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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0604874C I Improved Homeland Defense (HLD) Interceptors							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	627.693	742.842	421.820	412.363	-	412.363	326.922	197.386	137.553	86.423	Continuing	Continuing
MD97: Improved HD Interceptors	604.608	725.478	399.940	398.944	-	398.944	322.554	193.811	135.848	83.646	Continuing	Continuing
MD40: Program Wide Support	23.085	17.364	21.880	13.419	-	13.419	4.368	3.575	1.705	2.777	Continuing	Continuing
Program MDAP/MAIS Code: 362												
Note N/A												
A. Mission Description and Budget Item Justification The Ground-based Midcourse Defense (GMD) element of the BMDS provides combatant commanders with a continuously available (24 hours a day, 7 days a week, 365 days a year) capability to defend the Homeland against limited Intercontinental Ballistic Missile (ICBM) attacks. The improved Homeland Defense interceptor includes a RKV and the All Up Round (AUR) engineering necessary to integrate the RKV with new and existing booster configurations. The RKV improves interceptor reliability, reduces unit cost, improves maintainability in the field, and improves performance against emerging threats. The AUR engineering enables RKV integration with new and existing boost vehicles for flight testing and operational fielding.												
B. Program Change Summary (\$ in Millions)				FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total				
Previous President's Budget				636.430	561.220	485.755	-	485.755				
Current President's Budget				742.842	421.820	412.363	-	412.363				
Total Adjustments				106.412	-139.400	-73.392	-	-73.392				
• Congressional General Reductions				-2.000	0.000							
• Congressional Directed Reductions				-11.200	-139.400							
• Congressional Rescissions				0.000	0.000							
• Congressional Adds				139.400	0.000							
• Congressional Directed Transfers				0.000	0.000							
• Reprogrammings				0.000	0.000							
• SBIR/STTR Transfer				-19.788	0.000							
• Missile Defeat and Defense Enhancement				0.000	0.000	0.000	-	0.000				
• Other Adjustment				0.000	0.000	-73.392	-	-73.392				
Change Summary Explanation Increase in FY 2018 from PB19 to PB20 reflects the enacted congressional adjustment for an additional 20 GBIs and the congressional reduction for C3 booster early to need.												

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0604874C / Improved Homeland Defense (HLD) Interceptors	
Increase in FY 2019 from PB19 to PB20 reflects the congressional reductions for forward financing in FY 2018.		
Decrease in FY 2020 from PB19 to PB20 reflects the cancellation of the C3 booster development effort.		

