Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army												Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605457A *I Army Integrated Air and Missile Defense (AIAMD)*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	-	245.791	284.095	602.045	-	602.045	529.043	416.826	312.065	316.661	0.000	2,706.526
S40: *Army Integrated Air and Missile Defense*	-	245.791	254.163	525.963	-	525.963	412.252	394.003	310.057	316.151	0.000	2,458.380
SS1: *Remote Interceptor Guidance (RIG) 360 Dev and Int*	-	-	29.932	76.082	-	76.082	116.791	22.823	2.008	0.510	0.000	248.146
Program MDAP/MAIS Code: 205												

A. Mission Description and Budget Item Justification

This funding line is directly aligned to the U.S. Army Air and Missile Defense (AMD) Modernization Priority. The Army Integrated Air and Missile Defense (AIAMD) program is a designated Major Defense Acquisition Program (MDAP), a critical component of the Army's AMD strategy, and is a top AMD Cross Functional Team modernization priority program with a significant Software Pathway element.

The AIAMD program is a direct response to the U.S. Army AMD Concept and Operational and Organizational (O&O) Plan for the Future Force, the AIAMD System of Systems (SoS) Capabilities Development Document (CDD) and the AMD Task Force Concept of Operations (CONOPS). The AIAMD Program is uniquely structured to enable the development of an overarching SoS capability with all participating Department of Defense (DoD) Air Defense Artillery (ADA) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The AIAMD program achieves this objective by establishing the AIAMD SoS architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) to provide the common Mission Command capability, (2) the Integrated Fire Control Relay capability for fire control connectivity and distributed operations, and (3) the common Plug and Fight (P&F) Kits to network-enable multiple sensor and weapon components including the IBCS EOC.

The AIAMD Program provides advanced capabilities to the Army through agile software development and a network-centric SoS capability that integrates AMD sensors and weapons with the IBCS EOC. The AIAMD SoS architecture enables extended range and non-line-of-sight engagements, to include joint kill chain engagements across the full spectrum of aerial threats, providing fire control quality data to the most appropriate weapon to complete the mission successfully. The system mitigates coverage gaps and single points of failure and provides the user with the ability to train on a single Command and Control (C2) system, resulting in overall training savings. The AIAMD program also provides the Army with the ability to procure components that interface with the Integrated Fire Control Network (IFCN).

AIAMD Initial Operation Capability (IOC) was declared on 24 April 2023. Fielding of the AIAMD SoS architecture including the IBCS EOC, IFCN Relay, Sentinel A3, and PATRIOT components. The open architecture enables integration and fielding of beyond IOC capabilities including, but not limited to, Lower Tier Air and Missile Defense Sensor (LTAMDS), Enduring Indirect Fire Protection Capability (IFPC), Air Defense Airspace Management (ADAM) Cells, ADA Brigade, and Army Air and Missile Defense Command (AAMDC) to meet emerging threats.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army	Date: March 2024
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605457A *I Army Integrated Air and Missile Defense (AIAMD)*

Remote Interceptor Guidance 360 (RIG-360) is a software-defined, X-band missile communications device that provides full hemispherical, 360-degree in-flight communications with the PATRIOT Advanced Capability 3 (PAC-3) family of interceptors. RIG-360 improves the performance of the PAC-3 family of interceptors and enables AIAMD to expand the area of control of the PAC-3 interceptors to their full kinematic potential and increases defensive effectiveness to full 360-degree coverage against attacking non-ballistic threats. RIG-360 supports interceptor communication, allowing PAC-3 family of missiles engagement independent from the PATRIOT radar or Lower Tier Air and Missile Defense Sensor. This de-coupling of interceptor from radar advances program goals to pair any sensor with the best shooter, and expands asset defense and engagement space supporting Multi Domain Operations and Large-Scale Combat Operations. By using the RIG-360 to communicate with PAC-3 interceptors, the IBCS can conduct engagements even if the radar is unavailable due to hardware failure, battle damage, or successful electronic attack.

Funding in the amount of $192.481 million supports Pacific Deterrence Initiative (PDI).

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	263.545	284.095	365.377	-	365.377
Current President's Budget	245.791	284.095	602.045	-	602.045
Total Adjustments	-17.754	0.000	236.668	-	236.668
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-8.500	-			
• SBIR/STTR Transfer	-9.254	-			
• Adjustments to Budget Years	-	-	236.668	-	236.668

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: S40: *Army Integrated Air and Missile Defense*		
Congressional Add: *Kill Chain Automation*	10.000	-
Congressional Add Subtotals for Project: S40	10.000	-
Congressional Add Totals for all Projects	10.000	-

Change Summary Explanation

The increased funds expand the software development capability and increase software development capacity to enable multiple 1-N capability items such as: Sentinel A4, RIG-360, Army Long Range Persistent Surveillance (ALPS), F-35 Joint Striker and Terminal High Altitude Area Defense (THAAD) to be worked concurrently as defined by emerging joint Warfighter priorities. Additional increases in FY2025 funding are reflected in the updated independent cost estimate approved at Full Rate Production decision by the DAE.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) S40 / *Army Integrated Air and Missile Defense*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
S40: *Army Integrated Air and Missile Defense*	-	245.791	254.163	525.963	-	525.963	412.252	394.003	310.057	316.151	0.000	2,458.380
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This funding line is directly aligned to the U.S. Army Air and Missile Defense (AMD) Modernization Priority. The Army Integrated Air and Missile Defense (AIAMD) program is a designated Major Defense Acquisition Program (MDAP), a critical component of the Army's AMD strategy, and is a top AMD Cross Functional Team modernization priority program with a significant Software Pathway element.

