

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency	Date: March 2019
---	-------------------------

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	2,355.581	512.838	561.352	554.171	-	554.171	513.964	439.826	358.018	276.108	Continuing	Continuing
MC05: <i>Cyber Operations</i>	0.181	0.572	5.351	0.913	-	0.913	1.075	1.065	1.398	1.426	0.000	11.981
MT05: <i>BMDS Targets Program</i>	2,255.079	494.055	539.537	532.413	-	532.413	491.747	420.753	341.426	260.278	Continuing	Continuing
MD40: <i>Program Wide Support</i>	100.321	18.211	16.464	20.845	-	20.845	21.142	18.008	15.194	14.404	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

N/A

A. Mission Description and Budget Item Justification

The Ballistic Missile Defense System (BMDS) Targets Program provides centrally managed targets and countermeasures development and procurement for a cost effective, integrated system-level approach to BMDS testing. Based on engineering assessments of threat intelligence data, the BMDS Targets Program develops, builds, and supports the launch of Short Range Ballistic Missile (SRBM: Less than 1000 Kilometer range) targets, Medium Range Ballistic Missile (MRBM: 1000-3000 Kilometer Range) targets, Intermediate Range Ballistic Missile (IRBM: 3000-5500 Kilometer Range) targets, Intercontinental Ballistic Missile (ICBM: Greater than 5500 Kilometer range) targets, and Multi-Class Components to test, verify, and validate the performance of the BMDS against threats. The BMDS Targets Program provides an economical and reliable inventory of targets, which are representative of feasible future threats and support demonstration of the capability of the evolving layered missile defense system in a simultaneous test and operations threat environment.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020 Base</u>	<u>FY 2020 OCO</u>	<u>FY 2020 Total</u>
Previous President's Budget	460.125	517.852	441.827	-	441.827
Current President's Budget	512.838	561.352	554.171	-	554.171
Total Adjustments	52.713	43.500	112.344	-	112.344
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	-21.379	-36.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	108.200	79.500			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-34.096	0.000			
• SBIR/STTR Transfer	-0.012	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	112.344	-	112.344

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency		Date: March 2019
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets	
<p>Change Summary Explanation</p> <p>Increase in FY 2018 from PB19 to PB20 reflects the enacted congressional adjustments to accelerate deployment of 20 additional Ground Based Interceptors (GBI) with Redesigned Kill Vehicle (RKV), Terminal High Altitude Area Defense (THAAD)/Patriot Joint Emergent Operational Need (JEON), and FTM-29 flight test repeat.</p> <p>Increase in FY 2019 from PB19 to PB20 reflects the enacted congressional adjustments to fund cybersecurity upgrades, THAAD/Patriot JEON requirements, and development of an advanced target. The congressional decrease was for acceleration of boosters - requirement forward funded in FY 2018.</p> <p>Increase in FY 2020 from PB19 to PB20 provides the advanced target, fully funding the USFK JEON, target obsolescence, and Integrated Master Test Plan flight test adjustments.</p>		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MC05 / Cyber Operations			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MC05: Cyber Operations	0.181	0.572	5.351	0.913	-	0.913	1.075	1.065	1.398	1.426	0.000	11.981
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note FY 2019 reflects congressional adjustment to address cybersecurity threats.												
A. Mission Description and Budget Item Justification Defense Cyber Operations sustains Missile Defense Agency DoD Information Assurance Certification and Accreditation Program (DIACAP), Risk Management Framework Standards, Computer Network Defense Service Provider and Controls Validation Testing activities; analysis of validation results; risk assessments and reviews of proposed Program Manager/Information Assurance Manager (PM/IAM) Plans of Action and Milestones (POA&Ms) for MDA Ballistic Missile Defense Test program. It maintains the Certification and Accreditation (C&A) data repository, capturing the DIACAP documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority (DAA) accreditation decisions) and POA&M on all MDA information systems. This project supports the monitoring and tracking of Cybersecurity mitigations detailed in Information Technology security POA&Ms. Activities include preparation of C&A documentation and accreditation recommendations to the MDA Senior Information Assurance Officer/Certification Authority (CA) and DAA. Independent Verification and Validation (IV&V) team actions ensure the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. Activities in the Project are necessary to comply with the Federal Information Security Management Act (FISMA).												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020	
Title: Network / System Certification and Accreditation (C&A) Articles: Description: The Network/Systems Certification and Accreditation project sustains the MDA DoD Information Assurance Certification and Accreditation Program (DIACAP) and Controls Validation Testing (CVT) activities, analysis of validation results, risk assessments and reviews of proposed Program Manager/Information Assurance Manager (PM/IAM) Plans of Action and Milestones (POA&Ms) for MDA Command and Control Battle Management and Communications (C2BMC) mission systems. It maintains the Certification and Accreditation (C&A) data repository, capturing the DIACAP documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority [DAA] accreditation decisions) and POA&M on all MDA information systems. Specific and/or unique accomplishments to each FY are as follows: FY 2019 Plans:									0.572	5.351	0.913	
									-	-	-	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MC05 / <i>Cyber Operations</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
- Implement Department of Defense mandated upgrades to Windows 10 to improve Information Technology effectiveness and increase information system security. <i>FY 2020 Plans:</i> - SEE ABOVE. <i>FY 2019 to FY 2020 Increase/Decrease Statement:</i> Decrease from FY 2019 to FY 2020 reflects completion of the congressional addition for cybersecurity enhancements in FY 2019.			
