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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	208.650	74.250	81.514	59.511	5.796	65.307	55.509	60.550	61.786	62.891	Continuing	Continuing
D476: <i>Military Information Support Operations</i>	42.130	10.693	5.750	5.459	-	5.459	3.204	3.282	3.363	3.473	Continuing	Continuing
S375: <i>Weapons Systems</i>	4.829	1.212	1.625	1.604	-	1.604	1.529	1.561	1.597	1.629	Continuing	Continuing
S385: <i>Soldier Protection and Survival Systems</i>	19.633	11.342	13.947	4.816	5.796	10.612	12.527	13.119	13.225	13.317	Continuing	Continuing
S385A: <i>Body Armor and Associated Equipment</i>	7.572	1.006	1.752	1.738	-	1.738	1.694	1.729	1.770	1.805	Continuing	Continuing
S395: <i>Visual Augmentation, Lasers and Sensor Systems</i>	12.323	1.054	3.212	2.171	-	2.171	2.097	2.132	2.174	2.218	Continuing	Continuing
S700: <i>Communications Equipment and Electronics Systems</i>	30.937	13.340	17.359	26.435	-	26.435	21.709	21.250	21.720	22.154	Continuing	Continuing
S710: <i>Tactical Systems Development</i>	3.700	4.073	2.813	3.344	-	3.344	3.103	3.169	3.242	3.305	Continuing	Continuing
S725: <i>Tactical Radio Systems</i>	26.008	4.479	11.315	7.940	-	7.940	2.570	2.631	2.699	2.753	Continuing	Continuing
S800: <i>Munitions Advanced Development</i>	61.518	27.051	23.741	6.004	-	6.004	7.076	11.677	11.996	12.237	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for development, rapid prototyping, testing, and integration of specialized equipment in the areas of automation, communication, radio, weapon, soldier protection and survival, visual augmentation, lasers and sensors, munition and Military Information Support Operations (MISO) systems. Warrior Systems specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Special Operation Forces (SOF) must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success. The efforts within this Program Element (PE) improve SOF warfighting capabilities by continuing efforts to develop smaller, lighter, more efficient and more robust capabilities. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability while, generally, being conducted in harsh environments for unspecified periods and in locations requiring small unit autonomy. Communications efforts will maintain a Command, Control, and Communications (C3) link between SOF Commanders and SOF Teams, and provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies and allied foreign forces. Efforts relating to soldier

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protection and survival requirements will improve survivability and mobility of SOF while conducting varied missions. Counter Unmanned Aerial Systems (C-UAS) efforts rely on cutting edge detection sensors, both passive and active, paired with kinetic and non-kinetic defeat systems will allow SOF Operators to conduct Special Forces missions in denied and hostile environments worldwide. Specialized visual augmentation, lasers and sensors will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Munition efforts include advanced engineering operational system development and qualification efforts related to SOF-peculiar munitions and equipment. Precision Strike Systems (PSS) will develop a SOF organic strike mission package to surgically strike an agile and mobile enemy, protect own forces, and minimize collateral damage. Additionally, MISO efforts include planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups and individuals. These technologies will be pursued via rapid prototyping efforts when appropriate. This R-1 PE received Overseas Contingency Operations (OCO) funding in FY 2019 and FY 2020. FY 2021 funding includes OCO funding for Enduring Requirements (\$5.796 million).

MISO:
This project provides for the development, test and integration of MISO equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct the seven phase MISO process (planning, targeting audience analysis, series development, product development and design, approval, production/distribution/dissemination, and measures of effectiveness) in support of combatant commanders.

Weapons Systems:
This project provides for next generation system development and Pre-Planned Product Improvements (P3I), testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of SOF. Efforts include muzzle brakes and suppressors, and P3I for assault, sniper, and crew served weapons leveraging the latest technological advances to achieve overmatch capability against emerging threats.

Soldier Protection and Survival Systems:
This project funds development, testing, integration, rapid prototyping and evaluation of specialized equipment to meet the unique soldier protection and survival requirements of Special Operations Forces (SOF), to include, but not limited to, individual survival equipment, hearing protection, clothing systems, load bearing equipment, Counter Radio Controlled Improvised Explosive Device (RC-IED) systems, Counter Unmanned Systems (aerial, ground and maritime), and personnel safety equipment to improve the mobility of SOF, while conducting varied missions. These missions are generally conducted in harsh and hostile environments, for unspecified periods and in locations requiring small unit autonomy.

Body Armor and Associated Equipment:
This project provides specialized equipment with ballistic protection to meet the unique soldier protection and survival requirements of SOF. Specialized ballistic equipment improves survivability and load bearing equipment impacting the mobility of SOF while conducting varied missions. This project enhances the SOF Personal Equipment Advanced Requirements program by providing for the research, development, and testing of body armor plates, soft armor, helmets, eye protection, and other personal protective equipment to meet current ballistic threats that exist on the battlefield.

Visual Augmentation, Lasers and Sensor Systems:

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This project provides for development, testing, and integration of specialized visual augmentation, laser and sensor systems equipment to meet the unique requirements of SOF and facilitate future Hyper-Enabled Operator capabilities. Programs in this area include binocular/monocular devices; next generation laser designation and geo-location systems; weapon aiming lasers, scopes and accessories; and training and simulation systems.

Communications Equipment and Electronics Systems:

This project provides for communication systems to meet emergent requirements to support SOF. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. SOF Communications Equipment and Electronics is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.

Tactical Systems Development:

This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of SOF. Tactical systems provide forward deployed forces with advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and Command and Control (C2) of forces.

Tactical Radio Systems:

This project is for the development of all SOF tactical radio programs. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility. United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Tactical Radio Systems continue to provide SOF with the required capabilities throughout the 21st century. SOF Tactical Radios provide the critical C3 link between SOF Commanders and SOF Teams involved in operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied/coalition forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed C2 communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

Munitions Advanced Development:

This project provides for the advanced engineering, operational system development, and qualification efforts related to SOF-peculiar and Foreign/Non-standard munitions and equipment. Funding supports development of Insensitive Munitions (IM) technology and evaluation, in accordance with statutory requirement set forth in U.S. Code, Title 10, Chapter 141, Section 2389 (December 2001). Testing is in accordance with the USSOCOM IM Strategic Plan. Funding also supports efforts to develop and improve Precision Strike Systems (PSS) and Stand-Off Precision Guided Munitions (SOPGM), including the development and integration of improved warheads, seekers, guidance navigation and control systems, operational flight software, and missile delivery on to SOF platforms. When appropriate, these technologies will be pursued via rapid prototyping to develop, demonstrate and evaluate residual operational capabilities.

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B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	74.582	68.332	55.337	0.000	55.337
Current President's Budget	74.250	81.514	59.511	5.796	65.307
Total Adjustments	-0.332	13.182	4.174	5.796	9.970
• Congressional General Reductions	-	-3.818			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	17.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.942	-			
• SBIR/STTR Transfer	-2.274	-			
• Other Adjustments	-	-	4.174	5.796	9.970

Congressional Add Details (\$ in Millions, and Includes General Reductions)

	FY 2019	FY 2020
Project: D476: <i>Military Information Support Operations</i>		
Congressional Add: <i>Next Generation Loud Speakers (NGLS)</i>	5.760	4.000
Congressional Add Subtotals for Project: D476	5.760	4.000
Project: S385: <i>Soldier Protection and Survival Systems</i>		
Congressional Add: <i>Rotary Wing Aviation Helmet</i>	1.500	-
Congressional Add Subtotals for Project: S385	1.500	-
Project: S800: <i>Munitions Advanced Development</i>		
Congressional Add: <i>SOPGM</i>	13.928	13.000
Congressional Add Subtotals for Project: S800	13.928	13.000
Congressional Add Totals for all Projects	21.188	17.000

Change Summary Explanation

Funding:

FY 2019: Net decrease of \$0.332 million is due to a transfer to Small Business Innovative Research/Small Business Technology Transfer programs (-\$2.274 million); an increase in MMP to cover additional requirements related to Advanced Sniper Rifle development (\$1.137 million); an increase for continued RC-IED

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systems engineering, test and evaluation (\$0.990 million); and funding was made available to support critical emerging Command requirements during the year of execution (-\$0.185 million).

FY 2020: Net increase of \$13.182 million is due to Congressional Add program increases for distribute audio media and next generation loudspeakers (\$4.000 million), Small Glide Munition (SGM) unmanned aerial system integration (\$3.000 million), SGM collaborative strike environment (\$10.000 million) and Congressional General Reduction for prior year carryover (-\$3.818 million).

FY 2021: Net increase of \$9.970 million due to an increase for the initiation of developmental, test and evaluation of new Media Production Center (MPC) (\$2.694 million), begin the engineering and integration for the munitions guidance and control upgrades for Stand-Off Precision Guided Munitions (SOPGM) (\$3.155 million), rapid development of a modular open systems architecture to provide Mission Command Common Operational Picture (MC/COP) (\$4.583 million), and funding was made available to support critical emerging command requirements (-\$0.180 million). Funding transfer from (-\$5.796 million) base to OCO for Enduring Requirements (\$5.796 million).

For the Defense Wide Review (DWR), USSOCOM performed a comprehensive analysis of future capabilities and is streamlining the RC-CIED, Counter Unmanned Aerial Systems (C-UAS), and Munitions Advanced Development project contract support efforts to better align with the Department's priorities as outlined in the National Defense Strategy (-\$0.282 million).

- \$0.058 million - RC-CIED - reduces system engineering and test and evaluation efforts.
- \$0.204 million - C-UAS - reduces development and test of various capabilities.
- \$0.020 million - Munitions Advanced Development - reduces IM testing on various munitions.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) D476 / <i>Military Information Support Operations</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
D476: <i>Military Information Support Operations</i>	42.130	10.693	5.750	5.459	-	5.459	3.204	3.282	3.363	3.473	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the development and acquisition of Military Information Support Operations (MISO) equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct MISO in support of combatant commanders.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Title: Multi-Mission Payload (MMP) formerly known as Long Range Broadcast System (LRBS)</p> <p>Description: The MMP is a family of broadcast systems intended to be integrated into multiple manned and unmanned, long-loiter aerial systems with the capability of broadcasting in Frequency Modulation (FM), Television (TV), Very High Frequency (VHF), TV Ultra High Frequency (UHF) and cellular Short Message Service (SMS), Multi-Media Messaging Service, and Voice. This system provides the capability to broadcast MISO messages via multiple mediums into permissive, semi-permissive, and denied foreign areas. Additionally, the MMP is capable of supporting Electronic Warfare (EW) missions.</p> <p>FY 2021 Base Plans: Completes MMP-Medium development, test, and evaluation and begins MMP-Light development..</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$1.178 million begins MMP-Light development.</p>	3.232	-	1.178	-	1.178
<p>Title: Fly-Away Broadcast System (FABS)</p> <p>Description: FABS is a transit case fly-away broadcast system that utilizes commercial & industry standard technology to disseminate approved messaging to target audiences via FM, SW, cellular SMS and TV transmitter.</p> <p>FY 2020 Plans: Continue testing and evaluation of new systems and components to enhance MISO broadcasts, to include development of Next</p>	0.874	0.888	0.708	-	0.708

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B. Accomplishments/Planned Programs (\$ in Millions)										
<p>Generation FABS (v4) for enhanced Next Generation Loud Speaker (NGLS) - Scatterable Media (SM) reprogram capability and Software Defined Radio (SDR) implementation to improve efficiencies and reduce Size, Weight and Power (SWAP).</p> <p>FY 2021 Base Plans: Continues testing and evaluation of new systems and components to enhance MISO broadcasts, to include development of Next Generation FABS (v4) to integrate key capabilities to enhance MISO Broadcasts for NGLS-SM and SDR implementation that improves efficiencies and reduces SWAP. Begins implementation of Tactical Assault Kit - Common Operating Picture enhancements.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Decrease of \$0.180 million due to re-baselining of funds to more accurately reflect acquisition strategy.</p>						FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Title: Next Generation Loud Speakers (NGLS)</p> <p>Description: NGLS are portable systems capable of disseminating high quality recorded and live audio messages by MISO forces in varied geographical area and climate conditions. NGLS consists of Dismounted and Mounted variants that are lighter, smaller, and louder than legacy speaker systems, with added clarity and durability. NGLS-SM is a hand-emplaced or air-delivered printed audio-visual device for disseminating delayed or on-cue messages to foreign target audiences.</p> <p>FY 2020 Plans: Continue testing, development, and evaluation of new systems and components to enhance MISO broadcasts. Focus on NGLS-SM, wireless end-user device, and configurable mission module to improve measures of effectiveness and measures of performance.</p> <p>FY 2021 Base Plans: Continues testing, development, and evaluation of new systems and components to enhance MISO broadcasts. Continues focus on NGLS-SM, wireless end-user device, and configurable mission module to improve measures of effectiveness and measures of performance. NGLS Tactical Assault Kit COP on schedule.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$0.017 million due to minor adjustments.</p>						0.827	0.862	0.879	-	0.879
<p>Title: Media Production Center (MPC)</p>						-	-	2.694	-	2.694

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Description: MPC is a set of independent but inter-related multi-media production, editing, and archiving capabilities providing MISO forces and other select organizations with options for imagery, audio, animation, and Audio/Video (AV) products of varying degrees of technical complexity and operational responsiveness.</p> <p>FY 2021 Base Plans: Initiates development, modifications, testing, and evaluation of existing and new systems. RDTE plans for the MPC Family of Systems (FoS) include three main efforts: Media Anti Forensics, Language Translation, and Deep Fakes.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$2.694 million due to start of development, modifications, testing, and evaluation of new MPC capabilities.</p>					
Accomplishments/Planned Programs Subtotals	4.933	1.750	5.459	-	5.459

	FY 2019	FY 2020
<p>Congressional Add: Next Generation Loud Speakers (NGLS)</p> <p>FY 2019 Accomplishments: Congressional add to continue development of distributable audio media and NGLS - Scatterable Media (SM).</p> <p>FY 2020 Plans: Congressional add continues development and begins test and evaluation of distributable audio media and NGLS - Scatterable Media (SM).</p>	5.760	4.000
Congressional Adds Subtotals	5.760	4.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC1/0204OTHER: OTHER ITEMS <\$5M	131.905	103.938	96.333	0.984	97.317	79.598	73.139	54.838	70.984	Continuing	Continuing

Remarks
None.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
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D. Acquisition Strategy

- The MMP program has a traditional acquisition development and procurement strategy with accelerated development that includes increased flight test and multiple combat evaluations.
- The FABS program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The NGLS program has an evolutionary acquisition strategy for the legacy NGLS Mounted and Dismounted and an incremental acquisition strategy for new developmental variants (NGLS-SM, NGLS-Sonic Projection). Commercial and government agencies will be leveraged for engineering, required certifications, functional and operating tests and acceptance support.
- The MPC program will pursue incremental development of advanced media and analytic software capabilities following commercial standards and best practices.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Multi-Mission Payload (MMP)	MIPR	Various : Various	8.310	3.089	Jan 2019	-		1.178	Jan 2021	-		1.178	Continuing	Continuing	-
Fly Away Broadcast Systems (FABS)	Reqn	Various : Various	4.330	0.874	Apr 2019	0.888	Oct 2019	0.608	Dec 2020	-		0.608	Continuing	Continuing	-
Next Generation Loud Speakers (NGLS)	Allot	Various : Various	0.437	0.727	Apr 2019	0.762	Jun 2020	0.779	Nov 2020	-		0.779	Continuing	Continuing	-
NGLS Congressional Add	Allot	Various : Various	5.781	5.760	Apr 2020	4.000	Apr 2021	-		-		-	0.000	15.541	-
Media Production Center (MPC)	C/Various	Various : Various	-	-		-		2.694	Jan 2021	-		2.694	Continuing	Continuing	-
Prior Year	C/Various	Various : Various	22.706	-		-		-		-		-	0.000	22.706	-
Subtotal			41.564	10.450		5.650		5.259		-		5.259	Continuing	Continuing	N/A

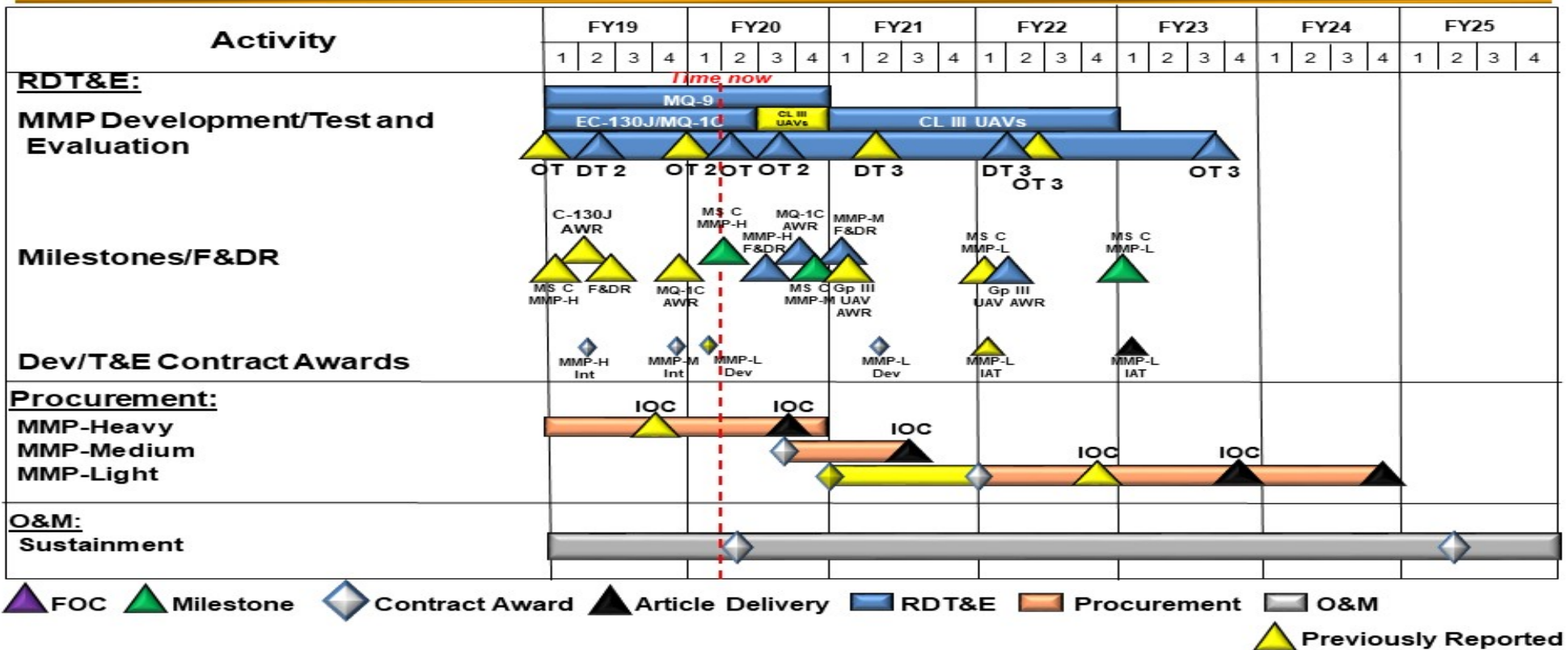
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MMP	MIPR	Various : Various	0.441	0.143	Jan 2019	-		-		-		-	0.000	0.584	-
NGLS	Allot	Various : Various	-	0.100	Apr 2019	0.100	Aug 2020	0.100	Aug 2020	-		0.100	Continuing	Continuing	-
FABS	MIPR	Various : Various	-	-		-		0.100	Jan 2021	-		0.100	Continuing	Continuing	-
Prior Year	MIPR	Various : Various	0.125	-		-		-		-		-	0.000	0.125	-
Subtotal			0.566	0.243		0.100		0.200		-		0.200	Continuing	Continuing	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		42.130	10.693	5.750	5.459	-	5.459	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
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Multi-Mission Payload (MMP) PEO-Managed Schedule

