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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605457A / <i>Army Integrated Air and Missile Defense (AIAMD)</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	213.956	159.873	265.288	-	265.288	289.312	344.958	182.204	131.523	0.000	1,587.114
S40: <i>Army Integrated Air and Missile Defense</i>	-	213.956	159.873	265.288	-	265.288	289.312	344.958	182.204	131.523	0.000	1,587.114

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.

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 architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) that provides 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 that network-enable multiple sensor components, weapon components, and the IBCS EOC.

The AIAMD Program provides advanced capabilities to the Army through agile software development and a network-centric SoS capability (also referred to as "Plug and Fight") 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. Further, it mitigates the coverage gaps and single points of failure that have plagued AMD design in the past. The AIAMD program provides the user with the ability to train on a single 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), alleviating the cost of procuring total system capabilities in the future.

AIAMD Initial Operation Capability (IOC) will be delivered through the fielding of the IBCS-based AIAMD architecture including the IBCS EOC, IFCN Relay, Sentinel A3, and PATRIOT components working in an integrated manner through the IFCN connection. The government controlled open architecture enables integration of beyond IOC capabilities to meet emerging threats and fielding to include but, not limited to, Air Defense Airspace Management (ADAM) Cells, ADA Brigade, and Army Air and Missile Defense Command (AAMDC). The AIAMD Program will also continue integration with both Lower Tier Air and Missile Defense Sensor (LTAMDS) and Enduring Indirect Fire Protection Capability (IFPC).

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605457A / <i>Army Integrated Air and Missile Defense (AIAMD)</i>
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Funding in FY 2023 supports agile software development and integration, developmental testing and requirements verification of the software build, operational testing, collective training and integration activities for integrated fires capabilities. Funding also continues Post-IOC 1-N Capabilities to include Terminal High Altitude Area Defense (THAAD) Planner, and F-35 Joint Striker. Funding includes test hardware requirements as well as lab infrastructure in order to support integration. Funds will continue the development and integration efforts of the Remote Interceptor Guidance-360 (RIG-360), which will provide integration of an independent, adapted uplinker into IBCS to support 360 degree PAC-3 Missile Segment Enhancement (MSE) engagements outside the coverage of the current PATRIOT Radar.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	206.850	157.873	0.000	-	0.000
Current President's Budget	213.956	159.873	265.288	-	265.288
Total Adjustments	7.106	2.000	265.288	-	265.288
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-4.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	6.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	7.106	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	265.288	-	265.288

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

Project: S40: *Army Integrated Air and Missile Defense*

 Congressional Add: *Counter Emerging Threat*

 Congressional Add: *Kill Chain Automation*

Congressional Add Subtotals for Project: S40

Congressional Add Totals for all Projects

	FY 2021	FY 2022
	20.000	-
	-	6.000
Congressional Add Subtotals for Project: S40	20.000	6.000
Congressional Add Totals for all Projects	20.000	6.000

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Army										Date: April 2022		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605457A / <i>Army Integrated Air and Missile Defense (AIAMD)</i>				Project (Number/Name) S40 / <i>Army Integrated Air and Missile Defense</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
S40: <i>Army Integrated Air and Missile Defense</i>	-	213.956	159.873	265.288	-	265.288	289.312	344.958	182.204	131.523	0.000	1,587.114
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.

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 architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) that provides 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 that network-enable multiple sensor components, weapon components, and the IBCS EOC.

The AIAMD Program provides advanced capabilities to the Army through agile software development and a network-centric SoS capability (also referred to as "Plug and Fight") 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. Further, it mitigates the coverage gaps and single points of failure that have plagued AMD design in the past. The AIAMD program provides the user with the ability to train on a single 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), alleviating the cost of procuring total system capabilities in the future.