The AIAMD program is a direct response to the U.S. Army AMD Concept and Operational and Organizational (O&O) Plan for the Future Force, the AIAMD System of Systems (SoS) Capabilities Development Document (CDD) and the AMD Task Force Concept of Operations (CONOPS). The AIAMD Program is uniquely structured to enable the development of an overarching SoS capability with all participating Department of Defense (DoD) Air Defense Artillery (ADA) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The AIAMD program achieves this objective by establishing the AIAMD SoS architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) to provide the common Mission Command capability, (2) the Integrated Fire Control Relay capability for fire control connectivity and distributed operations, and (3) the common Plug and Fight (P&F) Kits to network-enable multiple sensor and weapon components including the IBCS EOC.

The AIAMD Program provides advanced capabilities to the Army through agile software development and a network-centric SoS capability that integrates AMD sensors and weapons with the IBCS EOC. The AIAMD SoS architecture enables extended range and non-line-of-sight engagements, to include joint kill chain engagements across the full spectrum of aerial threats, providing fire control quality data to the most appropriate weapon to complete the mission successfully. The system mitigates coverage gaps and single points of failure and provides the user with the ability to train on a single Command and Control (C2) system, resulting in overall training savings. The AIAMD program also provides the Army with the ability to procure components that interface with the Integrated Fire Control Network (IFCN).

AIAMD Initial Operation Capability (IOC) was declared on 24 April 2023. Fielding of the AIAMD SoS architecture including the IBCS EOC, IFCN Relay, Sentinel A3, and PATRIOT components. The government controlled open architecture enables integration and fielding of beyond IOC capabilities including, but not limited to, Lower Tier Air and Missile Defense Sensor (LTAMDS), Enduring Indirect Fire Protection Capability (IFPC), Air Defense Airspace Management (ADAM) Cells, ADA Brigade, and Army Air and Missile Defense Command (AAMDC) to meet emerging threats.

Funding in FY 2025 supports agile software development, updates and integration, developmental testing, requirements verification of the software build, operational testing, and integration activities for integrated fires capabilities. Funding provides for integration of additional Post-IOC 1-N Capabilities such as: Sentinel A4, RIG-360, Army Long Range Persistent Surveillance (ALPS), F-35 Joint Striker and Terminal High Altitude Area Defense (THAAD). Also included is the software development for Forward Area Air Defense Command and Control (FAAD C2) Convergence into IBCS as well as funding to support development of AMD capabilities. Funding in the amount of $140.820M supports Pacific Deterrence Initiative (Defense of Guam) planned architecture.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Product Development - Beyond Initial Operational Capability (IOC)	184.690	157.251	326.097
Description: Product development in support of agile software development and integration efforts for additional capability beyond that fielded at IOC. ***FY 2024 Plans:*** Funding provides support for developmental software integration testing as well as continues the Defense of Guam support for the planned architecture. Agile software development continues to support enduring development efforts and includes software fixes and improvements to counter emerging threats and incorporate emerging technology. Funding continues the development, test, and integration of 1-N Capabilities to include ALPS, THAAD Planner, and F-35 Joint Striker. Funding supports JTMC Bridge Integration as well as IBCS development to support full weapon/threat planning and engagements. Funding also supports the continued development and integration of IFPC. ***FY 2025 Plans:*** Funding in FY2025 provides support for software development and integration testing as well as the Guam Defense Systems (GDS) support for the planned architecture. Agile software development continues to support enduring development efforts and includes software fixes and improvements to counter emerging threats and incorporate emerging technology. Funding supports IBCS agile software development and integration, developmental and operational testing and requirements verification of the software build, operational testing, and integration activities for integrated fires capabilities. It also expands software factory development capacity to enable multiple 1-N capability items to be worked concurrently as defined by emerging joint Warfighter priorities. Funding provided for integration of additional Post-IOC 1-N capabilities such as: Sentinel A4, RIG-360, Army Long Range Persistent Surveillance (ALPS), F-35 Joint Striker and Terminal High Altitude Area Defense (THAAD). In addition, funding provides for the continuation of the Software Integration Facility (SWIF) a Government-Owned, Government-Operated software development, integration, and test capability. Also included is the software development for Forward Area Air Defense Command and Control (FAAD C2) Convergence into IBCS, as well as funding to support development of AMD Capabilities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increased funds expand the software development capability and increases software development capacity to enable multiple 1-N capability items such as: Sentinel A4, RIG-360, Army Long Range Persistent Surveillance (ALPS), F-35 Joint Striker and Terminal High Altitude Area Defense (THAAD) to be worked concurrently as defined by emerging joint Warfighter priorities. Additional increases in FY2025 funding are reflected in the updated independent cost estimate approved at Full Rate Production decision by the DAE.			
Title: Test and Evaluation - Beyond IOC Capability	51.101	96.912	199.866

