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

<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 0604102C / <i>Guam Defense Development</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	0.000	112.400	397.936	-	397.936	343.875	329.780	215.729	146.089	Continuing	Continuing
MD65: <i>Defense of Guam Development</i>	-	0.000	112.400	383.486	-	383.486	331.773	318.507	207.626	140.566	Continuing	Continuing
MD40: <i>Program Wide Support</i>	-	0.000	0.000	14.450	-	14.450	12.102	11.273	8.103	5.523	Continuing	Continuing

**Program MDAP/MAIS Code:** 362

**Note**

The increase from FY 2022 to FY 2023 provides for the Department of Defense (DoD) - Defense of Guam Architecture solution to include Architecture Development and Engineering; Environmental, Site Activation, and Advanced Planning; Radar Development and Integration; Aegis Command, Control, Communications, Computers, and Intelligence (C4I); and Aegis Land-Based System Engineering.

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

This program develops a Missile Defense System (MDS) for the defense of Guam against ballistic, hypersonic and cruise missile threats as a high priority mission for the DoD. The MDS will form a key part of strategic deterrence and supports the Pacific Deterrence Initiative.

The architecture design includes integration efforts between Missile Defense Agency (MDA), U.S. Army, and U.S. Navy systems. MDA requested funding in FY 2022 to begin studies and analysis, architecture development and siting analysis. The program leverages the results of the studies and analysis to begin developing and fielding four land-based radars, distributed sensors, and integrated communications across strategic assets on Guam. The architecture acquisition process also provides environmental, engineering, and interoperability activities to balance costs and associated risks. The inter-Department partnership will conduct the appropriate flight tests to validate MDS capabilities on Guam.

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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 0604102C / <i>Guam Defense Development</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Previous President's Budget	0.000	78.300	0.000	-	0.000
Current President's Budget	0.000	112.400	397.936	-	397.936
Total Adjustments	0.000	34.100	397.936	-	397.936
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-5.900			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	40.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	397.936	-	397.936

**Change Summary Explanation**

Net increase of \$34 million in FY 2022 provides the Congressional Plus-up for Guam Defense System acceleration and reflects Congressional reduction for delayed architecture submission.

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

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 0400 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>				<b>Project (Number/Name)</b> MD65 / <i>Defense of Guam Development</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
MD65: <i>Defense of Guam Development</i>	-	0.000	112.400	383.486	-	383.486	331.773	318.507	207.626	140.566	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

The increase from FY 2022 to FY 2023 provides for the Department of Defense (DoD) - Defense of Guam Architecture solution.

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

The Missile Defense Agency (MDA) is developing a Missile Defense System (MDS) for Guam defense against a range of missile threats. The DoD has undertaken studies on a range of missile defense architecture options, emphasizing effectiveness, survivability, and flexibility against an evolving threat. The architecture design includes integration efforts between MDA, U.S. Army, and U.S. Navy systems. This Program Element supports Pacific Deterrence Initiative (PDI).

MDA requested funding in FY 2022 to begin studies and analysis, architecture development and siting analysis. The FY 2023 program leverages the results of studies and analysis to begin developing and fielding four land-based radars, distributed sensors, and integrated communications across strategic assets on Guam. The architecture acquisition process also provides environmental, engineering, and interoperability activities to balance costs and associated risks. The inter-Department partnership will conduct the appropriate flight tests to validate MDS capabilities on Guam.

