-CDD (19 Jun 20)	3	2020	3	2020
Capability Development	3	2019	4	2030
MVCR	4	2021	4	2021
Software Update R1	2	2022	2	2022
Software Update R2	4	2022	4	2022
Software Update R3	2	2023	2	2023
Software Update R4	4	2023	4	2023
Operational Demonstration	2	2024	2	2024
Software Update R5	4	2024	4	2024
Software Update R6	4	2025	4	2025
Production	4	2023	4	2032
Interim Contractor Support (ICS)	3	2023	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army											Date: March 2024	
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*				Project (Number/Name) CR3 / *STE Live*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
CR3: *STE Live*	-	66.396	23.839	34.115	-	34.115	18.016	83.248	84.312	85.154	0.000	395.080
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Synthetic Training Environment (STE) Live program develops live training systems in concert with the Cross Functional Team STE initiatives. The STE Live program converges live training with the STE, providing units the necessary training components to accelerate and sustain combined arms maneuver proficiency in support of Multi-Domain Operations (MDO). The STE Live program focuses on the development of a next generation live training architecture that leverages innovative technologies and standards to enable the realistic exercise of unit combat weapons up to brigade level in Multi Domain Operation Environments. The challenge today is the Army cannot train as it fights since 40% of Brigade Combat Team (BCT) platforms weapons effects are currently not simulated by today's live training system, Multiple Integrated Laser Engagement System (MILES). STE Live next generation systems will replicate the following new engagement types, improve sensory feedback, increase realism of direct fire engagement, increase realism of battle damage assessments, improve after action reviews and improve instrumentation at the Combat Training Centers and Home Stations: Indirect Fire, Counter-Defilade (M320, MK-19), Place Object (Mines), Thrown Objects (Grenades), Dropped Objects (Bombs), Guided Weapon (Missiles), Autonomous Weapon (Missiles, Smart Munitions), Direct Energy (laser), Radiant Energy (Sonic, Microwave), Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Plumes and Cyber.

FY 2025 Base RDTE dollars in the amount of $34.115 million furthers development of STE Live prototype(s) to replicate the Tactical Engagement Simulation Systems (TESS) for multiple engagement scenarios (continue direct fire, guided missiles, and autonomous weapons). These systems will replace up to six systems reaching end of useful life and enhance Soldier capability and training value. FY 2025 funds will also continue to revolutionize Soldier Simulation and Training systems to include a Synthetic Training Environment for 12 engagement types: Direct Fire, Counter-Defilade Fire, Indirect Fire, Dropped Objects, Placed Objects, Thrown Objects, Guided Weapons, Autonomous Weapons, Cyber, Directed Energy, Radiant Energy, and Plume. The 5 instrumentation enablers are Calculations, Networks, Sensors, Terrains, and Transmitters.

The total cost of the STE Live (CR3) Middle Tier of Acquisition (MTA) effort is $360.9 million RDTE from FY2022 to FY2026.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Engineering, Support, Test & Evaluation for STE Live	26.396	23.839	34.115
Description: Direct engineering development, support and test of the STE Live program through awarded OTA vehicles.			
FY 2024 Plans: FY 2024 Base RDTE dollars in the amount of $23.839 million furthers development of STE Live prototype(s) to replicate the TESS for multiple engagement scenarios (direct fire, guided missiles, and autonomous weapons). These systems will eventually replace			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR3 / *STE Live*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
up to six systems reaching End of Useful life and enhance Soldier capability and training value. FY 2024 funds will continue to revolutionize TESS and the 5 instrumentation enablers (Calculations, Networks, Sensors, Terrains, and Transmitters). ***FY 2025 Plans:*** FY 2025 Base RDTE dollars in the amount of $34.115 million furthers development of STE Live Increment 2 fleet integration, hardening, Electromagnetic Interference/ Environmental testing, series on record tests to exit prototyping and enter production and fielding. Fleet include small arms, ground combat vehicles and some counter defilade weapons. This in addition to the development activities for increment 3 that will occur by the STRI Agile Acquisition Response (STAAR) team for autonomous weapon, directed energy and radiant energy. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase of $10.276M from FY 2024 to FY 2025 is to support the development activities for increment 3 that will occur by STAAR for autonomous weapon, directed energy and radiant energy.			
Accomplishments/Planned Programs Subtotals	26.396	23.839	34.115

	FY 2023	FY 2024
Congressional Add: Congressional Add: STE Live electronic bullet ***FY 2023 Accomplishments:*** FY 2023 Congressional Add RDTE dollars in the amount of $20.000 million furthered development of STE Live. $20.000 million provided for the development of the STE Live electronic bullet.	20.000	-
Congressional Add: Congressional Add: STE Live OTA acceleration ***FY 2023 Accomplishments:*** FY 2023 Congressional Add RDTE dollars in the amount of $20.000 million furthered development of STE Live. $20.000 million provided funding to accelerate development being completed under the STE Live Other Transaction Agreements (OTAs).	20.000	-
Congressional Adds Subtotals	40.000	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• NA2012: *STE LIVE TRAINING SYSTEM*	6.166	35.071	73.811	-	73.811	117.564	68.823	11.140	11.252	0.000	323.827

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR3 / *STE Live*

C. Other Program Funding Summary ($ in Millions)

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

Remarks

Procurement dollars for STE Live will procure Force on Force engagement types, updates to the live training infrastructure, and Contractor Logistics Support that will support the integration and fielding of STE Live capabilities to the Combat Training Centers.