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Description: Test and Evaluation support for modeling and simulation, developmental test, and follow-on operational test events for additional capability beyond that fielded at IOC. ***FY 2024 Plans:*** Continues Modeling and Simulation efforts at the Government Systems Integration Lab, Joint Interoperability Test Support, Army Test and Evaluation Center, Orange Flag, Project Convergence, Joint All-Domain Command and Control, Integrated Fires Test, and White Sands Missile Range test support for developmental test activities. Specific test efforts include: software development and software requirements verification, cyber testing, initial testing for F-35 and test planning of future developmental and operational tests. Funding includes test hardware requirements as well as lab infrastructure for additional test lines for RIG-360, JTMC, and THAAD Integration in support of Defense of Guam planned architecture and an increase to facilitate additional capability development. ***FY 2025 Plans:*** Continues Modeling and Simulation efforts at the Contractor Systems Integration Lab, Government Systems Integration Lab, Joint Interoperability Test Support, Army Test and Evaluation Center, Orange Flag, Project Convergence, Joint All-Domain Command and Control (JADC2), Integrated Fires Test Campaign (IFTC), and White Sands Missile Range test support for developmental test activities. Specific test efforts include: software development, component integration testing, software requirements verification, and system of systems capability validation consistent with the 1-N list. Funding includes test hardware requirements as well as lab infrastructure for additional test lines to integrate the 1-N list. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase in FY2025 funding supports additional test requirements.			
Accomplishments/Planned Programs Subtotals	235.791	254.163	525.963

	FY 2023	FY 2024
Congressional Add: Kill Chain Automation	10.000	-
FY 2023 Accomplishments: Funding continues support of design, code, and integration of kill-chain automation enhancements into the Integrated Battle Command System (IBCS). Funding also improves algorithms and techniques for target typing and Combat Identification to improve performance and reduce fratricide risks. Funding also improves design to the IBCS User Interface to streamline operator awareness and feedback for automated actions.		
Congressional Adds Subtotals	10.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• C53101: *MSE Missile*	2,471.372	1,212.832	963.060	-	963.060	975.410	1,132.518	1,461.976	1,204.578	Continuing	Continuing
• EX2: *Lower Tier Air Missile Defense (LTAMD) Capability*	366.637	816.663	149.463	-	149.463	122.785	124.002	128.507	123.399	Continuing	Continuing
• EY7: *IFPC Increment 2 - Block 1*	126.308	196.248	138.553	-	138.553	117.923	10.862	11.139	136.733	Continuing	Continuing
• C62002: *IFPC INC 2-I BLOCK 1 SYSTEM*	22.709	313.189	411.430	-	411.430	663.872	786.454	802.826	997.832	0.000	3,998.312
• E10: *Sentinel*	77.158	94.944	44.927	-	44.927	19.024	22.051	19.641	28.244	Continuing	Continuing
• BZ5075: *IAMD Battle Command System*	459.343	412.556	403.028	-	403.028	584.262	651.373	449.114	509.060	Continuing	Continuing
• 146: *Air & Msl Defense Planning Control Sys*	1.209	26.367	19.996	-	19.996	15.243	15.529	15.790	15.952	Continuing	Continuing
• AD5070: *AIR & MSL Defense Planning & Control Sys*	72.619	68.892	80.011	-	80.011	-	-	-	-	0.000	221.522
• 0604403A: *Future Interceptor*	7.880	8.040	8.058	-	8.058	8.068	8.154	8.245	8.327	0.000	56.772
• 0604117A: *Maneuver - Short Range Air Defense (M-SHORAD)*	269.186	281.239	315.772	-	315.772	245.380	347.669	406.934	270.679	Continuing	Continuing
• C14300: *M-SHORAD - Procurement*	246.867	400.697	69.091	-	69.091	42.676	-	-	-	Continuing	Continuing

Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (AIAMD) architecture providing development of a common Integrated Fire Control System via open architecture approach enabling integration of Air Defense Artillery (ADA) components as they become available. This approach enables the AIAMD program to maintain its baseline program independent of fluctuation of other programs.

D. Acquisition Strategy

The AIAMD acquisition strategy delivered an Initial Operational Capability (IOC) 24 April 2023. Capabilities continue to be delivered through the fielding of the IAMD Battle Command System (IBCS) based AIAMD architecture including the IBCS Engagement Operations Center (EOC), Sentinel A4, and PATRIOT (through a Radar Interface Unit (RIU)) components connected via an Integrated Fire Control Network (IFCN) Relay, working in an integrated manner while also incorporating the insertion of emerging technology. Future capabilities include but not limited to the incorporation of IBCS functionality into Enduring Indirect Fire Protection Capabilities (IFPC), Lower Tier Air and Missile Defense Sensor (LTAMDS), Army Persistent Surveillance System (ALPS), Terminal High Altitude Area Defense (THAAD) Planner, F-35 Joint Strike Fighter, and other Army and Joint weapon systems using an agile development process.

Key principles of the AIAMD acquisition approach are the following:

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

- Migrate to competitive system of systems-based acquisition strategy, integrating components using agile development/operations methodology IAW FY 2019 National Defense Authorization Act direction.
- Use system-of-systems acquisition approach with collaboration among AIAMD, PEO MS, PEO C3T, and Brigade Combat Team (BCT) Modernization Component Project Offices, Missile Defense Agency (MDA), and other Service Project Offices to network-enable weapons and sensor components.
- Develop and procure a common Army IBCS EOC that replaces seven weapon system unique Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) components.
- Establish product lines to evaluate and select, modify and integrate modular open systems hardware and software common configuration items.
- Conduct architecture-based System Engineering, Integration and Test (SEI&T) activities for an incrementally fielded configuration of the IAMD Integrated Fire Control Network compatible IBCS EOC, weapons and sensor system components to include testing of resiliency and survivability in a denied environment.
- The DAE approved AIAMD to enter the Software Acquisition Pathway (SWP) Execution Phase and LRIP Re-Characterization ADM on September 21, 2021.
The program continues to develop SW via the Agile development methodology. SW development provide a Min Viable product quarterly in the Program Increments (PI) and a Minimum Viable capability Release annually.
- The Follow-On Software Contract provides Agile developed software-based improvements and capability additions to the Air and Missile Defense (AMD) weapon systems.
- Software testing occurs at the end of each PI starting with functional testing at the Contractor System Integration Lab (C-SIL), followed by regression and performance testing for requirements validation in the government System Integration lab (G-SIL). Software is then delivered to WSMR for developmental testing with tactical Sensors and Weapons.
- The program software path forward includes the engineering, development, and integration of capabilities to support LRIP, FOTE and Full Rate Production. PIs 21-24 (FY25) include correcting SW defects and enhancements identified in the Operational Assessments (OA) for IFPC and LTAMDS, and the Developmental Testing (DT) in preparation for FOTE. Additional engineering, development and testing in FY25 will include support of DT for Sentinel A4 and RIG-360, engineering for ALPS, THAAD, FAAD C2 Convergence and the Guam Defense System requirements.
- Establish a Government-Owned, Government-Operated (GO-GO) software integration facility (SWIF) on Redstone Arsenal, AL. The SWIF is a software development, integration and test environment that provides digital engineering, and system of system integration capabilities.
- The common fires mission command program is the centerpiece of an integrated fires development effort that includes survivability, resiliency, and effectiveness improvements against advanced threats from near-peer adversaries. This effort includes component integration, common development tools and processes, and annual test and evaluation to provide data to support program assessments and progress toward closure of performance gaps.
-Additional development to establish future software testing and integration activities at the SWIF.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AIAMD System Engineering & Integration	C/CPFF	Various : Huntsville, AL	252.113	14.592	Mar 2023	23.986	Oct 2023	31.023	Oct 2024	-		31.023	Continuing	Continuing	Continuing
AIAMD Capability Development	SS/ Various	Northrop Grumman, Raytheon, Lockheed Martin and Other : Huntsville, AL and Various other locations	-	42.164	Mar 2023	84.046	Oct 2023	140.820	Oct 2024	-		140.820	Continuing	Continuing	Continuing
Government Systems Engineering and Logistics	Various	Various : Huntsville, AL	139.356	10.218	Dec 2022	15.015	Oct 2023	22.391	Oct 2024	-		22.391	Continuing	Continuing	Continuing
Army 1-N Capability	Various	Various : TBD	-	10.670	Feb 2023	17.467	Oct 2023	48.558	Oct 2024	-		48.558	Continuing	Continuing	Continuing
Kill Chain Automation	Various	Various : Huntsville, AL; Grande Prairie, TX; Oklahoma City	6.000	10.000	Apr 2023	-		-		-		-	0.000	16.000	Continuing
RIG-360	SS/IDIQ	Lockheed Martin : Huntsville, AL and Grand Prairie, TX	4.000	45.611	Mar 2023	-		-		-		-	0.000	49.611	-
Guam Defense Systems	Various	Various : Various	-	61.435	Jun 2023	22.596	Oct 2023	56.328	Oct 2024	-		56.328	0.000	140.359	-
Software Integration Facility	Various	Various : Various	-	-		21.400	Oct 2023	26.977	Oct 2024	-		26.977	0.000	48.377	-
		Subtotal	401.469	194.690		184.510		326.097		-		326.097	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Test Activities/ Army Evaluation Center/ Developmental Test Command/Operational Test Command	MIPR	Various : Multiple Locations	135.046	10.351	Apr 2023	13.028	Oct 2023	23.075	Oct 2024	-		23.075	Continuing	Continuing	Continuing
Modeling & Sim/Joint Interoperability Test Spt	MIPR	SED : Huntsville, AL	262.617	13.352	Apr 2023	17.982	Oct 2023	31.151	Oct 2024	-		31.151	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) S40 / *Army Integrated Air and Missile Defense*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Range Support	MIPR	WSMR : White Sands, NM	106.566	7.970	Apr 2023	10.079	Oct 2023	24.228	Oct 2024	-		24.228	Continuing	Continuing	Continuing
Army 1-N Capability	Various	Various : Various	-	-		13.500	Oct 2023	36.920	Oct 2024	-		36.920	Continuing	Continuing	Continuing
Guam Defense Systems	Various	Various : Various	-	19.428	Jun 2023	15.064	Oct 2023	84.492	Oct 2024	-		84.492	Continuing	Continuing	-
		Subtotal	504.229	51.101		69.653		199.866		-		199.866	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	905.698	245.791		254.163		525.963		-		525.963	Continuing	Continuing	N/A

Remarks

The AIAMD Capability Development funding increase provides for additional software capacity. This capacity increase includes funding for threat updates, cyber posture, human system integration (HSI) changes, baseline maintenance and capacity to complete software backlog requirements. This also accelerates development of the following base program capabilities, LTAMDS, PATRIOT, Sentinel A3 and IFPC.

AMD 1-N provides effort for the program to continue development of User prioritized 1-N enduring capability requirements. These requirements are reviewed and revalidated by the Warfighter yearly to ensure priority synchronization. The increase funding provides for integration of Sentinel A4, JTMC Bridge, FAAD C2/IBCS Tactical and AMDPCS.

The Guam Defense Systems test increase is due to cost associated with OCONUS testing (shipping, range infrastructure requirements, TDY, range execution personnel); complex testing scenarios, TBM Targets development to meet requirements, Robust Flight Test matrix with Developmental Test as risk reduction. Pre-Flight Lab Work for pre-mission analysis, Joint external test participants and range safety data packages.

