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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>
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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	3,183.325	194.264	220.311	367.279	-	367.279	543.868	554.429	464.018	314.936	Continuing	Continuing
MD07: <i>THAAD</i>	2,573.835	176.090	199.440	349.029	-	349.029	516.697	527.099	438.811	295.807	Continuing	Continuing
MC07: <i>Cyber Operations</i>	56.334	10.353	12.140	3.189	-	3.189	3.250	3.313	3.380	3.446	Continuing	Continuing
MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>	411.296	0.914	0.900	0.922	-	0.922	0.938	0.952	0.967	0.986	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	141.860	6.907	7.831	14.139	-	14.139	22.983	23.065	20.860	14.697	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

The increase from FY 2024 to FY 2025 provides funding to begin the initial engineering efforts supporting the integration of the Terminal High Altitude Area Defense (THAAD) weapon system into the Army Integrated Air and Missile Defense Battle Command System (IBCS) architecture and provides for additional capability upgrades to the THAAD Interceptor as part of the THAAD System Build 6.0 - Updated THAAD with Increased Threat Space.

A. Mission Description and Budget Item Justification

The Ballistic Missile Defense Terminal Defense Segment provides vital forward-deployable capabilities to support regional defensive Missile Defense System operations. The THAAD system provides Combatant Commands a globally-transportable, rapidly-deployable capability to intercept and destroy short-range, medium-range, and limited intermediate-range missile threats inside or outside the atmosphere during terminal phase of flight. This Program Element investigates concepts and continues the development and integration of multiple, independent THAAD system builds to address the evolving threat, improve reliability, availability and readiness, defense planning, and improved capability to engage short-range ballistic missile, medium-range ballistic missile, and limited intermediate-range ballistic missile threats.

B. Program Change Summary (\$ in Millions)

	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>
Previous President's Budget	195.216	220.311	239.705	-	239.705
Current President's Budget	194.264	220.311	367.279	-	367.279
Total Adjustments	-0.952	0.000	127.574	-	127.574
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-3.454	0.000			
• Other Adjustment	2.502	0.000	127.574	-	127.574

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity
0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 4:
Advanced Component Development & Prototypes (ACD&P)

R-1 Program Element (Number/Name)
PE 0603881C / *Ballistic Missile Defense Terminal Defense Segment*

Change Summary Explanation

The increase in FY 2025 provides funding to begin the initial engineering efforts supporting the integration of the THAAD weapon system into the Army IBCS architecture and provides for additional capability upgrades to the THAAD Interceptor as part of the THAAD System Build 6.0 - Updated THAAD with Increased Threat Space.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>
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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
MD07: <i>THAAD</i>	2,573.835	176.090	199.440	349.029	-	349.029	516.697	527.099	438.811	295.807	Continuing	Continuing
Quantity of RDT&E Articles	50	-	-	-	-	-	-	-	-	-		

Note

The increase from FY 2024 to FY 2025 provides funding to begin the initial engineering efforts supporting the integration of the Terminal High Altitude Area Defense (THAAD) weapon system into the Army Integrated Air and Missile Defense Battle Command System (IBCS) architecture and provides for additional capability upgrades to the THAAD Interceptor as part of the THAAD System Build 6.0 - Updated THAAD with Increased Threat Space. The increase also includes the realignment of cyber budget for Weapon system specific cyber development or component modification efforts from Budget Project MC07 to MD07 THAAD Development accomplishment in accordance with Department guidance.

A. Mission Description and Budget Item Justification

The THAAD system provides a capability to intercept and destroy short-range, medium-range, and limited intermediate-range missile threats inside or outside the atmosphere during the terminal phase of flight. THAAD continues the development and integration of multiple, independent system builds to address the evolving threat, improve reliability, availability and readiness, defense planning, and improved capability to engage Short-Range Ballistic Missile, Medium-Range Ballistic Missile, and limited Intermediate-Range Ballistic Missile threats.

THAAD Development continues the development and integration of multiple, independent system builds to deliver enhanced system capabilities and expand the defense of allies and deployed forces from short to limited intermediate-range threats.

Program Operations provides strategic planning, program integration, cost estimating, contracting, financial management, internal reviews and audits, earned-value management and program assessments for the THAAD Program Office.

Project Redwood details are provided at a Higher Classification reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress.

THAAD Program Support provides communications and interoperability efforts to support the Materiel Release process, maintaining safety and mission assurance and the ability to operate on multiple networks.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025
Title: Terminal High Altitude Area Defense (THAAD) Development	112.459	137.376	285.526
Articles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
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Description: The THAAD Development program continues the development and integration of multiple, independent system builds to deliver enhanced system capabilities and expand the defense of allies and deployed forces from short-to-intermediate-range threats.

