

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Missile Defense Agency **Date:** March 2023

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 0604874C <i>I Improved Homeland Defense Interceptors</i>
---	---

COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	1,029.647	863.364	1,833.357	2,130.838	-	2,130.838	2,110.409	1,444.842	1,239.966	1,015.682	Continuing	Continuing
MD80: <i>Next Generation Interceptor Development (NGI)</i>	927.520	833.409	1,766.786	2,056.063	-	2,056.063	2,034.457	1,386.460	1,189.654	970.633	Continuing	Continuing
MD40: <i>Program Wide Support</i>	102.127	29.955	66.571	74.775	-	74.775	75.952	58.382	50.312	45.049	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

Increase from FY 2023 to FY 2024 provides Next Generation Interceptor development including two contractors' solutions through Critical Design Review (CDR) leveraging competitive pressures to deliver the initial operational capability as soon as possible; no later than FY 2028. The increase provides for engineering design development and component level parts testing necessary to achieve Preliminary Design Review (PDR) for two Next Generation Interceptor contractors, including completion of post-PDR sub-system and component survivability analyses and testing for natural and tactical space environments. The increase also provides for technical risk mitigation leading to CDR using the Integrated Digital Data Environment and Software Factory Framework to support analysis, baseline verification, Modeling and Simulation development, and system designs analyses. Increase in FY 2024 also provides for the escalation/inflation impacts due to ongoing global events, and the increase in adjusted labor skill mix required to maintain accelerated engineering milestones.

A. Mission Description and Budget Item Justification

The Improved Homeland Defense Interceptor Program Element will develop, test, and deliver a Next Generation Interceptor for Homeland Defense, meeting the U.S. Northern Command's (USNORTHCOM) Operational Needs for the Next Generation Interceptor. The Next Generation Interceptor acquisition covers the development, integration, and testing of an All Up Round (AUR) boost vehicle/multiple kill vehicle system capable of surviving both natural and hostile environments while countering the allocated threats. The budget requested continues to support the planned first Next Generation Interceptor delivery no later than FY 2028, which addresses the number one priority in the USNORTHCOM Operational Needs.

The Next Generation Interceptor will provide the Warfighter a cost-effective solution that is lethal across the specified threat space and upgradeable to address future and advancing threats. The Missile Defense Agency (MDA) issued a Request for Proposal in FY 2020 and competitively awarded two best value contracts on March 24, 2021 for a Next Generation Interceptor acquisition, which covers the development, integration, and testing of an AUR boost vehicle/multiple kill vehicle system. MDA plans to maintain the competitive environment through CDR in FY 2025 to reduce technical risk throughout the design development activities, secure competitive production pricing, and support the Department's ability to field a system capable of negating the expanded threat.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Missile Defense Agency	Date: March 2023
---	-------------------------

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 0604874C <i>I Improved Homeland Defense Interceptors</i>
---	---

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	884.125	1,833.357	2,104.382	-	2,104.382
Current President's Budget	863.364	1,833.357	2,130.838	-	2,130.838
Total Adjustments	-20.761	0.000	26.456	-	26.456
• 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	-20.761	0.000			
• Other Adjustment	0.000	0.000	26.456	-	26.456

Change Summary Explanation

Increase in FY 2024 provides for the escalation/inflation impacts due to ongoing global events, and the increase in adjusted labor skill mix required to maintain accelerated engineering milestones.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency										Date: March 2023		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>				Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
MD80: <i>Next Generation Interceptor Development (NGI)</i>	927.520	833.409	1,766.786	2,056.063	-	2,056.063	2,034.457	1,386.460	1,189.654	970.633	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Increase from FY 2023 to FY 2024 provides Next Generation Interceptor development including two contractors' solutions through Critical Design Review (CDR) to deliver the Next Generation Interceptor in accordance with the two awarded contracts to support first operational delivery no later than FY 2028. The increase provides for engineering design development and component level parts testing necessary to achieve Preliminary Design Review (PDR) for two Next Generation Interceptor contractors, including completion of post-PDR sub-system and component Survivability analysis and testing for natural and tactical space environments. The increase also provides for technical risk mitigation leading to CDR, expansion of the Integrated Digital Data Environment and Software Factory Framework to support analysis, functional baseline verification, Modeling and Simulation development, and system designs analysis. Increase in FY 2024 also provides for the escalation/inflation impacts due to ongoing global events, and the increase in adjusted labor skill mix required to maintain accelerated engineering milestones.