Accomplishments/Planned Programs Subtotals		0.572	5.351
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics N/A			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MC05 / Cyber Operations					
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Network / System Certification and Accreditation (C&A) - Windows 10 Upgrade	C/CPAF	Northrop Grumman Innovative Systems (NGIS) : Chandler, AZ	0.000	0.000		5.000	Dec 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		5.000		0.000		-		0.000	Continuing	Continuing	N/A
Remarks N/A															
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Network / System Certification and Accreditation (C&A) - Information Assurance 1	MIPR	Missile Defense Agency : Huntsville, AL	0.098	0.123	Nov 2017	0.163	Nov 2018	0.176	Nov 2019	-		0.176	Continuing	Continuing	Continuing
Network / System Certification and Accreditation (C&A) - Information Assurance 2	C/IDIQ	MiDAESS/TEAMS : Various	0.083	0.449	Nov 2017	0.188	Nov 2018	0.737	Nov 2019	-		0.737	Continuing	Continuing	Continuing
Subtotal			0.181	0.572		0.351		0.913		-		0.913	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.181	0.572		5.351		0.913		-		0.913	Continuing	Continuing	N/A
Remarks Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

UNCLASSIFIED

PE 0603915C: *Ballistic Missile Defense Targets* **UNCLASSIFIED**
Missile Defense Agency Page 6 of 38 R-1 Line #88

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MC05 / <i>Cyber Operations</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MC05 Cyber Activities	1	2018	4	2024

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDS Targets Program			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MT05: BMDS Targets Program	2,255.079	494.055	539.537	532.413	-	532.413	491.747	420.753	341.426	260.278	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note N/A												
A. Mission Description and Budget Item Justification												
<p>The mission of the BMDS Targets Program is to provide an economical and reliable inventory of targets that are representative of feasible future threats. These targets enable demonstration of BMDS capabilities in operationally realistic scenarios. The BMDS Targets Program develops and acquires four target types across four target classes. The classes include: Short Range Ballistic Missiles (SRBM), Medium Range Ballistic Missiles (MRBM), Intermediate Range Ballistic Missiles (IRBM), and Intercontinental Ballistic Missiles (ICBM). The target types (Type 1-4) designate the complexity of the target within its class. Type-1 targets are simple baseline configurations. Type-2 targets have increased capability or complexity. Type-3 targets have unique configurations. Type-4 targets are subscale targets.</p> <p>The BMDS Targets Program develops and provides Modified Ballistic Re-Entry Vehicles (MBRV) and Countermeasures that can be used across the spectrum of target types and classes. The BMDS Targets Program provides target digital models that enable MDA weapon system program offices to simulate end to end sensor and interceptor performance during pre-mission analysis. The BMDS Targets Program also provides maintenance, aging surveillance, refurbishment, and routine testing of government furnished equipment boosters and target components.</p> <p>The BMDS Targets Program carefully plans the year of execution to assure the best use of appropriated funds. However, the BMDS Targets Program must be flexible in its execution of the program in order to respond to emerging real world threats or changes in the intelligence community estimates of when a threat will be deployed. The BMDS Targets Program must also work with BMDS systems engineers on a continuing basis to align the targets program to the BMDS need to demonstrate capabilities as reflected in MDA's Integrated Master Test Plan (IMTP). The BMDS Targets Program makes every effort to reduce instability in contracts, production base and budget while managing in this dynamic work environment.</p> <p>The BMDS Targets Program develops and builds targets and countermeasures at multiple locations including: Courtland, AL; Orlando, FL; Huntsville, AL; and Chandler, AZ. Storage and maintenance facilities are also located throughout the country including: Huntsville, AL; White Sands, NM; Ogden, UT; Tooele, UT; Cape Canaveral Air Force Station, FL, and Courtland, AL.</p> <p>The BMDS Targets Program consists of four major areas: Consumables, Program Planning and Operations, Resources, and Flight Test Execution.</p>												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020	
Title: Consumables - Short Range Ballistic Missiles (SRBM)									21.895	29.832	51.437	
Articles:									-	-	-	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDS Targets Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