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors				Project (Number/Name) MD97 / Improved HD Interceptors			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD97: Improved HD Interceptors	604.608	725.478	399.940	398.944	-	398.944	322.554	193.811	135.848	83.646	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note N/A												
A. Mission Description and Budget Item Justification The GMD element of the BMDS provides combatant commanders with a continuously available (24 hours a day, 365 days a year) capability to defend the Homeland against limited Intercontinental ICBM attacks. The improved Homeland Defense interceptor includes a RKV and the AUR engineering necessary to integrate the RKV with new and existing booster configurations. The RKV improves interceptor reliability, reduces unit cost, improves maintainability in the field, and improves performance against emerging threats. The AUR engineering enables RKV integration with new and existing boost vehicles for flight testing and operational fielding.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020	
Title: Improved Homeland Defense (HLD) Interceptor Development Articles: Description: HLD development objectives include: redesigning the GMD kill vehicle, implementing tactical booster modifications, and conducting AUR system engineering. The RKV will be built with a modular, open architecture and designed with common interfaces and standards, making upgrades easier and broadening MDA's vendor and supplier base. The design for growth allows future upgradability. The AUR development approach integrates the RKV with the boost vehicle. The goal of all of these efforts is to develop and field an integrated set of capabilities to improve the reliability, survivability, lethality, and discrimination to defeat future threats. Specific and/or unique accomplishments to each FY are as follows: FY 2019 Plans: -Continue In-Flight Interceptor Communications System (IFICS) End-to-End Test to demonstrate communication between the RKV and the GMD Ground System -Conduct Integrated Communications Radio Kill Vehicle (KV) to Kill Vehicle (KV) Integration to demonstrate and validate the design approach of the new RKV communication capability -Conduct Production Highly Accelerated Life Testing to support RKV reliability improvements, identify stable operating and destruct limits, and improve the probability of first pass success during qualification -Continue KV to KV Antenna demonstrations to characterize engineering parameters, gather data and validate the design approach of the new RKV communication capability									712.457	390.298	389.333	
									-	-	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency			Date: March 2019		
Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors	Project (Number/Name) MD97 / Improved HD Interceptors		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2018	FY 2019	FY 2020
<div>-Continue development of kill vehicle algorithms and software, and conduct software independent verification and validation testing at contractor and government facilities to conduct independent testing and analysis ensuring the RKV software meets its requirements and that the delivered software system satisfies requirements, the intended use, and warfighter needs</div> <div>-Continue AUR systems engineering to support the testing and fielding of RKV on Integrated Boost Vehicles</div> <div>-Accelerate RKV efforts to support 20 additional GBIs in a new missile field (Missile Field #4) to defeat developing threats in terms of number of threat missiles and complexity of threat payloads</div> <div>-Continue software builds and design verification testing prior to critical design review to reduce program risk</div> <div>-Execute risk reduction strategy by developing a radiation hardened avionics architecture through system engineering, prototype development, and parts testing</div> <div>-Initiate Consolidated Integration Facility effort to correct safety issues and increase throughput capacity; needed to reach a 64 GBI fleet</div> <div>FY 2020 Plans:</div> <div>-Continue IFICS End-to-End Test to demonstrate communications between the RKV and the GMD Ground System</div> <div>-Continue KV to KV Antenna demonstrations to characterize engineering parameters, gather data and validate the design approach of the new RKV communications capability</div> <div>-Continue development of kill vehicle algorithms and software, and conduct software independent verification and validation testing at contractor and government facilities to conduct independent testing and analysis ensuring the RKV software meets its requirements and that the delivered software system satisfies requirements, the intended use, and warfighter needs</div> <div>-Continue AUR systems engineering to support the testing and fielding of RKV on Integrated Boost Vehicles</div> <div>-Continue RKV efforts to support 20 additional GBIs in a new missile field (Missile Field #4) to defeat developing threats in terms of number of threat missiles and complexity of threat payloads</div> <div>-Continue software builds and design verification testing prior to critical design review to reduce program risk</div> <div>-Continue Consolidated Integration Facility effort to correct safety issues and increase throughput capacity; needed to reach a 64 GBI fleet</div> <div>-Continue component and payload design and qualification testing prior to the critical design</div> <div>FY 2019 to FY 2020 Increase/Decrease Statement:</div> <div>N/A</div>					
Title: Program Operations			13.021	9.642	9.611
Articles:			-	-	-
Description: Program Operations provides for integrated program management of the Improved Homeland Defense Interceptor efforts. This effort includes: 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					

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Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors				Project (Number/Name) MD97 / Improved HD Interceptors			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020
meets cost, schedule, and performance goals; GMD RKV program compliance with internal and external direction, policies, and regulations to deliver critical capability via a consistent and disciplined process; 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; technical and testing oversight, verification of hardware and software development, quality / safety / mission assurance, integrated logistics support, and government manpower and infrastructure to develop, test, and sustain the RKV. Specific and/or unique accomplishments to each FY are as follows: FY 2019 Plans: - SEE ABOVE. FY 2020 Plans: - SEE ABOVE. FY 2019 to FY 2020 Increase/Decrease Statement: N/A											
Accomplishments/Planned Programs Subtotals									725.478	399.940	398.944
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• 0203882C: MD08: GMD O&M	138.751	139.204	153.218	-	153.218	146.614	159.376	165.746	165.790	Continuing	Continuing
• 0603882C: Ballistic Missile Defense Midcourse Defense Segment	1,153.263	803.359	1,156.506	-	1,156.506	829.451	766.237	834.533	776.671	Continuing	Continuing
• 0603882C: MD08: GMD Procurement	268.000	532.600	9.471	-	9.471	323.466	532.975	467.001	244.663	0.000	2,378.176
• 0603914C: Ballistic Missile Defense Test	406.806	515.897	395.924	-	395.924	417.946	335.481	451.723	405.136	Continuing	Continuing
• 0603915C: Ballistic Missile Defense Targets	512.838	561.352	554.171	-	554.171	513.964	439.826	358.018	276.108	Continuing	Continuing
• 0604887C: Ballistic Missile Defense Midcourse Defense Segment Test	85.030	72.634	98.139	-	98.139	91.955	116.709	110.937	101.103	Continuing	Continuing