System Build 5.0: THAAD Updates to Maintain Mission Assurance (Development scheduled to complete in 2Q FY 2025)

- Interface Change Proposal: Implements necessary Link-16 software interface changes to align with Missile Defense System interoperability.
- Maintenance Updates: Provides required maintenance updates and implements deferred content from accelerated Joint Emergent Operational Need (JEON) fielding timelines.
- Missile Segment Enhancement (MSE) Safety Integration: Integrates additional MSE safety improvements and the ability to manually emplace a MSE Launcher.
- External Integration: Project Manager for Short and Intermediate Effectors for Layered Defense (PM SHIELD) integration and support.
- Configuration 3 System Integration and Cyber Modernization: Updates THAAD weapon system to integrate new hardware addressing obsolescence, cyber vulnerabilities and various supportability issues to ensure continuity of Authority to Operate (ATO) approvals.
- THAAD Radio Frequency (RF) Remote Launcher: Delivers the capability to increase the defended area footprint of a single THAAD Battery by enabling RF communications from the THAAD Fire Control and Communication (TFCC) to Remoted THAAD launchers.
- Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) Radar: Integrates the latest AN/TPY-2 radar software (CX 6.0) into the THAAD weapon system, which ensures system functionality and interoperability providing the capability to track and discriminate evolving threats.
- Assured Position Navigation and Timing (APNT): Implement protective measures that increase assurance of reliable Position Navigation and Timing (PNT) data. APNT supports a Department of Defense (DoD) mandate to ensure the integrity and availability of PNT data for the THAAD weapon system.
- Remote Workstation: External TFCC hardware and software connectivity allowing for the capability to remote from the TFCC tactical shelter to a remote location.
- Dual Monitor: Integrate Dual Monitor capabilities for the ability to provide human factor improvements through additional monitor viewing space to be utilized within the TFCC and in support of Remote Workstation capability to support external Tactical Operation Centers (TOCs) and other external Remote Workstations.
- Architecture Improvements: Improvements in Software and Hardware Architecture to increase modularity, interoperability and reduce obsolete software and architecture structures.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
<ul style="list-style-type: none"> - Common Planner: Provides a common force operations planning capability with the objective of achieving a common software baseline across all current THAAD force operations planning platforms. - Cyber Security Updates: Provides THAAD Weapon System software development efforts consistent with DoD cybersecurity requirements. <p>System Build 6.0: Updates THAAD with Increased Threat Space (Development scheduled to complete in 4Q FY 2027)</p> <ul style="list-style-type: none"> - Updated THAAD/MSE with Increased Threat Space: Provides the capability to plan and execute engagements against advanced threats. - THAAD Interceptor Software Upgrades: Provides updated engagement algorithm development to the THAAD Interceptor to improve performance against existing and emerging threats. - AN/TPY-2 Radar: Integrates the latest AN/TPY-2 radar software (CX 7.0) into the THAAD weapon system, which ensures system functionality and interoperability providing the capability to track and discriminate evolving threats. - Cyber Security Updates: Provides THAAD Weapon System software development efforts consistent with DoD cybersecurity requirements. - THAAD Evaluation Center (TEC) Upgrades: Provides for the upgrade of the THAAD labs at the TEC to Battery Configuration 3 production representative hardware. - External Integration: PM SHIELD integration and support. <p>Recurring efforts include:</p> <ul style="list-style-type: none"> - Support element Models and Simulations (M&S) related activities, to include Verification, Validation and Accreditation (VV&A) and Continuous Digital Assessment on the path of accredited models and simulations for Missile Defense System assessment. - Support M&S related activities in element and Missile Defense System test events in the approved Integrated Master Test Plan such as requirements, design, development, and VV&A. - Design, develop, test, and field the releases of THAAD system software to ensure continued performance and operation of fielded batteries. - Support laboratory assets and equipment to enable future development, and to isolate, identify, and remedy root causes of equipment and software deficiencies identified by the warfighter. - Perform requirements development, engineering analysis, and performance verification for THAAD development and Missile Defense System integration to ensure THAAD compliance with the Missile Defense System Specification, Missile Defense System Description Document, and Master Integration Plan. - Perform Independent Verification and Validation (IV&V) of software and software assurance risk report. - Perform THAAD Weapon System software development efforts consistent with DoD cybersecurity requirements. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
<p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><i>FY 2024 Plans:</i> System Build 4.0 - Field System Build 4.0 (4.0 Global) to all THAAD batteries</p> <p>System Build 5.0 Provides for development and integration efforts to include: - Interface Change Proposal: Implements necessary Link-16 software interface changes to align with Missile Defense System interoperability. - Maintenance Updates: Provides required maintenance updates and implements deferred content from accelerated JEON fielding timelines. - MSE Safety Integration: Integrates additional MSE safety improvements and the ability to manually emplace MSE Launcher. - External Integration: PM SHIELD integration and support. - Configuration 3 system Integration and Cyber Modernization: Updates THAAD weapon system to integrate new hardware addressing obsolescence, cyber vulnerabilities and various supportability issues to ensure continuity of ATO approvals. - THAAD RF Remote Launcher: Delivers the capability to increase the defended area footprint of a single THAAD Battery by enabling RF communications from the TFCC to Remoted THAAD launchers. - AN/TPY-2 Radar: Integrates latest AN/TPY-2 radar software (CX 6.0) into THAAD weapon system which ensures system functionality and interoperability providing the capability to track and discriminate evolving threats. - APNT: Implement protective measures that increase assurance of reliable PNT data. APNT supports a Department of Defense mandate to ensure the integrity and availability of PNT data for the THAAD weapon system. - Remote Workstation: External TFCC hardware and software connectivity allowing for the capability to remote from the TFCC tactical shelter to a remote location. - Dual Monitor: Integrate Dual Monitor capabilities for the ability to provide human factor improvements through additional monitor viewing space to be utilized within the TFCC and in support of Remote Workstation capability to support external TOCs and other external Remote Workstations. - Architecture Improvements: Improvements in Software and Hardware Architecture to increase modularity, interoperability and reduce obsolete software and architecture structures. - Common Planner: Provides a common force operations planning capability with the objective of achieving a common software baseline across all current THAAD force operations planning platforms.</p> <p>System Build 6.0</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2023	FY 2024	FY 2025
<p>- Conduct systems engineering and integration analysis in support of the Full THAAD/MSE Integration capability.</p> <p>FY 2025 Plans:</p> <ul style="list-style-type: none"> - Complete development of THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance. - Continue for development of THAAD System Build 6.0 - Updated THAAD with Increased Threat Space including THAAD Interceptor capability upgrades to improve performance against existing and emerging threats. - Provide initial engineering efforts supporting the integration of the THAAD weapon system into the Army IBCS architecture. <p>FY 2024 to FY 2025 Increase/Decrease Statement:</p> <p>Increase from FY 2024 to FY 2025 provides funding to begin the initial engineering efforts supporting the integration of the THAAD weapon system into the Army IBCS architecture and provides for additional capability upgrades to the THAAD Interceptor as part of the THAAD System Build 6.0 - Updated THAAD with Increased Threat Space. The increase also reflects the realignment of cyber budget for Weapon system specific cyber development or component modification efforts from Budget Project MC07 to MD07 in accordance with Department guidance.</p>				
<p>Title: Program Operations</p> <p align="right">Articles:</p> <p>Description: Program Operations provides strategic planning, program integration, contracting, acquisition, engineering, financial management, internal reviews and audits, and program assessments for the THAAD Program Office.</p> <p>Recurring efforts include:</p> <ul style="list-style-type: none"> -Provide technical and business management support activities to provide Program and Agency Leadership with critical program status and decision quality data. -Ensure THAAD program compliance with internal and external direction, policies, and regulations to deliver critical capability within a consistent and disciplined process. -Conduct internal program reviews to measure program progress against the six Missile Defense Agency approved baselines. -Continue a Mission Assurance and Manufacturing Engineering Program to include Quality, Configuration Management, Manufacturing, Engineering, and Safety in all phases of the system life cycle, throughout the supply chain, and at all levels of assembly emphasizing high yield rates which minimize test and rework costs. -Provide Quality Safety and Mission Assurance (QSMA) operations to ensure compliance with Missile Defense Agency requirements for design, test, manufacturing, quality, safety and reliability to ensure high quality products are delivered to the Warfighter. <p>Specific and/or unique accomplishments to each FY are as follows:</p>		52.426	50.732	49.047
		-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
<p>FY 2024 Plans: -SEE ABOVE.</p> <p>FY 2025 Plans: -SEE ABOVE.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: N/A.</p>			
<p>Title: Project Redwood- Details at a Higher Classification</p> <p align="right">Articles:</p> <p>Description: This project is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program (SAP) Annual Report to Congress.</p> <p>FY 2024 Plans: -SEE ABOVE.</p> <p>FY 2025 Plans: -SEE ABOVE.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Further details are reported in accordance with Title 10, United States Code, Section 119(a)(1) in the SAP Annual Report to Congress.</p>	9.570 -	9.288 -	12.324 -
<p>Title: THAAD Program Support</p> <p align="right">Articles:</p> <p>Description: This activity provides support for efforts such as communications and interoperability upgrades to operate on joint, service, or allied communications networks. This activity provides support for safety and mission assurance requirements, and support of independent government offices as part of the Materiel Release process.</p> <p>Recurring efforts include:</p> <ul style="list-style-type: none"> - Interoperability development and maintenance to ensure the weapon system is authorized to operate on joint, service, or allied communications networks. - Safety confirmation and verification testing, preparation and approvals of System Safety Risk Assessments, issuance of hazard classifications and safety releases, insensitive munitions approvals and waivers, and independent oversight and support in the areas of reliability, availability, and maintainability and quality assurance. 	1.635 -	2.044 -	2.132 -