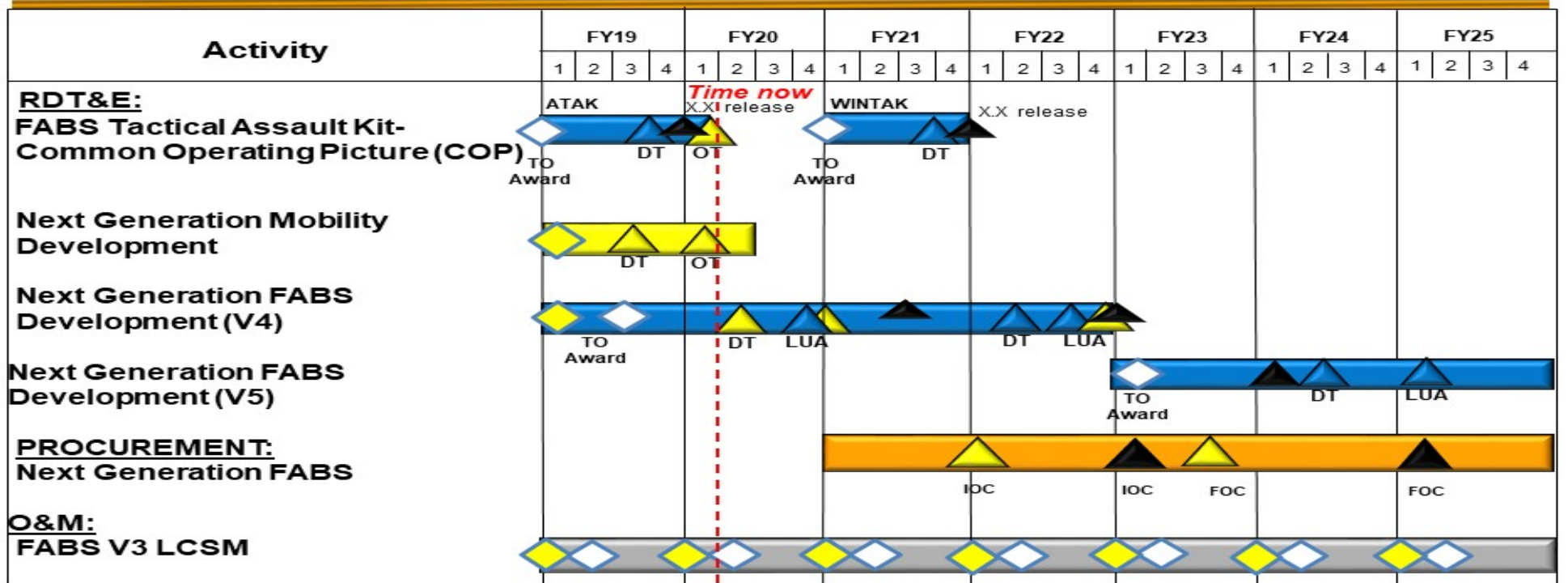


Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
D476 / Military Information Support
Operations

Fly Away Broadcast System PEO Managed Schedule

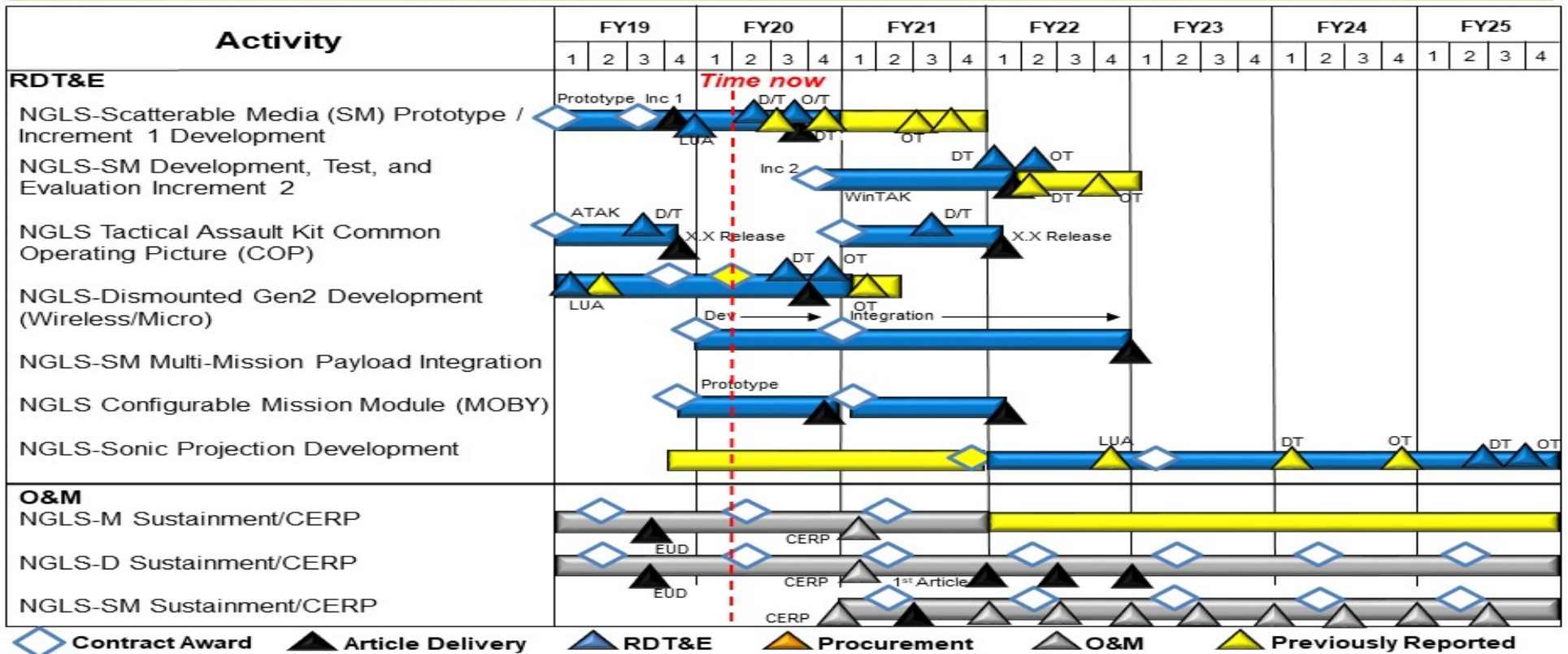


◇ Article Award
 ▲ Article Delivery
 ▲ RDT&E
 ▲ Procurement
 ▲ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
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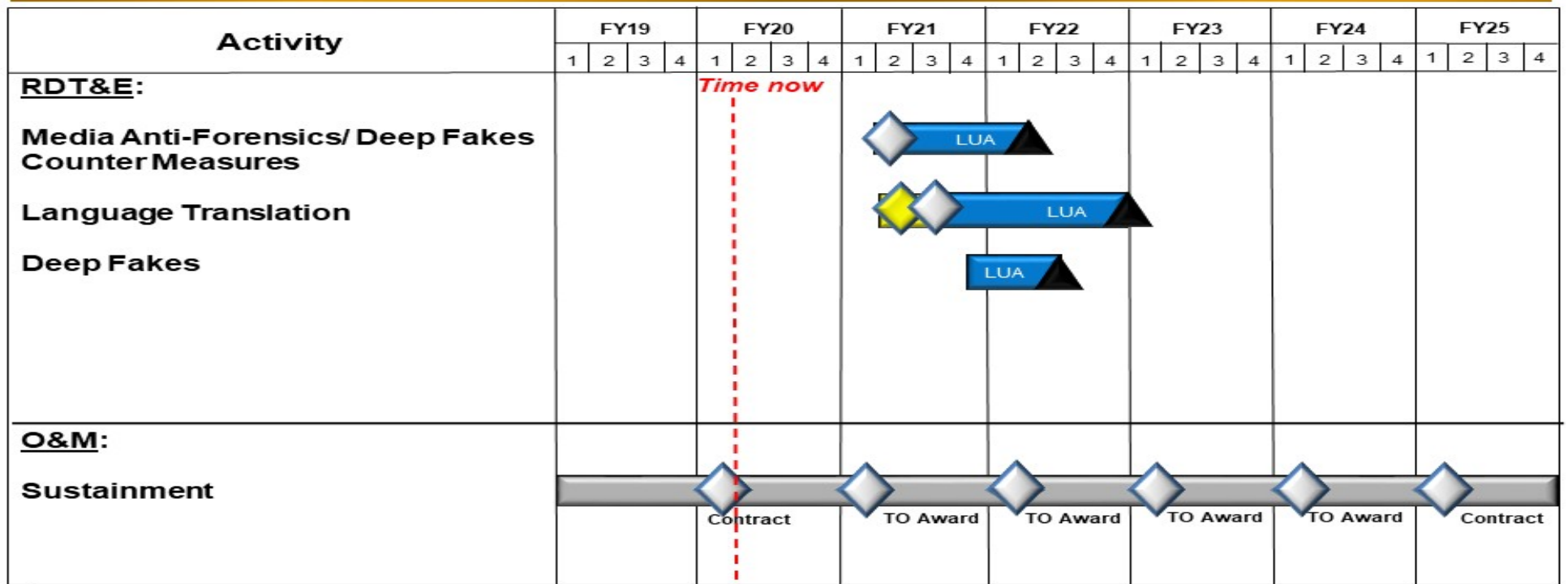
Next Generation Loudspeaker System (NGLS) PEO Managed Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
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Media Production Center (MPC) PEO Managed Schedule



◆ Contract Award
 ▲ Article Delivery
 ▲ RDT&E
 ▲ Procurement
 ▲ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Multi-Mission Payload (MMP)				
Development	1	2019	4	2022
Test and Evaluation	1	2019	3	2023
Fly Away Broadcast Systems (FABS)				
Tactical Assault Kit - Common Operating Picture (COP)	1	2019	4	2021
FABS (V4) Development	3	2019	4	2022
FABS (V5) Development	1	2023	4	2025
Next Generation Loudspeakers (NGLS)				
Scatterable Media (SM) Development, Test, and Evaluation	1	2019	2	2022
NGLS Tactical Assault Kit Common Operating Picture	1	2019	1	2022
Dismounted GEN 2 Development, Test, and Evaluation	1	2019	1	2021
NGLS-SM Multi-Mission Payload Integration	1	2021	4	2022
NGLS Configurable Mission Module	4	2019	1	2022
Sonic Projection Development	1	2022	4	2025
Media Production Center (MPC)				
Media Anti Forensics	2	2021	2	2022
Language Translation	3	2021	4	2022
Deep Fakes	4	2021	3	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S375 / <i>Weapons Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S375: <i>Weapons Systems</i>	4.829	1.212	1.625	1.604	-	1.604	1.529	1.561	1.597	1.629	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the next generation systems Pre-Planned Product Improvements (P3I), testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of Special Operations Forces (SOF). The efforts include the product improvements and testing of the Suppressed Upper Receiver Group (SURG), Advanced Sniper Rifle (ASR), Machine Gun (MG) Barrel, Mid-Range Gas Gun (MRGG), Personal Defense Weapon (PDW), Hand Gun (HG) suppressor, Lightweight Machine Gun-Medium (LMG-M), and Advance Machine Gun (AMG). The product improvements will leverage the latest technological advances to achieve overmatch capability against current and emerging threats. These technologies will be pursued via rapid prototyping efforts when appropriate.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Weapons	1.212	1.625	1.604	-	1.604
Description: SOF weapons are developed to enable the operator to tailor the configuration of the weapon to the assigned mission and operational environment, enhancing the overall effectiveness of the weapons, which enables mission accomplishment and operator survivability. Weapons is designated a Middle Tier of Acquisitions (MTA) program which uses the rapid prototyping pathway and is executed using existing contracts, government agencies, and new contract competitively selected as appropriate.					
FY 2020 Plans: Continue development of enhanced capabilities to improve performance of individual sniper, rifle, and machine gun weapons.					
FY 2021 Base Plans: Continues development of enhanced capabilities to improve performance of individual sniper, rifle, and machine gun weapons.					
FY 2020 to FY 2021 Increase/Decrease Statement: Decrease of \$0.021 million due to minor adjustments.					
Accomplishments/Planned Programs Subtotals	1.212	1.625	1.604	-	1.604

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems <\$5M</i>	470.285	335.992	260.733	32.573	293.306	276.972	282.592	285.664	286.725	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evolutionary acquisition, leveraging emerging technology and rapid prototyping efforts when appropriate. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. Full and open competition with firm-fixed price contracts and other transaction authorities (OTAs).

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Weapon Test & Evaluation	MIPR	Various : Various	4.829	1.212	Jan 2019	1.625	Jan 2020	1.604	Jan 2021	-		1.604	Continuing	Continuing	-
Subtotal			4.829	1.212		1.625		1.604		-		1.604	Continuing	Continuing	N/A
Project Cost Totals			4.829	1.212		1.625		1.604		-		1.604	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command

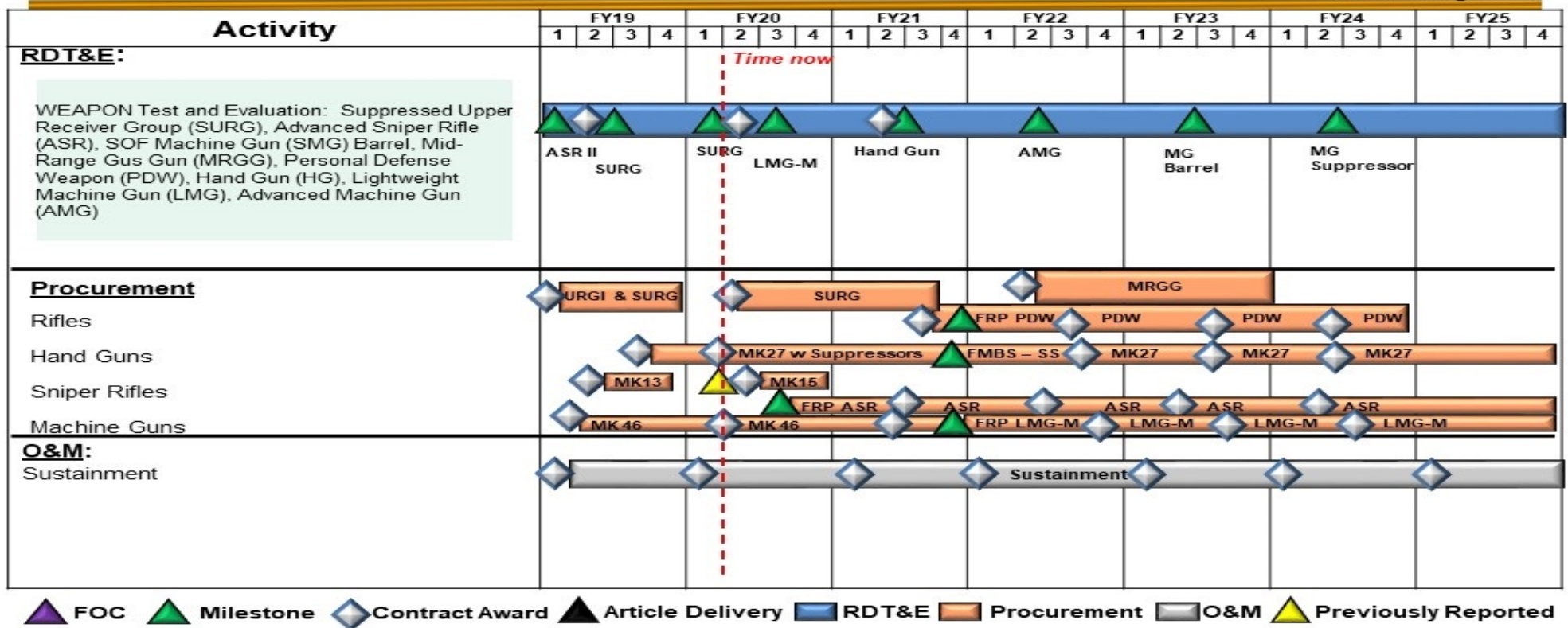
Date: February 2020

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S375 / Weapons Systems

Weapon Systems PEO-Managed Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Weapon Systems</i>				
Test & Evaluation: Suppressed Upper Receiver Group, Advanced Sniper Rifle, SOF Machine Gun Barrel, Mid-Range Gas Gun, Personal Defense Weapon, Hand Gun, Lightweight Machine Gun, Advanced Machine Gun	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S385: <i>Soldier Protection and Survival Systems</i>	19.633	11.342	13.947	4.816	5.796	10.612	12.527	13.119	13.225	13.317	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds development, testing, integration, rapid prototyping and evaluation of specialized equipment to meet the unique soldier protection and survival requirements of Special Operations Forces (SOF), to include, but not limited to, individual survival equipment, hearing protection, clothing systems, load bearing equipment, Counter Radio Controlled Improvised Explosive Device (RC-IED) systems, Counter Unmanned Systems (aerial, ground and maritime), and personnel safety equipment to improve the mobility of SOF, while conducting varied missions. These missions are generally conducted in harsh and hostile environments, for unspecified periods and in locations requiring small unit autonomy. These technologies will be pursued via rapid prototyping efforts when appropriate.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: SOF Personal Equipment Advanced Requirements (SPEAR)	0.845	0.288	1.232	-	1.232
Description: The SPEAR program provides for the research, development, testing and evaluation of a variety of individual and survival equipment to include: ballistic and environmental protective combat uniforms, load carriage systems, communications headsets, and visual augmentation system mounts.					
FY 2020 Plans: Continue research and development of land communications materiel solutions and environmental protective combat uniforms. Continue materials testing and incorporation into commodity lines. Continue wireless headset evaluations. Continue interoperability of headsets with radios and integrated communication systems.					
FY 2021 Base Plans: Continues research and development of land communications materiel solutions and environmental protective combat uniforms. Continues materials testing and incorporation into commodity lines. Continues wireless headset evaluations. Continues interoperability of headsets with radios and integrated communication systems.					
FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$0.944 million continues development supporting extreme weather clothing and equipment efforts, load carriage and body armor vest development and evaluations.					
Title: Tactical Combat Casualty Care (TCCC)	0.171	0.240	0.229	-	0.229

