Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army											Date: May 2021	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305206A *I Airborne Reconnaissance Systems*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	-	13.177	28.858	24.460	-	24.460	-	-	-	-	-	-
EH2: *EMARSS ADV DEV*	-	3.218	1.998	1.834	-	1.834	-	-	-	-	-	-
EH3: *EMARSS Payloads ADV DEV*	-	5.959	6.290	11.194	-	11.194	-	-	-	-	-	-
EH5: *ARL Payloads ADV DEV*	-	2.000	16.574	7.417	-	7.417	-	-	-	-	-	-
EH7: *Guardrail Common Sensor (GRCS) Payloads*	-	2.000	3.996	4.015	-	4.015	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Fiscal Year (FY) 2022 Direct War/Enduring Operations dollars in the amount of $5.278 million for Project EH3 will continue to support the Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT). Budget Item Justification is addressed in each Project.

The FY 2022 Direct War/Enduring Operations dollars in the amount of $4.140 million for Project EH5 will continue to support the Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 in accordance with the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV) , Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) Enabled workstations. ARL-E will be assigned to the U.S. Army Intelligence and Security Command's Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8). Budget Item Justification is addressed in each Project.

The RC-12X Guardrail Common Sensor (GRCS) is a fixed-wing, airborne COMINT and Electronic Intelligence (ELINT) collection and precision targeting location system. GRCS provides a persistent capability to detect, locate and classify/identify high value targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army INSCOM Aerial Exploitation Battalions providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. The

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army	Date: May 2021
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305206A *I Airborne Reconnaissance Systems*

Army's Acquisition Objective/Army's Procurement Objective is 19 RC-12X; seven (7) fielded to 3rd MI; and seven (7) fielded to the 204th MI, and five (5) trainers within TRADOC and INSCOM. Budget Item Justification is addressed in each Project.

GRCS is currently the most capable Army AISR system that currently provides SIGINT capabilities to support long range targeting of peer threats in an A2AD environment.

Research Development Technology & Evaluation (RDT&E) and procurement funding currently planned will address obsolescence issues for critical SIGINT and ELINT capabilities on the GRCS platform. These investments ensure GRCS AISR support in the A2AD environment is not impacted, which would prevent critical intelligence collection at large standoff which is needed to address long range targeting of peer threats and maintain system relevancy.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	13.177	28.858	21.386	-	21.386
Current President's Budget	13.177	28.858	24.460	-	24.460
Total Adjustments	0.000	0.000	3.074	-	3.074
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	3.074	-	3.074

Change Summary Explanation

FY 2022 Base Funds decrease on EH2 funding is for EMARSS Advanced Development
FY 2022 increase in funding supports the development of Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) modification (EH3) and development of Long Range Radar software enhancements (EH5).

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH2 / *EMARSS ADV DEV*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
EH2: *EMARSS ADV DEV*	-	3.218	1.998	1.834	-	1.834	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army INSCOM Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

This funding line supports non-recurring engineering (NRE), development of type certificates (TC), testing, integration of Modifications in Service of current or future EMARSS Army Aerial, Intelligence, Surveillance and Reconnaissance (AISR) systems. Funding provides for the integration of Department of Defense (DoD) mandated safety equipment to meet current and evolving International Standards and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. It also enhances aircraft communications, navigations and surveillance (CNS); aircraft survivability equipment (ASE) to include integration of Air Launched Effects onto Army fixed wing platforms; integration of AISR mission equipment package (MEP); as well as solving obsolescence issues and increasing commonality across EMARSS aircraft.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: Non-Recurring Engineering	3.218	1.998	1.834
Description: This funding line supports non-recurring engineering (NRE), development of type certificates (TC), testing, integration of Modifications in Service of current or future EMARSS Army Aerial, Intelligence, Surveillance and Reconnaissance (AISR) systems. Funding provides for the integration of Department of Defense (DoD) mandated safety equipment to meet current and evolving International Standards. It also enhances aircraft communications, navigations and surveillance (CNS); aircraft survivability equipment (ASE) to include integration of Air Launched Effects onto Army fixed wing platforms; integration of AISR mission equipment package (MEP); as well as solving obsolescence issues and increasing commonality across EMARSS aircraft. ***FY 2021 Plans:*** This funding line supports NRE, development of TC, testing and integration of Army AISR systems. Funding provides for the integration of DoD mandated safety equipment to meet current and evolving International Standards. It also enhances aircraft			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH2 / *EMARSS ADV DEV*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
CNS, ASE performance and the integration of the AISR MEP as well as obsolescence issues involved with the transition from QRC to POR in regards to platform survivability equipment such as the Navy AAR-47 changing to Army AAR-57, BFT to BFT-2 and the APX-123 Transponder to APX-119 Transponder. ***FY 2022 Plans:*** This funding line supports non-recurring engineering (NRE), development of type certificates (TC), testing, integration of Modifications in Service of current or future EMARSS Army Aerial, Intelligence, Surveillance and Reconnaissance (AISR) systems. Funding provides for the integration of Department of Defense (DoD) mandated safety equipment to meet current and evolving International Standards and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. It also enhances aircraft communications, navigations and surveillance (CNS); aircraft survivability equipment (ASE) to include integration of Air Launched Effects onto Army fixed wing platforms; integration of AISR mission equipment package (MEP); design and integration of Modular Open System Architecture (MOSA) onto Army fixed wing platforms as well as solving obsolescence issues and increasing commonality across EMARSS aircraft. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease reflects the successfully completed prior year NRE activities. The $1.834 million in FY2022 allows for completion of additional NRE efforts as listed in the FY 2022 Base Plan above.			
Accomplishments/Planned Programs Subtotals	3.218	1.998	1.834

