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**Department of Defense  
Fiscal Year (FY) 2023 Budget Estimates**

April 2022



**Missile Defense Agency**

*Defense-Wide Justification Book Volume 2b of 2*

***Procurement, Defense-Wide***  
**(Includes O&M and MILCON)**

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Missile Defense Agency • Budget Estimates FY 2023 • Procurement

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Missile Defense Agency • Budget Estimates FY 2023 • Procurement

**Missile Defense Agency..... Volume 2**

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## **Introduction & Explanation of Contents**

The Department of Defense Fiscal Year (FY) 2023 Budget Estimate Submission RDT&E (Includes Procurement, O&M, and MILCON), Defense-wide Volume 2, Missile Defense Agency (MDA) justification materials consists of two books titled Volume 2a and 2b. Justification documents are provided in the books as listed below.

### **Volume 2a**

- MDA FY 2023 Budget Estimate Overview
- MDA Appropriation Summary
- Acronyms
- RDT&E Exhibits in BA-03, BA-04, and BA-06

### **Volume 2b**

- MDA Operation and Maintenance Exhibit
- MDA MILCON Exhibits
- MDA Procurement Exhibits

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation -----	FY 2021 (Base + OCO) -----	FY 2022 Less Supplementals Enactment -----	FY 2022 Division B Division C P.L.117-43 Enactment* -----	FY 2022 Division B P.L.117-70 Enactment** -----
Procurement, Defense-Wide	2,027,594	2,611,253		
Total Defense-Wide	2,027,594	2,611,253		

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

\*Includes enacted funding pursuant to the Extending Government Funding and Delivering Emergency Assistance Act (Public Law 117-43).

\*\*Includes enacted funding pursuant to the Further Extending Government Funding Act (Public Law 117-70).

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation -----	FY 2022 Division A P.L. 117-86 Enactment*** -----	FY 2022 Division N P.L. 117-103 Enactment**** -----	FY 2022 Total Supplemental Enactment -----	FY 2022 Total Enactment -----
Procurement, Defense-Wide				2,611,253
Total Defense-Wide				2,611,253

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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\*\*\*\*Includes enacted funding pursuant to the Ukraine Supplemental Appropriations Act (Public Law 117-103).

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation  
-----

FY 2023  
Request  
-----

Procurement, Defense-Wide

1,165,861

Total Defense-Wide

1,165,861

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Organization: Procurement, Defense-Wide -----	FY 2021 (Base + OCO) -----	FY 2022 Less Supplementals Enactment -----	FY 2022 Division B Division C P.L.117-43 Enactment* -----	FY 2022 Division B P.L.117-70 Enactment** -----
Missile Defense Agency, MDA	2,027,594	2,611,253		
Total	2,027,594	2,611,253		

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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\*\*Includes enacted funding pursuant to the Further Extending Government Funding Act (Public Law 117-70).

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Organization: Procurement, Defense-Wide -----	FY 2022 Division A P.L. 117-86 Enactment*** -----	FY 2022 Division N P.L. 117-103 Enactment**** -----	FY 2022 Total Supplemental Enactment -----	FY 2022 Total Enactment -----
Missile Defense Agency, MDA				2,611,253
Total				2,611,253

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

\*\*\*Includes enacted funding pursuant to the Further Additional Extending Government Funding Act (Public Law 117-86).

\*\*\*\*Includes enacted funding pursuant to the Ukraine Supplemental Appropriations Act (Public Law 117-103).

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Organization: Procurement, Defense-Wide  
-----

FY 2023  
Request  
-----

Missile Defense Agency, MDA

1,165,861

Total

1,165,861

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Defense-Wide  
 FY 2023 President's Budget  
 Exhibit P-1 FY 2023 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

15 Apr 2022

Appropriation: Procurement, Defense-Wide

Budget Activity -----	FY 2021 (Base + OCO) -----	FY 2022 Less Supplementals Enactment -----	FY 2022 Division B Division C P.L.117-43 Enactment* -----	FY 2022 Division B Division B P.L.117-70 Enactment** -----
01. Major Equipment	2,027,594	2,611,253		
Total Procurement, Defense-Wide	2,027,594	2,611,253		

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

\*Includes enacted funding pursuant to the Extending Government Funding and Delivering Emergency Assistance Act (Public Law 117-43).

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation: Procurement, Defense-Wide

Budget Activity -----	FY 2022 Division A P.L. 117-86 Enactment*** -----	FY 2022 Division N P.L. 117-103 Enactment**** -----	FY 2022 Total Supplemental Enactment -----	FY 2022 Total Enactment -----
01. Major Equipment				2,611,253
Total Procurement, Defense-Wide				2,611,253

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation: Procurement, Defense-Wide

Budget Activity

FY 2023  
Request

-----  
01. Major Equipment

-----  
1,165,861

Total Procurement, Defense-Wide

1,165,861

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation: 0300D Procurement, Defense-Wide

Line No	Item Nomenclature	Ident Code	FY 2021 (Base + OCO) Quantity	Cost	FY 2022 Less Supplementals Enactment Quantity	Cost	FY 2022 Division B Division C P.L.117-43 Enactment* Quantity	Cost	FY 2022 Division B Division B P.L.117-70 Enactment** Quantity	Cost	S e c -
Budget Activity 01: Major Equipment											
Major Equipment, Missile Defense Agency											
30	THAAD	B	39	578,335	32	380,722					U
31	Ground Based Midcourse	A		150,000							U
32	Aegis BMD	B	40	(399,920)	40	(394,386)					U
	Less: Advance Procurement (PY)			(-46,024)		(-59,765)					U
				353,896		334,621					
33	Aegis BMD										
	Advance Procurement (CY)			44,901		17,493					U
	C (FY 2021 for FY 2022) (M)			(29,845)							
	C (FY 2021 for FY 2023) (M)			(15,056)							
	C (FY 2022 for FY 2023) (M)					(17,493)					
34	BMDS AN/TPY-2 Radars	A	1	243,270		2,738					U
35	SM-3 IIAs	B	9	318,322	16	488,022					U
36	Arrow 3 Upper Tier Systems	A	1	77,000	1	62,000					U
37	Short Range Ballistic Missile Defense (SRBMD)	A	1	50,000	1	30,000					U
38	Defense of Guam Procurement	B				80,000					U
39	Aegis Ashore Phase III	B		34,629		25,866					U
40	Iron Dome	A	1	73,000	1	1,108,000					U

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation: 0300D Procurement, Defense-Wide

Line No	Item Nomenclature	Ident Code	FY 2022 Division A P.L. 117-86 Enactment*** Quantity Cost	FY 2022 Division N P.L. 117-103 Enactment**** Quantity Cost	FY 2022 Total Supplemental Enactment Quantity Cost	FY 2022 Total Enactment Quantity Cost	S e c
Budget Activity 01: Major Equipment							
Major Equipment, Missile Defense Agency							
30	THAAD	B				32 380,722	U
31	Ground Based Midcourse	A					U
32	Aegis BMD	B				40 (394,386)	U
	Less: Advance Procurement (PY)					(-59,765)	U
						334,621	
33	Aegis BMD						
	Advance Procurement (CY)					17,493	U
	C (FY 2021 for FY 2022) (M)						
	C (FY 2021 for FY 2023) (M)						
	C (FY 2022 for FY 2023) (M)					(17,493)	
34	BMDS AN/TPY-2 Radars	A				2,738	U
35	SM-3 IIAs	B				16 488,022	U
36	Arrow 3 Upper Tier Systems	A				1 62,000	U
37	Short Range Ballistic Missile Defense (SRBMD)	A				1 30,000	U
38	Defense of Guam Procurement	B				80,000	U
39	Aegis Ashore Phase III	B				25,866	U
40	Iron Dome	A				1 1,108,000	U

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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\*\*\*\*Includes enacted funding pursuant to the Ukraine Supplemental Appropriations Act (Public Law 117-103).

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Defense-Wide  
 FY 2023 President's Budget  
 Exhibit P-1 FY 2023 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

15 Apr 2022

Appropriation: 0300D Procurement, Defense-Wide

Line No	Item Nomenclature	Ident Code		FY 2023 Request Quantity	Cost	S e c
----	-----	----		-----	----	-
Budget Activity 01: Major Equipment -----						
Major Equipment, Missile Defense Agency						
30	THAAD	B		3	74,994	U
31	Ground Based Midcourse	A			11,300	U
32	Aegis BMD	B		47	(455,835)	U
	Less: Advance Procurement (PY)				(-53,600)	U
					-----	
					402,235	
33	Aegis BMD					
	Advance Procurement (CY)					U
	C (FY 2021 for FY 2022) (M)					
	C (FY 2021 for FY 2023) (M)					
	C (FY 2022 for FY 2023) (M)					
34	BMDS AN/TPY-2 Radars	A			4,606	U
35	SM-3 IIAs	B		10	337,975	U
36	Arrow 3 Upper Tier Systems	A		1	80,000	U
37	Short Range Ballistic Missile Defense (SRBMD)	A		1	40,000	U
38	Defense of Guam Procurement	B			26,514	U
39	Aegis Ashore Phase III	B			30,056	U
40	Iron Dome	A		1	80,000	U

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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Defense-Wide  
 FY 2023 President's Budget  
 Exhibit P-1 FY 2023 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

15 Apr 2022

Appropriation: 0300D Procurement, Defense-Wide

Line No	Item Nomenclature	Ident Code	FY 2021 (Base + OCO)		FY 2022 Less Supplementals Enactment		FY 2022 Division B Division C P.L.117-43 Enactment*		FY 2022 Division B P.L.117-70 Enactment**		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
41	Aegis BMD Hardware and Software	A	9	104,241	5	81,791					U
Total Major Equipment				2,027,594		2,611,253					
Total Procurement, Defense-Wide				2,027,594		2,611,253					

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation: 0300D Procurement, Defense-Wide

Line			FY 2022	FY 2022	FY 2022					
No	Item Nomenclature	Ident	Division A	Division N	Total			FY 2022		S
		Code	P.L. 117-86	P.L. 117-103	Supplemental			Total		e
			Enactment***	Enactment****	Enactment			Enactment		c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
			-----	----	-----	----	-----	----	-----	----
41	Aegis BMD Hardware and Software	A						5	81,791	U
			-----	---- <td>-----</td> <td>----<td></td><td></td><td>-----</td><td></td></td>	-----	---- <td></td> <td></td> <td>-----</td> <td></td>			-----	
	Total Major Equipment								2,611,253	
			-----	---- <td>-----</td> <td>----<td></td><td></td><td>-----</td><td></td></td>	-----	---- <td></td> <td></td> <td>-----</td> <td></td>			-----	
	Total Procurement, Defense-Wide								2,611,253	

P-123PBP: FY 2023 President's Budget (Total Base Published Version), as of April 15, 2022 at 11:12:56

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Defense-Wide  
FY 2023 President's Budget  
Exhibit P-1 FY 2023 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

15 Apr 2022

Appropriation: 0300D Procurement, Defense-Wide

Line No	Item Nomenclature	Ident Code	FY 2023 Request Quantity	S e c Cost
----	-----	-----	-----	-----
41	Aegis BMD Hardware and Software	A	6	78,181 U
Total Major Equipment			1,165,861	
Total Procurement, Defense-Wide			1,165,861	

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31	01	17	MD08	Ground Based Midcourse.....	Volume 2b - 23
32	01	17	MD09	AEGIS BMD.....	Volume 2b - 45
33	01	17	MD09	AEGIS BMD, Advance Procurement.....	Volume 2b - 67
34	01	17	MD11	BMDs Sensors.....	Volume 2b - 71
35	01	17	MD14	SM-3 Block IIA.....	Volume 2b - 101
36	01	17	MD26	Arrow 3 Upper Tier System.....	Volume 2b - 107
37	01	17	MD34	Short Range Ballistic Missile Defense (SRBMD)(David's Sling Weapon System (DSWS)).....	Volume 2b - 111
38	01	17	MD65	Defense of Guam Procurement.....	Volume 2b - 115
39	01	17	MD73	Aegis Ashore Phase III.....	Volume 2b - 119
40	01	17	MD83	Iron Dome.....	Volume 2b - 129
41	01	17	MD90	Aegis BMD Hardware and Software.....	Volume 2b - 133

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Missile Defense Agency • Budget Estimates FY 2023 • Procurement

**Line Item Table of Contents (Alphabetically by Line Item Title)**

<b>Line Item Title</b>	<b>Line Item Number</b>	<b>Line #</b>	<b>BA</b>	<b>BSA</b>	<b>Page</b>
AEGIS BMD	MD09	32	01	17.....	Volume 2b - 45
AEGIS BMD, Advance Procurement	MD09	33	01	17.....	Volume 2b - 67
Aegis Ashore Phase III	MD73	39	01	17.....	Volume 2b - 119
Aegis BMD Hardware and Software	MD90	41	01	17.....	Volume 2b - 133
Arrow 3 Upper Tier System	MD26	36	01	17.....	Volume 2b - 107
BMDS Sensors	MD11	34	01	17.....	Volume 2b - 71
Defense of Guam Procurement	MD65	38	01	17.....	Volume 2b - 115
Ground Based Midcourse	MD08	31	01	17.....	Volume 2b - 23
Iron Dome	MD83	40	01	17.....	Volume 2b - 129
SM-3 Block IIA	MD14	35	01	17.....	Volume 2b - 101
Short Range Ballistic Missile Defense (SRBMD)(David's Sling Weapon System (DSWS))	MD34	37	01	17.....	Volume 2b - 111
THAAD	MD07	30	01	17.....	Volume 2b - 1

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# **Fiscal Year 2023 President's Budget**

## **Missile Defense Agency**



**April 2022**

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

<b>Total Obligational Authority (Dollars in Thousands)</b>			
	<b>FY 2021 <u>Actuals</u></b>	<b>FY 2022 <u>Enacted</u></b>	<b>FY 2023 <u>Request</u></b>
<b>4. Administrative and Servicewide Activities</b>	<b>572,886</b>	<b>502,418</b>	<b>541,787</b>
Aegis BMD Program	77,195	68,293	69,071
BMDS Radars Program	257,244	190,674	200,207
Ground-Based Midcourse Program	148,741	156,623	185,564
THAAD Program	89,706	86,828	86,945
<b>Total Operation and Maintenance, MDA</b>	<b>572,886</b>	<b>502,418</b>	<b>541,787</b>

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

<b>Total Obligational Authority (Dollars in Thousands)</b>			
	<b>FY 2021 <u>Actuals</u></b>	<b>FY 2022 <u>Enacted</u></b>	<b>FY 2023 <u>Request</u></b>
<b>4. Administrative and Servicewide Activities</b>	<b>572,886</b>	<b>502,418</b>	<b>541,787</b>
Aegis BMD Program	77,195	68,293	69,071
BMDS Radars Program	257,244	190,674	200,207
Ground-Based Midcourse Program	148,741	156,623	185,564
THAAD Program	89,706	86,828	86,945
<b>Total Operation and Maintenance, MDA</b>	<b>572,886</b>	<b>502,418</b>	<b>541,787</b>

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

		<u>FY 2021</u>	<u>Price</u>	<u>Price</u>	<u>Program</u>	<u>FY 2022</u>	<u>Price</u>	<u>Price</u>	<u>Program</u>	<u>FY 2023</u>
		<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>
			<u>Percent</u>				<u>Percent</u>			
0308	TRAVEL OF PERSONS	19	3.00%	1	-20	0	2.10%	0	0	0
	<b>TOTAL TRAVEL</b>	<b>19</b>		<b>1</b>	<b>-20</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
0401	DLA ENERGY (FUEL PRODUCTS)	1,716	10.10%	173	-708	1,181	-7.47%	-88	158	1,251
	<b>TOTAL DEFENSE WORKING CAPITAL FUND SUPPLIES AND MATERIALS</b>	<b>1,716</b>		<b>173</b>	<b>-708</b>	<b>1,181</b>		<b>-88</b>	<b>158</b>	<b>1,251</b>
0677	DISA TELECOMM SVCS - REIMBURSABLE	169	0.49%	1	-40	130	0.00%	0	-57	73
	<b>TOTAL OTHER FUND PURCHASES</b>	<b>169</b>		<b>1</b>	<b>-40</b>	<b>130</b>		<b>0</b>	<b>-57</b>	<b>73</b>
0771	COMMERCIAL TRANSPORT	3,508	3.00%	105	-145	3,468	2.10%	73	68	3,609
	<b>TOTAL TRANSPORTATION</b>	<b>3,508</b>		<b>105</b>	<b>-145</b>	<b>3,468</b>		<b>73</b>	<b>68</b>	<b>3,609</b>
0913	PURCHASED UTILITIES (NON-FUND)	2,338	3.00%	70	326	2,734	2.10%	57	-4	2,787
0914	PURCHASED COMMUNICATIONS (NON-FUND)	2,506	3.00%	75	-1,548	1,033	2.10%	22	3,188	4,243
0915	RENTS (NON-GSA)	0	3.00%	0	239	239	2.10%	5	-1	243
0920	SUPPLIES & MATERIALS (NON-FUND)	77,838	3.00%	2,335	-30,755	49,418	2.10%	1,038	-14,705	35,751
0922	EQUIPMENT MAINTENANCE BY CONTRACT	378,051	3.00%	11,342	-84,965	304,428	2.10%	6,393	5,852	316,673
0923	FACILITIES SUST, REST, & MOD BY CONTRACT	31,740	3.00%	952	-6,446	26,246	2.10%	551	30,121	56,918
0925	EQUIPMENT PURCHASES (NON-FUND)	4,131	3.00%	124	-3,476	779	2.10%	16	-332	463
0930	OTHER DEPOT MAINTENANCE (NON-FUND)	46,057	3.00%	1,382	44,747	92,186	2.10%	1,936	4,781	98,903
0932	MGT PROF SUPPORT SVCS	550	3.00%	17	-567	0	2.10%	0	0	0
0933	STUDIES, ANALYSIS & EVAL	0	3.00%	0	0	0	2.10%	0	622	622
0934	ENGINEERING & TECH SVCS	382	3.00%	11	-393	0	2.10%	0	657	657
0936	TRAINING AND LEADERSHIP DEVELOPMENT (OTHER CONTRACTS)	8,974	3.00%	269	-9,243	0	2.10%	0	0	0
0984	EQUIPMENT CONTRACTS	0	3.00%	0	100	100	2.10%	2	-1	101
0987	OTHER INTRA-GOVT PURCH	8,367	3.00%	251	1,078	9,696	2.10%	204	-339	9,561
0989	OTHER SERVICES	228	3.00%	7	10,545	10,780	2.10%	226	-1,074	9,932
0990	IT CONTRACT SUPPORT SERVICES	6,312	3.00%	189	-6,501	0	2.10%	0	0	0
	<b>TOTAL OTHER PURCHASES</b>	<b>567,474</b>		<b>17,024</b>	<b>-86,859</b>	<b>497,639</b>		<b>10,450</b>	<b>28,765</b>	<b>536,854</b>

OP-32 Exhibit  
MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

	<u>FY 2021 Program</u>	<u>Price Growth Percent</u>	<u>Price Growth</u>	<u>Program Growth</u>	<u>FY 2022 Program</u>	<u>Price Growth Percent</u>	<u>Price Growth</u>	<u>Program Growth</u>	<u>FY 2023 Program</u>
GRAND TOTAL	572,886		17,304	-87,772	502,418		10,435	28,934	541,787

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

		<u>FY 2021</u>	<u>Price</u>	<u>Price</u>	<u>Program</u>	<u>FY 2022</u>	<u>Price</u>	<u>Price</u>	<u>Program</u>	<u>FY 2023</u>
		<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>
			<u>Percent</u>				<u>Percent</u>			
0308	TRAVEL OF PERSONS	19	3.00%	1	-20	0	2.10%	0	0	0
	<b>TOTAL TRAVEL</b>	<b>19</b>		<b>1</b>	<b>-20</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
0401	DLA ENERGY (FUEL PRODUCTS)	1,716	10.10%	173	-708	1,181	-7.47%	-88	158	1,251
	<b>TOTAL DEFENSE WORKING CAPITAL FUND SUPPLIES AND MATERIALS</b>	<b>1,716</b>		<b>173</b>	<b>-708</b>	<b>1,181</b>		<b>-88</b>	<b>158</b>	<b>1,251</b>
0677	DISA TELECOMM SVCS - REIMBURSABLE	169	0.49%	1	-40	130	0.00%	0	-57	73
	<b>TOTAL OTHER FUND PURCHASES</b>	<b>169</b>		<b>1</b>	<b>-40</b>	<b>130</b>		<b>0</b>	<b>-57</b>	<b>73</b>
0771	COMMERCIAL TRANSPORT	3,508	3.00%	105	-145	3,468	2.10%	73	68	3,609
	<b>TOTAL TRANSPORTATION</b>	<b>3,508</b>		<b>105</b>	<b>-145</b>	<b>3,468</b>		<b>73</b>	<b>68</b>	<b>3,609</b>
0913	PURCHASED UTILITIES (NON-FUND)	2,338	3.00%	70	326	2,734	2.10%	57	-4	2,787
0914	PURCHASED COMMUNICATIONS (NON-FUND)	2,506	3.00%	75	-1,548	1,033	2.10%	22	3,188	4,243
0915	RENTS (NON-GSA)	0	3.00%	0	239	239	2.10%	5	-1	243
0920	SUPPLIES & MATERIALS (NON-FUND)	77,838	3.00%	2,335	-30,755	49,418	2.10%	1,038	-14,705	35,751
0922	EQUIPMENT MAINTENANCE BY CONTRACT	378,051	3.00%	11,342	-84,965	304,428	2.10%	6,393	5,852	316,673
0923	FACILITIES SUST, REST, & MOD BY CONTRACT	31,740	3.00%	952	-6,446	26,246	2.10%	551	30,121	56,918
0925	EQUIPMENT PURCHASES (NON-FUND)	4,131	3.00%	124	-3,476	779	2.10%	16	-332	463
0930	OTHER DEPOT MAINTENANCE (NON-FUND)	46,057	3.00%	1,382	44,747	92,186	2.10%	1,936	4,781	98,903
0932	MGT PROF SUPPORT SVCS	550	3.00%	17	-567	0	2.10%	0	0	0
0933	STUDIES, ANALYSIS & EVAL	0	3.00%	0	0	0	2.10%	0	622	622
0934	ENGINEERING & TECH SVCS	382	3.00%	11	-393	0	2.10%	0	657	657
0936	TRAINING AND LEADERSHIP DEVELOPMENT (OTHER CONTRACTS)	8,974	3.00%	269	-9,243	0	2.10%	0	0	0
0984	EQUIPMENT CONTRACTS	0	3.00%	0	100	100	2.10%	2	-1	101
0987	OTHER INTRA-GOVT PURCH	8,367	3.00%	251	1,078	9,696	2.10%	204	-339	9,561
0989	OTHER SERVICES	228	3.00%	7	10,545	10,780	2.10%	226	-1,074	9,932
0990	IT CONTRACT SUPPORT SERVICES	6,312	3.00%	189	-6,501	0	2.10%	0	0	0
	<b>TOTAL OTHER PURCHASES</b>	<b>567,474</b>		<b>17,024</b>	<b>-86,859</b>	<b>497,639</b>		<b>10,450</b>	<b>28,765</b>	<b>536,854</b>

OP-32A Exhibit  
MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

	<u>FY 2021 Program</u>	<u>Price Growth Percent</u>	<u>Price Growth</u>	<u>Program Growth</u>	<u>FY 2022 Program</u>	<u>Price Growth Percent</u>	<u>Price Growth</u>	<u>Program Growth</u>	<u>FY 2023 Program</u>
GRAND TOTAL	572,886		17,304	-87,772	502,418		10,435	28,934	541,787

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

<b>FY 2022 President's Budget Request (Amended, if applicable)</b>	<b>\$502,450</b>
1. Congressional Adjustments	\$-32
a) Distributed Adjustments	\$0
b) Undistributed Adjustments	\$0
c) Adjustments to Meet Congressional Intent	\$0
d) General Provisions	\$-32
Reduction to Federally Funded Research and Development Centers (FFRDC) funding, Section 8207	\$-32
<b>FY 2022 Appropriated Amount</b>	<b>\$502,418</b>
2. Supplemental Appropriations	\$0
a) Supplemental Funding	\$0
3. Fact-of-Life Changes	\$0
a) Functional Transfers	\$0
b) Technical Adjustments	\$0
c) Emergent Requirements	\$0
<b>FY 2022 Baseline Funding</b>	<b>\$502,418</b>
4. Reprogrammings (Requiring 1415 Actions)	\$0

PB-31D Exhibit  
MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

a) Increases .....	\$0
b) Decreases .....	\$0
<b>Revised FY 2022 Estimate .....</b>	<b>\$502,418</b>
5. Less: Item 2, Supplemental Appropriation and Item 4, Reprogrammings .....	\$0
a) Less: Supplemental Funding .....	\$0
<b>FY 2022 Normalized Current Estimate .....</b>	<b>\$502,418</b>
6. Price Change .....	\$10,435
7. Functional Transfers .....	\$0
a) Transfers In .....	\$0
b) Transfers Out .....	\$0
8. Program Increases .....	\$40,518
a) Annualization of New FY 2022 Program .....	\$0
b) One-Time FY 2023 Increases .....	\$0
c) Program Growth in FY 2023 .....	\$40,518
Aegis BMD Program .....	\$4,300
BMDS Radars Program .....	\$10,528

PB-31D Exhibit  
MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

Ground-Based Midcourse Defense Program .....	\$25,690
9. Program Decreases .....	\$-11,584
a) Annualization of FY 2022 Program Decreases .....	\$0
b) One-Time FY 2022 Increases .....	\$-281
Aegis BMD Program.....	\$-281
c) Program Decreases in FY 2023 .....	\$-11,303
Aegis BMD Program.....	\$-4,659
BMDS Radars Program.....	\$-4,959
THAAD Program .....	\$-1,685
<b>FY 2023 Budget Request .....</b>	<b>\$541,787</b>

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

	<u><b>FY 2021</b></u>	<u><b>FY 2022</b></u>	<u><b>FY 2023</b></u>	<u><b>Change FY 2022/2023</b></u>
Contractor FTEs (Total)	1,043	691	691	0

**Personnel Summary Explanations**

The FY 2021 to FY 2022 decrease reflects proper alignment of Contractor Full Time Equivalents (FTEs) in accordance with the Office of Management and Budget (OMB) Circular A-11 to not include Other Government Agency personnel.

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

<b><u>Appropriation Summary</u></b>	<b><u>FY 2021 Actuals</u></b>	<b><u>Price Change</u></b>	<b><u>Program Change</u></b>	<b><u>FY 2022 Enacted</u></b>	<b><u>Price Change</u></b>	<b><u>Program Change</u></b>	<b><u>FY 2023 Request</u></b>
O&M, MDA	\$572.9	\$17.3	\$-87.8	\$502.4	\$10.4	\$28.9	\$541.8

**Description of Operations Financed:**

Provides Missile Defense Systems (MDS) unique sustainment support for the BMD Aegis Weapon System (AWS), Ground-Based Midcourse Defense (GMD) system, MDS Radars, and Terminal High Altitude Area Defense (THAAD) systems.

- AWS sustainment support includes AWS Aegis Standard Missile-3 (SM-3) missile recertification, repair and maintenance, Aegis Ashore sites, and deployed BMD Aegis ship baselines, which MDA supports in conjunction with the Navy, who is responsible for operations and sustainment of common items.
- GMD Weapon System sustainment support for operational Ground-Based Interceptors and GMD systems, which MDA supports in conjunction with the Services, who are responsible for operations and sustainment of common items. In addition to the existing deployed system consisting of assets in CA, CO, NY, and AK, it includes the new additional 20 silos and silo interface vaults Operations and Sustainment at Fort Greely, AK Missile Field 4. Standard maintenance will be required for these new assets. These silos will support GBI and NGI emplacements in succeeding years
- MDS Radars unique sustainment support includes twelve Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) radars including Forward Based Mode (FBM) radars, five Upgraded Early Warning Radars (UEWRs) and COBRA DANE Radar, which MDA supports in conjunction with the U.S. Space Force, who is responsible for operations and sustainment of common items.
- THAAD MD unique sustainment support includes sustainment of the THAAD Missile defense unique and developmental items, which MDA supports in conjunction with the Army, who is responsible for the operations and sustainment of common items.

**Overall Assessment**

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

**Operation and Maintenance, Defense-Wide Summary (\$ in thousands)**

**Budget Activity (BA) 4: Administration and Service-Wide Activities**

	<b>FY 2021</b>	<b>Price</b>	<b>Program</b>	<b>FY 2022</b>	<b>Price</b>	<b>Program</b>	<b>FY 2023</b>
	<b><u>Actuals</u></b>	<b><u>Change</u></b>	<b><u>Change</u></b>	<b><u>Enacted</u></b>	<b><u>Change</u></b>	<b><u>Change</u></b>	<b><u>Request</u></b>
MDA	572,886	17,304	-87,772	502,418	10,435	28,934	541,787

\*FY 2021 includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

\*The total amount of the FY 2023 request reflects \$0.0 thousand for Overseas Operations Costs.

**I. Description of Operations Financed:**

Provides the following Ballistic Missile Defense (BMD) unique sustainment support:

**A. Aegis Ballistic Missile Defense (BMD).** Provides MD unique sustainment support for deployed Aegis BMD ships, Standard Missile (SM-3), BMD Aegis Weapons System (AWS), and Aegis Ashore sites.