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Description: TCCC provides lifesaving medical devices, ancillary equipment and Casualty Evacuation (CASEVAC) sets for SOF. The CASEVAC procures a suite of Food and Drug Administration (FDA) approved medical items including, but not limited, to intraosseous infusion devices, patient monitoring and assessment devices, emergency airway kits, as well as devices that provide SOF the capability to support extraction, mobility, transportation, and sustainment of casualties in forward areas. The TCCC program fields essential lifesaving CASEVAC equipment and capabilities and is a platform to transition capabilities developed under the National Mission Force's Tactical Medical Programs. This capability provides significant ability to lessen battlefield losses by providing timely, critical lifesaving and evacuation capabilities to the forward-deployed SOF operators.</p> <p>FY 2020 Plans: Continue test support to include program management, market surveys, rapid prototyping, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Continue the evaluation of enhanced medical monitoring systems capable of enabling telemedicine/telementoring for incorporation into the CASEVAC program.</p> <p>FY 2021 Base Plans: Continues test support to include program management, market surveys, rapid prototyping, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Continues the evaluation of enhanced medical monitoring systems capable of enabling telemedicine/telementoring for incorporation into the CASEVAC program.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Decrease of \$0.011 million due to the completion of the CASEVAC Prime vendor contract re-compete effort.</p>					
<p>Title: Counter Radio Controlled-Improvised Explosive Device (RC-IED)</p> <p>Description: Counter Radio Controlled-Improvised Explosive Device (RC-IED): United States Special Operations Command (USSOCOM) uses ground (mounted/dismounted) based jammers to counter Radio Controlled Improved Explosive devices. This program provides scalable RC-IED systems whose configuration and modularity address a mission critical capability to counter this threat globally. To stay ahead of emerging threats, USSOCOM has historically developed advanced techniques on annually recurring basis. Through strategic partnerships with the Services, and other government agencies, USSOCOM vastly improved program affordability while maintaining Joint Force compatibility. USSOCOM's special mission remains the priority, while the development of a third-party module, advanced techniques, and other hardware enhancements</p>	2.567	1.731	1.632	-	1.632

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>are coordinated with other government agencies and services to tackle emerging threats. All next generation Electronic Countermeasures (ECM) development designed as National to Theatre (“N-to-T”) transition programs.</p> <p>FY 2020 Plans: Continue test support to the Counter RC-IED program. Continue system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintain range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems. Continue development and testing of ECM systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Continue implementation of Modi software refactoring, improving stability and future technology integration.</p> <p>FY 2021 Base Plans: Continues test support to the Counter RC-IED program. Continues system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintains range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems from state and non-state actors. Continues development and testing of ECM systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Continues implementation of Modi software refactoring, improving stability and future technology integration.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Net decrease of \$0.099 million is due to minor adjustments.</p>					
<p>Title: Counter Unmanned Aerial System (C-UAS)</p> <p>Description: SOF C-UAS enhances the SOF operator’s ability to detect, identify, classify, locate, track, deter, defeat and exploit unmanned system threats. The funding in this program supports a Family of Systems (FoS) design, development, integration, rapid prototyping and test of cutting edge C-UAS sensor integration technologies that delivers and integrates various detection sensor modalities including, but not limited to, passive sensors, Radio frequency (RF) detection, acoustic, Light Detection and Ranging (LiDAR), radar, and Electro-Optical and Infrared (EO/IR). This program received Overseas Contingency Operations (OCO) funding in FY 2019 and FY 2020. C-UAS is designated a MTA program which uses the rapid prototyping pathway and is executed using existing contracts, government agencies, and new contract competitively selected as appropriate.</p> <p>FY 2020 Plans:</p>	4.662	10.000	0.000	5.796	5.796

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Continue and complete C-UAS System Integration Module (SIM) FoS Middle Tier Acquisition (MTA) rapid prototype phase 2 development and begin phase 3 test and operational assessment of layered multi-sensor interface technologies. Begin development and test of kinetic and non-kinetic capabilities of mounted, dismounted and fixed-site expeditionary form factors to address emerging threats. Conduct kinetic feasibility assessment.</p> <p>FY 2021 Base Plans: N/A</p> <p>FY 2021 OCO Plans: Continues C-UAS SIM FoS MTA rapid prototype phase 3 of layered multi-sensor interface technologies. Continues development and test of kinetic and non-kinetic capabilities of mounted, dismounted and fixed-site expeditionary form factors to address emerging threats. Continues kinetic feasibility assessment.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Net decrease of \$4.204 million is due to completion of SIM Phase 2: Prototype Development in FY20 (-\$4.000 million) and funding made available due to streamlining contract support efforts (-\$0.204 million).</p>					
<p>Title: Personal Signature Management (PSM)</p> <p>Description: PSM provides for development, rapid prototyping, test, and evaluation of signature reducing materials and technology, in order to reduce the probability of detection by battlefield threat sensors.</p> <p>FY 2020 Plans: Continue research, development, rapid prototyping, test and evaluation of next generation signature reducing solutions. Provide for program management, market research, test item acquisition and test and evaluation, in support of PSM efforts for both land and maritime operations.</p> <p>FY 2021 Base Plans: Continues research, development, rapid prototyping, test and evaluation of next generation signature reducing solutions. Provides for program management, market research, test item acquisition and test and evaluation, in support of PSM efforts for both land and maritime operations.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$0.035 million is due to anticipated cost increase of threat sensor exploitation efforts.</p>	1.597	1.688	1.723	-	1.723
Accomplishments/Planned Programs Subtotals	9.842	13.947	4.816	5.796	10.612

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

	FY 2019	FY 2020
Congressional Add: Rotary Wing Aviation Helmet	1.500	-
FY 2019 Accomplishments: Research and development of rotary wing aviation helmet.		
Congressional Adds Subtotals	1.500	-

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

Line Item	FY 2019	FY 2020	FY 2021	FY 2021	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Cost To	
			Base	OCO	Total					Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	470.285	335.992	260.733	32.573	293.306	276.972	282.592	285.664	286.725	Continuing	Continuing

Remarks

D. Acquisition Strategy

SPEAR: Contracts in support of SPEAR are a combination of firm fixed price five year indefinite delivery indefinite quantity with single vendor awards, Source America mandatory sole sources, small business set asides and prime vendor style multiple awards.

Tactical Combat Casualty Care (TCCC): Operator & Medic Kits - Program managed by Program Manager-Special Operations Forces Survival, Support, and Equipment Systems (PM-SOF SSES) using US Army Medical Materiel Agency prime vendor contracts for equipment purchases and the Special Operations Forces Support Activity for warehousing and sustainment. CASEVAC Set - Program managed by PM-SOF SSES and utilizes and Indefinite Delivery Indefinite Quantity Commercial-Off-The-Shelf (COTS) prime integrator contract.

Counter Radio Controlled - Improvised Explosive Device (RC-IED): USSOCOM collaborates with the DoD Joint CREW manager and other government agencies in order to maintain Joint Force compatibility and improve program affordability. All next generation ECM development designed as National to Theater ("N-to-T") transition programs. Centralized life cycle sustainment of SOF CREW inventory supports TSOC operational demand as Theater Provided Equipment (TPE). SOF RC-IED collaborates with the Joint Services, Academia and other government agencies to maintain interoperability and cost effectiveness. SOF RC-IED will continue to leverage the SOF-to-Service transition of proven capabilities.

Counter Unmanned Aerial System (C-UAS): SOF C-UAS acquisition strategy utilizes middle tier acquisition (MTA) rapid prototyping to develop and integrate various advancing sensors with kinetic and non-kinetic capabilities in mounted, dismounted and expeditionary fixed-site form factors, while the services focus primarily on providing capability to address fixed site defense of homeland and Forward Operating Bases (FOBs). Upon completion of various Combat Evaluations in FY20, C-UAS will transition into a Program of Record with an approved Capabilities Development Document (CDD). C-UAS will implement an incremental acquisition strategy as an enabling technology for future application to include additional capabilities given program/acquisition constraints and SOF operator requirements/priorities. Contracts are expected to be a combination of Firm Fixed Price (FFP) and Cost type through full and open competition across the SOCOM focus areas.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>
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SOF C-UAS collaborates with the Joint Services, Academia and other government agencies to maintain interoperability and cost effectiveness. SOF C-UAS will continue to leverage the SOF-to-Service transition of proven capabilities where possible.

Personal Signature Management (PSM): Signature reducing technologies will be embedded into SOF clothing and equipment via modified commercial-off-the-shelf variants. Contracts in support of fielding/sustainment of PSM clothing and equipment will be a combination of sole source firm fixed price 5-year indefinite delivery indefinite quantity contracts, Source America mandatory sole sources, small business set asides and prime vendor style multiple award contracts. PSM will utilize SOFSA for warehousing and sustainment.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S385 / Soldier Protection and Survival Systems</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
SOF Personal Equipment Advanced Requirements (SPEAR) - Protective Combat Uniform (PCU)	Various	PM-SSES : Natick, MA	0.447	0.200	Jan 2019	0.067	Jan 2020	0.400	Jan 2021	-		0.400	Continuing	Continuing	-
SPEAR - Hearing Protection and Communications Headsets	Various	PM-SSES : Natick, MA	1.195	0.150	Feb 2019	0.047	Jan 2020	0.300	Jan 2021	-		0.300	Continuing	Continuing	-
SPEAR Modular Glove System (MGS)	Various	PM-SSES : Natick, MA	0.040	0.010	Jan 2019	0.006	Jan 2020	0.030	Jan 2021	-		0.030	Continuing	Continuing	-
SPEAR - Load Carriage System (LCS) and Backpacks	Various	PM-SSES : Natick, MA	0.055	0.035	Mar 2019	0.019	Mar 2020	0.100	Mar 2021	-		0.100	Continuing	Continuing	-
Counter Unmanned Aerial System (C-UAS) Emerging Threat Development (Dismount/Mount/EXP) (OCO)	C/Various	Various : Various	-	-		4.440	Jan 2020	-		-		-	0.000	4.440	-
C-UAS Emerging Threat Development (Dismount/Mount/EXP) (OCO)	C/Various	Various : Various	-	-		-		0.000		3.000	Jan 2021	3.000	Continuing	Continuing	-
C-UAS SIM Phase I: Concept Development (OCO)	C/Various	Night Vision Labs : Ft. Belvoir, VA	-	3.000	Feb 2019	-		-		-		-	0.000	3.000	-
C-UAS SIM Phase II: Prototype Development	C/Various	Night Vision Labs : Ft. Belvoir, VA	-	-		4.000	Jan 2020	-		-		-	0.000	4.000	-
C-UAS SIM Phase III: Operational Assessment and Test (OCO)	C/Various	Various : Various	-	-		-		0.000		1.133	Mar 2021	1.133	Continuing	Continuing	-
Rotary Wing Aviation Helmet Congressional Add	C/Various	PM-SSES : Natick, MA	-	1.500	Sep 2019	-		-		-		-	0.000	1.500	-
Personal Signature Management (PSM) Development (Inc II and III)	Various	Various : Various	-	0.799	Sep 2019	-		0.861	Jan 2021	-		0.861	Continuing	Continuing	-
Subtotal			1.737	5.694		8.579		1.691		4.133		5.824	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S385 / Soldier Protection and Survival Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SPEAR - PCU testing/P3I	Various	PM-SSES : Natick, MA	0.356	0.200	Feb 2019	0.056	Mar 2020	0.100	Mar 2021	-		0.100	Continuing	Continuing	-
SPEAR-MGS Test and Evaluation	Various	PM-SSES : Natick, MA	0.091	0.010	Jan 2019	0.010	Jan 2020	0.045	Jan 2021	-		0.045	Continuing	Continuing	-
SPEAR - Hearing Protection and Comms Headset T&E	Various	PM-SSES : Natick, MA	1.668	0.210	Jan 2019	0.061	Jan 2020	0.162	Jan 2021	-		0.162	Continuing	Continuing	-
SPEAR - LCS/Body Armor Vest/Backpack Material and Prototype Test and Evaluation	Various	PM-SSES : Natick, MA	0.116	0.030	Jan 2019	0.022	Feb 2020	0.095	Feb 2021	-		0.095	Continuing	Continuing	-
Tactical Combat Casualty Care CASEVAC Sets Development, Test and Evaluation	Various	PM-SSES : Natick, MA	1.567	0.171	Feb 2019	0.240	Feb 2020	0.229	Jan 2021	-		0.229	Continuing	Continuing	-
Counter Radio Controlled - Improvised Explosive Device Technology Insertion/SW/Techniques	C/Various	Various : Various	13.127	2.567	Mar 2019	1.731	Mar 2020	1.632	Mar 2021	-		1.632	Continuing	Continuing	-
C-UAS Tech. and Concept Evaluation	C/Various	Various : Various	0.411	0.162	Feb 2019	-		-		-		-	0.000	0.573	-
C-UAS Test and Evaluation Support	C/Various	Various : Various	-	1.500	Nov 2018	-		-		-		-	0.000	1.500	-
C-UAS Test and Evaluation Support (OCO)	C/Various	Various : Various	-	-		1.560	Nov 2019	0.000		1.663	Nov 2020	1.663	Continuing	Continuing	-
Personal Signature Management (PSM) Test and Evaluation	Various	Various : Various	-	0.798	Jan 2019	1.688	Jan 2020	0.862	Jan 2021	-		0.862	Continuing	Continuing	-
Prior Year	MIPR	Various : Various	0.160	-		-		-		-		-	0.000	0.160	-
Prior Year (OCO)	Various	Various : Various	0.400	-		-		-		-		-	0.000	0.400	-
Subtotal			17.896	5.648		5.368		3.125		1.663		4.788	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command								Date: February 2020			
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>			
	Prior Years	FY 2019		FY 2020		FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	19.633	11.342		13.947		4.816	5.796	10.612	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems

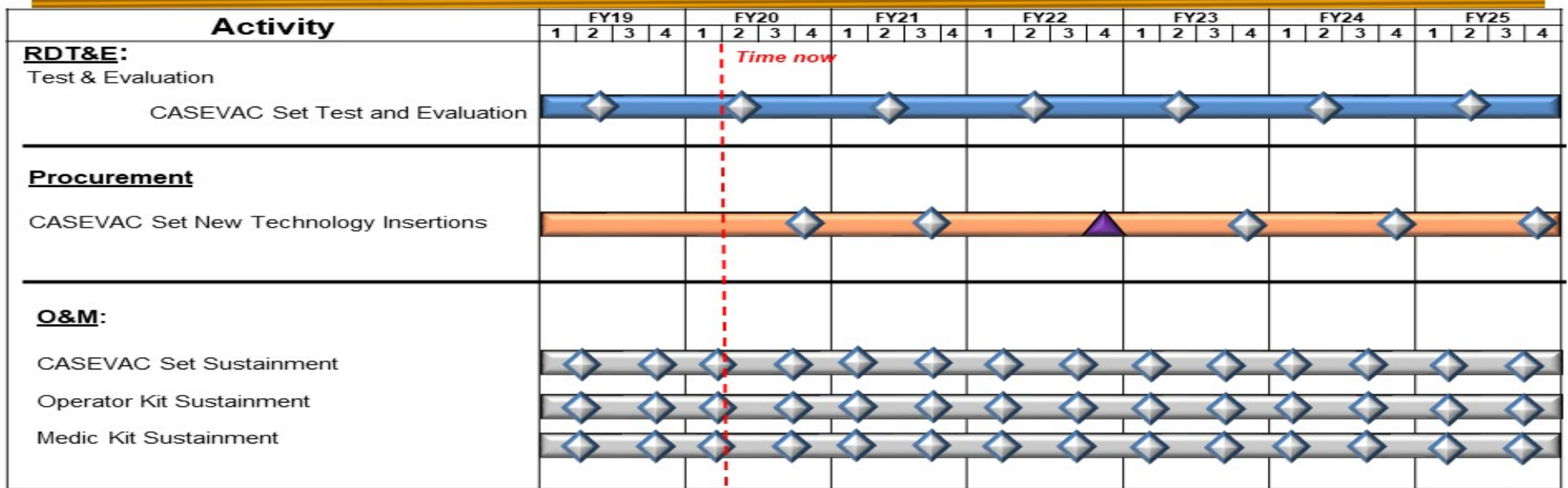
SOF Personal Equipment Advanced Requirements (SPEAR) PEO-Managed Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems