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• A02112: *EMARSS SEMA MODS*	43.139	28.912	1.568	-	1.568	-	-	-	-	-	-
• AZ2054: *EMARSS PAYLOADS*	12.146	12.174	9.912	-	9.912	-	-	-	-	-	-
• EH3: *EMARSS Payloads ADV DEV*	5.959	6.290	11.194	-	11.194	-	-	-	-	-	-

Remarks

The EMARSS Research Development Technology & Evaluation (RDT&E) efforts are found in the following two project lines; 0305206AEH2 EMARSS ADV DEV (Fixed Wing Project Office) and 0305206AEH3 EMARSS Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting Aircraft Procurement Army (APA lines are A02112 (P-1 Line #23) for Fixed Wing and AZ2054 (P-1 Line #18) for Aerial Intelligence. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH2 / *EMARSS ADV DEV*

D. Acquisition Strategy

The acquisition strategy, supported by the EMARSS CPD, is to design, test and field 24 systems as well as provide enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); Communications Intelligence (COMINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar; line-of-site (LOS) and beyond line-of-site (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations. The EMARSS fleet of 24 systems will consist of the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH2 / *EMARSS ADV DEV*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO	RO	FW PO/ PM SAI : Huntsville, AL/ Aberdeen, MD	0.376	0.273	Jan 2020	0.160	Jan 2021	0.156	Jan 2022	-		0.156	0.000	0.965	-
		Subtotal	0.376	0.273		0.160		0.156		-		0.156	0.000	0.965	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Non-Recurring Engineeering (OEM Design)/FAA Testing and Certification	SS/CPFF	Textron : Wichita, KS	2.933	2.945	May 2020	1.838	May 2021	1.678	May 2022	-		1.678	0.000	9.394	-
		Subtotal	2.933	2.945		1.838		1.678		-		1.678	0.000	9.394	N/A

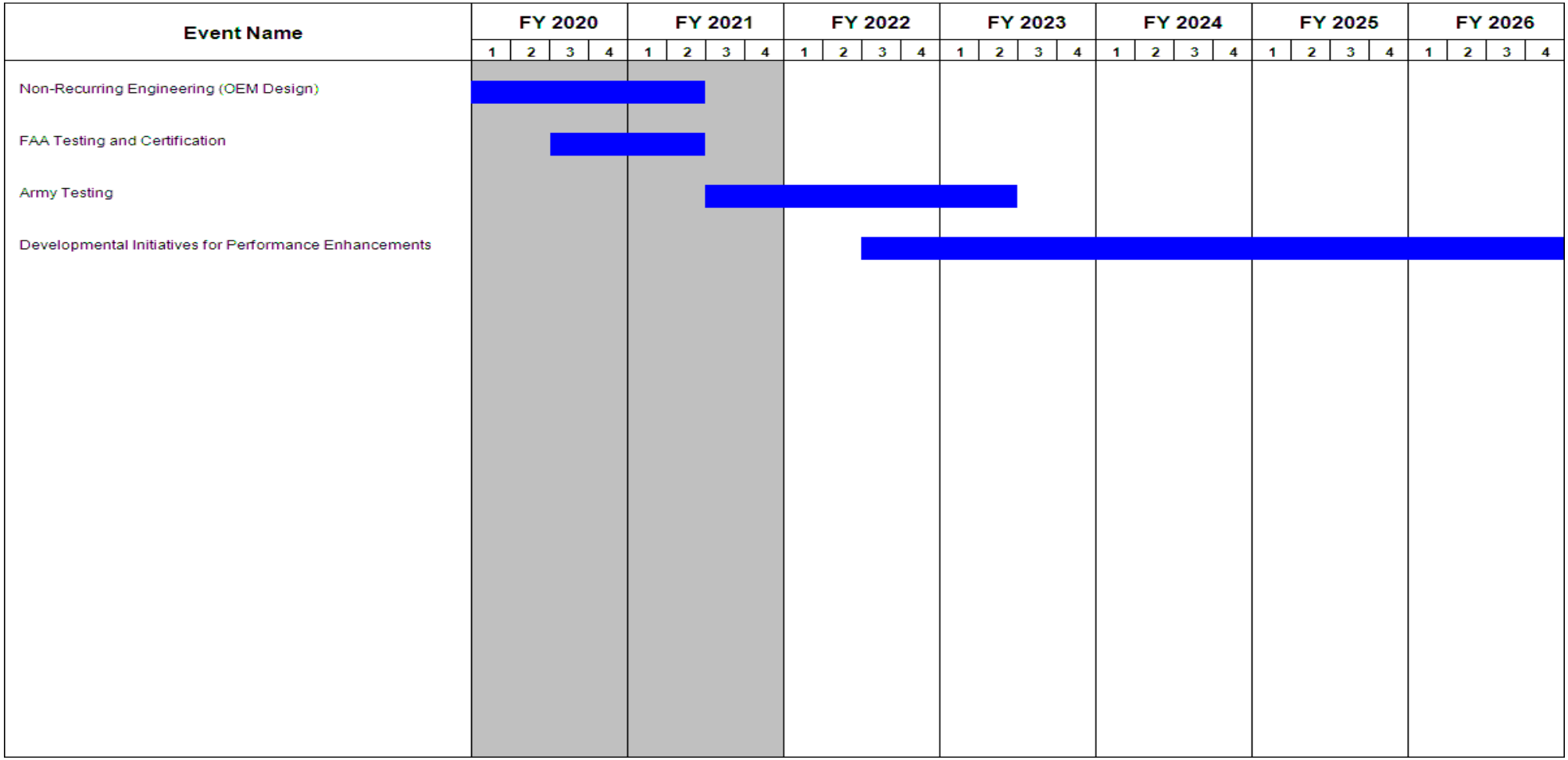
Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	MIPR	AFTD RTC : Eglin, AFB, FL	1.636	-		-		-		-		-	0.000	1.636	-
		Subtotal	1.636	-		-		-		-		-	0.000	1.636	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	4.945	3.218		1.998		1.834		-		1.834	0.000	11.995	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH2 / *EMARSS ADV DEV*



