

UNCLASSIFIED

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

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------

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	1,037.917	135.088	133.335	75.120	-	75.120	103.451	95.712	71.715	76.316	Continuing	Continuing
MD96: <i>Long Range Discrim Radar (LRDR)</i>	985.417	129.636	128.192	72.392	-	72.392	99.810	92.440	69.021	73.431	Continuing	Continuing
MD40: <i>Program Wide Support</i>	52.500	5.452	5.143	2.728	-	2.728	3.641	3.272	2.694	2.885	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

Decrease from FY 2022 to FY 2023 reflects the completion of the Long Range Discrimination Radar (LRDR) Increment 6B.1 development effort.

A. Mission Description and Budget Item Justification

The mission of the LRDR program is to design, develop, integrate, deliver, field, and sustain the LRDR as an element of the Missile Defense System (MDS) Increment 6B.1 Homeland Defense Capability. Initial fielding of the LRDR was planned for late 2020 leading to approval to add LRDR to the MDS Operational Capability Baseline (OCB) in FY 2021 and an Operational Acceptance by the United States Space Force (USSF) in FY 2023. Those milestones were impacted by a cessation of work at Clear Space Force Station (CSFS), AK in the spring of 2020 to mitigate the potential spread of COVID-19. Initial fielding of LRDR was completed on December 6, 2021 and LRDR will now be added to the Increment 6B.1 OCB in FY 2023. MDS Increment 6C/7 includes software upgrades to LRDR to assess and further improve discrimination techniques and capability which will expand capability to a broader spectrum of threats, increase support to Space Domain Awareness and Space Object Identification, and examine cost reduction initiatives to reduce life cycle operating costs. The OCB/Technical Capability Declaration for Increment 6C/7 is planned for FY 2026. The LRDR is comprised of a LRDR Equipment Shelter, housing two radar array faces, a Mission Control Facility, which supports radar operations, and supporting facilities and infrastructure. The Secretary of the Air Force approved CSFS, formerly known as Clear Air Force Station, AK as the LRDR site. The USSF Space Operations Command is the designated Lead Major Command.

The LRDR operates in the S-band frequency, features scalable and open systems architecture to mitigate evolving threats, and integrates into the MDS through the Command and Control, Battle Management, and Communications system. This Program Element includes MDS threat discrimination improvements to enhance MDS effectiveness against the evolving threat. The result will be a MDS architecture more capable of discriminating and intercepting re-entry vehicles with a higher degree of confidence to improve Warfighter shot doctrine, and conserve Ground Based Interceptor inventory. LRDR also supports additional mission areas including Space Domain Awareness and Space Object Identification.

UNCLASSIFIED

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

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	138.317	133.335	0.000	-	0.000
Current President's Budget	135.088	133.335	75.120	-	75.120
Total Adjustments	-3.229	0.000	75.120	-	75.120
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-3.391	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.162	0.000	75.120	-	75.120

Change Summary Explanation

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

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency										Date: April 2022		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)				Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)			
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
MD96: Long Range Discrim Radar (LRDR)	985.417	129.636	128.192	72.392	-	72.392	99.810	92.440	69.021	73.431	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

The decrease from FY 2022 to FY 2023 reflects the completion of the Long Range Discrimination Radar (LRDR) Increment 6B.1 development effort.

A. Mission Description and Budget Item Justification

This project includes development of the LRDR which will provide an improved persistent midcourse Missile Defense System (MDS) discrimination capability in the Pacific sensor architecture. Initial fielding of the LRDR capability was completed on December 6, 2021 and operational fielding of LRDR will be completed when added to the Operational Capability Baseline (OCB) in FY 2023 leading to Operational Acceptance (OA) by the United States Space Force (USSF). The LRDR will also increase the defensive capacity of the Ground Based Interceptor inventory and address evolving threats. The Missile Defense Agency's (MDA's) request includes funding for the design and development of the LRDR, system engineering, software development, software Independent Verification and Validation (IV&V), qualification testing, developmental testing support, Modeling and Simulation (M&S), and acquisition sustainment. M&S includes development of LRDR digital simulations and their integration into the MDS, M&S architecture, and Verification, Validation, and Accreditation of LRDR models. The USSF will leverage the LRDR inherent capabilities to augment ancillary missions including Space Domain Awareness (SDA) and Space Object Identification (SOI).