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

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<b>Title:</b> Guam Defense System (GDS)	0.000	112.400	0.000
<b>Articles:</b>	-	-	-
<b>Description:</b> This program develops an integrated air and missile defense system on Guam against air-breathing, ballistic, and hypersonic missile threats, however, architecture designs are still being finalized. This funding initiates development of multiple architecture options by investing in key enabling capabilities common to all proposed architecture solutions.			
<b>FY 2022 Plans:</b>			
- Begin Aegis design and engineering to accelerate sea-based terminal capability aligned to Guam			
- Start Command and Control center design and engineering to include Concept of Operations and battle management analysis, tailored to Guam			
- Modify C2BMC to improve tracking architecture to support advanced threats			
- Develop support facilities design and engineering to identify areas of consideration for the Defense of Guam site to include requirements definition, identify geographic locations that optimize operations, apply exclusionary and evaluative criteria, and location ranking			
- Commence environmental impact assessments, site survey and advanced MILCON planning activities			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD65 / <i>Defense of Guam Development</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<ul style="list-style-type: none"> <li>- Conduct systems engineering and threat model engineering to incorporate geographic specific threats and scenarios, defined test requirements, and applicable specifications</li> <li>- Conduct architecture and systems engineering planning to assess requirements analysis, configuration management functional flow down, specifications update, risk management, and trade studies</li> <li>- Initiate Guam sensor development</li> <li>- Develop and integrate Aegis Weapon System with mobile launcher</li> </ul> <p><b>FY 2023 Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease from FY 2022 to FY 2023 reflects the DoD Defense of Guam architecture solution. Funding has been realigned to other Accomplishments for increased transparency.</p>				
<p><b>Title:</b> Architecture Development &amp; Engineering</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This accomplishment provides the architecture and systems Engineering and technical integration efforts to provide a capability to defend Guam against ballistic, hypersonic and cruise missile attack. This includes threat engineering, specifications development, architecture level analysis and trades, modeling and simulations, risk management, test requirements, test and performance analysis, baseline management and control, and system verification.</p> <p><b>FY 2022 Plans:</b> N/A</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"> <li>- Continue architecture and requirements development to map integration activities across the island of Guam</li> <li>- Continue modeling and simulation to develop threat engineering assessment</li> <li>- Continue system methodology development to evaluate integration activities within the system architecture</li> </ul> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase from FY 2022 to FY 2023 provides additional resources to provide architecture and engineering requirements specific to the DoD architecture solution.</p>		0.000 -	0.000 -	9.904 -
<p><b>Title:</b> Environmental, Site Activation, and Advanced Planning</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> The Environmental, Site Activation, and Advanced Planning accomplishment leads all efforts for Guam defense to complete the environmental impacts and assessments as required by federal Laws. Performs geotechnical, topographical,</p>		0.000 -	0.000 -	24.600 -

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<p>environmental, and unexploded ordnance efforts to support siting of Guam defense assets. Performs advance planning and site preparation for required military construction on Guam. This element provides the Sprung structures required for two joint fire operations control centers. Performs site activation and facilities sustainment.</p> <p><b>FY 2022 Plans:</b> N/A</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"> <li>- Continues advance planning activities for site activation and construction on Guam</li> <li>- Continues environmental impact studies and assessments as required by federal Law</li> <li>- Continues site activation activities on Guam</li> </ul> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase from FY 2022 to FY 2023 provides additional resources to provide Environmental, Site Activation, and Advanced Planning requirements specific to the DoD architecture solution.</p>				
<b>Title:</b> Radar Development and Integration		0.000	0.000	241.000
		<b>Articles:</b> -	-	-
<p><b>Description:</b> This accomplishment develops, procures, delivers, and integrates multiple land-based radars for use in acquiring, tracking, identifying, and discriminating threats to Guam, including the necessary on-island support equipment for power, data communications (not SATCOM) to C2BMC Element/User Node, cooling, and environmental protection. Provides for transportation, delivery, integration, testing, operations, and limited spares.</p> <p><b>FY 2022 Plans:</b> N/A</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"> <li>- Initiate design and development of multiple land-based radar systems</li> <li>- Initiate radar system component acquisition; including Active Electronically Scanned Array antenna subsystems, power conversion and storage subsystems, mission processing subsystems, and radar signal processing subsystems for multiple distributed operating locations</li> <li>- Continues design and acquisition of radar equipment shelter</li> </ul> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b></p>				

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD65 / <i>Defense of Guam Development</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Increase from FY 2022 to FY 2023 provides additional resources to provide Radar Development and Integration requirements specific to the DoD architecture solution.				
<p><b>Title:</b> Aegis C4I Development and Integration</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This program develops Guam Defense System Command, Control, Communications, Computers, and Intelligence (C4I) architecture and technical data publication activities, and acquires system components necessary to provide an integrated air and missile defense system on Guam against air-breathing, ballistic, and hypersonic missile threats.</p> <p><b>FY 2022 Plans:</b> N/A</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"> <li>- Begins development for C4I-Link16, SATCOM, Fiber connections, Very High Frequency/Ultra High Frequency (VHF/UHF) radios, Crypto, and other system components required for final architecture design on the island of Guam</li> <li>- Begin C4I systems engineering to further develop Aegis Ballistic Missile Defense (BMD) requirements and to improve Ballistic Missile Defense System (BMDS) interoperability capability</li> <li>- Begin assessment and implementation of C4I capabilities in U.S. Navy C4I programs of record to meet Aegis BMD requirements</li> </ul> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase from FY 2022 to FY 2023 initiates Aegis C4I Development and Integration.</p>		0.000 -	0.000 -	39.000 -
<p><b>Title:</b> Aegis Land-Based System Engineering</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This program develops Aegis land-based system architecture and technical data publication activities necessary to provide an integrated air and missile defense system on Guam against air-breathing, ballistic, and hypersonic missile threats.</p> <p><b>FY 2022 Plans:</b> N/A</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"> <li>- Begins systems engineering and program management activities for Defense of Guam (DoG) Program</li> <li>- Begins DoG Aegis Weapons System (AWS) technology design for integration, assembly, test and check out</li> <li>- Conduct feasibility analysis, draft AWS requirements, develop design intent models and government reference models to support a System Requirements Review (SRR)</li> </ul>		0.000 -	0.000 -	68.982 -