D. Acquisition Strategy

To accelerate the live training modernization program, a STE Live Force on Force Modular Open System Approach compliant architecture will be developed starting with a 5G Player Unit Radio interface point and addressing training gaps for direct fire, indirect fire, placed objects, thrown objects, and counter-defilade force on force engagement systems to include modernized instrumentation enablers. STE Live will leverage innovative technologies in areas of integrated internet of things, intelligent sensors, augmented reality and haptics to realize these capabilities. STE Live will be acquired using rapid prototyping with objective to achieve production ready solutions within 2 to 3 years after award. STE Live Other Transaction Authority is pursuing Initial Operational Capability in FY 2026 and production of Full Operational Capability quantities in FY 2030.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR3 / *STE Live*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
STE Live Prototype Development	C/TBD	TBD : Various/ Various	-	-		23.839	Feb 2024	34.115	Feb 2025	-		34.115	0.000	57.954	-
STE Live Prototype Development	C/FFP	National Security Technology Accelerator : Various	-	19.472	Apr 2023	-		-		-		-	0.000	19.472	-
STE Live Prototype Development	C/FFP	Advanced Technology International : Various	-	3.969	Apr 2023	-		-		-		-	0.000	3.969	-
STE Live Electronic Bullet	C/FFP	National Security Technology Accelerator : Various/Various	-	3.196	Jul 2023	-		-		-		-	0.000	3.196	-
STE Live Electronic Bullet	C/FFP	Advanced Technology International : Various	-	16.376	Jul 2023	-		-		-		-	0.000	16.376	-
STE Live Electronic Bullet	C/FFP	Sustainable Systems Solutions LLC : Various	-	0.428	Jul 2023	-		-		-		-	0.000	0.428	-
STE Live OTA Acceleration	C/FFP	National Security Technology Accelerator : Various/Various	-	14.879	Jul 2023	-		-		-		-	0.000	14.879	-
STE Live OTA Acceleration	C/FFP	Advanced Technology International : Various	-	1.019	Jul 2023	-		-		-		-	0.000	1.019	-
STE Live OTA Acceleration	C/FFP	Riptide Software : Orlando, FL	-	0.100	Jul 2023	-		-		-		-	0.000	0.100	-
STE Live OTA Acceleration	C/FFP	General Dynamics Mission Systems Inc. : Orlando, FL	-	2.985	Jul 2023	-		-		-		-	0.000	2.985	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR3 / *STE Live*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
STE Live OTA Acceleration	C/FFP	Sustainable Systems Solutions LLC : Various	-	0.079	Jul 2023	-		-		-		-	0.000	0.079	-
		Subtotal	-	62.503		23.839		34.115		-		34.115	0.000	120.457	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
STE Live Integration	RO	DEVCOM : Orlando, FL	-	0.300	Apr 2023	-		-		-		-	0.000	0.300	-
STE Live Support	Various	Various : Orlando, FL	-	0.101	Aug 2023	-		-		-		-	0.000	0.101	-
STE Live OTA Acceleration	RO	ATEC : FORT HUACHUCA,AZ	-	0.883	Jul 2023	-		-		-		-	0.000	0.883	-
STE Live OTA Acceleration	RO	DEVCOM : Orlando, FL	-	0.055	Sep 2023	-		-		-		-	0.000	0.055	-
		Subtotal	-	1.339		-		-		-		-	0.000	1.339	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
STE Live Testbed	C/FFP	Sustainable Systems Solutions LLC : Various	-	2.554	Feb 2023	-		-		-		-	0.000	2.554	-
		Subtotal	-	2.554		-		-		-		-	0.000	2.554	N/A

	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	66.396		23.839		34.115		-		34.115	0.000	124.350	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR3 / *STE Live*	

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR3 / *STE Live*

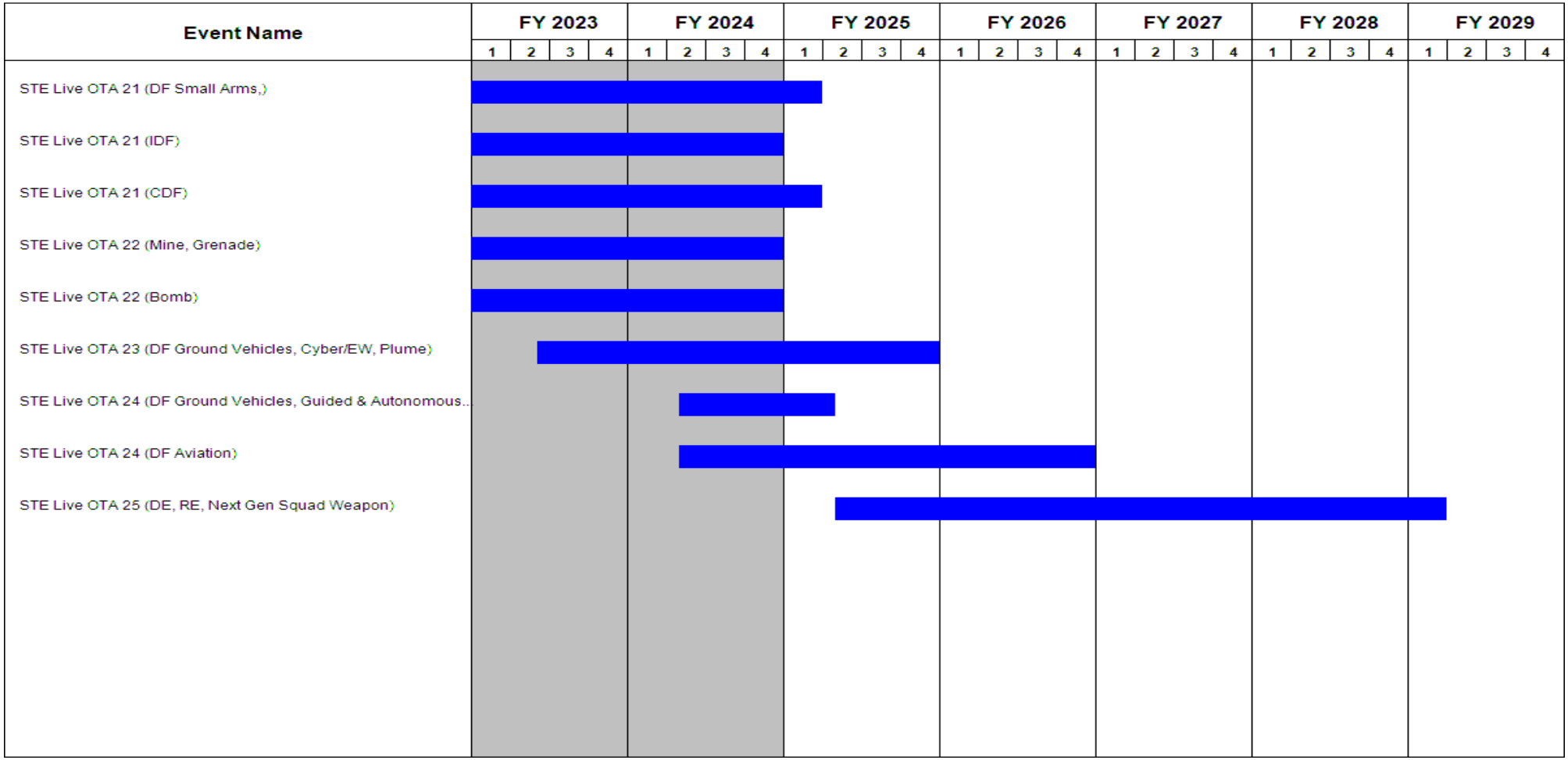

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR3 / *STE Live*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
STE Live OTA 21 (DF Small Arms,)	4	2021	1	2025
STE Live OTA 21 (IDF)	4	2021	4	2024
STE Live OTA 21 (CDF)	4	2021	1	2025
STE Live OTA 22 (Mine, Grenade)	3	2022	4	2024
STE Live OTA 22 (Bomb)	3	2022	4	2024
STE Live OTA 23 (DF Ground Vehicles, Cyber/EW, Plume)	2	2023	4	2025
STE Live OTA 24 (DF Ground Vehicles, Guided & Autonomous Munitions)	2	2024	2	2025
STE Live OTA 24 (DF Aviation)	2	2024	4	2026
STE Live OTA 25 (DE, RE, Next Gen Squad Weapon)	2	2025	1	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR4 / *STE One World Terrain (OWT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CR4: *STE One World Terrain (OWT)*	-	1.336	13.192	11.350	-	11.350	7.049	7.234	7.454	7.529	0.000	55.144
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

One World Terrain (OWT) is one of the Army's modernization efforts, and one of three core functions of the Synthetic Training Environment - Software (STE-SW). OWT provides a 3D global terrain capability and associated information services that support virtual replication of the physical Earth to reflect the complexities of the operational environment in support of Multi-Domain Operations (MDO) for use in training. OWT enables leaders, Soldiers, and units to train in simulated complex operational environments, such as dense urban, woodland, jungle, desert, and subterranean areas before the first fight begins.