A. Mission Description and Budget Item Justification

The Improved Homeland Defense Interceptor Program Element will develop, test, and deliver a Next Generation Interceptor for Homeland Defense, meeting the warfighter's number one priority for Homeland Defense. The U.S. Northern Command (USNORTHCOM) developed and maintains the operational needs for the Next Generation Interceptor. The Next Generation Interceptor acquisition covers the development, integration, and testing of an All Up Round (AUR) boost vehicle/ kill vehicle system capable of surviving both natural and hostile environments while countering the allocated threats. The budget request continues to support the planned first Next Generation Interceptor delivery no later than FY 2028, which addresses the number one priority in the USNORTHCOM Operational Needs.

The Next Generation Interceptor will provide the Warfighter a cost-effective solution that is lethal across the specified threat space and upgradeable to address future and advancing threats. The Missile Defense Agency (MDA) issued a Request for Proposal in FY 2020 and competitively awarded two best value contracts on March 24, 2021 for a Next Generation Interceptor acquisition, which covers the development, integration, and testing of an AUR boost vehicle/ kill vehicle system. MDA plans to maintain the competitive environment through CDR in FY 2025 to reduce technical risk throughout the design development activities, secure competitive production pricing, and support the Department's ability to field a system capable of negating the expanded threat.

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

	FY 2022	FY 2023	FY 2024
Title: Next Generation Interceptor Development (NGI)	813.171	1,745.981	2,033.969
Articles:	-	-	-
Description: The Improved Homeland Defense Interceptor Program Element will deliver a Next Generation Interceptor for Homeland Defense. The Next Generation Interceptor has multiple kill vehicles, improves survivability against natural and hostile			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency		Date: March 2023	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023
<p>environments and increases performance capability against 2030 threats compared to the currently fielded Ground Based Interceptors.</p> <p>Recurring efforts include:</p> <ul style="list-style-type: none"> - Continue the interceptor design and development to include completion of design trade studies and engineering analyses - Continue analysis of design against required threats - Continue activities to support achieving Knowledge Points and exit criteria - Continue Parts, Materials, and Processes Board Requirements approval for all parts - Continue to purchase and test parts including radiation/suitability testing to gain early confidence in Next Generation Interceptor design and development by building in reliability into design - Continue initiation of battlespace and threat containment requirement analysis - Continue development of the Development, Security, and Operations software factory for continuous deliver and integration of Next Generation Interceptor software updates <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p>FY 2023 Plans:</p> <ul style="list-style-type: none"> -Initiate flight-like sub-assembly testing -Increase part and sub-assembly qualification testing -Complete sub-assembly PDRs (Booster and Payload) -Complete Assembly and Check out of sub-systems (seekers, avionics, motors, etc.) for AUR PDR -Validate Software Factory to enable continuous delivery and integration of Next Generation Interceptor software development -Complete and Deliver analysis of Battle Space Requirements and threat containment/Engagement Management -Develop Test and Prototyping plan -Continue Critical Technology Element designs and risk mitigations -Complete Software Demonstrations -Purchase low risk long-lead AUR test articles. These long lead parts include Electrical Electronic and Electromechanical (EEE) parts, Inertial Measurement Unit (IMU) long lead items, propulsion materials, complex sensor and circuit card assembly long lead materials, metallic forgings, and unique avionics parts. These parts are only released after verification as part of PDR design baseline, allowing earliest flight tests in support of delivering the first operational NGI ahead of 2028. -Develop Next Generation Interceptor AUR transportation capability <p>FY 2024 Plans:</p> <ul style="list-style-type: none"> - Complete AUR PDR and initiate post PDR activities 			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency		Date: March 2023		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024