Note

FY20 $3.218 FY21 $1.998 FY22 $1.834 FY23 $2.023 FY24 $5.658 FY25 $18.711 FY26 $18.711

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH2 / *EMARSS ADV DEV*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Non-Recurring Engineering (OEM Design)	3	2019	2	2021
FAA Testing and Certification	3	2020	2	2021
Army Testing	3	2021	2	2023
Developmental Initiatives for Performance Enhancements	3	2022	4	2026

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH3 / *EMARSS Payloads ADV DEV*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
EH3: *EMARSS Payloads ADV DEV*	-	5.959	6.290	11.194	-	11.194	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the United States (U.S.) Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the U.S. Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

This funding line supports enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: Communications Intelligence (COMINT); Signals Intelligence (SIGINT); Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) Radar; Line-Of-Site (LOS) and Beyond Line-Of-Sight (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations.

Fiscal Year (FY) 2022 Base funding of $5.038 million continues the development of SIGINT server software and sensor enhancements. These enhancements are accomplished through SIGINT software porting and development of new SIGINT software focusing on resource management and emerging signals of interest applicable in a peer environment. This continued development effort leverages previous SIGINT server investments by PM SAI and other services facilitating rapid and continuous integration of capabilities targeting emerging signal sets and threats. This SIGINT development work will continue to address new threats as they emerge.

FY 2022 Direct War/Enduring Operations funding of $5.278 million provides peer readiness and mitigates ongoing sensor sub-component obsolescence impacting the Enhanced Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) Sensor Systems. This funding will begin the development of upgraded extended range antenna and associated signal processor to provide increased effective range and target processing. This sensor development work will continue through FY 2025.

FY 2022 Base funding of $0.878 million provides sensor engineering and program management office support.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: EMARSS - Sensor Enhancement	5.826	5.706	5.038

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH3 / *EMARSS Payloads ADV DEV*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Description: Enhancement of EMARSS JADO SIGINT capabilities to decrease target identification time, increase probability of intercept, and increased signal simultaneity. Efforts include software porting and design analysis of modular open system architecture. ***FY 2021 Plans:*** Continue sensor software updates to develop the next generation SIGINT capability and improve performance in a near peer environment to integrate capabilities developed by other programs. ***FY 2022 Plans:*** Continues sensor software updates to develop the next generation SIGINT capability and improve performance in a near peer environment to integrate capabilities developed by other programs. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease from FY 2021 to FY 2022 due to shift in program priority towards development of Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) modification efforts.			
Title: EMARSS - Synethetic Aperture Radar / Moving Target Indicator (SAR/MTI) ***Description:*** Efforts include development of upgraded Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) extended range antenna and associated signal processor to provide increased effective range and target processing. ***FY 2022 Plans:*** Begins development of Synthetic Aperture Radar (SAR) / Moving Target Indicator (MTI) modification due to VaDER obsolescence and to increase range for improved JADO mission relevancy. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Funding provided to begin development of SAR/MTI due to VaDER obsolescence.	-	-	5.278
Title: EMARSS - Sensor Engineering Support ***Description:*** Matrix engineering support for sensor enhancements. ***FY 2021 Plans:*** Continue matrix government engineering support for sensor enhancements. ***FY 2022 Plans:***	0.083	0.310	0.588

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH3 / *EMARSS Payloads ADV DEV*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Continue matrix government engineering support for sensor enhancements and provides engineering support required for SAR/ MTI development efforts. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase from FY 2021 to FY 2022 due to engineering support required to continue software updates and begin SAR/MTI development.			
Title: Program Management Support ***Description:*** Program Management Office (PMO) support and travel, as well as Systems Engineering and Technical Assistance (SETA) support. ***FY 2021 Plans:*** Continue Program Management Office government support and SETA support. ***FY 2022 Plans:*** Continue Program Management Office government support and SETA support. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase from FY 2021 to FY 2022 due to program support required to continue software updates and begin SAR/MTI development.	0.050	0.274	0.290
Accomplishments/Planned Programs Subtotals	5.959	6.290	11.194

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• A02112: *EMARSS SEMA MODS*	43.139	28.912	1.568	-	1.568	-	-	-	-	-	-
• AZ2054: *EMARSS PAYLOADS*	12.146	12.174	9.912	-	9.912	-	-	-	-	-	-
• EH2: *EMARSS ADV DEV*	3.218	1.998	1.834	-	1.834	-	-	-	-	-	-