OWT modernizes the Army's terrain generation capability by automatically processing raw geospatial data into a format that is editable and consumable by standard commercial tools and technologies. It provides the tools to incorporate approved geospatial information updates and local terrain surveys into the OWT foundational repository and will be used by the Synthetic Training Environment (STE) to represent the terrain in a virtual environment.

In FY 2021, OWT entered the Software Acquisition Pathway.

As part of the STE family of programs, OWT provides rapid and iterative delivery of its capabilities to the Training Support System/Training Management Tool (TSS/TMT) for integration into the STE-SW that supports the Reconfigurable Virtual Collective Trainer (RVCT) and future STE training systems.

FY 2025 Base RDTE dollars in the amount of $11.350 million for OWT will continue development of capabilities that automatically process geospatial data into simulation ready 3D terrain for training use; provide geospatial data and models that are editable by standard commercial tools and technologies; and incorporate approved geospatial data updates and user-generated terrain captures into the OWT repository. OWT Program Office costs transitioned from OMA to RDTE based on utilization of the Software Acquisition Pathway.

The OWT requirements are codified in the STE-SW abbreviated Capabilities Development Document (A-CDD) version 2, approved 2 June 2020.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Engineering, Support, Test & Evaluation for OWT	1.336	13.192	11.350
FY 2024 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR4 / *STE One World Terrain (OWT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Funding will support the further automation of OWT. Additionally, base funding will develop advanced capabilities to replicate complex environments such as urban terrain with dense infrastructure and power grids. Also, base funding will continue efforts to integrate OWT 3D terrain data into the Synthetic Training Environment (STE) family of programs. ***FY 2025 Plans:*** Funding will support the continued automation of OWT feature extraction and attribution as well as program management costs. In addition, OWT will begin to develop advanced capabilities that allow user-generated terrain captures to be incorporated into the OWT repository and standard commercial tools and technologies to be used for geospatial data editing. Also, base funding will continue efforts to improve OWT 3D terrain data integration into the Synthetic Training Environment (STE) family of programs. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease from FY2024 to FY2025 is due to scaling down the efforts to automate OWT capability and improve OWT 3D terrain data for integration into STE family of programs.			
Accomplishments/Planned Programs Subtotals	1.336	13.192	11.350

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The OWT requirements are codified in the STE-SW abbreviated Capabilities Development Document (A-CDD) version 2, approved 2 June 2020. OWT was one of five (5) Other Transaction Authorities (OTAs) awarded in FY 2019 in support of the STE prototype initiatives which included: STE-SW (Training Simulation Software/ Training Management Tool (TSS/TMT) and One World Terrain (OWT)), Reconfigurable Virtual Collective Trainer (RVCT), Live Training Systems (market research only), and Solider Virtual Trainer (SVT) weapons optimization (market research only). The Prime(s) and Sub-vendors execute the STE agreement(s) through Development, Security, and Operations (DevSecOps) processes. Vendors continually include the Government and stakeholders in the development process. This process ensures all stakeholders have early input into modular design efforts to support accelerated integration of STE family of programs.

In June 2021, OWT was designated as a software intensive program and entered the Software Acquisition Pathway as a component of the STE-SW Family of Programs.

OWT continues to develop prototype capabilities using the OTA awarded in FY2019 and conduct evaluations of the capability and terrain data products through technical assessments, Soldier Touch Points, test events, and Operational Assessments/Demonstrations held in concert with TSS/TMT. OWT products will be integrated with the TSS/TMT as the core information system for the STE Family of Programs.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR4 / *STE One World Terrain (OWT)*

OWT geospatial data delivered as part of the integrated STE-SW capability, will be in accordance with the STE distribution plan and will meet Information Assurance and Risk Management Framework requirements. Interim Contractor Support will align to support the STE fielding, anticipated to begin in 4QFY2024. OWT will continue to develop new capabilities, conduct minor updates, and refresh terrain data as needed via the OTA Extension until the Follow-on Production OTA and new Prototyping OTA are awarded in FY 2026.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR4 / *STE One World Terrain (OWT)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OWT Program Management	Various	PEO STRI : Orlando, FL	-	-		-		1.937	Oct 2024	-		1.937	0.000	1.937	-
		Subtotal	-	-		-		1.937		-		1.937	0.000	1.937	N/A

Remarks

OWT Program Management - FY2025 Base RDTE will provide program management, engineering and technical oversight, and travel for the OWT Program.

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OWT Capability Development	Option/ FFP	Maxar Technologies : Westminster, CO	25.870	1.336	Feb 2022	12.738	Dec 2023	8.945	Dec 2024	-		8.945	Continuing	Continuing	Continuing
		Subtotal	25.870	1.336		12.738		8.945		-		8.945	Continuing	Continuing	N/A

Remarks

OWT Capability Development: OWT awarded its OTA in June 2019. FY 2023-2025 Base RDTE funding will support the continuation of prototyping activities for the OWT OTA. The OWT OTA will be extended to continue development activities through 1QFY2026.

Note: VRICON was acquired by Maxar Technologies on 1 July 2020.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OWT Assessment	Various	Various : Orlando, FL	0.904	-		0.454	Mar 2024	0.468	Mar 2025	-		0.468	Continuing	Continuing	Continuing
		Subtotal	0.904	-		0.454		0.468		-		0.468	Continuing	Continuing	N/A

Remarks

OWT Assessment - Conducts the evaluation of OWT products through Soldier Touch Points, test events, and Operational Assessments in conjunction with TSS/TMT.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR4 / *STE One World Terrain (OWT)*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.774	1.336		13.192		11.350		-		11.350	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR4 / *STE One World Terrain (OWT)*