<ul style="list-style-type: none"> - Continue flight-like sub-assembly testing - Continue part and sub-assembly qualification testing - Continue executing test and prototyping - Continue Critical Technology Element designs and risk mitigations in support of CDRs - Continue to purchase long-lead materials for the initial AUR test articles - Continue to develop Next Generation Interceptor AUR transportation and emplacement concept of operations including peculiar support equipment requirements - Mature Next Generation Interceptor to Ground-Based Midcourse Defense (GMD) Weapon System interface specifications and descriptions - Continue design validation and parts survivability testing - Initiate sub-assembly CDRs - Deliver Minimum Software Capability Release - Continue proof of manufacturability for major sub-systems - Update initial reliability and availability/supportability assessment <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase from FY 2023 to FY 2024 provides Next Generation Interceptor development including two contractors' solutions through CDR to deliver the Next Generation Interceptor in accordance with the two awarded contracts to support first operational delivery no later than FY 2028. The increase provides for engineering design development and component level parts testing for two Next Generation Interceptor contractors, including completion of sub-system and component Survivability analysis and testing for natural and tactical space environments. The increase also provides for technical risk mitigation leading to CDR using the Integrated Digital Data Environment and Software Factory Framework to support analysis, baseline verification, Modeling and Simulation development, and system designs analyses. Increase in FY 2024 also provides for the escalation/inflation impacts due to ongoing global events, and the increase in adjusted labor skill mix required to maintain accelerated engineering milestones.</p>				
Title: Program Operations		20.238	20.805	22.094
		Articles:	-	-
<p>Description: Program Operations provides:</p> <ul style="list-style-type: none"> -Technical and business management support, financial management, cost and schedule performance analysis, cost estimation and analysis, configuration management, and integration activities to ensure the program meets cost, schedule, and performance goals -GMD Next Generation Interceptor program compliance with internal and external direction, policies, and regulations to deliver critical capability via a consistent and disciplined process while maintaining a competitive environment to reduce technical risk throughout the design development activities and secure competitive production pricing 				

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD80 / Next Generation Interceptor Development (NGI)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024
-Mission Assurance and Manufacturing Engineering processes 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 -Technical and testing oversight, cyber security support, verification of hardware and software development, quality / safety / mission assurance, integrated logistics support, and government manpower and infrastructure to develop, test, and sustain the Next Generation Interceptor Specific and/or unique accomplishments to each FY are as follows: FY 2023 Plans: SEE ABOVE FY 2024 Plans: SEE ABOVE FY 2023 to FY 2024 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	833.409	1,766.786	2,056.063

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• 0208866C: MD08: BMD Midcourse Defense O&M	156.623	185.564	174.789	-	174.789	178.467	161.429	132.557	206.311	Continuing	Continuing
• 0208866C: MD08: GMD Procurement	0.000	11.300	0.000	-	0.000	30.971	36.243	34.833	18.978	Continuing	Continuing
• 0603882C: Ballistic Missile Defense Midcourse Defense Segment	707.632	689.018	903.633	-	903.633	852.567	906.634	930.538	875.198	Continuing	Continuing
• 0604887C: Ballistic Missile Defense Midcourse Defense Segment Test	61.424	84.075	41.824	-	41.824	40.284	58.043	123.579	100.278	Continuing	Continuing

Remarks

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>

D. Acquisition Strategy

Ground-Based Midcourse Defense's (GMD) overarching acquisition strategy included a competitive source selection to develop and test an All Up Round (AUR) interceptor to meet warfighter requirements and defeat the 2030 and beyond threat. MDA competitively awarded two best value contracts for the Next Generation Interceptor to Northrop Grumman (known as Next Generation Interceptor Gold Program) and Lockheed Martin (known as Next Generation Interceptor Black Program) in March 2021 and plans to maintain competition to develop the Next Generation Interceptor through Critical Design Review (CDR). The Next Generation Interceptor competitive acquisition strategy is intended to reduce technical risk, drive industry behavior(s) throughout early design development activities, secure competitive production pricing, and support the Department's ability to field a system capable of negating the expanded threat, as well as maximize the likelihood of delivering this critical capability at the earliest possible opportunity. MDA has established multiple knowledge points and flight tests to evaluate Next Generation Interceptor Components and GMD Element performance during development and support future production decisions.

