Department of Defense FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
Research, Development, Test & Eval, DW	7,749,461	7,248,720		7,248,720
Total Research, Development, Test & Evaluation	7,749,461	7,248,720		7,248,720

Department of Defense FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

FY 2020

11 Mar 2019

	OCO for					
	FY 2020	FY 2020 OCO for Base	Direct War and Enduring	FY 2020 Total	FY 2020 Total	
Appropriation	Base	Requirements	Costs	oco	(Base + OCO)	
Research, Development, Test & Eval, DW	7,369,585				7,369,585	
Total Research, Development, Test & Evaluation	7,369,585				7,369,585	

Department of Defense FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Summary Recap of Budget Activities	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	
Advanced Technology Development	125,904	125,735		125,735
Advanced Component Development And Prototypes	7,478,332	7,090,959		7,090,959
Management Support	145,225	32,026		32,026
Total Research, Development, Test & Evaluation	7,749,461	7,248,720		7,248,720
Summary Recap of FYDP Programs				
Intelligence and Communications	964	985		985
Research and Development	7,638,419	7,087,670		7,087,670
Administration and Associated Activities	29,947	28,626		28,626
Space	80,131	131,439		131,439
Total Research, Development, Test & Evaluation	7,749,461	7,248,720		7,248,720

Department of Defense FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

FY 2020

11 Mar 2019

		OCO for			
Summary Recap of Budget Activities	FY 2020 Base	FY 2020 OCO for Base Requirements	Direct War and Enduring Costs		FY 2020 Total (Base + OCO)
Advanced Technology Development	58,482				58,482
Advanced Component Development And Prototypes	7,284,038				7,284,038
Management Support	27,065				27,065
Total Research, Development, Test & Evaluation	7,369,585				7,369,585
Summary Recap of FYDP Programs					
Intelligence and Communications	1,138				1,138
Research and Development	7,277,968				7,277,968
Administration and Associated Activities	27,065				27,065
Space	63,414				63,414

7,369,585

R-120PB: FY 2020 President's Budget (Published Version), as of March 11, 2019 at 12:39:07

Total Research, Development, Test & Evaluation

7,369,585

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority

(Dollars in Thousands)

Summary Recap of Budget Activities		FY 2019 Base Enacted	
Advanced Technology Development	125,904	125,735	125,735
Advanced Component Development And Prototypes	7,478,332	7,090,959	7,090,959
Management Support	145,225	32,026	32,026
Total Research, Development, Test & Evaluation	7,749,461	7,248,720	7,248,720
Summary Recap of FYDP Programs			
Intelligence and Communications	964	985	985
Research and Development	7,638,419	7,087,670	7,087,670
Administration and Associated Activities	29,947	28,626	28,626
Space	80,131	131,439	131,439
Total Research, Development, Test & Evaluation	7,749,461	7,248,720	7,248,720

R-120PB: FY 2020 President's Budget (Published Version), as of March 11, 2019 at 12:39:07

Page D-1

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

FY 2020 OCO for

Summary Recap of Budget Activities	FY 2020 Base	FY 2020 OCO for Base Requirements	-	FY 2020 Total OCO	FY 2020 Total (Base + OCO)
Advanced Technology Development	58,482				58,482
Advanced Component Development And Prototypes	7,284,038				7,284,038
Management Support	27,065				27,065
Total Research, Development, Test & Evaluation	7,369,585				7,369,585
Summary Recap of FYDP Programs					
Intelligence and Communications	1,138				1,138
Research and Development	7,277,968				7,277,968
Administration and Associated Activities	27,065				27,065
Space	63,414				63,414
Total Research, Development, Test & Evaluation	7,369,585				7,369,585

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget

Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
Missile Defense Agency	7,749,461	7,248,720		7,248,720
Total Research, Development, Test & Evaluation	7,749,461	7,248,720		7,248,720

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)
Missile Defense Agency	7,369,585				7,369,585
Total Research, Development, Test & Evaluation	7,369,585				7,369,585