AIAMD Initial Operation Capability (IOC) will be delivered through the fielding of the IBCS-based AIAMD architecture including the IBCS EOC, IFCN Relay, Sentinel A3, and PATRIOT components working in an integrated manner through the IFCN connection. The government controlled open architecture enables integration of beyond IOC capabilities to meet emerging threats and fielding to include but, not limited to, Air Defense Airspace Management (ADAM) Cells, ADA Brigade, and Army Air and Missile Defense Command (AAMDC). The AIAMD Program will also continue integration with both Lower Tier Air and Missile Defense Sensor (LTAMDS) and Enduring Indirect Fire Protection Capability (IFPC).

Funding in FY 2023 supports agile software development and integration, developmental testing and requirements verification of the software build, operational testing, collective training and integration activities for integrated fires capabilities. Funding also continues Post-IOC 1-N Capabilities to include Terminal High Altitude Area Defense (THAAD) Planner, and F-35 Joint Striker. Funding includes test hardware requirements as well as lab infrastructure in order to support integration. Funds will

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continue the development and integration efforts of the Remote Interceptor Guidance-360 (RIG-360), which will provide integration of an independent, adapted uplinker into IBCS to support 360 degree PAC-3 Missile Segment Enhancement (MSE) engagements outside the coverage of the current PATRIOT Radar.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Title: Product Development</p> <p>Description: Product development in support of agile software development.</p> <p>FY 2022 Plans: The AIAMD Systems Engineering and Integration provides support for developmental and operational test activities; to include software integration testing and preparation/conduct of the Initial Operational Test and Evaluation (IOT&E) flight tests. Agile software development continues to support enduring development efforts and includes software fixes and improvements to counter emerging threats and incorporate emerging technology. Enduring capabilities require modeling and simulation Government Furnished Equipment of adapting weapon systems to develop and integrate with IBCS.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Decrease is a result of the conclusion of IOC.</p>		87.164	49.799	-
<p>Title: Test and Evaluation</p> <p>Description: Test and Evaluation support for modeling and simulation, developmental test activities and IOT&E.</p> <p>FY 2022 Plans: Provides for continuation of Modeling and Simulation efforts at the Government Systems Integration Lab, Joint Interoperability Test Support, Army Test and Evaluation Center and White Sands Missile Range test support for developmental and operational test activities. Provides for preparation and conduct of the IOT&E flight tests and Full Rate Production Decision in third quarter FY 2022. Specific test efforts include: developmental testing and requirements verification of the latest agile software build; collective training with LTAMDS; OT&E with LTAMDS and Enduring IFPC.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Decrease is a result of the conclusion of IOC</p>		39.766	35.483	-
<p>Title: Product Development - Beyond Initial Operational Capability (IOC)</p> <p>Description: Product development in support of agile software development and integration efforts for additional capability beyond that fielded at IOC.</p> <p>FY 2022 Plans: Funding is provided for initial Remote Interceptor Guidance-360 (RIG-360) development and integration efforts, which will ultimately provide integration of an independent, adapted Uplinker into IBCS to support 360 degree PAC-3 Missile Segment</p>		60.395	46.526	147.849

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Enhancement (MSE) engagements outside the coverage of the current PATRIOT radar. Funding also supports agile software development for beyond IOC Capabilities including LTAMDS and IFPC.</p> <p>FY 2023 Plans: Funding provides support for developmental software integration testing. Agile software development continues to support enduring development efforts and includes software fixes and improvements to counter emerging threats and incorporate emerging technology. Funding also initiates 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 of IFPC as well as the development and integration efforts of the RIG-360, which will provide integration of an independent, adapted Uplinker into IBCS to support 360 degree PAC-3 MSE engagements outside the coverage of the current PATRIOT radar.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Increase is a result of post-IOC development activities ramp up to address Army's 1-N capabilities.</p>				
<p>Title: Test and Evaluation - Beyond IOC Capability</p> <p>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.</p> <p>FY 2022 Plans: Provides for continuation of 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, and White Sands Missile Range test support for developmental test activities. Specific test efforts include: software development and software requirements verification in PI 9-12, cyber testing, and test planning of future developmental and operational tests.</p> <p>FY 2023 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 Test Fires, 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 & RIG-360, and test planning of future developmental and operational tests. Funding includes test hardware requirements (2 EOCs, 2 ECTs, 2 ICEs, & 5 Relays) as well as lab infrastructure for additional test lines for RIG-360, JTMC, and THAAD Integration.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Increase is a result of post-IOC test and evaluation efforts ramp up to address Army's 1-N capabilities.</p>		6.631	16.449	117.439
Title: SBIR/STTR Transfer		-	5.616	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: SBIR/STTR Transfer			
FY 2022 to FY 2023 Increase/Decrease Statement: SBIR/STTR Transfer			
Accomplishments/Planned Programs Subtotals	193.956	153.873	265.288