Remarks

The EMARSS Research Development Technology & Evaluation (RDT&E) efforts are found in the following two (2) project lines; 0305206AEH2 EMARSS ADV DEV (Fixed Wing Project Office) and 0305206AEH3 EMARSS Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting procurement lines are A02112 and AZ2054. AZ2054 funding supports subsequent procurement and integration of the RDTE funded sensor enhancements. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH3 / *EMARSS Payloads ADV DEV*

D. Acquisition Strategy

The acquisition strategy, supported by the EMARSS CPD, is to provide enhancements to the following sensor capabilities in order to maintain relevancy to the Warfighter: EO/IR FMV; COMINT; WAAS; LiDAR and improved SAR/MTI radar; LOS and BLOS communications; and PED supporting two DCGS-A enabled operator workstations. The EMARSS fleet of 24 systems consists of the following variants: eight EMARSS-G (Geo-INT); four EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight EMARSS-M (Multi-INT); and four EMARSS-S (SIGINT).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH3 / *EMARSS Payloads ADV DEV*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO	C/CR	PEO IEW&S, PM SAI : APG, MD	0.827	0.050	Jul 2020	0.274	Nov 2020	0.290	Nov 2021	-		0.290	Continuing	Continuing	-
		Subtotal	0.827	0.050		0.274		0.290		-		0.290	Continuing	Continuing	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LiDAR sensor enhancement	SS/CPFF	JHU APL : Laurel, MD	1.500	-		-		-		-		-	0.000	1.500	-
AWAPSS sensor enhancement	C/CPIF	BAE : Nashua, CT	0.200	-		-		-		-		-	0.000	0.200	-
SIGINT sensor enhancement	C/CPFF	CACI/Boeing : APG, MD	0.114	-		-		-		-		-	0.000	0.114	-
SIGINT sensor enhancement	C/CPFF	Lockheed Martin Integrated Systems : Marlton, NJ	0.948	-		-		-		-		-	0.000	0.948	-
Advanced LiDAR Development	SS/CPFF	Johns Hopkins University Applied Physics Laboratory, LLC : Laurel, Md	7.424	-		-		-		-		-	0.000	7.424	-
SIGINT Sensor Enhancement	C/CPFF	AASKI : Tinton Falls, NJ	-	5.826	Jan 2020	5.706	Dec 2020	5.038	Jan 2022	-		5.038	Continuing	Continuing	-
SAR/MTI Development	C/CPFF	AASKI : Tinton Falls, NJ	-	-		-		5.278	Feb 2022	-		5.278	Continuing	Continuing	-
		Subtotal	10.186	5.826		5.706		10.316		-		10.316	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH3 / *EMARSS Payloads ADV DEV*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Government Engineering Support	MIPR	CCDC : APG, MD	0.390	0.083	Mar 2020	0.310	Dec 2020	0.588	Dec 2021	-		0.588	Continuing	Continuing	-
Contractor Engineering Support	C/CPFF	BAH : APG, MD	0.776	-		-		-		-		-	0.000	0.776	-
		Subtotal	1.166	0.083		0.310		0.588		-		0.588	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Government Testing	MIPR	CFA : Lakehurst, NJ	0.125	-		-		-		-		-	0.000	0.125	-
		Subtotal	0.125	-		-		-		-		-	0.000	0.125	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	12.304	5.959		6.290		11.194		-		11.194	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH3 / *EMARSS Payloads ADV DEV*

