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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Missile Defense Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>
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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	1,133.199	29.652	27.692	38.352	-	38.352	36.348	28.029	22.733	30.463	Continuing	Continuing
MD68: <i>AEGIS Ashore</i>	1,094.886	25.282	23.033	33.741	-	33.741	32.313	25.759	21.613	27.714	Continuing	Continuing
MC68: <i>Cyber Operations</i>	-	2.724	3.255	2.980	-	2.980	2.618	0.970	0.000	1.258	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	38.313	1.646	1.404	1.631	-	1.631	1.417	1.300	1.120	1.491	Continuing	Continuing

**Program MDAP/MAIS Code:** 362

**Note**

Increase from FY 2019 to FY 2020 provides site activation requirements due to Poland construction delays and increased Aegis Ashore Missile Defense Test Complex activities to include installation of hardware and infrastructure repairs and maintenance

**A. Mission Description and Budget Item Justification**

This program supports development of the Land-Based Standard Missile-3 (LBSM3) capability, Aegis Ashore. On 17 September 2009, the President announced an overarching plan to provide regional missile defense to U.S. deployed forces, allies, and partners in Europe called the European Phased Adaptive Approach (EPAA). The EPAA policy specifically defines a timeline to deploy a mix of afloat and land-based Ballistic Missile Defense (BMD) capabilities. Aegis Ashore represents one of these land-based capabilities. The U.S. can also build on current efforts to pursue Phased Adaptive Approaches (PAAs) in the Asia Pacific and the Middle East regions. The PAA tailors U.S. BMD capabilities to specific theater needs enhancing integrated regional missile defenses to protect defended assets against medium, intermediate, and ultimately intercontinental range ballistic missiles.

Aegis Ashore is a key component of EPAA Phases II (Romania) and III (Poland) and provides Aegis BMD capability against short to intermediate-range ballistic missiles in an ashore configuration. Aegis Ashore provides sophisticated engagement strategies and can adapt to threat updates while also being deployed/redeployed worldwide where needed to provide persistent coverage for the Geographic Combatant Commanders. Aegis Ashore re-hosts the required BMD components of a U.S. Navy Destroyer, including: SPY-1 Radio Direction and Ranging (Radar); Vertical Launch System (VLS), Computing Infrastructure; Command Control; Communications; Computers and Intelligence (C4I) Systems; and Operator Consoles.

This program element will continue to modernize, develop, and test Aegis Ashore capability improvements at Aegis Ashore Missile Defense Test Complex (AAMDTC) in Hawaii for implementation at operational sites.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Missile Defense Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	30.486	27.692	29.263	-	29.263
Current President's Budget	29.652	27.692	38.352	-	38.352
Total Adjustments	-0.834	0.000	9.089	-	9.089
• 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	-0.687	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	-0.147	0.000	9.089	-	9.089

**Change Summary Explanation**

Increase in FY 2020 from PB19 to PB20 provides site activation requirements due to Poland construction delays and increased Aegis Ashore Missile Defense Test Complex activities to include installation of hardware and repairs and maintenance of infrastructure

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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 0604880C / Land Based SM-3 (LBSM3)				Project (Number/Name) MD68 / AEGIS Ashore			
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
MD68: AEGIS Ashore	1,094.886	25.282	23.033	33.741	-	33.741	32.313	25.759	21.613	27.714	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Increase from FY 2019 to FY 2020 provides site activation requirements due to Poland construction delays and increased Aegis Ashore Missile Defense Test Complex (AAMDTC) activities to include installation of hardware and repairs and maintenance of infrastructure.