SM-3 missile sustainment includes recertification/repair/second destination transportation of missiles, installation of software and hardware updates, modeling and simulation and logistics efforts.

BMD AWS sustainment support includes:

- Technical and engineering services for in-service BMD ships and sites BMDS test infrastructure maintenance to ensure in-service BMD AWS baselines maintain directed operational availability.
- BMD Engineering Agent technical support and operational analysis for BMD units for casualty correction, technical issues, improvements, maintenance, certification, and delivery of BMD AWS computer program updates to the Fleet;
- Aegis software maintenance corrections in the common source library
- Test site infrastructure and maintenance
- Integrated logistics support of BMD unique parts including technical documentation review and updates, diminishing manufacturing sources, and obsolete materiel surveillance, identification, and resolution
- AEGIS BMD mission planner re-host to fleet warfighters

Aegis Ashore sustainment support includes:

- Aegis Ashore Poland engineering site presence
- Operation and maintenance of Aegis Weapons System
- Provides for potential unidentified design deficiencies in MDA provided equipment, buildings, and systems as Aegis Ashore Poland Deckhouse transitions to the Navy.

OP-5 Exhibit  
MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

**I. Description of Operations Financed: (Cont.)**

**B. Ground-Based Midcourse (GMD).** Funding sustainment support for operational Ground-Based Interceptors (GBIs) and GMD systems based at Fort Greely, AK and Vandenberg Space Force Base (VSFB), CA, Schriever Space Force Base (SSFB), CO, Fort Drum, NY and Eareckson AS, AK, including urgently needed major repairs and improvements previously deferred on 65-year-old maintenance facilities critical to the GMD mission at Fort Greely, AK.

Funding also ensures GMD assets are properly maintained and crews are trained to meet Combatant Commanders' needs including:

1. Weapon system sustainment support, equipment maintenance, operations support and sustaining engineering.
2. Mission support, network operations and defense, and integrated logistics support.
3. GMD unique Base Operations Support (BOS), facility maintenance and repairs, facility restoration and modernization, communication support, and utilities at Vandenberg SFB, CA, Fort Drum, NY, and Eareckson, AS, AK as outlined in respective Support Agreements.
4. Utilities for facilities that GMD occupies in the Fort Greely, AK cantonment area as outlined in the associated Support Agreement. This area does not include the Missile Defense Complex.
5. Configuration management and control for the fielded weapon system.

**C. Ballistic Missile Defense Systems (BMDS) Radars.** Funding provides sustainment support for twelve Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) Forward Based Mode (FBM) and Terminal High Altitude Area Defense (THAAD) configured Terminal Mode (TM) radars to include supply support, repair, maintenance, modernization, transportation, parts, storage, special tools and test equipment, recurring and delta training, technical interface, training device maintenance, engineering support, interactive electronic technical manual (IETM) updates, software user guide updates, software revision certification, and Depot Level Maintenance (DLM) for MDA's missile defense unique equipment. Funding also provides Cooling Equipment Unit (CEU) refurbishments and retrofit and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Multichannel Module (T/RIMM) sustainment at Letterkenny Army Depot (LEAD) to replace obsolete equipment, incorporate updates to servers, and enhance radar capabilities. Additionally, funding provides sustainment unique to the MDA Missile Defense mission for the five Upgraded Early Warning Radars (UEWRs) and COBRA DANE Radar, which MDA sustains and operates in conjunction with the U.S. Space Force.

**D. Terminal High Altitude Area Defense (THAAD).** MDA is responsible for the sustainment of the THAAD missile defense unique and development items, while the U.S. Army is responsible for the operations and sustainment of the common items. MDA funding provides sustainment for all fielded THAAD Batteries, ensures THAAD assets are properly maintained and crews are trained to meet Combatant Commanders needs including:

1. Field and sustainment level supply, maintenance, modernization, hazardous materials/waste disposal, and depot-level maintenance for THAAD missile defense unique equipment.
2. Spares, Interceptor spares, repair parts, and maintenance capability at the location of each THAAD battery.
3. Engineering support for the THAAD missile defense unique equipment.

OP-5 Exhibit  
MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
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**I. Description of Operations Financed: (Cont.)**

4. Deployment software support for fielded software to include: deficiency report reviews, error correction, incremental capability improvements, and hardware/system interface compatibility maintenance.
5. Missile transportation and handling from the missile storage location to the site of the THAAD launchers.
6. Interactive Electronic Technical Manual (IETM) updates, software users' guide updates, and software revision certification.
7. Maintenance and upkeep for all THAAD training devices.
8. Supply maintenance and transportation support for all new equipment training, and sustainment training relating to design changes and equipment upgrades.

**Fiscal Year (FY) 2023 Overseas Operations Costs funding accounted for in the Base budget include:**

- Operation INHERENT RESOLVE (OIR) [\$0 thousand].
- Operation European Deterrence Initiative (EDI) [\$0 thousand].
- Other theater requirements and related missions [\$0 thousand].

**II. Force Structure Summary:**

N/A

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

**III. Financial Summary (\$ in Thousands):**

			FY 2022					
			Congressional Action					
	FY 2021	Budget				Current	FY 2023	
<u>A. BA Subactivities</u>	<u>Actuals</u>	<u>Request</u>	<u>Amount</u>	<u>Percent</u>	<u>Appropriated</u>	<u>Enacted</u>	<u>Request</u>	
4. Administrative and Servicewide Activities	\$572,886	\$502,450	\$-32	-0.01%	\$502,418	\$502,418	\$541,787	
Aegis BMD Program	\$77,195	\$68,293	\$0	0.00%	\$68,293	\$68,293	\$69,071	
BMDS Radars Program	\$257,244	\$190,706	\$-32	-0.02%	\$190,674	\$190,674	\$200,207	
Ground-Based Midcourse Program	\$148,741	\$156,623	\$0	0.00%	\$156,623	\$156,623	\$185,564	
THAAD Program	<u>\$89,706</u>	<u>\$86,828</u>	<u>\$0</u>	<u>0.00%</u>	<u>\$86,828</u>	<u>\$86,828</u>	<u>\$86,945</u>	
Total	\$572,886	\$502,450	\$-32	-0.01%	\$502,418	\$502,418	\$541,787	

\*FY 2021 includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

\*Overseas Operations costs accounted for in the base budget: \$0.0 thousand.



**Missile Defense Agency  
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**III. Financial Summary (\$ in Thousands): (Cont.)**

	<b>Change FY 2022/FY 2022</b>	<b>Change FY 2022/FY 2023</b>
<b><u>B. Reconciliation Summary</u></b>		
<b>BASELINE FUNDING</b>	<b>\$502,450</b>	<b>\$502,418</b>
Congressional Adjustments (Distributed)	0	
Congressional Adjustments (Undistributed)	0	
Adjustments to Meet Congressional Intent	0	
Congressional Adjustments (General Provisions)	-32	
<b>SUBTOTAL APPROPRIATED AMOUNT</b>	<b>502,418</b>	
Fact-of-Life Changes (2022 to 2022 Only)	0	
<b>SUBTOTAL BASELINE FUNDING</b>	<b>502,418</b>	
Supplemental	0	
Reprogrammings	0	
Price Changes		10,435
Functional Transfers		0
Program Changes		28,934
<b>CURRENT ESTIMATE</b>	<b>502,418</b>	<b>541,787</b>
Less: Supplemental	0	
<b>NORMALIZED CURRENT ESTIMATE</b>	<b>\$502,418</b>	<b>\$541,787</b>

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

**III. Financial Summary (\$ in Thousands): (Cont.)**

<b>FY 2022 President's Budget Request (Amended, if applicable)</b>	<b>\$502,450</b>
1. Congressional Adjustments	\$-32
a) Distributed Adjustments	\$0
b) Undistributed Adjustments	\$0
c) Adjustments to Meet Congressional Intent	\$0
d) General Provisions	\$-32
1) Reduction to Federally Funded Research and Development Centers (FFRDC) funding, Section 8207	\$-32
<b>FY 2022 Appropriated Amount</b>	<b>\$502,418</b>
2. Supplemental Appropriations	\$0
a) Supplemental Funding	\$0
3. Fact-of-Life Changes	\$0
a) Functional Transfers	\$0
b) Technical Adjustments	\$0
c) Emergent Requirements	\$0
<b>FY 2022 Baseline Funding</b>	<b>\$502,418</b>

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MDA

**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

**III. Financial Summary (\$ in Thousands): (Cont.)**

4. Reprogrammings (Requiring 1415 Actions) .....	\$0
a) Increases .....	\$0
b) Decreases .....	\$0
<b>Revised FY 2022 Estimate .....</b>	<b>\$502,418</b>
5. Less: Item 2, Supplemental Appropriation and Item 4, Reprogrammings .....	\$0
a) Less: Supplemental Funding .....	\$0
<b>FY 2022 Normalized Current Estimate .....</b>	<b>\$502,418</b>
6. Price Change .....	\$10,435
7. Functional Transfers .....	\$0
a) Transfers In .....	\$0
b) Transfers Out .....	\$0
8. Program Increases .....	\$40,518
a) Annualization of New FY 2022 Program .....	\$0
b) One-Time FY 2023 Increases .....	\$0
c) Program Growth in FY 2023 .....	\$40,518
1) Aegis BMD Program .....	\$4,300

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**Missile Defense Agency  
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**III. Financial Summary (\$ in Thousands): (Cont.)**

\$3,260 increase provides purchasing additional spares in support of extended deployment of the SM-3 Block IA Rounds for an additional 4 years. Prevents significant reduction in Fleet missile capacity and global BMD capability.

\$1,040 increase provides additional anticipated lab hours at Combat System Engineering Development Site (CSEDS) and SCSC Wallops Island test sites in support of Aegis BMD baselines in sustainment.  
(FY 2022 Baseline: \$68,293 thousand)

2) BMDs Radars Program .....\$10,528

\$10,528 increase provides for site specific maintenance required due to the high optempo and exposure to corrosive environments to ensure 24 hours a day, 365 days per year availability.  
(FY 2022 Baseline: \$190,706 thousand)

3) Ground-Based Midcourse Defense Program .....\$25,690

\$16,738 increase provides for urgently needed major facility repairs at Fort Greely, AK to include electrical, fire suppression, lighting and HVAC upgrades; ceiling, interior wall and floor repairs; and asbestos and mold abatement. Facilities targeted for improvement are 65-year-old maintenance facilities critical to the GMD mission. Increase also provides additional funding to address remote site Eareckson Air Station, AK new Base Operating Support (BOS) contract increased rates as well as needed facility repairs and upgrades, new support equipment and vehicle purchases. These repairs and improvements help meet mission readiness, equipment availability, quality of life standards and safety requirements.

\$8,952 increase provides funding for FGA Missile Field 4 preventative and corrective maintenance for 20 additional silos and silo interface vaults; 24 hours a day, 7 days a week assured maintenance response to immediately assess and repair weapon system component failures; Warfighter integration to ensure the needs and requirements of U.S. Northern Command (USNORTHCOM) are met; and to purchase required spare parts for the weapon system. Additionally, the increase provides funding for transition of Operations and Sustainment for the GMD Weapon System from the GMD Development and Sustainment Contract (DSC) to the future GMD System Integration, Test and Readiness (SITR) contract and GMD Weapon System (GWS) contract transitioning from Q4 FY 2023 through Q1 FY 2024. The transition requires a gradual and temporary ramp up of incoming personnel to allow for weapon system training and familiarization prior to contract change over to ensure continued operations.  
(FY 2022 Baseline: \$156,623 thousand)

9. Program Decreases .....\$-11,584

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**III. Financial Summary (\$ in Thousands): (Cont.)**

a) Annualization of FY 2022 Program Decreases .....	\$0
b) One-Time FY 2022 Increases .....	-\$281
1) Aegis BMD Program .....	-\$281
-\$281 the one-time cost associated with providing additional anticipated lab hours at the operational test station. (FY 2022 Baseline: \$68,293 thousand)	
c) Program Decreases in FY 2023 .....	-\$11,303
1) Aegis BMD Program .....	-\$4,659
-\$2,651 decrease reflects the updated SM-3 Block IB Round recertification cycle from 4 years to 6 years to ensure Fleet missile capacity and global BMD capability.	
-\$1,517 decrease reflects a reduction in maintenance update requirements due to increased developmental upgrades on BL9 and reduced prime contractor maintenance and sustainment of the Aegis BMD Common Source Library (CSL) fair share maintenance software change requests for Mission Planner (MP), Command and Decision (CND), Aegis Display System (ADS), Aegis Common Infrastructure (ACI), Operational Readiness Test System (ORTS), Radar, and Weapon Control System (WCS) Products.	
-\$491 decrease reflects a realignment of BMDS interoperability Capabilities and Limitations information as an extension of the Strike Group Interoperability from Fleet Integration to Aegis Weapons Systems. (FY 2022 Baseline: \$68,293 thousand)	
2) BMDS Radars Program .....	-\$4,959
-\$4,959 decrease reflects reduction in Repair and Return after the positive impact of FY 2021 Spares Congressional Plus Up (CPU) and FY 2022 increases to fleet spares and Repair and Return to mitigate backlog and restore stock inventory. (FY 2022 Baseline: \$190,706 thousand)	
3) THAAD Program .....	-\$1,685
- \$1,685 decrease reflects cost savings for THAAD Contractor Support. (FY 2022 Baseline: \$86,828 thousand)	

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III. Financial Summary (\$ in Thousands): (Cont.)

FY 2023 Budget Request .....\$541,787

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**IV. Performance Criteria and Evaluation Summary:**

	<u>FY 2021 Actuals</u>	<u>FY 2022 Enacted</u>	<u>FY 2023 Estimate</u>
<b>1. Operational Support</b>	<b>572,886</b>	<b>502,418</b>	<b>541,787</b>
Aegis Program	77,195	68,293	69,071
Ground-Base Midcourse Program	148,741	156,623	185,564
BMDS Radars Program	257,244	190,674	200,207
THAAD Program	89,706	86,828	86,945
<b>Total Operations and Maintenance, Defense Wide</b>	<b>572,886</b>	<b>502,418</b>	<b>541,787</b>

The MDA Ballistic Missile Defense (BMD) mission is to deliver an enduring, operationally effective and supportable BMD capability to defend the nation, deployed forces, friends and allies.

- **Aegis BMD.** The Aegis BMD element of the BMDS capitalizes upon and evolves from the existing U. S. Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis BMD provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy short-range, medium-range, and intermediate-range ballistic missiles in the midcourse phase of flight and shorter range missile in terminal phase. Aegis BMD also provides a long range surveillance and track (LRS&T) capability to the BMDS. By the end of FY 2023 there will be 50 total BMDS capable ships requiring maintenance support.

**B. Ground-Based Midcourse (GMD).** The GMD fielded weapon system is under the command of U.S. Northern Command (USNORTHCOM) and is operated by Soldiers from the 100th Missile Defense Brigade (five crews) headquartered at Schriever Space Force Base (SSFB), Colorado, and its 49th Missile Defense Battalion (five crews) at Fort Greely, Alaska (FGA). In FY 2023, MDA will support operationally deployed GBIs located at FGA and Vandenberg Space Force Base, California (VSFB). Each GBI delivers a single Exo-atmospheric Kill Vehicle (EKV) to defeat threat warheads in space during the midcourse phase of the ballistic trajectory. The GMD Fire Control System consists of redundant fire control nodes at FGA (two each) and the Missile Defense Integration and Operations Center (MDIOC) (two each) at SSFB. In-Flight Interceptor Communications System (IFICS) Data Terminals (IDTs) are currently located at FGA (two each); VSFB (two each); Eareckson Air Station, Alaska (EAS); and Fort Drum, New York. In FY 2023, 20 additional silos and silo interface vaults Operations and Sustainment at the FGA Missile Field 4 complex and will be included in the performance criteria.

**C. Ballistic Missile Defense Systems (BMDS) Radars Program.** The MDA continues to provide sustainment support for twelve Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) radars. Five Forward Based Mode (FBM) radars at fixed radar sites operate continuously 24 hours a day, 7 days a week, 365 days a year. Seven radars operate in Terminal Mode (TM) when integrated with the THAAD battery. Two of the seven TM radars are permanently stationed at OCONUS sites. The operational tempo is met utilizing military personnel and contractor logistics support (CLS) to operate and maintain the radars. FY 2023 includes AN/TPY-2 operations and maintenance execution and Depot Level Maintenance (DLM) for Cooling Equipment Unit (CEU) and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Multichannel Module (T/RIMM) sustainment due to vehicle life expectancy, obsolescence improvements, and high

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**IV. Performance Criteria and Evaluation Summary:**

operational tempo use in corrosive environments. MDA also provides sustainment unique to the MDA Missile Defense mission for the five Upgraded Early Warning Radars (UEWRs) and COBRA DANE Radar, which MDA sustains and operates in conjunction with the U.S. Space Force.

D. Terminal High Altitude Area Defense (THAAD). Army force structure for THAAD is currently set at seven batteries with six launchers operated by 95 Soldiers. The battery is organized to conduct 120-day deployments (45 days of entry operations and 75 days of 17-hour/day combat operations). During actual deployments, batteries have been operating at a 24 hours a day, 7 days a week, 365 days a year operational tempo, with increased CLS costs. This increased tempo has been sustained through the increase of appropriate attachments and support. Additionally, increasing OCONUS stationing of THAAD Batteries by the Army drives an increase in costs for deployed contractor support, increased transportation costs for spares/repair parts and increased quantities of stocks to support separate locations.



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**V. Personnel Summary:**

	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Change FY 2021/ FY 2022</u>	<u>Change FY 2022/ FY 2023</u>
<b>Contractor FTEs (Total)</b>	<b>1,043</b>	<b>691</b>	<b>691</b>	<b>-352</b>	<b>0</b>

**Personnel Summary Explanations:**

The FY 2021 to FY 2022 decrease reflects proper alignment of Contractor Full Time Equivalents (FTEs) in accordance with the Office of Management and Budget (OMB) Circular A-11 to not include Other Government Agency personnel.

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**VI. OP 32 Line Items as Applicable (Dollars in thousands):**

		<u>Change from FY 2021 to FY 2022</u>			<u>Change from FY 2022 to FY 2023</u>		
	<u>FY 2021</u>	<u>Price</u>	<u>Program</u>	<u>FY 2022</u>	<u>Price</u>	<u>Program</u>	<u>FY 2023</u>
	<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>
308	TRAVEL OF PERSONS	19	1	-20	0	0	0
<b>0399</b>	<b>TOTAL TRAVEL</b>	<b>19</b>	<b>1</b>	<b>-20</b>	<b>0</b>	<b>0</b>	<b>0</b>
401	DLA ENERGY (FUEL PRODUCTS)	1,716	173	-708	1,181	-88	158
<b>0499</b>	<b>TOTAL DEFENSE WORKING CAPITAL FUND SUPPLIES AND MATERIALS</b>	<b>1,716</b>	<b>173</b>	<b>-708</b>	<b>1,181</b>	<b>-88</b>	<b>1,251</b>
677	DISA TELECOMM SVCS - REIMBURSABLE	169	1	-40	130	0	-57
<b>0699</b>	<b>TOTAL OTHER FUND PURCHASES</b>	<b>169</b>	<b>1</b>	<b>-40</b>	<b>130</b>	<b>0</b>	<b>73</b>
771	COMMERCIAL TRANSPORT	3,508	105	-145	3,468	73	68
<b>0799</b>	<b>TOTAL TRANSPORTATION</b>	<b>3,508</b>	<b>105</b>	<b>-145</b>	<b>3,468</b>	<b>73</b>	<b>3,609</b>
913	PURCHASED UTILITIES (NON-FUND)	2,338	70	326	2,734	57	-4
914	PURCHASED COMMUNICATIONS (NON-FUND)	2,506	75	-1,548	1,033	22	3,188
915	RENTS (NON-GSA)	0	0	239	239	5	-1
920	SUPPLIES & MATERIALS (NON-FUND)	77,838	2,335	-30,755	49,418	1,038	-14,705
922	EQUIPMENT MAINTENANCE BY CONTRACT	378,051	11,342	-84,965	304,428	6,393	5,852
923	FACILITIES SUST, REST, & MOD BY CONTRACT	31,740	952	-6,446	26,246	551	30,121
925	EQUIPMENT PURCHASES (NON-FUND)	4,131	124	-3,476	779	16	-332
930	OTHER DEPOT MAINTENANCE (NON-FUND)	46,057	1,382	44,747	92,186	1,936	4,781
932	MGT PROF SUPPORT SVCS	550	17	-567	0	0	0
933	STUDIES, ANALYSIS & EVAL	0	0	0	0	0	622
934	ENGINEERING & TECH SVCS	382	11	-393	0	0	657
936	TRAINING AND LEADERSHIP DEVELOPMENT (OTHER CONTRACTS)	8,974	269	-9,243	0	0	0
984	EQUIPMENT CONTRACTS	0	0	100	100	2	-1
987	OTHER INTRA-GOVT PURCH	8,367	251	1,078	9,696	204	-339
989	OTHER SERVICES	228	7	10,545	10,780	226	-1,074
990	IT CONTRACT SUPPORT SERVICES	6,312	189	-6,501	0	0	0
<b>0999</b>	<b>TOTAL OTHER PURCHASES</b>	<b>567,474</b>	<b>17,024</b>	<b>-86,859</b>	<b>497,639</b>	<b>10,450</b>	<b>28,765</b>
							<b>536,854</b>

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**VI. OP 32 Line Items as Applicable (Dollars in thousands):**

		<u>Change from FY 2021 to FY 2022</u>			<u>Change from FY 2022 to FY 2023</u>		
	<u>FY 2021</u>	<u>Price</u>	<u>Program</u>	<u>FY 2022</u>	<u>Price</u>	<u>Program</u>	<u>FY 2023</u>
	<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>	<u>Growth</u>	<u>Growth</u>	<u>Program</u>
9999    GRAND TOTAL	572,886	17,304	-87,772	502,418	10,435	28,934	541,787

\*FY 2021 includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

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<b><u>Appropriation/Fund</u></b>	<b><u>FY 2021 Actuals</u></b>	<b><u>FY 2022 Enacted</u></b>	<b><u>FY 2023 Request</u></b>
<b>I. Management &amp; Professional Support Services</b>			
FFRDC Work	17	0	0
Non-FFRDC Work	<u>533</u>	<u>0</u>	<u>0</u>
<b>Subtotal</b>	<b>550</b>	<b>0</b>	<b>0</b>
<b>II. Studies, Analysis &amp; Evaluations</b>			
FFRDC Work	0	0	19
Non-FFRDC Work	<u>0</u>	<u>0</u>	<u>603</u>
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>622</b>
<b>III. Engineering &amp; Technical Services</b>			
FFRDC Work	11	0	19
Non-FFRDC Work	<u>371</u>	<u>0</u>	<u>638</u>
<b>Subtotal</b>	<b>382</b>	<b>0</b>	<b>657</b>
<b>TOTAL</b>			
FFRDC Work	28	0	38
Non-FFRDC Work	<u>904</u>	<u>0</u>	<u>1,241</u>
<b>GRAND Total</b>	<b>932</b>	<b>0</b>	<b>1,279</b>
Reimbursable	0	0	0

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**Explanation of Funding Changes (FY 2021 to FY 2022):**

The GMD Program decrease in Management and Professional Support Service reflects a reclassification of the DSC contract efforts from Advisory and Assistance Services to Other Services to properly align with the Office of Management and Budget (OMB) Circular A-11.

**Explanation of Funding Changes (FY 2022 to FY 2023):**

The GMD Program increase in Studies, Analysis, and Evaluations; and Engineering and Technical Services provides technical and management advisory support required to ensure GMD System Readiness while transition Operations and Sustainment for the GMD Weapon System.

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**Missile Defense Agency**

	<u>US Direct Hire</u>	<u>Direct Hire</u>	<u>Indirect Hire</u>	<u>Total</u>
<b>Summary</b>				
1. FY 2021 FTEs	0	0	0	0
2. FY 2022 FTEs	0	0	0	0
3. FY 2023 FTEs	0	0	0	0
<b>MDA - Operation &amp; Maintenance (O&amp;M)</b>				
1. FY 2021 FTEs	0	0	0	0
2. FY 2022 FTEs	0	0	0	0
3. FY 2023 FTEs	0	0	0	0
<b>MDA - Research, Development, Test and Evaluation (RDT&amp;E)</b>				
1. FY 2019 FTEs	0	0	0	0
2. FY 2020 FTEs	0	0	0	0
3. FY 2021 FTEs	0	0	0	0
<b>MDA - Defense Working Capital Fund (DWCF)</b>				
1. FY 2019 FTEs	0	0	0	0
2. FY 2020 FTEs	0	0	0	0
3. FY 2021 FTEs	0	0	0	0

**4. SUMMARY**

	<u>US Direct Hire</u>	<u>Direct Hire</u>	<u>Indirect Hire</u>	<u>Total</u>
<b>FY 2021</b>				
<b>RDT&amp;E Total</b>	<b>2,440</b>	<b>0</b>	<b>0</b>	<b>2,440</b>
Direct Funded	2,440	0		2,440
<b>Total Component</b>	<b>2,440</b>	<b>0</b>	<b>0</b>	<b>2,440</b>
Direct Funded	2,440	0	0	2,440
Reimbursable Funded	0	0	0	0
<b>FY 2022</b>				
<b>RDT&amp;E Total</b>	<b>2,175</b>	<b>0</b>	<b>0</b>	<b>2,175</b>

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**4. SUMMARY**

	<u>US Direct Hire</u>	<u>Direct Hire</u>	<u>Indirect Hire</u>	<u>Total</u>
Direct Funded	2,175	0	0	2,175
<b>Total Component</b>	<b>2,175</b>	<b>0</b>	<b>0</b>	<b>2,175</b>
Direct Funded	2,175	0	0	2,175
Reimbursable Funded	0	0	0	0
<b>FY 2023</b>				
<b>RDT&amp;E Total</b>	<b>2,143</b>	<b>0</b>	<b>0</b>	<b>2,143</b>
Direct Funded	2,143	0	0	2,143
<b>Total Component</b>	<b>2,143</b>	<b>0</b>	<b>0</b>	<b>2,143</b>
Direct Funded	2,143	0	0	2,143
Reimbursable Funded	0	0	0	0

**5. Summary of Changes**

Research, Development, Test and Evaluation (RDT&E)

**Change from FY 2021 to FY 2022:**

MDA's direct RDT&E funded FTE decrease reflects civilian labor to execute FY 2021 Congressional plus-ups and development positions such as MDA's Career Development Program for entry level personnel.

**Change from FY 2022 to FY 2023:**

MDA's direct RDT&E funded FTE decrease reflects continued implementation of the FY 2021 Defense Wide Review (DWR) Reductions, which will be fully realized in FY 2024.



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**CONTRACT SERVICES FUNDING**

**(\$ in Millions)**

<b>Line</b>	<b><u>By PB/OP-32 Inflation Category Code</u></b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2023</b>
		<b>Base &amp; OCO</b>	<b>Base</b>	<b>OCO</b>	<b>Base</b>	<b>OCO</b>
		<b><u>Actuals</u></b>	<b><u>Enacted</u></b>	<b><u>Enacted</u></b>	<b><u>Request</u></b>	<b><u>Request</u></b>
914	Purchased Communications (Non-Fund)	3	1	0	4	0
	<b>Total 23.3 - Communications, Utilities and Misc. Charges</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>
932	Mgmt and Professional Support Services	1	0	0	0	0
933	Studies, Analysis, and Evaluation Services	0	0	0	0	0
934	Engineering and Technical Services	0	0	0	0	0
	<b>Total 25.1 - Advisory and Assistance Services</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
936	Training and Leadership Development	9	0	0	0	0
989	Other Contracts	0	11	0	10	0
	<b>Total 25.2 - Other Services</b>	<b>9</b>	<b>11</b>	<b>0</b>	<b>10</b>	<b>0</b>
987	Other Intra-Government Purchases	8	10	0	10	0
	<b>Total 25.3 - Other Goods and Services from Federal Sources</b>	<b>8</b>	<b>10</b>	<b>0</b>	<b>10</b>	<b>0</b>
923	Facility Maintenance	32	26	0	57	0
	<b>Total 25.4 - Operation and Maintenance of Facilities</b>	<b>32</b>	<b>26</b>	<b>0</b>	<b>57</b>	<b>0</b>
985	Research and Development Contracts	0	0	0	0	0
	<b>Total 25.5 - Research and Development Contracts</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
922	Equipment Maintenance - Contract	378	304	0	316	0
930	Other Depot Maintenance (Non-Fund)	46	92		98	
990	IT Contract Support Services	6	0		0	0
	<b>Total 25.7 - Operation and Maintenance of Equipment</b>	<b>430</b>	<b>396</b>	<b>0</b>	<b>414</b>	<b>0</b>
925	Equipment Purchases (Non-Fund)	4	1	0	1	0
	<b>Total 31.0 - Equipment Purchases (Non-Fund)</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>
	<b>Total</b>	<b>487</b>	<b>445</b>	<b>0</b>	<b>496</b>	<b>0</b>

Source: Program Resources Collection Process as of 25 Mar 2022

Numbers may not add due to rounding

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**CONTRACT SERVICES - MANPOWER**

**Contractor Full-Time Equivalents**

Line	By PB/OP-32 Inflation Category Code	FY 2021 Base & OCO <u>Actuals</u>	FY 2022 Base <u>Enacted</u>	FY 2022 OCO <u>Enacted</u>	FY 2023 Base <u>Request</u>	FY 2023 OCO <u>Request</u>
914	Purchased Communications (Non-Fund)	0	0	0	0	0
	<b>Total 23.3 - Communications, Utilities and Misc. Charges</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
932	Mgmt and Professional Support Services	4	0	0	0	0
933	Studies, Analysis, and Evaluation Services	0	0	0	0	0
934	Engineering and Technical Services	1	0	0	0	0
	<b>Total 25.1 - Advisory and Assistance Services</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
936	Training and Leadership Development	34	0	0	0	0
989	Other Contracts	0	34	0	34	0
	<b>Total 25.2 - Other Services</b>	<b>34</b>	<b>34</b>	<b>0</b>	<b>34</b>	<b>0</b>
987	Other Intra-Government Purchases	2	0	0	0	0
	<b>Total 25.3 - Other Goods and Services from Federal Sources</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
923	Facility Maintenance	106	0	0	0	0
	<b>Total 25.4 - Operation and Maintenance of Facilities</b>	<b>106</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
985	Research and Development Contracts	0	0	0	0	0
	<b>Total 25.5 - Research and Development Contracts</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
922	Equipment Maintenance - Contract	771	544	0	544	0
930	Other Depot Maintenance (Non-Fund)	112	113		113	
990	IT Contract Support Services	13	0		0	0
	<b>Total 25.7 - Operation and Maintenance of Equipment</b>	<b>896</b>	<b>657</b>	<b>0</b>	<b>657</b>	<b>0</b>
925	Equipment Purchases (Non-Fund)	0	0	0	0	0
	<b>Total 31.0 - Equipment Purchases (Non-Fund)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Total</b>	<b>1,043</b>	<b>691</b>	<b>0</b>	<b>691</b>	<b>0</b>

Source: Program Resources Collection Process as of 25 Mar 2022

Numbers may not add due to rounding

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**CONTRACT SERVICES**

**Defense-Wide Missile Defense Agency  
Operation and Maintenance  
Justification Narrative**

**Description of Services Financed:**

Provides the following Ballistic Missile Defense (BMD) operations and maintenance support:

A. Aegis BMD. Funding provides a wide range of sustainment support activities for deployed Aegis BMD ships and Aegis Ashore facilities including Standard Missile-3 (SM-3), BMD Aegis Weapon System (AWS), and for Aegis Ashore sites. The SM-3 sustainment support program includes the recertification/repair of missiles, installation of software and hardware updates, modeling and simulation and logistics efforts. Also provides missile second destination transportation, transportation ballistic barrier maintenance, spares replenishment and operational fleet support.

