

Missile Defense Agency President's Budget (PB) 2019-2023 FY 2019- FY 2023 Appropriation Summary R-1 Exhibit (\$ Thousands)												
Line Number	Program Element	Budget Project	Program	Budget Activity	FY17 Actual	FY18	FY19	FY20	FY21	FY22	FY23	FY19-23
O&M												
11A	0208866C		O&M	NA	459,556	504,058	499,817	502,663	535,391	525,678	567,815	2,631,364
		MD08	Ground Base Midcourse	NA	131,081	137,896	147,229	137,396	140,723	143,844	146,567	715,759
		MD07	THAAD	NA	69,062	78,761	92,608	98,370	91,579	92,643	94,366	469,566
		MD09	AEGIS	NA	66,540	96,346	83,837	87,258	99,475	86,454	82,389	439,413
		MD11	BMDS AN/TPY-2 Radars	NA	192,873	191,055	176,143	179,639	203,614	202,737	244,493	1,006,626
			Budget Activity 00 Total	NA	459,556	504,058	499,817	502,663	535,391	525,678	567,815	2,631,364
			O&M Total	NA	459,556	504,058	499,817	502,663	535,391	525,678	567,815	2,631,364
Procurement												
36	0208866C		PROCUREMENT	01	1,585,399	2,417,504	2,432,004	1,945,093	1,669,844	1,294,869	1,486,379	8,828,189
		MD07	THAAD	01	566,504	960,732	874,068	416,343	413,956	424,473	434,439	2,563,279
		MD08	Ground Based Midcourse	01	47,000	268,000	524,000	520,000	411,000	0	0	1,455,000
		MD09	AEGIS BMD	01	513,801	914,756	708,694	673,210	583,469	583,205	767,044	3,315,622
		MD26	Israeli Program	01	120,000	0	80,000	55,000	77,000	62,000	90,000	364,000
		MD11	BMDS Sensors	01	5,503	11,947	13,185	9,785	999	0	0	23,969
		MD73	Aegis Ashore Phase III	01	57,493	59,739	15,000	0	0	0	0	15,000
		MD34	Short Range Ballistic Missile Defense (SRBMD)	01	150,000	0	50,000	50,000	50,000	30,000	30,000	210,000
		MD83	Iron Dome	01	62,000	42,000	70,000	95,000	73,000	108,000	80,000	426,000
		MD90	Aegis BMD Hardware and Software	01	63,098	160,330	97,057	125,755	60,420	87,191	84,896	455,319
37	1030X000		Redesigned Kill Vehicle (AP)	01	50,000	0	0	0	0	0	0	0
		MD97	Improved Homeland Defense (HLD)	01	50,000	0	0	0	0	0	0	0
			Budget Activity 01 Total	01	1,635,399	2,417,504	2,432,004	1,945,093	1,669,844	1,294,869	1,486,379	8,828,189
			Procurement Total	01	1,635,399	2,417,504	2,432,004	1,945,093	1,669,844	1,294,869	1,486,379	8,828,189
RDT&E												
28	0603176C		Advanced Concepts and Performance Assessment	03	14,534	12,996	13,017	14,267	14,899	15,235	16,224	73,642
		MD71	Advanced Concepts and Performance Assessments	03	13,961	11,612	11,628	11,568	11,791	12,039	12,267	59,293
		MD40	Program-Wide Support	03	573	829	605	648	671	743	740	3,407
		MC71	Cyber Operations	03	0	555	784	2,051	2,437	2,453	3,217	10,942
29	0603178C		Weapons Technology	03	47,403	5,495	0	0	0	0	0	0
		MD69	Directed Energy Research	03	24,173	5,495	0	0	0	0	0	0
		MD72	Interceptor Technology	03	21,110	0	0	0	0	0	0	0
		MD40	Program-Wide Support	03	2,120	0	0	0	0	0	0	0
30	0603179C		Advanced C4ISR	03	3,489	0	0	0	0	0	0	0
		MD73	Advanced C4ISR	03	3,327	0	0	0	0	0	0	0
		MD40	Program-Wide Support	03	162	0	0	0	0	0	0	0
31	0603180C		Advanced Research	03	27,185	20,184	20,365	20,778	21,194	21,652	22,036	106,025