The Next Generation Interceptor efforts include, but are not limited to, systems engineering; hardware, software, and firmware development; manufacture, integration and checkout/test; and delivery of Next Generation Interceptors, culminating in four (4) intercept flight tests. Based on successful capability demonstration during flight tests, MDA will seek approval from the Under Secretary of Defense for Acquisition and Sustainment to proceed with procurement of operational AURs.

An option is available on each contract to extend efforts through December 2028 for activities and hardware to support Missile Defense System Ground Testing, as well as activities and hardware to deliver up to ten (10) Next Generation Interceptor units in an AUR configuration to support the corresponding Missile Defense System flight test campaigns. Contemporaneous with CDR, the contractors will submit a proposal for an additional test article and 20 production units, broken into two (2) production lots.

In addition to the two (2) Next Generation Interceptor Contracts, GMD's overarching Acquisition Strategy includes a GMD Weapon System (GWS) Contract and SITR Contract to execute the full scope of the GMD Element development efforts for Missile Defense System Increment 6C, 10, and 11. Each of the new contracts is structured to break out major efforts into separate Contract Line Item Numbers with individual incentives for management insight, accounting, and property accountability.

Other Enabling Ground-Based Midcourse Defense Acquisition Strategies (budgeted for in PE 0603882C)

GMD Increment 6C, 10, and 11 will be executed with the SITR and GWS contracts. The GWS Contract was competitively awarded to Northrop Grumman Systems Corporation in July 2022 to provide design, development, production, product level testing, sustainment planning, maintenance of the current Weapon System components including development to incorporate the Next Generation Interceptor into the GMD Weapon System. The GWS contractor is responsible for developing weapon system solutions, including fire control and communication systems improvements, required to update the legacy system to remain effective while Next Generation Interceptor is under development, as well as, preparing for the seamless introduction of Next Generation Interceptor and other future Missile Defense System capabilities. The GWS Contract will update the system interface for the addition of Next Generation Interceptors to the fleet, provide the Warfighter capability to operate the GMD Weapon System with a mixed fleet of Ground Based Interceptors and Next Generation Interceptors, and identify and develop solutions for message exchanges between the GMD Weapon System and in-flight kill vehicles. All of this must be accomplished while maintaining a robust cyber defense network capable of detecting and defending against current and future cybersecurity threats.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>

GMD also competitively awarded a single SITR Contract to provide, along with the Technical Direction Agent, a synergistic approach in executing the GMD Element-level engineering, integration, test, and readiness of the GMD Weapon System, which operates with the current Ground-Based Interceptor and is adding infrastructure for the integration and testing of Next Generation Interceptor. The SITR contractor is charged with being the Government's technical partner for day-to-day operation and sustainment of the GMD Weapon System alongside the U.S. Northern Command Warfighters. While the Government maintains overall systems integration responsibilities and authority, the SITR contractor will assume a supporting technical role responsible for ensuring overall GMD integration including physical and logical integration of the GMD Components to include Next Generation Interceptor, GMD Element, and MDA enterprise level integration, planning and execution of all necessary testing to verify and validate requirements compliance.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD80 / Next Generation Interceptor Development (NGI)
--	--	--

Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development - Lockheed-Martin	C/CPIF	LOCKHEED MARTIN CORPORATION : Various	0.000	404.030	Nov 2021	995.876	Nov 2022	863.115	Nov 2023	-		863.115	Continuing	Continuing	Continuing
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development - Northrop-Grumman	C/CPIF	NORTHROP GRUMMAN : Various	0.000	402.806	Nov 2021	733.255	Nov 2022	1,164.619	Nov 2023	-		1,164.619	Continuing	Continuing	Continuing
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development - Various	C/CPIF	Lockheed-Martin, Northrop-Grumman : AL	891.075	0.000		0.000		0.000		-		0.000	0.000	891.075	0.000
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development Lab & System Support	C/CPIF	Lockheed-Martin, Northrop-Grumman : AL	7.731	0.000		0.000		0.000		-		0.000	0.000	7.731	0.000
Subtotal			898.806	806.836		1,729.131		2,027.734		-		2,027.734	Continuing	Continuing	N/A

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

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development Lab & System Support - CCDC	MIPR	USA CCDC AVIATION AND MISSILE CENTE : AL	0.000	4.257	Mar 2022	15.736	Jan 2023	6.107	Jan 2024	-		6.107	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Missile Defense Agency												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0604874C / Improved Homeland Defense Interceptors				MD80 / Next Generation Interceptor Development (NGI)							
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development Lab & System Support - Classified Performer	C/CPIF	Classified Performer : Various	0.000	0.950	Sep 2022	0.000		0.000		-		0.000	0.950	1.900	0.000
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development Lab & System Support - JACOBS TECHNOLOGY INC.	C/CPIF	JACOBS TECHNOLOGY INC. : Various	0.000	0.458	Jan 2022	1.114	Nov 2022	0.128	Nov 2023	-		0.128	Continuing	Continuing	Continuing
Next Generation Interceptor Development (NGI) - Next Generation Interceptor Development Lab & System Support - Various	MIPR	Various : Various	0.000	0.670	Apr 2022	0.000		0.000		-		0.000	0.670	1.340	0.000
Program Operations - Contract Support Services - PARSONS GOVERNMENT SERVICES INC.	C/CPIF	PARSONS GOVERNMENT SERVICES INC. : AL	0.000	10.117	Nov 2021	10.321	Nov 2022	11.146	Nov 2023	-		11.146	Continuing	Continuing	Continuing
Program Operations - Contract Support Services - Various	C/CPFF	Various : AL/AK/ CA/ CO/VA	18.172	0.000		0.000		0.000		-		0.000	0.000	18.172	0.000
Program Operations - Government Civilian Salaries	Allot	MDA : AL/VA	10.053	8.067	Oct 2021	8.386	Oct 2022	9.020	Oct 2023	-		9.020	Continuing	Continuing	Continuing
Program Operations - Government Travel	Allot	MDA : AL/VA	0.489	0.489	Oct 2021	0.503	Oct 2022	0.526	Oct 2023	-		0.526	Continuing	Continuing	Continuing
Subtotal			28.714	25.008		36.060		26.927		-		26.927	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD80 / Next Generation Interceptor Development (NGI)
--	--	--

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			

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

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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 - Contract Support Services - Various	C/CPFF	Various : AL	0.000	1.565	Nov 2021	1.595	Nov 2022	1.402	Nov 2023	-		1.402	Continuing	Continuing	Continuing
Subtotal			0.000	1.565		1.595		1.402		-		1.402	Continuing	Continuing	N/A

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

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	927.520	833.409	1,766.786	2,056.063	-	2,056.063	Continuing	Continuing	N/A

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

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>
--	---	---

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Next Generation Interceptor TD Phase	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆																
Next Generation Interceptor PD Phase									◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆				
Next Generation Interceptor IP Phase																					◆	◆	◆	◆	◆	◆	◆	◆
Next Generation Interceptor (Black) SRR	▲																											
Next Generation Interceptor (Black) PDR								△																				
Next Generation Interceptor (Black) CDR															△													
Next Generation Interceptor (Gold) SRR	▲																											
Next Generation Interceptor (Gold) PDR											△																	
Next Generation Interceptor (Gold) CDR															△													