The BMD AWS sustainment support program provides technical and engineering services for in-service BMD ships and sites, along with infrastructure maintenance for BMDS platforms executing BMD test missions, to ensure the in-service BMD AWS baselines maintain the directed operational availability. BMD AWS sustainment includes: BMD Engineering Agent technical support and operational analysis for BMD units engineering reach-back services supporting casualty correction, issues, and improvements maintenance, certification, and delivery of BMD AWS computer program updates to the Fleet Aegis software maintenance corrections in the common source library test site infrastructure and maintenance integrated logistics support of BMD unique parts, technical documentation review, and implementation of updated maintenance concepts diminishing manufacturing sources, and obsolete materiel surveillance, identification, and resolution.

Funding for Aegis Ashore Poland provides engineering services and site presence. Additionally, supports operation and maintenance of Aegis Weapon Systems and provides for potential unidentified design deficiencies in MDA-provided equipment, buildings, and systems as the Aegis Ashore Poland Deckhouse transitions to the Navy.

B. Ground-Based Midcourse. Funding provides sustainment support for operational Ground-Based Interceptors (GBIs) based at Fort Greely, AK and Vandenberg SFB, CA, Schriever SFB, CO, Fort Drum, NY and Eareckson AS, AK. Funding also ensures GMD assets are properly maintained and crews are trained to meet Combatant Commanders needs including: Weapon system sustainment, equipment maintenance, and sustaining engineering; mission operations support, network operations and defense, and integrated logistics support; Base Operations Support (BOS), facility maintenance and repairs, facility restoration and modernization, communication support, and utilities at Vandenberg SFB, CA, Fort Drum, NY and Eareckson AS, AK; configuration management and control for the

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fielded weapon system. Funding provides BOS, facility maintenance and repairs, facility restoration and modernization, and communication support at Fort Greely, AK. Funding also provides utilities for facilities that GMD occupies in the Fort Greely, AK cantonment area. This area does not include the Missile Defense Complex. This includes the additional 20 silos and silo interface vaults Operations and Sustainment at Fort Greely, AK Missile Field 4. Standard maintenance is required for these new assets. These silos will support GBI and NGI emplacements in succeeding years.

C. Ballistic Missile Defense System (BMDS) Radars. Sustainment support for twelve Army Navy/Transportable Radar Surveillance and Control-2 (AN/TPY-2) Forward Based Mode (FBM) and Terminal High Altitude Area Defense (THAAD) configured Terminal Mode (TM) radars to include supply support, repair, maintenance, modernization, transportation, parts, storage, special tools and test equipment, recurring and delta training, technical interface, training device maintenance, engineering support, interactive electronic technical manual (IETM) updates, software user guide updates, software revision certification, and Depot Level Maintenance (DLM) for missile defense unique equipment. Funding also provides Cooling Equipment Unit (CEU) refurbishment and continuation of Gallium Nitride (GaN) Transmit/Receive Integrated Multichannel Module (T/RIMM) sustainment at Letterkenny Army Depot (LEAD) to replace obsolete equipment, incorporate updates to servers, and enhance radar capabilities. Funding provides sustainment support for items unique to the Missile Defense mission for the 5 Upgraded Early Warning Radars (UEWRs) and COBRA DANE Radar, which MDA sustains and operates in conjunction with the U.S. Space Force.

D. Terminal High Altitude Area Defense (THAAD). MDA is responsible for the sustainment support for the THAAD missile defense unique or developmental items, while the U. S. Army is responsible for the operations and sustainment of the common items. Funding provides sustainment support for all fielded THAAD Batteries, ensures THAAD assets are properly maintained and crews are trained to meet Combatant Commanders needs including: 1.) Field and sustainment level supply, maintenance, modernization, hazardous materials/waste disposal, and depot-level maintenance for THAAD missile defense unique equipment. 2.) Spares, Interceptor spares, repair parts, and maintenance capability at the location of each THAAD battery. 3.) Engineering support for the THAAD missile defense unique equipment. 4.) Deployment software support for fielded software, to include deficiency report review, error correction, incremental capability improvements, and hardware/systems interface compatibility maintenance. 5.) Missile transportation and handling from the missile storage location to the site of the THAAD launchers. 6.) IETM updates, software users' guide updates, and software revision certification. 7.) Maintenance and upkeep for all THAAD training devices. 8.) Supply, maintenance and transportation support for all new equipment training, and sustainment training relating to design changes and equipment upgrades.

**Reporting Limitations:**

N/A

**Summary of Increases/Decreases:**

**A. AEGIS Program:**

1. Increase provides purchasing additional spares in support of extended deployment of the SM-3 Block 1A Rounds for an additional 4 years. Prevents significant reduction in Fleet missile capacity and global BMD capability.
2. Increase provides additional anticipated lab hours at Combat System Engineering Development Site (CSEDS) and SCSC Wallops Island test sites in support of Aegis BMD baselines in sustainment.

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3. Decrease reflects the updated SM-3 Block IB Round recertification cycle from 4 years to 6 years to ensure Fleet missile capacity and global BMD capability.
4. Decrease reflects a reduction in maintenance update requirements due to increased developmental upgrades on BL9 and reduced prime contractor maintenance and sustainment of the Aegis BMD Common Source Library (CSL) fair share maintenance software change requests for Mission Planner (MP), Command and Decision (CND), Aegis Display System (ADS), Aegis Common Infrastructure (ACI), Operational Readiness Test System (ORTS), Radar, and Weapon Control System (WCS) Products.
5. Decrease reflects a realignment of BMDS interoperability Capabilities and Limitations information as an extension of the Strike Group Interoperability from Fleet Integration to Aegis Weapons Systems.

**B. Ground-Based Midcourse Program:**

1. Increase provides for urgently needed major facility repairs at Fort Greely, AK to include electrical, fire suppression, lighting and HVAC upgrades; ceiling, interior wall and floor repairs; and asbestos and mold abatement. Facilities targeted for improvement are 65-year-old maintenance facilities critical to the GMD mission. Increase also provides additional funding to address remote site Eareckson Air Station, AK new Base Operating Support (BOS) contract increased rates as well as needed facility repairs/upgrades and new support equipment and vehicle purchases. These efforts help meet mission readiness, equipment availability, quality of life standards and safety requirements.
2. Increase provides funding for FGA Missile Field 4 preventative and corrective maintenance for 20 additional silos and silo interface vaults; 24 hours a day, 7 days a week assured maintenance response to immediately assess and repair weapon system component failures; Warfighter integration to ensure the needs and requirements of U.S. Northern Command (USNORTHCOM) are met; and to purchase required spare parts for the weapon system. Additionally, the increase provides funding for transition of Operations and Sustainment for the GMD Weapon System from the GMD Development and Sustainment Contract (DSC) to the future GMD System Integration, Test and Readiness (SITR) contract and GMD Weapon System (GWS) contract transitioning from Q4 FY 2023 through Q1 FY 2024. The transition requires a gradual and temporary ramp up of incoming personnel to allow for weapon system training and familiarization prior to contract change over to ensure continued operations.

**C. Ballistic Missile Defense Systems (BMDS) Radars Program:**

1. Increase provides for site specific maintenance required due to the high optempo corrosive environments to ensure 24 hours a day, 365 days per year availability.
2. Decrease reflects reduction in Repair and Return after the positive impact of FY 2021 Spares Congressional Plus Up (CPU) and FY 2022 increases to fleet spares and Repair and Return to mitigate backlog and restore stock inventory.

**D. THAAD Program:**

1. Decrease reflects cost savings for THAAD Contractor Support.

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Operation and Maintenance, Defense-Wide  
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(Dollars in Thousands)

<b>Research Development Test &amp; Evaluation, D-W</b>	<b>FY 2021 Actual</b>	<b>FY 2022 Enacted</b>	<b>FY 2022 Estimate</b>
I. Management & Professional Support Services			
FFRDC Work	7,444	20,790	33,996
Non-FFRDC Work	116,614	96,973	174,959
<b>Subtotal</b>	<b>124,058</b>	<b>117,763</b>	<b>208,955</b>
II. Studies, Analysis, & Evaluation			
FFRDC Work	34	4,528	4,716
Non-FFRDC Work	539	567	34,385
<b>Subtotal</b>	<b>573</b>	<b>5,095</b>	<b>39,101</b>
III. Engineering & Technical Services			
FFRDC Work	31,504	6,198	6,066
Non-FFRDC Work	493,064	346,469	337,630
<b>Subtotal</b>	<b>524,568</b>	<b>352,667</b>	<b>343,696</b>
<b>TOTAL</b>			
FFRDC Work	38,982	31,516	44,778
Non-FFRDC Work	610,217	444,009	546,974
<b>GRAND Total</b>	<b>649,199</b>	<b>475,525</b>	<b>591,752</b>

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**Missile Defense Agency  
Operation and Maintenance, Defense-Wide  
Fiscal Year (FY) 2023 President's Budget**

PB 2023					
Missile Defense Agency Depot Maintenance Program					
(\$ in Thousands)					
	Method of Accomplishment	Weapon System	FY 2021	FY 2022	FY 2023
Operation and Maintenance Funding					
	Contractor Logistics Support (CLS)	AN/TPY-2 Radar	213	-	2,919
		Ballistic Missile Defense	20,127	16,584	16,916
		Standard Missile-3	24,939	17,585	14,629
		THAAD	25,314	21,909	25,455
	Contractor Logistics Support (CLS) Total		70,593	56,078	59,919
	Interim Contract Support (ICS)	THAAD	-	665	672
	Interim Contract Support (ICS) Total		-	665	672
	Inter-Service	Standard Missile-3	-	-	-
		THAAD	7,185	7,602	7,760
	Inter-Service Total		7,185	7,602	7,760
	Organic	AN/TPY-2 Radar	-	11,826	9,195
		Ballistic Missile Defense	1,486	2,047	2,086
		Standard Missile-3	-	-	-
		THAAD	67	37	55
	Organic Total		1,553	13,910	11,336
	Other Contract	THAAD	21,331	16,811	17,245
	Other Contract Total		21,331	16,811	17,245
Total Operation and Maintenance Funding			100,662	95,067	96,932
Procurement Funding					
	Interim Contractor Support (ICS)	THAAD	-	4,958	-
	Interim Contractor Support (ICS) Total		-	4,958	-
	Other Contract	AN/TPY-2 Radar	-	-	-
		THAAD	-	-	-
	Other Contract Total		-	-	-
Total Procurement Funding			-	-	-
Total MDA Depot Maintenance Program			100,662	100,025	96,932

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# **Missile Defense Agency**

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**Fiscal Year 2023**

**President's Budget Submittal**

**Military Construction Exhibit**



**April 2022**

**MISSILE DEFENSE AGENCY  
FY 2023 MILITARY CONSTRUCTION  
PRESIDENT'S BUDGET SUBMITTAL  
DESCRIPTIVE SUMMARIES**

(\$ in Thousands)

<b><u>Program</u></b>	<b><u>Authorization</u></b>	<b><u>Appropriation</u></b>
Major Construction	0	0
Unspecified Minor Construction	0	0
MILCON Planning & Design	<u>47,063</u>	<u>47,063</u>
TOTAL MILITARY CONSTRUCTION	47,063	47,063

**MISSILE DEFENSE AGENCY  
FY 2023 MILITARY CONSTRUCTION  
PROJECT SUMMARY  
BY LOCATION**

(\$ in Thousands)

<u>State/Installation/Project</u>	<u>Auth Request</u>	<u>Approp Request</u>	<u>New/ Current Mission</u>	<u>Page No.</u>
Major Construction	0	0		
Unspecified Minor Construction	0	0		
MILCON Planning and Design	<u>47,063</u>	<u>47,063</u>		
<b>TOTAL MILITARY CONSTRUCTION</b>	47,063	47,063		

1. COMPONENT MDA		FY 2023 MILITARY CONSTRUCTION PROJECT DATA			2. DATE Mar 2022	
3. INSTALLATION AND LOCATION Various Worldwide Locations			4. PROJECT TITLE Planning and Design			
5. PROGRAM ELEMENT N/A		6. CATEGORY CODE N/A	7. PROJECT NUMBER N/A	8. PROJECT COST (\$000) 47,063		
9. COST ESTIMATES						
ITEM			U/M	QUANTITY	UNIT COST	
Planning and Design			LS		47,063	
SUBTOTAL					47,063	
CONTINGENCY PERCENT (0.0%)					0	
ESTMATED CONTRACT COST					47,063	
SUPERVISION, INSPECTION & OVERHEAD (0.0%)					0	
TOTAL REQUEST					47,063	
TOTAL REQUEST (ROUNDED)					47,063	
INSTALLED EQPT-OTHER APPROPRIATIONS					(0)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION: The funds requested will be used to provide financing for architectural and engineering services and construction design of Missile Defense Agency (MDA) Military Construction projects.						

**1. REQUIREMENT:** As required

REQUIREMENT: These planning and design funds are required to initiate and complete design of facilities in the MDA military construction program including unspecified minor construction projects which are anticipated to arise during FY 2023, and accomplish planning and design for future projects supporting the Missile Defense System (MDS) with a long lead-time to be included in subsequent MDA Military Construction programs.

The Planning and Design funds in FY 2023 are planned to support future major military construction (MILCON):

- \$8.063 million for Ground Test Facility Infrastructure (GTFI) at Redstone Arsenal (RSA), Alabama that will modify existing Von Braun (VB) Complex facilities in order to relocate critical Missile Defense System (MDS) assets from off-post locations to existing MDA facilities on RSA.
- \$39 million to support design and planning for MILCON Projects at multiple sites on Guam. The MILCON effort will support deployment of an integrated air and missile defense system for the Defense of Guam from emerging threats in the US INDOPACOM region.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD07 / THAAD					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> 0604876C, 0603881C				<b>Other Related Program Elements:</b> 0604876C, 0603881C					
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity <i>(Units in Each)</i>	534	39	32	3	-	3	11	31	32	48	Continuing	Continuing
Gross/Weapon System Cost <i>(\$ in Millions)</i>	6,711.500	578.335	380.722	74.994	-	74.994	211.524	435.682	464.343	643.513	Continuing	Continuing
Less PY Advance Procurement <i>(\$ in Millions)</i>	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	6,711.500	578.335	380.722	74.994	-	74.994	211.524	435.682	464.343	643.513	Continuing	Continuing
Plus CY Advance Procurement <i>(\$ in Millions)</i>	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>6,711.500</b>	<b>578.335</b>	<b>380.722</b>	<b>74.994</b>	<b>-</b>	<b>74.994</b>	<b>211.524</b>	<b>435.682</b>	<b>464.343</b>	<b>643.513</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Millions)</i>	9.723	9.743	9.602	12.094	-	12.094	12.789	10.998	10.912	11.150	Continuing	Continuing
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	12.568	14.829	11.898	24.998	-	24.998	19.229	14.054	14.511	13.407	Continuing	Continuing
<b>Description:</b> Terminal High Altitude Area Defense (THAAD) is an element of the Terminal Defense Segment (TDS) of the Missile Defense System (MDS). THAAD enhances the TDS by deepening, complementing, and extending the MDS battlespace and capability to engage ballistic targets in the late mid-course and terminal phases of their trajectory. THAAD Army Navy / Transportable Radar Surveillance and Control (AN/TPY-2) radar is a surveillance and targeting sensor providing data to the THAAD system to execute intercept missions. The THAAD system, in conjunction with the fielded Phased Array Tracking Radar to Intercept on Target (PATRIOT) system, provides the TDS for the Missile Defense Agency objective of enhancing the MDS capability. Five major components [Interceptors, Launchers, AN/TPY-2 Radar, THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSG), and Peculiar Support Equipment including Missile Round Pallet Transportable] comprise the THAAD system.												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD07 / THAAD				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> 0604876C, 0603881C			<b>Other Related Program Elements:</b> 0604876C, 0603881C			
<b>Line Item MDAP/MAIS Code:</b> 362										
<b>Exhibits Schedule</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>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-5	THAAD	P-5a, P-21	B		534 / 6,711.500	39 / 578.335	32 / 380.722	3 / 74.994	- / -	3 / 74.994
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>534 / 6,711.500</b>	<b>39 / 578.335</b>	<b>32 / 380.722</b>	<b>3 / 74.994</b>	<b>- / -</b>	<b>3 / 74.994</b>
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

**Justification:**  
 The FY 2021 budget includes Congressional increases of \$76.325 million for the 8th THAAD Battery and \$30.108 million for 30 Heavy Expanded Mobility Tactical Trucks (HEMTT) and a decrease of \$23.494 million due to unit cost growth.

The FY 2022 budget includes Congressional increase of \$129.179 million for 14 additional THAAD interceptors.

The decrease from FY 2022 to FY 2023 reflects a decrease in the THAAD Interceptor procurement quantity from 32 in FY 2022 to 3 in FY 2023 and a lower requirement for Interceptor obsolescence and THAAD Battery Ground Component obsolescence modifications.

The FY 2023 budget request includes 3 THAAD Interceptors, the Stockpile Reliability Program, and Obsolescence mitigation efforts.

In FY 2023 MDA will continue a "synergy" lot buy approach to THAAD Interceptor purchases. This approach entails awarding a contract that includes an option for the following fiscal year funding. By utilizing this approach, MDA will achieve savings in material costs in multiple fiscal years. This will result in a higher Interceptor quantity buy at a lower average unit price than if buys were not combined.

Interceptor unit costs vary from year to year based on the quantity being procured.

Two (2) of the seven (7) THAAD Batteries delivered to date were funded with Research Development Test and Evaluation in Program Element 0603881C, thus not included in the costs above.

"Procurement Quantity" and "Flyaway Unit Cost" above represent interceptors only, but the "Net Procurement" cost above includes the costs of all hardware. Prior FYs funding included procurement of ground components, which affected the "Gross Weapon System Unit Cost".

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency														Date: April 2022							
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD07 / THAAD							Item Number / Title [DODIC]: THAAD							
ID Code (A=Service Ready, B=Not Service Ready) : B										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity (Units in Each)				534			39			32			3			-			3		
Gross/Weapon System Cost (\$ in Millions)				6,711.500			578.335			380.722			74.994			-			74.994		
Less PY Advance Procurement (\$ in Millions)				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) (\$ in Millions)				6,711.500			578.335			380.722			74.994			-			74.994		
Plus CY Advance Procurement (\$ in Millions)				0.000			0.000			0.000			-			-			-		
Total Obligation Authority (\$ in Millions)				6,711.500			578.335			380.722			74.994			-			74.994		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares (\$ in Millions)				-			-			-			-			-			-		
Gross/Weapon System Unit Cost (\$ in Millions)				12.568			14.829			11.898			24.998			-			24.998		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total					
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)			
Hardware Cost																					
Recurring Cost																					
8th THAAD Battery	-	-	-	76.325	1	76.325	-	-	-	-	-	-	-	-	-	-	-	-			
HEMTT Trucks	-	-	-	1.004	30	30.108	-	-	-	-	-	-	-	-	-	-	-	-			
Interceptor <sup>(†)</sup>	9.723	534	5,192.036	9.743	39	379.959	9.602	32	307.274	12.094	3	36.281	-	-	-	12.094	3	36.281			
Launcher <sup>(†)</sup>	8.110	36	291.977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Support Equipment	25.943	9	233.491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
TFCC Tactical Station Group <sup>(†)</sup>	10.522	8	84.179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Recurring Cost	-	-	5,801.683	-	-	486.392	-	-	307.274	-	-	36.281	-	-	-	-	-	36.281			
Subtotal: Hardware Cost	-	-	5,801.683	-	-	486.392	-	-	307.274	-	-	36.281	-	-	-	-	-	36.281			
Support Cost																					
JEON	20.970	2	41.940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Obsolescence and Modifications	32.345	8	258.763	67.630	1	67.630	55.561	1	55.561	21.082	1	21.082	-	-	-	21.082	1	21.082			
Production Support & Testing	55.941	8	447.524	20.306	1	20.306	15.002	1	15.002	17.631	1	17.631	-	-	-	17.631	1	17.631			
Training	20.199	8	161.590	4.007	1	4.007	2.885	1	2.885	-	-	-	-	-	-	-	-	-			
Subtotal: Support Cost	-	-	909.817	-	-	91.943	-	-	73.448	-	-	38.713	-	-	-	-	-	38.713			
Gross/Weapon System Cost	12.568	534	6,711.500	14.829	39	578.335	11.898	32	380.722	24.998	3	74.994	-	-	-	24.998	3	74.994			
Remarks:																					

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17	<b>P-1 Line Item Number / Title:</b> MD07 / THAAD	<b>Item Number / Title [DODIC]:</b> THAAD
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B		<b>MDAP/MAIS Code:</b>
<p>"Procurement Quantity" above represents interceptors only, but the "Net Procurement" cost above includes the costs of all hardware. Prior FYs funding includes procurement of ground components, which affects the "Gross Weapon System Unit Cost". Support Equipment captures miscellaneous items such as Terminal High Altitude Area Defense (THAAD) Missile Round Pallet-Transportable (MRP-T), THAAD Active Leak Sensor System (TALSS), and Battery Support Center (BSC) that support the THAAD Batteries and varies from year to year.</p> <p>The FY 2021 budget includes Congressional increases of \$76.325 million for the 8th THAAD Battery and \$30.108 million for 30 Heavy Expanded Mobility Tactical Trucks (HEMTT) and a decrease of \$23.494 million due to unit cost growth.</p> <p>The FY 2022 budget includes Congressional increase of \$129.179 million for 14 additional THAAD interceptors.</p> <p>The decrease in the Interceptor line above from FY 2022 to FY 2023 reflects a decrease in the THAAD Interceptor procurement quantity from 32 in FY 2022 to 3 in FY 2023, which combined with FMS interceptors sustains minimum production.</p> <p>The decrease in the Obsolescence and Modifications line above from FY 2022 to FY 2023 reflects a lower requirement for Interceptor obsolescence and THAAD Battery Ground Component obsolescence modifications.</p> <p>The decrease in the Training line above from FY 2022 to FY 2023 reflects the completion of the THAAD Skills Trainer (TST).</p> <p>Interceptor obsolescence encompasses mitigation activities that protect the system design and ensure a producible technical data package. This preserves an affordable future product cost within an acceptable production schedule. Examples of mitigation activities include component replacement parts, materials, qualification, alternative source/parts qualification, and piece part/material bridge buys to support subsequent years' production lots.</p> <p>THAAD Battery Ground Component obsolescence modifications address weapon system obsolescence, supportability issues, and cyber threats and result in a common baseline (Configuration 3) for all THAAD Batteries.</p> <p>The Stockpile Reliability Program (SRP) encompasses production support, field testing, storage and aging testing, and stockpile reliability testing and analysis for THAAD interceptors. This provides reliability data and analysis which provides warfighter confidence and enables the extension of the Interceptor shelf and service life, resulting in significant cost avoidance.</p> <p>(t) indicates the presence of a P-5a</p>		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD07 / THAAD				<b>Item Number / Title [DODIC]:</b> THAAD				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Interceptor - Lot 1 <sup>(†)</sup>		2010	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Mar 2011	Jul 2012	26	14.480	Y		Oct 2009
Interceptor - Lot 2 <sup>(†)</sup>		2011	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Mar 2011	Jul 2013	22	12.100	N		Oct 2009
Interceptor - Lot 4 <sup>(†)</sup>		2012	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Aug 2012	Jun 2015	46	11.022	N		Aug 2011
Interceptor - Lot 5 <sup>(†)</sup>		2013	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Sep 2013	Jul 2017	34	11.022	N		Aug 2011
Interceptor - Lot 6 <sup>(†)</sup>		2014	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Dec 2013	Mar 2018	27	11.022	N		Jun 2013
Interceptor - Lot 7 <sup>(†)</sup>		2015	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Dec 2015	Aug 2018	38	10.100	N		Mar 2014
Interceptor - Lot 8 <sup>(†)</sup>		2016	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Dec 2015	Feb 2019	36	10.100	N		Apr 2015
Interceptor - Lot 9 <sup>(†)</sup>		2017	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Mar 2017	Jan 2020	47	9.185	N		May 2016
Interceptor - Lot 10 <sup>(†)</sup>		2018	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Dec 2017	Oct 2020	109	9.169	N		Dec 2016
Interceptor - Lot 11 <sup>(†)</sup>		2019	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Apr 2019	Dec 2021	110	8.410	N		May 2018
Interceptor - Lot 12 <sup>(†)</sup>		2020	Lockheed Martin / Troy, AL	SS / FPIF	MDA, Huntsville, AL	Mar 2020	Mar 2023	39	8.397	N		Oct 2018
Launcher - Lot 1 <sup>(†)</sup>		2010	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	May 2011	Apr 2013	6	9.170	Y		Oct 2009
Launcher - Lot 2 <sup>(†)</sup>		2011	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	May 2011	Oct 2013	6	9.130	Y		Oct 2009
Launcher - Lot 3 <sup>(†)</sup>		2011	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	Jul 2012	May 2014	6	9.130	Y		Aug 2011
Launcher - Lot 4 <sup>(†)</sup>		2012	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	Jul 2012	Nov 2014	6	7.490	Y		Aug 2011
Launcher - Lot 6 <sup>(†)</sup>		2014	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	Aug 2014	Mar 2016	12	9.050	Y		Jun 2013
TFCC Tactical Station Group - Lot 2 <sup>(†)</sup>		2011	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	Mar 2011	May 2013	4	10.100	Y		Oct 2009
TFCC Tactical Station Group - Lot 3 <sup>(†)</sup>		2011	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	Jul 2012	Aug 2014	2	10.100	Y		Aug 2011
TFCC Tactical Station Group - Lot 4 <sup>(†)</sup>		2012	Lockheed Martin / Camden, AR	SS / FFP	MDA, Huntsville, AL	Jul 2012	Oct 2014	2	9.260	Y		Aug 2011

(†) indicates the presence of a P-21

**Remarks:**

Lot 3 Interceptors were removed due to a Congressional Mark in FY 2011. Lot numbers relate to groupings in fiscal years and no Launcher or Tactical Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) were scheduled for procurement in FY 2013, therefore Lot 5 is an interceptor only Lot. Delivery of Battery 3 completed in FY 2013. Delivery of Battery 4 completed in FY 2014. Delivery of Battery 5 completed in FY 2015. Delivery of Battery 6 completed in FY 2016. Delivery of Battery 7 completed in FY 2017. Concurrent with the Lot 4, 5, and 6 (FY 2012-FY 2014) U.S. procurements, MDA THAAD is executing a Foreign Military Sales (FMS) Case for two (2) Batteries and 192 Interceptors. The magnitude of the USG and FMS combined buy reduced the unit price for those Lots, and an overlap in period of performance with FMS interceptors also benefited the unit price for Lots 7 and 8 (FY 2015 and FY 2016).