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
- Conduct MDS system level requirements allocation and Aegis BMD system requirements development, trace, validation and verification, and establish configuration management for coordination with all participating external agencies and organizations - Develop Systems Modeling Language (SysML) model to support DoG Aegis Combat System (ACS) development and technical reviews - Develop initial design for DoG ACS enclosures and transportation plans - Develop initial design concepts for C4I enclosure, towers and integration plans - Establish Integrated Product Teams and liaison MDA and Army Rapid Capabilities and Critical Technologies Office (RCCTO) for integration of Solid State Radars and transportable launchers - Begin Concept of Operations development for DoG ACS, including electro-magnetic interference mitigation, and commercial air traffic de-confliction - Begin development of training and logistics support plans for DoG ACS  <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase from FY 2022 to FY 2023 provides initiation of Aegis Land-Based System Engineering requirements specific to the DoD architecture solution.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	112.400	383.486

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 0208902C: <i>MD65: Defense of Guam Procurement</i>	0.000	80.000	26.514	-	26.514	43.227	35.493	35.374	80.434	Continuing	Continuing
• 0603890C: <i>BMD Enabling Programs</i>	607.167	623.644	591.847	-	591.847	613.589	625.761	635.633	640.374	Continuing	Continuing
• 0603892C: <i>AEGIS BMD</i>	861.809	639.549	600.072	-	600.072	658.798	574.014	570.018	580.496	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management &amp; Communication</i>	639.027	564.946	589.374	-	589.374	575.883	588.824	612.853	605.801	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	364.994	389.156	367.824	-	367.824	363.963	421.261	476.991	490.176	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	534.348	560.478	559.513	-	559.513	555.341	623.995	628.146	632.072	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD65 / <i>Defense of Guam Development</i>

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

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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**Remarks**

**D. Acquisition Strategy**

Acquisition strategy for Guam Defense consists of contract actions to industry, and agreements with DoD organizations and Federally Funded Research and Development Centers (FFRDC) to develop, demonstrate, and field a MDS on Guam.

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

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / Guam Defense Development	<b>Project (Number/Name)</b> MD65 / Defense of Guam Development
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<b>Product Development (\$ in Millions)</b>				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Guam Defense System (GDS) - Environmental and other Site Survey & Advanced MILCON Planning	MIPR	DOD - USN - NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC) HAWAII : HI	0.000	0.000		14.900	May 2022	0.000		-		0.000	0.000	14.900	0.000
Guam Defense System (GDS) - Aegis Design and Engineering tailored to Guam	C/CPIF	Various : Various	0.000	0.000		23.100	Jul 2022	0.000		-		0.000	0.000	23.100	0.000
Guam Defense System (GDS) - Architecture Engineering	FFRDC	Various : Various	0.000	0.000		7.800	May 2022	0.000		-		0.000	0.000	7.800	0.000
Guam Defense System (GDS) - C2BMC Modifications	C/Various	Various : Various	0.000	0.000		8.800	May 2022	0.000		-		0.000	0.000	8.800	0.000
Guam Defense System (GDS) - Command and Control Center Design and Engineering, tailored to Guam	FFRDC	TBD : TBD	0.000	0.000		5.800	May 2022	0.000		-		0.000	0.000	5.800	0.000
Guam Defense System (GDS) - MDS Systems Engineering and Threat Engineering	C/CPIF	Various : Various	0.000	0.000		12.100	May 2022	0.000		-		0.000	0.000	12.100	0.000
Guam Defense System (GDS) - Mobile Launcher	C/CPIF	LOCKHEED MARTIN CORPORATION : NJ	0.000	0.000		18.000	Jul 2022	0.000		-		0.000	0.000	18.000	0.000
Guam Defense System (GDS) - Sensor Development	C/CPIF	LOCKHEED MARTIN CORPORATION : NJ	0.000	0.000		12.300	Jul 2022	0.000		-		0.000	0.000	12.300	0.000
Guam Defense System (GDS) - Special Programs	Various	Various : Various	0.000	0.000		8.200	Jul 2022	0.000		-		0.000	0.000	8.200	0.000