Tactical Combat Casualty Care (TCCC) PEO-Managed Schedule



▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems

Counter Radio Controlled - Improvised Explosive Device (RC-IED) PEO Managed Schedule

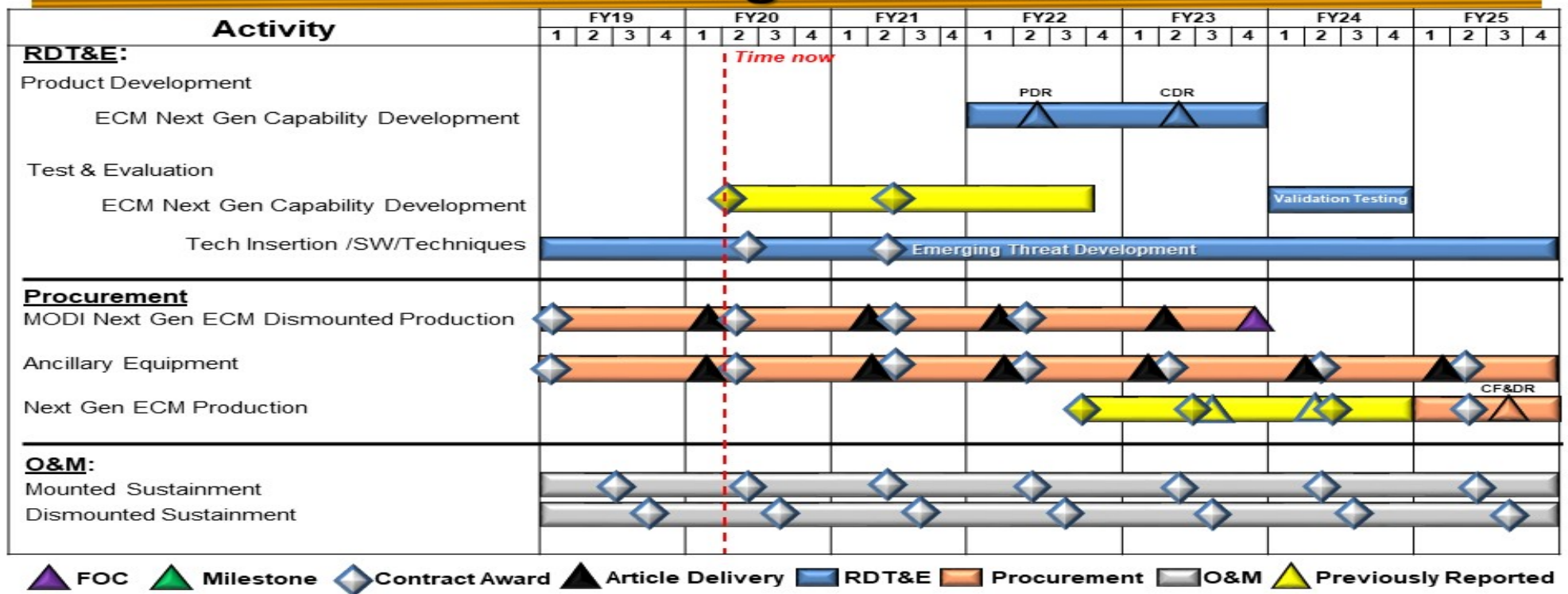
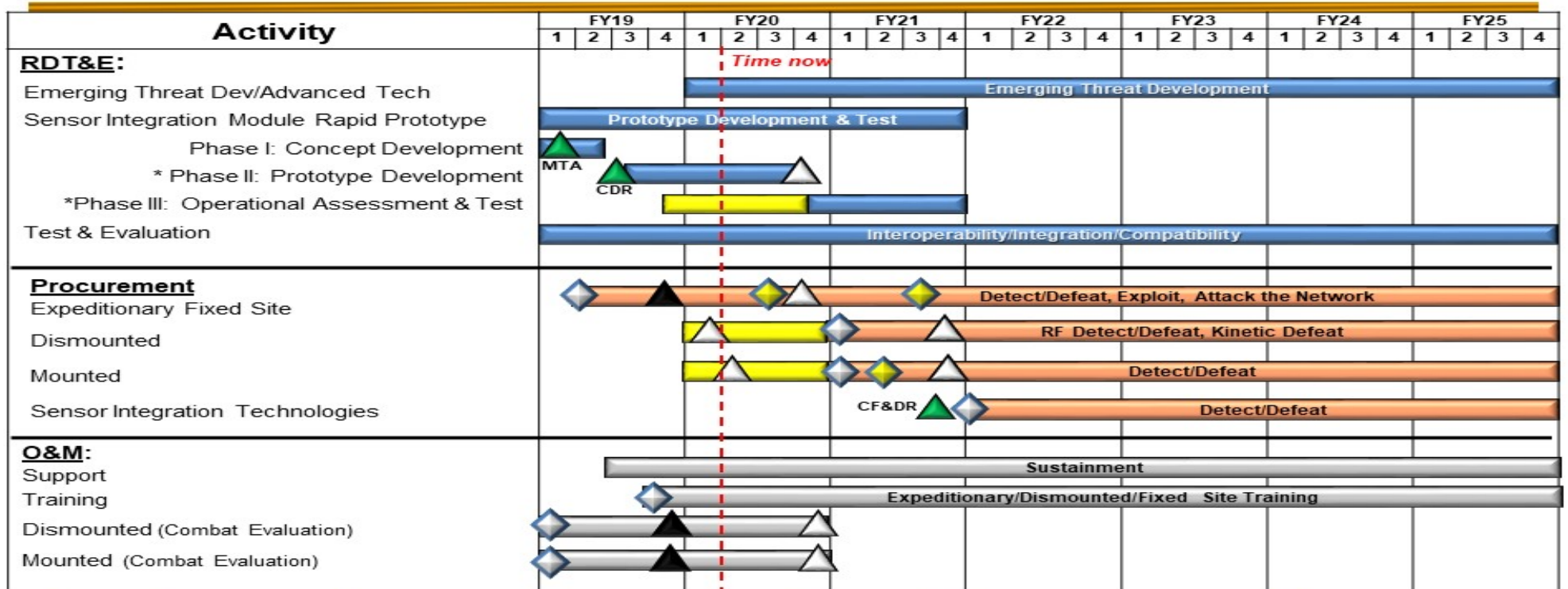


Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems

Counter Unmanned Aerial Systems PEO-Managed Schedule

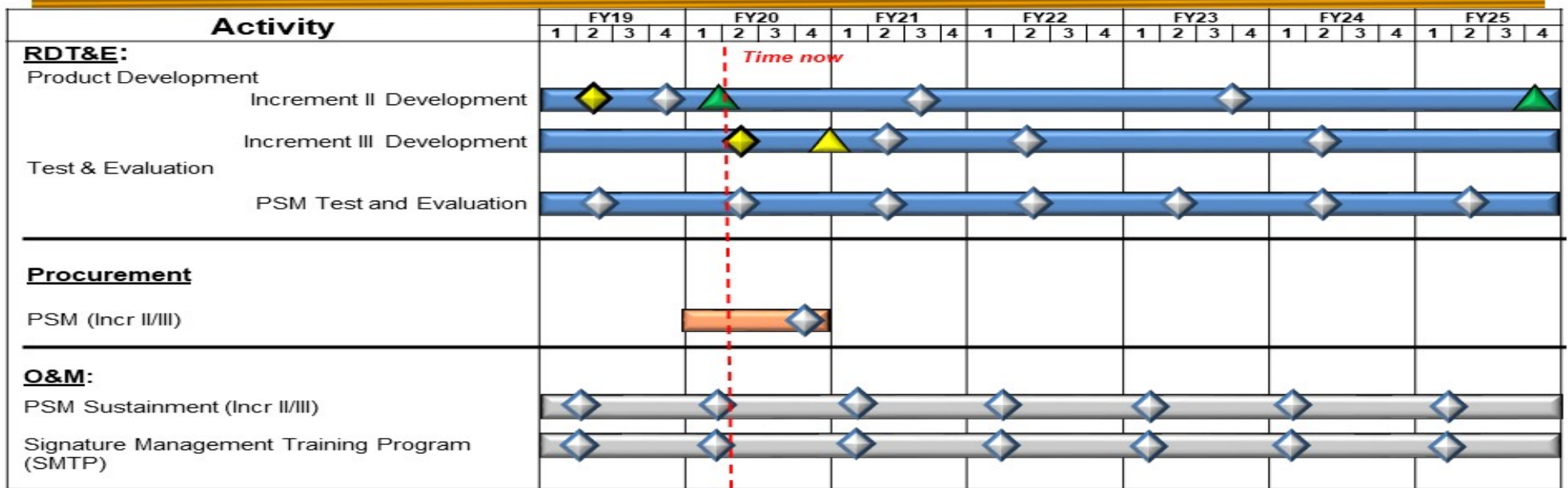


▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems

Personal Signature Management (PSM) PEO-Managed Schedule



▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Soldier Protection and Survival Systems (SPEAR)</i>				
Protective Combat Uniform (PCU) Product Development	1	2019	4	2025
Modular Integrated Communications Helmet (MICH) Comms/Land Maritime Communication System Product Development	1	2019	4	2025
Modular Glove System (MGS) Product Development	1	2019	4	2025
Load Carriage System (LCS) and Backpacks Product Development	1	2019	4	2025
PCU Test & Evaluation	1	2019	4	2025
MGS Test & Evaluation	1	2019	4	2025
Comms Test & Evaluation	1	2019	4	2025
LCS/Backpack/Body Armor Vest Test & Evaluation	1	2019	4	2025
<i>Tactical Combat Casualty Care (TCCC)</i>				
TCCC CASEVAC Sets Development, Test & Evaluation	1	2019	4	2025
<i>Counter Radio Controlled-Improvised Explosive Device (R-CIED)</i>				
Next Generation ECM Capability Development (Product Development)	1	2022	4	2023
Next Generation ECM Capability Development (Test & Evaluation Support)	1	2024	4	2024
Technology Insertion/SW/Techniques (Test & Evaluation Support)	1	2019	4	2025
<i>Counter Unmanned Aerial System (C-UAS)</i>				
Emerging Threat Development / Advanced Technology	1	2020	4	2025
C-UAS Family of Systems (FoS) SIM - Phase 1 (Technology and Concept Evaluation)	1	2019	2	2019
C-UAS FoS-SIM - Phase 2 (Prototype Development)	3	2019	4	2020
C-UAS FoS-SIM - Phase 3 (Prototype Operational Assessment and Test)	4	2020	4	2021
Interoperability, Integration and Compatibility Test	1	2019	4	2025

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Personnel Signature Management (PSM)</i>				
PSM Development (Incr II)	1	2019	4	2025
PSM Development (Incr III)	1	2019	4	2025
PSM Test & Evaluation	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S385A: <i>Body Armor and Associated Equipment</i>	7.572	1.006	1.752	1.738	-	1.738	1.694	1.729	1.770	1.805	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides specialized equipment to meet the unique operator protection and survival requirements of SOF, to include: Army Rangers; Army Special Forces; Navy Sea, Air, Land (SEAL) teams; Navy Special Boat Units; Air Force Operators; and Marine Raiders. Specialized ballistic equipment improves survivability impacting the mobility of SOF while conducting varied missions. These missions are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: SOF Personal Equipment Advanced Requirement (SPEAR)-Ballistic Protection	1.006	1.752	1.738	-	1.738
Description: This project enhances the SPEAR program by supporting body armor helmets and eye protection. It also provides for the research, development, and testing of a variety of body armor and personal protective equipment.					
FY 2020 Plans: Continue foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continue development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continue evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Continue development and testing of technologies to upgrade the maritime crewman helmet.					
FY 2021 Base Plans: Continues foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continues development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continues evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Continues development and testing of technologies to upgrade the maritime crewman helmet.					
FY 2020 to FY 2021 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Decrease of \$0.014 million is due to minor adjustments.					
Accomplishments/Planned Programs Subtotals	1.006	1.752	1.738	-	1.738

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

N/A

Remarks

D. Acquisition Strategy

SPEAR ballistic protection equipment takes advantage of modified Commercial-Off-The-Shelf (COTS) or non-developmental items. As USSOCOM required tailored solutions for SOF Mission sets, SPEAR items leveraged from industry are often on cutting edge of technology with modifications specific for SOF missions and require substantial testing in SOF environments. Utilizes Special Operations Forces Support Activity (SOFS) for warehousing and sustainment, Program Manager Special Operations Forces - Survival, Support, and Equipment Systems (PM-SOF SSES) has cradle to grave responsibility. Contracts in support of SPEAR are a combination of firm fixed price five year indefinite delivery indefinite quantity with single vendor awards, Source America mandatory sole sources, small business set asides and prime vendor style multiple award contracts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF Personal Equipment Advanced Requirement (SPEAR) - Body Armor	Various	PM-SSES : Natick, MA	2.505	0.338	Apr 2019	0.395	Feb 2020	0.387	Feb 2021	-		0.387	Continuing	Continuing	-
SPEAR - Lightweight Ballistic Helmets	Various	PM-SSES : Natick, MA	1.717	0.126	May 2019	0.385	Jan 2020	0.378	Jan 2021	-		0.378	Continuing	Continuing	-
SPEAR - Eye Protection	Various	PM-SSES : Natick, MA	0.236	0.050	Apr 2019	0.107	Mar 2020	0.116	Mar 2021	-		0.116	Continuing	Continuing	-
Subtotal			4.458	0.514		0.887		0.881		-		0.881	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SPEAR - Body Armor	Various	PM-SSES : Natick, MA	1.726	0.301	Apr 2019	0.385	Apr 2020	0.381	Apr 2021	-		0.381	Continuing	Continuing	-
SPEAR - Lightweight Ballistic Helmet	Various	PM-SSES : Natick, MA	1.231	0.153	Jun 2019	0.385	Apr 2020	0.381	Apr 2021	-		0.381	Continuing	Continuing	-
SPEAR - Transparent Armor	Various	PM-SSES : Natick, MA	0.157	0.038	Apr 2019	0.095	Mar 2020	0.095	Mar 2021	-		0.095	Continuing	Continuing	-
Subtotal			3.114	0.492		0.865		0.857		-		0.857	Continuing	Continuing	N/A

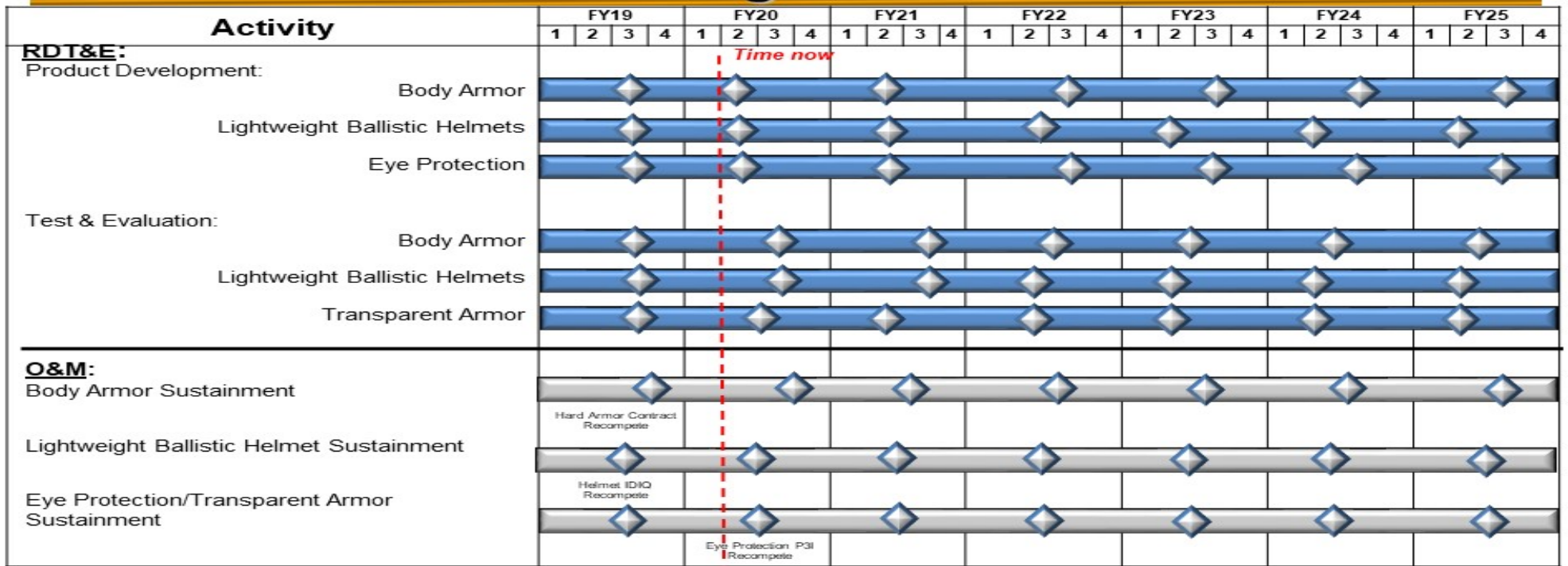
	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		7.572	1.006	1.752	1.738	1.738	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>

SOF Personal Equipment Advanced Requirements (SPEAR) - Body Armor PEO-Managed Schedule



▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Body Armor and Associated Equipment</i>				
Body Armor Product Development	1	2019	4	2025
Lightweight Ballistic Helmets Product Development	1	2019	4	2025
Eye Protection Product Development	1	2019	4	2025
Body Armor Test & Evaluation	1	2019	4	2025
Lightweight Ballistic Helmets Test & Evaluation	1	2019	4	2025
Transparent Armor Test & Evaluation	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S395: <i>Visual Augmentation, Lasers and Sensor Systems</i>	12.323	1.054	3.212	2.171	-	2.171	2.097	2.132	2.174	2.218	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for development, testing and integration of specialized visual augmentation, binocular and monocular night vision devices, laser markers, laser designators, geo-location systems, weapon optics, weapon aiming lasers, sensor systems, visible lights, infrared imagers, clandestine pointers, simulators and accessories to meet the unique requirements of SOF. These projects ensure SOF hyper-enabled operators will remain technologically superior to enemy threats and ensure mission success.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Visual Augmentation Systems (VAS)	1.054	3.212	2.171	-	2.171
Description: Sensor technologies being developed include image intensification thermal imaging, short wave infrared, multi-spectral, fusion, and other sensor types. Developments will decrease weight, increase range, increase situational awareness, provide data, image processing, image filtering, determine wind speed, observe bullet trace, and sensor fusion to be able to detect, identify, classify and engage targets at greater ranges. Some efforts may be tied to Hyper-Enabled Operator (HEO).					
FY 2020 Plans: Continue development and testing of visual augmentation, laser devices, and begin development and testing of simulators to improve situational awareness, sharing of data/images, target acquisition, and training.					
FY 2021 Base Plans: Continues development and testing of visual augmentation, laser devices, and continues development and testing of simulators to improve situational awareness, sharing of data/images, target acquisition, and training.					
FY 2020 to FY 2021 Increase/Decrease Statement: Decrease of \$1.041 million is due to efficiencies gained in simulator development by combining new standards and protocols that will provide the architecture to integrate service common simulators into current SOCOM simulators.					
Accomplishments/Planned Programs Subtotals	1.054	3.212	2.171	-	2.171

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command			Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>	

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	470.285	335.992	260.733	32.573	293.306	276.972	282.592	285.664	286.725	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evolutionary acquisition and leveraging emerging technologies. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. Full and open competition; Contracts are a combination of five-year Firm Fixed Price Indefinite Delivery Indefinite Quantity (IDIQ) and small business set asides at several location; primarily via Naval Surface Warfare Center, Crane Contracting office, USSOCOM Contracting Office and other contracting offices.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Visual Augmentation Systems (VAS) Product Development (Laser and Optic)	C/CPFF	USSOCOM : Tampa, FL	9.161	1.054	Jan 2019	1.507	Apr 2020	1.000	Apr 2021	-		1.000	Continuing	Continuing	-
Visual Augmentation Systems (VAS) Product Development (Simulator)	C/CPFF	USSOCOM : Tampa, FL	-	-		1.493	Apr 2020	0.481	Apr 2021	-		0.481	Continuing	Continuing	-
Prior Year Overseas Contingency Operations (OCO)	C/CPFF	USSOCOM : Tampa, FL	2.667	-		-		-		-		-	0.000	2.667	-
Subtotal			11.828	1.054		3.000		1.481		-		1.481	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
VAS Test and Evaluation	C/CPFF	USSOCOM : Tampa, FL	0.495	-		-		-		-		-	Continuing	Continuing	-
VAS Optic Test and Evaluation	C/CPFF	USSOCOM : Tampa FL	-	-		0.106	Apr 2020	0.345	Apr 2021	-		0.345	Continuing	Continuing	-
VAS Laser Test and Evaluation	C/CPFF	USSOCOM : Tampa FL	-	-		0.106	Apr 2020	0.345	Apr 2021	-		0.345	Continuing	Continuing	-
Subtotal			0.495	-		0.212		0.690		-		0.690	Continuing	Continuing	N/A

Project Cost Totals	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
	12.323	1.054	3.212	2.171	-	2.171	Continuing	Continuing	N/A

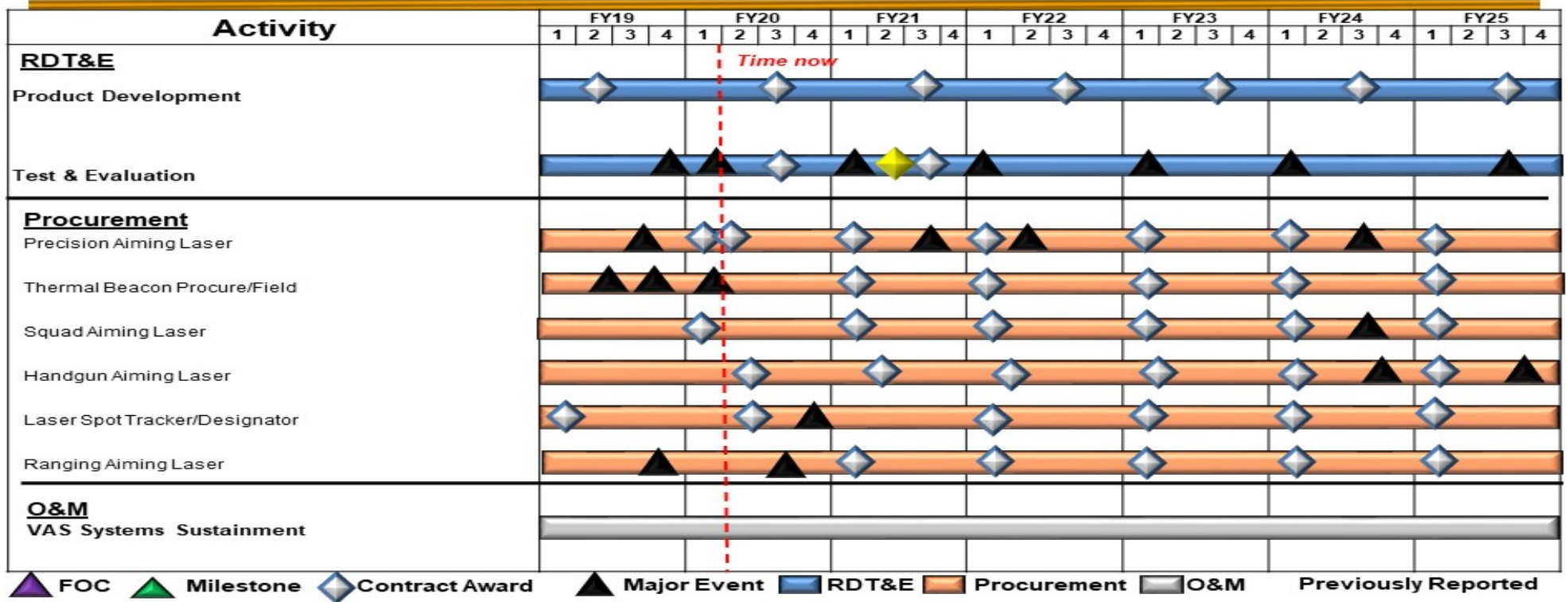
Remarks

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S395 / Visual Augmentation, Lasers and
Sensor Systems

Visual Augmentation Systems Laser PEO-Managed Schedule

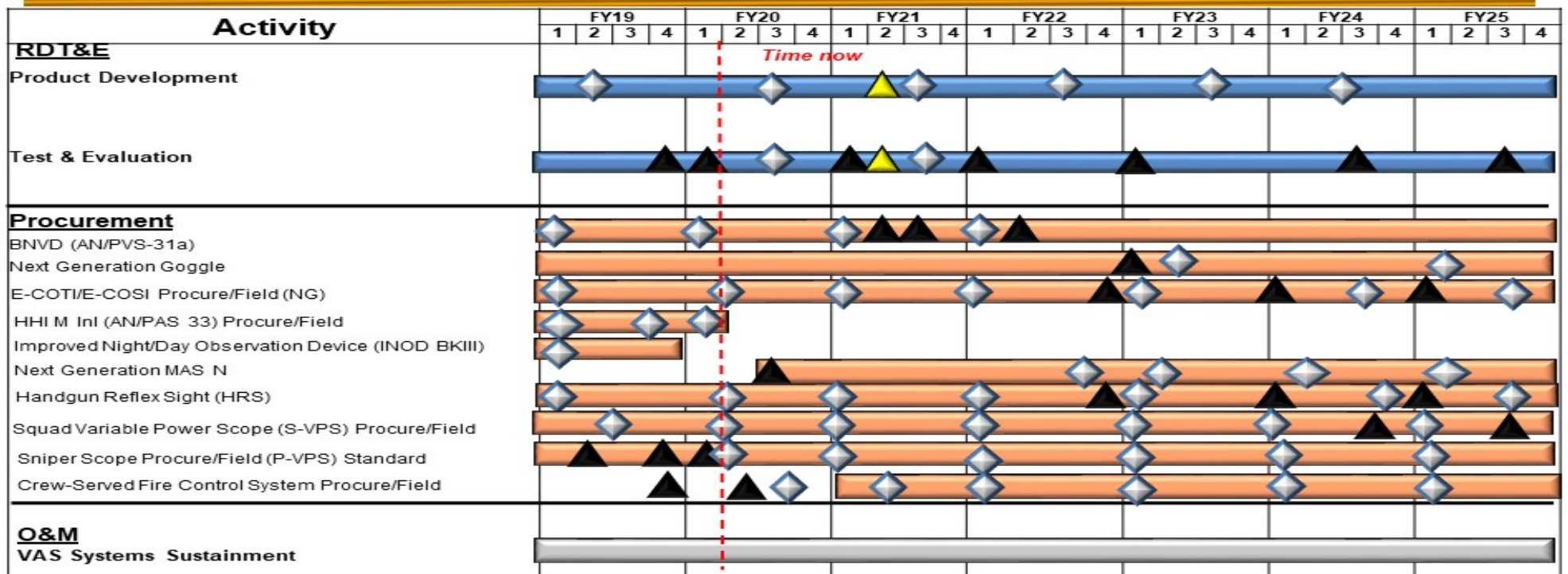


Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S395 / Visual Augmentation, Lasers and Sensor Systems

Visual Augmentation Systems Optic PEO-Managed Schedule

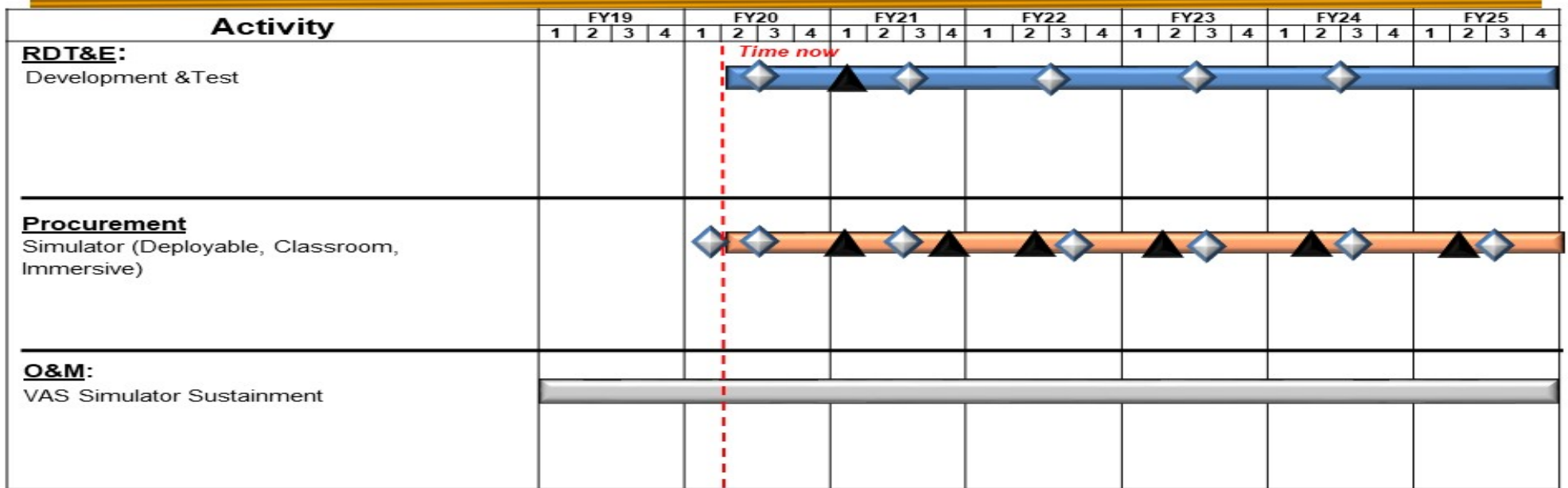


▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Major Event
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>

Visual Augmentation Systems Simulator PEO-Managed Schedule



▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Visual Augmentation Systems</i>				
VAS Optic Development and Test	1	2019	4	2025
VAS Laser Development and Test	1	2019	4	2025
VAS Simulator Development and Test	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
<i>S700: Communications Equipment and Electronics Systems</i>	30.937	13.340	17.359	26.435	-	26.435	21.709	21.250	21.720	22.154	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for communication systems to meet emergent requirements to support Special Operations Forces (SOF). Communications Equipment and Electronics Systems is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.

USSOCOM's C4 systems comprise an integrated network of systems providing positive command and control and the timely exchange of information to all organizational echelons. The C4 systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration within the Global Information Grid (GIG). The GIG is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Satellite Deployable Node (SDN)	9.241	9.327	10.641	-	10.641
<p>Description: SDN is a family of deployable, super high frequency, multi-band, Satellite Communications (SATCOM) systems providing the transport path for high-capacity, voice, data, Video Teleconferencing (VTC), and Full Motion Video (FMV) at all levels of classification. It consists of SDN subprograms, transport for intelligence variants, technology insertions and Capital Equipment replacement.</p> <p>FY 2020 Plans: Continue assessments, tests and evaluations for wide-band Communications-On-The-Move (COTM) maritime, ground mobile and airborne technologies. Complete assessments of reduction of Size, Weight and Power (SWAP) and SDN wireless network capabilities. Continue Evolutionary Technology Insertion (ETI) integration. Continue evaluation of High Throughput Satellite (HTS) constellations and terminals. Continue evaluation of resiliency of systems in a degraded communication environment. Continue the integration and testing of mobile technologies.</p> <p>FY 2021 Base Plans:</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
vulnerability assessments plus independent verification and validation. Acquisition efforts are structured for rapid, tailored development to counter adaptable emerging threats in all theaters of SOF sensitive missions. FY 2021 Base Plans: Continues segment development for the SPCOM enterprise; develops means and methods to provide near-term impact to operators. Continues development of anti-intrusion/anti-tamper capabilities. Continues extensive vulnerability assessments plus independent verification and validation. Acquisition efforts are structured for rapid, tailored development to counter adaptable emerging threats in all theaters of SOF sensitive missions. FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$3.185 million will fulfill additional Theater Special Operations Commands (TSOC) area and mission-specific tailored requirements for low-signature, threat-mitigated, and sensitive missions.					
Title: Mission Command System Common Operational Picture (MCS/COP) Description: MCS/COP provides shared situational awareness for Special Operations Forces Commanders across all domains at the tactical, operational, and strategic levels. The MCS/COP delivers a near-real time operational understanding of the intelligence and operational environment to support decision making. FY 2021 Base Plans: Begins rapid prototyping, product development, and operational testing and evaluation based upon dynamic and emergent operational requirements. FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$4.583 million is due to rapid development of a modular open systems architecture, which can fully integrate with Global Command and Control System (GCCS) - Joint, Distributed Common Ground Surface System (DCGS) - SOF Advanced Analytics, and the Tactical Assault Kit system.	-	-	4.583	-	4.583
Accomplishments/Planned Programs Subtotals	13.340	17.359	26.435	-	26.435

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems <\$5M</i>	470.285	335.992	260.733	32.573	293.306	276.972	282.592	285.664	286.725	Continuing	Continuing
• PROC/0204OTHER: <i>OTHER ITEMS <\$5M</i>	131.905	103.938	96.333	0.984	97.317	79.598	73.139	54.838	70.984	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

SDN is a fielded program with Evolutionary Technology Insertions (ETI) into all variants: Heavy, Medium, and Light, wide-band COTM, and Airborne Intelligence Surveillance Reconnaissance-Transport variants. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.

CIM has an evolutionary acquisition strategy to enhance its capability to meet the CA community's emerging requirements.

SPCOM is an evolutionary technology insertions effort to provide and support multiple field mission sets fully integrated with secure transports for complete end-to-end capabilities. In particular, rapid, phased prototyping is prioritized to both develop operationally-relevant prototypes but also to be flexible and agile in ensuring countermeasures against dynamically adapting special communication threats in all theaters. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.