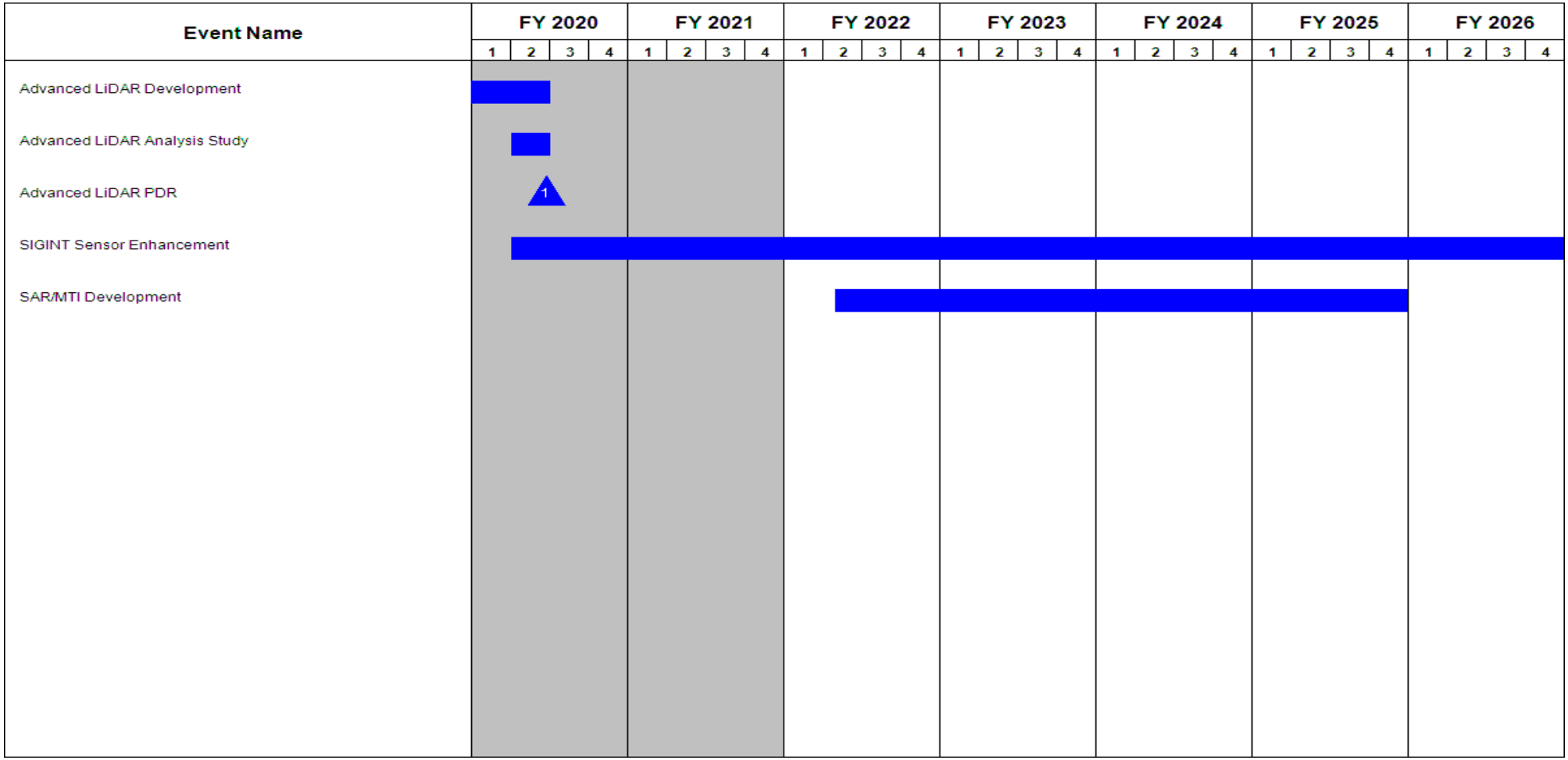


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH3 / *EMARSS Payloads ADV DEV*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
QRC to EMARSS POR Modification and Conversion	2	2015	4	2019
EMARSS Fielding	3	2017	4	2019
Advanced LiDAR Development	2	2018	2	2020
Advanced LiDAR Analysis Study	2	2020	2	2020
Advanced LiDAR PDR	2	2020	2	2020
SIGINT Sensor Enhancement	2	2020	4	2026
SAR/MTI Development	2	2022	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army											Date: May 2021	
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*				Project (Number/Name) EH5 / *ARL Payloads ADV DEV*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
EH5: *ARL Payloads ADV DEV*	-	2.000	16.574	7.417	-	7.417	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV) , Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) Enabled workstations. ARL-E will be assigned to the United States (U.S.) Army Intelligence and Security Command's Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine. The Mission Equipment Package (MEP) objective is eight.

Fiscal Year (FY) 2022 Base funding of $5.253 million will fund the continued the new signal enhancement development efforts for Signals 3 and Signal 4 to enhance the COMINT collection capabilities including lab and flight test to meet the requirements in the ARL-E CPD.

Fiscal Year (FY) 2022 Direct War/Enduring Operations funding of $2.164 million will fund the development of the Long Range Radar software enhancements, to include deep sea state to allow better collection of targets in water, and to increase combat effectiveness in contested environments and improve capability to detect and locate advanced targets.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2020**	**FY 2021**	**FY 2022**
Title: New Signals (COMINT/Software Upgrades)	2.000	16.574	7.417
Description: To develop software for Signals 1, 3, 4, 5, and 6.			
FY 2021 Plans: FY 2021 Base funding of $0.999 million will continue to fund the new signal enhancement development effort to continue development of Signal 3. This funding line supports continued software development to enhance COMINT collection capabilities to effectively prosecute high priority and emerging modern signal emitters.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH5 / *ARL Payloads ADV DEV*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Fiscal Year (FY) 2022 Base funding of $5.253 million will fund the continued the new signal enhancement development efforts for Signals 3 and Signal 4 to enhance the COMINT collection capabilities including lab and flight test to meet the requirements in the ARL-E CPD. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** New Signals Development and Long Rang Radar Software Enhancement efforts were previously funded in FY21 with BEDI OCO dollars ($15.575M) and Base dollars ($0.999M). The New Signals Development funding has decreased and moved to the Base in FY22.			
Accomplishments/Planned Programs Subtotals	2.000	16.574	7.417

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• AZ2050: *ARL PAYLOADS*	77.895	78.561	81.989	-	81.989	-	-	-	-	-	-
• DX9: *National Integration To Tactical Systems*	4.490	4.219	2.796	-	2.796	-	-	-	-	-	-
• A02109: *A02109*	12.294	9.796	-	-	-	-	-	-	-	-	-
• A02110: *ARL SEMA MODS*	6.566	9.598	9.437	-	9.437	-	-	-	-	-	-

Remarks

The ARL-E Research Development Technology & Evaluation (RDT&E) efforts are found in the following two (2) project lines; 0305206AEH4 ARL ADV DEV (Fixed Wing Project Office) and 0305206AEH5 ARL Payloads ADV DEV (Project Manager Sensors - Aerial Intelligence). The supporting procurement lines are A02110 and AZ2050. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