		MD25	Advanced Technology Development	03	26,364	19,302	19,461	19,848	20,239	20,643	21,033	101,224
		MD40	Program-Wide Support	03	821	882	904	930	955	1,009	1,003	4,801
33	0603274C		Special Program - MDA Technology	03	12,509	0	0	0	0	0	0	0
		MD81	Special Programs - MDA Technology	03	12,509	0	0	0	0	0	0	0
39	0603294C		Common Kill Vehicle Technology	03	54,395	252,879	189,753	205,645	254,130	122,494	52,373	824,395
		MD85	Common Kill Vehicle Technology	03	51,133	249,915	181,248	195,924	242,675	116,791	50,000	786,638
		MD40	Program Wide Support	03	3,262	2,964	8,505	9,721	11,455	5,703	2,373	37,757
			Budget Activity 03 Total	03	159,515	291,554	223,135	240,690	290,223	159,381	90,633	1,004,062
115	0305103C		Cyber Security Initiative	04	945	986	985	1,140	1,163	1,187	1,209	5,684
		MDCS	Cyber Security Initiative	04	945	986	985	1,140	1,163	1,187	1,209	5,684
72	0603881C		Ballistic Missile Defense Terminal Defense Segment	04	197,171	292,262	214,173	199,399	197,451	174,161	152,174	937,358
		MD07	THAAD	04	182,901	277,669	198,132	178,852	176,785	157,140	139,393	850,302
		MC07	Cyber Operations	04	3,694	3,325	6,149	5,583	10,584	7,612	4,186	38,114
		MD06	Patriot Advanced Capability-3 (PAC-3)	04	1,083	1,162	1,159	1,244	1,228	1,252	1,288	6,171
		MD40	Program-Wide Support	04	9,493	10,106	8,733	9,720	8,854	8,157	7,307	42,771
73	0603882C		Ballistic Missile Defense Midcourse Defense Segment	04	1,034,861	957,097	926,359	1,046,235	847,537	585,956	572,619	3,978,706
		MD08	Ground Based Midcourse	04	981,437	906,692	872,895	990,175	793,532	539,759	518,995	3,715,356
		MC08	Cyber Operations	04	12,329	18,818	23,754	26,372	26,575	19,463	25,454	121,618
		MD40	Program-Wide Support	04	41,095	31,587	29,710	29,688	27,430	26,734	28,170	141,732
75	0603884C		Ballistic Missile Defense Sensors	04	252,665	278,145	220,876	250,238	267,502	263,758	260,273	1,262,647
		MD11	BMDS Radars	04	242,049	244,332	206,836	226,889	241,306	240,203	237,978	1,153,212

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		MD41	Homeland Defense Radar - Hawaii (HDR-H)	04	0	21,000	0	0	0	0	0	0
		MC11	Cyber Operations	04	1,230	3,636	1,079	7,788	4,368	1,145	1,168	15,548
		MD40	Program-Wide Support	04	9,386	9,177	12,961	15,561	21,828	22,410	21,127	93,887
76	0603890C		BMD Enabling Programs	04	435,203	465,642	540,926	542,326	608,210	489,637	496,313	2,677,412
		MD24	System Engineering & Integration	04	150,748	166,558	170,348	156,422	151,341	148,663	158,262	785,036
		MT23	Enabling - Test	04	17,187	22,767	39,288	20,666	21,328	21,081	21,373	123,736
		MD28	Intelligence & Security	04	44,696	44,708	44,078	47,226	46,859	47,581	48,905	234,649
		MD30	BMD Information Management Systems	04	84,671	84,499	79,979	88,786	87,686	90,970	93,890	441,311
		MC30	Cyber Operations	04	43,589	41,458	63,112	66,286	72,775	68,150	56,599	326,922
		MD31	Modeling & Simulation	04	46,513	49,824	89,786	97,004	135,297	48,670	49,030	419,787