	FY 2021	FY 2022
Congressional Add: Counter Emerging Threat	20.000	-
FY 2021 Accomplishments: \$20M Add to develop a System of Systems (SoS) Integration framework of standards, processes, techniques and tools to digital-engineer capability and design requirements for systems, subsystems, and components that are part of the IAMD enterprise.		
Congressional Add: Kill Chain Automation	-	6.000
FY 2022 Plans: Funding supports design, code, and integration of kill-chain automation enhancements into the Integrated Battle Command System (IBCS). Funding 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	20.000	6.000

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• C53101: MSE Missile	678.148	771.696	1,037.093	-	1,037.093	978.741	982.922	991.265	1,002.608	Continuing	Continuing
• EF9: System Integration and Test	-	-	-	-	-	-	-	-	-	-	-
• EX2: Lower Tier Air Missile Defense (LTAMD) Capability	308.805	297.629	382.147	-	382.147	89.187	89.984	90.002	90.874	Continuing	Continuing
• EY7: IFPC Increment 2 - Block 1	152.399	182.257	131.093	-	131.093	59.266	10.774	10.778	-	Continuing	Continuing
• C62002: IFPC INC 2- I BLOCK 1 SYSTEM	62.461	19.053	18.924	-	18.924	386.383	670.667	712.994	722.152	0.000	2,592.634
• E10: Sentinel	105.271	122.607	71.259	-	71.259	74.055	31.655	8.578	8.662	Continuing	Continuing
• BZ5075: IAMD Battle Command System	198.587	296.872	438.967	-	438.967	412.920	457.335	458.445	457.608	Continuing	Continuing

UNCLASSIFIED

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

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• 146: Air & Msl Defense Planning Control Sys	8.085	2.877	1.255	-	1.255	3.495	3.281	3.282	3.315	Continuing	Continuing
• AD5070: AIR & MSL Defense Planning & Control Sys	62.517	67.193	72.619	-	72.619	-	-	-	-	0.000	202.329
• 149: Counter-Rockets, Artillery & Mortar	0.875	-	0.000	-	0.000	-	-	-	-	0.000	0.875
• 0604403A: Future Interceptor	-	6.895	8.179	-	8.179	8.210	8.202	8.205	8.285	0.000	47.976
• 0604117A: Maneuver - Short Range Air Defense (M-SHORAD)	5.776	39.376	225.147	-	225.147	461.536	519.511	252.825	271.364	0.000	1,775.535
• C14300: M-SHORAD - Procurement	517.287	331.575	135.747	-	135.747	58.336	205.657	487.003	487.120	Continuing	Continuing

Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (AIAMD) architecture. It provides for development of a common Integrated Fire Control System through a government controlled open architecture approach allowing for 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 delivers an Initial Operational Capability (IOC) in FY 2023. The capabilities are delivered through the fielding of the IAMD Battle Command System (IBCS) based AIAMD architecture including the IBCS Engagement Operations Center (EOC), Sentinel A3, 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 Striker, Remote Interceptor Guidance-360 (RIG-360), and other Army and Joint weapon systems using an agile development process.