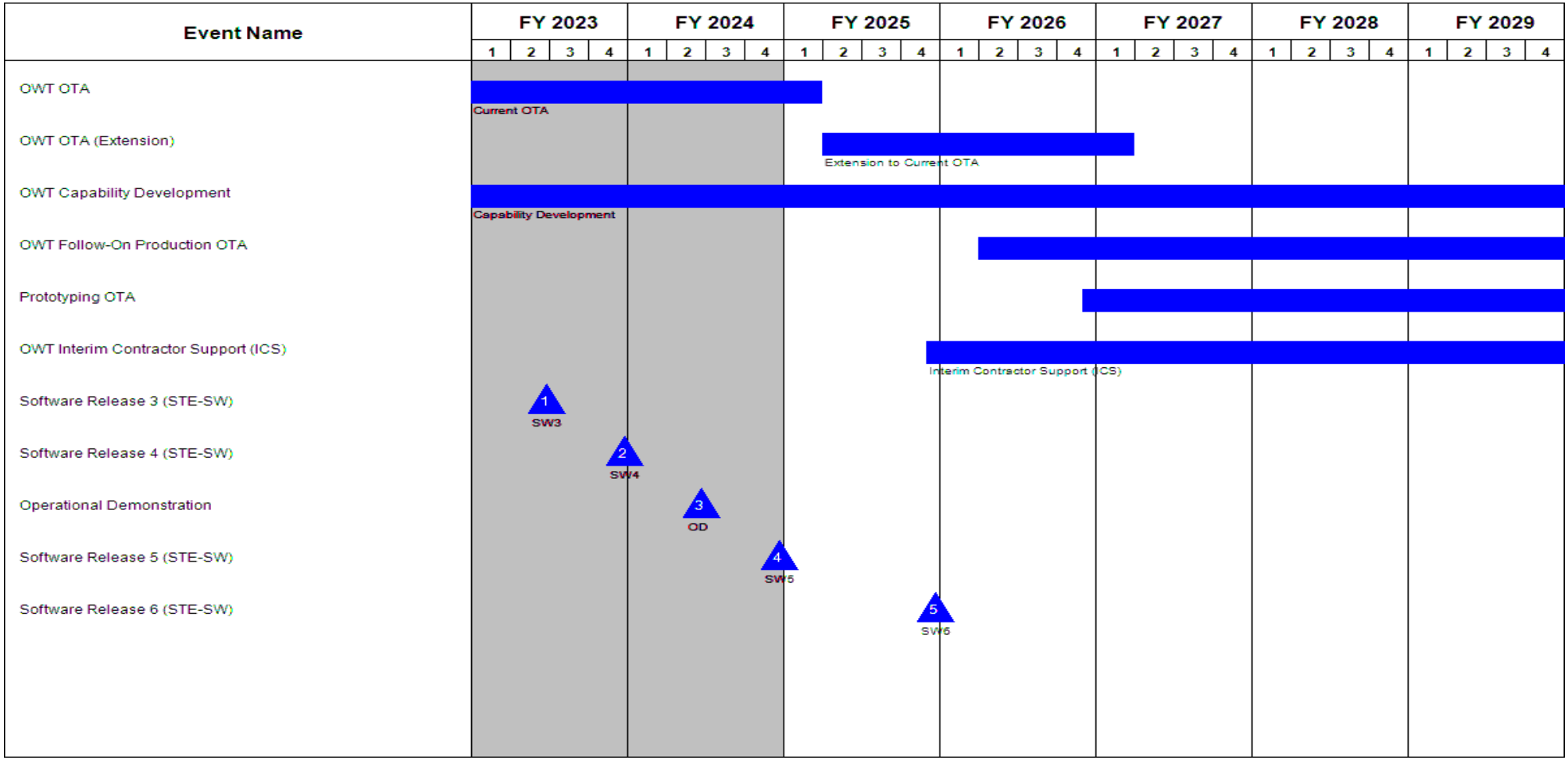

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR4 / *STE One World Terrain (OWT)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
OWT OTA	3	2019	1	2025
OWT OTA (Extension)	2	2025	1	2027
OWT Capability Development	3	2019	1	2032
OWT Follow-On Production OTA	2	2026	1	2032
Prototyping OTA	4	2026	1	2032
OWT Interim Contractor Support (ICS)	4	2025	1	2032
Software Release 3 (STE-SW)	2	2023	2	2023
Software Release 4 (STE-SW)	4	2023	4	2023
Operational Demonstration	2	2024	2	2024
Software Release 5 (STE-SW)	4	2024	4	2024
Software Release 6 (STE-SW)	4	2025	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR5 / *STE Reconfigurable Virtual Trainer (RVCT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CR5: *STE Reconfigurable Virtual Trainer (RVCT)*	-	19.970	15.282	7.434	-	7.434	6.070	4.643	8.420	10.306	0.000	72.125
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Synthetic Training Environment-Software (STE-SW) and Reconfigurable Virtual Collective Trainer (RVCT) requirements, which are codified in abbreviated Capabilities Development Documents (A-CDD) version 2 approved 2 June 2020, directly support the Army Collective Training Environment - Initial Capabilities Document (ACTE-ICD) as the Army's cornerstone for replicating the Operational Environment (OE) during training events enabling the Army to train as it fights. Separate, but interoperable, RVCT systems are required for both air and ground collective training. The Air RVCT will represent the U.S. Army, Army National Guard, and Army Reserves fleet of rotary wing aircraft. The Ground RVCT will represent ground track and wheeled vehicles from the U.S. Army and Army National Guard.

The Reconfigurable Virtual Collective Trainer (RVCT) is the Army's next generation Virtual Training System for conducting collective maneuver training, collective gunnery training, mission rehearsal, and pre-deployment training; that will prepare units for Multi-Domain Operations (MDO). The RVCT includes aviation platforms (RVCT-A), ground platforms (RVCT-G), and dismounted infantry devices. The RVCT is transportable to the Point of Need (PoN) allowing units to train anywhere in the world. The RVCT will be enabled using the STE-SW, which provides a fully interactive, real time simulated battlefield.

FY2025 Base RDTE dollars in the amount of $7.434 million for RVCT is to continue iterative development on the RVCT configuration kits, complete integration lab assets, and develop future configuration kits based on Soldier feedback emerging from the FY 2023 Soldier Touch Points (STPs) and an Operational Demonstration (OD) at Fort Cavazos, Texas.

The total cost of the STE RVCT (CR5) MTA effort is $119.1 million RDT&E from FY 2020 to FY 2024. The remainder of STE RVCT is fully funded across the Future Years Defense Program.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Engineering, Support, Test & Evaluation for RVCT	19.970	15.282	7.434
Description: Direct engineering development, support and test of the Reconfigurable Virtual Collective Trainer (RVCT) program through awarded OTA vehicles.			
FY 2024 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR5 / *STE Reconfigurable Virtual Trainer (RVCT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
FY2024 Base RDTE dollars in the amount of $15.282 million for RVCT is to continue iterative development on the RVCT configuration kits, complete integration lab asses, and develop future configuration kits based on Soldier feedback emerging from FY 2023 STPs and the OD at Fort Hood, Texas. ***FY 2025 Plans:*** FY2025 Base RDTE dollars in the amount of $7.434 million for RVCT is to continue development on RVCT future variant kits and complete integration lab assets. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease of $7.848 million from FY 2024 to FY 2025 is due to the completion of Phase 1 RVCT First Article (FA) and Phase 2 GEN2 prototypes.			
Accomplishments/Planned Programs Subtotals	19.970	15.282	7.434

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• NA2014: *STE-RVCT*	170.652	180.186	96.075	-	96.075	140.710	129.721	133.297	132.803	0.000	983.444

Remarks

Procurement dollars for RVCT will procure STE RVCT devices and Interim Contractor Support to fielded locations.

D. Acquisition Strategy

The United States Army has identified requirements for a training capability that provides a Synthetic Training Environment (STE), which includes immersive air and ground Reconfigurable Virtual Collective Trainers (RVCT), and a semi-immersive training capability for dismounted soldiers. The RVCT contributes significantly to the mitigation of four critical capability gaps identified in the Army's Capabilities Needs Analysis (CNA). As part of the STE Systems of Systems (SoS), the RVCT effort will deliver adaptable, low-overhead, software agnostic, training simulators that enable collective combined arms training in a realistic training environment that is a high-fidelity representation of current and future complex operational environments.