		MC31	Engineering Cyber Operations	04	2,980	3,838	4,466	11,564	34,665	10,697	13,383	74,775
		MD32	Quality, Safety, and Mission Assurance	04	29,813	30,516	29,319	31,135	30,766	31,398	32,286	154,904
		MD40	Program-Wide Support	04	15,006	21,474	20,550	23,237	27,493	22,427	22,585	116,292
77	0603891C		Special Programs - MDA	04	289,364	365,190	422,348	406,779	405,289	425,469	403,884	2,063,769
		MD27	Special Programs	04	289,364	365,190	422,348	406,779	405,289	425,469	403,884	2,063,769
78	0603892C		AEGIS BMD	04	889,489	860,788	767,539	780,085	707,901	693,256	562,748	3,511,529
		MD09	Aegis BMD	04	771,211	292,063	253,686	392,027	392,393	356,791	309,348	1,704,245
		MG09	Aegis BMD SM-3 Development Articles	04	0	253,276	120,217	0	0	0	0	120,217
		MM09	Aegis BMD SM-3 Development	04	0	98,150	161,958	158,636	87,272	101,329	17,317	526,512
		MC09	Cyber Operations	04	2,301	2,340	10,886	13,718	16,238	10,274	11,164	62,280
		MX09	Aegis BMD Development Support	04	74,920	173,325	185,742	182,219	183,780	194,068	194,217	940,026
		MD40	Program-Wide Support	04	41,057	41,634	35,050	33,485	28,218	30,794	30,702	158,249
79	0603893C		Space Tracking and Surveillance System	04	37,809	0	0	0	0	0	0	0
		MD12	Space Tracking and Surveillance System (STSS)	04	36,452	0	0	0	0	0	0	0
		MD40	Program-Wide Support	04	1,357	0	0	0	0	0	0	0
80	0603895C		Ballistic Missile Defense System Space Programs	04	20,910	0	0	0	0	0	0	0
		MD33	MD Space Exp Center (MDSEC)	04	19,989	0	0	0	0	0	0	0
		MD40	Program-Wide Support	04	921	0	0	0	0	0	0	0
81	0603896C		Ballistic Missile Defense Command and Control, Battle Management & Command & Control, Battle Management, Communications (C2BMC)	04	465,433	454,862	475,168	515,239	494,873	492,119	515,529	2,492,928
		MD01	Command & Control, Battle Management, Communications (C2BMC)	04	278,263	270,033	279,389	291,528	280,506	279,616	289,122	1,420,161
		MC01	Cyber Operations	04	1,587	5,305	7,651	26,943	16,180	15,923	23,989	90,686
		MT01	C2BMC Test	04	56,125	57,302	54,100	54,712	55,539	50,661	52,342	267,354
		MX01	Command & Control, Battle Management, Communications (C2BMC)	04	111,323	103,440	112,910	119,861	120,577	123,051	126,959	603,358
		MD40	Program-Wide Support	04	18,135	18,782	21,118	22,195	22,071	22,868	23,117	111,369
82	0603898C		Ballistic Missile Defense Joint Warfighter Support	04	47,402	48,954	48,767	53,418	51,448	54,076	54,061	261,770
		MD03	Joint Warfighter Support	04	15,042	15,394	15,279	17,584	16,021	17,771	16,872	83,527
		MT03	Joint Warfighter Support Test	04	30,424	31,206	31,142	33,352	32,940	33,616	34,564	165,614
		MC03	Cyber Operations	04	0	152	154	156	159	161	164	794
		MD40	Program-Wide Support	04	1,936	2,202	2,192	2,326	2,328	2,528	2,461	11,835
83	0603904C		Missile Defense Integration and Operations Center (MDIOC)	04	53,483	53,265	54,925	58,498	57,764	59,020	61,915	292,122
		MD22	Missile Defense Integration and Operations Center (MDIOC)	04	50,516	50,261	51,841	55,313	54,499	55,597	58,422	275,672