Key principles of the AIAMD acquisition approach are the following:

- Migrate from system-based acquisition to competitive, component-based acquisition 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 used to evaluate and select, modify and integrate modular open systems hardware and software common configuration items.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / <i>Army Integrated Air and Missile Defense (AIAMD)</i>	Project (Number/Name) S40 / <i>Army Integrated Air and Missile Defense</i>
<ul style="list-style-type: none"> - Conduct architecture-based System Engineering, Integration and Test (SEI&T) activities for an incrementally fielded configuration of the AIAMD Integrated Fire Control Network-compatible IBCS EOC, weapons and sensor system components to include testing of resiliency and survivability in a denied environment. - The Follow-On Software Contract provides software-based improvements and capability additions to the Air and Missile Defense (AMD) weapon systems. - Software testing occurs at the end of each quarterly Program Increment. First, 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). It is then delivered to WSMR for developmental testing with tactical Sensors and Weapons. - The DAE approved the IAMD Software Acquisition Pathway (SWP) and LRIP Re-Characterization ADM on September 21, 2021. The ADM authorizes entry into the SWP Execution Phase and re-characterizes the IBCS FY 2022 quantity (26 IBCS EOCs) as LRIP versus FRP, increasing the total LRIP procurement from 19 to 45. - This program provides common fires mission command capability that 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. 		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0605457A / Army Integrated Air and Missile Defense (AIAMD)				S40 / Army Integrated Air and Missile Defense							
Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	MIPR	Various : Huntsville, AL	35.528	-		-		-		-		-	Continuing	Continuing	Continuing
SBIR/STTR	Various	Various : TBD	-	-		5.616		-		-		-	0.000	5.616	-
Subtotal			35.528	-		5.616		-		-		-	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AIAMD System Engineering & Integration	C/CPFF	Various : Huntsville, AL	216.764	21.006	Oct 2020	14.343	Jan 2022	33.361	Oct 2022	-		33.361	Continuing	Continuing	Continuing
IAMD Engineering Manufacturing and Development	SS/ Various	Northrop Grumman, Raytheon, Lockheed Martin and Other : Huntsville, AL and Various other locations	1,626.450	110.725	Oct 2020	46.956	Oct 2021	55.472	Oct 2022	-		55.472	Continuing	Continuing	Continuing
Government Furnished Equipment	MIPR	Various : Multiple	38.500	4.883	Oct 2020	2.755	Mar 2022	-		-		-	Continuing	Continuing	Continuing
Government Systems Engineering and Logistics	Various	Various : Huntsville, AL	116.140	10.945	Oct 2020	12.271	Nov 2021	10.300	Oct 2022	-		10.300	Continuing	Continuing	Continuing
Counter Emerging Threat	Various	AMRDEC/Torch Technologies : Huntsville, AL	85.000	20.000		-		-		-		-	0.000	105.000	-
Army 1-N Capability	Various	Various : TBD	-	-		20.000	Jun 2022	48.716	Oct 2022	-		48.716	Continuing	Continuing	-
Kill Chain Automation	Various	Various : TBD	-	-		6.000	May 2022	-		-		-	0.000	6.000	-
Subtotal			2,082.854	167.559		102.325		147.849		-		147.849	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army **Date:** April 2022

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
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Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Other Test Activities/ Army Evaluation Center/ Developmental Test Command/Operational Test Command	MIPR	Various : Multiple Locations	94.047	19.033	Oct 2020	16.966	Nov 2021	14.262	Oct 2022	-		14.262	Continuing	Continuing	Continuing
Modeling & Sim/Joint Interoperability Test Spt	MIPR	SED : Huntsville, AL	223.508	15.828	Oct 2020	18.281	Nov 2021	48.954	Oct 2022	-		48.954	Continuing	Continuing	Continuing
Range Support	MIPR	WSMR : White Sands, NM	72.345	11.536	Oct 2020	16.685	Nov 2021	9.123	Oct 2022	-		9.123	Continuing	Continuing	Continuing
Army 1-N Capability	Various	Various : TBD	-	-		-		9.130		-		9.130	Continuing	Continuing	-
Test Hardware Requirements	Various	Various : TBD	-	-		-		35.970		-		35.970	0.000	35.970	-
Subtotal			389.900	46.397		51.932		117.439		-		117.439	Continuing	Continuing	N/A