Defense-Wide FY 2020 President's Budget hibit R-1 FY 2020 President's Bud

Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number	Item	Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 Total Enacted	S e c -
29	0603176C	Advanced Concepts and Performance Assessment	03	17,683	13,017	13,017	U
30	0603178C	Weapons Technology	03	28,894	13,400	13,400	U
31	0603180C	Advanced Research	03	23,765	42,565	42,565	U
38	0603294C	Common Kill Vehicle Technology	03	55,562	56,753	56,753	U
	Advan	ced Technology Development		125,904	125,735	 125,735	
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	454,147	388,273	388,273	U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,153,263	803,359	803,359	U
77	0603884C	Ballistic Missile Defense Sensors	04	290,289	385,375	385,375	U
78	0603890C	BMD Enabling Programs	04	533,993	620,831	620,831	U
79	0603891C	Special Programs - MDA	04	356,560	422,348	422,348	U
80	0603892C	AEGIS BMD	04	798,395	741,076	741,076	U
81	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	449,985	507,817	507,817	U
82	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	48,574	48,767	48,767	U
83	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	51,905	58,125	58,125	U
84	0603906C	Regarding Trench	04	8,898	16,916	16,916	U
85	0603907C	Sea Based X-Band Radar (SBX)	04	173,988	136,715	136,715	U
86	0603913C	Israeli Cooperative Programs	04	373,800	300,000	300,000	U

R-120PB: FY 2020 President's Budget (Published Version), as of March 11, 2019 at 12:39:07

Page D-3

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)	S e C -
29	0603176C	Advanced Concepts and Performance Assessment	03	14,208				14,208	U
30	0603178C	Weapons Technology	03	10,000				10,000	U
31	0603180C	Advanced Research	03	20,674				20,674	U
38	0603294C	Common Kill Vehicle Technology	03	13,600				13,600	U
	Advan	ced Technology Development		58,482				58,482	
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	302,761				302,761	U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,156,506				1,156,506	U
77	0603884C	Ballistic Missile Defense Sensors	04	283,487				283,487	U
78	0603890C	BMD Enabling Programs	04	571,507				571,507	U
79	0603891C	Special Programs - MDA	04	377,098				377,098	U
80	0603892C	AEGIS BMD	04	727,479				727,479	U
81	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	0.4	564,206				564,206	U
82	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	51,532				51,532	U
83	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	56,161				56,161	U
84	0603906C	Regarding Trench	04	22,424				22,424	U
85	0603907C	Sea Based X-Band Radar (SBX)	04	128,156				128,156	U
86	0603913C	Israeli Cooperative Programs	04	300,000				300,000	U

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority

(Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number		Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted	S e c
87	0603914C	Ballistic Missile Defense Test	04	406,806	515,897		515,897	U
88	0603915C	Ballistic Missile Defense Targets	04	512,838	561,352		561,352	U
92	0604115C	Technology Maturation Initiatives	04	163,947	316,822		316,822	U
95	0604181C	Hypersonic Defense	04	63,032	130,944		130,944	U
102	0604672C	Homeland Defense Radar - Hawaii (HDR-H)	04		62,221		62,221	U
103	0604673C	Pacific Discriminating Radar	04	59,564	15,926		15,926	U
108	0604873C	Long Range Discrimination Radar (LRDR)	04	370,516	166,543		166,543	U
109	0604874C	Improved Homeland Defense Interceptors	04	742,842	421,820		421,820	U
110	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	35,738	61,017		61,017	U
111	0604878C	Aegis BMD Test	04	128,757	92,160		92,160	U
112	0604879C	Ballistic Missile Defense Sensor Test	04	88,840	77,405		77,405	U
113	0604880C	Land-Based SM-3 (LBSM3)	04	29,652	27,692		27,692	U
114	0604881C	AEGIS SM-3 Block IIA Co-Development	04	9,531				U
115	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	85,030	72,634		72,634	U
116	0604894C	Multi-Object Kill Vehicle	04	6,347	6,500		6,500	U
119	0305103C	Cyber Security Initiative	04	964	985		985	U
121	1206893C	Space Tracking & Surveillance System	04	35,008	36,955		36,955	U