		MC22	Cyber Operations	04	446	612	610	634	646	659	672	3,221
		MD40	Program-Wide Support	04	2,521	2,392	2,474	2,551	2,619	2,764	2,821	13,229
84	0603906C		Regarding Trench	04	7,303	9,113	16,916	18,712	12,012	12,348	12,695	72,683
		MD35	Regarding Trench	04	7,303	9,113	16,916	18,712	12,012	12,348	12,695	72,683
85	0603907C		Sea Based X-Band Radar (SBX)	04	115,201	145,695	149,715	175,013	155,718	129,044	136,390	745,880
		MX46	Sea Based X-Band Radar Development Support	04	112,139	141,737	143,604	168,045	151,462	124,637	131,987	719,735
		MD40	Program-Wide Support	04	3,062	3,958	6,111	6,968	4,256	4,407	4,403	26,145
86	0603913C		Israeli Cooperative Programs	04	268,735	105,354	300,000	300,000	300,000	300,000	300,000	1,500,000
		MD20	Israeli Upper Tier	04	84,893	56,861	0	0	0	0	0	0
		MD26	Israeli ARROW Program	04	67,331	10,841	163,000	159,000	173,000	173,000	173,000	841,000
		MD34	Short Range Ballistic Missile Defense (SRBMD)	04	116,511	37,652	137,000	141,000	127,000	127,000	127,000	659,000
87	0603914C		Ballistic Missile Defense Test	04	294,441	316,193	365,681	349,388	320,909	320,332	327,584	1,683,894
		MD04	BMDS Test Development Program	04	0	0	0	17,332	28,623	22,383	22,807	91,145
		MT04	BMDS Test Program	04	271,143	298,918	342,457	308,160	268,978	274,085	281,012	1,474,692
		MC04	Cyber Operations	04	9,539	2,528	8,619	8,716	8,815	8,914	8,914	43,978
		MD40	Program Wide Support	04	13,759	14,747	14,605	15,180	14,493	14,950	14,851	74,079

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88	0603915C		Ballistic Missile Defense Targets	04	521,784	460,125	517,852	441,827	383,739	405,909	417,800	2,167,127
		MC05	Cyber Operations	04	116	251	351	915	1,078	1,068	1,401	4,813
		MT05	BMD5 Targets Program	04	496,730	441,657	501,037	423,308	365,357	385,914	397,457	2,073,073
		MD40	Program Wide Support	04	24,938	18,217	16,464	17,604	17,304	18,927	18,942	89,241
92	0604115C		Technology Maturation Initiatives	04	84,514	128,406	148,822	172,423	143,240	143,938	174,770	783,193
		MD98	Directed Energy Demonstrator Development	04	14,265	48,099	61,317	66,266	60,697	70,704	72,040	331,024
		MD99	Discrimination Sensor Demonstrator Development	04	56,988	73,295	78,608	94,217	74,068	66,263	94,528	407,684
		MT99	Technology Maturation Initiatives Test	04	8,434	220	1,982	4,285	1,839	0	0	8,106
		MC98	Cyber Operations	04	331	172	254	177	180	270	275	1,156
		MD40	Program Wide Support	04	4,496	6,620	6,661	7,478	6,456	6,701	7,927	35,223
95	0604181C		Hypersonic Defense	04	0	75,300	120,444	157,672	142,296	117,381	119,434	657,227
		MD29	Hypersonic Defense	04	0	75,300	115,054	150,838	135,886	111,917	114,032	627,727
		MD40	Program Wide Support	04	0	0	5,390	6,834	6,410	5,464	5,402	29,500
100	0604673C		Pacific Discriminating Radar	04	0	0	95,765	164,167	497,630	604,085	402,890	1,764,537
		MD41	Homeland Defense Radar - Hawaii (HDR-H)	04	0	0	62,221	106,370	258,357	200,158	136,088	763,194