This project also includes MDS Increment 6C/7 software upgrades. MDS Increment 6C/7 includes software upgrades to LRDR to further verify and improve discrimination techniques and capability, verify and improve electronic protection techniques and capability, expand capability to a broader spectrum of threats, increase support to SDA and SOI, and examine cost reduction initiatives to reduce life cycle operating costs. Operational fielding of the LRDR Increment 6C/7 capability will be completed when added to the OCB in FY 2026.

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

	FY 2021	FY 2022	FY 2023
Title: Long Range Discrimination Radar (LRDR)	129.636	128.192	72.392
Articles:	-	-	-
Description: The LRDR program includes requirement development activities associated with systems engineering, software development, discrimination improvements, design reviews, testing, and M&S efforts for radar development. Efforts include LRDR site activation and preparation of site infrastructure for construction activities. The program will develop and integrate Command and Control, Battle Management, and Communications (C2BMC) systems for LRDR functionality. The program will develop, maintain, and deliver radar software Increment 6B.1 and establish the IV&V lab for testing of operational software. The program includes purchase, manufacture, integration and test of radar materials. This program will also establish the operational baseline, initiate radar operations and communication, and initiate sustainment operations. The program also includes logistics			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
<p>management, reliability, availability, maintainability efforts, data management, and operations support for the LRDR program office. This project also includes MDS Increment 6C/7 software upgrades to LRDR to further verify and improve discrimination techniques and capability, verify and improve electronic protection techniques and capability, expand capability to a broader spectrum of threats, increase support to SDA and SOI, and implement cost reduction initiatives to reduce life cycle operating costs.</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p>FY 2022 Plans:</p> <ul style="list-style-type: none"> -- Achieve Authority to Operate -- Achieve final Government acceptance of radar (DD 250) -- Complete LRDR addition to the OCB for Increment 6B.1 -- Continue efforts to achieve OA by USSF by FY 2023 -- Continue Increment 6C/7 development --Cost Reduction Initiative to reduce power consumption --Enhanced SDA/SOI messaging --Expanded reporting / messaging --Cybersecurity upgrades -- Complete iterative System Requirements Review process for Increment 6C/7 -- Complete Preliminary Design Review (PDR) and Critical Design Review (CDR) for Increment 6C/7 -- Continue post-fielding operations and sustainment -- Complete demobilization of Temporary Workforce Camp at Clear Space Force Station (CSFS), AK <p>FY 2023 Plans:</p> <ul style="list-style-type: none"> -- Continue Increment 6C/7 development -- Complete PDR and CDR for Increment 6C/7 -- Complete software build for Integrated Ground Test -- Initiate fielding preparations to place LRDR improvements onto the MDS Increment 6C/7 OCB -- Complete OA of LRDR by USSF -- Complete Transition and Transfer of LRDR -- Complete Interim Contractor Support phase 2 <p>FY 2022 to FY 2023 Increase/Decrease Statement:</p>			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
Decrease from FY 2022 to FY 2023 reflects the completion of the LRDR Increment 6B.1 development effort.			
Accomplishments/Planned Programs Subtotals	129.636	128.192	72.392

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

Line Item	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
• 0603882C: Ballistic Missile Defense Midcourse Defense Segment	1,195.853	724.028	667.524	-	667.524	870.817	802.617	781.973	765.733	Continuing	Continuing
• 0603884C: Ballistic Missile Defense Sensors	259.605	254.962	231.134	-	231.134	250.028	274.705	276.254	257.575	Continuing	Continuing
• 0603896C: Ballistic Missile Defense Command and Control, Battle Management & Communication	639.027	564.946	589.374	-	589.374	575.883	588.824	612.853	605.801	Continuing	Continuing
• 0603904C: Missile Defense Integration and Operations Center (MDIOC)	54.026	52.403	49.367	-	49.367	51.744	56.502	57.833	59.006	Continuing	Continuing
• 0604672C: Homeland Defense Radar-Hawaii	133.000	75.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	208.000
• 0604873C: Long Range Discrimination Radar MILCON	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
• 0604879C: Ballistic Missile Defense Sensor Test	64.245	77.428	88.326	-	88.326	91.495	98.146	103.010	145.810	Continuing	Continuing
• 31299903: MILCON PLANNING and DESIGN	0.000	19.000	47.063	-	47.063	0.000	0.000	0.000	0.000	0.000	66.063