This STE simplified acquisition management plan for a Rapid Fielding (RF) decision occurred 2QFY2023. A Rapid Fielding production contract was awarded 3QFY2023. The First Unit Equipped (FUE) is projected for 4QFY2024. The 2QFY2023 Middle Tier Acquisition-Rapid Fielding (MTA-RF) decision date was driven by several contributing factors; the aging legacy Training Aids Devices Simulators, and Simulations (TADSS), the widening of their respective concurrency gaps, and advanced technology developments in the field of Modeling & Simulation (M&S), that now allow the US Army to realize a level of training realism that is not possible with the current generation of legacy TADSS.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR5 / *STE Reconfigurable Virtual Trainer (RVCT)*

RVCT executed a Middle Tier Acquisition-Rapid Prototyping (MTA-RP) as of 29 November 2021 in accordance with DoDi 5000.80, "Operation of Middle Tier of Acquisition (MTA), dtd 30 December 2019. Program Executive Officer for Simulation, Training, and Simulation (PEO STRI) is the Milestone Decision Authority for the approved MTA-RP. The MDA for the MTA-RF is the ASA (ALT) Acquisition Executive.

The Phase 1 RVCT First Article (FA) prototyping phase conducted an iterative discovery and development process that included close collaboration between Soldier stakeholders, customers, industry, and the development engineering community. The RVCT FA prototyping phase provided users with multiple feedback points, using pre-planned Synthetic Training Environment-Software (STE-SW) Minimum Viable Product (MVP) software capability drops to facilitate Soldier Centric Design principles. Throughout the FA prototyping phase, the RVCT PMO prioritized requirements as a trade-off for delivery, affordability, and risk reduction.

The RVCT Phase 2 produced prototype GEN2 RVCT A/G systems for use at Fort Cavazos, Texas to support the OA in FY 2022, continued development of the STE-SW, and follow on STPs and the OD in FY2024.

The OA of the RVCT GEN2 prototypes were conducted 4QFY2022 at Fort Cavazos, Texas, and STP3 was conducted in 2QFY2023, also at Fort Cavazos, Texas. The OA helped senior leaders determine whether the RVCT systems were operationally effective, suitable, survivable, and safe for intended use to support a 2QFY2023 RVCT entry into MTA-RF. The RVCT OA was conducted on production representative RVCT hardware running the STE-SW Minimum Viable Capability Release (MVCR) Company level software capability.

Current cost estimates are in line with a procurement funding request for a rapid fielding OTA production decision with a $500M ceiling. Production of RVCT began 4QFY23.
The MTA-RF production decision occurred when the Acquisition Decision Memorandum (ADM) was signed 21 MAR 2023. The rapid fielding production contract was awarded 3QFY23; and the Operational Demonstration is scheduled for 2QFY2024.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR5 / *STE Reconfigurable Virtual Trainer (RVCT)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Reconfigurable Virtual Collective Trainers	C/FP	Cole Engineering Services, Inc : Orlando, FL	24.296	5.341	Oct 2022	-		-		-		-	Continuing	Continuing	Continuing
Reconfigurable Virtual Collective Trainers	C/FP	Cole Engineering Services, Inc : Orlando	-	14.228	Apr 2023	15.282	Apr 2024	7.434	Apr 2025	-		7.434	0.000	36.944	-
		Subtotal	24.296	19.569		15.282		7.434		-		7.434	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Environmental Testing	MIPR	Aberdeen Test Center : Aberdeen MD	-	0.401	Mar 2023	-		-		-		-	0.000	0.401	-
		Subtotal	-	0.401		-		-		-		-	0.000	0.401	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.296	19.970		15.282		7.434		-		7.434	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR5 / *STE Reconfigurable Virtual Trainer (RVCT)*