**A. Mission Description and Budget Item Justification**

Deployed sites, referred to as Aegis Ashore Missile Defense Systems (AAMDS), will be modified to support future computer programs and missile variants in step with the U.S. Navy's Destroyer Modernization Plan. MDA is responsible for maintaining and modernizing the test center at the Pacific Missile Range Facility (PMRF), while the U.S. Navy is responsible for maintaining and modernizing all deployed Aegis Ashore sites. The initial AAMDS deployed to Romania in 2015 employing Aegis BMD 5.0 CU (Capabilities Upgrade) and SM-3 Block IB. A second AAMDS deploys to Poland and is scheduled to become operational in 2020. These sites provide an Aegis Ashore exo-atmospheric defense against short to intermediate-range ballistic missile threats in the later stages of flight. If the threat dictates, additional systems can be purchased and deployed globally.

Research and Development efforts include design of modifications to adapt the Aegis Weapon System for land-based use, modernization in pace with the U.S. Navy's Destroyer Modernization Plan, development and testing of Aegis Ashore capability improvements at the AAMDTC in Hawaii, and modifications, as required, to enhance co-existence with Broadband Wireless Access systems in the European theater.

In support of EPAA Phase III, Aegis Ashore integrates the Aegis BMD 5.1 and Standard Missile (SM-3) Block IIA capabilities into the Aegis Ashore sites. MDA is responsible for any upgrade to BMD capability, BMD specific mission equipment, and integration with existing Ballistic Missile Defense System (BMDS) nodes for all Aegis Ashore sites.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Aegis Weapon System Development	16.579	18.085	19.869
<b>Articles:</b>	-	-	-
<b>Description:</b> Maintain and modernize the AAMDTC at the PMRF in Hawaii. Develop and test Aegis Ashore capability improvements prior to implementation at operational sites, and support SPY-1 Radar and Broadband Wireless Access (BWA) coexistence efforts at Aegis Ashore sites. Recurring Accomplishments: - Determine the minimum hardware refresh of element components and spares that are projected to be removed from the production to ensure the test capability at AAMDTC remains current with the U.S Navy's Destroyer Modernization efforts			