		MD51	Homeland Defense Radar - Pacific (HDR-P)	04	0	0	33,544	57,797	239,273	403,927	266,802	1,001,343
104	0604873C		Long Range Discrimination Radar (LRDR)	04	186,172	357,659	164,562	91,603	78,112	108,167	133,728	576,172
		MD96	Long Range Discrim Radar (LRDR)	04	174,540	341,638	158,597	89,330	75,897	102,762	128,326	554,912
		MD40	Program Wide Support	04	11,632	16,021	5,965	2,273	2,215	5,405	5,402	21,260
105	0604874C		Improved Homeland Defense (HLD) Interceptors	04	247,362	636,430	561,220	485,755	502,023	604,309	635,719	2,789,026
		MD97	Improved HD Interceptors	04	236,361	619,060	539,340	462,825	474,430	576,045	607,472	2,660,112
		MD40	Program Wide Support	04	11,001	17,370	21,880	22,930	27,593	28,264	28,247	128,914
106	0604876C		Ballistic Missile Defense Terminal Defense Segment Test	04	57,567	36,239	61,017	49,170	16,917	51,003	59,759	237,866
		MT07	THAAD Test	04	54,743	33,321	57,892	16,184	46,955	48,629	57,387	227,047
		MD40	Program Wide Support	04	2,824	2,918	3,125	733	2,215	2,374	2,372	10,819
107	0604878C		Aegis BMD Test	04	131,012	137,783	95,756	80,684	94,138	146,910	137,601	555,089
		MT09	AEGIS BMD Test	04	127,014	132,091	92,533	77,119	89,177	142,504	133,198	534,531
		MD40	Program Wide Support	04	3,998	5,692	3,223	3,565	4,961	4,406	4,403	20,558
108	0604879C		Ballistic Missile Defense Sensor Test	04	81,376	101,839	81,001	77,654	68,026	101,091	81,903	409,675
		MT11	BMD5 Radars Test	04	76,628	98,437	78,095	74,374	65,052	98,538	79,353	395,412
		MD40	Program Wide Support	04	4,748	3,402	2,906	3,280	2,974	2,553	2,550	14,263
109	0604880C		Land Based SM-3 (LBSM3)	04	40,452	30,486	27,692	29,263	28,370	27,228	28,225	140,778
		MD68	AEGIS Ashore	04	38,733	26,477	23,033	24,860	24,371	24,863	25,573	122,700
		MC68	Cyber Operations	04	0	2,643	3,255	2,980	2,618	970	1,258	11,081
		MD40	Program-Wide Support	04	1,719	1,366	1,404	1,423	1,381	1,395	1,394	6,997
110	0604881C		AEGIS SM-3 Block IIA Co-Development	04	102,272	9,739	0	0	0	0	0	0
		MD09	SM-3 Block IIA Co-Development	04	88,130	8,816	0	0	0	0	0	0
		MT09	SM-3 Block IIA Co-Development Test	04	11,424	0	0	0	0	0	0	0
		MD40	Program-Wide Support	04	2,718	923	0	0	0	0	0	0
111	0604887C		Ballistic Missile Defense Midcourse Defense Segment Test	04	61,350	76,757	81,934	95,458	82,956	78,715	85,362	424,425
		MT08	Midcourse Test	04	58,319	73,453	78,311	92,111	79,214	74,784	81,444	405,864
		MD40	Program Wide Support	04	3,031	3,304	3,623	3,347	3,742	3,931	3,918	18,561
112	0604894C		Multi Object Kill Vehicle	04	0	6,500	8,256	33,935	8,277	184,118	355,060	589,646
		MD85	Multi Object Kill Vehicle	04	0	6,500	7,886	32,463	7,904	175,545	338,971	562,769
		MD40	Program-Wide Support	04	0	0	370	1,472	373	8,573	16,089	26,877
116	1206893C		Space Tracking and Surveillance System (STSS)	04	0	34,907	36,955	37,134	35,617	36,404	37,503	183,613
		MD12	Space Tracking and Surveillance System (STSS)	04	0	32,015	32,217	34,154	33,671	34,363	35,356	169,761