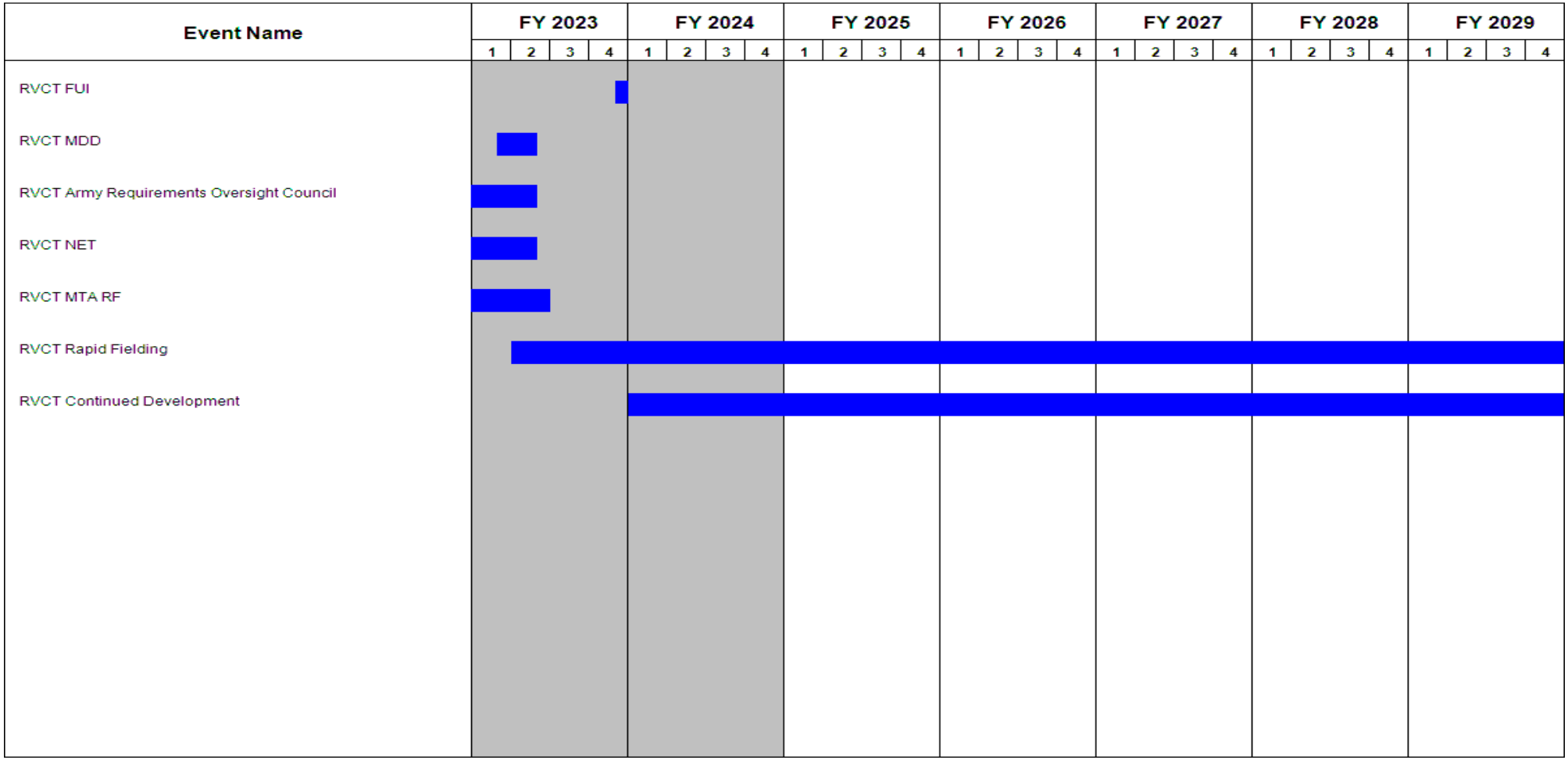

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR5 / *STE Reconfigurable Virtual Trainer (RVCT)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
RVCT PH2, Complete Prototypes	3	2021	4	2022
RVCT FUI	4	2023	4	2023
RVCT MDD	1	2022	2	2023
RVCT Army Requirements Oversight Council	4	2022	2	2023
RVCT NET	4	2022	2	2023
RVCT OA	4	2022	4	2022
RVCT MTA RF	4	2022	2	2023
RVCT Rapid Fielding	2	2023	4	2029
RVCT Continued Development	1	2024	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR6 / *STE Squad Immersive Virtual Trainer (SiVT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CR6: *STE Squad Immersive Virtual Trainer (SiVT)*	-	36.130	-	18.889	-	18.889	-	-	-	-	0.000	55.019
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Squad Immersive Virtual Trainer (SiVT) is the immersive training capability delivered as part of the Integrated Visual Augmentation System (IVAS) for the close combat squads that enables IVAS to be a Fight, Rehearse, and Train platform. IVAS/SiVT provide a single platform for Soldiers/Marines to Fight, Rehearse, and Train with day and night capability, providing increased lethality, mobility, and situational awareness necessary to achieve overmatch against current and future adversaries. SiVT provides a readiness tool for Squad Lethality and Human Performance assessment and a Synthetic Training Environment (STE) tool enabling on-demand squad training. SiVT provides the "Rehearse and Train" capability to the IVAS platform's "Fight, Rehearse, and Train" concept.

FY2025 BASE RDTE funding in the amount of $18.889 million will continue technology insertion into the SiVT system, including technologies that improve outdoor capability, increase the reliability and connectivity of the systems. Other efforts include alternative drop-in kit prototypes, additional drop-in kits to support future Next Generation Squad Weapon variants, SiVT reduction and improvements in Size, Weight, and Power (SWaP), One World Terrain accessibility and integration, and tactical cloud package development and integration. Funding will continue technology insertions and testing that improve the SiVTs ability to support Close Combat Force (CCF) training on Battle Drills 1-11 in both indoor and outdoor settings, mirroring IVAS capabilities.

Basis of Estimate: Developmental costs associated with vendor engineering, cyber hardening and logistical support personnel. Internal Army Enablement Testing (AETs) from Sprint Exit Builds (SEB) and Informal/Formal User Assessments/User Juries/Soldier Touch Points are required to ensure a path to Operational Test and Evaluation (OT&E) and First Unit Issued and First Unit Equipped.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Engineering, Support, Test & Evaluation for SiVT	-	-	18.889
FY 2025 Plans: Funding will be used to continue technology insertion into the SiVT system, including technologies that improve outdoor Battle Drill capability. Other efforts include additional weapon trackers and weapon drop in kits to support future Next Generation Squad Weapon variants, SiVT reductions and improvements in Size, Weight, and Power (SWaP), One World Terrain (OWT) data accessibility and tactical cloud package development and integration.			
FY 2024 to FY 2025 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR6 / *STE Squad Immersive Virtual Trainer (SiVT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
FY2025 funding increase to reinitiate continued efforts of technology insertion into the SiVT system and testing that improve the SiVTs ability to support Close Combat Force (CCF) training on Battle Drills 1-11 in both indoor and outdoor settings, mirroring IVAS capabilities.			
Accomplishments/Planned Programs Subtotals	-	-	18.889

	FY 2023	FY 2024
Congressional Add: Congressional Add: Engineering, Support, Test & Evaluation for SiVT	36.130	-
FY 2023 Accomplishments: Funding will be used for incremental technology insertion into the SiVT system, including technologies that improve outdoor capability. Other efforts include additional weapon trackers and weapon drop in kits to support future Next Generation Squad Weapon variants, SiVT reductions and improvements in Size, Weight, and Power (SWaP), and tactical cloud package development and integration.		
Congressional Adds Subtotals	36.130	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• NA2211: *STE SIVT (IVAS TRAINER)*	-	-	-	-	-	-	-	-	-		

Remarks

D. Acquisition Strategy

Integrated Visual Augmentation System (IVAS) prototype OTA was awarded November 2018 to provide Soldiers the Fight, Rehearse, and Train capability to the close combat Soldiers. The SiVT capabilities developed during the prototype effort were assessed through Soldier Touch Points and feedback in support of the follow-on production efforts. The Synthetic Training Environment Cross Functional Team (CFT) and the Program Executive Office (PEO) for Simulation, Training and Instrumentation worked with Soldier Lethality CFT and PEO Soldier to leverage their production OTA contract and awarded a modification in 4th QTR FY2022 that aligned SiVT with the IVAS fielding schedule. The Production and Fielding OTA is a five-year effort fielding to all active and reserve component close combat force (CCF) units. IVAS / SiVT awarded IVAS 1.2, Phase II modification in 4QFY23 to provide SiVT software and Authority to Operate, avatar behaviors upgrades, user experience improvements and bug fixes. Technical Insertions will incrementally improve capabilities over the life of the program. SiVT continues to work with Microsoft to develop and implement production improvements to the base system through Post Deployment Software Support (PDSS).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR6 / *STE Squad Immersive Virtual Trainer (SiVT)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Congressional Add: SiVT Development	Option/ FP	Microsoft Corporation : Redmond, WA	-	36.130	Aug 2023	-		-		-		-	0.000	36.130	-
SiVT Development	Option/ FFP	Microsoft Corporation : Redmond, WA	4.817	-		-		18.889	Jun 2025	-		18.889	0.000	23.706	-
		Subtotal	4.817	36.130		-		18.889		-		18.889	0.000	59.836	N/A

Remarks

SiVT Development (Congressional Add)- SiVT awarded Phase 1 technology insertion efforts as part of the production OTA with Microsoft on Dec 2022. FY 2023 Base RDTE efforts continued technology insertion efforts to achieve outdoor capability.

SiVT Development - FY 2025 Base RDTE efforts will continue technology insertion efforts to improve the outdoor capability and increase the reliability and connectivity of the systems.