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Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors				Project (Number/Name) MD97 / Improved HD Interceptors			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2020</u>	<u>FY 2020</u>	<u>FY 2020</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Complete</u>	<u>Total Cost</u>
Remarks											
D. Acquisition Strategy											
<p>MDA is executing an acquisition strategy to develop an integrated RKV with a Cross-Industry team design solution. This concept includes potential production sources from industry and provides a consolidated product that includes the collective knowledge of and leverages capabilities from the industry leaders in kill vehicle design and development. The industry teaming method incorporates the most viable technical approaches from each contractor and allows for combination of resources to shorten the learning curve and reduce the time needed to develop and begin initial production. This strategy allows for industry to provide the best value and best design solution for the MDA while setting the conditions for future competition of production. The development phase is followed by initial production and then a competitive full rate production phase. The competitive production phase encompasses the purchase, production, and the integration of the proven components demonstrated in the development phase and provides competitive benefits to the Government. This strategy allows for industry to provide the best value and best design solution for the MDA while setting the conditions for future competition of production. The Government, as the design authority, retains responsibility for the execution of the program cost, schedule, and the technical performance of the RKV to meet requirements levied on the contractor. The Government has implemented a rigorous systems engineering process to ensure that the design and development efforts meet requirements. This acquisition strategy is documented in the RKV Acquisition Plan signed by the Defense Acquisition Executive in October 2015.</p> <p>In January of 2018, the MDA Director signed an Acquisition Strategy Decision Memorandum (ASDM) changing the acquisition strategy to execute the Missile Defeat and Defense Enhancement scope. The Development and Sustainment Contract (DSC) will continue with the Boeing Company to Q1 FY2024 to build the 20 GBI's and 20 Silo's with supporting test, engineering, software, and performance based logistics scope. This additional capability will provide 64 interceptors as well as maintain operation and support capabilities and support upcoming ground and flight tests. The Justification and Approval for this action was signed by the MDA Director on 2 January 2018.</p>											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors						Project (Number/Name) MD97 / Improved HD Interceptors			
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Improved Homeland Defense (HLD) Interceptor Development - GBI Consolidated Integration Facility Improvements	C/CPIF	Boeing : AL/AK/AZ	0.000	0.000		9.279	Nov 2018	2.503	Nov 2019	-		2.503	Continuing	Continuing	Continuing
Improved Homeland Defense (HLD) Interceptor Development - OGA/ FFRDC Booster Avionics Risk Reduction	MIPR	Draper : AL/CA	0.000	1.644	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Improved Homeland Defense (HLD) Interceptor Development - PRIME AUR System Engineering and Development	C/CPIF	Boeing AL/AK/AZ : CA/CO/TX/VA	0.000	49.840	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Improved Homeland Defense (HLD) Interceptor Development - PRIME RKV Development	C/CPIF	Boeing AL/AK/AZ : CA/CO/TX/VA	511.841	623.111	Nov 2017	357.917	Oct 2018	355.749	Nov 2019	-		355.749	Continuing	Continuing	Continuing
Improved Homeland Defense (HLD) Interceptor Development - Post-Intercept Assessment	C/CPIF	Boeing AL/AK/AZ : CA/CO/TX/VA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Improved Homeland Defense (HLD) Interceptor Development - Prior year no longer funded in the FYDP	Various	Various : Various	21.114	0.000		0.000		0.000		-		0.000	0.000	21.114	0.000
Improved Homeland Defense (HLD) Interceptor Development - RKV Development Lab and System Support	MIPR	AMRDEC : Redstone Arsenal, AL	38.965	37.862	Nov 2017	23.102	Oct 2018	31.081	Nov 2019	-		31.081	Continuing	Continuing	Continuing
Subtotal			571.920	712.457		390.298		389.333		-		389.333	Continuing	Continuing	N/A