Remarks

D. Acquisition Strategy

The LRDR acquisition strategy, which was approved on January 7, 2015, incorporates robust acquisition practices to ensure delivery of a best value solution that meets mission performance requirements and reduces lifecycle costs. MDA awarded a fixed-price incentive contract to Lockheed Martin Corporation of Moorestown, NJ, on October 21, 2015 to design, develop, manufacture, integrate & test, and field the LRDR prime mission equipment. The prime contract included other fixed-price and cost-reimbursable line items and options in order to properly balance acquisition costs and risks. Performance and cost incentives were included to motivate

UNCLASSIFIED

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

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 4	PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>	MD96 / <i>Long Range Discrim Radar (LRDR)</i>

contractor performance. The radar prime contractor will deliver a full technical data package, which will enable the government to effectively and affordably sustain the system. MDA synchronized the radar development contract efforts with a simultaneous Military Construction effort, which was executed through the US Army Corps of Engineers. The LRDR completed the initial fielding milestone on December 6, 2021 for MDS integration and testing of the Increment 6B.1 capability and an expected fielding of LRDR when it is added to the MDS OCB in FY 2023. The Acquisition Strategy was updated in FY 2021 to add the Increment 6C/7 capability. MDA awarded a cost-plus incentive fee contract to Lockheed Martin on September 20, 2021 to develop and deliver the Increment 6/7 software upgrade.

UNCLASSIFIED

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 0604873C / Long Range Discrimination Radar (LRDR)					MD96 / Long Range Discrim Radar (LRDR)						
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
Long Range Discrimination Radar (LRDR) - Prime Contractor - Future Configuration	SS/TBD	LOCKHEED MARTIN CORPORATION : NJ	0.000	0.000		0.000		5.429	Jun 2023	-		5.429	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - BMEWS Remediation and Removal	MIPR	USACE : AL, AK	25.110	0.000		0.000		0.000		-		0.000	0.000	25.110	0.000
Long Range Discrimination Radar (LRDR) - Civilians/ Travel	Allot	MDA : AL	5.875	3.795	Oct 2020	3.725	Oct 2021	4.032	Oct 2022	-		4.032	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Communications Integration	SS/CPIF	Lockheed Martin : AL, NJ	34.986	0.000		0.732	May 2022	0.000		-		0.000	0.000	35.718	0.000
Long Range Discrimination Radar (LRDR) - Contract Support Services	C/CPFF	Various : Various	9.409	4.939	Nov 2020	6.127	Oct 2021	0.000		-		0.000	0.000	20.475	0.000
Long Range Discrimination Radar (LRDR) - FFRDC/ UARC-No longer funded in this cost category	MIPR	GTRI, JHU/APL, MITRE, MIT/LL : AL, GA, IL, MA, VA	6.042	3.712	Oct 2020	2.390	Oct 2021	0.000		-		0.000	0.000	12.144	0.000
Long Range Discrimination Radar (LRDR) - Hybrid Program Office	MIPR	US Air Force : Various	0.692	0.000		0.000		0.000		-		0.000	0.000	0.692	0.000
Long Range Discrimination Radar (LRDR) - IV&V	MIPR	DOD - USA - COMBAT CAPABILITIES DEVELOPMENT COMMAND (CCDC) AVIATION AND MISSILE CENTER (AVMC) : Huntsville, AL	15.346	4.592	Dec 2020	4.388	Nov 2021	3.354	Nov 2022	-		3.354	0.000	27.680	0.000

UNCLASSIFIED

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)
--------------------------------------------------	--------------------------------------------------------------------------------------------------	------------------------------------------------------------------------