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
Specific and/or unique accomplishments to each FY are as follows: FY 2024 Plans: -SEE ABOVE. FY 2025 Plans: -SEE ABOVE. FY 2024 to FY 2025 Increase/Decrease Statement: N/A.			
Accomplishments/Planned Programs Subtotals	176.090	199.440	349.029

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
• 0208866C MD07: <i>THAAD Operation and Maintenance</i>	86.037	89.297	91.790	-	91.790	93.995	96.024	97.945	99.904	Continuing	Continuing
• 0208866C MD07: <i>THAAD Procurement</i>	239.994	216.782	246.995	-	246.995	476.227	645.357	656.946	674.361	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	376.650	360.455	367.491	-	367.491	418.514	383.362	435.626	438.825	Continuing	Continuing
• 0604876C: <i>Ballistic Missile Defense Terminal Defense Segment Test</i>	67.789	47.577	25.673	-	25.673	61.982	120.465	56.615	55.131	Continuing	Continuing

Remarks

D. Acquisition Strategy
 The THAAD program awards Task Orders on the Advanced Capability Development (ACD) Indefinite Delivery Indefinite Quantity (IDIQ) contract for THAAD development. The ACD contract is comprised of seven separate task orders with varying contract types such as firm fixed price, fixed price incentive firm, cost plus incentive fee, and cost plus fixed fee. The discrete task orders allow management and tracking of development work. The ACD contract ordering period ends in January 2025, with the final delivery period for all ordered work to end in January 2026. As such, the THAAD program plans to award a new IDIQ contract called THAAD Follow on Development Contract (TFODC) by January 2025. TFODC will support continued development for TH 6.0, future THAAD system builds, engineering and design support, testing efforts, obsolescence mitigation and software sustainment.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