<p>Description: Consumables include SRBM target hardware development and manufacturing.</p> <p>Target development includes non-recurring engineering, MBRVs, Countermeasures, and launch support equipment for BMDS flight testing as required by the BMDS IMTP. Target development provides air, sea, and ground launch capabilities to maximize flexibility in MDA test design. Development activities include requirements decomposition, design, modeling and simulation, qualification testing, and characterization. The BMDS Targets Program Office manages target configuration, component interface specifications, range integration, reliability, mission assurance, and costs. The BMDS Targets Program ensures target designs are producible, reliable, and affordable.</p> <p>Target manufacturing includes the build of targets and target components that are required to execute the BMDS IMTP. Manufacturing includes government furnished equipment and new component acquisition, assembly, and integration. Also included are target characterization, quality and mission assurance, transportation, and logistics support. The BMDS Targets Program delivers fully assembled and integrated targets to the BMDS Test Program. Future revisions to the IMTP will likely affect target types and quantities noted in the Planned Accomplishments.</p> <p>Specific and/or unique planned accomplishments to each FY are as follows:</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> -Short Range Ballistic Missile T4-G (SRBM T4-G) - deliver Ship Sets 1 and 2 to support pre-ship readiness reviews and flight tests in FY 2019 -SRBM T4-B - deliver Ship Set 25 to support a pre-ship readiness review and flight test in FY 2019; continue manufacture of Ship Set 26 to support a pre-ship readiness review in FY 2020 -Award contract and initiate development of future short range (subscale) targets to include initiation of SRBM T4 manufacture of Ship Sets 1, 2, and 3 to support pre-ship readiness reviews in FY 2022 <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> -SRBM T4-B - deliver Ship Set 26 to support a pre-ship readiness review and flight test in FY 2020 -Future short range ballistic missile (subscale) targets - continue development efforts, continue manufacture of SRBM T4 Ship Sets 1, 2, and 3 to support pre-ship readiness reviews in FY 2022, and initiate manufacture of SRBM T4 Ship Set 4 to support pre-ship readiness review in FY 2023 <p>FY 2019 to FY 2020 Increase/Decrease Statement:</p>			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDs Targets Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
Increase from FY 2019 to FY 2020 provides the first full year of non-recurring engineering development efforts and hardware purchases associated with the future short range (subscale) ballistic missile targets contract.			FY 2020
Title: Consumables - Medium Range Ballistic Missiles (MRBM) Description: MRBM target hardware development and manufacturing is consistent with the Description found in the Consumables-SRBM section. Specific and/or unique planned accomplishments to each FY are as follows: FY 2019 Plans: -MRBM Type 3 Configuration 2 (MRBM T3C2) - deliver Ship Set 5 to support a flight test in FY 2019, continue manufacture of Ship Sets 6 and 7 to support a pre-ship readiness reviews and flight tests in FY 2020 (Ship Set 6) and FY 2022 (Ship Set 7) -MBRV-7 - continue recurring engineering efforts; deliver MBRV-7 front section to support MRBM T1/T2 Ship Set 4; continue manufacturing MBRV-7 front sections to support MRBM T1/T2 Ship Sets 5 and 6 -MRBM T1/T2 - complete non-recurring engineering efforts; deliver Ship Set 1 to support first target acceptance review and pre-ship readiness review in FY 2019; continue manufacturing of Ship Sets 2-4 to support pre-ship readiness reviews in FY 2022 (Ship Set 2) and FY 2023 (Ship Sets 3 and 4) -MRBM T4 - continue manufacture of Ship Sets 5-7 to support flight tests in FY 2021; initiate manufacture of Ship Set 8 to support a pre-ship readiness review in FY 2021 -Continue non-recurring engineering efforts for the MRBM Re-Entry Vehicle development and build -Develop and manufacture advanced target in accordance with FY 2019 Congressional enactment. FY 2020 Plans: -MRBM Type 3 Configuration 2 (MRBM T3C2) - deliver Ship Set 6 to support a flight test in FY 2020, continue manufacturing of Ship Set 7 to support a pre-ship readiness review and flight test in FY 2022 -MBRV-7 - continue recurring engineering efforts and manufacturing of MBRV-7 front sections to support MRBM flight tests -MRBM T1/T2 - continue manufacturing of Ship Sets 2-4 to support pre-ship readiness reviews in FY 2020 (Ship Set 2), FY 2021 (Ship Set 3), and FY 2022 (Ship Set 4); initiate manufacturing of Ship Sets 5 and 6 to support pre-ship readiness reviews in FY 2023 -MRBM T4 - continue manufacturing of Ship Sets 5-7 to support flight tests in FY 2021; initiate manufacturing of Ship Set 8 to support a pre-ship readiness review in FY 2021 -Continue non-recurring engineering efforts for the MRBM Re-Entry Vehicle development and build -Continue development and manufacture of advanced target FY 2019 to FY 2020 Increase/Decrease Statement:		148.162	177.888
Articles:		-	-
		147.066	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDs Targets Program</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020
Decrease from FY 2019 to FY 2020 reflects congressional enactment of FY 2019 program increase for the advanced target.				