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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 0604880C / Land Based SM-3 (LBSM3)	Project (Number/Name) MD68 / AEGIS Ashore		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020
<p>- Provide system engineering, technical, and logistics support for the AAMDS facility and tactical elements to ensure appropriate system adaptation, readiness, availability, and effectiveness</p> <p>- Modernize the AAMDTC Weapons System, C4I, VLS, and other equipment to align with the U.S. Navy's Destroyer Modernization Plan and ensure the test site configuration is ready to support BMDS testing</p> <p>- Maintain Aegis Ashore Technical Data Package with modernization implementation to include drawings and installation plans for U.S. Navy use in implementation at operational sites</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2019 Plans:</b></p> <p>- SEE ABOVE.</p> <p><b>FY 2020 Plans:</b></p> <p>-Install hardware at AAMDTC to increase processing capabilities, network capacities, and update storage space</p> <p>-Provide Facilities, Sustainment, Restoration, and Modernization (FSRM) to initiate critical repairs and maintenance of infrastructure at AAMDTC</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> <p>Increase from 2019 to 2020 provides hardware installation and FSRM (preventative maintenance, roof repair, renovation, and erosion control)</p>				
<p><b>Title:</b> Site Activation</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Provide site design, unexploded ordnance clearing; spectrum analysis studies; temporary facilities; utilities; administrative communications equipment and services; infrastructure modifications; generator and commercial power; leased vehicles; material handling equipment; generator fuel; supplies, barriers; guard shacks; temporary lighting; transportation of materials and equipment; translators; and emerging requirements as site activation progresses and until sites are transferred to the Navy.</p> <p>Recurring Accomplishments include:</p> <p>- Provide site activation for Aegis Ashore site in Poland to include temporary site activation facilities, base operations support, utilities, administrative communications, on-site material handling equipment services, and equipment installation</p> <p>- Fuel for facility commissioning activities, backup generators, and on-site vehicle support</p> <p>- Technical support to facilitate processing facility change proposals and construction modifications</p> <p>- Post-award technical services (structural, mechanical, and electrical) to ensure quality standards and construction schedule is met</p> <p>- Continue providing Defense Threat Reduction Agency (DTRA) support to ensure High-Altitude Electromagnetic Pulse (HEMP) validation and verification testing is completed</p>		8.703 -	4.948 -	13.872 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Missile Defense Agency										<b>Date:</b> March 2019		
<b>Appropriation/Budget Activity</b> 0400 / 4				<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>				<b>Project (Number/Name)</b> MD68 / <i>AEGIS Ashore</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>										<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Specific and/or unique accomplishments to each FY are as follows:												
<b><i>FY 2019 Plans:</i></b> - SEE ABOVE.												
<b><i>FY 2020 Plans:</i></b> - SEE ABOVE.												
<b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b> Increase from FY 2019 to FY 2020 provides requirements for base operations support, utilities, administrative communications, on-site material handling equipment services, and equipment installation due to Poland construction delays.												
<b>Accomplishments/Planned Programs Subtotals</b>										25.282	23.033	33.741
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<b>Line Item</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
• 0208866C: <i>PROCUREMENT</i>	3,052.841	2,572.400	1,493.793	-	1,493.793	1,670.987	1,834.709	1,971.280	1,822.396	0.000	14,418.406	
• 0603892C: <i>AEGIS BMD</i>	798.395	741.076	727.479	-	727.479	718.949	703.473	505.529	527.720	Continuing	Continuing	
• 0604878C: <i>Aegis BMD Test</i>	128.757	92.160	169.822	-	169.822	76.270	149.764	137.058	147.923	Continuing	Continuing	
• 0604881C: <i>AEGIS SM-3</i>	9.531	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	9.531	
<i>Block IIA Co-Development</i>												
<b>Remarks</b>												
<b>D. Acquisition Strategy</b>												
The Aegis Ashore Engineering Agent (AAEA) is responsible for the design, development, integration and test of the Aegis Weapons System capability into a reconstitutable deckhouse. The AAEA will also support Aegis Ashore deployment to Romania.												
The Global Deployment (GD) program office is utilizing Naval Facilities Engineering Command (NAVFAC) and U. S. Corps of Engineers Europe District (Core of Engineers North Atlantic Union) CENAU to award and administer contracts for base operating support, commercial power, temporary site activation facilities, and integrated electronic security systems for Romania and Poland sites.												
<b>E. Performance Metrics</b>												
Cost Plus Award Fee Contracts												

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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 0604880C / Land Based SM-3 (LBSM3)				Project (Number/Name) MD68 / AEGIS Ashore					
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
Aegis Weapon System Development - AWS Development-NAVFAC	MIPR	NAVFAC : HI	1.469	1.869	Nov 2017	1.954	Nov 2018	2.600	Nov 2019	-		2.600	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-NAVSEA-MD68	MIPR	NAVSEA-LM/BAE, SPAWAR, NSWC CD : San Diego, CA; Baltimore, MD; Minneapolis, MN	8.802	0.084	Nov 2017	2.984	Nov 2018	3.150	Nov 2019	-		3.150	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-NSWC DD-MD68	MIPR	NSWC Dahlgren : Dahlgren, VA	46.354	0.476	Nov 2017	0.500	Nov 2018	1.214	Nov 2019	-		1.214	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-NSWC PHD-MD68	MIPR	NSWC PHD, NSWC, DOI, Aegis Techrep : CA, NJ, ID, MD, IN	37.290	3.292	Nov 2017	1.500	Nov 2018	2.125	Nov 2019	-		2.125	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-PMRF - MD68	MIPR	PMRF : Hawaii	12.630	2.726	Nov 2017	1.100	Nov 2018	1.238	Nov 2019	-		1.238	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-SPAWAR-MD68	MIPR	SSC PAC : San Diego,CA	45.979	2.998	Nov 2017	0.047	Nov 2018	2.000	Nov 2019	-		2.000	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-SSC PAC Pearl Harbor	MIPR	SSC PAC Pearl Harbor : HI	0.000	0.000		2.500	Nov 2018	2.090	Nov 2019	-		2.090	Continuing	Continuing	Continuing
Aegis Weapon System Development - AWS Development-Various-MD68: No longer funding in the FYDP	Various	Various : AL,VA,CA, APO, HI, NJ	837.719	0.000		0.000		0.000		-		0.000	0.000	837.719	0.000
Aegis Weapon System Development - Aegis	SS/CIPIF	MDA Lockheed Martin : Moorestown, NJ	25.060	5.134	Jan 2018	0.000		5.452	Nov 2019	-		5.452	Continuing	Continuing	Continuing