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Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors						Project (Number/Name) MD97 / Improved HD Interceptors			
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Remarks N/A															
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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 - Contract Support Services	C/CPFF	Various AL/AK / CA/ CO/VA	18.130	8.460	Oct 2017	5.830	Oct 2018	5.698	Oct 2019	-		5.698	Continuing	Continuing	Continuing
Program Operations - FFRDC Support	MIPR	MIT : LL AL	3.132	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Operations - Government Civilian Salaries	MIPR	MDA : AL/VA	6.121	1.945	Oct 2017	2.352	Oct 2018	2.270	Oct 2019	-		2.270	Continuing	Continuing	Continuing
Program Operations - Other Government Agencies	MIPR	Various AL/VA : FL/ CO	4.377	2.341	Oct 2017	1.460	Oct 2018	1.289	Oct 2019	-		1.289	Continuing	Continuing	Continuing
Program Operations - Prior year no longer funded in the FYDP	Various	Various : Various	0.552	0.000		0.000		0.000		-		0.000	0.000	0.552	0.000
Program Operations - Travel	MIPR	MDA : AL/VA	0.376	0.275	Oct 2017	0.000		0.354	Oct 2019	-		0.354	Continuing	Continuing	Continuing
Subtotal			32.688	13.021		9.642		9.611		-		9.611	Continuing	Continuing	N/A
Remarks N/A															
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			-	-		-		-		-		-	-	-	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors				Project (Number/Name) MD97 / Improved HD Interceptors				

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Remarks N/A															

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	604.608	725.478	399.940	398.944	-	398.944	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 2020 Missile Defense Agency															Date: March 2019														
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors										Project (Number/Name) MD97 / Improved HD Interceptors									
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 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024							
RKV Critical Design Review																	△												
CTV-03+																		△											
FTG-17																			△										
FTG-18																				△									

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense (HLD) Interceptors</i>	Project (Number/Name) MD97 / <i>Improved HD Interceptors</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
RKV Critical Design Review	1	2021	1	2021
CTV-03+	2	2022	2	2022
FTG-17	1	2023	1	2023
FTG-18	1	2024	1	2024

Note

Flight test schedule at a higher classification.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors				Project (Number/Name) MD40 / Program Wide Support			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD40: Program Wide Support	23.085	17.364	21.880	13.419	-	13.419	4.368	3.575	1.705	2.777	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Program Wide Support (PWS) is allocated on a pro-rata basis across multiple Agency PE's 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 BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS 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. 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; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (SRM) 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 2018	FY 2019	FY 2020
Title: Program Wide Support	17.364	21.880	13.419
Articles:	-	-	-
Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS 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. 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; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (SRM) 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.			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / <i>Improved Homeland Defense (HLD) Interceptors</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>	

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020
<i>FY 2019 Plans:</i> - SEE ABOVE.			
<i>FY 2020 Plans:</i> - SEE ABOVE.			
<i>FY 2019 to FY 2020 Increase/Decrease Statement:</i> Decrease from FY 2019 to FY 2020 reflects the PWS allocation on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.			
Accomplishments/Planned Programs Subtotals	17.364	21.880	13.419

C. Other Program Funding Summary (\$ in Millions) N/A	Remarks	
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors						Project (Number/Name) MD40 / Program Wide Support			
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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 Facilities and Maintenance (MIPR)	MIPR	Various Multi : AL, VA	4.368	4.503	Mar 2018	14.724	Mar 2019	5.218	Apr 2020	-		5.218	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Various	Various Multi : AL, VA	0.000	0.424	Jul 2018	0.331	Jul 2019	0.201	Jul 2020	-		0.201	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services (MIPRs)	MIPR	Various Multi : AL, VA	5.836	4.677	May 2018	4.573	Mar 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various Multi : AL, VA	12.881	7.760	Jul 2018	2.252	Jul 2019	8.000	Jun 2020	-		8.000	Continuing	Continuing	Continuing
Subtotal			23.085	17.364		21.880		13.419		-		13.419	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			23.085	17.364		21.880		13.419		-		13.419	Continuing	Continuing	N/A
Remarks N/A															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency														Date: March 2019																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604874C / Improved Homeland Defense (HLD) Interceptors	Project (Number/Name) MD40 / Program Wide Support	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2018	4	2024