MCS/COP employs an evolutionary strategy to incorporate the latest standards and technology in a next generation enterprise information system. Commercial and government agency sources will be leveraged for required certifications, system level integration, functional, and operational testing and evaluations.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S700 / Communications Equipment and Electronics Systems</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Satellite Deployable Node (SDN) Development	Various	Various : Various	6.962	4.520	Dec 2018	7.040	Mar 2020	5.321	Dec 2020	-		5.321	Continuing	Continuing	-
Civil Information Management Data Processing System (CIMDPS) Development	PO	SOF AT&L -KS : MACDILL AFB	1.795	-		0.016	Mar 2020	0.010	Mar 2021	-		0.010	Continuing	Continuing	-
Special Communications (SPCOM) Enterprise Capability Development	TBD	Various : Various	12.145	2.954	Mar 2019	6.650	Mar 2020	9.330	Mar 2021	-		9.330	Continuing	Continuing	-
SPCOM Technology Vulnerability Assessments	MIPR	MITRE : Bedford, MA	2.210	0.889	Dec 2018	1.026	Dec 2019	1.423	Dec 2020	-		1.423	Continuing	Continuing	-
Mission Command System Common Operational Picture (MCS/COP)	C/Various	Various : Various	-	-		-		2.292	Jan 2021	-		2.292	Continuing	Continuing	-
Subtotal			23.112	8.363		14.732		18.376		-		18.376	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SDN Market Research Evaluation and Testing	Various	Various : Various	6.440	4.721	Feb 2019	2.287	Apr 2020	5.320	Feb 2021	-		5.320	Continuing	Continuing	-
SPCOM Independent Verification and Validation	MIPR	MITRE : Bedford, MA	1.385	0.256	Dec 2018	0.340	Dec 2019	0.448	Dec 2020	-		0.448	Continuing	Continuing	-
Mission Command System Common Operational Picture (MCS/COP)	C/Various	Various : Various	-	-		-		2.291	Jan 2021	-		2.291	Continuing	Continuing	-
Subtotal			7.825	4.977		2.627		8.059		-		8.059	Continuing	Continuing	N/A

Project Cost Totals	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
	30.937	13.340	17.359	26.435	-	26.435	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command							Date: February 2020			
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>			Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>				
	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	

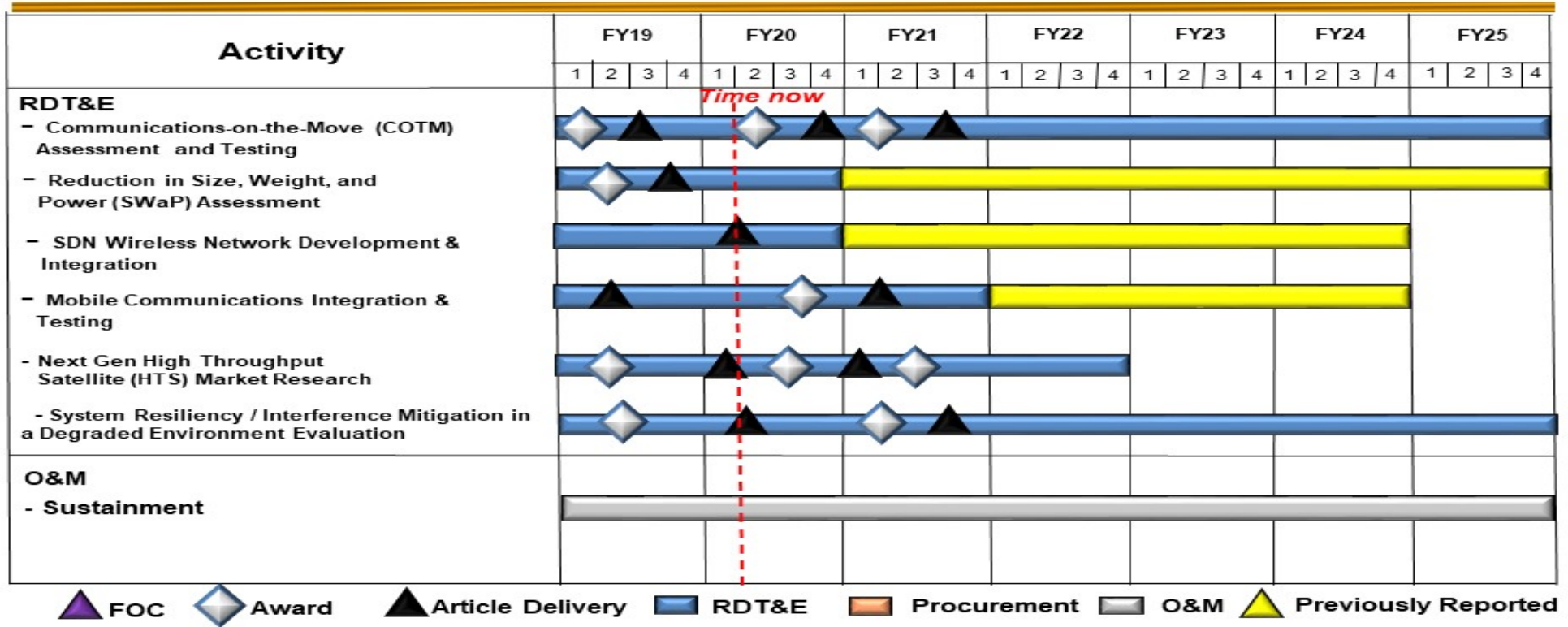
Remarks

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S700 / Communications Equipment and Electronics Systems

Satellite Deployable Node (SDN) PEO Managed Schedule

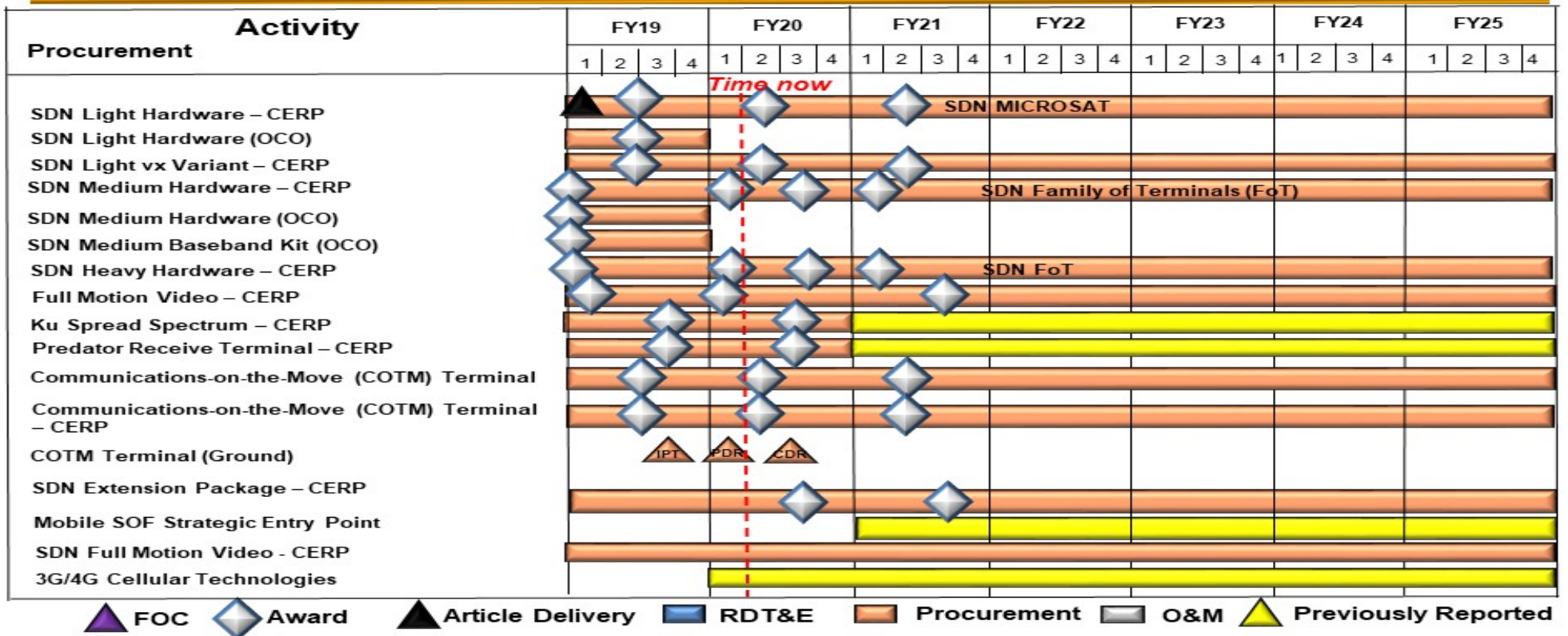


Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S700 / Communications Equipment and Electronics Systems

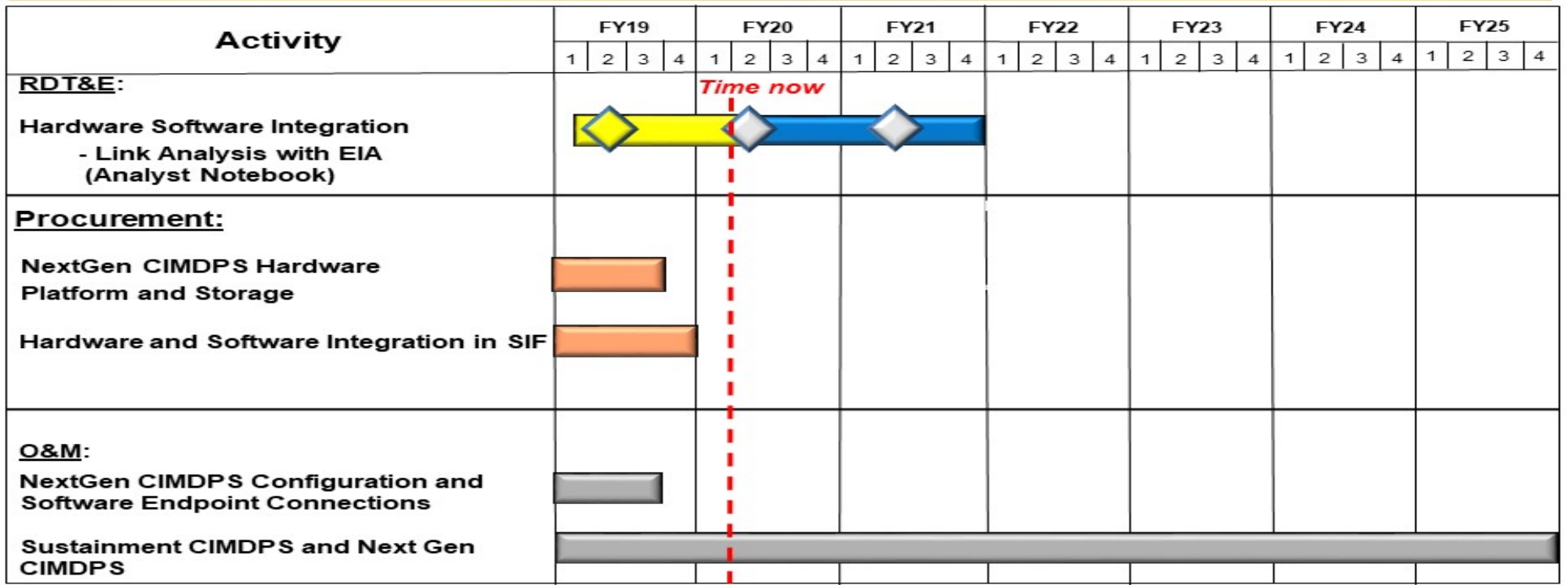
Satellite Deployable Node (SDN) PEO Managed Schedule (con't)



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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

Civil Information Management Data Processing System (CIMDPS) PEO Managed Schedule

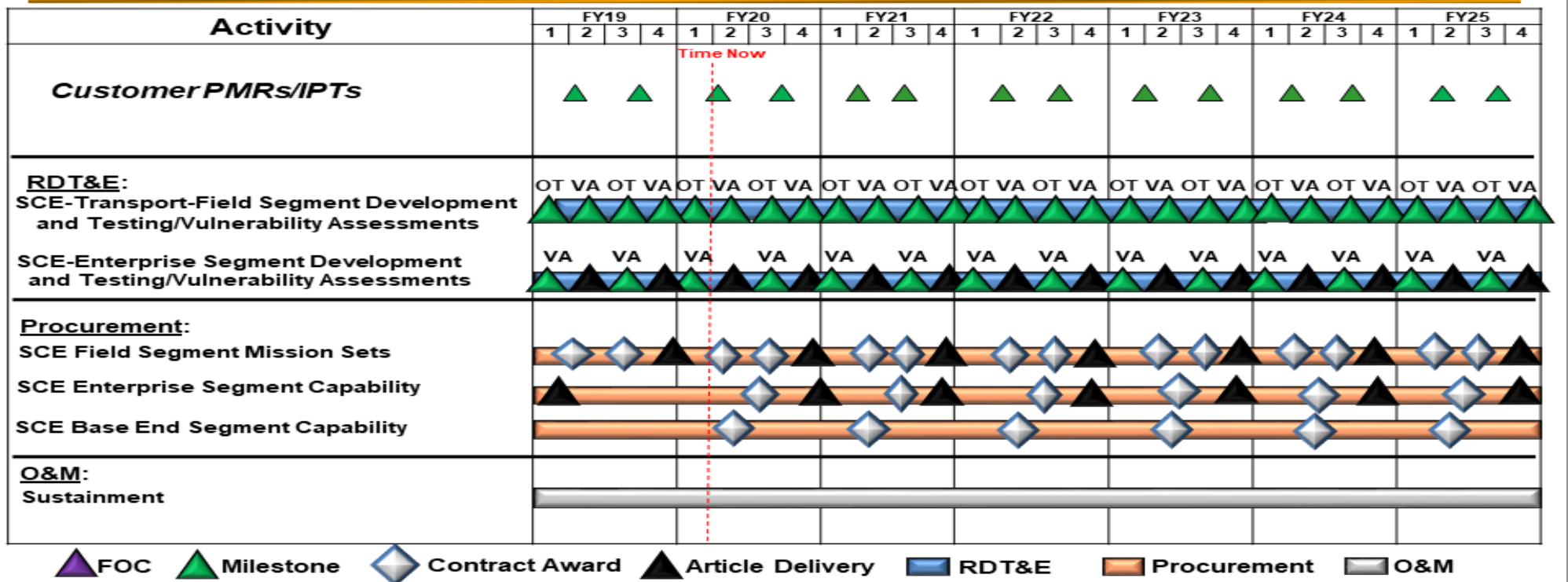


◊ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ▲ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

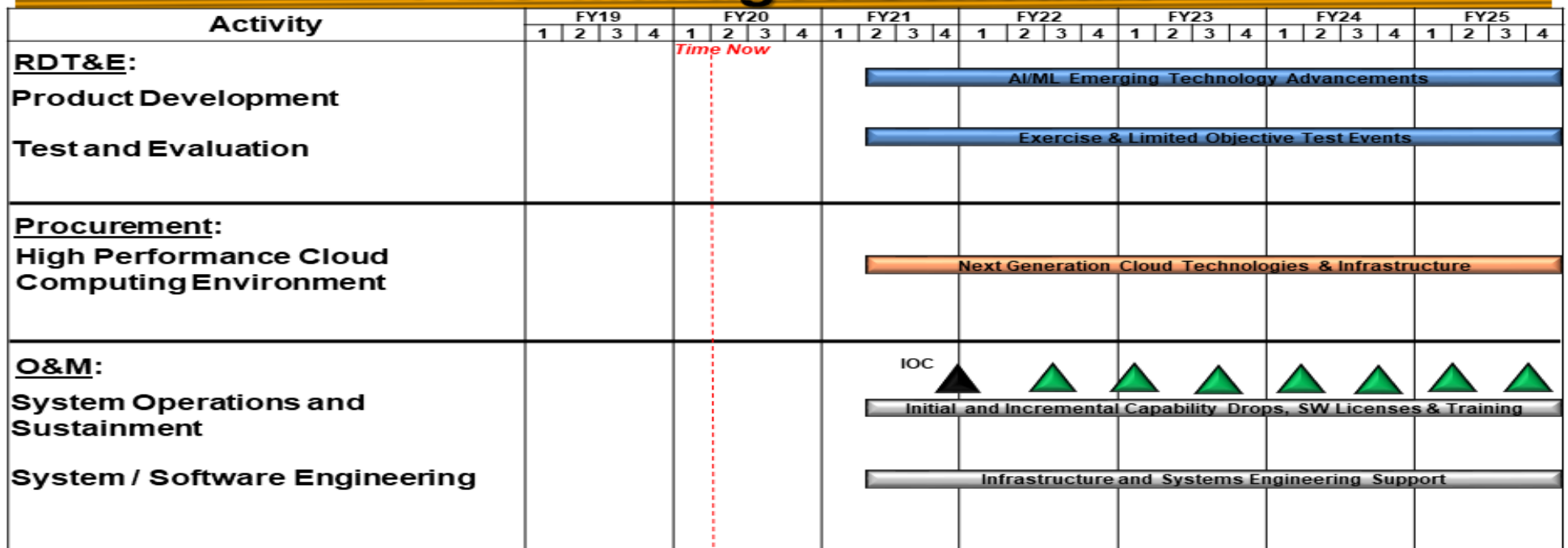
Special Communications Enterprise (SCE) PEO-Managed Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

Mission Command System/ Common Operational Picture (MCS/COP) PEO-Managed Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SOF Deployable Node (SDN)</i>				
Communications-on-the-Move (COTM) Assessment & Testing	1	2019	4	2025
Assess Reduction in Size, Weight, and Power (SWaP)	1	2019	4	2020
SDN Wireless Network Development & Integration	1	2019	4	2020
Mobile Communication Integration & Testing	1	2019	4	2021
Next Generation High Throughput Satellite Market Research	1	2019	4	2022
Evaluate System Resiliency / Interference Mitigation in Degraded Communications Environment Evaluation	1	2019	4	2025
<i>Civil Information Mmagemnt (CIM)</i>				
Hardware Software Integration	2	2020	4	2021
<i>Special Communications (SPCOM) Enterprise Program</i>				
Transport - Field Segment Kit Development and Testing / Vulnerability Assessments	1	2019	4	2025
Enterprise Segment Development and Testing / Vulnerability Assessments	1	2019	4	2025
<i>Mission Command System Common Operational (MCS/COP)</i>				
Product Development	2	2021	4	2025
Test and Evaluation	2	2021	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
<i>S710: Tactical Systems Development</i>	3.700	4.073	2.813	3.344	-	3.344	3.103	3.169	3.242	3.305	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized automation equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Tactical Local Area Network (TACLAN) Suites	4.073	2.813	3.344	-	3.344
Description: TACLAN provides SOF operational commanders and forward deployed forces advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The TACLAN consists of Suites, Mission Planning Kits, Field Computing Devices (FCD), and tactical work stations.					
FY 2020 Plans: Continue integration and testing of Evolutionary Technology Insertions (ETI) for TACLAN FCD and Network Management Suite upgrades. Continue Mobile Edge Computing capabilities for integration and assessment in the TACLAN Family of Systems. Completes the development of Tactical Secret Networking capabilities for integration and assessment.					
FY 2021 Base Plans: Continues integration and testing of ETIs for TACLAN FCD and Network Management Suite upgrades. Continues the development of Mobile Edge Computing capabilities for integration and assessment in the TACLAN Family of Systems.					
FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$0.531 million supports integration and testing for increased modularity in TACLAN FCD upgrades.					
Accomplishments/Planned Programs Subtotals	4.073	2.813	3.344	-	3.344

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204OTHER: <i>OTHER ITEMS <\$5M</i>	131.905	103.938	96.333	0.984	97.317	79.598	73.139	54.838	70.984	Continuing	Continuing

