<table>
<tr><td colspan="14" align="center">Missile Defense Agency
President`s Budget (PB) 2017-2021
FY 2017 through FY 2021 Appropriation Summary
($ Thousands)</td></tr>
</table>

Line Number	Program Element	Budget Project	Program	Budget Activity	FY15 Actual	FY16	FY17	FY18	FY19	FY20	FY21	FY17-21
Operations & Maintenance												
011A	0208866C		O&M	NA	402,462	424,069	446,975	470,884	496,702	533,236	541,432	2,489,229
		MD08	Ground Base Midcourse	NA	150,892	133,511	129,281	137,896	143,027	139,319	142,269	691,792
		MD07	THAAD	NA	62,078	58,308	72,099	78,761	87,478	92,082	91,832	422,252
		MD09	AEGIS	NA	11,632	46,111	73,039	77,707	80,746	98,806	103,809	434,107
		MD11	BMDS AN/TPY-2 Radars	NA	177,860	186,139	172,556	176,520	185,451	203,029	203,522	941,078
			Budget Activity NA Total	NA	402,462	424,069	446,975	470,884	496,702	533,236	541,432	2,489,229
			Operations and Maintenance Total	NA	402,462	424,069	446,975	470,884	496,702	533,236	541,432	2,489,229
Procurement												
	0208866C		PROCUREMENT	NA	1,757,170	1,489,203	988,503	1,390,673	1,499,493	1,617,970	1,781,795	7,278,434
23		MD07	THAAD	NA	449,478	447,971	369,608	451,592	440,883	405,015	420,829	2,087,927
24		MD09	AEGIS BMD	NA	663,316	566,711	463,801	727,291	962,410	1,079,913	1,221,081	4,454,496
25		MD11	BMDS AN/TPY-2 Radars	NA	87,803	78,634	5,503	2,408	3,016	11,017	53,898	75,842
26		MD20	Arrow Upper Tier	NA	0	15,000	0	0	0	0	0	0
27		MD34	David's Sling	NA	0	150,000	0	0	0	0	0	0
28		MD73	Aegis Ashore Phase III	NA	205,601	30,587	57,493	69,880	0	0	0	127,373
29		MD83	Iron Dome	NA	350,972	55,000	42,000	0	0	0	0	42,000
		MD90	Aegis BMD Hardware and Software	NA	0	145,300	50,098	139,502	93,184	122,025	85,987	490,796
			Budget Activity NA Total	NA	1,757,170	1,489,203	988,503	1,390,673	1,499,493	1,617,970	1,781,795	7,278,434
			Procurement Total	NA	1,757,170	1,489,203	988,503	1,390,673	1,499,493	1,617,970	1,781,795	7,278,434
RDT&E												
28	0603176C		Advanced Concepts and Performance Assessment	3	9,999	12,139	17,880	12,599	12,897	13,004	13,221	69,601
		MD71	Advanced Concepts and Performance Assessments	3	9,539	11,569	17,298	11,988	12,242	12,336	12,524	66,388
		MD40	Program-Wide Support	3	460	570	582	611	655	668	697	3,213
29	0603177C		Discrimination Sensor Technology	3	35,223	28,200	0	0	0	0	0	0
		MD95	Discrimination Sensor Technology	3	33,258	23,304	0	0	0	0	0	0
		MT95	Discrimination Sensor Tech-Flight Test Execution	3	0	3,749	0	0	0	0	0	0
		MC95	Cyber Operations	3	132	0	0	0	0	0	0	0
		MD40	Program-Wide Support	3	1,833	1,147	0	0	0	0	0	0
30	0603178C		Weapons Technology	3	61,396	51,153	71,843	69,004	53,745	66,400	67,487	328,479
		MD69	Directed Energy Research	3	20,691	26,055	47,691	65,695	51,044	63,026	63,965	291,421
		MD72	Interceptor Technology	3	40,000	22,967	22,000	0	0	0	0	22,000
		MD40	Program-Wide Support	3	705	2,131	2,152	3,309	2,701	3,374	3,522	15,058
31	0603179C		Advanced C4ISR	3	13,061	9,876	3,626	0	0	0	0	3,626
		MD73	Advanced C4ISR	3	12,382	9,412	3,462	0	0	0	0	3,462
		MD40	Program-Wide Support	3	679	464	164	0	0	0	0	164