Title: Consumables - Intermediate Range Ballistic Missiles (IRBM) Articles: Description: IRBM target hardware development and manufacturing is consistent with the Description found in the Consumables-SRBM section. Specific and/or unique planned accomplishments to each FY are as follows: FY 2019 Plans: -IRBM T1/T2 - continue manufacturing and integration of Ship Sets 10-14 to support pre-ship readiness reviews in FY 20 (Ship Set 10), FY 2021 (Ship Set 12), FY 2022 (Ship Set 11), FY 2024 (Ship Set 14) and FY 2026 (Ship Set 13) -MBRV-8 - perform additional characterization on the MBRV-8 -Initiate development efforts on the competitively awarded IRBM Countermeasures contract FY 2020 Plans: -IRBM T1/T2 - deliver Ship Set 10 to support pre-ship readiness review and a flight test in FY 2020; continue manufacturing and integration of Ship Sets 11-14 to support pre-ship readiness reviews in FY 2021 (Ship Set 12), FY 2022 (Ship Set 11), FY 2024 (Ship Set 14) and FY 2026 (Ship Set 13) -MBRV-8 - perform additional characterization on the MBRV-8 and continue recurring engineering efforts and manufacturing of MBRV-8 front sections to support IRBM flight tests -Continue development efforts for IRBM Countermeasures FY 2019 to FY 2020 Increase/Decrease Statement: Decrease from FY 2019 to FY 2020 reflects completion of hardware purchases for option 2 of the IRBM T1/T2 prime contract (Ship Sets 13-18).		71.752 -	88.346 -	82.752 -
Title: Consumables - Intercontinental Ballistic Missiles (ICBM) Articles: Description: ICBM target hardware development and manufacturing is consistent with the Description found in the Consumables-SRBM section. Specific and/or unique planned accomplishments to each FY are as follows: FY 2019 Plans: -ICBM T1/T2 - continue manufacturing Ship Set 3, 4, and 5 to support pre-ship readiness reviews in FY 2020 (Ship Set 3), FY 2023 (Ship Set 4), and FY 2024 (Ship Set 5) -MBRV-8 - continue performing characterization on the MBRV-8		75.071 -	86.069 -	74.281 -

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDS Targets Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
-Continue efforts to provide an ICBM target for an Aegis SM-3 Block IIA Missile Test			
FY 2020 Plans: -ICBM T1/T2 - deliver Ship Set 3 to support pre-ship readiness review and Aegis SM-3 Block IIA Missile flight test in FY 2020 (Ship Set 3); continue manufacturing Ship Sets 4 and 5 to support pre-ship readiness reviews in FY 2023 (Ship Set 4), and FY 2024 (Ship Set 5) -MBRV-8 - perform additional characterization on the MBRV-8 and continue recurring engineering efforts and manufacturing of MBRV-8 front sections to support ICBM flight tests FY 2019 to FY 2020 Increase/Decrease Statement: Decrease from FY 2019 to FY 2020 reflects full year production of Ship Set 3, 4, and 5 in FY 2019, and delivery of Ship Set 3 in first quarter FY 2020.			
Title: Consumables - Joint Emergent Operational Need Statement (JEON) Articles: Description: Target development and build to support near term capability improvements and Priority 1, 2 and 3 efforts for US Forces Korea (USFK) Joint Emergent Operational Need (JEON). The 3 priorities include: 1) PATRIOT launch on remote from THAAD battery data; 2) THAAD / Missile Segment Enhancement (MSE) Integration Part 1; 3) THAAD remote launcher Part 1. Specific and/or unique planned accomplishments to each FY are as follows: FY 2019 Plans: - SEE ABOVE. FY 2020 Plans: - SEE ABOVE. FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY 2019 to FY 2020 provides increased target hardware for FTT-21 USFK JEON testing.		34.900	4.500
		-	-
		9.600	-
Title: Program Planning & Operations		71.115	64.922
Articles:		-	-
Description: Program Planning and Operations provides for government management of the BMDS Targets Program. Included in this effort is program and business management, program administration, technical and testing oversight, verification of hardware and software development, government manpower and infrastructure to develop, test and sustain the BMDS Targets Program			62.759
			-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDS Targets Program</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020
Office system and components. Other Government Agency (OGA) and Federally Funded Research and Development Research Centers (FFRDC) are used for highly specialized skill sets not available internal to Targets for specific time periods. Recurring yearly planned accomplishments include the following: -Provide technical and business management support activities, financial management, cost and schedule performance analysis cost estimation and analysis, and integration activities -Provide program oversight, subcontract management, quality assurance, verification of hardware and software development, and technical and testing oversight -Ensure BMDS Targets compliance with internal and external direction, policies, and regulations -Conduct Internal Program Plans that align with the MDA approved IMTP -Provide program and technical management of target launch operations activities to include oversight of mission planning, range coordination, and mission requirements Specific and/or unique planned accomplishments to each FY are as follows: FY 2019 Plans: - SEE ABOVE. FY 2020 Plans: - SEE ABOVE. FY 2019 to FY 2020 Increase/Decrease Statement: N/A				
Title: Resources		40.970	51.239	51.040
		Articles: -	-	-
Description: BMDS Target Resources consist of two sub-elements: Systems Engineering/Program Management and Logistics. Systems Engineering/Program Management provides technical direction to meet Target Program requirements while balancing cost, schedule, performance, and risk. It conducts functional requirements allocation to product lines, defines product line specifications/interfaces, performs configuration and data management, and follows guidelines for design reviews. It performs target system analysis to verify system performance, defines target program baselines, controls flight test configurations, and conducts pre and post-flight analysis. It identifies treaty and environmental issues and develops plans for issue resolution. It provides Quality, Safety, and Mission Assurance operations to ensure compliance with MDA requirements for design, test, manufacturing, quality, safety and reliability to ensure high quality products are delivered for test events. It also includes Single				