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Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604880C / Land Based SM-3 (LBSM3)				Project (Number/Name) MD68 / AEGIS Ashore					
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
Weapon System Development - MD68-															
Aegis Weapon System Development - MD68	MIPR	MDA : Arlington, VA	1.076	0.000		7.500	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Site Activation - DTRA support to construction in Romania and Poland	MIPR	DTRA : Ft. Belvoir, VA	1.150	0.400	Nov 2017	2.868	Nov 2018	0.426	Nov 2019	-		0.426	Continuing	Continuing	Continuing
Site Activation - IESS Support	MIPR	USAF LCMC : Wright-Patterson AFB, OH	0.000	0.145	Sep 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Site Activation - Poland Admin Communication	MIPR	Northrop Grumman : Poland	1.644	0.124	Nov 2017	0.437	Nov 2018	0.423	Nov 2019	-		0.423	Continuing	Continuing	Continuing
Site Activation - Poland Base Operating Support	MIPR	NAVFAC : Poland	3.697	2.258	Nov 2017	1.007	Nov 2018	7.763	Nov 2019	-		7.763	Continuing	Continuing	Continuing
Site Activation - Poland Commerical and Temporary Utilities	MIPR	NAVFAC : Poland	0.000	0.545	Sep 2018	0.000		2.223	Nov 2019	-		2.223	Continuing	Continuing	Continuing
Site Activation - Poland Fuel	MIPR	DLA : Fort Belvoir, Virginia	0.000	0.089	Jun 2018	0.000		0.247	Nov 2019	-		0.247	Continuing	Continuing	Continuing
Site Activation - Prior year no longer funded in the FYDP	Various	Various : Various	64.185	0.000		0.000		0.000		-		0.000	0.000	64.185	0.000
Site Activation - Romainia/ Poland Security Guards / Escorts	C/FFP	Chenega Infinity : Chantilly, VA	0.000	0.829	Jul 2018	0.000		0.252	Nov 2019	-		0.252	Continuing	Continuing	Continuing
Site Activation - Site Activation – Transportation of Aegis Weapon System	MIPR	SDDC : Scotts AFB, IL	5.786	0.095	Nov 2017	0.012	Nov 2018	0.012	Nov 2019	-		0.012	Continuing	Continuing	Continuing
Site Activation - Site Activation- Poland Admin Communications	MIPR	DISA : Scott AFB, IL	0.000	0.160	Nov 2017	0.009	Nov 2018	0.125	Nov 2019	-		0.125	Continuing	Continuing	Continuing
Site Activation - Site Activation- Poland Navy Leases / Material Handling Services	MIPR	NAVFAC : Naples, Italy	0.000	1.324	Nov 2017	0.000		0.000		-		0.000	0.000	1.324	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)				Project (Number/Name)					
0400 / 4						PE 0604880C / Land Based SM-3 (LBSM3)				MD68 / AEGIS Ashore					
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
Site Activation - USACE in-house support in Poland	MIPR	CEHNC : Huntsville, AL	1.131	0.708	Oct 2017	0.000		1.899	Nov 2019	-		1.899	Continuing	Continuing	Continuing
Site Activation - USACE support in Poland	MIPR	CENAU : Poland	0.914	2.026	Oct 2017	0.615	Nov 2018	0.502	Nov 2019	-		0.502	Continuing	Continuing	Continuing
Subtotal			1,094.886	25.282		23.033		33.741		-		33.741	Continuing	Continuing	N/A
Remarks															
Increase from FY 2019 to FY 2020 for Poland Base Operating Support due to Poland construction delays															
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
Subtotal			-	-		-		-		-		-	-	-	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
Remarks															
N/A															
Management Services (\$ 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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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2020 Missile Defense Agency												<b>Date:</b> March 2019			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0604880C / Land Based SM-3 (LBSM3)				<b>Project (Number/Name)</b> MD68 / AEGIS Ashore					
<b>Management Services (\$ in Millions)</b>				<b>FY 2018</b>		<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Remarks</b> N/A															
			<b>Prior Years</b>	<b>FY 2018</b>		<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			1,094.886	25.282		23.033		33.741		-		33.741	Continuing	Continuing	N/A
<b>Remarks</b> Funding in the All Prior Years column represents a summary of Prior Years Total Costs for inactive contracts and MIPRs on the R-3. 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					R-1 Program Element (Number/Name)										Project (Number/Name)									
0400 / 4					PE 0604880C / Land Based SM-3 (LBSM3)										MD68 / AEGIS Ashore									
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		
B/L 5.1 Certification Testing					◇	◇	◇	◇																
Facility Support for NAVEUR Exercise					◇	◇	◇	◇	◇															
IMTP					◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	
AAMDTC Upgrades								◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	
Poland Beneficial Occupancy Date (BOD)										◇														
EPAA Phase III Technical Capability Demonstration (TCD)												◇												
Poland Construction Complete												◇												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2020 Missile Defense Agency			<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>	<b>Project (Number/Name)</b> MD68 / <i>AEGIS Ashore</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
B/L 5.1 Certification Testing	1	2018	4	2018
Facility Support for NAVEUR Exercise	1	2018	1	2019
IMTP	1	2018	4	2024
AAMDTC Upgrades	4	2018	4	2024
Poland Beneficial Occupancy Date (BOD)	4	2019	4	2019
EPAA Phase III Technical Capability Demonstration (TCD)	3	2020	3	2020
Poland Construction Complete	3	2020	3	2020