THAAD also utilizes other contracts with industry as well as agreements with other U.S. Government organizations in order to develop, test and upgrade the THAAD Weapon system.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
0400 / 4				PE 0603881C / Ballistic Missile Defense Terminal Defense Segment						MD07 / THAAD					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Terminal High Altitude Area Defense (THAAD) Development - Advanced Capability Development	SS/IDIQ	LOCKHEED MARTIN CORPORATION : AL	1,102.887	47.090	Nov 2022	83.152	Nov 2023	148.475	Nov 2024	-		148.475	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - MDA Program Support (Prior)	MIPR	Various : Various	15.386	0.000		0.000		0.000		-		0.000	0.000	15.386	15.386
Terminal High Altitude Area Defense (THAAD) Development - Requirements and Design - Industry	C/CPAF	BOEING : AL	30.397	6.990	Dec 2022	5.665	Dec 2023	5.420	Dec 2024	-		5.420	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - Software Development	MIPR	Various : Various	17.631	4.664	Nov 2022	0.277	Nov 2023	0.296	Nov 2024	-		0.296	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - Software Development (PM Shield)	MIPR	DOD - USA - SHORT AND INTERMEDIATE EFFECTORS FOR LAYERED DEFENSE (SHIELD) : AL	0.000	13.169	Nov 2022	13.852	Nov 2023	32.229	Nov 2024	-		32.229	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - Software Support (Prior)	MIPR	DOD - USA - COMBAT CAPABILITIES DEVELOPMENT COMMAND (CCDC) : AL	14.147	0.000		0.000		0.000		-		0.000	0.000	14.147	14.147
Terminal High Altitude Area Defense (THAAD) Development - THAAD IBCS Integration	SS/IDIQ	TBD : TBD	0.000	0.000		0.000		59.900	Nov 2024	-		59.900	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
0400 / 4				PE 0603881C / Ballistic Missile Defense Terminal Defense Segment						MD07 / THAAD					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Terminal High Altitude Area Defense (THAAD) Development - THAAD Radar Improvements	SS/CPAF	Raytheon : MA	10.000	0.000		0.000		0.000		-		0.000	0.000	10.000	10.000
Terminal High Altitude Area Defense (THAAD) Development - Verification and Assessment - CSS / TEAMS	C/CPFF	PARSONS GOVERNMENT SERVICES INC. : Various	19.570	0.260	Nov 2022	0.681	Nov 2023	1.110	Nov 2024	-		1.110	Continuing	Continuing	Continuing
JEON - Advanced Capability Development	SS/IDIQ	Lockheed Martin : Various	177.889	0.000		0.000		0.000		-		0.000	0.000	177.889	177.889
JEON - MDA Program Support	Various	Various : Various	0.509	0.000		0.000		0.000		-		0.000	0.000	0.509	0.509
JEON - OGA JEON Support (GOVT)	MIPR	US Army Tank Automotive Research, Development, and Engineering Center (TARDEC), Army Test and Evaluation Command (ATEC) : Warren, MI / Huntsville, AL	19.359	0.000		0.000		0.000		-		0.000	0.000	19.359	19.359
THAAD Layered Homeland Defense - THAAD Layered Homeland Defense	Various	Lockheed Martin / U.S. Army Combat Capabilities Development Command (CCDC) : Sunnyvale, CA / Huntsville, AL	35.059	0.000		0.000		0.000		-		0.000	0.000	35.059	35.059
Subtotal			1,442.834	72.173		103.627		247.430		-		247.430	Continuing	Continuing	N/A
Remarks															
N/A.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
0400 / 4				PE 0603881C / Ballistic Missile Defense Terminal Defense Segment						MD07 / THAAD					
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Terminal High Altitude Area Defense (THAAD) Development - IT Program Support	C/CPAF	JACOBS TECHNOLOGY INC. : Various	18.626	2.740	Nov 2022	2.949	Nov 2023	3.027	Nov 2024	-		3.027	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - Models & Simulations	MIPR	DOD - USA - COMBAT CAPABILITIES DEVELOPMENT COMMAND (CCDC) : AL	321.677	25.922	Nov 2022	26.494	Nov 2023	28.650	Nov 2024	-		28.650	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - Models & Simulations - Various Support	Various	Various : Various	0.000	2.713	Nov 2022	0.000		2.040	Nov 2024	-		2.040	0.000	4.753	4.753
Terminal High Altitude Area Defense (THAAD) Development - Software IV&V	MIPR	DOD - USA - COMBAT CAPABILITIES DEVELOPMENT COMMAND (CCDC) : AL	7.180	3.911	Nov 2022	4.306	Nov 2023	4.379	Nov 2024	-		4.379	Continuing	Continuing	Continuing
Terminal High Altitude Area Defense (THAAD) Development - Survivability Planning / Intercept Evaluation	MIPR	Various : Various	0.000	5.000	Apr 2023	0.000		0.000		-		0.000	0.000	5.000	5.000
Program Operations - Civilian Labor	Allot	DOD - MISSILE DEFENSE AGENCY (MDA) CIVILIAN : Various	22.855	24.168	Oct 2022	24.169	Oct 2023	23.801	Oct 2024	-		23.801	Continuing	Continuing	Continuing
Program Operations - Contractor Support Services (MDS Eng)	C/CPFF	PARSONS GOVERNMENT SERVICES INC. : AL	9.443	10.909	Nov 2022	10.119	Nov 2023	8.028	Nov 2024	-		8.028	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
0400 / 4				PE 0603881C / Ballistic Missile Defense Terminal Defense Segment						MD07 / THAAD					
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Program Operations - Contractor Support Services (QSMA)	C/CPFF	AI SOLUTIONS, INC. : AL	1.166	1.083	Nov 2022	1.343	Nov 2023	1.721	Nov 2024	-		1.721	Continuing	Continuing	Continuing
Program Operations - Contractor Support Services (Various)	C/CPFF	Various : Various	428.118	1.852	Nov 2022	1.695	Nov 2023	1.756	Nov 2024	-		1.756	Continuing	Continuing	Continuing
Program Operations - Program Operations (CCDC)	MIPR	DOD - USA - COMBAT CAPABILITIES DEVELOPMENT COMMAND (CCDC) : AL	4.613	4.746	Nov 2022	5.006	Nov 2023	5.106	Nov 2024	-		5.106	Continuing	Continuing	Continuing
Program Operations - Program Operations (FFRDC)	MIPR	DOD - USA - COMMUNICATIONS ELECTRONICS COMMAND (CECOM) : MD	3.277	3.174	Nov 2022	2.962	Nov 2023	3.015	Nov 2024	-		3.015	Continuing	Continuing	Continuing
Program Operations - Program Operations (IT Support)	C/CPFF	Various : Various	0.282	1.451	Nov 2022	0.508	Nov 2023	0.408	Nov 2024	-		0.408	Continuing	Continuing	Continuing
Program Operations - Travel	Allot	DOD - MISSILE DEFENSE AGENCY (MDA) : Various	0.644	0.990	Nov 2022	1.132	Nov 2023	1.332	Nov 2024	-		1.332	Continuing	Continuing	Continuing
Project Redwood- Details at a Higher Classification - Special Programs	SS/FP	Various : Various	133.826	9.570	Nov 2022	9.288	Nov 2023	12.324	Nov 2024	-		12.324	Continuing	Continuing	Continuing
THAAD Program Support - Mission Support	MIPR	ATEC / SMDC / CCDC / MDA : WSMR, NM / Huntsville, AL	36.982	0.000		0.000		0.000		-		0.000	0.000	36.982	36.982
THAAD Program Support - Mission Support (CCDC)	MIPR	DOD - USA - COMBAT CAPABILITIES DEVELOPMENT	1.030	1.060	Nov 2022	1.199	Nov 2023	1.222	Nov 2024	-		1.222	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency											Date: March 2024				
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>					Project (Number/Name) MD07 / <i>THAAD</i>				