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022												
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD07 / THAAD										Item Number / Title [DODIC]: THAAD												
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2011										Fiscal Year 2012										BALANCE					
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2010	BAL DUE AS OF 1 OCT	Calendar Year 2011										Calendar Year 2012															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	
	16	2011	MDA	4	0	4							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
TFCC Tactical Station Group - Lot 3																																
	17	2011	MDA	2	0	2																						A -	-	-	2	
TFCC Tactical Station Group - Lot 4																																
	18	2012	MDA	2	0	2																							A -	-	-	2
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD07 / THAAD										Item Number / Title [DODIC]: THAAD															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2013										Fiscal Year 2014														B A L A N C E				
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 2	BAL DUE AS OF 1 OCT				Calendar Year 2013										Calendar Year 2014															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Interceptor - Lot 1																																			
	1	2010	MDA	26	1	25	-	-	-	-	-	3	6	6	7	3															0				
Interceptor - Lot 2																																			
	2	2011	MDA	22	0	22	-	-	-	-	-	-	-	-	-	4	4	4	3	3	3	-	-	-	1								0		
Interceptor - Lot 4																																			
	3	2012	MDA	46	0	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46				
Interceptor - Lot 5																																			
	4	2013	MDA	34	0	34											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34		
Interceptor - Lot 6																																			
	5	2014	MDA	27	0	27															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Interceptor - Lot 7																																			
	6	2015	MDA	38	0	38																									38				
Interceptor - Lot 8																																			
	6	2016	MDA	36	0	36																									36				
Interceptor - Lot 9																																			
	7	2017	MDA	47	0	47																									47				
Interceptor - Lot 10																																			
	8	2018	MDA	109	0	109																									109				
Interceptor - Lot 11																																			
	9	2019	MDA	110	0	110																									110				
Interceptor - Lot 12																																			
	10	2020	MDA	39	0	39																									39				
Launcher - Lot 1																																			
	11	2010	MDA	6	0	6	-	-	-	-	-	-	1	2	-	-	3															0			
Launcher - Lot 2																																			
	12	2011	MDA	6	0	6	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1								0			
Launcher - Lot 3																																			
	13	2011	MDA	6	0	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1				
Launcher - Lot 4																																			
	14	2012	MDA	6	0	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6				
Launcher - Lot 6																																			
	15	2014	MDA	12	0	12																		A -	-	12									
TFCC Tactical Station Group - Lot 2																																			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					



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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022												
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD07 / THAAD										Item Number / Title [DODIC]: THAAD												
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2013										Fiscal Year 2014										BALANCE					
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	Calendar Year 2013										Calendar Year 2014															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	
	16	2011	MDA	4	0	4	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2											0
TFCC Tactical Station Group - Lot 3																																
	17	2011	MDA	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0
TFCC Tactical Station Group - Lot 4																																
	18	2012	MDA	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD07 / THAAD													Item Number / Title [DODIC]: THAAD															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2015												Fiscal Year 2016												B A L A N C E				
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015												Calendar Year 2016																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
	16	2011	MDA	4	4	0																													0
TFCC Tactical Station Group - Lot 3																																			
	17	2011	MDA	2	2	0																													0
TFCC Tactical Station Group - Lot 4																																			
	18	2012	MDA	2	0	2	1	1																							0				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD07 / THAAD										Item Number / Title [DODIC]: THAAD															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017										Fiscal Year 2018										B A L A N C E								
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017										Calendar Year 2018																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y		J U N	J U L	A U G	S E P				
	16	2011	MDA	4	4	0																													0
TFCC Tactical Station Group - Lot 3																																			
	17	2011	MDA	2	2	0																													0
TFCC Tactical Station Group - Lot 4																																			
	18	2012	MDA	2	2	0	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	0				

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD07 / THAAD													Item Number / Title [DODIC]: THAAD														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019													Fiscal Year 2020													BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
	16	2011	MDA	4	4	0																												0
TFCC Tactical Station Group - Lot 3																																		
	17	2011	MDA	2	2	0																												0
TFCC Tactical Station Group - Lot 4																																		
	18	2012	MDA	2	2	0	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	0			

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Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD07 / THAAD													Item Number / Title [DODIC]: THAAD															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2021													Fiscal Year 2022													BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
	16	2011	MDA	4	4	0																													0
TFCC Tactical Station Group - Lot 3																																			
	17	2011	MDA	2	2	0																													0
TFCC Tactical Station Group - Lot 4																																			
	18	2012	MDA	2	2	0	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	0				

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD07 / THAAD										Item Number / Title [DODIC]: THAAD											
Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Interceptor - Lot 1																												0			
	1	2010	MDA		26	26	0																					0			
Interceptor - Lot 2																															
	2	2011	MDA		22	22	0																					0			
Interceptor - Lot 4																															
	3	2012	MDA		46	46	0																					0			
Interceptor - Lot 5																															
	4	2013	MDA		34	34	0																					0			
Interceptor - Lot 6																															
	5	2014	MDA		27	27	0																					0			
Interceptor - Lot 7																															
	6	2015	MDA		38	38	0																					0			
Interceptor - Lot 8																															
	6	2016	MDA		36	36	0																					0			
Interceptor - Lot 9																															
	7	2017	MDA		47	47	0																					0			
Interceptor - Lot 10																															
	8	2018	MDA		109	109	0																					0			
Interceptor - Lot 11																															
	9	2019	MDA		110	64	46	8	8	8	8	8	6															0			
Interceptor - Lot 12																															
	10	2020	MDA		39	0	39	-	-	-	-	-	2	8	8	8	8	5										0			
Launcher - Lot 1																															
	11	2010	MDA		6	6	0																					0			
Launcher - Lot 2																															
	12	2011	MDA		6	6	0																					0			
Launcher - Lot 3																															
	13	2011	MDA		6	6	0																					0			
Launcher - Lot 4																															
	14	2012	MDA		6	6	0																					0			
Launcher - Lot 6																															
	15	2014	MDA		12	12	0																					0			
TFCC Tactical Station Group - Lot 2																															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD07 / THAAD													Item Number / Title [DODIC]: THAAD															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2023													Fiscal Year 2024												BALANCE			
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023													Calendar Year 2024															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
	16	2011	MDA	4	4	0																													0
TFCC Tactical Station Group - Lot 3																																			
	17	2011	MDA	2	2	0																													0
TFCC Tactical Station Group - Lot 4																																			
	18	2012	MDA	2	2	0	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	0				

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<b>Exhibit P-21, Production Schedule:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17					<b>P-1 Line Item Number / Title:</b> MD07 / THAAD					<b>Item Number / Title [DODIC]:</b> THAAD	

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Troy, AL	1	4	8	6	6	16	22	6	4	27	31
2	Lockheed Martin - Troy, AL	1	4	8	6	6	28	34	6	4	27	31
3	Lockheed Martin - Troy, AL	1	4	8	6	11	36	47	6	11	36	47
4	Lockheed Martin - Troy, AL	1	4	8	6	12	37	49	6	12	37	49
5	Lockheed Martin - Troy, AL	1	4	8	6	3	43	46	6	3	43	46
6	Lockheed Martin - Troy, AL	1	4	8	6	12	31	43	6	12	31	43
7	Lockheed Martin - Troy, AL	1	4	8	6	5	34	39	6	5	34	39
8	Lockheed Martin - Troy, AL	1	4	8	6	3	34	37	6	3	34	37
9	Lockheed Martin - Troy, AL	1	4	8	6	3	34	37	6	6	34	40
10	Lockheed Martin - Troy, AL	1	4	8	6	6	31	37	6	6	31	37
11	Lockheed Martin - Camden, AR	1	1	3	6	8	23	31	6	4	21	25
12	Lockheed Martin - Camden, AR	1	1	2	6	8	29	37	6	4	21	25
13	Lockheed Martin - Camden, AR	1	1	2	6	10	22	32	6	4	21	25
14	Lockheed Martin - Camden, AR	1	1	2	6	10	28	38	6	3	21	24
15	Lockheed Martin - Camden, AR	1	1	2	6	6	22	28	6	4	21	25
16	Lockheed Martin - Camden, AR	1	2	2	6	6	26	32	6	4	24	28
17	Lockheed Martin - Camden, AR	1	1	1	6	10	25	35	6	4	24	28
18	Lockheed Martin - Camden, AR	1	1	1	6	10	27	37	6	3	24	27

**Remarks:**

- Max Production rate is 8 at normal capacity.

- FMS deliveries of approximately 4 per month from December 2015 to October 2019 are not included.

- In August 2016, interceptor deliveries were paused in order to resolve a cable connector sub-assembly issue. During this time however, production of other interceptor sub-assemblies continued. Interceptor production resumed in November 2016, and associated deliveries resumed in April 2017. Lockheed Martin worked extended work days and additional shifts in order to surge deliveries through September 2018 in order to complete interceptor deliveries in accordance with current contract requirements.

- Manufacturing lead times can vary due to factors such as managing multiple lot buys concurrently to achieve price discounts, increasing the lead time for the second awarded lot buy.

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17	P-1 Line Item Number / Title: MD07 / THAAD	Item Number / Title [DODIC]: THAAD
<p>- A Lot 4 Interceptor mission computer static random access memory failure, root cause analysis, corrective action, and incorporation of leap second software update resulted in a seven (7) month production delay from November 2014 to June 2015.</p> <p>"A" in the Delivery Schedule indicates the Contract Award Date.</p> <p><b>Note:</b> Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> 0603882C				<b>Other Related Program Elements:</b> 0603882C					
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity <i>(Units in Each)</i>	96	-	-	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1,130.247	150.000	0.000	11.300	-	11.300	-	18.403	42.725	48.866	Continuing	Continuing
Less PY Advance Procurement <i>(\$ in Millions)</i>	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1,130.247	150.000	0.000	11.300	-	11.300	-	18.403	42.725	48.866	Continuing	Continuing
Plus CY Advance Procurement <i>(\$ in Millions)</i>	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>	<b>1,130.247</b>	<b>150.000</b>	<b>0.000</b>	<b>11.300</b>	<b>-</b>	<b>11.300</b>	<b>-</b>	<b>18.403</b>	<b>42.725</b>	<b>48.866</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Millions)</i>	0.000	-	-	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	11.773	0.000	0.000	-	-	-	-	-	-	-	Continuing	Continuing

**Description:**

The Ground-based Midcourse Defense (GMD) element of the Missile Defense System provides combatant commands with a continuously available (24 hours a day, 365 days a year) capability to defend the Homeland against limited Intercontinental Ballistic Missile attacks. The GMD capability consists of Ground Based Interceptors (GBI), GMD Fire Control system (GFC), GMD Communications Network (GCN), In-Flight Interceptor Communications System Data Terminal (IDT) and ground Launch Support Systems (LSS). Each GBI delivers a single kill vehicle to defeat threat warheads in space during the midcourse phase of the ballistic trajectory. The GFC consists of fire control nodes in Fort Greely, Alaska (FGA) and Missile Defense Integration and Operations Center (MDIOC) Colorado Springs, Colorado. IDTs are currently located in FGA, Vandenberg Space Force Base (VSFB), California; Eareckson Air Station, Alaska; and Fort Drum, New York. LSS are currently located at FGA and VSFB.

FY 2021 procures four (4) Configuration (C2) boost vehicles to maintain the industrial base, improve reliability, and extend the service life of extend the service life of the GBI fleet.

FY 2021 provides for additional spare boost vehicles to address operational needs, reduce turn-around time of GBI Service Life Extension Program upgrades, and maintain the Orion solid rocket motor production line.

FY 2023 provides processors and operating system upgrade modification kits for four operational IDTs at Fort Drum NY (1), Fort Greely AK (2), and Eareckson AK (1) to mitigate existing obsolescence. These are modification kits.

Future Procurement budgets will include Next Generation Interceptor (NGI) related Procurement and Advanced Procurement for long lead items post-design and development.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B			<b>Program Elements for Code B Items:</b> 0603882C			<b>Other Related Program Elements:</b> 0603882C				
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Ground Based Midcourse	P-5a, P-21	B		73 / 294.783	- / 150.000	- / 0.000	- / -	- / -	- / -
P-5	Ground Based Interceptors (GBI)	P-5a, P-21	B		1 / 368.000	- / 0.000	- / 0.000	- / -	- / -	- / -
P-5	Silo Interface Vaults/Silos	P-5a, P-21	B		22 / 467.464	- / 0.000	- / 0.000	- / -	- / -	- / -
P-5	Phased Array IDT and IDT Upgrades	P-5a, P-21	B		0 / 0.000	- / 0.000	- / 0.000	- / 11.300	- / -	- / 11.300
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>96 / 1,130.247</b>	<b>- / 150.000</b>	<b>- / 0.000</b>	<b>- / 11.300</b>	<b>- / -</b>	<b>- / 11.300</b>
<p>*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b> FY 2023 provides processors and operating system upgrade modification kits for four operational IDTs at Fort Drum NY (1), Fort Greely AK (2), and Eareckson AK (1) to mitigate existing obsolescence. These are modification kits.</p>										



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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17						P-1 Line Item Number / Title: MD08 / Ground Based Midcourse							Item Number / Title [DODIC]: Ground Based Midcourse								
ID Code (A=Service Ready, B=Not Service Ready) : B										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity <i>(Units in Each)</i>				73			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				294.783			150.000			0.000			-			-			-		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				294.783			150.000			0.000			-			-			-		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				294.783			150.000			0.000			-			-			-		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				4.038			0.000			0.000			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements		Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total				
		Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)		
Hardware Cost																					
Non Recurring Cost																					
Boost Vehicles <sup>(†)</sup>	37.500	4	150.000	25.000	6	150.000	-	-	-	-	-	-	-	-	-	-	-	-			
Launch Support Systems <sup>(†)</sup>	1.977	73	144.312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Non Recurring Cost	-	-	294.312	-	-	150.000	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Hardware Cost	-	-	294.312	-	-	150.000	-	-	-	-	-	-	-	-	-	-	-	-			
Support Cost																					
Obsolescence	0.471	1	0.471	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Support Cost	-	-	0.471	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Gross/Weapon System Cost	4.038	73	294.783	0.000	-	150.000	0.000	-	0.000	-	-	-	-	-	-	-	-	-			
Remarks:																					
Cost savings due to favorable contract negotiations for Silo Hardware allowed for the reallocation of \$0.471M of obsolescence funding to procure spare Launch Support System (LSS) kits to improve weapon system reliability.																					
(†) indicates the presence of a P-5a																					

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17			<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse					<b>Item Number / Title [DODIC]:</b> Ground Based Midcourse				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ M)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Boost Vehicles <sup>(†)</sup>		2020	Boeing / AL/AK/AZ/CA/CO/VA	C / CPIF	Huntsville, AL	Dec 2020	Feb 2023	4	50.000	N		Jul 2020
Launch Support Systems <sup>(†)</sup>		2020	Boeing / AL/AK/AZ/CA/CO/VA	C / CPIF	Huntsville, AL	Sep 2021	Sep 2023	73	2.045	N		Jun 2021
<p><sup>(†)</sup> indicates the presence of a P-21</p> <p><b>Remarks:</b> N/A</p>												

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity:							P-1 Line Item Number / Title:															Item Number / Title [DODIC]:									
0300D / 01 / 17							MD08 / Ground Based Midcourse															Ground Based Midcourse									
Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Boost Vehicles																															
	1	2020	MDA	4	0	4			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
Launch Support Systems																															
	2	2020	MDA	73	0	73											A -	-	-	-	-	-	-	-	-	-	-	-	-	73	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Ground Based Midcourse											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2023										Fiscal Year 2024														BALANCE
OCO#	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023										Calendar Year 2024														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Boost Vehicles																															
	1	2020	MDA	4	0	4	-	-	-	-	1	-	1	-	1	1															0
Launch Support Systems																															
	2	2020	MDA	73	0	73	-	-	-	-	-	-	-	-	-	-	22	4	4	4	4	4	4	4	4	4	4	5	5	5	0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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<b>Exhibit P-21, Production Schedule:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse				<b>Item Number / Title [DODIC]:</b> Ground Based Midcourse	

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Boeing - AL/AK/AZ/CA/CO/ VA	1	1	2	6	3	26	29	6	3	26	29
2	Boeing - AL/AK/AZ/CA/CO/ VA	1	1	2	6	12	24	36	6	12	24	36

**Remarks:**  
N/A

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency														<b>Date:</b> April 2022							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17							<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse							<b>Item Number / Title [DODIC]:</b> Ground Based Interceptors (GBI)							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B										<b>MDAP/MAIS Code:</b>											
<b>Resource Summary</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>		
Procurement Quantity <i>(Units in Each)</i>				1			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				368.000			0.000			0.000			-			-			-		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				368.000			0.000			0.000			-			-			-		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>				<b>368.000</b>			<b>0.000</b>			<b>0.000</b>			<b>-</b>			<b>-</b>			<b>-</b>		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				368.000			0.000			0.000			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
<b>Cost Elements</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>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>		
Hardware Cost																					
Recurring Cost																					
Ground Based Interceptors <sup>(†)</sup>		368.000	1	368.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subtotal: Recurring Cost		-	-	368.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subtotal: Hardware Cost		-	-	368.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Gross/Weapon System Cost</b>		<b>368.000</b>	<b>1</b>	<b>368.000</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>		
<b>Remarks:</b> For purchase of long-lead hardware  <sup>(†)</sup> indicates the presence of a P-5a																					

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17				P-1 Line Item Number / Title: MD08 / Ground Based Midcourse				Item Number / Title [DODIC]: Ground Based Interceptors (GBI)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Ground Based Interceptors - Hardware <sup>(†)</sup>		2019	Boeing / Huntsville	C / CPIF	Huntsville	Oct 2018	Jan 2019	1	0.000	Y		Jan 2018

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022												
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Ground Based Interceptors (GBI)												
Cost Elements (Units in Each)							Fiscal Year 2019										Fiscal Year 2020													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019										Calendar Year 2020															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
Ground Based Interceptors - Hardware																																0
	1	2019	MDA	1	0	1	A	-	-	-	1																					0
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		



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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17					P-1 Line Item Number / Title: MD08 / Ground Based Midcourse				Item Number / Title [DODIC]: Ground Based Interceptors (GBI)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Boeing - Huntsville	1	1	2	6	0	38	38	6	0	38	38

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency														<b>Date:</b> April 2022							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17							<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse							<b>Item Number / Title [DODIC]:</b> Silo Interface Vaults/Silos							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B										<b>MDAP/MAIS Code:</b>											
<b>Resource Summary</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>		
Procurement Quantity <i>(Units in Each)</i>				22			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				467.464			0.000			0.000			-			-			-		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				467.464			0.000			0.000			-			-			-		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>				<b>467.464</b>			<b>0.000</b>			<b>0.000</b>			<b>-</b>			<b>-</b>			<b>-</b>		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				21.248			0.000			0.000			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
<b>Cost Elements</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>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>		
Hardware Cost																					
Non Recurring Cost																					
Silos <sup>(†)</sup>		21.248	22	467.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subtotal: Non Recurring Cost		-	-	467.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Subtotal: Hardware Cost		-	-	467.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Gross/Weapon System Cost</b>		<b>21.248</b>	<b>22</b>	<b>467.464</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>		
<b>Remarks:</b> N/A  <sup>(†)</sup> indicates the presence of a P-5a																					

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse				<b>Item Number / Title [DODIC]:</b> Silo Interface Vaults/Silos				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ M)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Silos - Hardware <sup>(†)</sup>		2018	Boeing / AL/AK/AZ/CA/CO/VA	SS / FPIF	Huntsville, AL	Jan 2018	Sep 2021	10	22.700	Y	Sep 2018	Jan 2018
Silos - Hardware <sup>(†)</sup>		2019	Boeing / AL/AK/AZ/CA/CO/VA	SS / FPIF	Huntsville, AL	Jan 2018	Jan 2022	12	21.050	Y	Sep 2018	Jan 2018

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Silo Interface Vaults/Silos										
Cost Elements (Units in Each)							Fiscal Year 2018										Fiscal Year 2019													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	
Silos - Hardware																														
	1	2018	MDA	10	0	10				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
	1	2019	MDA	12	0	12				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022													
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Silo Interface Vaults/Silos													
Cost Elements (Units in Each)							Fiscal Year 2020													Fiscal Year 2021													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
Silos - Hardware																																	
	1	2018	MDA	10	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9	
	1	2019	MDA	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Silo Interface Vaults/Silos														
Cost Elements (Units in Each)							Fiscal Year 2022										Fiscal Year 2023										BALANCE							
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022										Calendar Year 2023																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP			
Silos - Hardware																																		
	1	2018	MDA	10	1	9	3	3	3																									0
	1	2019	MDA	12	0	12	-	-	-	2	2	2	3	1	-	-	-	-	-	-	-	-	-	-	2								0	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17					P-1 Line Item Number / Title: MD08 / Ground Based Midcourse				Item Number / Title [DODIC]: Silo Interface Vaults/Silos			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Boeing - AL/AK/AZ/CA/CO/ VA	1	1	6	6	0	20	20	6	0	20	20
<p>Remarks:</p> <p>FY 2019 MILCON for Missile Field-1 was reprogrammed as a result of the utilization of 10 U.S. Code section 2808, the declaration of a national emergency at the southern border. GM Missile Field-1 construction and subsequent delivery of the silos was delayed until April 2023.</p> <p>"A" in the Delivery Schedule indicates the Contract Award Date.</p> <p><b>Note:</b> Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).</p>												

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD08 / Ground Based Midcourse						Item Number / Title [DODIC]: Phased Array IDT and IDT Upgrades								
ID Code (A=Service Ready, B=Not Service Ready) : B										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity <i>(Units in Each)</i>				0			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				0.000			0.000			0.000			11.300			-			11.300		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				0.000			0.000			0.000			11.300			-			11.300		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				0.000			0.000			0.000			11.300			-			11.300		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements		Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total				
		Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)		
Hardware Cost																					
Recurring Cost																					
Phased Array IDT and IDT Upgrades <sup>(†)</sup>		-	-	-	-	-	-	-	-	-	2.825	4	11.300	-	-	-	2.825	4	11.300		
Subtotal: Recurring Cost		-	-	-	-	-	-	-	-	-	-	-	11.300	-	-	-	-	-	11.300		
Subtotal: Hardware Cost		-	-	-	-	-	-	-	-	-	-	-	11.300	-	-	-	-	-	11.300		
Gross/Weapon System Cost		0.000	0	0.000	0.000	-	0.000	0.000	-	0.000	-	-	11.300	-	-	-	-	-	11.300		
Remarks: FY 2023 provides processors and operating system upgrade modification kits for four operational IDTs at Fort Drum NY (1), Fort Greely AK (2), and Eareckson AK (1) to mitigate existing obsolescence. These are not brand new items, but are modification kits. Two IDTs at VSFB are being upgraded as part of RDT&E Risk Reduction development for IDT Processor and operating system upgrade. The two IDTs at VSFB are used for flight testing and, as such, their upgrade is funded using RDTE.																					
<sup>(†)</sup> indicates the presence of a P-5a																					



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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17				P-1 Line Item Number / Title: MD08 / Ground Based Midcourse				Item Number / Title [DODIC]: Phased Array IDT and IDT Upgrades				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Phased Array IDT and IDT Upgrades <sup>(†)</sup>		2023	Boeing / AL/AK/AZ/CA/CO/VA	C / CPIF	Huntsville, AL	Feb 2022	Sep 2023	4	2,825.000	N		Jul 2021

(†) indicates the presence of a P-21

**Remarks:**  
FY 2023 provides processors and operating system upgrade modification kits for four operational IDTs at Fort Drum NY (1), Fort Greely AK (2), and Eareckson AK (1) to mitigate existing obsolescence. These are not brand new end items, but are modification kits.

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022													
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Phased Array IDT and IDT Upgrades													
Cost Elements (Units in Each)							Fiscal Year 2022													Fiscal Year 2023													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
Phased Array IDT and IDT Upgrades																																	
	1	2023	MDA	4	0	4					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD08 / Ground Based Midcourse										Item Number / Title [DODIC]: Phased Array IDT and IDT Upgrades											
Cost Elements (Units in Each)							Fiscal Year 2024										Fiscal Year 2025													BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024										Calendar Year 2025														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP
Phased Array IDT and IDT Upgrades																														0	
	1	2023	MDA	4	1	3	1	1	1																						
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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<b>Exhibit P-21, Production Schedule:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD08 / Ground Based Midcourse				<b>Item Number / Title [DODIC]:</b> Phased Array IDT and IDT Upgrades			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Boeing - AL/AK/AZ/CA/CO/ VA	1	1	4	6	1	11	12	6	1	11	12

**Remarks:**

FY 2023 provides processors and operating system upgrade modification kits for four operational IDTs at Fort Drum NY (1), Fort Greely AK (2), and Eareckson AK (1) to mitigate existing obsolescence. These are not brand new end items, but are modification kits.

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Missile Defense Agency								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						P-1 Line Item Number / Title: MD09 / AEGIS BMD						
ID Code (A=Service Ready, B=Not Service Ready): B				Program Elements for Code B Items: 0603892C, 0604881C				Other Related Program Elements: 0603892C				
Line Item MDAP/MAIS Code: 362												
Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (Units in Each)	377	40	40	47	-	47	27	24	43	43	Continuing	Continuing
Gross/Weapon System Cost (\$ in Millions)	5,841.324	399.920	394.386	455.835	-	455.835	378.685	362.834	496.857	506.794	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	0.000	46.024	59.765	53.600	-	53.600	-	-	-	-	-	159.389
Net Procurement (P-1) (\$ in Millions)	5,841.324	353.896	334.621	402.235	-	402.235	378.685	362.834	496.857	506.794	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	96.995	44.901	17.493	-	-	-	-	-	-	-	-	159.389
Total Obligation Authority (\$ in Millions)	5,938.319	398.797	352.114	402.235	-	402.235	378.685	362.834	496.857	506.794	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Millions)	70.428	8.975	9.032	8.897	-	8.897	12.368	13.094	10.398	10.606	Continuing	Continuing
Gross/Weapon System Unit Cost (\$ in Millions)	15.494	9.998	9.860	9.699	-	9.699	14.025	15.118	11.555	11.786	Continuing	Continuing
Description:												
In accordance with the Consolidated Appropriations Act 2020, SM-3 Block IIA was transferred to MD14 from MD09 in FY 2020 and beyond. FY 2018 and FY 2019 costs are contained in MD09.												
Procurement Quantity" and "Flyaway Unit Cost" above represent SM-3 Block IB missiles only, but the Net Procurement and Gross Weapon System costs includes all hardware and support costs including canisters, production engineering, obsolescence and system engineering, which are detailed in separate P-5s.												
Prior Year procurement 71 SM-3 Block IAs are not included.												
The Sea-Based Weapon Systems mission is to deliver an operationally effective and supportable Ballistic Missile Defense (BMD) capability to defend the nation, deployed forces, and allies. Aegis BMD aims to increase this capability by delivering evolutionary improvements as part of Missile Defense System upgrades. Sea-Based Weapon Systems provides a forward-deployable, mobile capability to detect and track ballistic missiles of all ranges, and the ability to destroy Short-Range Ballistic Missiles (SRBM), Medium-Range Ballistic Missiles (MRBM), and Intermediate-Range Ballistic Missiles (IRBM) in the midcourse phase of flight. Upgrades to both the Aegis BMD Weapon System and SM-3 configuration enable Aegis BMD to provide an effective, supportable, and defensive capability against longer range, more sophisticated threats and an enduring Aegis Ashore defensive capability.												
The SM-3 Block IB improves Sea-Based Weapon Systems ability to expand the BMD battlespace, engage longer range, more sophisticated ballistic missiles that may deploy countermeasures and launch in larger raid sizes. The SM-3 Block IB Kinetic Warhead's (KW) two color infrared (IR) seeker and advanced signal processor provides a real-time discrimination and characterization capability while improving sensitivity for longer range targets and performance against more sophisticated threats. Additionally, the Throttleable Divert and Attitude Control System KW divert engine has been upgraded over the SM-3 Block IA to provide a more flexible divert in order to maneuver the KW to intercept.												
The SM-3 Block IIA provides greater capability over SM-3 Block IB, including increased velocity and range provided by a 21-inch diameter rocket motor propulsion stack, more than doubled seeker sensitivity, and more than tripled divert capability incorporated in an advanced KW. New component technologies include, but are not limited to: lightweight nosecone, advanced KW, 21-inch second stage rocket motor, and 21-inch third stage rocket motor. Working in concert with the SM-3 Block IB, the SM-3 Block IIA, will increase the Ballistic Missile Defense System defended area and increase the probability of kill against a larger threat set. The SM-3 Block IIA is also a critical part of the Aegis Ashore Missile Defense System Complex - Romania and Poland, and is also vital to defense efforts for Aegis afloat in the European and Indo-Pacific Commands. This will provide a more robust protection of Europe and the Indo-Pacific. The SM-3 Block IIA also provides defense against IRBMs and other threats. SM-3 Block IIA was transferred to MD14 from MD09 in FY 2020 and beyond.												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD09 / AEGIS BMD				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> 0603892C, 0604881C			<b>Other Related Program Elements:</b> 0603892C			
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Aegis BMD SM-3 Block IB	P-5a, P-21	B		347 / 4,990.266	40 / 399.920	40 / 394.386	47 / 455.835	- / -	47 / 455.835
P-5	Aegis BMD SM-3 Block IIA	P-5a, P-21	B		30 / 851.058	- / 0.000	- / 0.000	- / -	- / -	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>377 / 5,841.324</b>	<b>40 / 399.920</b>	<b>40 / 394.386</b>	<b>47 / 455.835</b>	<b>- / -</b>	<b>47 / 455.835</b>
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b> N/A										