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDs Targets Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
<p>Stimulation Framework (SSF)/Objective Simulation Framework (OSF) compatible Modeling and Simulation (M&S) execution and improvements to evolve M&S capability; trajectory analyses; signature analyses and characterization; studies to assess alternative target and platform solutions; assessments of risk management; and design approval of government furnished equipment. Specific Systems Engineering Planned Accomplishments include:</p> <ul style="list-style-type: none"> -Continue Program Management and Business Operations for target components to provide a framework for overall management of the BMDs Targets Program -Continue providing classified network connections to OGAs so their subject matter experts can be used to support Target requirements -Continue analyses of future target Launch Vehicles, Re-Entry Vehicles, and launch platforms to ensure they are threat representative and that the Agency is making use of available technology in our future designs -Continue performing Pedigree Reviews to ensure high probability of mission success -Continue information technology and classified network support to ensure sensitive target information is not compromised -Continue Software Independent Verification and Validation (IV&V) to provide risk reduction of flight missions for target systems under development <p>BMDs Targets Program Logistics support provides target storage, aging surveillance, and transportation of target hardware in support of BMDs testing. Also included are integrated logistics support for facilities, inventory maintenance, spare parts, aging surveillance, disposal, special testing for rocket motor propellants, and other hazardous material handling. This task manages and oversees accountability of all government furnished equipment and contractor acquired property. Logistics also provides common support equipment for launch vehicles, MBRVs, countermeasures, and all up integrated target rounds. It also supports launch site activations through the transportation of support equipment to various test sites. Specific Targets Logistics Planned Accomplishments include:</p> <ul style="list-style-type: none"> -Continue Multi-Class Inventory storage, aging surveillance, maintenance of existing assets, and transportation support that ensured availability of MBRV and ground support equipment -Conduct disposal actions of inert assets <p>Specific and/or unique planned accomplishments to each FY are as follows:</p> <p>FY 2019 Plans: - SEE ABOVE.</p> <p>FY 2020 Plans: - SEE ABOVE.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement:</p>			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency			Date: March 2019		
Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>		Project (Number/Name) MT05 / <i>BMDs Targets Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2018	FY 2019	FY 2020
N/A					
Title: Flight Test Execution			30.190	36.741	53.478
			-	-	-
<p align="right">Articles:</p> <p>Description: Flight Test Execution is performed by the Target Launch Operations group. This group conducts target mission planning, coordinates target range and mission requirements, and provides target technical information to the MDA's General Counsel to support treaty approvals. The Target Launch Operations Group is the primary link between the target developer and the BMDs test community, incorporating target system constraints into the BMDs mission countdown and launch constraints. Specific and/or unique planned accomplishments to each FY are as follows:</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> -Conduct final target integration with the test range and Forward Staging Area to accomplish launch operations of two IRBM targets and one MRBM target in support of an operational engagement using a Regional / Theater BMDs Architecture (Aegis / THAAD / PATRIOT) -Conduct final target integration with the test range and launch operations of two SRBM targets in support of Aegis BMD BL 9.C2 Software demonstrating a salvo engagement (2) Missile Segment Enhancement firing four SM-6 Dual II -Conduct final target integration with the test range and launch operations of an MRBM target in support of Aegis BMD 4.0.3 BL 9.C1 Software demonstrating SM-SM-3 Blk 1B Launch on Remote (Reaper) -Conduct final target integration with the test range and Forward Staging Area to accomplish launch operations of an MRBM target in support of Aegis BMD BL 9.C2 Software data collection -Conduct final target integration with the test range and Forward Staging Area to accomplish launch operations of an MRBM target in support of Upgraded Early Warning Radar Cape Cod sensor tracking test <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> -Conduct final target integration with the test range and launch operations of a MRBM target in support of Aegis BMD BL 9.C2 Software demonstrating a salvo engagement (2) firing two SM-6 Dual II -Conduct final target integration with the test range and launch operations of two SRBM targets in support of Aegis BMD BL 9.C2 Software demonstrating a salvo engagement (2) Missile Segment Enhancement firing four SM-6 Dual II -Conduct final target integration with the test range and accomplish launch operations of an ICBM target in support of an Aegis BL 9.C2 DDG demonstration of lethal intercept with a SM-3 Blk IIA missile using Engage-on-Remote (EoR) quality tracks via C2BMC from AN/TPY-2 -Conduct final target integration with the test range and Forward Staging Area to accomplish launch operations of two IRBM targets and one MRBM target in support of an operational engagement using a Regional / Theater BMDs Architecture 					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDS Targets Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
-Conduct final target integration with the test range and launch operations of a MRBM target in support of Aegis BMD BL 9.C2 Software demonstrating an engagement firing an SM-3Blk II			
<i>FY 2019 to FY 2020 Increase/Decrease Statement:</i> Increase from FY 2019 to FY 2020 provides the number and types of targets required for the mix of flight tests in the BMDS IMTP.			