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Missile Defense Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD80 / <i>Next Generation Interceptor Development (NGI)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Next Generation Interceptor TD Phase	1	2022	3	2024
Next Generation Interceptor PD Phase	3	2024	2	2027
Next Generation Interceptor IP Phase	2	2027	4	2028
Next Generation Interceptor (Black) SRR	1	2022	1	2022
Next Generation Interceptor (Black) PDR	4	2023	4	2023
Next Generation Interceptor (Black) CDR	3	2025	3	2025
Next Generation Interceptor (Gold) SRR	1	2022	1	2022
Next Generation Interceptor (Gold) PDR	2	2024	2	2024
Next Generation Interceptor (Gold) CDR	3	2025	3	2025

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD40 / Program Wide Support
--	--	---

COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
MD40: Program Wide Support	102.127	29.955	66.571	74.775	-	74.775	75.952	58.382	50.312	45.049	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 2022	FY 2023	FY 2024
Title: Program Wide Support	29.955	66.571	74.775
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			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Missile Defense Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024
<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>Specific and/or unique accomplishments to each FY are as follows:</p> <p>FY 2023 Plans: - SEE ABOVE.</p> <p>FY 2024 Plans: - SEE ABOVE.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase from FY 2023 to FY 2024 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	29.955	66.571	74.775

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.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD40 / Program Wide Support
--	--	---

Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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 Operations and Support Services #2	C/CPFF	DISTRICT FLEET, LLC : Various	0.000	0.000		0.000		1.049	Nov 2023	-		1.049	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services #3	MIPR	Various : Various	0.000	0.000		0.000		0.014	Nov 2023	-		0.014	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services #4	C/CPFF	Cherokee Nation Red Wing : Various	0.000	0.000		0.000		1.337	Nov 2023	-		1.337	Continuing	Continuing	Continuing
Program Wide Support - Agency Facilities and Maintenance	MIPR	Army Garrison Resource : AL, VA	31.305	2.636	Dec 2021	12.295	Nov 2022	13.488	Nov 2023	-		13.488	Continuing	Continuing	Continuing
Program Wide Support - Agency Facilities and Maintenance SRM	MIPR	Army Corps of Engineers : Multi: AK, AL, CA, CO, HI, NY, VA	0.000	3.775	Dec 2021	2.675	Nov 2022	3.811	Nov 2023	-		3.811	Continuing	Continuing	Continuing
Program Wide Support - Agency Operation and Support Services	C/CPFF	Various : Various	48.830	17.004	Nov 2021	28.641	Nov 2022	0.000		-		0.000	0.000	94.475	0.000
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	Various Multi : AL, VA	2.456	0.000		22.960	Oct 2022	24.819	Oct 2023	-		24.819	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD40 / Program Wide Support
--	--	---

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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 Operations and Support Services #6	MIPR	Army Corps of Engineers : TBD	0.000	0.000		0.000		1.036	Nov 2023	-		1.036	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations, Sustainment and GPC	C/FFP	Facilities Resource Group : Multi: AK, AL, CA, HI, NY, VA	0.000	3.560	Dec 2021	0.000		2.652	Nov 2023	-		2.652	Continuing	Continuing	Continuing
Subtotal			82.591	26.975		66.571		48.206		-		48.206	Continuing	Continuing	N/A

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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 Operations and Support Other Agency Services	C/CPFF	BCF SOLUTIONS, INC. : AL	19.536	2.980	Nov 2021	0.000		5.537	Nov 2023	-		5.537	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	PARSONS GOVERNMENT SERVICES INC. : AL	0.000	0.000		0.000		21.032	Nov 2023	-		21.032	Continuing	Continuing	Continuing
Subtotal			19.536	2.980		0.000		26.569		-		26.569	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Missile Defense Agency **Date:** March 2023

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense Interceptors	Project (Number/Name) MD40 / Program Wide Support
--	--	---

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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			

Remarks
N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	102.127	29.955	66.571	74.775	-	74.775	Continuing	Continuing	N/A

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

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Missile Defense Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense Interceptors</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2022	4	2028