R-120PB: FY 2020 President's Budget (Published Version), as of March 11, 2019 at 12:39:07

Page D-4

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)	S e c
87	0603914C	Ballistic Missile Defense Test	04	395,924				395,924	U
88	0603915C	Ballistic Missile Defense Targets	04	554,171				554,171	U
92	0604115C	Technology Maturation Initiatives	04	303,458				303,458	U
95	0604181C	Hypersonic Defense	04	157,425				157,425	U
102	0604672C	Homeland Defense Radar - Hawaii (HDR-H)	04	274,714				274,714	U
103	0604673C	Pacific Discriminating Radar	04	6,711				6,711	U
108	0604873C	Long Range Discrimination Radar (LRDR)	04	136,423				136,423	U
109	0604874C	Improved Homeland Defense Interceptors	04	412,363				412,363	U
110	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	25,137				25,137	U
111	0604878C	Aegis BMD Test	04	169,822				169,822	U
112	0604879C	Ballistic Missile Defense Sensor Test	04	105,530				105,530	U
113	0604880C	Land-Based SM-3 (LBSM3)	04	38,352				38,352	U
114	0604881C	AEGIS SM-3 Block IIA Co-Development	04						U
115	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	98,139				98,139	U
116	0604894C	Multi-Object Kill Vehicle	04						U
119	0305103C	Cyber Security Initiative	04	1,138				1,138	U
121	1206893C	Space Tracking & Surveillance System	04	35,849				35,849	U

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority

(Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element			FY 2018	FY 2019	FY 2019	FY 2019	S e
No	Number	Item	Act	(Base + OCO)	Base Enacted	OCO Enacted	Total Enacted	_
								-
122	1206895C	Ballistic Missile Defense System Space Programs	04	45,123	94,484		94,484	U
	Advan	ced Component Development And Protot	ypes	7,478,332	7,090,959		7,090,959	
160	0605502C	Small Business Innovation Research - MDA	06	115,278				U
177	0606942C	Assessments and Evaluations Cyber Vulnerabilities	06		3,400		3,400	U
193	0901598C	Management HQ - MDA	06	29,947	28,626		28,626	U
	Manage	ement Support		145,225	32,026		32,026	
					,			
Total	Research,	Development, Test & Eval, DW		7,749,461	7,248,720		7,248,720	

R-120PB: FY 2020 President's Budget (Published Version), as of March 11, 2019 at 12:39:07

Page D-5

Defense-Wide FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO		S e c
122	1206895C	Ballistic Missile Defense System Space Programs	04	27,565				27,565	U
	Advan	ced Component Development And Protot	ypes	7,284,038				7,284,038	
160	0605502C	Small Business Innovation Research - MDA	06						U
177	0606942C	Assessments and Evaluations Cyber Vulnerabilities	06						U
193	0901598C	Management HQ - MDA	06	27,065				27,065	U
	Manag	ement Support		27,065				27,065	
Tota:	l Research,	Development, Test & Eval, DW		7,369,585				7,369,585	

Missile Defense Agency FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority

(Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number	Item	Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted	S e c
29	0603176C	Advanced Concepts and Performance Assessment	03	17,683	13,017		13,017	U
30	0603178C	Weapons Technology	03	28,894	13,400		13,400	U
31	0603180C	Advanced Research	03	23,765	42,565		42,565	U
38	0603294C	Common Kill Vehicle Technology	03	55,562	56,753		56,753	U
Ad	dvanced Tec	hnology Development		125,904	125,735		125,735	
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	454,147	388,273		388,273	U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,153,263	803,359		803,359	U
77	0603884C	Ballistic Missile Defense Sensors	04	290,289	385,375		385,375	U
78	0603890C	BMD Enabling Programs	04	533,993	620,831		620,831	U
79	0603891C	Special Programs - MDA	04	356,560	422,348		422,348	U
80	0603892C	AEGIS BMD	04	798,395	741,076		741,076	U
81	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	449,985	507,817		507,817	U
82	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	48,574	48,767		48,767	U
83	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	51,905	58,125		58,125	U
84	0603906C	Regarding Trench	04	8,898	16,916		16,916	U
85	0603907C	Sea Based X-Band Radar (SBX)	04	173,988	136,715		136,715	U
86	0603913C	Israeli Cooperative Programs	04	373,800	300,000		300,000	U