Accomplishments/Planned Programs Subtotals		494.055	539.537
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy <p>The BMDS Targets Program provides for the development and purchase of ballistic missile targets and countermeasures for the BMDS in support of the MDA's flight test program. The BMDS Targets Program requirements are derived from the BMDS Integrated Master Test Plan (IMTP).</p> <p>The BMDS Targets Program is currently in various stages of planning or execution for procurement of ballistic missile targets by range class: SRBM, MRBM, IRBM, and ICBM. These targets are procured using a Target Performance Specification to support flight test requirements as identified in the IMTP. Each target class may be solicited, evaluated, and competitively awarded independently in IMTP 'need date' priority order.</p> <p>The BMDS Targets Program competitively awarded a prime contract in 2011 to Orbital Sciences Corporation (now Northrop Grumman Innovation Systems (NGIS)) with a period of performance (PoP) of March 2011 through September 2025 for air-launched IRBM targets. This award included two follow-on options, one for eight IRBM targets exercised in 2014 and another for six IRBM targets exercised in 2017.</p> <p>The BMDS Targets Program conducted a limited competition in 2012 and awarded a contract modification to Orbital Sciences Corporation (now NGIS) with a PoP of October 2012 through September 2025 for the development of ICBM targets. This award included two ICBM Stage Zero Kits to be used with an existing air-launched IRBM target. Four ICBM Stage Zero Kits were added in 2018.</p> <p>The BMDS Targets Program competitively awarded a prime contract in 2016 to Orbital Sciences Corporation (now NGIS) with a period of performance (PoP) of July 2016 to December 2020 for three MRBM T3c2 targets. This award included an option for up to four MRBM T3c2 targets.</p> <p>The BMDS Targets competitively awarded a prime contract to L-3 Communications/Coleman Aerospace Corporation with a PoP of October 2013 through December 2027 to provide six MRBM targets. This award includes one follow-on option, for up to twelve additional MRBM targets. The first target from this contract will be delivered in 4QFY19.</p>			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDS Targets Program</i>
<p>The SRBM T4 and MRBM T4 (previously called the Aegis Readiness Assessment Vehicles (ARAVs)) target efforts are managed by BMDS Targets Program and the Naval Surface Warfare Center Port Hueneme Division White Sands (NSWC PHD WS). NSWC PHD WS has unique sounding rocket expertise and access to existing contracts managed by White Sands Missile Range that makes this a beneficial relationship for both parties. BMDS Targets Program provides targets funding via Military Interdepartmental Purchase Orders that NSWC PHD WS expends on its hardware development and engineering contracts. The BMDS Targets Program Office will be transitioning the NSWC subscale efforts to a new competitively awarded contract anticipated in FY 2019. This transitioning reduces the mission and schedule risk of ensuring the Program Office maintains a relationship with NSWC as a backup plan/surge need to have NSWC quick turn and deliver targets.</p> <p>The BMDS Targets Program Future Acquisition Strategy is based on two premises. The first is to utilize existing capabilities/infrastructure and sustain an industrial base to deliver targets. The second is to initiate acquisitions that delivers low cost/affordable targets that replicate evolving threats. The Acquisition Strategy is proceeding through the MDA Acquisition Panel/Board reviews for decision-making. Depending on the approved outcome, multiple Request for Proposals may be released for future target acquisitions.</p> <p><u>E. Performance Metrics</u> N/A</p>		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDS Targets Program					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Consumables - Short Range Ballistic Missiles (SRBM) - 10	FFRDC	Sandia National Lab : Albuquerque, NM	0.000	4.771	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Short Range Ballistic Missiles (SRBM) - 2	MIPR	Naval Surface Warfare Center, Port Hueneme : Port Hueneme, CA	67.998	11.597	Nov 2017	7.682	Nov 2018	5.413	Nov 2019	-		5.413	Continuing	Continuing	Continuing
Consumables - Short Range Ballistic Missiles (SRBM) - 7	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	20.965	0.000		0.000		0.000		-		0.000	0.000	20.965	20.965
Consumables - Short Range Ballistic Missiles (SRBM) - 8	C/CPIF	Future Subscale Target : TBD	0.000	0.000		21.760	Apr 2019	45.804	Nov 2019	-		45.804	0.000	67.564	4.192