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<b>Product Development (\$ in Millions)</b>				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Guam Defense System (GDS) - Support Facilities Design and Engineering	MIPR	DOD - USN - NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC) HAWAII : HI	0.000	0.000		1.400	Jun 2022	0.000		-		0.000	0.000	1.400	0.000
Architecture Development & Engineering - Architecture Development - TEAMS	C/CPIF	TBD : AL	0.000	0.000		0.000		4.204	Nov 2022	-		4.204	Continuing	Continuing	Continuing
Architecture Development & Engineering - Modeling and Simulation - TEAMS	C/CPIF	TBD : AL	0.000	0.000		0.000		2.900	Nov 2022	-		2.900	Continuing	Continuing	Continuing
Architecture Development & Engineering - System Assessment - TEAMS	C/CPIF	TBD : AL	0.000	0.000		0.000		2.800	Jan 2023	-		2.800	Continuing	Continuing	Continuing
Environmental, Site Activation, and Advanced Planning - Advance Planning - USN	MIPR	DOD - USN - NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC) HAWAII : HI	0.000	0.000		0.000		8.000	Nov 2022	-		8.000	Continuing	Continuing	Continuing
Environmental, Site Activation, and Advanced Planning - Sites Activation - USN	MIPR	DOD - USN - NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC) HAWAII : HI	0.000	0.000		0.000		16.600	Dec 2022	-		16.600	Continuing	Continuing	Continuing
Radar Development and Integration - Equipment Shelter	C/IDIQ	TBD : AL	0.000	0.000		0.000		6.000	Nov 2022	-		6.000	Continuing	Continuing	Continuing
Radar Development and Integration - Land-Based Radar Development - Type 1	C/IDIQ	TBD : AL	0.000	0.000		0.000		140.500	Dec 2022	-		140.500	Continuing	Continuing	Continuing

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0400 / 4				PE 0604102C / Guam Defense Development				MD65 / Defense of Guam Development							
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Radar Development and Integration - Land-Based Radar Development - Type 2	C/IDIQ	TBD : AL	0.000	0.000		0.000		94.500	Dec 2022	-		94.500	Continuing	Continuing	Continuing
Aegis C4I Development and Integration - Aegis C4I Development and Integration	TBD	Naval Information Warfare Center (NIWC) : TBD	0.000	0.000		0.000		39.000	Nov 2022	-		39.000	Continuing	Continuing	Continuing
Aegis Land-Based System Engineering - Aegis Tech Rep	MIPR	DOD - USN - NAVAL SEA SYSTEMS COMMAND (NAVSEA) : DC	0.000	0.000		0.000		1.200	Nov 2022	-		1.200	Continuing	Continuing	Continuing
Aegis Land-Based System Engineering - Systems Engineering	C/CPIF	TBD : AL	0.000	0.000		0.000		15.462	Nov 2022	-		15.462	Continuing	Continuing	Continuing
Aegis Land-Based System Engineering - Systems Engineering Lockheed	C/CPIF	LOCKHEED MARTIN CORPORATION : AL	0.000	0.000		0.000		37.620	Jan 2023	-		37.620	Continuing	Continuing	Continuing
Aegis Land-Based System Engineering - Systems Engineering NSWC (Crane)	MIPR	DOD - USN - NAVAL SURFACE WARFARE CENTER (NSWC) CRANE DIVISION : IN	0.000	0.000		0.000		3.000	Nov 2022	-		3.000	Continuing	Continuing	Continuing
Aegis Land-Based System Engineering - Systems Engineering NSWC (Dalhgren)	MIPR	DOD - USN - NAVAL SURFACE WARFARE CENTER (NSWC) DAHLGREN DIVISION (NSWCDD) : VA	0.000	0.000		0.000		7.200	Nov 2022	-		7.200	Continuing	Continuing	Continuing
Aegis Land-Based System Engineering - Systems Engineering NSWC (PHD)	MIPR	DOD - USN - NAVAL SURFACE WARFARE CENTER (NSWC) PORT HUENEME	0.000	0.000		0.000		1.500	Nov 2022	-		1.500	Continuing	Continuing	Continuing