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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 0604880C / Land Based SM-3 (LBSM3)				Project (Number/Name) MC68 / Cyber Operations			
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
MC68: Cyber Operations	-	2.724	3.255	2.980	-	2.980	2.618	0.970	0.000	1.258	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note N/A												
A. Mission Description and Budget Item Justification Sustain Missile Defense Agency (MDA) DoD Information Assurance Certification and Accreditation Program (DIACAP) and Controls Validation Testing (CVT) activities, analysis of validation results, risk assessments and reviews of proposed Program Manager/Information Assurance Manager (PM/IAM) Plans of Action and Milestones (POA&Ms) for MDA Aegis Ballistic Missile Defense (BMD) mission systems. It maintains the Certification and Accreditation (C&A) data repository, capturing the DIACAP documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority (DAA) accreditation decisions) on all MDA Information Systems.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020	
Title: Network/System Certification and Accreditation (C&A)									2.724	3.255	2.980	
Articles:									-	-	-	
Description: Monitor and track cybersecurity mitigation detailed in Information Technology Security Guidance. Activities include preparation of C&A documentation and accreditation recommendations to the MDA Senior Information Assurance Officer (SIAO)/ Certification Authority (CA) and DAA. Independent Verification and Validation (IV&V) team actions ensure the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. Activities in the Project are necessary to comply with the Federal Information Security Management Act (FISMA). Recurring Accomplishments: - Provide Cybersecurity engineering and architecture requirements planning for Aegis BMD systems - Coordinate the development and implementation of Aegis BMD Risk Management Framework (RMF) accreditation packages - Conduct regular Controls Validation Testing (CVT) of Aegis BMD systems and provide a Risk Assessment Report (RAR) to mitigate cybersecurity deficiencies - Conduct annual cybersecurity reviews on the Aegis BMD systems to assess compliance in implementing and maintaining RMF controls - Implement HW/SW to conduct continuous daily monitoring - Conduct monthly reviews of systems in eMass - Provide daily management of eMass Specific and/or unique accomplishments to each FY are as follows:												
FY 2019 Plans:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Missile Defense Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604880C / <i>Land Based SM-3 (LBSM3)</i>	<b>Project (Number/Name)</b> MC68 / <i>Cyber Operations</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2018</b>	<b>FY 2019</b>
- Install Global Positioning System (GPS)Based Positioning, Navigation and Timing Service (GPNTS) - Purchase Consolidated Afloat Networks and Enterprise Services (CANES)  <b><i>FY 2020 Plans:</i></b> - SEE ABOVE.  <b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>		2.724	3.255
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
Full and Open contract support through Missile Defense Agency Program Management Office.			
<b>E. Performance Metrics</b>			
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 0604880C / Land Based SM-3 (LBSM3)				Project (Number/Name) MC68 / Cyber Operations					
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
Network/System Certification and Accreditation (C&A) - Cyber Operations	MIPR	PMRF : HI	0.000	0.000		0.000		0.252	Nov 2019	-		0.252	Continuing	Continuing	Continuing
Network/System Certification and Accreditation (C&A) - NSWC Corona	MIPR	NSWC Corona : CA	0.000	0.000		0.250	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Network/System Certification and Accreditation (C&A) - NSWC Philadelphia	MIPR	Pennsylvania, PA : NSWC Philadephia	0.000	0.942	Nov 2017	0.250	Nov 2018	0.133	Nov 2019	-		0.133	Continuing	Continuing	Continuing
Network/System Certification and Accreditation (C&A) - SPAWAR	MIPR	SPAWAR : CA	0.000	1.782	Jun 2018	2.755	Nov 2018	2.595	Nov 2019	-		2.595	Continuing	Continuing	Continuing
Subtotal			0.000	2.724		3.255		2.980		-		2.980	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			0.000	2.724		3.255		2.980		-		2.980	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 0604880C / Land Based SM-3 (LBSM3)										Project (Number/Name) MC68 / Cyber Operations																	
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			
Cyber Operations										◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	