D. Acquisition Strategy

ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E CPD requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), EO/IR FMV, COMINT, on-Board Collection, Analysis, Sensor Cross Cue and dissemination through DCGS-A Enabled workstations. This includes software development to enhance COMINT collection capabilities. The software will be added to existing COMINT systems to effectively prosecute high priority and emerging modern signal emitters.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH5 / *ARL Payloads ADV DEV*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	TBD	PM SAI : Aberdeen Proving Ground, MD	0.260	-		-		-		-		-	0.000	0.260	-
		Subtotal	0.260	-		-		-		-		-	0.000	0.260	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
New Signals (COMINT/ Software Upgrades)	C/CPFF	Boeing Argon : Mountain View, CA	38.968	2.000	Jan 2020	12.575	Jan 2021	3.253	Jan 2022	-		3.253	0.000	56.796	-
Radar Software Electronic Protection Measures/ Enhancements	SS/CPFF	Northrup Grumman : Baltimore, MD	-	-		1.799	Nov 2020	1.964	Nov 2021	-		1.964	0.000	3.763	-
		Subtotal	38.968	2.000		14.374		5.217		-		5.217	0.000	60.559	N/A

Remarks

New Signals Contract: W56KGY-16-D-0001/ 0006. Fiscal Year (FY) 2022 Base funding of $3.253 million continues the new signal enhancement development effort for Signal 3 and 4. This funding line supports continued software development to enhance COMINT collection capabilities to effectively prosecute high priority and emerging modern signal emitters.

Radar Development Contract: W56KGY-20-D-0012. Fiscal Year (FY) 2022 Base funding of $1.964 million starts the development of LRR software enhancements, to include deep sea state to allow better collection of targets in water, and to increase combat effectiveness in contested environments and improve capability to detect and locate advanced targets.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support to New Signals (COMINT/Software Upgrades)	C/CPFF	Boeing Argon : Mountain View, CA	10.690	-		2.000	Jan 2021	2.000	Jan 2022	-		2.000	0.000	14.690	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH5 / *ARL Payloads ADV DEV*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Radar Software Electronic Protection Measures/ Enhancements	SS/CPFF	Northrup Grumman : Batlimore, MD	-	-		0.200	Nov 2020	0.200	Nov 2021	-		0.200	0.000	0.400	-
		Subtotal	10.690	-		2.200		2.200		-		2.200	0.000	15.090	N/A

Remarks

New Signals Contract: W56KGY-16-D-0001/ 0006. Fiscal Year (FY) 2022 Base funding of $2.000 million completes the lab and flight test for Signal 3 and 4 to meet the requirements in the ARL-E CPD.
Radar Development Contract: W56KGY-20-D-0012. Fiscal Year (FY) 2022 Base funding of $0.200 million starts the lab and flight test for software enhancements.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	49.918	2.000		16.574		7.417		-		7.417	0.000	75.909	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH5 / *ARL Payloads ADV DEV*