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD09 / AEGIS BMD						Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB								
ID Code (A=Service Ready, B=Not Service Ready) : B										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity <i>(Units in Each)</i>				347			40			40			47			-			47		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				4,990.266			399.920			394.386			455.835			-			455.835		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			46.024			59.765			53.600			-			53.600		
Net Procurement (P-1) <i>(\$ in Millions)</i>				4,990.266			353.896			334.621			402.235			-			402.235		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				96.995			44.901			17.493			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				5,087.261			398.797			352.114			402.235			-			402.235		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				14.381			9.998			9.860			9.699			-			9.699		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total					
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)			
Flyaway Cost																					
Recurring Cost																					
SM-3 Block IA Procurement <sup>(†)</sup>	10.800	71	766.765	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
SM-3 Block IB Procurement <sup>(†)</sup>	10.849	347	3,764.677	8.975	40	359.000	9.032	40	361.273	8.897	47	418.141	-	-	-	8.897	47	418.141			
Subtotal: Recurring Cost	-	-	4,531.442	-	-	359.000	-	-	361.273	-	-	418.141	-	-	-	-	-	418.141			
Subtotal: Flyaway Cost	-	-	4,531.442	-	-	359.000	-	-	361.273	-	-	418.141	-	-	-	-	-	418.141			
Hardware Cost																					
Recurring Cost																					
Canisters Procurement SM-3 Block IA/IB (1)	0.245	356	87.297	0.322	40	12.888	0.297	40	11.889	0.303	47	14.249	-	-	-	0.303	47	14.249			
Subtotal: Recurring Cost	-	-	87.297	-	-	12.888	-	-	11.889	-	-	14.249	-	-	-	-	-	14.249			
Subtotal: Hardware Cost	-	-	87.297	-	-	12.888	-	-	11.889	-	-	14.249	-	-	-	-	-	14.249			
Support Cost																					
Ballistic Barriers for Transportation SM-3 Block IB (2)	0.305	36	10.963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Cyber Security (3)	1.500	1	1.500	1.500	1	1.500	-	-	-	-	-	-	-	-	-	-	-	-			
Diminishing Manufacturing Sources Mitigation (4)	6.992	3	20.975	3.733	1	3.733	3.866	1	3.866	3.943	1	3.943	-	-	-	3.943	1	3.943			
SM-3 Blk IB Investment Spares (5)	7.972	4	31.886	10.737	1	10.737	7.414	1	7.414	8.876	1	8.876	-	-	-	8.876	1	8.876			

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD09 / AEGIS BMD						Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB					
ID Code (A=Service Ready, B=Not Service Ready) : B										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
SM-3 Block IB Obsolescence (6)	13.410	4	53.641	1.394	1	1.394	1.375	1	1.375	1.394	1	1.394	-	-	-	1.394	1	1.394
SM-3 Block IB Production Engineering (7)	23.995	9	215.955	4.162	1	4.162	3.751	1	3.751	4.302	1	4.302	-	-	-	4.302	1	4.302
SM-3 Block IB Service Life Evaluation Program	2.975	4	11.900	2.000	1	2.000	-	-	-	-	-	-	-	-	-	-	-	-
SM-3 Block IB Systems Engineering and Integration (9)	8.236	3	24.707	4.506	1	4.506	4.818	1	4.818	4.930	1	4.930	-	-	-	4.930	1	4.930
Subtotal: Support Cost	-	-	371.527	-	-	28.032	-	-	21.224	-	-	23.445	-	-	-	-	-	23.445
Gross/Weapon System Cost	14.381	347	4,990.266	9.998	40	399.920	9.860	40	394.386	9.699	47	455.835	-	-	-	9.699	47	455.835
Remarks: (1) Canisters are required for each SM-3 procured.  (2) SM-3 Transportation of Ballistic Barriers are required by Joint Service Insensitive Munitions Technical Panel) and Naval Ordnance Safety and Security Activity to transport missiles.  (3) Cyber Security - Support Certification & Accreditation planning and testing in accordance with the Operational Designated Accrediting Authority Process. Conduct certification and accreditation of classified systems and networks under The National Industrial Security Program Operating Manual. Ensure protection of trusted system networks and unclassified contractor networks containing DoD Information.  (4) Diminishing Manufacturing Sources Mitigation allows Aegis Ballistic Missile Defense to mitigate the loss, or impending loss, of manufacturers of items or suppliers of items or of raw materials caused by several factors. These factors include new or evolving science, detection limits, toxicity values, and regulations related to chemicals and materials resulting in significant impact on the supply chain and industrial base . (5) SM-3 Block IB Investment Spares are procured to coincide with the delivery of the missile and are required to support All Up Rounds during 4 year maintenance period.  (6) Obsolescence monitoring and management is the program’s most effective and efficient way to minimize materiel readiness risks, realize future savings during production and sustainment, and improve overall life-cycle management. Identifies risk associated with the 800 vendors/suppliers discontinuing production of a component or raw material and then properly mitigating impacts to production. If not identified early, such activities will impact production and Fleet deliveries.  (7) Production Engineering supports SM-3 Guided Missile Round production activities and issue resolution during manufacturing, assembly, testing, and missile integration. Funding provides production change validation, preparation, and configuration management, government prepared production acceptance procedures, production planning, Integrated Logistics Support planning, coordination of government furnished information and government furnished equipment, contract deliverable monitoring and prime contractor monitoring of cost/schedule performance. Also provides in-service engineering agent and technical direction agent support.  (8) SM-3 Block IB Service Life Evaluation Program includes testing and analysis to demonstrate the safety and suitability of the SM-3 for an extended service life goal of 12 years.  (9) Systems Engineering and Integration - Addresses production technical issues that arise within the entire SM-3 vendor/supplier base. Includes improvement and efficiency activities such as configuration management and control boards, engineering assessments of manufacturing process improvement changes, engineering assessments of sub-vendor production issues, and engineering and quality review of documentation and test data prior to missile acceptance by the government.																		



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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17	P-1 Line Item Number / Title: MD09 / AEGIS BMD	Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB
ID Code (A=Service Ready, B=Not Service Ready) : B		MDAP/MAIS Code:
<div>(t) indicates the presence of a P-5a</div>		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD09 / AEGIS BMD				<b>Item Number / Title [DODIC]:</b> Aegis BMD SM-3 Block IB				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
SM-3 Block IA Procurement <sup>(†)</sup>		2009	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Feb 2008	Mar 2010	11	8.405	Y		Mar 2007
SM-3 Block IA Procurement <sup>(†)</sup>		2010	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Apr 2008	Aug 2010	24	8.119	Y		Mar 2007
SM-3 Block IA Procurement <sup>(†)</sup>		2011	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Aug 2012	Sep 2013	22	9.525	Y		Nov 2010
SM-3 Block IA Procurement <sup>(†)</sup>		2012	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Aug 2012	Jul 2014	14	9.867	Y		Aug 2011
SM-3 Block IB Procurement <sup>(†)</sup>		2012	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	May 2012	Dec 2013	14	13.400	Y		Aug 2011
SM-3 Block IB Procurement <sup>(†)</sup>		2013	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Jun 2013	Jun 2014	33	12.130	Y		Aug 2012
SM-3 Block IB Procurement <sup>(†)</sup>		2014	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Apr 2014	Jan 2016	52	10.236	Y		Aug 2013
SM-3 Block IB Procurement <sup>(†)</sup>		2015	Raytheon / Tucson, AZ	SS / FPIF	Dahlgren, VA	Mar 2015	Nov 2016	52	11.411	Y		Aug 2014
SM-3 Block IB Procurement <sup>(†)</sup>		2016	Raytheon / Tucson, AZ	SS / FPIF	Dahlgren, VA	Mar 2016	Oct 2018	46	11.538	Y		Aug 2015
SM-3 Block IB Procurement <sup>(†)</sup>		2017	Raytheon / Tucson, AZ	SS / FP	Dahlgren, VA	Mar 2017	Oct 2019	35	10.896	Y		Aug 2016
SM-3 Block IB Procurement <sup>(†)</sup>		2018	Raytheon / Tucson, AZ	SS / FPIF	Dahlgren, VA	Apr 2019	Oct 2020	44	11.843	Y		Aug 2017
SM-3 Block IB Procurement <sup>(†)</sup>		2019	Raytheon / Tucson, AZ	SS / FPIF	Dahlgren, VA	Mar 2020	May 2022	39	8.980	Y		Aug 2018
SM-3 Block IB Procurement <sup>(†)</sup>		2020	Raytheon / Tucson, AZ	SS / FPIF	Dahlgren, VA	Mar 2020	Apr 2023	32	8.980	Y		Aug 2018

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD09 / AEGIS BMD										Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB											
Cost Elements (Units in Each)							Fiscal Year 2008										Fiscal Year 2009										BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2007	BAL DUE AS OF 1 OCT	Calendar Year 2008										Calendar Year 2009														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP
SM-3 Block IA Procurement																															
	1	2009	MDA	11	0	11					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
	1	2010	MDA	24	0	24							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
	1	2011	MDA	22	0	22																									22
	1	2012	MDA	14	0	14																									14
SM-3 Block IB Procurement																															
	2	2012	MDA	14	0	14																									14
	2	2013	MDA	33	0	33																									33
	2	2014	MDA	52	0	52																									52
	2	2015	MDA	52	0	52																									52
	2	2016	MDA	46	0	46																									46
	2	2017	MDA	35	0	35																									35
	2	2018	MDA	44	0	44																									44
	2	2019	MDA	39	0	39																									39
	2	2020	MDA	32	0	32																									32
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD09 / AEGIS BMD													Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB										
Cost Elements (Units in Each)							Fiscal Year 2010												Fiscal Year 2011													BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2009	BAL DUE AS OF 1 OCT	Calendar Year 2010												Calendar Year 2011														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
SM-3 Block IA Procurement																																	
	1	2009	MDA	11	0	11	-	-	-	-	-	2	-	-	-	2	2	-	-	-	-	-	-	-	1	1	3						0
	1	2010	MDA	24	0	24	-	-	-	-	-	-	-	-	-	2	2	7	-	-	-	-	-	-	-	-	-	-	-	-	13		
	1	2011	MDA	22	0	22																										22	
	1	2012	MDA	14	0	14																										14	
SM-3 Block IB Procurement																																	
	2	2012	MDA	14	0	14																										14	
	2	2013	MDA	33	0	33																										33	
	2	2014	MDA	52	0	52																										52	
	2	2015	MDA	52	0	52																										52	
	2	2016	MDA	46	0	46																										46	
	2	2017	MDA	35	0	35																										35	
	2	2018	MDA	44	0	44																										44	
	2	2019	MDA	39	0	39																										39	
	2	2020	MDA	32	0	32																										32	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																			Date: April 2022																		
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD09 / AEGIS BMD												Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB																		
Cost Elements (Units in Each)						Fiscal Year 2012												Fiscal Year 2013												B A L A N C E							
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2011	BAL DUE AS OF 1 OCT	Calendar Year 2012												Calendar Year 2013																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P						
SM-3 Block IA Procurement																																					
	1	2009	MDA	11	11	0																									0						
	1	2010	MDA	24	11	13	-	-	-	-	6	-	1	-	-	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1	0					
	1	2011	MDA	22	0	22													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	21		
	1	2012	MDA	14	0	14													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	
SM-3 Block IB Procurement																																					
	2	2012	MDA	14	0	14													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
	2	2013	MDA	33	0	33																									33						
	2	2014	MDA	52	0	52																									52						
	2	2015	MDA	52	0	52																									52						
	2	2016	MDA	46	0	46																									46						
	2	2017	MDA	35	0	35																									35						
	2	2018	MDA	44	0	44																									44						
	2	2019	MDA	39	0	39																									39						
	2	2020	MDA	32	0	32																									32						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD09 / AEGIS BMD													Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB										
Cost Elements (Units in Each)							Fiscal Year 2016												Fiscal Year 2017												BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
SM-3 Block IA Procurement																																	
	1	2009	MDA	11	11	0																										0	
	1	2010	MDA	24	24	0																										0	
	1	2011	MDA	22	22	0																										0	
	1	2012	MDA	14	14	0																										0	
SM-3 Block IB Procurement																																	
	2	2012	MDA	14	14	0																										0	
	2	2013	MDA	33	24	9	4	-	5																								0
	2	2014	MDA	52	0	52	-	-	-	2	-	-	-	2	-	-	14	6	-	-	12	5	5	4	2								0
	2	2015	MDA	52	0	52	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	2	6	3	-	5	8	25			
	2	2016	MDA	46	0	46						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46		
	2	2017	MDA	35	0	35																											35
	2	2018	MDA	44	0	44																											44
	2	2019	MDA	39	0	39																											39
	2	2020	MDA	32	0	32																											32
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022													
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD09 / AEGIS BMD										Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB													
Cost Elements (Units in Each)							Fiscal Year 2020										Fiscal Year 2021													BALANCE			
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT				Calendar Year 2020										Calendar Year 2021													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP		
SM-3 Block IA Procurement																																	
	1	2009	MDA	11	11	0																									0		
	1	2010	MDA	24	24	0																									0		
	1	2011	MDA	22	22	0																									0		
	1	2012	MDA	14	14	0																									0		
SM-3 Block IB Procurement																																	
	2	2012	MDA	14	14	0																									0		
	2	2013	MDA	33	33	0																									0		
	2	2014	MDA	52	52	0																									0		
	2	2015	MDA	52	52	0																									0		
	2	2016	MDA	46	37	9	9																								0		
	2	2017	MDA	35	0	35	4	10	-	-	-	3	-	4	5	1	4	4														0	
	2	2018	MDA	44	0	44	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	6	10	3	2	-	-	-	-	21		
	2	2019	MDA	39	0	39						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39		
	2	2020	MDA	32	0	32						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022												
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD09 / AEGIS BMD										Item Number / Title [DODIC]: Aegis BMD SM-3 Block IB												
Cost Elements (Units in Each)							Fiscal Year 2022										Fiscal Year 2023										B A L A N C E					
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022															Calendar Year 2023										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y		J U N	J U L	A U G	S E P	
SM-3 Block IA Procurement																																
	1	2009	MDA	11	11	0																						0				
	1	2010	MDA	24	24	0																						0				
	1	2011	MDA	22	22	0																						0				
	1	2012	MDA	14	14	0																						0				
SM-3 Block IB Procurement																																
	2	2012	MDA	14	14	0																						0				
	2	2013	MDA	33	33	0																						0				
	2	2014	MDA	52	52	0																						0				
	2	2015	MDA	52	52	0																						0				
	2	2016	MDA	46	46	0																						0				
	2	2017	MDA	35	35	0																						0				
	2	2018	MDA	44	23	21	-	-	-	1	5	11	4																		0	
	2	2019	MDA	39	0	39	-	-	-	-	-	-	-	7	-	-	10	-	-	10	-	-	12								0	
	2	2020	MDA	32	0	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	8	-	20	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

**UNCLASSIFIED**

LI MD09 - AEGIS BMD  
Missile Defense Agency

# UNCLASSIFIED

<b>Exhibit P-21, Production Schedule:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD09 / AEGIS BMD				<b>Item Number / Title [DODIC]:</b> Aegis BMD SM-3 Block IB			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon - Tucson, AZ				4	0	30	30	4	0	30	30
2	Raytheon - Tucson, AZ	1	4	5	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency												Date: April 2022						
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17						P-1 Line Item Number / Title: MD09 / AEGIS BMD						Item Number / Title [DODIC]: Aegis BMD SM-3 Block IIA						
ID Code (A=Service Ready, B=Not Service Ready) : B										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total				
Procurement Quantity <i>(Units in Each)</i>				30		-		-		-		-		-		-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				851.058		0.000		0.000		-		-		-		-		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-		-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				851.058		0.000		0.000		-		-		-		-		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-		-		
Total Obligation Authority <i>(\$ in Millions)</i>				851.058		0.000		0.000		-		-		-		-		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-		-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				28.369		0.000		0.000		-		-		-		-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
SM-3 Block IIA Procurement <sup>(†)</sup>	27.018	30	810.533	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	810.533	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway Cost	-	-	810.533	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware Cost																		
Recurring Cost																		
Canisters Procurement SM-3 Block IIA	1.224	32	39.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	39.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	39.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support Cost																		
SM-3 Block IIA Production Engineering	1.354	1	1.354	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support Cost	-	-	1.354	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	28.369	30	851.058	0.000	-	0.000	0.000	-	0.000	-	-	-	-	-	-	-	-	-
Remarks: N/A																		
(†) indicates the presence of a P-5a																		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD09 / AEGIS BMD				<b>Item Number / Title [DODIC]:</b> Aegis BMD SM-3 Block IIA				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ M)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
SM-3 Block IIA Procurement <sup>(†)</sup>		2018	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Aug 2018	Apr 2022	20	26.848	Y		
SM-3 Block IIA Procurement <sup>(†)</sup>		2019	Raytheon / Tucson, AZ	SS / CPIF	Dahlgren, VA	Dec 2019	Jan 2023	10	25.403	Y		Aug 2019

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																				Date: April 2022													
Appropriation / Budget Activity / Budget Sub Activity:							P-1 Line Item Number / Title:													Item Number / Title [DODIC]:													
0300D / 01 / 17							MD09 / AEGIS BMD													Aegis BMD SM-3 Block IIA													
Cost Elements (Units in Each)							Fiscal Year 2018													Fiscal Year 2019													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
SM-3 Block IIA Procurement																																	
	1	2018	MDA	20	0	20														A	-	-	-	-	-	-	-	-	-	-	-	-	20
	1	2019	MDA	10	0	10																											10
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD09 / AEGIS BMD										Item Number / Title [DODIC]: Aegis BMD SM-3 Block IIA											
Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
SM-3 Block IIA Procurement																															
	1	2018	MDA	20	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	
	1	2019	MDA	10	0	10			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	



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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity:										P-1 Line Item Number / Title:													Item Number / Title [DODIC]:								
0300D / 01 / 17										MD09 / AEGIS BMD													Aegis BMD SM-3 Block IIA								
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2022												Fiscal Year 2023												BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
SM-3 Block IIA Procurement																															
	1	2018	MDA	20	0	20	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2								0		
	1	2019	MDA	10	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	2	2	1			0	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17					P-1 Line Item Number / Title: MD09 / AEGIS BMD				Item Number / Title [DODIC]: Aegis BMD SM-3 Block IIA			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon - Tucson, AZ	1	1	2	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2023 Missile Defense Agency										Date: April 2022	
Appropriation / Budget Activity / Budget Sub Activity: 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						P-1 Line Item Number / Title: MD09 / AEGIS BMD					
Program Elements for Code B Items: 0603892C, 0604881C						Other Related Program Elements: 0603892C					
Line Item MDAP/MAIS Code: 362											

<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	96.995	44.901	17.493	-	-	-	-	-	-	-	-	159.389
Net Procurement (P-1) ( <i>\$ in Millions</i> )	96.995	44.901	17.493	-	-	-	-	-	-	-	-	159.389
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>96.995</b>	<b>44.901</b>	<b>17.493</b>	-	-	-	-	-	-	-	-	<b>159.389</b>

**Description:**

The Missile Defense Agency awarded a five year Multi-Year Procurement (MYP) contract for 198 Standard Missile-3 Block IBs in FY 2019 through FY 2023 (final delivery FY 2026). This multiyear contract strategy uses Economic Order Quantity Advance Procurement (EOQ AP) funding to provide the U.S. Government maximum savings in price and delivery schedule. No EOQ AP was appropriated in FY 2019 with \$96.995 million requested was appropriated in FY 2020 and requested \$44.901 million Economic Order Quantity. This MYP requests \$44.901 million EOQ AP funding in FY 2021. This MYP request \$17.493 million EOQ AP funding in FY 2022 which results in savings for bulk purchases of materials and components to reduce material costs and for investments in productivity enhancements to reduce labor costs. The EOQ AP funding in FY 2020-FY 2022 supports the production of 127 All Up Rounds (AUR). EOQ AP funding will enable Raytheon Missile Defense Systems to bulk order materials with long lead times, and authorize equipment suppliers and subcontractors to do the same with sufficient lead time to support the planned delivery schedule within the context of the multiyear funding, prices, and cancellation ceilings.

Many components have minimum buy quantities which may not be met under single year procurements, which result in increased unit costs. EOQ AP quantities will allow the prime contractor and subcontractors at all tiers to exceed minimum order quantities and capture cost avoidance on these components. Long-term Agreements will provide price discounts to guarantee business. Given EOQ AP, suppliers will have increased business and stability. Suppliers will implement innovative processes and capital investments necessary to reduce costs which result in missile unit cost savings. As a result of these process innovations and capital investments, obsolescence risks and costs are also expected to be minimized.

Procuring at a guaranteed rate of minimum production will also yield cost avoidances. Allowing the contractor to manage facilities and subcontractors to a guaranteed production rate will reduce costs by allowing the Prime and subcontractors to engage in activities including, but not limited to, reducing the number of production set-ups.

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<b>Exhibit P-40, Advance Procurement Budget Line Item Justification:</b> PB 2023 Missile Defense Agency							<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency					<b>P-1 Line Item Number / Title:</b> MD09 / AEGIS BMD				
<b>Program Elements for Code B Items:</b> 0603892C, 0604881C					<b>Other Related Program Elements:</b> 0603892C				
<b>Line Item MDAP/MAIS Code:</b> 362									
Exhibits Schedule				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	Aegis BMD SM-3 Block IB			347 / 96.995	40 / 44.901	40 / 17.493	47 / -	- / -	47 / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>			<b>377 / 96.995</b>	<b>40 / 44.901</b>	<b>40 / 17.493</b>	<b>47 / -</b>	<b>- / -</b>	<b>47 / -</b>
*Title represents the P-10 Title for Advance Procurement.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									

**Justification:**  
EOQ AP procures long lead items in bulk for FY 2021 through FY 2023 lots in order to reduce the cost of subcontractor effort, material, and components as compared to single future fiscal year lot buys. The bulk advance buys enable greater production efficiencies and substantial cost savings over separate single year lot buys.

Advance Procurement (FY 2021 \$44.901 million and FY 2022 \$17.493 million) funding will procure the following major items for the FY 2022 through FY 2023 lots:

1. Kinetic Warhead Guidance Unit (29 month lead time) with estimated savings of 18% across MYP contract.
2. Third Stage Rocket Motors (24 month lead time) with estimated savings of 13% across MYP contract.
3. Throttling Divert Attitude Control System (25 month lead time) with estimated savings of 13% across MYP contract.
4. MK-72 Booster (25 month lead time) with estimated savings of 12% across MYP contract.
5. Guidance Section (Gravity Switch, Thermal Batteries) (23 month lead time) with estimated savings of 3% across MYP contract.
6. Sub-components and raw materials to facilitate production efficiencies including Integrated Dewar Assembly Substrates, Fiber Material, Beryllium Material, Electronic Components, Printed Wire Boards, Housings, Antennas and Shell Material.

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<b>Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification):</b> PB 2023 Missile Defense Agency					<b>Date:</b> April 2022	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17		<b>P-1 Line Item Number / Title:</b> MD09 / AEGIS BMD			<b>P-5 Number / Title:</b> Aegis BMD SM-3 Block IB	
<b>First System (2023) Award Date:</b> January 2018		<b>First System (2023) Completion Date:</b> October 2020		<b>Interval Between Systems:</b> 1 Months		
<b>Aegis BMD SM-3 Block IB</b>		<b>Production Leadtime</b> <i>(Months)</i>	<b>Prior Years</b> <i>(Each)</i>	<b>FY 2021</b> <i>(Each)</i>	<b>FY 2022</b> <i>(Each)</i>	<b>FY 2023</b> <i>(Each)</i>
Quantity		30	347	40	40	47
<b>Cost Elements</b>		<b>When Required</b> <i>(Months)</i>	<b>Prior Years</b> <i>(\$ M)</i>	<b>FY 2021</b> <i>(\$ M)</i>	<b>FY 2022</b> <i>(\$ M)</i>	<b>FY 2023</b> <i>(\$ M)</i>
<b>EOQ</b>						
Aegis Advanced Procurement		0	96.995	44.901	17.493	0.000
<i>Total: EOQ</i>			<i>96.995</i>	<i>44.901</i>	<i>17.493</i>	<i>0.000</i>
<b>Total Advance Procurement/Obligation Authority</b>			<b>96.995</b>	<b>44.901</b>	<b>17.493</b>	<b>-</b>

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2023 Missile Defense Agency						Date: April 2022	
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17		P-1 Line Item Number / Title: MD09 / AEGIS BMD				P-5 Number / Title: Aegis BMD SM-3 Block IB	
Cost Elements	QPA (Each)	FY 2023					
		Production Leadtime (Months)	Unit Cost (\$ M)	Contract Forecast Date	2023 Qty (Each)	For FY	Total Cost Request (\$ M)
EOQ							
Aegis Advanced Procurement	0						0.000
Total: EOQ							0.000
Total Advance Procurement/Obligation Authority							-

**Description:**  
The Advance Procurement (AP) funding provides economic order quantity (EOQ) to reduce the cost of subcontractor effort, material, and components enabling greater production efficiencies and substantial cost savings.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							P-1 Line Item Number / Title: MD11 / BMDS Sensors					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0603884C, 0603881C				Other Related Program Elements: 0603881C, 0603884C					
Line Item MDAP/MAIS Code: 362												
Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	5	1	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	2,661.718	243.270	2.738	4.606	-	4.606	8.962	6.682	13.382	27.475	-	2,968.833
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	2,661.718	243.270	2.738	4.606	-	4.606	8.962	6.682	13.382	27.475	-	2,968.833
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	2,661.718	243.270	2.738	4.606	-	4.606	8.962	6.682	13.382	27.475	-	2,968.833
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	10.901	-	-	-	-	-	-	-	-	-	-	10.901
Flyaway Unit Cost ( <i>\$ in Millions</i> )	172.502	-	-	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	532.344	243.270	0.000	-	-	-	-	-	-	-	-	-
Description:												
<p>The Army Navy/Transportable Radar Surveillance and Control (AN/TPY-2) radar is an integral component of the Missile Defense System (MDS) layered network of sensors. It is easily transported and can be configured to operate as either a Terminal High Altitude Area Defense (THAAD) Fire Unit Radar (terminal mode) or Forward-Based Radar. The forward-based AN/TPY-2 provides detection and tracking during the boost phase. This significantly reduces the uncertainty in target discrimination and reaction time, increasing the probability of a successful MDS engagement. In forward-based mode, the AN/TPY-2 also provides acquisition and track data via the MDS Command, Control, Battle Management and Communications and Link 16 to the Aegis missile defense system for cueing. The AN/TPY-2 used in terminal mode is an integral component of the THAAD Battery. The THAAD battery radar is capable of tracking multiple threats and multiple interceptors during engagements in the terminal phase. It provides surveillance, acquisition, track, discrimination, interceptor communications, and hit assessment data collection for fire control.</p>												
<p>Prior year procurement funding acquired five AN/TPY-2 Radars required to complete the THAAD Battery acquisitions. "Procurement Quantity" and "Flyaway Unit Cost" represent AN/TPY-2 radar systems ((i.e. one Antenna Equipment Unit (AEU), one Cooling Equipment Unit (CEU), one Electronic Equipment Unit (EEU), and two Prime Power Units (PPU)) only, but the "Net Procurement" cost plus the Initial Spares amount includes the costs of all hardware. The AEU Transformer and PPU procurement addressed the obsolescence in major end items and was completed in FY 2020.</p>												
<p>The FY 2021 Congressional Plus Up (CPU) procured one (1) AN/TPY-2 Radar which includes one AEU, one CEU, one EEU, and two PPUs.</p>												
<p>The AN/TPY-2 EEU Modification Kits and Radar Field Upgrade Kits provided updated processing capabilities and added a cybersecurity server in the EEUs in both Terminal and Forward-based modes. The AEU transformers include design improvements to extend the life of this mission critical component.</p>												
<p>The Next Generation server procurement updates the existing servers and enhances cybersecurity protection and processing capability for the fleet.</p>												
<p>The Change Notices procure CEU modernization kits and bring the fleets CEUs into a common, more reliable configuration.</p>												
<p>The Digital Receiver/Exciter (DREX) kit procurement will upgrade the current analog Receiver/Exciter (REX) technology to a modern digital capability, increasing reliability and spares availability for the fleet.</p>												
<p>The Advanced Signal Processor (ASP) kit procurement, when used with the DREX, will upgrade the system waveform processing capability to align signal-processing capability with advanced waveform types and provide a scalable, distributed processing solution and enhanced capability against emerging threats.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD11 / BMDS Sensors				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> 0603884C, 0603881C			<b>Other Related Program Elements:</b> 0603881C, 0603884C			
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BMDS AN/TPY-2 Radars	P-5a, P-21	A		5 / 2,661.718	1 / 243.270	- / 2.738	- / 4.606	- / -	- / 4.606
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>5 / 2,661.718</b>	<b>1 / 243.270</b>	<b>- / 2.738</b>	<b>- / 4.606</b>	<b>- / -</b>	<b>- / 4.606</b>
<small>*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										

**Justification:**

The increase from FY 2022 to FY 2023 provides for the procurement of (4) DREX kits.

FY 2023 through FY 2027 base procurement provides:

- Next Generation servers to upgrade the existing servers and enhance cybersecurity protection and processing capability for the fleet.
- DREX kits to upgrade the current analog REX technology to a modern digital capability increasing reliability and availability to the fleet.
- ASP kits to provide a scalable, distributed processing solution and enhanced capability against emerging threats.
- The AEU Transformer and PPU procurement addressed the obsolescence in major end items, and was completed in FY 2020.