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
		COMMAND (CCDC) : AL													
THAAD Program Support - Mission Support (Prime)	SS/IDIQ	LOCKHEED MARTIN CORPORATION : Various	0.600	0.000		0.000		0.000		-		0.000	0.000	0.600	0.600
THAAD Program Support - Mission Support (Various)	MIPR	Various : Various	1.068	0.575	Dec 2022	0.845	Dec 2023	0.910	Dec 2024	-		0.910	Continuing	Continuing	Continuing
THAAD Program Support - Prior year no longer funded in the FYDP	Various	Various : Various	136.579	0.000		0.000		0.000		-		0.000	0.000	136.579	136.579
Subtotal			1,127.966	99.864		92.015		97.719		-		97.719	Continuing	Continuing	N/A

Remarks
N/A

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Program Operations - Contractor Support Services (Various)	C/CPPF	Various : Various	3.035	4.053	Nov 2022	3.798	Nov 2023	3.880	Nov 2024	-		3.880	Continuing	Continuing	Continuing
Subtotal			3.035	4.053		3.798		3.880		-		3.880	Continuing	Continuing	N/A

Remarks
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		2,573.835	176.090	199.440	349.029	-	349.029	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency							Date: March 2024		
Appropriation/Budget Activity 0400 / 4			R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>			Project (Number/Name) MD07 / <i>THAAD</i>			
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks
Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>
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Significant Event Complete ▲	Milestone Decision Complete ★	Element Test Complete ◆	System Level Test Complete ●	Complete Activity ◆
Significant Event Planned △	Milestone Decision Planned ☆	Element Test Planned ◇	System Level Test Planned ○	Planned Activity ◇

	FY 2023			FY 2024			FY 2025			FY 2026			FY 2027			FY 2028			FY 2029		
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Incremental Engineering Technical Review (IETR) #1	▲																				
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance IETR #2	▲																				
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Formal Qualification Testing IETR #3				▲																	
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Incremental Engineering Technical Review (IETR) #4				△																	
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Incremental Engineering Technical Review (IETR) #5					△																
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance FQT							△														
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #6								△													
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #7									△												
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #8										△											
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #9											△										
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space FQT												△									
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #10													△								
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #11														△							
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #12															△						
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #13																△					
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #14																				△	