Consumables - Short Range Ballistic Missiles (SRBM) - 9	FFRDC	Johns Hopkins University Applied Physics Laboratory : Laurel, MD	7.026	5.527	Nov 2017	0.390	Dec 2018	0.220	Dec 2019	-		0.220	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 1	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	451.102	4.471	Nov 2017	0.893	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 10	C/CPAF	Orbital Sciences Corporation : Chandler, AZ	38.497	68.335	Nov 2017	38.096	Nov 2018	35.894	Nov 2019	-		35.894	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 11	MIPR	Naval Surface Warfare Center : Crane, IN	0.000	0.011	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 15	FFRDC	Applied Physics Lab/Johns Hopkins University : Laurel, MD	0.000	2.151	Dec 2017	4.658	Dec 2018	2.878	Dec 2019	-		2.878	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDs Targets Program					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Consumables - Medium Range Ballistic Missiles (MRBM) - 16	MIPR	Naval Surface Warfare Center : Port Hueneme, CA	0.000	0.000		5.495	Nov 2018	2.966	Nov 2019	-		2.966	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 17	MIPR	Space and Missile Systems Center : Albuquerque, NM	0.000	3.321	Nov 2017	5.750	Nov 2018	6.446	Nov 2019	-		6.446	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 18	MIPR	Yuma Proving Grounds : Yuma, AZ	0.000	0.316	Nov 2017	0.070	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 19	MIPR	Air Force Research Laboratory : Wright Patterson AFB, OH	0.000	0.187	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 2	C/CPAF	L3 Communications/ Coleman Aerospace : Orlando, FL	235.458	44.675	Nov 2017	47.739	Nov 2018	59.465	Nov 2019	-		59.465	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 20	MIPR	Defense Finance and Accounting Service : Indianapolis, IN	0.000	0.010	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 21	MIPR	Cape Canaveral 45th Space Wing : Cape Canaveral, FL	0.000	0.742	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 22	FFRDC	Georgia Tech Research Institute : Huntsville, AL	0.000	4.946	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 23	MIPR	Pacific Missile Range Facility : Barking Sands, HI	0.000	1.058	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 24	MIPR	US Army Redstone Test Center : Huntsville, AL	0.000	0.404	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 25	MIPR	30th Space Wing : Vandenberg AFB, CA	0.000	0.242	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDs Targets Program					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Consumables - Medium Range Ballistic Missiles (MRBM) - 3	FFRDC	Sandia National Laboratories : Albuquerque, NM	0.000	4.600	Dec 2017	43.460	Dec 2018	20.200	Dec 2019	-		20.200	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 4	MIPR	Aviation & Missile Research, Dev & Eng Center : Huntsville, AL	0.000	8.324	Dec 2017	18.740	Dec 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 7	MIPR	Space and Missile Defense Command : Huntsville, AL	1.818	4.295	Dec 2017	0.000		0.000		-		0.000	0.000	6.113	0.000
Consumables - Medium Range Ballistic Missiles (MRBM) - 8	C/CPAF	Future Subscale MRBM : RFP TBD	0.000	0.000		12.911	Mar 2019	19.138	Nov 2019	-		19.138	Continuing	Continuing	Continuing
Consumables - Medium Range Ballistic Missiles (MRBM) - 9	MIPR	Defense Information Systems Agency : Fort Meade, MD	0.031	0.074	Nov 2017	0.076	Nov 2018	0.079	Nov 2019	-		0.079	Continuing	Continuing	Continuing
Consumables - Intermediate Range Ballistic Missiles (IRBM) - 1	C/CPAF	Orbital Sciences Corporation : Chandler, AZ	512.095	55.299	Nov 2017	60.797	Nov 2018	68.081	Nov 2019	-		68.081	Continuing	Continuing	Continuing
Consumables - Intermediate Range Ballistic Missiles (IRBM) - 12	MIPR	Naval Air Weapons Station : China Lake, CA	0.000	0.000		0.082	Nov 2018	0.121	Nov 2019	-		0.121	Continuing	Continuing	Continuing
Consumables - Intermediate Range Ballistic Missiles (IRBM) - 15	FFRDC	Sandia National Laboratories : Albuquerque, NM	1.786	8.983	Dec 2017	13.674	Dec 2018	5.717	Dec 2019	-		5.717	Continuing	Continuing	Continuing
Consumables - Intermediate Range Ballistic Missiles (IRBM) - 16	FFRDC	Georgia Tech Research Institute : Atlanta, GA	1.923	0.000		9.933	Dec 2018	3.417	Dec 2019	-		3.417	Continuing	Continuing	Continuing
Consumables - Intermediate Range	MIPR	Naval Surface Warfare Center : Dahlgren, VA	0.000	0.000		0.026	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDS Targets Program					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ballistic Missiles (IRBM) - 17															
Consumables - Intermediate Range Ballistic Missiles (IRBM) - 18	MIPR	Naval Surface Warfare Center : Crane, IN	0.000	0.003	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Intermediate Range Ballistic Missiles (IRBM) - 4	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	57.140	7.467	Nov 2017	3.834	Nov 2018	5.416	Nov 2019	-		5.416	Continuing	Continuing	Continuing
Consumables - Intercontinental Ballistic Missiles (ICBM) - 1	C/CPAF	Orbital Sciences Corporation : Chandler, AZ	186.535	54.814	Nov 2017	85.960	Nov 2018	74.101	Nov 2019	-		74.101	Continuing	Continuing	Continuing