32	0603180C		Advanced Research	3	18,476	17,364	23,433	19,870	20,529	21,131	21,494	106,457
		MD25	Advanced Technology Development	3	17,980	16,549	22,600	18,908	19,487	20,047	20,362	101,404
		MD40	Program-Wide Support	3	496	815	833	962	1,042	1,084	1,132	5,053

Line Number	Program Element	Budget Project	Program	Budget Activity	FY15 Actual	FY16	FY17	FY18	FY19	FY20	FY21	FY17-21
35	0603274C		Special Program - MDA Technology	3	43,439	13,908	83,745	0	0	0	0	83,745
		MD81	Special Programs - MDA Technology	3	43,439	13,908	83,745	0	0	0	0	83,745
40	0603294C		Common Kill Vehicle Technology	3	24,836	61,753	0	0	0	0	0	0
		MD85	Common Kill Vehicle Technology	3	23,524	59,558	0	0	0	0	0	0
		MD40	Program Wide Support	3	1,312	2,195	0	0	0	0	0	0
			Budget Activity 03 Total	3	206,430	194,393	200,527	101,473	87,171	100,535	102,202	591,908
73	0603881C		Ballistic Missile Defense Terminal Defense Segment	4	161,298	212,230	206,834	231,105	197,018	250,227	260,613	1,145,797
		MD07	THAAD	4	140,019	200,395	192,699	215,417	181,703	232,169	241,539	1,063,527
		MC07	Cyber Operations	4	389	652	3,367	3,325	4,117	3,964	4,069	18,842
		MD06	Patriot Advanced Capability-3 (PAC-3)	4	960	1,154	1,130	1,168	1,186	1,248	1,267	5,999
		MD40	Program-Wide Support	4	19,930	10,029	9,638	11,195	10,012	12,846	13,738	57,429
74	0603882C		Ballistic Missile Defense Midcourse Defense Segment	4	863,965	1,269,913	862,080	701,311	585,079	600,710	535,614	3,284,794
		MD08	Ground Based Midcourse	4	801,930	1,209,006	815,796	658,613	546,271	560,488	497,613	3,078,781
		MC08	Cyber Operations	4	3,475	4,394	4,563	4,762	4,972	5,195	5,417	24,909
		MD40	Program-Wide Support	4	58,560	56,513	41,721	37,936	33,836	35,027	32,584	181,104
76	0603884C		Ballistic Missile Defense Sensors	4	260,347	228,392	230,077	144,893	141,815	171,644	158,421	846,850
		MD11	BMDS Radars	4	236,819	216,880	219,503	137,144	134,259	161,902	148,004	800,812
		MC11	Cyber Operations	4	1,132	1,239	1,045	1,067	1,089	1,111	1,133	5,445
		MD40	Program-Wide Support	4	22,396	10,273	9,529	6,682	6,467	8,631	9,284	40,593
77	0603890C		BMD Enabling Programs	4	395,927	404,780	401,594	404,993	409,481	427,603	434,868	2,078,539
		MD24	System Engineering & Integration	4	126,625	141,368	133,166	135,296	137,233	139,846	141,901	687,442
		MT23	Enabling - Test	4	32,792	16,611	17,449	25,501	26,040	24,704	25,077	118,771
		MD28	Intelligence & Security	4	38,485	40,263	41,254	45,192	45,654	48,462	49,348	229,910
		MD30	BMD Information Management Systems	4	90,761	95,650	92,628	81,212	80,427	86,691	87,939	428,897
		MC30	Cyber Operations	4	19,189	20,017	22,881	21,019	21,184	23,922	24,396	113,402
		MD31	Modeling & Simulation	4	39,589	42,668	44,458	47,278	47,837	50,226	50,984	240,783
		MC31	M&S Cyber Operations	4	204	225	253	258	263	268	274	1,316
		MD32	Quality, Safety, and Mission Assurance	4	29,358	29,986	31,022	29,582	29,970	31,470	31,967	154,011
		MD40	Program-Wide Support	4	18,924	17,992	18,483	19,655	20,873	22,014	22,982	104,007