FY2025 AIAMD PE includes Guam Defense Systems funding to support Sentinel, LTAMDS and PATRIOT integration efforts.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

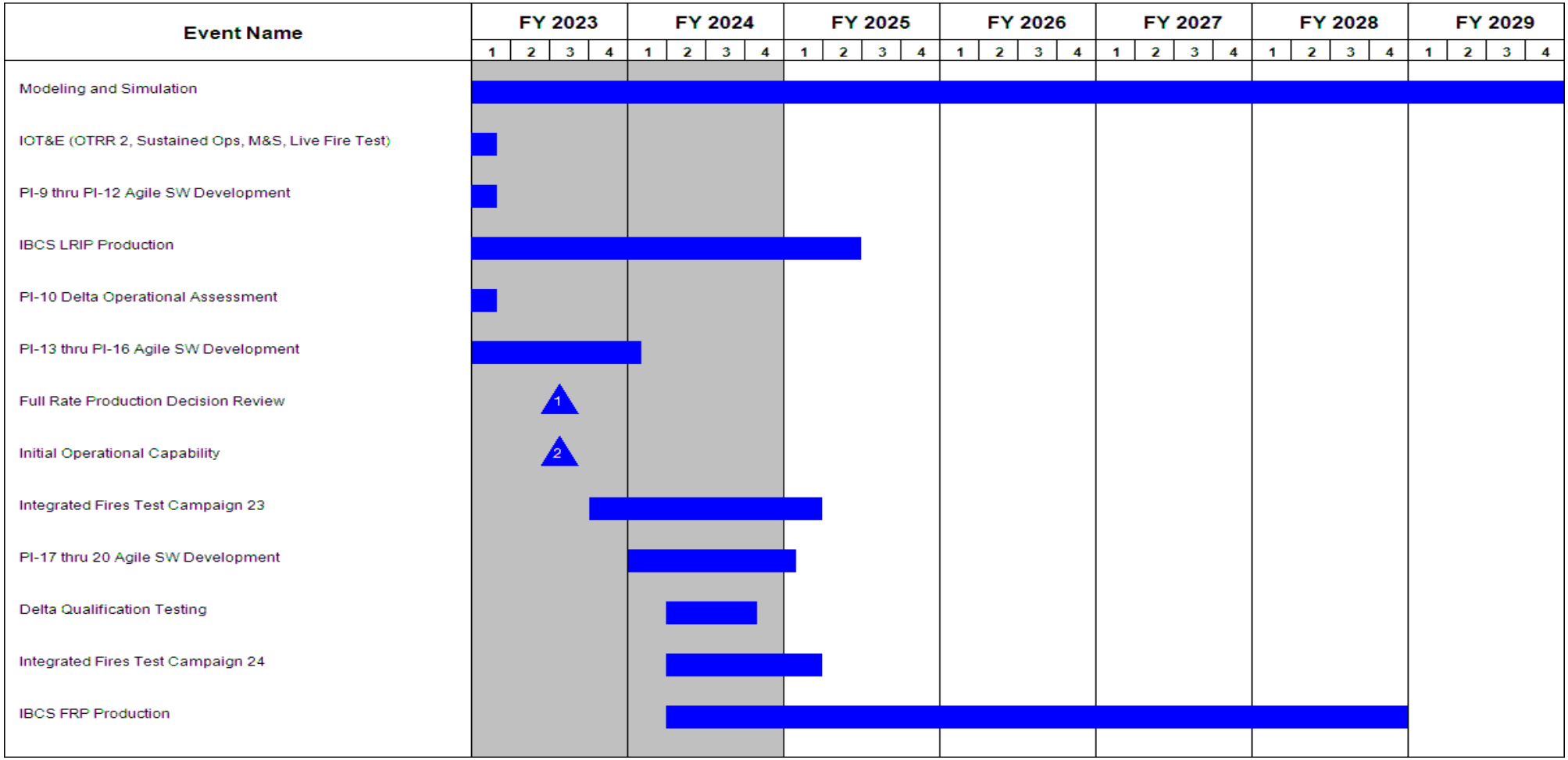

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

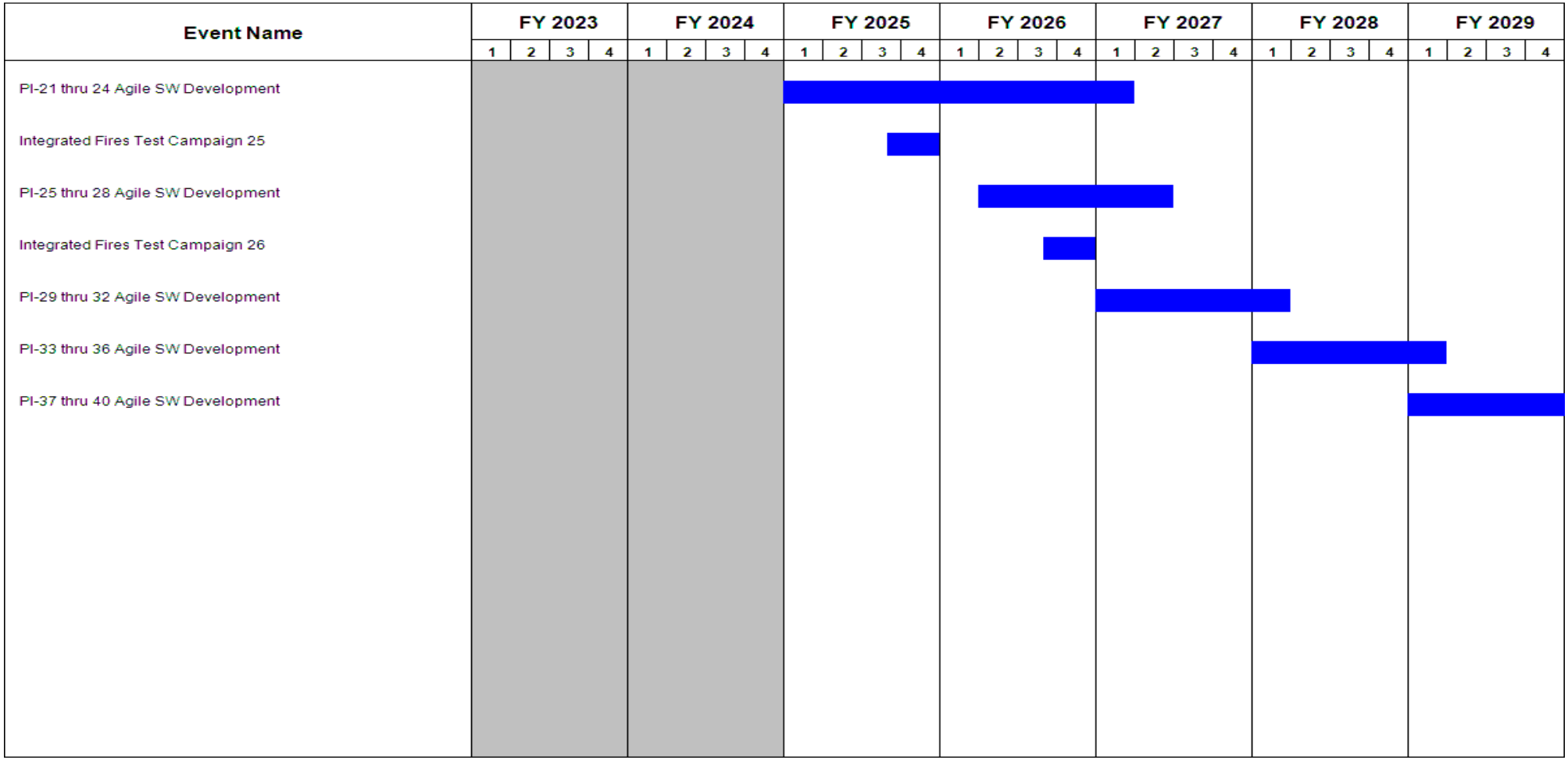

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Modeling and Simulation	1	2013	4	2029
EMD Developmental Test (DT)	4	2014	1	2017
Product Readiness Review (PRR)	4	2016	4	2016
EMD DT Continuation	1	2018	1	2020
v4.5.0 Software (SW) Development	2	2018	1	2020
v4.5.0 Developmental Ground/Flight Testing	3	2019	1	2020
PI-1 thru PI-4 Agile SW Development	1	2020	4	2020
Software Version 4.6.0 Capabilities Review	3	2020	3	2020
Limited User Test	4	2020	4	2020
PI-5 thru PI-8 Agile SW Development (IOT&E SW)	1	2021	1	2022
Milestone C Decision	2	2021	2	2021
PI-5 thru PI-8 Dev Ground/Flight Testing (IOT&E SW)	2	2021	1	2022
Software Version 4.6.1 Capabilities Review	3	2021	3	2021
IOT&E (OTRR 2, Sustained Ops, M&S, Live Fire Test)	1	2022	1	2023
PI-9 thru PI-12 Agile SW Development	1	2022	1	2023
IBCS LRIP Production	2	2022	2	2025
PI-10 Delta Operational Assessment	4	2022	1	2023
PI-13 thru PI-16 Agile SW Development	1	2023	1	2024
Full Rate Production Decision Review	3	2023	3	2023
Initial Operational Capability	3	2023	3	2023