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

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / Guam Defense Development	<b>Project (Number/Name)</b> MD65 / Defense of Guam Development
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Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		DIVISION (PHD) : CA													
Aegis Land-Based System Engineering - Systems Engineering PEO C4I	MIPR	Program Executive Office (PEO) Command, Control, Communications, Computers & Intelligence (C4I) : DC	0.000	0.000		0.000		3.000	Nov 2022	-		3.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		112.400		383.486		-		383.486	Continuing	Continuing	N/A

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

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	0.000	0.000	112.400	383.486	-	383.486	Continuing	Continuing	N/A

**Remarks**  
N/A

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**Exhibit R-4, RDT&E Schedule Profile:** PB 2023 Missile Defense Agency **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD65 / <i>Defense of Guam Development</i>
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	Significant Event Complete ▲			Milestone Decision Complete ★			Element Test Complete ◆			System Level Test Complete ●			Complete Activity ◆								
	Significant Event Planned △			Milestone Decision Planned ☆			Element Test Planned ◇			System Level Test Planned ○			Planned Activity ◇								
	FY 2021			FY 2022			FY 2023			FY 2024			FY 2025			FY 2026			FY 2027		
Environmental - Impact Assessment							◇	◇	◇												
Environmental - Advance Planning and Evaluation							◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Radar Development - Type 1 Design and Acquisition							◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Radar Development - Type 2 Design and Acquisition							◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Radar Development - Equipment Shelter							◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Architecture and Engineering - Architecture Development and Assessment							◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Environmental - Sites Activation Activities								◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
C4I Development - Signal and Radio Communications									◇	◇	◇	◇	◇	◇	◇						
Aegis Land-Based - System Engineering									◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
Aegis Land-Based Technology Design for Integration, Assembly, Test and Verification									◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD65 / <i>Defense of Guam Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Environmental - Impact Assessment	3	2022	3	2023
Environmental - Advance Planning and Evaluation	3	2022	4	2026
Radar Development - Type 1 Design and Acquisition	3	2022	4	2027
Radar Development - Type 2 Design and Acquisition	3	2022	4	2027
Radar Development - Equipment Shelter	3	2022	4	2027
Architecture and Engineering - Architecture Development and Assessment	3	2022	4	2027
Environmental - Sites Activation Activities	4	2022	4	2026
C4I Development - Signal and Radio Communications	1	2023	4	2024
Aegis Land-Based - System Engineering	1	2023	4	2026
Aegis Land-Based Technology Design for Integration, Assembly, Test and Verification	1	2023	4	2027

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**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Missile Defense Agency **Date:** April 2022

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / Guam Defense Development	<b>Project (Number/Name)</b> MD40 / Program Wide Support
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
MD40: Program Wide Support	-	0.000	0.000	14.450	-	14.450	12.102	11.273	8.103	5.523	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 MDS. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the MDS 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 2021	FY 2022	FY 2023
<b>Title:</b> Program Wide Support	0.000	0.000	14.450
<b>Articles:</b>	-	-	-
<b>Description:</b> PWS contains non-headquarters management costs in support of MDA functions and activities across the entire MDS. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the MDS 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,			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD40 / <i>Program Wide Support</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
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><i>FY 2022 Plans:</i></b> N/A			
<b><i>FY 2023 Plans:</i></b> - SEE ABOVE.			
<b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Increase from FY 2022 to FY 2023 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.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	14.450

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

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Missile Defense Agency												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0604102C / Guam Defense Development				MD40 / Program Wide Support							
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Wide Support - Agency Operations and Support Services	C/CPFF	Kepler Research, Incorporated : AL	0.000	0.000		0.000		5.000	Dec 2022	-		5.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Support	C/CPFF	LSINC : AL	0.000	0.000		0.000		1.700	Nov 2022	-		1.700	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Financial	C/CPFF	Veterans Technology, LLC : AL	0.000	0.000		0.000		2.000	Dec 2022	-		2.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services	MIPR	DOD - DEFENSE FINANCE AND ACCOUNTING SERVICES (DFAS) : IN	0.000	0.000		0.000		2.250	Nov 2022	-		2.250	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Security	C/CPFF	INTREPID TV LTD : AL	0.000	0.000		0.000		3.500	Nov 2022	-		3.500	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		14.450		-		14.450	Continuing	Continuing	N/A
<b>Remarks</b>															
N/A															
			Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract				
<b>Project Cost Totals</b>			0.000	0.000	0.000	14.450	-	14.450	Continuing	Continuing	N/A				
<b>Remarks</b>															
N/A															



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604102C / <i>Guam Defense Development</i>	<b>Project (Number/Name)</b> MD40 / <i>Program Wide Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2023	4	2027