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	4.817	36.130		-		18.889		-		18.889	0.000	59.836	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR6 / *STE Squad Immersive Virtual Trainer (SiVT)*

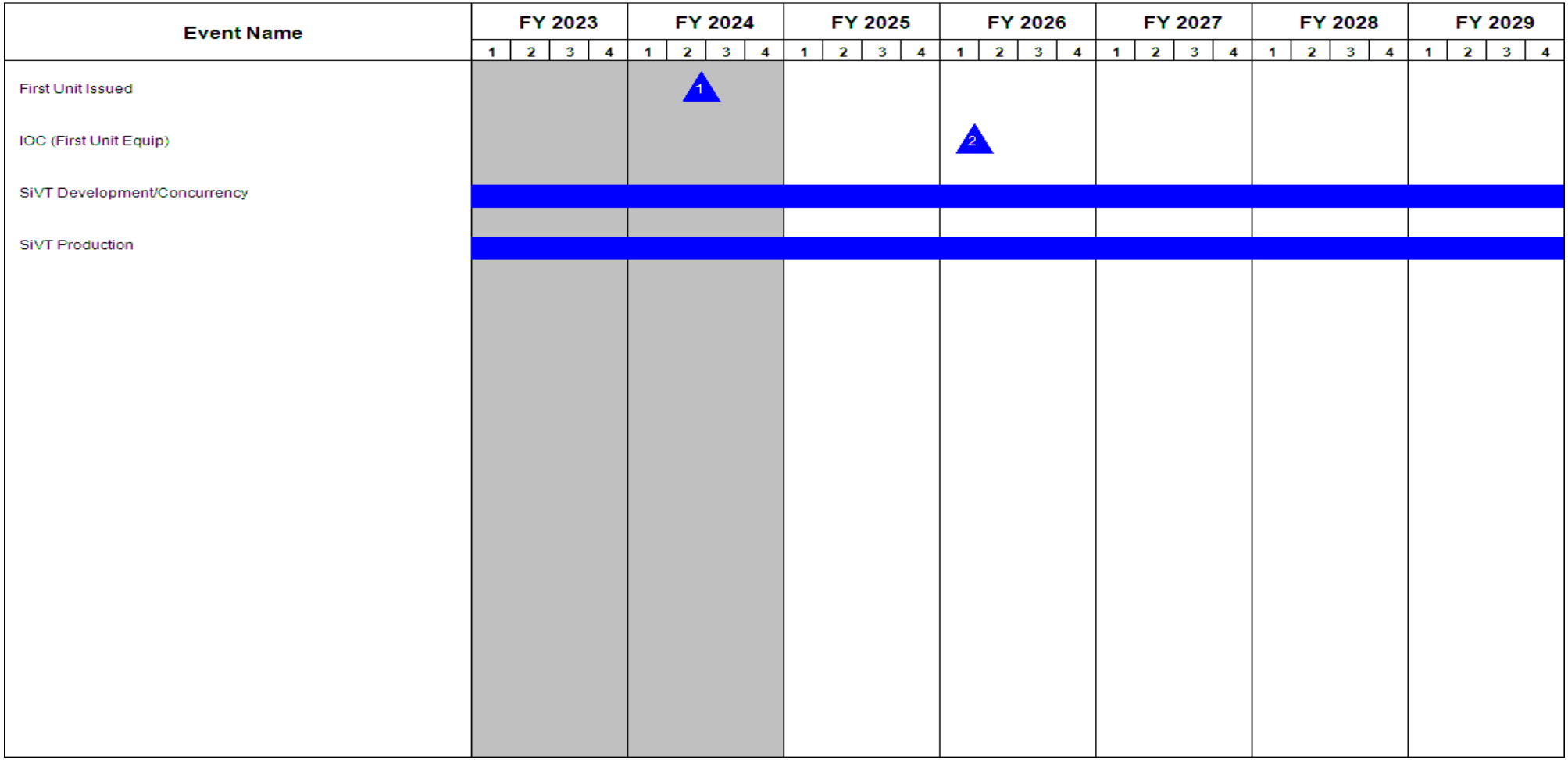

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR6 / *STE Squad Immersive Virtual Trainer (SiVT)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SiVT Proptotype Development	1	2019	4	2021
First Unit Issued	2	2024	2	2024
IOC (First Unit Equip)	1	2026	1	2026
SiVT Development/Concurrency	4	2021	4	2029
SiVT Production	2	2022	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR7 / *STE Soldier Virtual Trainer (SVT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
CR7: *STE Soldier Virtual Trainer (SVT)*	-	5.355	7.785	26.286	-	26.286	19.631	-	-	-	0.000	59.057
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Soldier Virtual Trainer (SVT) is enabled by the Synthetic Training Environment (STE) and is a virtual immersive trainer that combines and integrates several individual Soldier training capabilities: Weapon Skills Development (WSD), Joint Fires Training (JFT), and Use of Force (UoF). (1) WSD provides immersive capability to meet individual/crew weapons training in support of Army integrated weapon training strategies. (2) JFT provides certification and qualification of Joint Fires Observers (JFO). This includes the training of types II and III close air support according to the JFO Memorandums of Agreement. (3) UoF training enables Soldiers to replicate current Non-Lethal (NL) devices, munitions that demand the user to determine the appropriate level of force, select the correct device, and comply with doctrine, legal policy, and guidance for NL device employment. SVT will take a phased acquisition approach in developing the three capabilities beginning with WSD, JFT, and UoF respectively. SVT's acquisition strategy implementation and award will reduce impact of replacing currently fielded sustained Program of Records (Engagement Skills Trainer II (EST II) and Call for Fire Trainer III (CFFT III)). EST and CFFT PoRs are currently in sustainment awaiting to be replaced by SVT.

FY 2025 Base RDTE dollars in the amount of $26.286 million for SVT furthers the development of prototype designs for SVT Core Integration, WSD - Increment 2, JFT, and UoF capabilities. The prototype designs will inform requirements, technology readiness level maturity, design of the SVT capabilities, and level of effort to integrate with STE Software.

The total cost of the SVT (CR7) Middle Tier of Acquisition effort is $108.8 million from FY2022 to FY2027, including RDT&E ($101.6M) and Procurement ($7.2M) of prototype units.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Engineering, Support, Test & Evaluation for SVT	5.355	7.785	26.286
Description: Direct engineering development, support and test of the Soldier Virtual Trainer (SVT) program through awarded OTA vehicles.			
FY 2024 Plans: FY 2024 Base RDTE dollars in the amount of $7.785 million for SVT furthers the development of prototype designs for SVT Core Integration, WSD-Increment 2, JFT, and UoF capabilities. The prototype designs will inform requirements, technology readiness level maturity, design of the SVT capabilities, and level of effort to integrate with the common synthetic environment.			
FY 2025 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR7 / *STE Soldier Virtual Trainer (SVT)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
FY 2025 Base RDTE dollars in the amount of $26.286 million for SVT furthers the development of prototype designs for SVT Core Integration, WSD -Increment 2, JFT, and UoF capabilities. The prototype designs will inform requirements, technology readiness level maturity, design of the SVT capabilities, and level of effort to integrate with STE software. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase of $18.501 million from FY 2024 to FY 2025 is to support development of phase 3 WSD- Increment 2, JFT and UoF capabilities.			
Accomplishments/Planned Programs Subtotals	5.355	7.785	26.286

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• NA2013: *STE-SOLDIER VIRTUAL TRAINER*	-	10.060	23.798	-	23.798	43.128	78.220	77.480	78.265	0.000	310.951

Remarks

Procurement dollars for SVT will procure STE SVT initial Weapon Skills Development (WSD) capabilities for Increment 1.