Integrated Fires Test Campaign 23	4	2023	1	2025
PI-17 thru 20 Agile SW Development	1	2024	1	2025

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Delta Qualification Testing	2	2024	4	2024
Integrated Fires Test Campaign 24	2	2024	1	2025
IBCS FRP Production	2	2024	4	2028
PI-21 thru 24 Agile SW Development	1	2025	1	2027
Integrated Fires Test Campaign 25	3	2025	4	2025
PI-25 thru 28 Agile SW Development	2	2026	2	2027
Integrated Fires Test Campaign 26	3	2026	4	2026
PI-29 thru 32 Agile SW Development	1	2027	1	2028
PI-33 thru 36 Agile SW Development	1	2028	1	2029
PI-37 thru 40 Agile SW Development	1	2029	1	2030

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) SS1 / *Remote Interceptor Guidance (RIG) 360 Dev and Int*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
SS1: *Remote Interceptor Guidance (RIG) 360 Dev and Int*	-	-	29.932	76.082	-	76.082	116.791	22.823	2.008	0.510	0.000	248.146
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This funding line is directly aligned to the U.S. Army Air and Missile Defense (AMD) Modernization Priority. The Army Integrated Air and Missile Defense (AIAMD) program is a designated Major Defense Acquisition Program (MDAP), a critical component of the Army's AMD strategy, and is a top AMD Cross Functional Team modernization priority program.