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			
Long Range Discrimination Radar (LRDR) - Prime Contractor -Increment 6B.1	C/FPIF	LOCKHEED MARTIN CORPORATION : NJ	759.201	75.191	Nov 2020	17.884	Nov 2021	0.000		-		0.000	0.000	852.276	0.000
Long Range Discrimination Radar (LRDR) - Prime Contractor -Increment 6C/7	SS/CPIF	LOCKHEED MARTIN CORPORATION : NJ	0.000	13.342	Sep 2021	67.000	Oct 2021	23.639	Oct 2022	-		23.639	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Program Office - No longer funded in this cost category	Various	MDA, JHU/APL, GSA AL, MA, IL : AL, MA, IL	10.616	0.000		0.000		0.000		-		0.000	0.000	10.616	0.000
Long Range Discrimination Radar (LRDR) - Radar Operations, Sustainment, and Fuel	MIPR	DOD - USSF - US SPACE FORCE (USSF) : AK	9.134	14.104	Nov 2020	24.006	Nov 2021	0.000		-		0.000	0.000	47.244	0.000
Long Range Discrimination Radar (LRDR) - Site Activation & Studies	MIPR	USACE : AL, AK	109.006	9.961	Nov 2020	1.710	Feb 2022	0.000		-		0.000	0.000	120.677	0.000
Long Range Discrimination Radar (LRDR) - Transition & Transfer	C/TBD	MDA : AL	0.000	0.000		0.230	Jan 2022	0.000		-		0.000	0.000	0.230	0.000
Subtotal			985.417	129.636		128.192		36.454		-		36.454	Continuing	Continuing	N/A

Remarks
N/A

Support (\$ 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			
Long Range Discrimination Radar (LRDR) - Contract Support Services	C/CPFF	Various : Various	0.000	0.000		0.000		1.658	Oct 2022	-		1.658	Continuing	Continuing	Continuing

UNCLASSIFIED

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 0604873C / Long Range Discrimination Radar (LRDR)					MD96 / Long Range Discrim Radar (LRDR)						
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
Long Range Discrimination Radar (LRDR) - Contract Support Services - Logistics	C/CPFF	VENTURI, INC. : Various	0.000	0.000		0.000		1.371	Oct 2022	-		1.371	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Contract Support Services - Systems Engineering	C/CPFF	PARSONS GOVERNMENT SERVICES INC. : Various	0.000	0.000		0.000		2.411	Oct 2022	-		2.411	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - FFRDC-MITRE	MIPR	DOD - USA - COMMUNICATIONS ELECTRONICS COMMAND (CECOM) : Various	0.000	0.000		0.000		1.065	Nov 2022	-		1.065	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Prime Radar Integration	MIPR	DOD - USA - US ARMY CORPS OF ENGINEERS (USACE) : Various	0.000	0.000		0.000		1.732	Nov 2022	-		1.732	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - Radar Operations, Sustainment, and Fuel	MIPR	DOD - USSF - US SPACE FORCE (USSF) : AK	0.000	0.000		0.000		25.131	Nov 2022	-		25.131	Continuing	Continuing	Continuing
Long Range Discrimination Radar (LRDR) - UARC - JHU/APL	SS/CPFF	JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY LLC, THE : Various	0.000	0.000		0.000		2.570	Nov 2022	-		2.570	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		35.938		-		35.938	Continuing	Continuing	N/A
Remarks															
N/A															

UNCLASSIFIED

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)
--------------------------------------------------	--------------------------------------------------------------------------------------------------	------------------------------------------------------------------------

Management Services (\$ 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
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
Project Cost Totals	985.417	129.636	128.192	72.392	-	72.392	Continuing	Continuing	N/A

Remarks
Award Dates reflect date of first obligation. Additional obligations may incrementally occur throughout the year.

UNCLASSIFIED

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)
--------------------------------------------------	--------------------------------------------------------------------------------------------------	------------------------------------------------------------------------

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			
Long Range Discrimination Radar Capability	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇
System Requirements Review for Increment 6C/7			▲																									
Initial Fielding				▲																								
GTI-08a (N/I) (MDS Ground Test)							◇																					
FTX-26 (OT) (SN, OT Target Only Flight Test)								△																				
FTX-45								△																				
GTD-08a (N/I) (MDS Ground Test)								◇																				
LRDR Operational Capability Baseline (OCB) / Increment 6B.1 Technical Capability Declaration (TCD)												△																
GTI-08b (N/I)												◇																
Operational Acceptance (OA)												△																
GTI-08b Sprint 1 (N/I) (MDS Ground Test)													◇															
GTD-08b (N/I)														◇														
GTI-13 Sprint 1 (N/I) (MDS Ground Test)															◇													
GTI-13 Sprint 2 (N/I) (MDS Ground Test)																◇												
GTD-13 (N/I) (MDS Ground Test)																			◇									
LRDR Operational Capability Baseline (OCB) / Increment 6C/7 Technical Capability Declaration (TCD)																				△								
GTI-14 Sprint 1 (N/I)																								◇				
GTI-14 (N/I) Sprint 2 (MDS Ground Test)																										◇		
GTD-14 (N/I) (MDS Ground Test)																												◇