78	0603891C		Special Programs - MDA	4	301,201	400,387	321,607	307,410	284,785	264,031	268,024	1,445,857
		MD27	Special Programs	4	301,201	400,387	321,607	307,410	284,785	264,031	268,024	1,445,857
79	0603892C		AEGIS BMD	4	761,646	830,647	959,066	841,738	700,596	592,940	528,744	3,623,084
		MD09	Aegis BMD	4	669,587	719,565	846,028	733,184	593,543	497,562	435,442	3,105,759
		MC09	Cyber Operations	4	880	870	879	885	884	884	901	4,433
		MX09	Aegis BMD Development Support	4	32,016	73,118	68,283	66,770	70,406	63,884	64,285	333,628
		MD40	Program-Wide Support	4	59,163	37,094	43,876	40,899	35,763	30,610	28,116	179,264
80	0603893C		Space Tracking and Surveillance System	4	29,530	28,605	32,129	33,869	34,884	36,203	36,821	173,906
		MD12	Space Tracking and Surveillance System (STSS)	4	27,716	27,214	30,751	32,228	33,111	34,344	34,879	165,313
		MD40	Program-Wide Support	4	1,814	1,391	1,378	1,641	1,773	1,859	1,942	8,593
81	0603895C		Ballistic Missile Defense System Space Programs	4	7,560	21,507	20,690	15,670	11,641	11,796	11,992	71,789
		MD33	MD Space Exp Center (MDSEC)	4	7,191	20,483	19,755	14,911	11,049	11,190	11,360	68,265
		MD40	Program-Wide Support	4	369	1,024	935	759	592	606	632	3,524

Line Number	Program Element	Budget Project	Program	Budget Activity	FY15 Actual	FY16	FY17	FY18	FY19	FY20	FY21	FY17-21
82	0603896C		Ballistic Missile Defense Command and Control, Battle Management & Communication	4	420,516	429,853	439,617	413,198	432,763	454,601	462,065	2,202,244
		MD01	Command & Control, Battle Management, Communications (C2BMC)	4	254,080	260,100	249,662	232,379	240,621	255,093	255,258	1,233,013
		MC01	Cyber Operations	4	819	543	905	942	979	1,018	1,058	4,902
		MT01	C2BMC Test	4	51,890	56,318	52,727	55,665	53,188	55,129	56,207	272,916
		MX01	Command & Control, Battle Management, Communications (C2BMC) Development Support	4	89,235	93,097	116,552	104,221	115,994	120,027	125,174	581,968
		MD40	Program-Wide Support	4	24,492	19,795	19,771	19,991	21,981	23,334	24,368	109,445
83	0603898C		Ballistic Missile Defense Joint Warfighter Support	4	44,220	47,898	47,776	49,621	50,564	53,151	54,042	255,154
		MD03	Joint Warfighter Support	4	40,638	14,569	15,417	15,832	16,071	16,885	17,146	81,351
		MT03	Joint Warfighter Support Test	4	1,051	31,149	30,423	31,369	31,904	33,517	34,027	161,240
		MD40	Program-Wide Support	4	2,531	2,180	1,936	2,420	2,589	2,749	2,869	12,563
84	0603904C		Missile Defense Integration and Operations Center (MDIOC)	4	53,972	47,939	54,750	53,894	55,524	58,100	59,029	281,297
		MD22	Missile Defense Integration and Operations Center (MDIOC)	4	50,127	45,303	51,773	50,663	52,076	54,468	55,255	264,235
		MC22	Cyber Operations	4	592	472	456	612	617	640	653	2,978
		MD40	Program-Wide Support	4	3,253	2,164	2,521	2,619	2,831	2,992	3,121	14,084
85	0603906C		Regarding Trench	4	15,912	9,583	8,785	9,161	9,314	9,786	9,934	46,980
		MD35	Regarding Trench	4	15,912	9,583	8,785	9,161	9,314	9,786	9,934	46,980
86	0603907C		Sea Based X-Band Radar (SBX)	4	64,610	71,266	68,787	73,329	70,423	85,881	74,189	372,609