Remarks

D. Acquisition Strategy

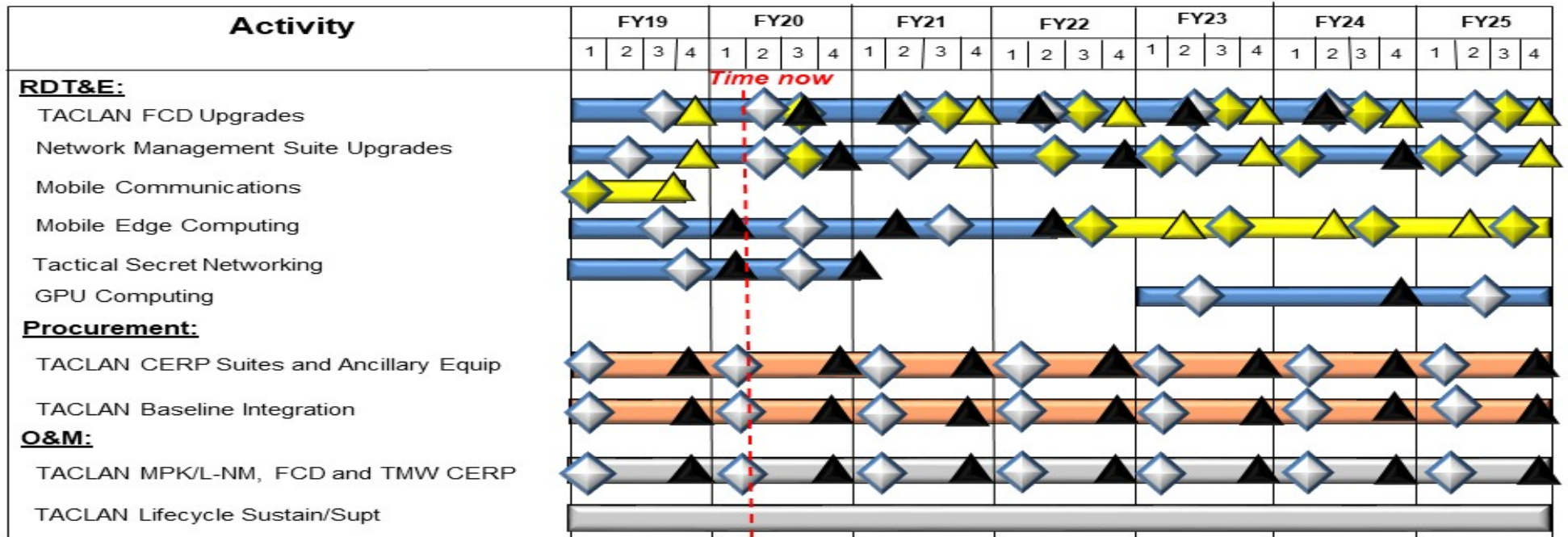
The TACLAN evolutionary acquisition strategy includes the use of commercial and government agency sources, that will be leveraged for required certifications, functional and operational test, and acceptance support.

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S710 / Tactical Systems Development

Tactical Local Area Network (TACLAN) PEO Managed Schedule



▲ FOC
 ◆ Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Tactical Local Area Network (TACLAN) Suites</i>				
TACLAN FCD Upgrades	1	2019	4	2025
Network Management Suite Upgrades	1	2019	4	2025
Mobile Edge Computing	1	2019	2	2022
Tactical Secret Networking	1	2019	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command										Date: February 2020		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S725 / <i>Tactical Radio Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
<i>S725: Tactical Radio Systems</i>	26.008	4.479	11.315	7.940	-	7.940	2.570	2.631	2.699	2.753	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project is for the development of all SOF tactical radio programs. Tactical Radios provide the critical Command, Control, and Communications (C3) link between SOF Commanders and SOF Teams conducting operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied foreign forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed Command and Control (C2) communications between operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: SOF Tactical Communications (STC)	4.408	10.642	7.253	-	7.253
Description: STC consists of Next-Generation SOF Communication Systems which replace most of the currently fielded SOF tactical radios. Capabilities include Real Time, Hostile and Friendly Force Information; Line of Sight (LOS) and Beyond LOS (BLOS) Communications; and access to Situational Awareness in the form of Intelligence Inputs, Broadcasts, and Networks.					
FY 2020 Plans: Continue A-Tactical Assault Kit (ATAK) development and integration. Continue Software Development Kit (SDK) and complete Wizard and Intelligence, Surveillance, and Reconnaissance (ISR) Mission Module (MM) development. Begin Engineering Change Proposal (ECP) for Next Generation Handheld (NGHH). Complete Next Generation Manpack (NGMP) test and evaluation. Continue High Frequency (HF) platform modernization incorporating two systems into a single Government-owned form factor that provides standard, and Low Probability Intercept/Detection (LPI/D) capabilities.					
FY 2021 Base Plans: Completes ATAK development and integration. Continues SDK Mission Module (MM) development. Continues ECP for NGHH. Continues High Frequency (HF) platform modernization incorporating two systems into a single Government-owned form factor that provides standard, anti-jam, and Low Probability Intercept/Detection (LPI/D) capabilities.					
FY 2020 to FY 2021 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S725 / Tactical Radio Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Decrease of \$3.389 million due to completion of ISR MM development and associated software development kit.					
Title: Blue Force Tracking (BFT)	0.071	0.673	0.687	-	0.687
Description: BFT is a family of devices used to remotely track and monitor SOF unit personnel. The capability enhances C2, threat warning, force protection, situational awareness, combat search and rescue, counter-fratricide, and battlefield visualization. This capability is unique to SOF because it requires the devices to be lightweight, portable, secure with a Low Probability of Intercept/Low Probability of Detection.					
FY 2020 Plans: Continue development and test of new capabilities in BFT equipment.					
FY 2021 Base Plans: Continues development and test of new capabilities in BFT equipment.					
FY 2020 to FY 2021 Increase/Decrease Statement: Increase of \$0.014 million to allow for rapid prototyping and additional product development focused on denied environments.					
Accomplishments/Planned Programs Subtotals	4.479	11.315	7.940	-	7.940

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	470.285	335.992	260.733	32.573	293.306	276.972	282.592	285.664	286.725	Continuing	Continuing

Remarks

D. Acquisition Strategy

- STC is a Commercial-Off-The-Shelf (COTS)/Non-Development Item program with Evolutionary Technology Insertions (ETIs). Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- BFT is a fielded program with evolutionary technology insertions leveraging commercial and other government agency sources for required certifications, functional and operational tests, and technology updates.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command

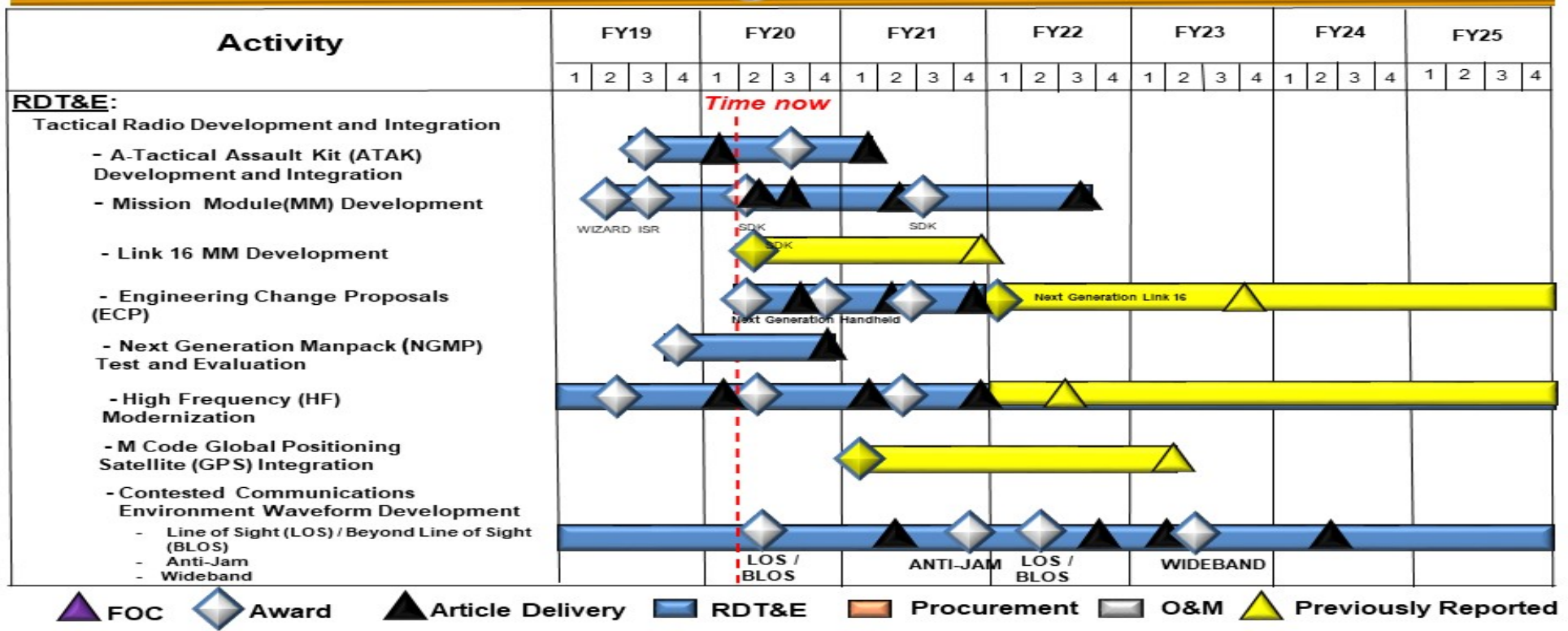
Date: February 2020

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S725 / Tactical Radio Systems

SOF Tactical Communications (STC)/ Next Generation Tactical Communications (NGTC) PEO Managed Schedule

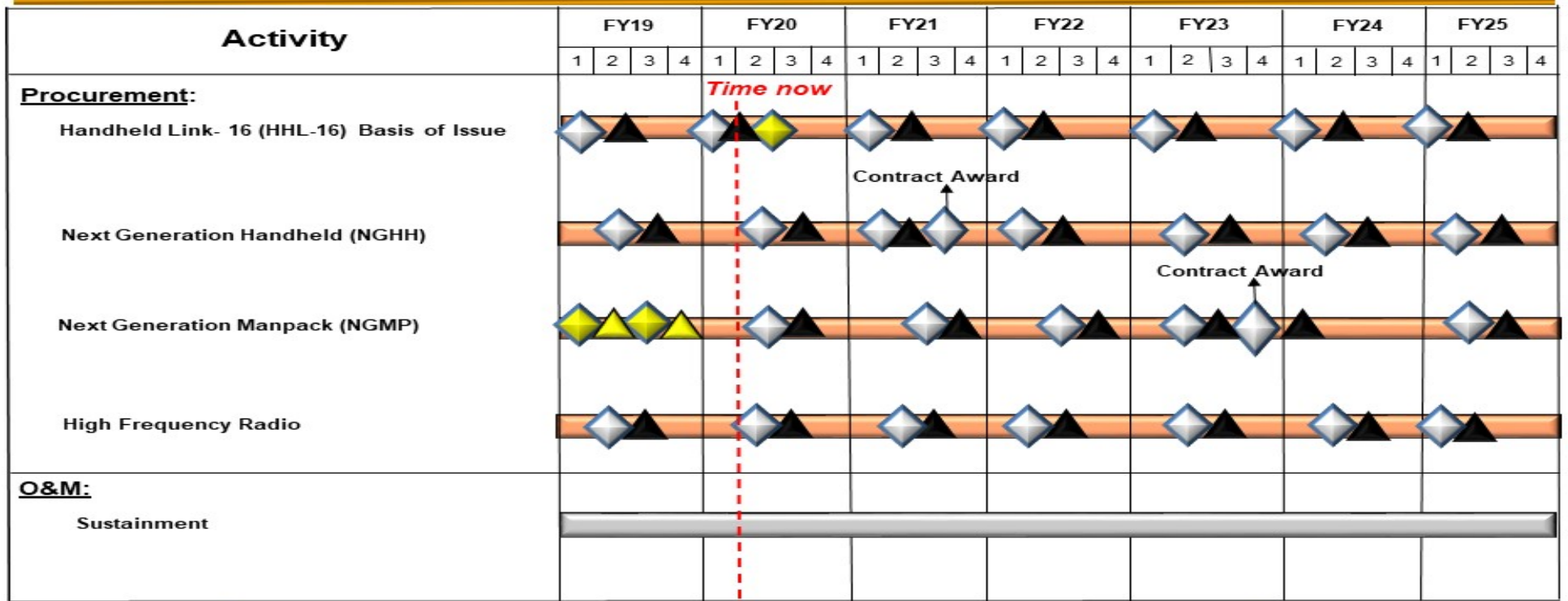


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Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command Date: February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S725 / Tactical Radio Systems
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STC/NGTC PEO Managed Schedule



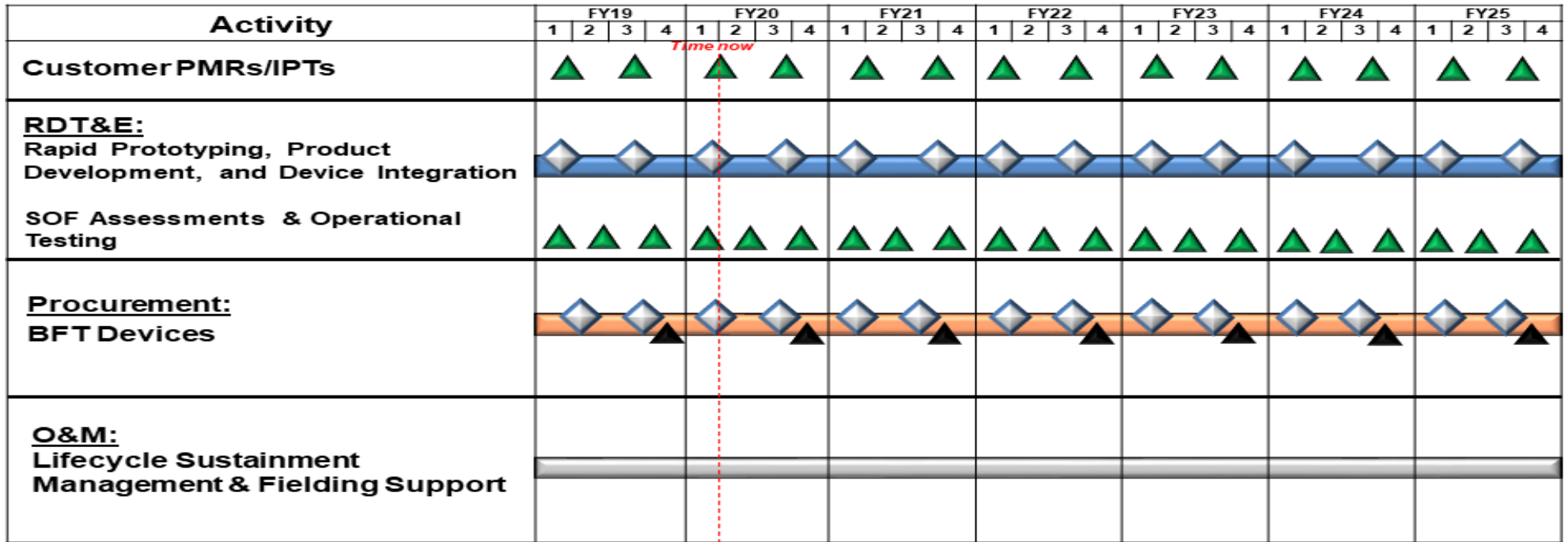
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 Previously Reported

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S725 / Tactical Radio Systems

Blue Force Tracking (BFT) PEO-Managed Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S725 / Tactical Radio Systems</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SOF Tactical Communications Radio</i>				
A-Tactical Assault Kit (ATAK) Development and Integration	3	2019	1	2021
Mission Module (MM) Development	2	2019	3	2022
Engineering Change Proposals (ECPs)	2	2020	4	2021
Next Generation (NGEN) Manpack (MP) Test and Evaluation	3	2019	4	2020
High Frequency (HF) Modernization	1	2019	4	2021
Contested Communications	1	2019	4	2025
<i>Blue Force Tracking</i>				
Rapid Prototyping, Product Development, and Device Integration	1	2019	4	2025
SOF Assessment & Operational Testing	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S800: <i>Munitions Advanced Development</i>	61.518	27.051	23.741	6.004	-	6.004	7.076	11.677	11.996	12.237	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds advanced engineering, operational system development and qualification efforts related to specialized munitions and equipment to meet the unique requirements of SOF.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Munitions Advanced Development	0.322	0.588	0.559	-	0.559
Description: The Munitions Advanced Development program provides for Insensitive Munitions (IM) technology development and evaluations that allow SOF munitions to pass testing which includes bullet impact, sympathetic detonation, fast cook off, slow cook off and shaped charge test. Testing is in accordance with the United States Special Operations IM Testing Plan. Munitions product improvements are tested in accordance with command priorities.					
FY 2020 Plans: Continue proof of concept development and IM testing on various munitions. Continue full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006).					
FY 2021 Base Plans: Continues proof of concept development and IM testing on various munitions. Continues full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006).					
FY 2020 to FY 2021 Increase/Decrease Statement: Net decrease of \$0.029 million is due to minor adjustments (-\$0.009 million) and funding was made available due to streamlining contract support efforts (-\$0.020 million).					
Title: Stand-Off Precision Guided Munitions (SOPGM)	9.245	-	3.155	-	3.155
Description: SOPGM provides for the integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms. This project received a congressional add in FY 2019.					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p><i>FY 2021 Base Plans:</i> Begins the engineering, integration and testing for SOPGMs guidance and control upgrades.</p> <p><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Increase of \$3.155 million to begin the engineering and integration for the munitions guidance and control upgrades.</p>					
<p><i>Title:</i> Precision Strike Systems (PSS)</p> <p><i>Description:</i> Guided Rocket Systems provides for the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms. PSS is designated a Middle Tier Acquisition (MTA) program which uses the rapid prototyping pathway and is executing using existing contracts, government agencies, and new contract competitively selected as appropriate.</p> <p><i>FY 2020 Plans:</i> Continue the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms.</p> <p><i>FY 2021 Base Plans:</i> Continues the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms.</p> <p><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Decrease of \$5.972 million is due to planned completions of system test and certification, and intended transition to procurement funding of the munition for the medium range precision strike munition.</p>	2.500	8.262	2.290	-	2.290
<p><i>Title:</i> Counter Unmanned Aerial System (C-UAS)</p> <p><i>Description:</i> SOF C-UAS enhances the SOF operator's ability to detect, identify, classify, locate, track, deter, defeat and exploit unmanned system threats. The funding in this program supports a Family of Systems (FoS) design, development, integration, rapid prototyping and test of cutting edge C-UAS sensor integration technologies that delivers and integrates various detection sensor modalities including, but not limited to, passive sensors, Radio frequency (RF) detection, acoustic, Light Detection and Ranging (LiDAR), radar, and Electro-Optical and Infrared (EO/IR). C-UAS is designated a MTA program which uses the rapid prototyping pathway and is executed using existing contracts, government agencies, and new contract competitively selected as appropriate.</p> <p><i>FY 2020 Plans:</i></p>	1.056	1.891	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Continue C-UAS System Integration Module (SIM) phase 2 prototype development and begin phase 3 integration of a High Velocity 40mm effector turret sensor. This capability provides kinetic Counter-Unmanned Aerial System (C-UAS) capabilities to the Warfighter. <i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> Decrease of \$1.891 million due to completion of development and evaluation of High Velocity 40mm High Explosive Air Bursting Ammunition.					
Accomplishments/Planned Programs Subtotals	13.123	10.741	6.004	-	6.004

	FY 2019	FY 2020
<i>Congressional Add:</i> SOPGM	13.928	13.000
<i>FY 2019 Accomplishments:</i> Continue integration and testing of Small Glide Munition (SGM) on SOF UAS platforms.		
<i>FY 2020 Plans:</i> Continue SGM UAS integration (\$3.000 million) and begin SGM collaborative strike enhancement (\$10.000 million) for SOPGM.		
Congressional Adds Subtotals	13.928	13.000

C. Other Program Funding Summary (\$ in Millions)						Cost To					
Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Complete	Total Cost
• PROC/0203ORDN: <i>Ordnance Items <\$5M</i>	417.346	412.244	186.197	105.355	291.552	188.013	185.499	251.376	232.940	Continuing	Continuing

Remarks

D. Acquisition Strategy
Munitions Advanced Development: Munitions and packaging redesign shall take place within government laboratories, as well as in industry, depending on the munitions. IM solutions shall be tested on a small scale for proof of principle. Planned product improvements are tested at Army, Navy, and Air Force test centers leveraging mid-tier acquisition authorities and Other Transaction Authorities (OTAs).