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Incremental Engineering Technical Review (IETR) #1	1	2023	1	2023
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance IETR #2	2	2023	2	2023
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Formal Qualification Testing IETR #3	1	2024	1	2024
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Incremental Engineering Technical Review (IETR) #4	2	2024	2	2024
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance Incremental Engineering Technical Review (IETR) #5	4	2024	4	2024
THAAD System Build 5.0 - THAAD Updates to Maintain Mission Assurance FQT	2	2025	2	2025
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #6	3	2025	3	2025
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #7	1	2026	1	2026
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #8	3	2026	3	2026
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space IETR #9	1	2027	1	2027
THAAD System Build 6.0 - Updated THAAD with Increased Threat Space FQT	3	2027	3	2027
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #10	3	2027	3	2027
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #11	1	2028	1	2028
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #12	3	2028	3	2028
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #13	1	2029	1	2029

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD07 / <i>THAAD</i>

Events	Start		End	
	Quarter	Year	Quarter	Year
THAAD System Build 7.0 - Additional Ballistic Missile Threat Space and Representative Threats for THAAD Engagements IETR #14	3	2029	3	2029

Note

Incremental Engineering Technical Review (IETR): A formal milestone review held at the end of each Iterative Phase to review delivered capability and approve entry/exit criteria required for previous and subsequent Iterative Phase(s). The IETR may include Weapon System Component or System level reviews. The IETR will review material in alignment with approved Technical Review Plan (TRP) to include, but not limited to, the applicable content for the following: Cost / Schedule Review, System Requirements Review (SRR) ETR requirements evaluation, Preliminary Design Review (PDR) ETR requirements evaluation, Critical Design Review (CDR) ETR requirements evaluation, Test Results review, Requirements trace review, Code Status review, Risk/Issue review, Objective Evidence/Justification review, Test Readiness Review, and Approved Documentation Review.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MC07 / <i>Cyber Operations</i>
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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
MC07: <i>Cyber Operations</i>	56.334	10.353	12.140	3.189	-	3.189	3.250	3.313	3.380	3.446	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Decrease from FY 2024 to FY 2025 reflects the realignment of cyber budget for Weapon system specific cyber development or component modification efforts from Budget Project MC07 to MD07 Terminal High Altitude Area Defense (THAAD) Development accomplishment in accordance with Department guidance.

A. Mission Description and Budget Item Justification

Cyber Operations sustain the Missile Defense Agency (MDA) Risk Management Framework (RMF) and Controls Validation Testing (CVT) activities; analysis of validation results, risk assessments; reviews of proposed Program Manager/Information Assurance Manager Plans of Action and Milestones for MDA THAAD mission systems; and supports THAAD authorizations to operate in the Missile Defense System.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025
Title: Network / System Certification and Accreditation (C&A)	10.353	12.140	3.189
Articles:	-	-	-
Description: Funding in this project sustains MDA RMF and CVT activities, analysis of validation results, risk assessments, monitoring and tracking of cybersecurity mitigations, and all other activities necessary to comply with the Federal Information Security Management Act.			
Recurring efforts include:			
<ul style="list-style-type: none"> - Conduct cybersecurity/information assurance engineering and architecture planning for THAAD information technology systems. - Develop and test cybersecurity/information assurance control measures for THAAD systems. - Develop THAAD RMF for Department of Defense Information Technology Certification and accreditation packages. - Support CVT of THAAD mission, test, and training systems. - Develop Plan of Action and Milestones to resource and remediate information assurance deficiencies. - Conduct annual information assurance reviews on the THAAD enclaves to assess compliance in implementing and maintaining Information Assurance controls. - Perform Information Assurance Vulnerability Alert to mitigate potential system vulnerabilities. 			
Specific and/or unique accomplishments to each FY are as follows:			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MC07 / <i>Cyber Operations</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
<i>FY 2024 Plans:</i> -SEE ABOVE.			
<i>FY 2025 Plans:</i> -SEE ABOVE.			
<i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Decrease from FY 2024 to FY 2025 reflects the realignment of cyber budget for Weapon system specific cyber development or component modification efforts from Budget Project MC07 to MD07 THAAD Development accomplishment in accordance with Department guidance.			
Accomplishments/Planned Programs Subtotals	10.353	12.140	3.189

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
• 0208866C MD07: <i>THAAD Operation and Maintenance</i>	86.037	89.297	91.790	-	91.790	93.995	96.024	97.945	99.904	Continuing	Continuing
• 0208866C MD07: <i>THAAD Procurement</i>	239.994	216.782	246.995	-	246.995	476.227	645.357	656.946	674.361	Continuing	Continuing
• 0604876C: <i>Ballistic Missile Defense Terminal Defense Segment Test</i>	67.789	47.577	25.673	-	25.673	61.982	120.465	56.615	55.131	Continuing	Continuing

Remarks

D. Acquisition Strategy

THAAD utilizes contracts with industry as well as agreements with other U.S. Government organizations in order to develop, test and upgrade the THAAD Weapon system.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MC07 / <i>Cyber Operations</i>
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Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Network / System Certification and Accreditation (C&A) - Mayhem Cybersecurity Tool	MIPR	DOD - USA - ARMY CONTRACTING COMMAND (ACC) PICATINNY ARSENAL (PICA) : NJ	0.175	0.115	Nov 2022	0.115	Nov 2023	0.115	Nov 2024	-		0.115	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - Network / System Certification and Accreditation (C&A)	SS/IDIQ	LOCKHEED MARTIN CORPORATION : AL	9.521	8.216	Nov 2022	9.246	Nov 2023	0.000		-		0.000	0.000	26.983	26.983
Subtotal			9.696	8.331		9.361		0.115		-		0.115	Continuing	Continuing	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Network / System Certification and Accreditation (C&A) - CND/IA Advisory and Assistance Services	C/CPFF	Various : Various	5.302	0.000		0.000		0.000		-		0.000	0.000	5.302	5.302
Network / System Certification and Accreditation (C&A) - Contract Support Services (CCRM)	C/CPFF	Various : Various	0.460	0.465	Nov 2022	0.478	Nov 2023	0.708	Nov 2024	-		0.708	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) -	C/CPFF	SYSTEM HIGH CORPORATION : VA	1.106	0.000		0.000		0.000		-		0.000	0.000	1.106	1.106