R-120PB: FY 2020 President's Budget (Published Version), as of March 11, 2019 at 12:39:07

Page D-6

Missile Defense Agency FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

FY 2020

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

30	0603176C	Advanced Concepts and Performance				Costs	OCO	(Base + OCO)	C -
	0.6021709	Assessment	03	14,208				14,208	U
31	0603178C	Weapons Technology	03	10,000				10,000	U
	0603180C	Advanced Research	03	20,674				20,674	U
38	0603294C	Common Kill Vehicle Technology	03	13,600				13,600	
Ad	lvanced Tec	chnology Development		58,482				58,482	
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	302,761				302,761	U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,156,506				1,156,506	U
77	0603884C	Ballistic Missile Defense Sensors	04	283,487				283,487	U
78	0603890C	BMD Enabling Programs	04	571,507				571,507	U
79	0603891C	Special Programs - MDA	04	377,098				377,098	U
30	0603892C	AEGIS BMD	04	727,479				727,479	U
31	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	564,206				564,206	U
32	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	51,532				51,532	U
33	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	56,161				56,161	U
34	0603906C	Regarding Trench	04	22,424				22,424	U
35	0603907C	Sea Based X-Band Radar (SBX)	04	128,156				128,156	U
36	0603913C	Israeli Cooperative Programs	04	300,000				300,000	U
333333333333333333333333333333333333333	1 2 3 4 5	0 0603892C 1 0603896C 2 0603898C 3 0603904C 4 0603906C 5 0603907C 6 0603913C	Ballistic Missile Defense Command and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint Warfighter Support 3 0603904C Missile Defense Integration & Operations Center (MDIOC) 4 0603906C Regarding Trench 5 0603907C Sea Based X-Band Radar (SBX)	Ballistic Missile Defense Command and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint Warfighter Support 3 0603904C Missile Defense Integration & O4 Operations Center (MDIOC) 4 0603906C Regarding Trench 04 5 0603907C Sea Based X-Band Radar (SBX) 04	Ballistic Missile Defense Command of and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint Warfighter Support 3 0603904C Missile Defense Integration & 04 56,161 Operations Center (MDIOC) 4 0603906C Regarding Trench 04 22,424 5 0603907C Sea Based X-Band Radar (SBX) 04 128,156	Ballistic Missile Defense Command of and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint of St.,532 Warfighter Support 3 0603904C Missile Defense Integration & O4 56,161 Operations Center (MDIOC) 4 0603906C Regarding Trench 04 22,424 5 0603907C Sea Based X-Band Radar (SBX) 04 128,156	Ballistic Missile Defense Command and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint 04 51,532 Warfighter Support 3 0603904C Missile Defense Integration & 04 56,161 Operations Center (MDIOC) 4 0603906C Regarding Trench 04 22,424 5 0603907C Sea Based X-Band Radar (SBX) 04 128,156	Ballistic Missile Defense Command 04 564,206 and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint 04 51,532 Warfighter Support 3 0603904C Missile Defense Integration & 04 56,161 Operations Center (MDIOC) 4 0603906C Regarding Trench 04 22,424 5 0603907C Sea Based X-Band Radar (SBX) 04 128,156	### 1 0603896C Ballistic Missile Defense Command and Control, Battle Management and Communicati 2 0603898C Ballistic Missile Defense Joint Warfighter Support 3 0603904C Missile Defense Integration & 04 56,161 56,161 56,161 Operations Center (MDIOC) 4 0603906C Regarding Trench 04 22,424 22,424 5 0603907C Sea Based X-Band Radar (SBX) 04 128,156