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD96 / Long Range Discrim Radar (LRDR)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Long Range Discrimination Radar Capability	1	2021	4	2027
System Requirements Review for Increment 6C/7	3	2021	3	2021
Initial Fielding	1	2022	1	2022
GTI-08a (N/I) (MDS Ground Test)	3	2022	3	2022
FTX-26 (OT) (SN, OT Target Only Flight Test)	4	2022	4	2022
FTX-45	4	2022	4	2022
GTD-08a (N/I) (MDS Ground Test)	1	2023	1	2023
LRDR Operational Capability Baseline (OCB) / Increment 6B.1 Technical Capability Declaration (TCD)	3	2023	3	2023
GTI-08b (N/I)	4	2023	4	2023
Operational Acceptance (OA)	4	2023	4	2023
GTI-08b Sprint 1 (N/I) (MDS Ground Test)	1	2024	1	2024
GTD-08b (N/I)	2	2024	2	2024
GTI-13 Sprint 1 (N/I) (MDS Ground Test)	1	2025	1	2025
GTI-13 Sprint 2 (N/I) (MDS Ground Test)	3	2025	3	2025
GTD-13 (N/I) (MDS Ground Test)	4	2025	4	2025
LRDR Operational Capability Baseline (OCB) / Increment 6C/7 Technical Capability Declaration (TCD)	1	2026	1	2026
GTI-14 Sprint 1 (N/I)	4	2026	4	2026
GTI-14 (N/I) Sprint 2 (MDS Ground Test)	2	2027	2	2027
GTD-14 (N/I) (MDS Ground Test)	4	2027	4	2027

UNCLASSIFIED

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD40 / Program Wide Support
--------------------------------------------------	--------------------------------------------------------------------------------------------------	-------------------------------------------------------------

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	52.500	5.452	5.143	2.728	-	2.728	3.641	3.272	2.694	2.885	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

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

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire 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
Title: Program Wide Support	5.452	5.143	2.728
Articles:	-	-	-
Description: 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; the FSRM program			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / <i>Long Range Discrimination Radar (LRDR)</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2021	FY 2022	FY 2023
<p>(formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.</p> <p>FY 2022 Plans: - SEE ABOVE.</p> <p>FY 2023 Plans: - SEE ABOVE.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Decrease from FY 2022 to FY 2023 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.</p>				
Accomplishments/Planned Programs Subtotals		5.452	5.143	2.728
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

UNCLASSIFIED

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD40 / Program Wide Support
--------------------------------------------------	--------------------------------------------------------------------------------------------------	-------------------------------------------------------------

Support (\$ 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			
Program Wide Support - Agency Facilities and Maintenance SRM (MIPR)	MIPR	Various : Multi: AL, VA, Aust, Japan	24.395	0.000		0.000		0.000		-		0.000	0.000	24.395	0.000
Program Wide Support - Agency Operations Management	Various	Various : Multi: AL, CA, CO, VA	0.625	0.000		0.000		0.000		-		0.000	0.000	0.625	0.000
Program Wide Support - Agency Operations Sustainment and GPC	C/FFP	Various : Multi: AL, CA, CO, VA etc.	2.327	0.000		0.000		0.000		-		0.000	0.000	2.327	0.000
Program Wide Support - Agency Operations and Support Services	C/CPFF	CHENEGA : AL	20.027	5.452	Apr 2021	5.143	Jan 2022	2.728	Nov 2022	-		2.728	Continuing	Continuing	Continuing
Program Wide Support - Prior year no longer funded in the FYDP	Various	Various : Various	5.126	0.000		0.000		0.000		-		0.000	0.000	5.126	0.000
Subtotal			52.500	5.452		5.143		2.728		-		2.728	Continuing	Continuing	N/A

Remarks
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
Project Cost Totals	52.500	5.452	5.143	2.728	-	2.728	Continuing	Continuing	N/A

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

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604873C / Long Range Discrimination Radar (LRDR)	Project (Number/Name) MD40 / Program Wide Support

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2021	4	2027