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		2,508.282	213.956	159.873	265.288	-	Continuing	Continuing	N/A

Remarks
 FY 2023 funding increase is a result of test hardware requirements (2 EOCs, 2 ECTs, 2 ICEs, & 5 Relays) as well as lab infrastructure for additional test lines with RIG-360, JTMC, and THAAD Integration. Funding supports IBCS development to support full weapon/threat planning and engagements.

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
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

Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Modeling and Simulation	[Blue bar spanning all quarters from FY 2021 to FY 2025]																											
PI-1 thru PI-4 SW Developmental Ground/Flight Testing	[Blue bar]																											
PI-1 thru PI-4 Agile SW HWIL Int Test & Rqmt Verification	[Blue bar]																											
PI-5 thru PI-8 Agile SW Development (IOT&E SW)	[Blue bar]																											
PI-5 thru PI-8 Agile SW HWIL Int Test & Rqmt Verification	[Blue bar]																											
Milestone C Decision	▲ 1																											
PI-5 thru PI-8 Dev Ground/Flight Testing (IOT&E SW)	[Blue bar]																											
Software Version 4.6.1 Capabilities Review	[Blue bar]																											
IOT&E (OTRR 2, Sustained Ops, M&S, Live Fire Test)					[Blue bar]																							
PI-9 thru PI-12 Agile SW Development					[Blue bar]																							
PI-9 thru PI-12 Agile SW HWIL Int Test & Rqmt Verification					[Blue bar]																							
PI-9 thru PI-12 Developmental Ground/Flight Testing					[Blue bar]																							
PI-10 Delta Operational Assessment									[Blue bar]																			

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
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

Event Name	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Delta Qualification Testing									████████████████																			
Initial Operational Capability									▲ 3																			
PI-13 thru PI-16 Agile SW Development													████████████████															
Full Rate Production Decision Review													▲ 4															
PI-13 thru PI-16 Agile SW HWIL Int Test & Rqmt Verification																	████████████████											
PI-13 thru PI-16 Developmental Ground/Flight Testing																	████████████████											
Future Capability Agile SW Development and Test																					██							

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army **Date:** April 2022

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
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Modeling and Simulation	1	2013	4	2025
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
PI-1 thru PI-4 SW Developmental Ground/Flight Testing	2	2020	2	2021
PI-1 thru PI-4 Agile SW HWIL Int Test & Rqmt Verification	2	2020	1	2021
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
PI-5 thru PI-8 Agile SW HWIL Int Test & Rqmt Verification	2	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	3	2022
PI-9 thru PI-12 Agile SW Development	1	2022	1	2023
PI-9 thru PI-12 Agile SW HWIL Int Test & Rqmt Verification	2	2022	1	2023
PI-9 thru PI-12 Developmental Ground/Flight Testing	2	2022	1	2023
PI-10 Delta Operational Assessment	4	2022	4	2022
Delta Qualification Testing	4	2022	1	2024

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army **Date:** April 2022

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
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Events	Start		End	
	Quarter	Year	Quarter	Year
Initial Operational Capability	1	2023	1	2023
PI-13 thru PI-16 Agile SW Development	1	2023	1	2024
Full Rate Production Decision Review	1	2023	1	2023
PI-13 thru PI-16 Agile SW HWIL Int Test & Rqmt Verification	2	2023	1	2024
PI-13 thru PI-16 Developmental Ground/Flight Testing	2	2023	1	2024
Future Capability Agile SW Development and Test	1	2024	4	2026