Procurement quantity above reflects procurement of complete radars only. Seven (7) of the thirteen (13) AN/TPY-2 Radars procured to date were funded with Research Development Test and Evaluation (RDT&E) in Program Element 0603884C, thus not included in the costs above.

A full-year FY 2022 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Extending Government Funding and Delivering Emergency Assistance Act (Public Law 117-43), Further Extending Government Funding Act (Public Law 117-70), and Further Additional Extending Government Funding Act Public Law 117-86). The amounts included for FY 2022 reflect the annualized level provided by the continuing resolution adjusted by any full year enactments in the above mentioned legislation.



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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD11 / BMDS Sensors						Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars					
ID Code (A=Service Ready, B=Not Service Ready) : A									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total				
Procurement Quantity <i>(Units in Each)</i>				5		1		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				2,661.718		243.270		2.738		4.606		-		4.606				
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				2,661.718		243.270		2.738		4.606		-		4.606				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				2,661.718		243.270		2.738		4.606		-		4.606				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				532.344		243.270		0.000		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
AN/TPY-2 Major End Item CN Kits <sup>(†)</sup>	-	-	-	-	-	-	2.738	1	2.738	-	-	-	-	-	-	-	-	-
AN/TPY-2 Secure Servers (Cyber) <sup>(†)</sup>	1.862	2	3.724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antenna Equipment Unit (AEU) <sup>(†)</sup>	130.482	5	652.411	164.040	1	164.040	-	-	-	-	-	-	-	-	-	-	-	-
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>	1.083	10	10.829	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COBRA DANE Transmitter Group Replacement <sup>(†)</sup>	9.704	2	19.408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cooling Equipment Unit (CEU) <sup>(†)</sup>	6.996	5	34.982	13.660	1	13.660	-	-	-	-	-	-	-	-	-	-	-	-
Critical Spares <sup>(†)</sup>	9.742	3	29.227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DREX kit	-	-	-	-	-	-	-	-	-	1.152	4	4.606	-	-	-	1.152	4	4.606
Electronic Equipment Unit (EEU) <sup>(†)</sup>	20.914	5	104.572	29.355	1	29.355	-	-	-	-	-	-	-	-	-	-	-	-
Electronic Equipment Unit (EEU) Modification Kit <sup>(†)</sup>	4.850	5	24.248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17						P-1 Line Item Number / Title: MD11 / BMDS Sensors						Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars						
ID Code (A=Service Ready, B=Not Service Ready) : A									MDAP/MAIS Code:									
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Float Antenna Equipment Unit (AEU) <sup>(†)</sup>	62.019	1	62.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Float Cooling Equipment Unit (CEU) <sup>(†)</sup>	12.929	2	25.857	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Float Electronic Equipment Unit (EEU) <sup>(†)</sup>	21.491	2	42.982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Forward-Based Mode Prime Power Units (PPU) <sup>(†)</sup>	10.985	4	43.940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prime Power Unit (PPUs - 2 each radar system) <sup>(†)</sup>	14.109	5	70.545	18.108	2	36.215	-	-	-	-	-	-	-	-	-	-	-	-
Transmit/Receive Integrated Microwave Module (TRIMMs) <sup>(†)</sup>	59.840	1	59.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
†Radar Field Upgrade (RAFU) Kit	1,450.000	1	1,450.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	2,634.584	-	-	243.270	-	-	2.738	-	-	4.606	-	-	-	-	-	4.606
Non Recurring Cost																		
Antenna Equipment Unit (AEU) Radome <sup>(†)</sup>	1.525	1	1.525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antenna Equipment Unit (AEU) Transformer Hoses	0.001	180	0.151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CEU Fan Motors <sup>(†)</sup>	0.122	24	2.933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Contractor Certification <sup>(†)</sup>	2.862	1	2.862	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reference Horn Switch Assembly (RHSA) Retrofit Kits <sup>(†)</sup>	0.242	1	0.242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retrofit Firewall Kits <sup>(†)</sup>	0.092	37	3.421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	11.134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	2,645.718	-	-	243.270	-	-	2.738	-	-	4.606	-	-	-	-	-	4.606
Support Cost																		
Program Support*	16.000	1	16.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency													<b>Date:</b> April 2022					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17						<b>P-1 Line Item Number / Title:</b> MD11 / BMDS Sensors						<b>Item Number / Title [DODIC]:</b> BMDS AN/TPY-2 Radars						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>									
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support Cost</i>	-	-	16.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	532.344	5	2,661.718	243.270	1	243.270	0.000	-	2.738	-	-	4.606	-	-	-	-	-	4.606
<p><b>Remarks:</b>  AN/TPY-2 Radar consists of one Antenna Equipment Unit (AEU), one Cooling Equipment Unit (CEU), one Electronic Equipment Unit (EEU) and two Prime Power Units (PPUs).</p> <p>Procurement quantity above reflects procurement of complete radars only. Seven (7) of the thirteen (13) AN/TPY-2 Radars procured to date were funded with Research Development Test and Evaluation (RDT&amp;E) in Program Element (PE) 0603884C, thus not included in the costs above.</p> <p>(†) indicates the presence of a P-5a</p>																		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:				Item Number / Title [DODIC]:				
0300D / 01 / 17				MD11 / BMDS Sensors				BMDS AN/TPY-2 Radars				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
AN/TPY-2 Major End Item CN Kits - 1 <sup>(†)</sup>		2022	Raytheon / Woburn, MA	C / BA	MDA, Huntsville, AL	Oct 2021	Apr 2022	1	2.738	N		May 2021
AN/TPY-2 Secure Servers (Cyber) - Lot <sup>(†)</sup>		2019	Raytheon / Woburn, MA	C / BA	MDA, Huntsville, AL	Feb 2019	Aug 2020	2	1.862	N		Jun 2018
Antenna Equipment Unit (AEU) <sup>(†)</sup>		2010	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Jun 2010	Dec 2012	1	144.290	Y		
Antenna Equipment Unit (AEU) <sup>(†)</sup>		2012	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2011	Jun 2014	2	144.090	Y		
Antenna Equipment Unit (AEU) - 1 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2012	Jun 2015	1	126.400	Y		
Antenna Equipment Unit (AEU) - 2 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2013	Jun 2016	1	126.400	Y		
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>		2015	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2014	Sep 2015	3	1.775	Y		
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>		2016	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2015	Sep 2016	1	0.410	Y		
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>		2017	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2016	Sep 2017	1	0.919	Y		
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>		2018	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2017	Sep 2018	1	0.947	Y		
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>		2019	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2018	Sep 2019	2	0.978	Y		
Antenna Equipment Unit (AEU) Transformer <sup>(†)</sup>		2020	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2019	Sep 2020	2	0.869	N		
COBRA DANE Transmitter Group Replacement <sup>(†)</sup>		2018	Raytheon / Washington, D.C.	C / IDIQ	MDA, Huntsville, AL	Apr 2018	Apr 2019	1	11.000	Y		
COBRA DANE Transmitter Group Replacement <sup>(†)</sup>		2019	Raytheon / Washington, D.C.	C / IDIQ	MDA, Huntsville, AL	Jun 2019	Jun 2020	1	8.000	Y		
Cooling Equipment Unit (CEU) <sup>(†)</sup>		2010	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Jun 2010	Dec 2012	1	7.800	Y		
Cooling Equipment Unit (CEU) <sup>(†)</sup>		2012	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2011	Jun 2014	2	7.668	Y		
Cooling Equipment Unit (CEU) - 1 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2012	Jun 2015	1	6.802	Y		
Cooling Equipment Unit (CEU) - 2 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2013	Jun 2016	1	6.802	Y		
Critical Spares <sup>(†)</sup>		2014	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	May 2014	May 2015	1	14.361	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:				Item Number / Title [DODIC]:				
0300D / 01 / 17				MD11 / BMDS Sensors				BMDS AN/TPY-2 Radars				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Critical Spares <sup>(†)</sup>		2015	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2014	Dec 2015	1	11.391	Y		
Critical Spares <sup>(†)</sup>		2016	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2015	Dec 2016	1	3.475	Y		
Electronic Equipment Unit (EEU) <sup>(†)</sup>		2010	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Jun 2010	Dec 2012	1	23.400	Y		
Electronic Equipment Unit (EEU) <sup>(†)</sup>		2012	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2011	Jun 2014	2	23.000	Y		
Electronic Equipment Unit (EEU) - 1 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2012	Jun 2015	1	20.220	Y		
Electronic Equipment Unit (EEU) - 2 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2013	Jun 2016	1	20.220	Y		
Electronic Equipment Unit (EEU) Modification Kit <sup>(†)</sup>		2015	Raytheon / Woburn, MA	SS / FFP	M	Dec 2014	Jun 2015	3	2.795	Y		
Electronic Equipment Unit (EEU) Modification Kit <sup>(†)</sup>		2016	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Mar 2016	Sep 2016	1	3.183	Y		
Electronic Equipment Unit (EEU) Modification Kit <sup>(†)</sup>		2017	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2016	Jun 2017	1	3.134	Y		
Float Antenna Equipment Unit (AEU) <sup>(†)</sup>		2016	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2015	Jun 2018	1	62.019	Y		
Float Cooling Equipment Unit (CEU) <sup>(†)</sup>		2012	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2011	Jun 2014	1	7.140	Y		
Float Cooling Equipment Unit (CEU) <sup>(†)</sup>		2014	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Sep 2014	Dec 2015	1	18.721	Y		
Float Electronic Equipment Unit (EEU) <sup>(†)</sup>		2012	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2011	Jun 2014	1	20.260	Y		
Float Electronic Equipment Unit (EEU) <sup>(†)</sup>		2014	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Sep 2014	Sep 2016	1	22.718	Y		
Forward-Based Mode Prime Power Units (PPU) <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2012	Dec 2014	4	10.985	Y		
Prime Power Unit (PPUs - 2 each radar system) <sup>(†)</sup>		2010	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Jun 2010	Dec 2012	1	15.600	Y		
Prime Power Unit (PPUs - 2 each radar system) <sup>(†)</sup>		2012	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2011	Jun 2014	2	15.336	Y		
Prime Power Unit (PPUs - 2 each radar system) - 1 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2012	Jun 2015	1	13.895	Y		
Prime Power Unit (PPUs - 2 each radar system) - 2 <sup>(†)</sup>		2013	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2013	Jun 2016	1	13.895	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17			P-1 Line Item Number / Title: MD11 / BMDS Sensors						Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Transmit/Receive Integrated Microwave Module (TRIMMs) <sup>(†)</sup>		2015	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2014	Jun 2016	1	59.840	Y		
Antenna Equipment Unit (AEU) Radome - Raytheon <sup>(†)</sup>		2020	Raytheon / Huntsville	C / BA	Huntsville, AL	Jan 2020	Sep 2020	1	1.525	N		May 2019
CEU Fan Motors - Raytheon <sup>(†)</sup>		2020	Raytheon / Huntsville	C / BA	Huntsville, AL	Dec 2019	Sep 2020	24	0.122	N		Oct 2019
Contractor Certification <sup>(†)</sup>		2015	Raytheon / Woburn, MA	SS / FFP	MDA, Huntsville, AL	Dec 2014	Dec 2015	1	2.862	Y		
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon <sup>(†)</sup>		2020	Raytheon / Huntsville	C / BA	Huntsville, AL	Feb 2020	Sep 2020	1	0.242	N		Oct 2019
Retrofit Firewall Kits - Raytheon <sup>(†)</sup>		2020	Raytheon / Huntsville	C / BA	Huntsville, AL	Dec 2019	Sep 2020	37	0.092	N		Nov 2019

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**  
N/A

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022												
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors										Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2010										Fiscal Year 2011													BALANCE			
OCO	MFR#	FY	SERVICE	PROCQTY	ACCEPT PRIOR TO 1 OCT 2009	BAL DUE AS OF 1 OCT				Calendar Year 2010										Calendar Year 2011													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP		
AN/TPY-2 Major End Item CN Kits - 1																																	
	1	2022	MDA		1	0	1																										
AN/TPY-2 Secure Servers (Cyber) - Lot																																	
	2	2019	MDA		2	0	2																										
Antenna Equipment Unit (AEU)																																	
	3	2010	MDA		1	0	1											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	2012	MDA		2	0	2																										
Antenna Equipment Unit (AEU) - 1																																	
	3	2013	MDA		1	0	1																										
Antenna Equipment Unit (AEU) - 2																																	
	3	2013	MDA		1	0	1																										
Antenna Equipment Unit (AEU) Transformer																																	
	4	2015	MDA		3	0	3																										
	4	2016	MDA		1	0	1																										
	4	2017	MDA		1	0	1																										
	4	2018	MDA		1	0	1																										
	4	2019	MDA		2	0	2																										
	4	2020	MDA		2	0	2																										
COBRA DANE Transmitter Group Replacement																																	
	5	2018	MDA		1	0	1																										
	5	2019	MDA		1	0	1																										
Cooling Equipment Unit (CEU)																																	
	6	2010	MDA		1	0	1											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	6	2012	MDA		2	0	2																										
Cooling Equipment Unit (CEU) - 1																																	
	6	2013	MDA		1	0	1																										
Cooling Equipment Unit (CEU) - 2																																	
	6	2013	MDA		1	0	1																										
Critical Spares																																	
	7	2014	MDA		1	0	1																										
	7	2015	MDA		1	0	1																										
	7	2016	MDA		1	0	1																										
Electronic Equipment Unit (EEU)																																	
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD11 / BMDS Sensors													Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2010										Fiscal Year 2011										BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2009	BAL DUE AS OF 1 OCT	Calendar Year 2010										Calendar Year 2011														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP
Contractor Certification																															
	18	2015	MDA	1	0	1																									1
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																															
	19	2020	MDA	1	0	1																									1
Retrofit Firewall Kits - Raytheon																															
	20	2020	MDA	37	0	37																									37
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors														Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2012														Fiscal Year 2013														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2011	BAL DUE AS OF 1 OCT	Calendar Year 2012														Calendar Year 2013														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
Contractor Certification																																			
	18	2015	MDA	1	0	1																									1				
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																																			
	19	2020	MDA	1	0	1																									1				
Retrofit Firewall Kits - Raytheon																																			
	20	2020	MDA	37	0	37																									37				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022																
Appropriation / Budget Activity / Budget Sub Activity:										P-1 Line Item Number / Title:													Item Number / Title [DODIC]:																
0300D / 01 / 17										MD11 / BMDS Sensors													BMDS AN/TPY-2 Radars																
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2014												Fiscal Year 2015														B A L A N C E						
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT				Calendar Year 2014											Calendar Year 2015																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									
AN/TPY-2 Major End Item CN Kits - 1																																							
	1	2022	MDA		1	0	1																												1				
AN/TPY-2 Secure Servers (Cyber) - Lot																																							
	2	2019	MDA		2	0	2																												2				
Antenna Equipment Unit (AEU)																																							
	3	2010	MDA		1	1	0																												0				
	3	2012	MDA		2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0							
Antenna Equipment Unit (AEU) - 1																																							
	3	2013	MDA		1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		0							
Antenna Equipment Unit (AEU) - 2																																							
	3	2013	MDA		1	0	1			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							
Antenna Equipment Unit (AEU) Transformer																																							
	4	2015	MDA		3	0	3																	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0
	4	2016	MDA		1	0	1																												1				
	4	2017	MDA		1	0	1																												1				
	4	2018	MDA		1	0	1																												1				
	4	2019	MDA		2	0	2																												2				
	4	2020	MDA		2	0	2																												2				
COBRA DANE Transmitter Group Replacement																																							
	5	2018	MDA		1	0	1																												1				
	5	2019	MDA		1	0	1																												1				
Cooling Equipment Unit (CEU)																																							
	6	2010	MDA		1	1	0																												0				
	6	2012	MDA		2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0							
Cooling Equipment Unit (CEU) - 1																																							
	6	2013	MDA		1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		0							
Cooling Equipment Unit (CEU) - 2																																							
	6	2013	MDA		1	0	1			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							
Critical Spares																																							
	7	2014	MDA		1	0	1								A -	-	-	-	-	-	-	-	-	-	-	-	-	1						0					
	7	2015	MDA		1	0	1																	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	7	2016	MDA		1	0	1																												1				
Electronic Equipment Unit (EEU)																																							
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P								

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity:							P-1 Line Item Number / Title:														Item Number / Title [DODIC]:														
0300D / 01 / 17							MD11 / BMDS Sensors														BMDS AN/TPY-2 Radars														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2014														Fiscal Year 2015														B A L A N C E
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014														Calendar Year 2015														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
	8	2010	MDA	1	1	0																													0
	8	2012	MDA	2	0	2	-	-	-	-	-	-	-	-	-	2														0					
Electronic Equipment Unit (EEU) - 1																																			
	8	2013	MDA	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0						
Electronic Equipment Unit (EEU) - 2																																			
	8	2013	MDA	1	0	1	A -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1					
Electronic Equipment Unit (EEU) Modification Kit																																			
	9	2015	MDA	3	0	3															A -	-	-	-	-	-	-	3	0						
	9	2016	MDA	1	0	1																						1							
	9	2017	MDA	1	0	1																						1							
Float Antenna Equipment Unit (AEU)																																			
	10	2016	MDA	1	0	1																						1							
Float Cooling Equipment Unit (CEU)																																			
	11	2012	MDA	1	0	1	-	-	-	-	-	-	-	-	1														0						
	11	2014	MDA	1	0	1															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Float Electronic Equipment Unit (EEU)																																			
	12	2012	MDA	1	0	1	-	-	-	-	-	-	-	-	1														0						
	12	2014	MDA	1	0	1															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Forward-Based Mode Prime Power Units (PPU)																																			
	13	2013	MDA	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3								1						
Prime Power Unit (PPUs - 2 each radar system)																																			
	14	2010	MDA	1	1	0																						0							
	14	2012	MDA	2	0	2	-	-	-	-	-	-	-	-	2														0						
Prime Power Unit (PPUs - 2 each radar system) - 1																																			
	14	2013	MDA	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0							
Prime Power Unit (PPUs - 2 each radar system) - 2																																			
	14	2013	MDA	1	0	1	A -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1					
Transmit/Receive Integrated Microwave Module (TRIMMs)																																			
	15	2015	MDA	1	0	1															A -	-	-	-	-	-	-	-	-	-	-	-	-	1	
Antenna Equipment Unit (AEU) Radome - Raytheon																																			
	16	2020	MDA	1	0	1																						1							
CEU Fan Motors - Raytheon																																			
	17	2020	MDA	24	0	24																						24							
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity:							P-1 Line Item Number / Title:															Item Number / Title [DODIC]:											
0300D / 01 / 17							MD11 / BMDS Sensors															BMDS AN/TPY-2 Radars											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2014												Fiscal Year 2015												BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
Contractor Certification																																	
	18	2015	MDA	1	0	1													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																																	
	19	2020	MDA	1	0	1																									1		
Retrofit Firewall Kits - Raytheon																																	
	20	2020	MDA	37	0	37																									37		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors													Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2016												Fiscal Year 2017													BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
Contractor Certification																																		
	18	2015	MDA	1	0	1	-	-	1																									0
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																																		
	19	2020	MDA	1	0	1																											1	
Retrofit Firewall Kits - Raytheon																																		
	20	2020	MDA	37	0	37																											37	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors										Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars																
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019													B A L A N C E						
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT				Calendar Year 2018										Calendar Year 2019																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P					
AN/TPY-2 Major End Item CN Kits - 1																																		1		
AN/TPY-2 Secure Servers (Cyber) - Lot																																				
	2	2019	MDA	2	0	2														A -	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
Antenna Equipment Unit (AEU)																																				
	3	2010	MDA	1	1	0																												0		
	3	2012	MDA	2	2	0																												0		
Antenna Equipment Unit (AEU) - 1																																				
	3	2013	MDA	1	1	0																												0		
Antenna Equipment Unit (AEU) - 2																																				
	3	2013	MDA	1	1	0																												0		
Antenna Equipment Unit (AEU) Transformer																																				
	4	2015	MDA	3	3	0																												0		
	4	2016	MDA	1	1	0																												0		
	4	2017	MDA	1	1	0																												0		
	4	2018	MDA	1	0	1			A -	-	-	-	-	-	-	-	-	-	1														0			
	4	2019	MDA	2	0	2														A -	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	
	4	2020	MDA	2	0	2																												2		
COBRA DANE Transmitter Group Replacement																																				
	5	2018	MDA	1	0	1							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1								0
	5	2019	MDA	1	0	1																					A -	-	-	-		1				
Cooling Equipment Unit (CEU)																																				
	6	2010	MDA	1	1	0																												0		
	6	2012	MDA	2	2	0																												0		
Cooling Equipment Unit (CEU) - 1																																				
	6	2013	MDA	1	1	0																												0		
Cooling Equipment Unit (CEU) - 2																																				
	6	2013	MDA	1	1	0																												0		
Critical Spares																																				
	7	2014	MDA	1	1	0																												0		
	7	2015	MDA	1	1	0																												0		
	7	2016	MDA	1	1	0																												0		
Electronic Equipment Unit (EEU)																																				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD11 / BMDS Sensors														Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019														B A L A N C E				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT				Calendar Year 2018										Calendar Year 2019															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
	8	2010	MDA	1	1	0																													0
	8	2012	MDA	2	2	0																													0
Electronic Equipment Unit (EEU) - 1																																			
	8	2013	MDA	1	1	0																													0
Electronic Equipment Unit (EEU) - 2																																			
	8	2013	MDA	1	1	0																													0
Electronic Equipment Unit (EEU) Modification Kit																																			
	9	2015	MDA	3	3	0																													0
	9	2016	MDA	1	1	0																													0
	9	2017	MDA	1	1	0																													0
Float Antenna Equipment Unit (AEU)																																			
	10	2016	MDA	1	0	1	-	-	-	-	-	-	-	-	-	1															0				
Float Cooling Equipment Unit (CEU)																																			
	11	2012	MDA	1	1	0																													0
	11	2014	MDA	1	1	0																													0
Float Electronic Equipment Unit (EEU)																																			
	12	2012	MDA	1	1	0																													0
	12	2014	MDA	1	1	0																													0
Forward-Based Mode Prime Power Units (PPU)																																			
	13	2013	MDA	4	3	1																													1
Prime Power Unit (PPUs - 2 each radar system)																																			
	14	2010	MDA	1	1	0																													0
	14	2012	MDA	2	2	0																													0
Prime Power Unit (PPUs - 2 each radar system) - 1																																			
	14	2013	MDA	1	1	0																													0
Prime Power Unit (PPUs - 2 each radar system) - 2																																			
	14	2013	MDA	1	1	0																													0
Transmit/Receive Integrated Microwave Module (TRIMMs)																																			
	15	2015	MDA	1	1	0																													0
Antenna Equipment Unit (AEU) Radome - Raytheon																																			
	16	2020	MDA	1	0	1																													1
CEU Fan Motors - Raytheon																																			
	17	2020	MDA	24	0	24	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	24				

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022							
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors										Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019													BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP
Contractor Certification																															
	18	2015	MDA	1	1	0																									0
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																															
	19	2020	MDA	1	0	1																									1
Retrofit Firewall Kits - Raytheon																															
	20	2020	MDA	37	0	37	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	37

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																							Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors													Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020												Fiscal Year 2021												BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
Contractor Certification																																	
	18	2015	MDA	1	1	0																										0	
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																																	
	19	2020	MDA	1	0	1					A	-	-	-	-	-	-	-	1														0
Retrofit Firewall Kits - Raytheon																																	
	20	2020	MDA	37	0	37				A	-	-	-	-	-	-	-	-	37														0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			



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LI MD11 - BMDS Sensors  
Missile Defense Agency

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LI MD11 - BMDS Sensors  
Missile Defense Agency

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17										P-1 Line Item Number / Title: MD11 / BMDS Sensors														Item Number / Title [DODIC]: BMDS AN/TPY-2 Radars											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2022														Fiscal Year 2023														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
Contractor Certification																																	0		
18	2015		MDA	1	1	0																											0		
Reference Horn Switch Assembly (RHSA) Retrofit Kits - Raytheon																																			
19	2020		MDA	1	1	0																											0		
Retrofit Firewall Kits - Raytheon																																			
20	2020		MDA	37	37	0	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	0				

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<b>Exhibit P-21, Production Schedule:</b> PB 2023 Missile Defense Agency				<b>Date:</b> April 2022	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17			<b>P-1 Line Item Number / Title:</b> MD11 / BMDS Sensors		<b>Item Number / Title [DODIC]:</b> BMDS AN/TPY-2 Radars

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon - Woburn, MA	1	1	2	2	3	6	9	2	3	6	9
2	Raytheon - Woburn, MA		2	2	9	0	6	6	0	0	0	0
3	Raytheon - Woburn, MA	1	1	4	4	3	30	33	0	0	0	0
4	Raytheon - Woburn, MA	1	4	4	2	3	9	12	2	3	9	12
5	Raytheon - Washington, D.C.	1	1	1	3	2	12	14	3	2	12	14
6	Raytheon - Woburn, MA	1	1	4	4	2	30	32	0	0	0	0
7	Raytheon - Woburn, MA	1	1	4	4	2	12	14	4	2	12	14
8	Raytheon - Woburn, MA	1	1	4	4	2	30	32	0	0	0	0
9	Raytheon - Woburn, MA	1	2	4	2	3	6	9	2	3	6	9
10	Raytheon - Woburn, MA	1	1	4	4	2	30	32	0	0	0	0
11	Raytheon - Woburn, MA	1	1	4	4	2	15	17	0	0	0	0
12	Raytheon - Woburn, MA	1	1	4	4	2	24	26	0	0	0	0
13	Raytheon - Woburn, MA	1	1	4	4	2	24	26	0	0	0	0
14	Raytheon - Woburn, MA	1	1	4	4	2	30	32	0	0	0	0
15	Raytheon - Woburn, MA	1	1	4	4	2	18	20	4	2	18	20
16	Raytheon - Huntsville	1	1	1	2	3	6	9	2	3	6	9
17	Raytheon - Huntsville	1	1	24	2	3	6	9	2	3	6	9
18	Raytheon - Woburn, MA	1	1	1	3	2	12	14	3	2	12	14
19	Raytheon - Huntsville	1	1	37	2	3	6	9	2	3	6	9
20	Raytheon - Huntsville	1	1	37	2	3	3	6	2	3	3	6

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Missile Defense Agency								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						P-1 Line Item Number / Title: MD14 / SM-3 Block IIA						
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0604881C, 0603892C				Other Related Program Elements: 0604878C, 0603892C					
Line Item MDAP/MAIS Code: 362												
Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	7	9	16	10	-	10	12	12	12	12	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	238.000	318.322	488.022	337.975	-	337.975	458.224	479.190	460.468	457.932	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	238.000	318.322	488.022	337.975	-	337.975	458.224	479.190	460.468	457.932	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	238.000	318.322	488.022	337.975	-	337.975	458.224	479.190	460.468	457.932	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	27.348	28.407	28.411	31.461	-	31.461	32.714	33.026	33.444	34.384	Continuing	Continuing
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	34.000	35.369	30.501	33.798	-	33.798	38.185	39.933	38.372	38.161	Continuing	Continuing
Description: In accordance with the Consolidated Appropriations Act 2020, SM-3 Block IIA was transferred to MD14 from MD09 in FY 2020 and beyond. FY 2018 and FY 2019 costs are contained in MD09.  Procurement Quantity" and "Flyaway Unit Cost" above represent SM-3 Block IIA missiles only, but the Net Procurement and Gross Weapon System costs includes all hardware and support costs including canisters, production engineering, obsolescence and system engineering, which are detailed in separate P-5s.  FY 2021 All Up Rounds (AURs) increased from 6 to 9 AURs as a result of the PB21 Congressional Plus up of \$100 Million.  FY 2022 AURs increased from 8 to 16 AURs as a result of the PB22 Congressional Plus up of \$192 Million.  Net Procurement and Gross Weapon System costs includes all hardware and support costs including canisters, production engineering, obsolescence and system engineering, which are detailed in separate P-5s.  The Sea-Based Weapon Systems mission is to deliver an operationally effective and supportable Ballistic Missile Defense (BMD) capability to defend the nation, deployed forces, and allies. Sea-Based Weapon Systems mission aims to increase this capability by delivering evolutionary improvements as part of Missile Defense System upgrades. Sea-Based Weapon Systems mission provides a forward-deployable, mobile capability to detect and track ballistic missiles of all ranges, and the ability to destroy Short-Range Ballistic Missiles, Medium-Range Ballistic Missiles, and Intermediate-Range Ballistic Missiles (IRBM) in the midcourse phase of flight. Upgrades to both the Aegis Weapon System and the SM-3 configuration provides effective and supportable defensive capability against longer range and more sophisticated threats and an enduring Aegis Ashore defensive capability.  The SM-3 Block IB improves Sea-Based Weapon Systems mission ability to expand the BMD battlespace, engage longer range, more sophisticated ballistic missiles that may deploy countermeasures, and launch in larger raid sizes. The SM-3 Block IB Kinetic Warhead's (KW) two color infrared seeker and advanced signal processor provides a real-time discrimination and characterization capability while improving sensitivity for longer range targets and performance against more sophisticated threats. Additionally, the new Throttleable Divert and Attitude Control System KW divert engine has been upgraded over the SM-3 Block IA to provide a more flexible divert in order to maneuver the KW to intercept.												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency		<b>P-1 Line Item Number / Title:</b> MD14 / SM-3 Block IIA
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0604881C, 0603892C	<b>Other Related Program Elements:</b> 0604878C, 0603892C
<b>Line Item MDAP/MAIS Code:</b> 362		
<p>The SM-3 Block IIA provides greater capability over SM-3 Block IB, including increased velocity and range provided by a 21-inch diameter rocket motor propulsion stack, more than doubled seeker sensitivity, and more than tripled divert capability incorporated in an advanced KW. New component technologies include, but are not limited to: lightweight nosecone, advanced KW, 21-inch second stage rocket motor, and 21-inch third stage rocket motor. Working in concert with the SM-3 Block IB, the SM-3 Block IIA, will increase the Ballistic Missile Defense System defended area and increase the probability of kill against a larger threat set. The SM-3 Block IIA is also a critical part of the Aegis Ashore Missile Defense System Complex - Romania and Poland, and is also vital to defense efforts for Aegis afloat in the European and Indo-Pacific Commands. This will provide a more robust protection of Europe and the Indo-Pacific. The SM-3 Block IIA also provides defense against IRBMs and other threats.</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD14 / SM-3 Block IIA				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> 0604881C, 0603892C			<b>Other Related Program Elements:</b> 0604878C, 0603892C			
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Seabased BMD SM-3 Blk IIA		A		7 / 238.000	9 / 318.322	16 / 488.022	10 / 337.975	- / -	10 / 337.975
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>7 / 238.000</b>	<b>9 / 318.322</b>	<b>16 / 488.022</b>	<b>10 / 337.975</b>	<b>- / -</b>	<b>10 / 337.975</b>
<small>*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										