		MX46	Sea Based X-Band Radar Development Support	4	60,882	68,061	65,678	69,759	66,842	81,471	70,276	354,026
		MD40	Program-Wide Support	4	3,728	3,205	3,109	3,570	3,581	4,410	3,913	18,583
87	0603913C		Israeli Cooperative Programs	4	268,842	267,595	103,835	105,612	108,271	110,009	112,168	539,895
		MD20	Israeli Upper Tier	4	74,707	74,550	55,793	56,861	58,285	59,225	60,392	290,556
		MD26	Israeli ARROW Program	4	56,201	56,519	10,831	10,833	11,117	11,285	11,505	55,571
		MD34	Short Range Ballistic Missile Defense (SRBMD)	4	137,934	136,526	37,211	37,918	38,869	39,499	40,271	193,768
88	0603914C		Ballistic Missile Defense Test	4	354,414	281,740	293,441	337,537	322,334	346,134	351,933	1,651,379
		MT04	BMDS Test Program	4	334,185	267,225	277,851	318,658	303,374	325,732	330,699	1,556,314
		MC04	Cyber Operations	4	1,141	2,450	2,479	2,528	2,578	2,631	2,682	12,898
		MD40	Program Wide Support	4	19,088	12,065	13,111	16,351	16,382	17,771	18,552	82,167
89	0603915C		Ballistic Missile Defense Targets	4	447,424	527,563	563,576	471,059	431,349	454,830	462,429	2,383,243
		MT05	BMDS Targets Program	4	422,612	504,989	539,837	448,238	409,425	431,477	438,049	2,267,026
		MD40	Program Wide Support	4	24,812	22,574	23,739	22,821	21,924	23,353	24,380	116,217
93	0604115C		Technology Maturation Initiatives	4	0	27,225	90,266	149,901	205,787	198,136	201,431	845,521
		MD98	Directed Energy Prototype Development	4	0	0	23,744	46,938	80,900	66,052	60,418	278,052
		MD99	Discrimination Sensor Prototype Development	4	0	20,467	57,382	69,903	109,286	115,812	127,654	480,037
		MT99	Technology Maturation Initiatives Test	4	0	2,357	4,408	25,539	4,963	5,918	2,554	43,382
		MC98	Cyber Operations	4	0	166	168	258	176	179	182	963
		MD40	Program Wide Support	4	0	4,235	4,564	7,263	10,462	10,175	10,623	43,087
104	0604873C		Long Range Discrimination Radar (LRDR)	4	49,606	137,564	162,012	310,347	76,843	98,874	102,320	750,396
		MD96	Long Range Discrim Radar (LRDR)	4	49,606	131,514	150,203	300,338	71,133	94,843	99,080	715,597
		MD40	Program Wide Support	4	0	6,050	11,809	10,009	5,710	4,031	3,240	34,799
105	0604874C		Improved Homeland Defense (HLD) Interceptors	4	97,739	278,944	274,148	321,441	479,049	508,198	580,239	2,163,075
		MD97	Improved HD Interceptors	4	97,739	266,676	260,543	306,321	455,080	482,214	549,783	2,053,941
		MD40	Program Wide Support	4	0	12,268	13,605	15,120	23,969	25,984	30,456	109,134
106	0604876C		Ballistic Missile Defense Terminal Defense Segment Test	4	109,394	26,225	63,444	69,959	79,497	72,950	59,271	345,121
		MT07	THAAD Test	4	109,394	25,072	60,577	66,569	75,456	69,204	56,145	327,951
		MD40	Program Wide Support	4		1,153	2,867	3,390	4,041	3,746	3,126	17,170
107	0604878C		Aegis BMD Test	4	88,041	78,468	95,012	127,720	91,461	88,217	98,525	500,935
		MT09	AEGIS BMD Test	4	88,041	76,043	90,953	121,531	86,811	83,687	93,328	476,310
		MD40	Program Wide Support	4	0	2,425	4,059	6,189	4,650	4,530	5,197	24,625

Line Number	Program Element	Budget Project	Program	Budget Activity	FY15 Actual	FY16	FY17	FY18	FY19	FY20	FY21	FY17-21