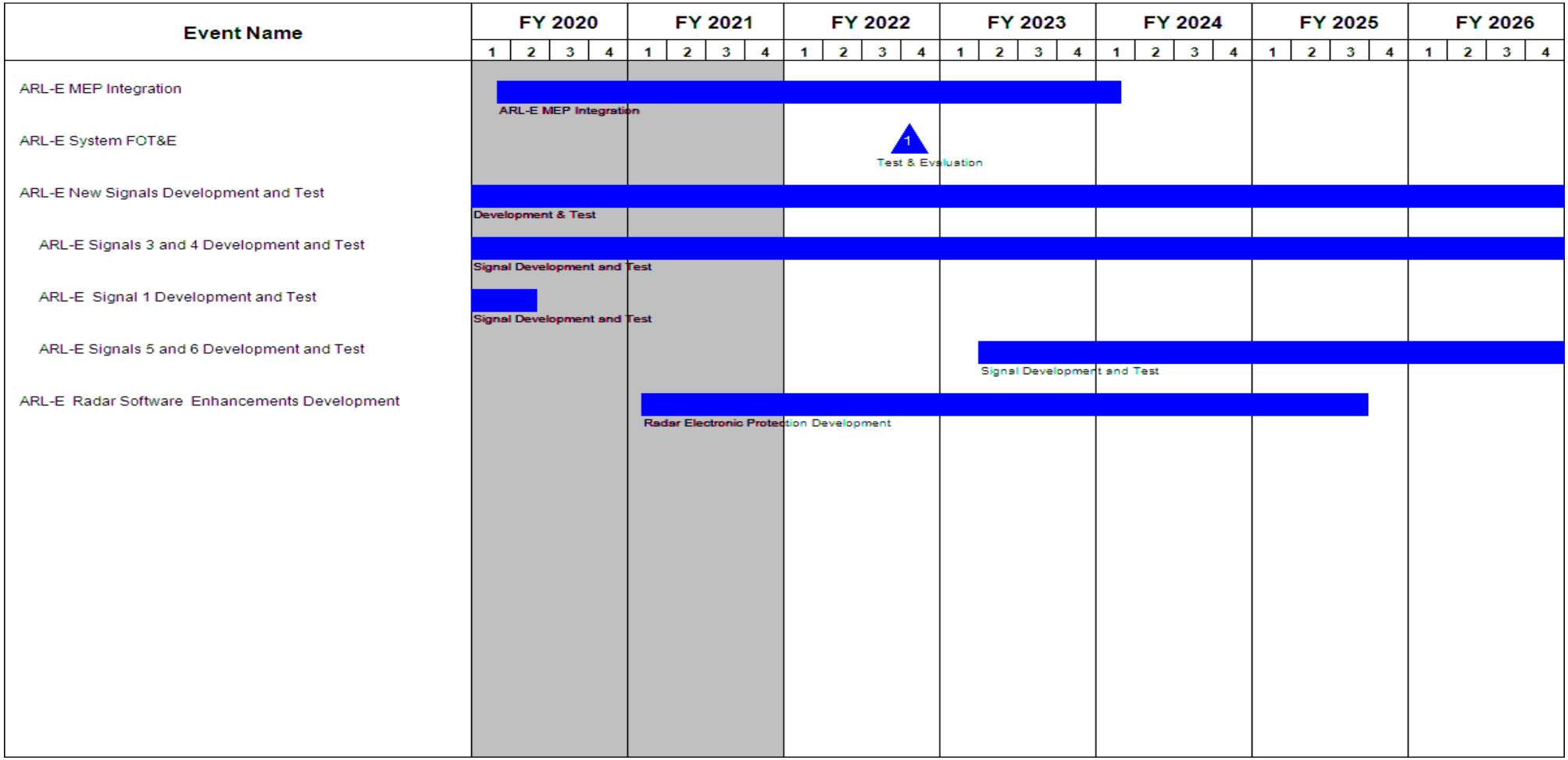


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH5 / *ARL Payloads ADV DEV*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ARL-E MEP Contract Award	1	2016	1	2016
ARL-E MEP Integration	1	2016	1	2024
ARL-E System FOT&E	4	2022	4	2022
ARL-E New Signals Development and Test	2	2016	4	2027
ARL-E Signals 3 and 4 Development and Test	2	2016	4	2027
ARL-E Signal 1 Development and Test	4	2017	2	2020
ARL-E Signals 5 and 6 Development and Test	2	2023	4	2027
ARL-E Radar Software Enhancements Development	1	2021	3	2025
ARL-E Long Range Radar Development	4	2017	3	2019
ARL-E Long Range Radar Testing	3	2019	3	2019

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305206A / *Airborne Reconnaissance Systems*	Project (Number/Name) EH7 / *Guardrail Common Sensor (GRCS) Payloads*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
EH7: *Guardrail Common Sensor (GRCS) Payloads*	-	2.000	3.996	4.015	-	4.015	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Guardrail Common Sensor (GRCS) is an airborne Signals Intelligence (SIGINT) Collection and Location System capable of providing Tactical Commanders Near-Real Time intelligence. It provides a persistent capability to detect, locate and classify/identify critical targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) United States (U.S.) Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. In accordance with the Army's AISR 2020 strategy, the Army's Acquisition Objective/Army's Procurement Objective (AAO/APO) is 19 RC-12X; seven (7) fielded to 3rd MI BN; seven (7) fielded to the 204th MI BN, and five (5) pilot trainers to support Force Generation. The five (5) trainers are not equipped with Primary Mission Equipment (PME).

GRCS Fiscal Year (FY) 2022 Base RDT&E funding request in the amount of $4.015 million supports continuation of advanced signal enhancement efforts, software development and testing of SIGINT infrastructure for GRCS sensors. Funding also supports development of simulation capabilities for future software enhancements to pace threat signals and to provide additional training tools to maintain military proficiency. GRCS is currently the most capable Army AISR system that provides SIGINT capabilities to support long range targeting of near-peer threats in an A2AD environment. RDT&E and procurement funding currently planned will address obsolescence issues for critical SIGINT capabilities on the GRCS platform. These investments ensure GRCS AISR support in the A2AD environment is not impacted, which would prevent critical intelligence collection at large standoff which is needed to address long range targeting of near-peer threats and maintain system relevancy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
Title: GRCS SIGINT Sensor Upgrades	1.924	3.674	3.833
Description: Funding line supports GRCS advanced signal enhancement efforts and software development and testing of signal enhancement infrastructure for GRCS updated SIGINT sensor development. Funding also supports simulation development to allow for continued software enhancements and capability development to keep pace with emerging threats and new technology as well as provide the training required to maintain military proficiency.			
FY 2021 Plans: FY 2021 funding line supports GRCS advanced signal enhancement efforts and software development and testing of signal enhancement infrastructure for GRCS updated SIGINT sensor development.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH7 / *Guardrail Common Sensor (GRCS) Payloads*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021	FY 2022
FY 2022 funding continues advanced signal enhancement efforts, software development and testing of SIGINT infrastructure for GRCS sensors. Funding also supports development of simulation capabilities for future software enhancements to pace threat signals and to provide additional training tools to maintain military proficiency. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Funding increase due to simulation development effort for the GRCS program.			
Title: Program Management Support ***Description:*** Funds support program management office (PMO) efforts including travel. ***FY 2021 Plans:*** This FY 2021 funding will support PMO efforts including travel. ***FY 2022 Plans:*** FY 2022 funding will support PMO efforts including travel. ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Funding decrease due to ramp down of program support as GRCS RDT&E funding ends in FY 2022.	0.076	0.322	0.182
Accomplishments/Planned Programs Subtotals	2.000	3.996	4.015