		MC12	Cyber Operations	04	0	1,336	2,997	1,359	340	340	446	5,482
		MD40	Program-Wide Support	04	0	1,556	1,741	1,621	1,606	1,701	1,701	8,370
117	1206895C		Ballistic Missile Defense System Space Programs	04	0	30,994	16,484	19,555	19,097	17,888	18,236	91,260
		MD33	MD Space Exp Center (MDSEC)	04	0	30,233	15,745	18,707	18,236	17,055	17,410	87,153
		MD40	Program-Wide Support	04	0	761	739	848	861	833	826	4,107
			Budget Activity 04 Total	04	5,924,276	6,476,710	6,522,138	6,600,517	6,560,468	6,627,509	6,545,384	32,856,016
154	0605502C		Small Business Innovation Research - MDA	06	86,742	0	0	0	0	0	0	0
		MD45	Small Business Innovation Research	06	86,742	0	0	0	0	0	0	0
169	0606942C		Assessments and Evaluations of Cyber Vulnerabilities	06	0	0	3,400	0	0	0	0	3,400
		MC39	Assessment and Evaluation of Cyber Vulnerabilities	06	0	0	3,400	0	0	0	0	3,400

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Line Number	Program Element	Budget Project	Program	Budget Activity	FY17 Actual	FY18	FY19	FY20	FY21	FY22	FY23	FY19-23
185	0901598C		Management HQ - MDA	06	30,693	29,947	28,626	27,276	27,894	28,466	29,005	141,267
		MD38	Management Headquarters	06	30,693	29,947	28,626	27,276	27,894	28,466	29,005	141,267
			Budget Activity 06 Total	06	117,435	29,947	32,026	27,276	27,894	28,466	29,005	144,667
			RDT&E Total	06	6,201,226	6,798,211	6,777,299	6,868,483	6,878,585	6,815,356	6,665,022	34,004,745
MILCON												
	0603882C		MID-COURSE MILCON	NA	9,560	200,000	8,000	0	0	90,000	0	98,000
		MM08	Missile Defense Complex Switchgear Facility, Ft. Greely, AK	NA	9,560	200,000	8,000	0	0	90,000	0	98,000
	0603884C		SENSORS MILCON	NA	166,670	0	174,000	0	0	0	0	174,000
		MM04	Wake Island Air Base Test Support Facility, Wake Is	NA	11,670	0	0	0	0	0	0	0
		MM96	Long Range Discriminating Radar (LRDR)	NA	155,000	0	0	0	0	0	0	0
		MM11	Long Range Discrimination Radar Cmplx, Clear AFS, AK	NA	0	0	174,000	0	0	0	0	174,000
	0603888C		BMD TEST and TARG MILCON	NA	0	0	0	0	0	0	181,260	181,260
		MM44	BMDS Test Infrastructure Building (BTB)	NA	0	0	0	0	0	0	181,260	181,260
	0604673C		Pacific Discriminating Radar	NA	0	0	0	0	138,000	548,965	0	686,965
		MM51	Homeland Defense Radar - Pacific (HDR-P)	NA	0	0	0	0	0	365,965	0	365,965
		MM41	Homeland Defense Radar - Hawaii (HDR-H)	NA	0	0	0	0	138,000	183,000	0	321,000
	22299902		MINOR MILCON	NA	2,414	3,000	10,000	2,729	1,616	501	1,363	16,209
		MM14	Minor MILCON	NA	2,414	3,000	10,000	2,729	1,616	501	1,363	16,209
	31299903		MILCON PLANNING and DESIGN	NA	15,000	0	14,184	49,482	38,424	8,009	8,160	118,259
		MM32	MILCON Planning Design	NA	15,000	0	14,184	49,482	38,424	8,009	8,160	118,259
			Budget Activity 00 Total	NA	193,644	203,000	206,184	52,211	178,040	647,475	190,783	1,274,693
			MILCON Total	NA	193,644	203,000	206,184	52,211	178,040	647,475	190,783	1,274,693
			Program Total		8,489,825	9,922,773	9,915,304	9,368,450	9,261,860	9,283,378	8,909,999	46,738,991