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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 0604880C / Land Based SM-3 (LBSM3)	Project (Number/Name) MC68 / Cyber Operations	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Cyber Operations	1	2018	4	2024



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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 0604880C / Land Based SM-3 (LBSM3)				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	38.313	1.646	1.404	1.631	-	1.631	1.417	1.300	1.120	1.491	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; 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)**

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Program Wide Support	1.646	1.404	1.631
<b>Articles:</b>	-	-	-
<p><b>Description:</b> 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; 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>			
<b>FY 2019 Plans:</b>			

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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 0604880C / Land Based SM-3 (LBSM3)	Project (Number/Name) MD40 / Program-Wide Support
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
- SEE ABOVE.			
FY 2020 Plans: - SEE ABOVE.			
FY 2019 to FY 2020 Increase/Decrease Statement: Increase 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		1.646	1.404
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 0604880C / Land Based SM-3 (LBSM3)				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, CA, CO, VA	11.024	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Facilities and Maintenance (Reqn)	Reqn	Various; Multi : AL, CA, CO, VA	4.383	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various: Multi : AL, CA, CO, VA	1.973	0.146	Jul 2018	0.021	Jul 2019	0.024	Jul 2020	-		0.024	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AL, CA, CO, VA	20.412	1.500	Aug 2018	1.383	Mar 2019	1.607	Jul 2020	-		1.607	9.005	33.907	0.000
Program Wide Support - Agency Operations and Support, International, and Materiel and Readiness	MIPR	Department of State; : Washington, DC, Japan, Australia	0.181	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - FFRDC/UARC	C/CPAF	Various : Multi:AL,VA	0.340	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			38.313	1.646		1.404		1.631		-		1.631	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			38.313	1.646		1.404		1.631		-		1.631	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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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 0604880C / Land Based SM-3 (LBSM3)	Project (Number/Name) MD40 / Program-Wide Support	

Schedule Details

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