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• AZ2052: *GUARDRAIL PAYLOADS*	25.408	25.869	18.554	-	18.554	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The acquisition strategy is to address obsolescence by providing advanced signal enhancement efforts, software development and testing to the GRCS SIGINT Sensors to extend the useful life through FY 2028. Existing PM SAI contracts to be leveraged.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH7 / *Guardrail Common Sensor (GRCS) Payloads*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USFK ONS Development/ JICD 4.2 Compliance	C/CPFF	PEO IEW&S : Aberdeen Proving Ground, MD	0.700	-		-		-		-		-	0.000	0.700	0.700
Program Management Support	C/Various	Various : Various	-	0.076	Jan 2020	0.322	Dec 2020	0.182	Dec 2021	-		0.182	0.000	0.580	-
		Subtotal	0.700	0.076		0.322		0.182		-		0.182	0.000	1.280	N/A

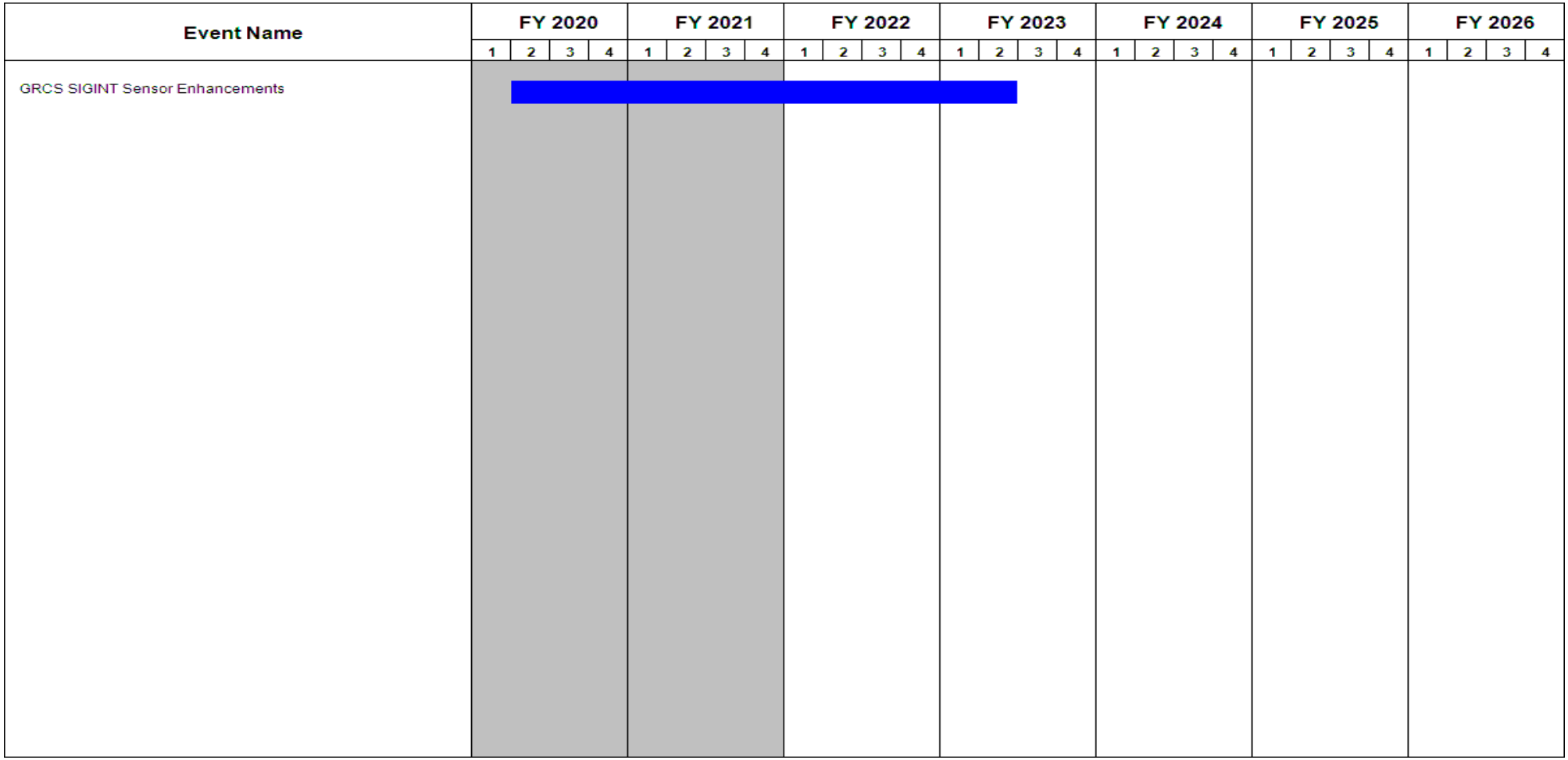
Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GRCS SIGINT Sensor Enhancements	C/CPFF	AASKI : Tinton Falls, NJ	-	1.924	Apr 2020	3.674	Dec 2020	3.833	Dec 2021	-		3.833	0.000	9.431	2.000
		Subtotal	-	1.924		3.674		3.833		-		3.833	0.000	9.431	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.700	2.000		3.996		4.015		-		4.015	0.000	10.711	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH7 / *Guardrail Common Sensor (GRCS) Payloads*



Note

Execution of FY 2022 funding continues into FY 2023 due to non-severable contract.

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0305206A / *Airborne Reconnaissance Systems*	**Project (Number/Name)** EH7 / *Guardrail Common Sensor (GRCS) Payloads*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
USFK ONS Development/JICD 4.2 Compliance	1	2019	2	2019
GRCS SIGINT Sensor Enhancements	2	2020	2	2023

Note

JICD: Joint Interface Control Document
GRCS SIGINT: Guardrail Common Sensor Signals Intelligence