Missile Defense Agency FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number		Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted	S e c
87	0603914C	Ballistic Missile Defense Test	04	406,806	515,897		515,897	U
88	0603915C	Ballistic Missile Defense Targets	04	512,838	561,352		561,352	U
92	0604115C	Technology Maturation Initiatives	04	163,947	316,822		316,822	U
95	0604181C	Hypersonic Defense	04	63,032	130,944		130,944	U
102	0604672C	Homeland Defense Radar - Hawaii (HDR-H)	04		62,221		62,221	U
103	0604673C	Pacific Discriminating Radar	04	59,564	15,926		15,926	U
108	0604873C	Long Range Discrimination Radar (LRDR)	04	370,516	166,543		166,543	U
109	0604874C	Improved Homeland Defense Interceptors	04	742,842	421,820		421,820	U
110	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	35,738	61,017		61,017	U
111	0604878C	Aegis BMD Test	04	128,757	92,160		92,160	U
112	0604879C	Ballistic Missile Defense Sensor Test	04	88,840	77,405		77,405	U
113	0604880C	Land-Based SM-3 (LBSM3)	04	29,652	27,692		27,692	U
114	0604881C	AEGIS SM-3 Block IIA Co-Development	04	9,531				U
115	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	85,030	72,634		72,634	U
116	0604894C	Multi-Object Kill Vehicle	04	6,347	6,500		6,500	U
119	0305103C	Cyber Security Initiative	04	964	985		985	U
121	1206893C	Space Tracking & Surveillance System	04	35,008	36,955		36,955	U

Missile Defense Agency FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

	Program Element Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)	S e C
87	0603914C	Ballistic Missile Defense Test	04	395,924				395,924	U
88	0603915C	Ballistic Missile Defense Targets	04	554,171				554,171	U
92	0604115C	Technology Maturation Initiatives	04	303,458				303,458	U
95	0604181C	Hypersonic Defense	04	157,425				157,425	U
102	0604672C	Homeland Defense Radar - Hawaii (HDR-H)	04	274,714				274,714	U
103	0604673C	Pacific Discriminating Radar	04	6,711				6,711	U
108	0604873C	Long Range Discrimination Radar (LRDR)	04	136,423				136,423	U
109	0604874C	Improved Homeland Defense Interceptors	04	412,363				412,363	U
110	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	25,137				25,137	U
111	0604878C	Aegis BMD Test	04	169,822				169,822	U
112	0604879C	Ballistic Missile Defense Sensor Test	04	105,530				105,530	U
113	0604880C	Land-Based SM-3 (LBSM3)	04	38,352				38,352	U
114	0604881C	AEGIS SM-3 Block IIA Co-Development	04						U
115	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	98,139				98,139	U
116	0604894C	Multi-Object Kill Vehicle	04						U
119	0305103C	Cyber Security Initiative	04	1,138				1,138	U
121	1206893C	Space Tracking & Surveillance System	04	35,849				35,849	U

Missile Defense Agency FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted	S e c
122	1206895C	Ballistic Missile Defense System Space Programs	04	45,123	94,484		94,484	U
Ad	dvanced Com	ponent Development And Prototypes		7,478,332	7,090,959		7,090,959	
160	0605502C	Small Business Innovation Research - MDA	06	115,278				U
177	0606942C	Assessments and Evaluations Cyber Vulnerabilities	06		3,400		3,400	U
193	0901598C	Management HQ - MDA	06	29,947	28,626		28,626	U
Ma	anagement S	upport		145,225	32,026		32,026	
Total	l Missile D	efense Agency		7,749,461	7,248,720		7,248,720	

Missile Defense Agency FY 2020 President's Budget Exhibit R-1 FY 2020 President's Budget Total Obligational Authority (Dollars in Thousands)

11 Mar 2019

Appropriation: 0400D Research, Development, Test & Eval, DW

Line H	Program Element Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)	S e c -
122	1206895C	Ballistic Missile Defense System Space Programs	04	27,565				27,565	U
Adv	vanced Com	ponent Development And Prototypes		7,284,038				7,284,038	
160 (0605502C	Small Business Innovation Research - MDA	06						U
177 (0606942C	Assessments and Evaluations Cyber Vulnerabilities	06						U
193 (0901598C	Management HQ - MDA	06	27,065				27,065	U
Mar	nagement S	upport		27,065				27,065	
Total	Missile D	efense Agency		7,369,585				7,369,585	