**Justification:**  
N/A

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD14 / SM-3 Block IIA						Item Number / Title [DODIC]: Seabased BMD SM-3 Blk IIA								
ID Code (A=Service Ready, B=Not Service Ready) : A									MDAP/MAIS Code:												
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity <i>(Units in Each)</i>				7			9			16			10			-			10		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				238.000			318.322			488.022			337.975			-			337.975		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				238.000			318.322			488.022			337.975			-			337.975		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				238.000			318.322			488.022			337.975			-			337.975		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				34.000			35.369			30.501			33.798			-			33.798		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total					
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)			
Flyaway Cost																					
Recurring Cost																					
SBMD SM-3 Block IIA	27.348	7	191.436	28.407	9	255.665	28.411	16	454.582	31.461	10	314.611	-	-	-	31.461	10	314.611			
Subtotal: Recurring Cost	-	-	191.436	-	-	255.665	-	-	454.582	-	-	314.611	-	-	-	-	-	314.611			
Subtotal: Flyaway Cost	-	-	191.436	-	-	255.665	-	-	454.582	-	-	314.611	-	-	-	-	-	314.611			
Hardware Cost																					
Recurring Cost																					
Canisters Procurement SM-3 Block IIA (1)	1.054	8	8.433	0.949	10	9.486	1.195	17	20.311	0.900	11	9.905	-	-	-	0.900	11	9.905			
Subtotal: Recurring Cost	-	-	8.433	-	-	9.486	-	-	20.311	-	-	9.905	-	-	-	-	-	9.905			
Subtotal: Hardware Cost	-	-	8.433	-	-	9.486	-	-	20.311	-	-	9.905	-	-	-	-	-	9.905			
Support Cost																					
SM-3 BLK IIA Diminishing Manufacturing Sources Mitigation (6)	-	-	-	-	-	-	4.380	1	4.380	4.468	1	4.468	-	-	-	4.468	1	4.468			
SM-3 BLK IIA Investment Spares (2)	9.630	1	9.630	14.003	1	14.003	-	-	-	-	-	-	-	-	-	-	-	-			
SM-3 BLK IIA Service Life Evaluation Programs (3)	20.645	1	20.645	27.492	1	27.492	3.143	1	3.143	3.273	1	3.273	-	-	-	3.273	1	3.273			
SM-3 Block IIA Obsolescence (4)	4.860	1	4.860	5.001	1	5.001	2.876	1	2.876	2.934	1	2.934	-	-	-	2.934	1	2.934			



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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency												Date: April 2022						
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17						P-1 Line Item Number / Title: MD14 / SM-3 Block IIA						Item Number / Title [DODIC]: Seabased BMD SM-3 Blk IIA						
ID Code (A=Service Ready, B=Not Service Ready) : A										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
SM-3 Block IIA Production Engineering (5)	2.996	1	2.996	6.675	1	6.675	2.730	1	2.730	2.784	1	2.784	-	-	-	2.784	1	2.784
Subtotal: Support Cost	-	-	38.131	-	-	53.171	-	-	13.129	-	-	13.459	-	-	-	-	-	13.459
Gross/Weapon System Cost	34.000	7	238.000	35.369	9	318.322	30.501	16	488.022	33.798	10	337.975	-	-	-	33.798	10	337.975
Remarks: (1) Canisters are required for each SM-3 procured. Historical trends have identified 1 canister per year breaking during delivery, thus the request for a spare canister.  (2) SM-3 Block IIA Investment Spares are procured to coincide with the delivery of the missile and are required to support AURs during 6-year maintenance period.  (3) SM-3 Block IIA Service Life Evaluation Program Testing and analysis program to demonstrate the safety and suitability of the SM-3 for an extended service life.  (4) Obsolescence is the program’s most effective and efficient way to minimize materiel readiness risks, realize future savings during production and sustainment, and improve overall life-cycle management. Identifies risk associated with the 800 vendors/suppliers discontinuing production of a component or raw material and then properly mitigating impacts to production. If not identified early, such activities will impact production and Fleet deliveries.  (5) Production Engineering provides engineering efforts support of SM-3 Guided Missile Round (GMR) production activities, manage and resolve issues that arise during manufacturing, assembly, tests, and missile integration. This effort addresses production technical issues that arise within the entire SM-3 vendor/supplier base. Includes improvement and efficiency activities such as configuration management and control boards, engineering assessments of manufacturing process improvement changes, engineering assessments of sub-vendor production issues, and engineering and quality review of documentation and test data prior to missile acceptance by the government. Additionally, includes Special Tooling and Test Equipment, which sustains and maintains the tools and test equipment vital to manufacture and test prior to government acceptance of new SM-3 missiles.  (6) Diminishing Manufacturing Sources Mitigation allows the program to mitigate the loss, or impending loss, of manufacturers of items or suppliers of items or of raw materials caused by several factors. These factors include new or evolving science, detection limits, toxicity values, and regulations related to chemicals and materials resulting in significant impact on the supply chain and industrial base.																		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency	<b>Date:</b> April 2022
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency	<b>P-1 Line Item Number / Title:</b> MD26 / Arrow 3 Upper Tier System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603913C
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**Line Item MDAP/MAIS Code:** 362

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	5	1	1	1	-	1	1	1	1	1	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	390.000	77.000	62.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	390.000	77.000	62.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Total Obligation Authority ( <i>\$ in Millions</i> )	390.000	77.000	62.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	78.000	77.000	62.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing

**Description:**

For procurement of Arrow Weapon System (AWS) components. Quantities are classified. The unit quantity of one is used as a proxy in each fiscal year with funding.

Change Summary: Funding profile mirrors the Program Funding Baseline that has been coordinated with Israeli Missile Defense Organization based on the Strategic Plan of the MOU between Israel and the U.S.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD26 / Arrow 3 Upper Tier System				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0603913C				
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Israeli Program Procurement		A		5 / 390.000	1 / 77.000	1 / 62.000	1 / 80.000	- / -	1 / 80.000
P-40	<b>Total Gross/Weapon System Cost</b>				<b>5 / 390.000</b>	<b>1 / 77.000</b>	<b>1 / 62.000</b>	<b>1 / 80.000</b>	<b>- / -</b>	<b>1 / 80.000</b>
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<b>Justification:</b> For procurement of additional AWS components.										

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency														<b>Date:</b> April 2022							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17							<b>P-1 Line Item Number / Title:</b> MD26 / Arrow 3 Upper Tier System							<b>Item Number / Title [DODIC]:</b> Israeli Program Procurement							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A										<b>MDAP/MAIS Code:</b>											
<b>Resource Summary</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>		
Procurement Quantity ( <i>Units in Each</i> )				5			1			1			1			-			1		
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				390.000			77.000			62.000			80.000			-			80.000		
Less PY Advance Procurement ( <i>\$ in Millions</i> )				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) ( <i>\$ in Millions</i> )				390.000			77.000			62.000			80.000			-			80.000		
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				0.000			0.000			0.000			-			-			-		
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>390.000</b>			<b>77.000</b>			<b>62.000</b>			<b>80.000</b>			<b>-</b>			<b>80.000</b>		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares ( <i>\$ in Millions</i> )				-			-			-			-			-			-		
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )				78.000			77.000			62.000			80.000			-			80.000		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
<b>Cost Elements</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>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)		
Hardware Cost																					
Recurring Cost																					
Israeli Programs		78.000	5	390.000	77.000	1	77.000	62.000	1	62.000	80.000	1	80.000	-	-	-	80.000	1	80.000		
<i>Subtotal: Recurring Cost</i>		-	-	390.000	-	-	77.000	-	-	62.000	-	-	80.000	-	-	-	-	-	80.000		
<i>Subtotal: Hardware Cost</i>		-	-	390.000	-	-	77.000	-	-	62.000	-	-	80.000	-	-	-	-	-	80.000		
<b>Gross/Weapon System Cost</b>		<b>78.000</b>	<b>5</b>	<b>390.000</b>	<b>77.000</b>	<b>1</b>	<b>77.000</b>	<b>62.000</b>	<b>1</b>	<b>62.000</b>	<b>80.000</b>	<b>1</b>	<b>80.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>80.000</b>	<b>1</b>	<b>80.000</b>		
<b>Remarks:</b> For procurement of AWS components. Quantities are classified. The unit quantity of one is used as a proxy in each fiscal year with funding.																					

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD34 / Short Range Ballistic Missile Defense (SRBMD)(David's Sling Weapon System (DSWS))					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0603913C				
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	5	1	1	1	-	1	1	1	1	1	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	520.000	50.000	30.000	40.000	-	40.000	40.000	40.000	40.000	40.000	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	520.000	50.000	30.000	40.000	-	40.000	40.000	40.000	40.000	40.000	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>520.000</b>	<b>50.000</b>	<b>30.000</b>	<b>40.000</b>	<b>-</b>	<b>40.000</b>	<b>40.000</b>	<b>40.000</b>	<b>40.000</b>	<b>40.000</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	104.000	50.000	30.000	40.000	-	40.000	40.000	40.000	40.000	40.000	Continuing	Continuing
<p><b>Description:</b> Previously named David's Sling. FY 2018 name change to Short Range Ballistic Missile Defense (SRBMD).</p> <p>Provides funding to the Government of Israel to procure DSWS/SRBMD components. Quantities are classified. The unit quantity of one is used as a proxy in each fiscal year with funding.</p> <p>Change Summary: Funding profile mirrors the Program Funding Baseline that has been coordinated with Israeli Missile Defense Organization based on the Strategic Plan of the Memorandum Of Understanding (MOU) between Israel and the U.S.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD34 / Short Range Ballistic Missile Defense (SRBMD)(David's Sling Weapon System (DSWS))				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0603913C				
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / David's Sling Weapon System [1]		A		5 / 520.000	1 / 50.000	1 / 30.000	1 / 40.000	- / -	1 / 40.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>5 / 520.000</b>	<b>1 / 50.000</b>	<b>1 / 30.000</b>	<b>1 / 40.000</b>	<b>- / -</b>	<b>1 / 40.000</b>
<small>*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										

**Justification:**  
For procurement of additional SRBMD/DSWS components.



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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency												<b>Date:</b> April 2022						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17						<b>P-1 Line Item Number / Title:</b> MD34 / Short Range Ballistic Missile Defense (SRBMD) (David's Sling Weapon System (DSWS))						<b>Item Number / Title [DODIC]:</b> 1 / David's Sling Weapon System [1]						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>									
<b>Resource Summary</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>				
Procurement Quantity <i>(Units in Each)</i>				5		1		1		1		-		1				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				520.000		50.000		30.000		40.000		-		40.000				
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				520.000		50.000		30.000		40.000		-		40.000				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>				<b>520.000</b>		<b>50.000</b>		<b>30.000</b>		<b>40.000</b>		<b>-</b>		<b>40.000</b>				
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				104.000		50.000		30.000		40.000		-		40.000				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</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>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>
Hardware Cost																		
Recurring Cost																		
David's Sling Weapon System	104.000	5	520.000	50.000	1	50.000	30.000	1	30.000	40.000	1	40.000	-	-	-	40.000	1	40.000
<i>Subtotal: Recurring Cost</i>	-	-	520.000	-	-	50.000	-	-	30.000	-	-	40.000	-	-	-	-	-	40.000
<i>Subtotal: Hardware Cost</i>	-	-	520.000	-	-	50.000	-	-	30.000	-	-	40.000	-	-	-	-	-	40.000
<b>Gross/Weapon System Cost</b>	<b>104.000</b>	<b>5</b>	<b>520.000</b>	<b>50.000</b>	<b>1</b>	<b>50.000</b>	<b>30.000</b>	<b>1</b>	<b>30.000</b>	<b>40.000</b>	<b>1</b>	<b>40.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>40.000</b>	<b>1</b>	<b>40.000</b>
<b>Remarks:</b> DSWS/SRBMD component procurement. Quantities are classified. The unit quantity of one is used as a proxy in each fiscal year with Funding.																		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD65 / Defense of Guam Procurement					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> 0604102C				
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	0	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	80.000	26.514	-	26.514	43.227	35.493	35.374	80.434	-	301.042
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	80.000	26.514	-	26.514	43.227	35.493	35.374	80.434	-	301.042
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>0.000</b>	<b>80.000</b>	<b>26.514</b>	<b>-</b>	<b>26.514</b>	<b>43.227</b>	<b>35.493</b>	<b>35.374</b>	<b>80.434</b>	<b>-</b>	<b>301.042</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<p><b>Description:</b></p> <p>The Department finalized the details of this Integrated Air and Missile Defense (IAMD) system. The Aegis portion of the selected architecture carries elements such as the Fire Control System, Common Display, Processing Equipment, and unique equipment as defined by the final architectural design. The final configuration for IAMD on Guam is based on the results of the MDA and Cost Assessment and Program Evaluation (CAPE) architecture studies, and Departmental direction.</p> <p>The Department finalized the details of this IAMD system. The Aegis portion of the selected architecture consists of the following systems that will be procured in FY 2023:</p> <ul style="list-style-type: none"> <li>- Fire Control System (FCS)</li> <li>- Integrated Friend or Foe (IFF) System</li> </ul> <p>The specific versions and modifications of the above equipment may change as final details are identified in the design process.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD65 / Defense of Guam Procurement				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B				<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0604102C			
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	GDS AWS Equipment		B		0 / 0.000	- / 0.000	- / 80.000	- / 26.514	- / -	- / 26.514
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>0 / 0.000</b>	<b>- / 0.000</b>	<b>- / 80.000</b>	<b>- / 26.514</b>	<b>- / -</b>	<b>- / 26.514</b>
<small>*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.</small>										
<small>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</small>										

**Justification:**

The decrease from FY 2022 to FY 2023 reflects the architecture solution and resource allocation established by the Department.

FY 2022 Procurement includes materials to include Fire Control System, Multi-Mission Display, Command, Control, Communications, Computers and Intelligence, Common Display Processing Equipment, Common Processing System and Navigation System.

FY 2023 Planned Procurement includes the following Aegis Weapon System equipment:

- Fire Control System (FCS)
- Integrated Friend or Foe (IFF) System

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency												<b>Date:</b> April 2022						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17						<b>P-1 Line Item Number / Title:</b> MD65 / Defense of Guam Procurement						<b>Item Number / Title [DODIC]:</b> GDS AWS Equipment						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B									<b>MDAP/MAIS Code:</b>									
<b>Resource Summary</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>				
Procurement Quantity <i>(Units in Each)</i>				0		-		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				0.000		0.000		80.000		26.514		-		26.514				
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				0.000		0.000		80.000		26.514		-		26.514				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>				<b>0.000</b>		<b>0.000</b>		<b>80.000</b>		<b>26.514</b>		<b>-</b>		<b>26.514</b>				
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</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>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>	<b>Unit Cost</b> <i>(\$ M)</i>	<b>Qty</b> <i>(Each)</i>	<b>Total Cost</b> <i>(\$ M)</i>
Hardware Cost																		
Non Recurring Cost																		
AWS Equipment	-	-	-	-	-	-	80.000	1	80.000	-	-	26.514	-	-	-	-	-	26.514
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	80.000	-	-	26.514	-	-	-	-	-	26.514
Subtotal: Hardware Cost	-	-	-	-	-	-	-	-	80.000	-	-	26.514	-	-	-	-	-	26.514
Gross/Weapon System Cost	0.000	0	0.000	0.000	-	0.000	0.000	-	80.000	-	-	26.514	-	-	-	-	-	26.514
<b>Remarks:</b> Long lead equipment																		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD73 / Aegis Ashore Phase III					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> 0604880C, 0604881C, 0603892C				<b>Other Related Program Elements:</b> 0604880C				
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	1	-	-	-	-	-	-	-	-	-	-	1
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	541.315	34.629	25.866	30.056	-	30.056	2.390	0.976	-	-	-	635.232
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	541.315	34.629	25.866	30.056	-	30.056	2.390	0.976	-	-	-	635.232
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>541.315</b>	<b>34.629</b>	<b>25.866</b>	<b>30.056</b>	<b>-</b>	<b>30.056</b>	<b>2.390</b>	<b>0.976</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>635.232</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	541.315	0.000	0.000	-	-	-	-	-	-	-	-	635.232
<p><b>Description:</b></p> <p>The increase from FY 2022 to FY 2023 provides continued support to achieve European Phased Adaptive Approach (EPAA) Phase III Technical Capability Declaration (TCD) in FY 2023.</p> <p>On 17 December 2009, the President announced an overarching policy to provide regional missile defense to U.S. deployed forces, allies and partners in Europe called the European Phased Adaptive Approach (EPAA). Within this policy, a European PAA specifically addresses a timeline to deploy a mix of afloat and land-based Missile Defense (MD) capabilities. Aegis Ashore represents one of these land-based capabilities.</p> <p>Aegis Ashore provides the Aegis Missile Defense capability against short and medium range ballistic missiles in an ashore configuration. It will be similar to the Aegis At-Sea BMD capability inherent in the new Arleigh Burke-class Aegis destroyers (DDG-113 and following ships) to facilitate training and logistical support by the lead service, Navy. Aegis Ashore re-hosts the required BMD components of a Navy Destroyer in an ashore configuration to include a Deckhouse structure and Weapon System comprised of an AN/SPY-1D(V) radar, Vertical Launch System (VLS), computing infrastructure, Command, Control, Communications, Computers and Intelligence (C4I) systems, and operator consoles. Aegis Ashore can adapt to the threat and can be deployed to other regions as needed to provide persistent coverage for the Geographic Combatant Commanders. Phase III of EPAA (FY 2023) deploys a land based Aegis Ashore in Poland, and introduces an upgraded Standard Missile, the SM-3 Block IIA. This missile brings improved coverage against medium and intermediate range ballistic threats.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency							<b>Date:</b> April 2022			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD73 / Aegis Ashore Phase III				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> 0604880C, 0604881C, 0603892C			<b>Other Related Program Elements:</b> 0604880C			
<b>Line Item MDAP/MAIS Code:</b> 362										
<b>Exhibits Schedule</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>Exhibit Type</b>	<b>Title*</b>	<b>Subexhibits</b>	<b>ID CD</b>	<b>MDAP/MAIS Code</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>	<b>Quantity / Total Cost (Each) / (\$ M)</b>
P-5	Aegis Ashore Poland, Equipment and Deckhouse	P-5a, P-21	A		1 / 541.315	- / 34.629	- / 25.866	- / 30.056	- / -	- / 30.056
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>1 / 541.315</b>	<b>- / 34.629</b>	<b>- / 25.866</b>	<b>- / 30.056</b>	<b>- / -</b>	<b>- / 30.056</b>
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
<p><b>Justification:</b>          The Aegis Ashore to be installed in Poland contains a Deckhouse structure and Weapon System comprised of a AN/SPY-1D(V) radar, Vertical Launch System (VLS), computing infrastructure, Command, Control, Communications, Computers and Intelligence (C4I) systems, and operator consoles with very diverse procurement lead times from multiple contracts. The funding profile addresses the multiple actions required to field the Aegis Ashore end item in Poland in FY 2023, keep the individual components up to date with the Navy's destroyer modernization plan and install modifications as required to enhance co-existence with Broadband Wireless Access systems in the European theater. MDA uses Research Development, Test, and Evaluation (RDT&amp;E) (Program Element (PE)-0604880C) to modernize, develop and test Aegis Ashore capability improvements at the Aegis Ashore Missile Defense Test Complex (AAMDTC) in Hawaii for implementation at operational sites. Procurement funding provides the following:</p> <p>FY 2016 Fabrication of the Deckhouse structure and assembly of Aegis Ashore Deckhouse structure in Poland.          FY 2017 Install Aegis Ashore Weapon System in the Aegis Ashore Deckhouse structure in Poland.          FY 2018 Continue installation of the Aegis Ashore Weapon System in the Aegis Ashore Deckhouse structure in Poland.          FY 2019 Continue installation of the combat system and combat structure adaptation, integration and installation          FY 2020 Continue installation of the combat system and combat structure adaptation, integration and installation          FY 2021 Continue installation of the combat system and combat structure adaptation, integration and installation          FY 2022 Initiate weapon system commissioning prior to Chief of Naval Operations acceptance and EUCOM acceptance          FY 2023 Complete weapon system commissioning prior to Chief of Naval Operations acceptance and EUCOM acceptance</p>										



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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022								
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III						Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse								
ID Code (A=Service Ready, B=Not Service Ready) : A										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity <i>(Units in Each)</i>				1			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				541.315			34.629			25.866			30.056			-			30.056		
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				541.315			34.629			25.866			30.056			-			30.056		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000			0.000			0.000			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				541.315			34.629			25.866			30.056			-			30.056		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				541.315			0.000			0.000			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements		Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total				
		Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)		
Flyaway Cost																					
Recurring Cost																					
Aegis Ashore Poland, Equipment and Deckhouse <sup>(†)</sup>		541.315	1	541.315	-	-	34.629	-	-	25.866	-	-	30.056	-	-	-	-	-	30.056		
Subtotal: Recurring Cost		-	-	541.315	-	-	34.629	-	-	25.866	-	-	30.056	-	-	-	-	-	30.056		
Subtotal: Flyaway Cost		-	-	541.315	-	-	34.629	-	-	25.866	-	-	30.056	-	-	-	-	-	30.056		
Gross/Weapon System Cost		541.315	1	541.315	0.000	-	34.629	0.000	-	25.866	-	-	30.056	-	-	-	-	-	30.056		
Remarks: N/A																					
(†) indicates the presence of a P-5a																					

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17				P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III					Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Aegis Ashore Poland, Equipment and Deckhouse <sup>(†)</sup>		2015	USACE / Poland	MIPR	Dahlgren VA	Jan 2016	Sep 2023	1	0.000	N		

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III																	Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2016												Fiscal Year 2017												BALANCE			
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
Aegis Ashore Poland, Equipment and Deckhouse																																		
	1	2015	MDA		1	0	1				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III														Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse														
Cost Elements (Units in Each)							Fiscal Year 2018														Fiscal Year 2019														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
Aegis Ashore Poland, Equipment and Deckhouse																																			
	1	2015	MDA	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III														Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020														Fiscal Year 2021														BALANCE
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020														Calendar Year 2021														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
Aegis Ashore Poland, Equipment and Deckhouse																																			
	1	2015	MDA	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																								Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III														Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2022														Fiscal Year 2023														BALANCE
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Aegis Ashore Poland, Equipment and Deckhouse																																			
	1	2015	MDA	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency								Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17				P-1 Line Item Number / Title: MD73 / Aegis Ashore Phase III				Item Number / Title [DODIC]: Aegis Ashore Poland, Equipment and Deckhouse			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	USACE - Poland				0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD83 / Iron Dome					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A					<b>Other Related Program Elements:</b> 0603913C				
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	9	1	1	1	-	1	1	1	1	1	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,568.630	73.000	1,108.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,568.630	73.000	1,108.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,568.630</b>	<b>73.000</b>	<b>1,108.000</b>	<b>80.000</b>	<b>-</b>	<b>80.000</b>	<b>80.000</b>	<b>80.000</b>	<b>80.000</b>	<b>80.000</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	174.292	73.000	1,108.000	80.000	-	80.000	80.000	80.000	80.000	80.000	Continuing	Continuing
<p><b>Description:</b> Provides funding to the Government of Israel to procure Iron Dome components. Quantities are classified. The unit quantity of one is used as a proxy in each fiscal year with funding.</p> <p>Change Summary: Funding profile mirrors the Program Funding Baseline that has been coordinated with Israeli Missile Defense Organization based on the Strategic Plan of the MOU between Israel and the U.S.</p> <p>FY 2022 Congressional Add provides for procurement of Iron Dome Defense System (IDDS) components to counter short-range rockets, Unmanned Arial Vehicles (UAVs) and missile threats.</p>												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD83 / Iron Dome				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0603913C				
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Iron Dome		A		9 / 1,568.630	1 / 73.000	1 / 1,108.000	1 / 80.000	- / -	1 / 80.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>9 / 1,568.630</b>	<b>1 / 73.000</b>	<b>1 / 1,108.000</b>	<b>1 / 80.000</b>	<b>- / -</b>	<b>1 / 80.000</b>
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

**Justification:**  
For procurement of additional Iron Dome components.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency														<b>Date:</b> April 2022							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17							<b>P-1 Line Item Number / Title:</b> MD83 / Iron Dome							<b>Item Number / Title [DODIC]:</b> Iron Dome							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A										<b>MDAP/MAIS Code:</b>											
<b>Resource Summary</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>		
Procurement Quantity ( <i>Units in Each</i> )				9			1			1			1			-			1		
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				1,568.630			73.000			1,108.000			80.000			-			80.000		
Less PY Advance Procurement ( <i>\$ in Millions</i> )				0.000			0.000			0.000			-			-			-		
Net Procurement (P-1) ( <i>\$ in Millions</i> )				1,568.630			73.000			1,108.000			80.000			-			80.000		
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				0.000			0.000			0.000			-			-			-		
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>1,568.630</b>			<b>73.000</b>			<b>1,108.000</b>			<b>80.000</b>			<b>-</b>			<b>80.000</b>		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares ( <i>\$ in Millions</i> )				-			-			-			-			-			-		
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )				174.292			73.000			1,108.000			80.000			-			80.000		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
<b>Cost Elements</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>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ M)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)		
Hardware Cost																					
Recurring Cost																					
Iron Dome		174.292	9	1,568.630	73.000	1	73.000	1,108.000	1	1,108.000	80.000	1	80.000	-	-	-	80.000	1	80.000		
<i>Subtotal: Recurring Cost</i>		-	-	1,568.630	-	-	73.000	-	-	1,108.000	-	-	80.000	-	-	-	-	-	80.000		
<i>Subtotal: Hardware Cost</i>		-	-	1,568.630	-	-	73.000	-	-	1,108.000	-	-	80.000	-	-	-	-	-	80.000		
<b>Gross/Weapon System Cost</b>		<b>174.292</b>	<b>9</b>	<b>1,568.630</b>	<b>73.000</b>	<b>1</b>	<b>73.000</b>	<b>1,108.000</b>	<b>1</b>	<b>1,108.000</b>	<b>80.000</b>	<b>1</b>	<b>80.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>80.000</b>	<b>1</b>	<b>80.000</b>		
<b>Remarks:</b> Procurement of additional Iron Dome components. Quantities are classified. The unit quantity of one is used as a proxy in each fiscal year with funding.																					

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency										<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency							<b>P-1 Line Item Number / Title:</b> MD90 / Aegis BMD Hardware and Software					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A				<b>Other Related Program Elements:</b> 0603892C					
<b>Line Item MDAP/MAIS Code:</b> 362												
<b>Resource Summary</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>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	124	9	5	6	-	6	7	4	2	2	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	560.799	104.241	81.791	78.181	-	78.181	115.776	116.026	61.748	32.695	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	560.799	104.241	81.791	78.181	-	78.181	115.776	116.026	61.748	32.695	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>560.799</b>	<b>104.241</b>	<b>81.791</b>	<b>78.181</b>	<b>-</b>	<b>78.181</b>	<b>115.776</b>	<b>116.026</b>	<b>61.748</b>	<b>32.695</b>	<b>Continuing</b>	<b>Continuing</b>
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	4.523	11.582	16.358	13.030	-	13.030	16.539	29.007	30.874	16.348	Continuing	Continuing
<b>Description:</b> FY 2023 Base procurement budget request provides the procurement, installation, fielding and deployment of integrated Aegis Ballistic Missile Defense (BMD) combat system to operational ships and sites for homeland and regional defense. The Sea-Based mission is to deliver an enduring, operationally effective and supportable BMD capability to defend the nation, deployed forces, friends and allies, and to increase this capability by delivering evolutionary improvements as part of Ballistic Missile Defense System (BMDS) upgrades. The Aegis BMD element of the Missile Defense System (MDS) capitalizes upon and evolves from the existing United States Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis BMD combat system provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy Short-Range Ballistic Missiles (SRBMs), Medium-Range Ballistic Missiles (MRBMs), and Intermediate-Range Ballistic Missiles (IRBMs) in the midcourse phase of flight, and shorter range missiles in the terminal phase of flight. The Aegis BMD combat system also provides a Long Range Surveillance and Track (LRS&T) capability to the MDS in support of early detection of BMD threats to the homeland. Upgrades to both the AWS and the SM-3 configuration provides effective and supportable defensive capability against longer range and more sophisticated threats, and an enduring Aegis Ashore defensive capability.												