108	0604879C		Ballistic Missile Defense Sensor Test	4	60,048	83,597	83,250	87,346	100,132	100,073	86,937	457,738
		MT11	BMDS Radars Test	4	60,048	79,782	78,430	82,876	94,753	94,691	82,095	432,845
		MD40	Program Wide Support	4	0	3,815	4,820	4,470	5,379	5,382	4,842	24,893
109	0604880C		Land Based SM-3 (LBSM3)	4	121,413	34,970	43,293	29,045	19,259	21,294	21,646	134,537
		MD68	AEGIS Ashore	4	94,943	33,432	41,548	27,637	18,280	20,200	20,504	128,169
		MT68	Aegis Ashore Test	4	20,473	0	0	0	0	0	0	0
		MD40	Program-Wide Support	4	5,997	1,538	1,745	1,408	979	1,094	1,142	6,368
110	0604881C		AEGIS SM-3 Block IIA Co-Development	4	259,278	172,645	106,038	0	0	0	0	106,038
		MD09	SM-3 Block IIA Co-Development	4	236,565	139,866	91,071	0	0	0	0	91,071
		MT09	SM-3 Block IIA Co-Development Test	4	7,468	25,186	12,208	0	0	0	0	12,208
		MD40	Program-Wide Support	4	15,245	7,593	2,759	0	0	0	0	2,759
111	0604887C		Ballistic Missile Defense Midcourse Defense Segment Test	4	78,463	64,618	56,481	86,709	76,205	74,776	87,415	381,586
		MT08	Midcourse Test	4	78,463	61,777	53,192	83,069	72,723	70,935	82,805	362,724
		MD40	Program Wide Support	4	0	2,841	3,289	3,640	3,482	3,841	4,610	18,862
112	0604894C		Multi Object Kill Vehicle	4	0	0	71,513	34,884	84,503	98,065	99,699	388,664
		MD85	Multi Object Kill Vehicle	4	0	0	68,201	33,194	80,208	93,029	94,442	369,074
		MD40	Program-Wide Support	4	0	0	3,312	1,690	4,295	5,036	5,257	19,590
115	0305103C		Cyber Security Initiative	4	944	963	969	986	997	1,031	1,051	5,034
		MDCS	Cyber Security Initiative	4	944	963	969	986	997	1,031	1,051	5,034
			Budget Activity 04 Total	4	5,316,310	5,985,117	5,661,070	5,412,738	5,059,574	5,189,260	5,159,420	26,482,062
152	0605502C		Small Business Innovation Research - MDA	6	89,507	0	0	0	0	0	0	0
		MD45	Small Business Innovation Research	6	89,507	0	0	0	0	0	0	0
176	0901598C		Management HQ - MDA	6	35,598	35,871	31,160	29,814	27,889	27,131	27,737	143,731
		MD38	Management Headquarters	6	35,598	35,871	31,160	29,814	27,889	27,131	27,737	143,731
			Budget Activity 06 Total	6	125,105	35,871	31,160	29,814	27,889	27,131	27,737	143,731
			RDT&E Total	6	5,647,845	6,215,381	5,892,757	5,544,025	5,174,634	5,316,926	5,289,359	27,217,701
MILCON												
			Major MILCON	NA	0	169,153	176,230	0	150,000	0	0	326,230
			Long Range Discrimination Radar Cmplx, Clear AFS, AK	NA	0		155,000	0	150,000	0	0	305,000
			Missile Defense Cmplx Switchgear Facility, Ft. Greely, AK	NA	0	0	9,560	0	0	0	0	9,560
			Test Support Facility, Wake Island	NA	0	0	11,670	0	0	0	0	11,670
			Aegis Ashore Missile Def Cmplx, Poland	NA	0	169,153	0	0	0	0	0	0
			Minor MILCON	NA	2,000	0	2,414	3,000	3,000	3,000	3,000	14,414
				NA	2,000	0	2,414	3,000	3,000	3,000	3,000	14,414
			MILCON Planning and Design	NA	58,704	15,000	0	6,355	6,384	7,640	7,848	28,227
				NA	58,704	15,000	0	6,355	6,384	7,640	7,848	28,227
			MILCON Total	NA	60,704	184,153	178,644	9,355	159,384	10,640	10,848	368,871
			Program Total		7,868,181	8,312,806	7,506,879	7,414,937	7,330,213	7,478,772	7,623,434	37,354,235