SOPGM: Integration and developmental testing of precision guided munitions will be conducted using government laboratories or industry partners depending on the munitions for various SOF platforms.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
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PSS: Integration and developmental testing of the launcher systems with follow-on government-led integration effort leveraging lessons learned from similar rapid integration efforts on other combat tested SOF platforms.

Counter Unmanned Aerial System (C-UAS): SOF C-UAS acquisition strategy utilizes MTA rapid prototyping to develop and integrate various advancing sensors with kinetic and non-kinetic capabilities. SOF Operators require C-UAS capability in mounted, dismounted and expeditionary fixed-site form factors. SOF C-UAS collaborates with the Joint Services, Academia and other government agencies to maintain interoperability and cost effectiveness. SOF C-UAS will continue to leverage the SOF-to-Service transition of proven capabilities.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Stand-off Precision Guided Munitions (SOPGM) MQ-9 Laser Small Diameter Bomb (LSDB)/Small Diameter Bomb (SDB) II Weapon Mount Hardware Development & Integration	SS/ Various	General Atomics : NY	3.157	7.105	Dec 2018	-		-		-		-	0.000	10.262	-
SOPGM MQ-9 LSDB Software Development & Integration	SS/ Various	Boeing : MO	1.700	1.040	Feb 2019	-		-		-		-	0.000	2.740	-
SOPGM Small Glide Munition (SGM)/MQ-1C Integration Congressional Plus Up	C/Various	Dynetics : AL	6.633	1.636	Jan 2019	-		-		-		-	0.000	8.269	-
SOPGM SGM/MQ-9 Integration Congressional Plus Up	C/Various	Dynetics : AL	-	5.901	Jan 2019	-		-		-		-	0.000	5.901	-
SOPGM SGM/MQ-9 Integration Overseas Contingency Operations (OCO)	C/Various	Dynetics : AL	-	-		2.000	Feb 2020	-		-		-	0.000	2.000	-
SOPGM SGM Collaborative Strike Enhancement OCO	C/Various	Dynetics : AL	-	-		7.000	Feb 2020	-		-		-	0.000	7.000	-
SOPGM SGM Griffin Guidance Control Development and Integration	SS/ Various	Various : Various	-	-		-		3.155	Jan 2021	-		3.155	Continuing	Continuing	-
Counter Unmanned Aerial System (C-UAS) SIM Phase II: Prototype Development	C/Various	Night Vision Labs : Ft. Belvoir, VA	-	1.056	Feb 2019	1.891	Nov 2019	-		-		-	0.000	2.947	-
Precision Strike Prototypes for Demonstration and Assessment	C/Various	Various : Various	-	0.400	Feb 2019	8.262	Nov 2019	0.500	Nov 2020	-		0.500	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command **Date:** February 2020

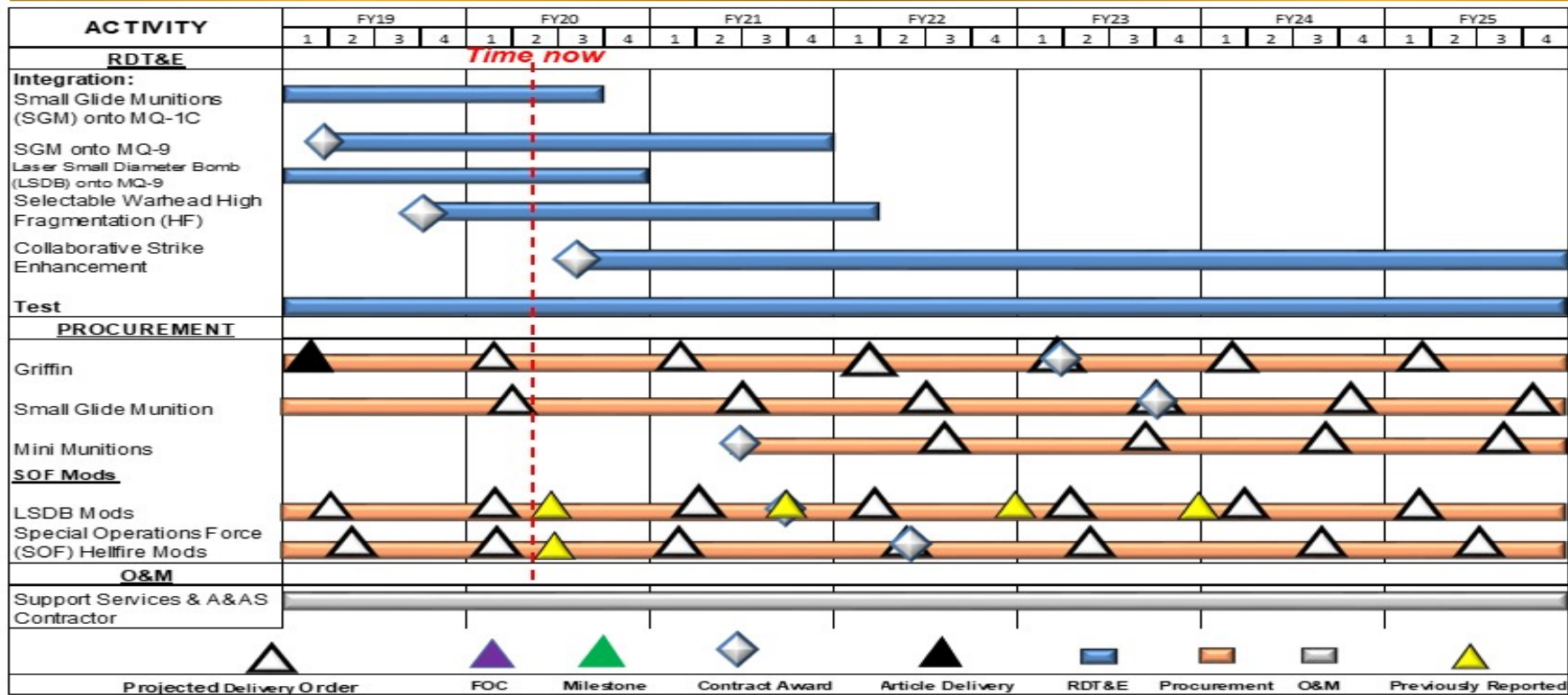
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Precision Strike Vehicle Mount and Engineering Assessment	C/Various	Various : Various	-	1.350	Feb 2019	-		1.000	Nov 2020	-		1.000	Continuing	Continuing	-
Prior Year	C/Various	Various : Various	36.541	-		-		-		-		-	0.000	36.541	-
Subtotal			48.031	18.488		19.153		4.655		-		4.655	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOPGM SGM Support Congressional Plus Up	C/Various	Dynetics : AL	4.754	3.115	May 2019	-		-		-		-	0.000	7.869	-
SOPGM SGM Support OCO	C/Various	Dynetics : AL	-	-		2.000	Mar 2020	-		-		-	0.000	2.000	-
Prior Year	C/Various	Various : Various	1.100	-		-		-		-		-	0.000	1.100	-
Subtotal			5.854	3.115		2.000		-		-		-	0.000	10.969	N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOPGM MQ-9 LSDB/SDB II Test	SS/TBD	Boeing : MO	-	0.694	May 2019	-		-		-		-	0.000	0.694	-
SOPGM MQ-9 LSDB/SDB II Test OCO	SS/TBD	Boeing : MO	-	0.406	May 2019	-		-		-		-	0.000	0.406	-
SOPGM SGM Test Congressional Plus Up	C/Various	Dynetics : AL	4.998	-		-		-		-		-	0.000	4.998	-
SOPGM SGM/MQ-1C Test Congressional Plus Up	C/Various	Dynetics : AL	-	1.638	May 2019	-		-		-		-	0.000	1.638	-
SOPGM SGM/MQ-9 Integration Congressional Plus Up	C/Various	Dynetics : AL	-	1.638	Dec 2019	-		-		-		-	0.000	1.638	-

Stand-Off Precision Guided Munitions (SOPGM) PEO-Managed Schedule

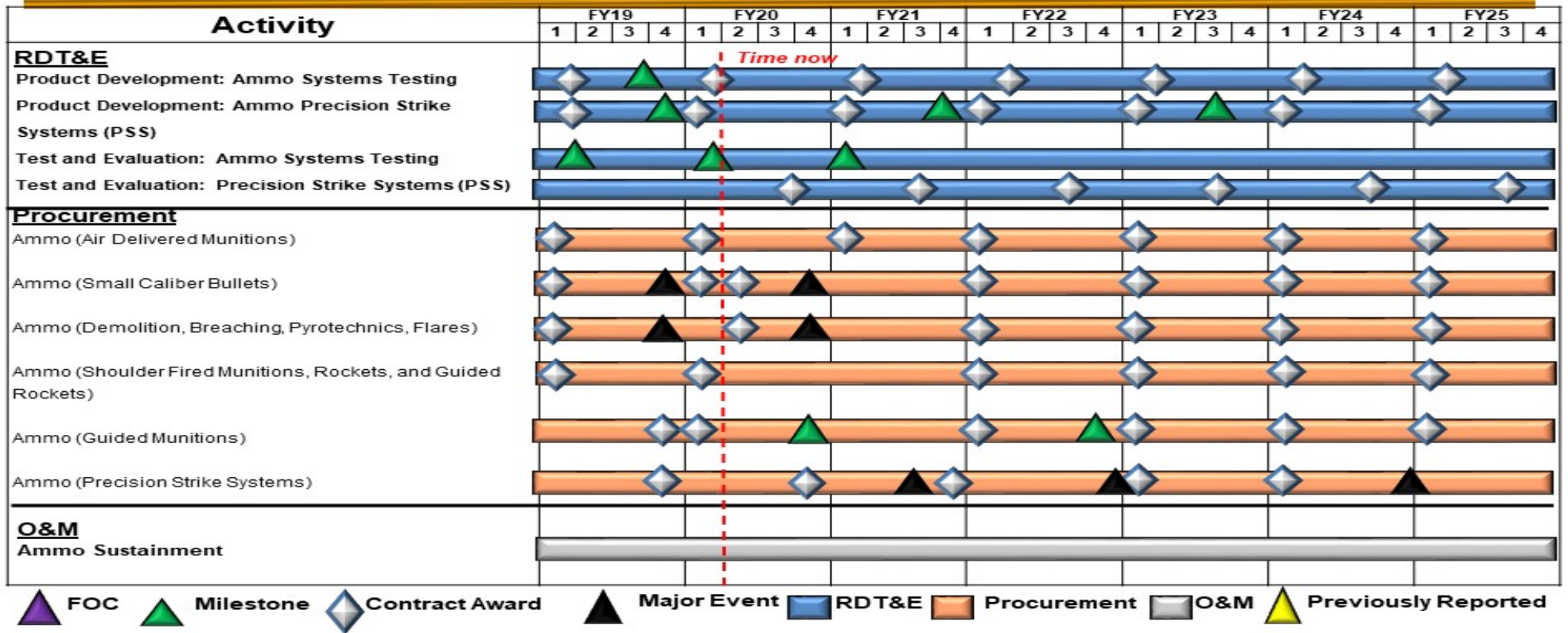


Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S800 / Munitions Advanced Development

Munitions (Ordnance Items <\$5M) PEO-Managed Schedule

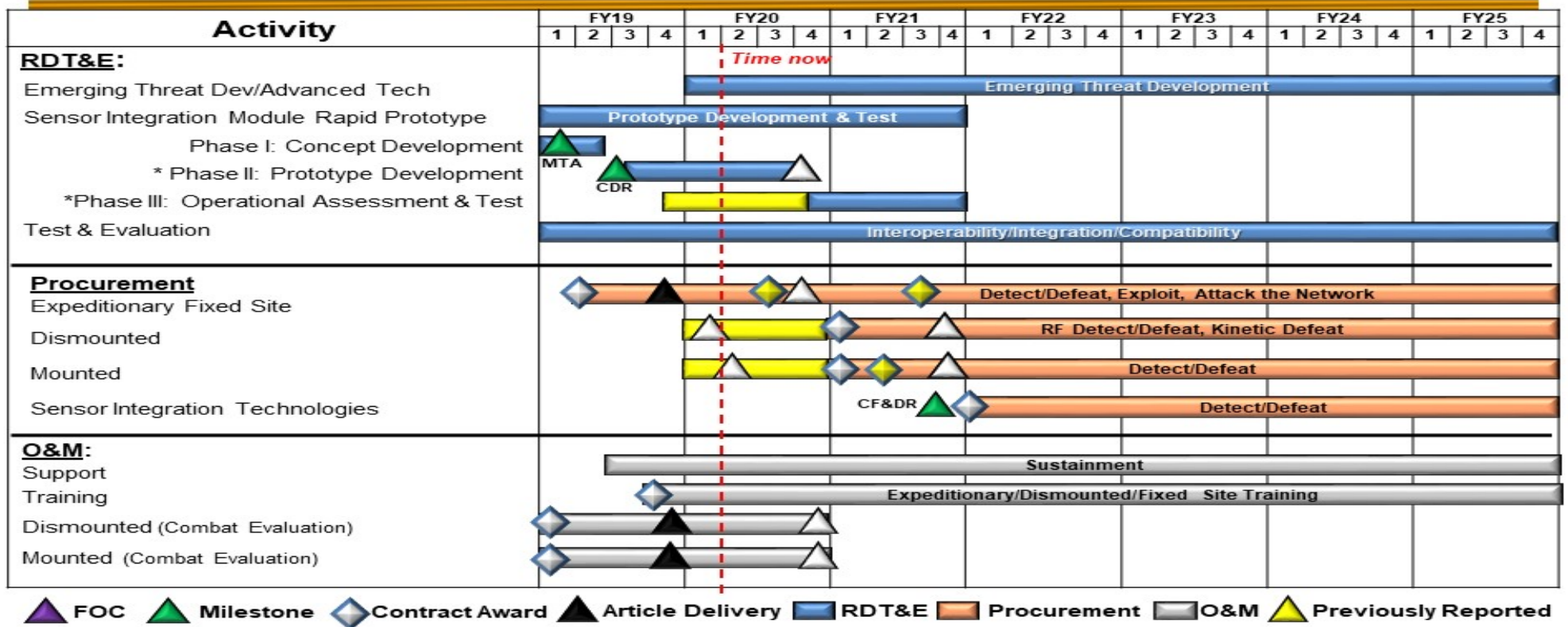


Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S800 / Munitions Advanced Development

Counter Unmanned Aerial Systems PEO-Managed Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command **Date:** February 2020

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Stand-off Precision Guided Munitions (SOPGM)</i>				
Small Glide Munitions (SGM) onto MQ-1C Integration	1	2019	3	2020
SGM onto MQ-9 Integration	2	2019	4	2021
Laser Small Diameter Bomb (LSDB) onto MQ-9 Integration	1	2019	4	2020
Selectable Warhead HellFire (HF) Integration	4	2019	1	2022
SGM Collaborative Strike Enhancement	2	2020	4	2025
SOPGM Testing	1	2019	4	2025
<i>Munitions (Ordnance Items)</i>				
Product Development: Ammo Systems Testing	1	2019	4	2025
Test and Evaluation: Ammo Systems Testing	1	2019	4	2025
Counter Unmanned Aerial Systems (C-UAS) SIM Phase II: Prototype Development	3	2019	4	2020
<i>Precision Strike System (PSS)</i>				
Product Development: Ammo Precision Strike System (PSS)	1	2019	4	2025
Test and Evaluation: PSS	1	2019	4	2025