Remote Interceptor Guidance 360 (RIG-360) is a software-defined, X-band missile communications device that provides full hemispherical, 360-degree in-flight communications with IAMD Composite Task Force interceptors to include the PATRIOT Advanced Capability 3 (PAC-3) family of interceptors. The RIG-360 program provides additional follow-on capability to the AIAMD architecture. RIG-360 improves the performance of the PAC-3 family of interceptors and enables AIAMD to expand the area of control of the PAC-3 interceptors to their full kinematic potential and increases defense effectiveness to full 360 degree coverage against attacking non-ballistic threats. Provides a 360-degree engagement capability leveraging sensors integrated within the IBCS architecture by integrating an interceptor datalink device as a network component. Integration of an independent, adapted IFPC Uplinker into IBCS will support PAC-3/MSE and IPFC Family of Interceptor engagements and advances IAMD goals of pairing any sensor with best shooter.

The RIG-360 consists of two Major End Items, the Control Assembly and Array Assembly. The Control Assembly, in a rack mounted case, is the control node for the Array Assembly and serves as the Adaptation Kit (A-Kit) to the Integrated Fire Control Network. The rack mounted case provides outer ruggedness to environmental conditions with internal shock isolation, while allowing easy interchange of power supplies, server components, or other components as required within an industry standard rack assembly. The RIG-360 Array Assembly is a mast-mounted, X-band array of antennas that transmit and receive the interceptor radio frequency PAC-3 missile communication waveforms.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: RIG-360 Development	-	28.281	71.894
Description: RIG-360 development provides a 360-degree engagement capability leveraging sensors integrated within the IBCS architecture by integrating an interceptor datalink device as a network component. FY 2024 planned accomplishments are continued component development, completion of a Preliminary Design Review and development testing.			
FY 2024 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** SS1 / *Remote Interceptor Guidance (RIG) 360 Dev and Int*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Continued component development, completion of a Preliminary Design Review and provides support for developmental test activities. ***FY 2025 Plans:*** Continues development of RIG-360 PAC/MSE Uplinker. Conduct Critical Design review and functional design audit in support of operational testing. Procure 2 prototypes to support Operation Testing. Begin development of IFPC Uplinker in support of the IFPC family of interceptors. Procure 3 prototypes to support developmental testing of AIM 9X Uplinker. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase due to initiation of the development of AIM 9X Uplinker effort in FY2025.			
Title: Test and Evaluation ***Description:*** Test and Evaluation in support of RIG-360 PAC3/MSE Family of Interceptors. ***FY 2024 Plans:*** Provides support for preparation and conduct of developmental test activities. ***FY 2025 Plans:*** Conduct Operational testing of RIG-360 PAC 3 MSE Uplinker. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase attributed to the ongoing development of RIG-360 PAC/MSE Uplinker.	-	1.651	4.188
Accomplishments/Planned Programs Subtotals	-	29.932	76.082

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• 0605457A: *Army Integrated Air and Missile Defense (AIAMD)*	245.791	284.095	602.045	-	602.045	529.043	416.826	312.065	316.661	Continuing	Continuing
• BZ5075: *IAMD Battle Command System*	459.343	412.556	403.028	-	403.028	584.262	651.373	449.114	509.060	Continuing	Continuing
• DV8: *Patriot Product Improvement*	146.753	177.197	82.220	-	82.220	168.617	165.083	226.762	223.166	Continuing	Continuing
• C50700: *Patriot Mods*	462.959	212.247	171.958	-	171.958	760.673	1,821.040	1,004.129	832.309	Continuing	Continuing
• CA0267: *PATRIOT MODIFICATION INITIAL SPARES*	6.508	6.573	6.695	-	6.695	6.671	6.680	6.687	6.755	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** SS1 / *Remote Interceptor Guidance (RIG) 360 Dev and Int*

C. Other Program Funding Summary ($ in Millions)

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

Remarks

D. Acquisition Strategy

RIG-360 is a Major Capability Acquisition program entering at Milestone B. As directed in the 19 April 2022 Acquisition Decision Memorandum signed by the Army Acquisition Executive, the Program Executive Officer Missiles and Space is the Milestone Decision Authority for this Acquisition Category (ACAT) III program. The program had a successful Milestone B Decision in December 2022. Contract was awarded 4Q FY 2023. The RIG-360 development program objectives include requirements definition, system design and analysis, qualification, and integration and test activities for a production representative RIG-360 device. A sole source contract will be awarded to Lockheed Martin Missiles and Fire Control (LMMFC) in Grand Prairie, Texas. LMMFC is the sole developer and producer of the RIG-360 capability. They are also the only source with the knowledge, technical expertise, facilities, and the technical data to support Integrated Battle Command System integration and testing efforts related to RIG-360 uplink capabilities. The Government will procure a full production baseline Technical Data Package for the primary RIG-360 components (control assembly, antenna array and equipment platform) to include all technical data as documented in the approved product development design. The contractor will conduct a System Requirements Review, Preliminary Design Review, Critical Design Review, and Functional Configuration Audit for the RIG-360 program. All technical reviews will have pre-defined entrance and exit criteria agreed-to by the Government. Component testing will be conducted in conjunction with AIAMD developmental and operational testing to verify performance of the Major End Item. The program is planning for a Milestone C/Full Rate Production Decision 4Q FY 2026.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Army			Date: March 2024
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) SS1 / *Remote Interceptor Guidance (RIG) 360 Dev and Int*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RIG-360 Engineering Manufacturing and Development	SS/ Various	Lockheed Martin Missile and Fire Control, Northrop Grumman : Grand Prairie, Texas; Huntsville, AL	-	-		25.305	Oct 2023	66.845	Oct 2024	-		66.845	0.000	92.150	-
System Engineering and Integration	Various	Various : Various	-	-		2.076	Oct 2023	3.766	Oct 2024	-		3.766	0.000	5.842	-
RIG-360 Program Management	TBD	Government : Various	-	-		0.900	Oct 2023	1.283	Oct 2024	-		1.283	0.000	2.183	-
		Subtotal	-	-		28.281		71.894		-		71.894	0.000	100.175	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RIG-360 Test and Evaluation	Various	Various : Various	-	-		1.651	Oct 2023	4.188	Oct 2024	-		4.188	0.000	5.839	-
		Subtotal	-	-		1.651		4.188		-		4.188	0.000	5.839	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		29.932		76.082		-		76.082	0.000	106.014	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** SS1 / *Remote Interceptor Guidance (RIG) 360 Dev and Int*