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D: Procurement, Defense-Wide / BA 01: Major Equipment / BSA 17: Major Equipment, Missile Defense Agency						<b>P-1 Line Item Number / Title:</b> MD90 / Aegis BMD Hardware and Software				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A				<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0603892C			
<b>Line Item MDAP/MAIS Code:</b> 362										
Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	Aegis BMD Shipsets	P-5a, P-21	A		124 / 560.799	9 / 104.241	5 / 81.791	6 / 78.181	- / -	6 / 78.181
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>124 / 560.799</b>	<b>9 / 104.241</b>	<b>5 / 81.791</b>	<b>6 / 78.181</b>	<b>- / -</b>	<b>6 / 78.181</b>
<p>*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.</p> <p>Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.</p>										
<p><b>Justification:</b></p> <p>FY 2023 Base procurement dollars supports the continued procurement and deployment of Aegis BMD capabilities to operational ships and sites. A shipset consists of the procurement of cabinets, cabling, equipment, and other material required to support a single shipboard installation of the appropriate BMD baseline. Procurement Quantity represents shipsets only and excludes installation services and Diminishing Manufacturing Sources (DMS).</p> <p>Upgrading 4.x to BL 5.4.1 (BMD 4.2) is a joint effort with the U.S. Navy that refurbishes existing ship AN/SPY-1 radar arrays with the installation of antenna Low Noise Amplifiers (LNAs). Updates planned for 12 Flight I/II Destroyers (DDG) with increased radar capability, and growth to maintain relevance through End of Service Life. Capabilities delivered include discrimination improvements, increased threat set, improved radar sensitivity and other warfighter improvements. BMD 4.2 procured an Array Set in FY 2020 to support rotatable pool for radar refurbishment.</p> <p>Upgrading the 5.x shipsets adds capability and capacity in support of achieving the European Phased Adaptive Approach (EPAA) Phase III requirements. Hardware and software updates, including Aegis BMD TI-12H, to 5.x shipsets provides warfighter improvements implemented through Combat System upgrades to meet emerging threats.</p> <p>The Aegis BL 9.C2 (BMD 5.1) TI-12H Upgrade Procurement consists of hardware and associated computer program necessary to upgrade existing in-service Aegis BL 9.C2 (BMD 5.1) TI-12 ships to a TI-16 compatible weapon system configuration.</p> <p>The procurement and fielding of new BMD components impacted by Diminishing Manufacturing Sources (DMS) will allow for the continued production of 5.x and BL 5.4.0 (BMD 4.1.2) in support of EPAA Phase II and III requirements.</p>										

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17						P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software							Item Number / Title [DODIC]: Aegis BMD Shipsets					
ID Code (A=Service Ready, B=Not Service Ready) : A										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total				
Procurement Quantity <i>(Units in Each)</i>				124		9		5		6		-		6				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				560.799		104.241		81.791		78.181		-		78.181				
Less PY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				560.799		104.241		81.791		78.181		-		78.181				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				0.000		0.000		0.000		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				560.799		104.241		81.791		78.181		-		78.181				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>				4.523		11.582		16.358		13.030		-		13.030				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Aegis BL 5.4.0 (BMD 4.1.2) Installs <sup>(†)</sup>	0.639	8	5.114	0.409	5	2.044	-	-	-	-	-	-	-	-	-	-	-	-
Aegis BL 5.4.0 (BMD 4.1.2) Procurement <sup>(†)</sup>	0.237	18	4.257	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aegis BL 5.4.1 (BMD 4.2) Hardware Procurement <sup>(†)</sup>	51.996	1	51.996	2.825	3	8.474	24.172	1	24.172	2.247	3	6.741	-	-	-	2.247	3	6.741
Aegis BL 9.C1 (5.0 CU) Installs	1.400	1	1.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aegis BL 9.C2 (BMD 5.1) BackFit Installs <sup>(†)</sup>	1.026	16	16.420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aegis BL 9.C2 (BMD 5.1) BackFit Procurement <sup>(†)</sup>	2.194	17	37.297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>	1.652	9	14.864	1.270	3	3.811	1.361	2	2.722	1.387	2	2.774	-	-	-	1.387	2	2.774
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>	3.984	11	43.822	6.559	3	19.678	6.563	3	19.689	5.834	3	17.503	-	-	-	5.834	3	17.503
Aegis BMD 3.6 to 4.X Hardware Procurements <sup>(†)</sup>	13.655	11	150.203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Missile Defense Agency													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software						Item Number / Title [DODIC]: Aegis BMD Shipsets					
ID Code (A=Service Ready, B=Not Service Ready) : A										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>	18.487	11	203.359	42.365	1	42.365	25.621	1	25.621	-	-	-	-	-	-	-	-	-
Aegis BMD DMS <sup>(†)</sup>	-	-	-	0.570	12	6.835	0.829	3	2.488	0.469	5	2.346	-	-	-	0.469	5	2.346
Aegis BMD TI-12H Upgrade Installs <sup>(†)</sup>	-	-	-	2.279	4	9.114	3.147	1	3.147	1.466	6	8.796	-	-	-	1.466	6	8.796
Aegis BMD TI-12H Upgrade Procurement <sup>(†)</sup>	3.389	7	23.722	3.871	3	11.614	3.081	1	3.081	-	-	-	-	-	-	-	-	-
Hardware - Aegis BL 5.4.1 (BMD 4.2) Installs	-	-	-	-	-	-	-	-	-	7.599	2	15.198	-	-	-	7.599	2	15.198
Hardware - Aegis BL 5.4.1 (BMD 4.2) Refurbishments	-	-	-	-	-	-	-	-	-	11.615	2	23.229	-	-	-	11.615	2	23.229
Subtotal: Recurring Cost	-	-	552.454	-	-	103.935	-	-	80.920	-	-	76.587	-	-	-	-	-	76.587
Subtotal: Hardware Cost	-	-	552.454	-	-	103.935	-	-	80.920	-	-	76.587	-	-	-	-	-	76.587
Software Cost																		
Recurring Cost																		
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs <sup>(†)</sup>	0.643	8	5.145	0.306	1	0.306	0.436	2	0.871	0.399	4	1.594	-	-	-	0.399	4	1.594
Aegis BMD 4.0 to 4.X Software Installs	0.533	6	3.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	8.345	-	-	0.306	-	-	0.871	-	-	1.594	-	-	-	-	-	1.594
Subtotal: Software Cost	-	-	8.345	-	-	0.306	-	-	0.871	-	-	1.594	-	-	-	-	-	1.594
Gross/Weapon System Cost	4.523	124	560.799	11.582	9	104.241	16.358	5	81.791	13.030	6	78.181	-	-	-	13.030	6	78.181
Remarks: All Shipset procurements and installs are in alignment with Navy Ship Fielding Plan as of 14 Jan 2022.																		
Aegis BL 5.4.1 (BMD 4.2) AN/SPY-1 upgrade is a joint effort with the U.S. Navy that provides refurbishment of existing ship AN/SPY-1 radar arrays with the addition of Low Noise Amplifiers (LNAs). Planned update for 12 FLT I/II DDG's with increased capability and growth to maintain relevance through End of Service Life. Weapon System Updates include MIL-SPEC UYK-43, COTS BMD Signal Processor, and COTS adjunct processor updates.																		
The Aegis BL 9.C2 (BMD 5.1) Backfit upgrade installs consists of an Aegis Weapon System, Command/Control/Communication, Kill Assessment (KAS) and Vertical Launching System hardware and associated computer program necessary to upgrade an in-service Aegis BL 9.C1 (BMD 5.0CU) capable ship to BL 9.C2 (BMD 5.1). These unit costs are averaged in the years where there is a mix of ship configurations and will result in unit cost fluctuations year to year.																		



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<b>Exhibit P-5, Cost Analysis:</b> PB 2023 Missile Defense Agency		<b>Date:</b> April 2022
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17	<b>P-1 Line Item Number / Title:</b> MD90 / Aegis BMD Hardware and Software	<b>Item Number / Title [DODIC]:</b> Aegis BMD Shipsets
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>
<p>The Aegis BL 9.C2 (BMD 5.1) Inline procurement/installation upgrades non-BMD capable ships to full Aegis BL 9.C2 (BMD 5.1) capability. Unit costs for Aegis BL 9.C2 (BMD 5.1) Inline Procurements is dependent on specific ship configuration. These unit costs are averaged in the years where there is a mix of ship configurations and will result in unit cost fluctuations year to year.</p> <p>The Aegis BMD Production DMS Procurements allows for the continued production of BMD 5.x and BL 5.4 (BMD 4.1) combat system hardware impacted by production hardware obsolescence, and the installation of this hardware on in-service BMD 5.x and BL 5.4 (BMD 4.1) ships to reduce configuration variance and sustainment complexity.</p> <p>The Aegis BL 9.C2 (BMD 5.1) TI-12H Upgrade Procurement consists of hardware and associated computer program necessary to upgrade existing in-service Aegis BL 9.C2 (BMD 5.1) TI-12 ships to a TI-16 compatible weapon system configuration.</p> <p>The Aegis BL 9.B/C2 (BMD 5.1) Capability Upgrade Installs deliver incremental Common Source Library (CSL) capability upgrades to the BMD 5.1 ships and sites providing increased performance against emergent threats.</p> <p>(†) indicates the presence of a P-5a</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17				P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software					Item Number / Title [DODIC]: Aegis BMD Shipsets			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Aegis BL 5.4.0 (BMD 4.1.2) Installs		2019	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Jun 2020	Sep 2020	3	0.650	N		Jun 2019
Aegis BL 5.4.0 (BMD 4.1.2) Installs <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington DC	Jun 2020	Sep 2020	5	0.160	Y		Jun 2019
Aegis BL 5.4.0 (BMD 4.1.2) Installs <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2020	Nov 2021	5	0.409	Y		Feb 2020
Aegis BL 5.4.0 (BMD 4.1.2) Procurement <sup>(†)</sup>		2019	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Apr 2019	Mar 2020	10	0.167	Y		Jan 2018
Aegis BL 5.4.0 (BMD 4.1.2) Procurement <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Apr 2020	Sep 2020	8	0.200	Y		Jan 2019
Aegis BL 5.4.1 (BMD 4.2) Hardware Procurement <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Dec 2019	Dec 2020	1	51.996	Y		Mar 2019
Aegis BL 5.4.1 (BMD 4.2) Hardware Procurement <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Dec 2020	Dec 2022	3	2.825	Y		Mar 2020
Aegis BL 9.C2 (BMD 5.1) BackFit Installs <sup>(†)</sup>		2017	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Dahlgren, VA	Jun 2017	Oct 2018	3	1.134	Y		Aug 2016
Aegis BL 9.C2 (BMD 5.1) BackFit Installs <sup>(†)</sup>		2018	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Dahlgren, VA	Nov 2017	Jun 2018	8	0.710	Y		Feb 2017
Aegis BL 9.C2 (BMD 5.1) BackFit Installs <sup>(†)</sup>		2019	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Dahlgren, VA	Jun 2019	Apr 2020	3	0.762	Y		Jun 2018
Aegis BL 9.C2 (BMD 5.1) BackFit Installs <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Dahlgren, VA	Feb 2020	Jun 2020	2	1.485	Y		Jun 2019
Aegis BL 9.C2 (BMD 5.1) BackFit Installs		2021	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Dahlgren, VA	Jun 2020	Dec 2020	0	0.000	Y		Dec 2019
Aegis BL 9.C2 (BMD 5.1) BackFit Procurement		2016	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Nov 2015	Jan 2016	11	2.194	N		Sep 2015
Aegis BL 9.C2 (BMD 5.1) BackFit Procurement <sup>(†)</sup>		2017	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2017	Aug 2018	6	2.533	Y		Jul 2016
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2017	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2017	Aug 2018	1	3.310	Y		Jul 2016
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2018	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Jan 2018	Jan 2019	3	0.450	Y		Jul 2017
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2019	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Jan 2019	Jan 2020	2	0.636	Y		Jul 2018
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Jan 2020	Jan 2021	3	0.460	Y		Jul 2019

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17				P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software					Item Number / Title [DODIC]: Aegis BMD Shipsets			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2020	Aug 2022	3	1.270	Y		Jul 2020
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2021	Feb 2022	2	1.361	Y		Jul 2021
Aegis BL 9.C2 (BMD 5.1) Inline Installs <sup>(†)</sup>		2023	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2022	Feb 2023	2	1.387	Y		Jul 2022
Aegis BL 9.C2 (BMD 5.1) Inline Procurements		2016	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	May 2016	Nov 2017	2	4.122	N		Jul 2015
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>		2017	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	May 2017	Nov 2018	1	3.913	Y		Jul 2016
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>		2018	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2018	Apr 2019	3	3.735	Y		Jul 2017
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>		2019	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2019	Aug 2020	2	3.738	Y		Jun 2018
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2020	Aug 2021	3	3.871	Y		Jun 2019
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Apr 2021	Jun 2022	3	6.599	N		Apr 2020
Aegis BL 9.C2 (BMD 5.1) Inline Procurements <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Apr 2022	Jun 2023	3	6.563	Y		Nov 2021
Aegis BMD 3.6 to 4.X Hardware Procurements		2016	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2016	Aug 2017	6	13.519	N		Jul 2015
Aegis BMD 3.6 to 4.X Hardware Procurements <sup>(†)</sup>		2017	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2017	Aug 2018	1	12.100	Y		Jul 2016
Aegis BMD 3.6 to 4.X Hardware Procurements <sup>(†)</sup>		2018	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2018	Aug 2019	3	12.100	Y		Jul 2017
Aegis BMD 3.6 to 4.X Hardware Procurements <sup>(†)</sup>		2019	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2019	Aug 2020	1	15.010	Y		Jun 2018
Aegis BMD 3.6 to 4.X Installs		2016	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Washington, D.C.	Jan 2016	May 2017	1	17.831	N		May 2015
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>		2017	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Washington, D.C.	Jan 2017	Jun 2018	1	9.100	Y		May 2016
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>		2018	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Washington, D.C.	Feb 2018	Feb 2019	5	7.100	Y		Aug 2016
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>		2019	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Washington, D.C.	Nov 2017	Sep 2019	3	18.299	Y		Nov 2017
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Washington, D.C.	Nov 2019	Jul 2021	1	7.500	Y		Nov 2018
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2020	Nov 2022	1	42.365	Y		Feb 2020

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Exhibit P-5a, Procurement History and Planning: PB 2023 Missile Defense Agency									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					Item Number / Title [DODIC]:			
0300D / 01 / 17				MD90 / Aegis BMD Hardware and Software					Aegis BMD Shipsets			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Aegis BMD 3.6 to 4.X Installs <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Washington, D.C.	Dec 2021	Dec 2022	1	25.621	Y		Feb 2021
Aegis BMD DMS <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Apr 2021	Jun 2022	12	0.570	N		Nov 2020
Aegis BMD DMS <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Apr 2022	Jun 2023	3	0.829	N		Nov 2021
Aegis BMD TI-12H Upgrade Installs <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Oct 2020	Nov 2020	4	2.279	Y		Feb 2020
Aegis BMD TI-12H Upgrade Installs <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Oct 2021	Nov 2021	1	3.147	Y		Jul 2021
Aegis BMD TI-12H Upgrade Installs <sup>(†)</sup>		2023	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Oct 2022	Nov 2022	6	1.466	Y		Jul 2022
Aegis BMD TI-12H Upgrade Procurement		2019	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Dec 2019	Aug 2020	2	3.311	N		Jul 2019
Aegis BMD TI-12H Upgrade Procurement <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2020	Oct 2020	5	3.419	Y		Jun 2019
Aegis BMD TI-12H Upgrade Procurement <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2021	Oct 2021	3	3.871	N		Apr 2020
Aegis BMD TI-12H Upgrade Procurement <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / FPIF	Washington, D.C.	Feb 2022	Oct 2022	1	3.081	N		Apr 2021
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs <sup>(†)</sup>		2020	Lockheed Martin / Moorestown, N.J.	SS / CPIF	Dahlgren, VA	Apr 2020	Sep 2020	8	0.160	Y		Apr 2019
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs <sup>(†)</sup>		2021	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2020	Aug 2021	1	0.306	Y		Feb 2020
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs <sup>(†)</sup>		2022	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2021	Aug 2022	2	0.436	Y		Oct 2021
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs <sup>(†)</sup>		2023	Lockheed Martin / Moorestown, N.J.	SS / FFP	Washington, D.C.	Nov 2022	Aug 2023	4	0.399	Y		Oct 2022

<sup>(†)</sup> indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022																			
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17								P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software													Item Number / Title [DODIC]: Aegis BMD Shipsets																			
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2016											Fiscal Year 2017											B A L A N C E											
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT				Calendar Year 2016										Calendar Year 2017																				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P									
Aegis BL 5.4.0 (BMD 4.1.2) Installs																																								
	1	2020	MDA		5	0	5																									5								
	1	2021	MDA		5	0	5																									5								
Aegis BL 5.4.0 (BMD 4.1.2) Procurement																																								
	2	2019	MDA		10	0	10																									10								
	3	2020	MDA		8	0	8																									8								
Aegis BL 5.4.1 (BMD 4.2) Hardware Procurement																																								
	4	2020	MDA		1	0	1																									1								
	4	2021	MDA		3	0	3																									3								
Aegis BL 9.C2 (BMD 5.1) BackFit Installs																																								
	5	2017	MDA		3	0	3																									A -	-	-	-	3				
	5	2018	MDA		8	0	8																									8								
	5	2019	MDA		3	0	3																									3								
	5	2020	MDA		2	0	2																									2								
Aegis BL 9.C2 (BMD 5.1) BackFit Procurement																																								
	6	2017	MDA		6	0	6																									A -	-	-	-	-	-	-	-	6
Aegis BL 9.C2 (BMD 5.1) Inline Installs																																								
	7	2017	MDA		1	0	1																									A -	-	-	-	-	-	-	-	1
	7	2018	MDA		3	0	3																									3								
	7	2019	MDA		2	0	2																									2								
	7	2020	MDA		3	0	3																									3								
	7	2021	MDA		3	0	3																									3								
	7	2022	MDA		2	0	2																									2								
	7	2023	MDA		2	0	2																									2								
Aegis BL 9.C2 (BMD 5.1) Inline Procurements																																								
	8	2017	MDA		1	0	1																									A -	-	-	-	-	-	-	-	1
	8	2018	MDA		3	0	3																									3								
	8	2019	MDA		2	0	2																									2								
	8	2020	MDA		3	0	3																									3								
	8	2021	MDA		3	0	3																									3								
	8	2022	MDA		3	0	3																									3								
Aegis BMD 3.6 to 4.X Hardware Procurements																																								
	9	2017	MDA		1	0	1	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	1								

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																		Date: April 2022													
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software												Item Number / Title [DODIC]: Aegis BMD Shipsets												
Cost Elements (Units in Each)							Fiscal Year 2016										Fiscal Year 2017										BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016										Calendar Year 2017														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP
	9	2018	MDA	3	0	3																									3
	9	2019	MDA	1	0	1																									1
Aegis BMD 3.6 to 4.X Installs																															
	10	2017	MDA	1	0	1															A -	-	-	-	-	-	-	-	-	-	1
	10	2018	MDA	5	0	5																									5
	10	2019	MDA	3	0	3																									3
	10	2020	MDA	1	0	1																									1
	10	2021	MDA	1	0	1																									1
	10	2022	MDA	1	0	1																									1
Aegis BMD DMS																															
	11	2021	MDA	12	0	12																									12
	11	2022	MDA	3	0	3																									3
Aegis BMD TI-12H Upgrade Installs																															
	12	2021	MDA	4	0	4																									4
	12	2022	MDA	1	0	1																									1
	13	2023	MDA	6	0	6																									6
Aegis BMD TI-12H Upgrade Procurement																															
	14	2020	MDA	5	0	5																									5
	14	2021	MDA	3	0	3																									3
	14	2022	MDA	1	0	1																									1
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs																															
	15	2020	MDA	8	0	8																									8
	15	2021	MDA	1	0	1																									1
	15	2022	MDA	2	0	2																									2
	15	2023	MDA	4	0	4																									4
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																	Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software													Item Number / Title [DODIC]: Aegis BMD Shipsets												
Cost Elements (Units in Each)							Fiscal Year 2018										Fiscal Year 2019										BALANCE					
OCCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP	
	9	2018	MDA	3	0	3					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	
	9	2019	MDA	1	0	1															A -	-	-	-	-	-	-	-	-	-	1	
Aegis BMD 3.6 to 4.X Installs																																
	10	2017	MDA	1	0	1	-	-	-	-	-	-	-	-	1																0	
	10	2018	MDA	5	0	5					A -	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	1	-		1	
	10	2019	MDA	3	0	3		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3		0	
	10	2020	MDA	1	0	1																									1	
	10	2021	MDA	1	0	1																									1	
	10	2022	MDA	1	0	1																									1	
Aegis BMD DMS																																
	11	2021	MDA	12	0	12																									12	
	11	2022	MDA	3	0	3																									3	
Aegis BMD TI-12H Upgrade Installs																																
	12	2021	MDA	4	0	4																									4	
	12	2022	MDA	1	0	1																									1	
	13	2023	MDA	6	0	6																									6	
Aegis BMD TI-12H Upgrade Procurement																																
	14	2020	MDA	5	0	5																									5	
	14	2021	MDA	3	0	3																									3	
	14	2022	MDA	1	0	1																									1	
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs																																
	15	2020	MDA	8	0	8																									8	
	15	2021	MDA	1	0	1																									1	
	15	2022	MDA	2	0	2																									2	
	15	2023	MDA	4	0	4																									4	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		



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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																		Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity:							P-1 Line Item Number / Title:												Item Number / Title [DODIC]:													
0300D / 01 / 17							MD90 / Aegis BMD Hardware and Software												Aegis BMD Shipsets													
Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE	
OCCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
	9	2018	MDA	3	1	2	-	2																							0	
	9	2019	MDA	1	0	1	-	-	-	-	-	-	-	-	-	-	1														0	
Aegis BMD 3.6 to 4.X Installs																																
	10	2017	MDA	1	1	0																									0	
	10	2018	MDA	5	4	1	-	1																							0	
	10	2019	MDA	3	3	0																									0	
	10	2020	MDA	1	0	1		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			0	
	10	2021	MDA	1	0	1												A -	-	-	-	-	-	-	-	-	-	-	-	-	1	
	10	2022	MDA	1	0	1																									1	
Aegis BMD DMS																																
	11	2021	MDA	12	0	12																				A -	-	-	-	-	-	12
	11	2022	MDA	3	0	3																									3	
Aegis BMD TI-12H Upgrade Installs																																
	12	2021	MDA	4	0	4												A -	2	-	-	-	-	-	-	-	2				0	
	12	2022	MDA	1	0	1																									1	
	13	2023	MDA	6	0	6																									6	
Aegis BMD TI-12H Upgrade Procurement																																
	14	2020	MDA	5	0	5					A -	-	-	-	-	-	-	-	5												0	
	14	2021	MDA	3	0	3																			A -	-	-	-	-	-	-	3
	14	2022	MDA	1	0	1																									1	
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs																																
	15	2020	MDA	8	0	8						A -	-	-	-	-	-	8													0	
	15	2021	MDA	1	0	1														A -	-	-	-	-	-	-	-	-	1		0	
	15	2022	MDA	2	0	2																									2	
	15	2023	MDA	4	0	4																									4	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																					Date: April 2022																		
Appropriation / Budget Activity / Budget Sub Activity:										P-1 Line Item Number / Title:											Item Number / Title [DODIC]:																		
0300D / 01 / 17										MD90 / Aegis BMD Hardware and Software											Aegis BMD Shipsets																		
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2022											Fiscal Year 2023											BALANCE										
OCO #	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT				Calendar Year 2022											Calendar Year 2023																		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL		AUG	SEP								
Aegis BL 5.4.0 (BMD 4.1.2) Installs																																							
	1	2020	MDA		5	5	0																										0						
	1	2021	MDA		5	0	5	-		5																							0						
Aegis BL 5.4.0 (BMD 4.1.2) Procurement																																							
	2	2019	MDA		10	10	0																										0						
	3	2020	MDA		8	8	0																										0						
Aegis BL 5.4.1 (BMD 4.2) Hardware Procurement																																							
	4	2020	MDA		1	1	0																										0						
	4	2021	MDA		3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0								
Aegis BL 9.C2 (BMD 5.1) BackFit Installs																																							
	5	2017	MDA		3	3	0																										0						
	5	2018	MDA		8	8	0																										0						
	5	2019	MDA		3	3	0																										0						
	5	2020	MDA		2	2	0																										0						
Aegis BL 9.C2 (BMD 5.1) BackFit Procurement																																							
	6	2017	MDA		6	6	0																										0						
Aegis BL 9.C2 (BMD 5.1) Inline Installs																																							
	7	2017	MDA		1	1	0																										0						
	7	2018	MDA		3	3	0																										0						
	7	2019	MDA		2	2	0																										0						
	7	2020	MDA		3	3	0																										0						
	7	2021	MDA		3	0	3	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0							
	7	2022	MDA		2	0	2		A	-	-	-	2																									0	
	7	2023	MDA		2	0	2																	A	-	-	-	2											0
Aegis BL 9.C2 (BMD 5.1) Inline Procurements																																							
	8	2017	MDA		1	1	0																										0						
	8	2018	MDA		3	3	0																										0						
	8	2019	MDA		2	2	0																										0						
	8	2020	MDA		3	3	0																										0						
	8	2021	MDA		3	0	3	-	-	-	-	-	-	-	-	3																	0						
	8	2022	MDA		3	0	3							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0							
Aegis BMD 3.6 to 4.X Hardware Procurements																																							
	9	2017	MDA		1	1	0																										0						
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP								

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Exhibit P-21, Production Schedule: PB 2023 Missile Defense Agency																		Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 0300D / 01 / 17							P-1 Line Item Number / Title: MD90 / Aegis BMD Hardware and Software													Item Number / Title [DODIC]: Aegis BMD Shipsets													
Cost Elements (Units in Each)							Fiscal Year 2022													Fiscal Year 2023													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
	9	2018	MDA	3	3	0																									0		
	9	2019	MDA	1	1	0																									0		
Aegis BMD 3.6 to 4.X Installs																																	
	10	2017	MDA	1	1	0																									0		
	10	2018	MDA	5	5	0																									0		
	10	2019	MDA	3	3	0																									0		
	10	2020	MDA	1	1	0																									0		
	10	2021	MDA	1	0	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	10	2022	MDA	1	0	1				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
Aegis BMD DMS																																	
	11	2021	MDA	12	0	12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	11	2022	MDA	3	0	3							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
Aegis BMD TI-12H Upgrade Installs																																	
	12	2021	MDA	4	4	0																									0		
	12	2022	MDA	1	0	1		A -		1																					0		
	13	2023	MDA	6	0	6													A -		6										0		
Aegis BMD TI-12H Upgrade Procurement																																	
	14	2020	MDA	5	5	0																									0		
	14	2021	MDA	3	0	3		3																							0		
	14	2022	MDA	1	0	1					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
Aegis BL 9.B/C2 (BMD 5.1) Software Upgrade Installs																																	
	15	2020	MDA	8	8	0																									0		
	15	2021	MDA	1	1	0																									0		
	15	2022	MDA	2	0	2			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	15	2023	MDA	4	0	4														A -	-	-	-	-	-	-	-	-	-	-	0		
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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<b>Exhibit P-21, Production Schedule:</b> PB 2023 Missile Defense Agency								<b>Date:</b> April 2022			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0300D / 01 / 17				<b>P-1 Line Item Number / Title:</b> MD90 / Aegis BMD Hardware and Software				<b>Item Number / Title [DODIC]:</b> Aegis BMD Shipsets			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Moorestown, N.J.	1	1	6	0	0	0	0	0	0	0	0
2	Lockheed Martin - Moorestown, N.J.	1	1	10	0	0	0	0	0	0	0	0
3	Lockheed Martin - Moorestown, N.J.	1	1	8	0	0	0	0	0	0	0	0
4	Lockheed Martin - Moorestown, N.J.	1	1	6	0	0	0	0	0	0	0	0
5	Lockheed Martin - Moorestown, N.J.	1	1	8	0	0	0	0	0	0	0	0
6	Lockheed Martin - Moorestown, N.J.	1	1	11	0	0	0	0	0	0	0	0
7	Lockheed Martin - Moorestown, N.J.	1	1	4	0	0	0	0	0	0	0	0
8	Lockheed Martin - Moorestown, N.J.	1	1	4	0	0	0	0	0	0	0	0
9	Lockheed Martin - Moorestown, N.J.	1	1	1	0	0	0	0	0	0	0	0
10	Lockheed Martin - Moorestown, N.J.	1	1	5	0	0	0	0	0	0	0	0
11	Lockheed Martin - Moorestown, N.J.			12	0	0	0	0	0	0	0	0
12	Lockheed Martin - Moorestown, N.J.	1	1	4	0	0	0	0	0	0	0	0
13	Lockheed Martin - Moorestown, N.J.	1	1	6	0	0	0	0	0	0	0	0
14	Lockheed Martin - Moorestown, N.J.	1	1	5	0	0	0	0	0	0	0	0
15	Lockheed Martin - Moorestown, N.J.	1	1	14	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

**Note:** Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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