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MC07 / <i>Cyber Operations</i>
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Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Contract Support Services (CHS)															
Network / System Certification and Accreditation (C&A) - Contract Support Services (CND)	C/CPPF	Various : Various	1.077	1.135	Nov 2022	1.150	Nov 2023	1.173	Nov 2024	-		1.173	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - Cybersecurity Engineering	SS/IDIQ	LOCKHEED MARTIN CORPORATION : Various	38.139	0.000		0.000		0.000		-		0.000	0.000	38.139	38.139
Network / System Certification and Accreditation (C&A) - Network / System Certification and Accreditation (Various)	Various	Various : Various	0.554	0.422	Oct 2022	1.151	Oct 2023	1.193	Oct 2024	-		1.193	Continuing	Continuing	Continuing
Subtotal			46.638	2.022		2.779		3.074		-		3.074	Continuing	Continuing	N/A

Remarks
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	56.334	10.353	12.140	3.189	-	3.189	Continuing	Continuing	N/A

Remarks
Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MC07 / <i>Cyber Operations</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MC07 Completed Cyber Operations	1	2023	4	2023
MC07 Planned Cyber Operations	1	2024	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD06 / <i>Patriot Advanced Capability-3 (PAC-3)</i>
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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
	MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>	411.296	0.914	0.900	0.922	-	0.922	0.938	0.952	0.967	0.986	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

N/A.

A. Mission Description and Budget Item Justification

PAC-3 is an operational, land-based weapon built upon the proven U.S. Army Phased Array Tracking Radar Intercept on Target (PATRIOT) air and missile defense infrastructure. The Army is responsible for production and further development of the PAC-3 System and Missile Segment Enhancements (MSE); the Missile Defense Agency (MDA) remains responsible for any Missile Defense System interoperability and integration efforts. The Army will utilize MDA funds to further the integration of PATRIOT with the Missile Defense System.

Previously this project included the Army's portion of the Joint Emergent Operational Need (JEON) including:

- 1) PATRIOT launch on remote to utilize Terminal High Altitude Area Defense's (THAAD's) capability to detect and track threat ballistic missiles at longer ranges and utilize MSE's full kinematic capability
- 2) THAAD/MSE Integration Part 1 that integrates MSE launchers and missiles into the THAAD weapon system enabling a more tightly integrated upper/lower tier defensive capability

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025
Title: General Support	0.914	0.900	0.922
Articles:	-	-	-
Description: MDA funds PATRIOT participation in Missile Defense System interoperability integration efforts.			
FY 2024 Plans: -SEE ABOVE.			
FY 2025 Plans: -SEE ABOVE.			
FY 2024 to FY 2025 Increase/Decrease Statement: N/A.			
Accomplishments/Planned Programs Subtotals	0.914	0.900	0.922

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency									Date: March 2024		
Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>				Project (Number/Name) MD06 / <i>Patriot Advanced Capability-3 (PAC-3)</i>			

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>			<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• 0208866C MD07: <i>THAAD Operation and Maintenance</i>	86.037	89.297	91.790	-	91.790	93.995	96.024	97.945	99.904	Continuing	Continuing
• 0208866C MD07: <i>THAAD Procurement</i>	239.994	216.782	246.995	-	246.995	476.227	645.357	656.946	674.361	Continuing	Continuing
• 0604876C: <i>Ballistic Missile Defense Terminal Defense Segment Test</i>	67.789	47.577	25.673	-	25.673	61.982	120.465	56.615	55.131	Continuing	Continuing

Remarks

D. Acquisition Strategy

The planned acquisition strategy for PATRIOT support is to use a support agreement to provide Military Interdepartmental Purchase Requests to the U.S. Army to further the integration of PATRIOT with the Missile Defense System.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD06 / <i>Patriot Advanced Capability-3 (PAC-3)</i>
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Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
JEON - PM SHIELD - JEON	MIPR	Various : Various	397.585	0.000		0.000		0.000		-		0.000	0.000	397.585	397.585
Subtotal			397.585	0.000		0.000		0.000		-		0.000	0.000	397.585	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
General Support - General Support	MIPR	Various : Various	13.711	0.914	Nov 2022	0.900	Nov 2023	0.922	Nov 2024	-		0.922	Continuing	Continuing	Continuing
Subtotal			13.711	0.914		0.900		0.922		-		0.922	Continuing	Continuing	N/A

Remarks
N/A

Project Cost Totals	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
	411.296	0.914	0.900	0.922	-	0.922	Continuing	Continuing	N/A