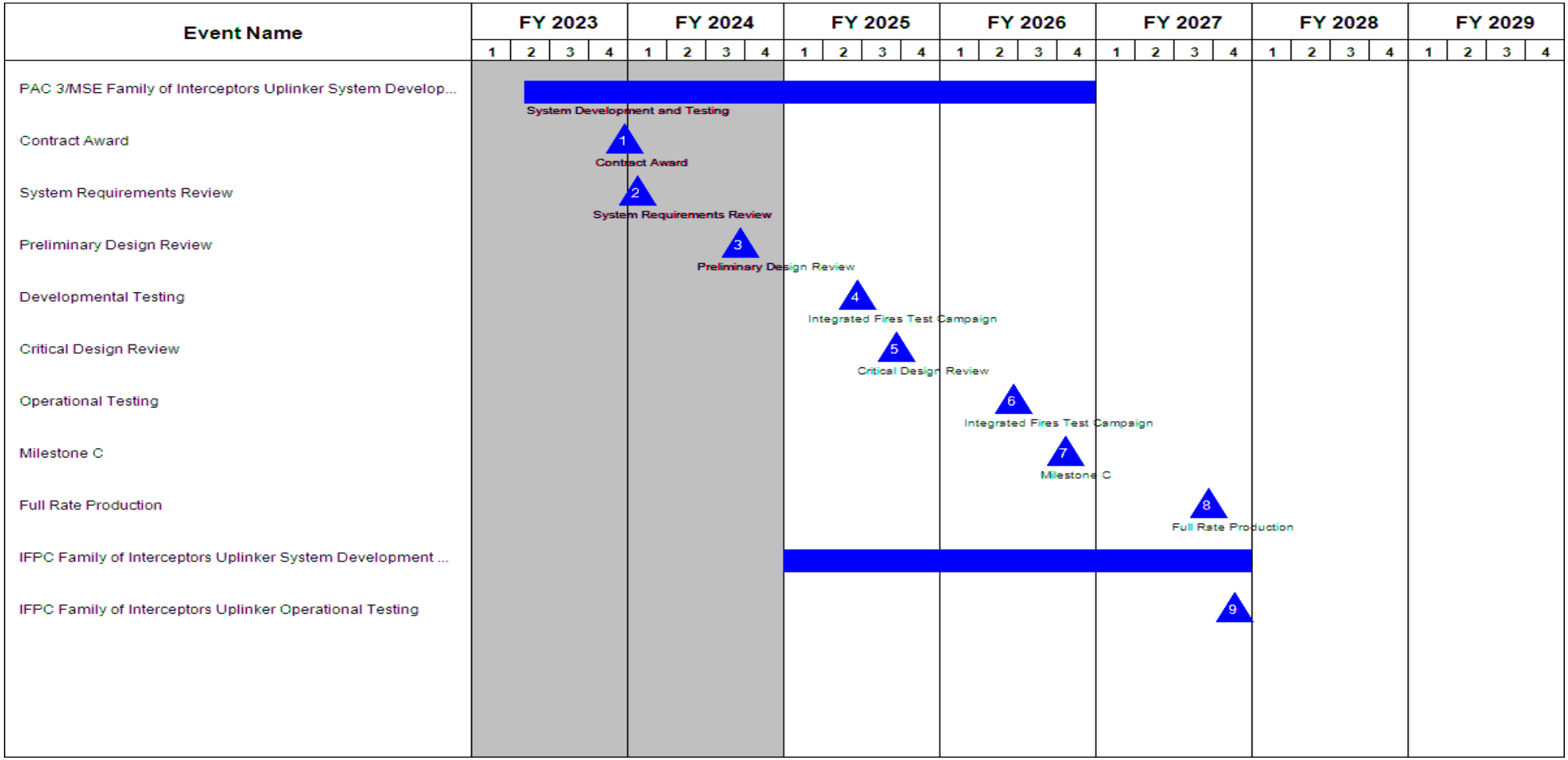

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Army		Date: March 2024
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** SS1 / *Remote Interceptor Guidance (RIG) 360 Dev and Int*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
PAC 3/MSE Family of Interceptors Uplinker System Development and Testing	2	2023	4	2026
Contract Award	4	2023	4	2023
System Requirements Review	1	2024	1	2024
Preliminary Design Review	3	2024	3	2024
Developmental Testing	2	2025	2	2025
Critical Design Review	3	2025	3	2025
Operational Testing	2	2026	2	2026
Milestone C	4	2026	4	2026
Full Rate Production	3	2027	3	2027
IFPC Family of Interceptors Uplinker System Development and Testing	1	2025	4	2027
IFPC Family of Interceptors Uplinker Operational Testing	4	2027	4	2027