D. Acquisition Strategy

The SVT uses the Synthetic Training Environment (STE) modular open systems architecture via virtual interface and hardware standards. SVT optimizes training delivery through the employment of a combination of Operational Environment (OE) mixed reality visualization and Natural User Interface (NUI) technologies to maximize efficiencies for the integration of system capabilities. The SVT system design combines and integrates several individual Soldier and squad training capabilities, Weapon Skill Development (WSD), Joint Fires Training (JFT), and Use of Force (UoF), into a single capability that can be conducted simultaneously or individually and enable physical movement/exertion related to the execution of a Soldier individual and squad collective training tasks. The system is required to be person transportable and deployable worldwide. It delivers training at the Point of Need (PoN) supporting Army-wide formations such as artillery, Military Police, and units for weapons skills development.

SVT entered the Middle Tier Acquisition Rapid Prototyping Pathway in 3QFY2022 and awarded two vendor OTAs in support of the development prototype design for the SVT Core and WSD Increment 1. In May 2023 SVT down selected to a single vendor and awarded the follow-on phase of SVT Core and WSD Increment 1 to continue prototype development and integrate STE Software. Multiple test events including Soldier Touch Points, and Operational Demonstrations will be conducted during the development phase to endure Warfighter feedback is incorporated and facilitate acceptance in support of FY 2025 IOC. SVT will take a phased acquisition approach in developing the three capabilities: WSD, JFT, and UoF. SVT OTA option award(s) for WSD Increment 2, JFT, and UoF are projected for 2QFY2024.

The SVT OTA's Prime(s) and Sub-vendors will execute the STE agreement(s) through an Agile development process with established success criteria and their DevSecOps processes and develop prototypes to prove out the three SVT capabilities: WSD, UoF, and JFT. SVT vendors will continually include the Government and

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR7 / *STE Soldier Virtual Trainer (SVT)*

all stakeholders (Internal and external) in the SVT Hardware prototype development and the STE-SW Agile development integration process. This process will ensure all parties have transparency and early input into the modular design effort in order to support success of the product(s) being developed for the SVT and interacting with the STE-SW. Other acquisition elements such as testing, contracting, and technology transition will consider any and all means available to innovate and incorporate complementary support to add momentum in this approach.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	Project (Number/Name) CR7 / *STE Soldier Virtual Trainer (SVT)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Virtual Trainer (SVT) Development	C/FFP	CAE Inc : Orlando, FL	10.876	5.355	Jun 2023	7.785	Mar 2024	26.286	Dec 2024	-		26.286	Continuing	Continuing	Continuing
		Subtotal	10.876	5.355		7.785		26.286		-		26.286	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	10.876	5.355		7.785		26.286		-		26.286	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR7 / *STE Soldier Virtual Trainer (SVT)*

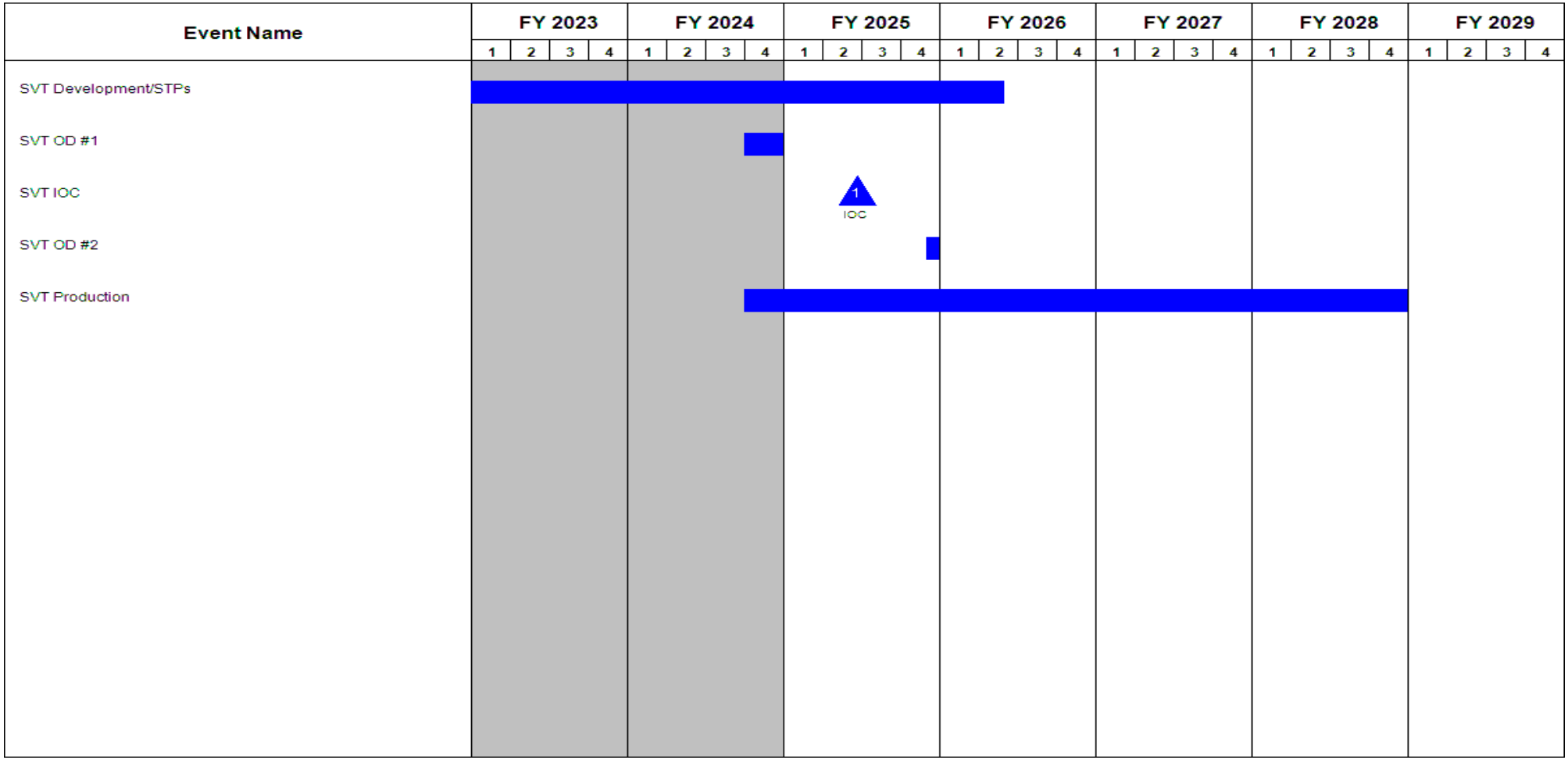

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0604121A / *Synthetic Training Environment Refinement & Prototyping*	**Project (Number/Name)** CR7 / *STE Soldier Virtual Trainer (SVT)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SVT Development/STPs	3	2022	2	2026
SVT OD #1	4	2024	4	2024
SVT IOC	2	2025	2	2025
SVT OD #2	4	2025	4	2025
SVT Production	4	2024	4	2028