Remarks
Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD06 / <i>Patriot Advanced Capability-3 (PAC-3)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD06 Completed Patriot Advanced Capability-3 (PAC-3) General Support	1	2023	4	2023
MD06 Planned Patriot Advanced Capability-3 (PAC-3) General Support	1	2024	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency										Date: March 2024		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>				Project (Number/Name) MD40 / <i>Program-Wide Support</i>			
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
MD40: <i>Program-Wide Support</i>	141.860	6.907	7.831	14.139	-	14.139	22.983	23.065	20.860	14.697	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Program Wide Support (PWS) is allocated on a pro-rata basis across multiple Agency PEs each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire Missile Defense System. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the Missile Defense System as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations worldwide. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations across multiple geographic locations; commercial and ancillary facility services; management of all facility aspects regardless of lifecycle stage; supplies and maintenance; compliance with statutory environmental requirements; data and unified communications support; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (FSRM) program (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025
Title: Program Wide Support	6.907	7.831	14.139
Articles:	-	-	-
Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire Missile Defense System. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the Missile Defense System as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations worldwide. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations across multiple geographic locations; commercial and ancillary facility services; management of all facility aspects regardless of lifecycle stage; supplies and maintenance; compliance with statutory environmental requirements; data and unified communications support; materiel and readiness and central property			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025
<p>management of equipment; Facilities Sustainment, Restoration and Modernization (FSRM) program (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.</p> <p>FY 2024 Plans: - SEE ABOVE.</p> <p>FY 2025 Plans: - SEE ABOVE.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase from FY 2024 to FY 2025 provides the PWS allocation on a pro-rata basis across multiple Agency PEs each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.</p>			
Accomplishments/Planned Programs Subtotals	6.907	7.831	14.139

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

N/A

Remarks

D. Acquisition Strategy

The acquisition strategy for MDA Consolidated Support consists of contract actions to industry for: a) Engineering and technical support; b) studies, analyses, and evaluations; and c) management and professional services to MDA functional organizations and program offices. With a focus to achieve Small Business goals, MDA is leveraging existing contracts and will competitively award new contracts to meet MDA's Fiscal Years 2020-2030 Advisory and Assistance Services support.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
0400 / 4				PE 0603881C / Ballistic Missile Defense Terminal Defense Segment					MD40 / Program-Wide Support						
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Program Wide Support - Agency Operations and Support Services #3	C/FFP	HUNTSVILLE REHABILITATION FOUNDATION : Various	0.000	0.000		0.000		1.026	Nov 2024	-		1.026	Continuing	Continuing	Continuing
Program Wide Support - Agency Facilities and Maintenance	MIPR	Various : VA	12.138	0.000		0.125	Nov 2023	1.388	Nov 2024	-		1.388	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Various	Various : Multi: AL, CA, CO, VA	7.109	0.000		0.000		0.000		-		0.000	0.000	7.109	0.000
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	Various : MDA Multi: AL, CO, CA, VA,	18.700	0.000		0.000		0.000		-		0.000	0.000	18.700	0.000
Program Wide Support - Agency Operations and Support International and Materiel and Readiness	MIPR	Various : Multi: AL, VA, Aust, Japan	3.492	0.000		0.000		0.000		-		0.000	0.000	3.492	0.000
Program Wide Support - Agency Operations and Support Services	C/CPFF	STRATEGIC ALLIANCE BUSINESS GROUP LLC : Multi: AL, CO, VA	95.096	4.683	Nov 2022	0.000		0.000		-		0.000	0.000	99.779	0.000
Program Wide Support - Agency Operations and Support Services #2	C/FFP	Various : Multi: AK, AL, CA, CO, HI, NY, VA	0.018	0.000		0.502	Nov 2023	11.725	Nov 2024	-		11.725	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations, Sustainment and GPC	C/CPFF	JACOBS TECHNOLOGY INC. : AK, AL, CA, HI, NY, VA	0.005	2.224	Nov 2022	2.254	Nov 2023	0.000		-		0.000	0.000	4.483	0.000
Program Wide Support - FFRDC/UARC	FFRDC	Various : Multi: AL, VA	1.787	0.000		0.000		0.000		-		0.000	0.000	1.787	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Missile Defense Agency **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>
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Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Program Wide Support - Prior year no longer funded in the FYDP	Various	Various : Various	3.515	0.000		0.000		0.000		-		0.000	0.000	3.515	0.000
Subtotal			141.860	6.907		2.881		14.139		-		14.139	Continuing	Continuing	N/A

Remarks
N/A

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Program Wide Support - Agency Operation and Support Services	C/CPFF	STRATEGIC ALLIANCE BUSINESS GROUP LLC : Various	0.000	0.000		4.950	Nov 2023	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		4.950		0.000		-		0.000	Continuing	Continuing	N/A

Remarks
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	141.860	6.907	7.831	14.139	-	14.139	Continuing	Continuing	N/A

Remarks
Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Missile Defense Agency						Date: March 2024													
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>						Project (Number/Name) MD40 / <i>Program-Wide Support</i>							
Significant Event Complete ▲		Milestone Decision Complete ★		Element Test Complete ◆		System Level Test Complete ●		Complete Activity ◆		Significant Event Planned △		Milestone Decision Planned ☆		Element Test Planned ◇		System Level Test Planned ○		Planned Activity ◇	
						FY 2023		FY 2024		FY 2025		FY 2026		FY 2027		FY 2028		FY 2029	
MD40 Program-Wide Support						◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Missile Defense Agency		Date: March 2024
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603881C / <i>Ballistic Missile Defense Terminal Defense Segment</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2023	4	2029