Consumables - Intercontinental Ballistic Missiles (ICBM) - 10	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	10.848	11.528	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Intercontinental Ballistic Missiles (ICBM) - 14	MIPR	Air Force Research Laboratory : Wright Patterson AFB, OH	0.000	0.330	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Intercontinental Ballistic Missiles (ICBM) - 15	FFRDC	MIT Lincoln Laboratory : Hanscom AFB, Lexington, MA	0.000	8.399	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Consumables - Intercontinental Ballistic Missiles (ICBM) - 4	MIPR	Naval Air Weapons Station : China Lake, CA	0.605	0.000		0.083	Nov 2018	0.096	Nov 2019	-		0.096	Continuing	Continuing	Continuing
Consumables - Intercontinental Ballistic Missiles (ICBM) - 5	MIPR	Naval Surface Warfare Center, Dahlgren Division : Dahlgren, VA	0.071	0.000		0.026	Dec 2018	0.084	Nov 2019	-		0.084	0.000	0.181	0.000
Consumables - Joint Emergent Operational Need Statement (JEON) - 1	C/CPAF	L3 Communications/ Coleman Aerospace : Orlando, FL	0.000	34.900	Dec 2017	4.500	Feb 2019	9.600	Nov 2019	-		9.600	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDs Targets Program					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Planning & Operations - Program Planning and Operations - 1	C/CPAF	Targets TEAMS Support : Huntsville, AL	186.706	42.899	Nov 2017	35.117	Nov 2018	35.165	Nov 2019	-		35.165	Continuing	Continuing	Continuing
Program Planning & Operations - Program Planning and Operations - 10	MIPR	Missile Defense Agency : Huntsville, AL	143.466	26.097	Oct 2017	27.601	Nov 2018	26.153	Nov 2019	-		26.153	Continuing	Continuing	Continuing
Program Planning & Operations - Program Planning and Operations - 12	C/FFP	Network Management Resources : Chantilly, VA	2.849	0.134	Nov 2017	0.137	Nov 2018	0.123	Nov 2019	-		0.123	Continuing	Continuing	Continuing
Program Planning & Operations - Program Planning and Operations - 13	MIPR	Naval Surface Warfare Center : Crane, IN	0.000	0.048	Nov 2017	0.302	Nov 2018	0.111	Nov 2019	-		0.111	Continuing	Continuing	Continuing
Program Planning & Operations - Program Planning and Operations - 14	FFRDC	Mitre Corporation : Huntsville, AL	0.000	0.314	Dec 2017	0.320	Dec 2018	0.162	Dec 2019	-		0.162	Continuing	Continuing	Continuing
Program Planning & Operations - Program Planning and Operations - 6	FFRDC	Johns Hopkins University, Applied Physics Lab : Baltimore, MD	2.945	1.496	Dec 2017	1.022	Dec 2018	0.834	Dec 2019	-		0.834	Continuing	Continuing	Continuing
Program Planning & Operations - Program Planning and Operations - 7	MIPR	US Army Aviation & Missile Command : Huntsville, AL	5.275	0.127	Nov 2017	0.423	Nov 2018	0.211	Nov 2019	-		0.211	0.000	6.036	0.000
Resources - Resources/ Logistics - 37	FFRDC	Aerospace Corporation : El Segundo, CA	0.000	2.978	Nov 2017	3.525	Nov 2018	1.843	Nov 2019	-		1.843	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 40	MIPR	Army Information Management Command : San Antonio, TX	0.000	0.081	Dec 2017	0.674	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>				Project (Number/Name) MT05 / <i>BMDS Targets Program</i>					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Resources - Resources/ Logistics - 41	MIPR	Marshall Space Flight Center : Huntsville, AL	0.000	0.012	Dec 2017	0.011	Dec 2018	0.011	Dec 2019	-		0.011	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 42	MIPR	Dugway Proving Ground : Dugway, UT	0.000	0.015	Dec 2017	0.012	Dec 2018	0.013	Dec 2019	-		0.013	Continuing	Continuing	Continuing
Resources - Resources - TBD	TBD	Future ILS/Systems Engineering Support : TBD	0.000	0.000		25.374	Dec 2018	32.424	Nov 2019	-		32.424	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 1	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	44.142	4.011	Nov 2017	0.266	Nov 2018	0.198	Nov 2019	-		0.198	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 12	MIPR	Redstone Arsenal Garrison : Huntsville, AL	3.261	0.149	Nov 2017	0.012	Nov 2018	0.014	Nov 2019	-		0.014	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 18	MIPR	Defense Finance & Accounting Service : Indianapolis, IN	3.050	0.210	Nov 2017	0.144	Nov 2018	0.148	Nov 2019	-		0.148	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 2	C/CPFF	Orbital/Alliant Techsystems : Magna, UT	1.045	0.404	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 25	MIPR	Tooele Army Depot : Tooele, UT	1.171	0.205	Dec 2017	0.487	Dec 2018	0.450	Dec 2019	-		0.450	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 34	C/CPFF	Inuteq, Corp. : Beltsville, MD	2.276	0.384	Nov 2017	0.809	Nov 2018	0.832	Nov 2019	-		0.832	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 36	MIPR	Tobyhanna Army Depot : Tobyhanna, PA	1.089	1.492	Nov 2017	0.984	Nov 2018	0.884	Nov 2019	-		0.884	Continuing	Continuing	Continuing
Resources - Resources/ Logistics - 5	MIPR	Aviation & Missile Research, Dev & Eng Center : Huntsville, AL	9.183	0.270	Nov 2017	0.274	Nov 2018	0.281	Nov 2019	-		0.281	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>				Project (Number/Name) MT05 / <i>BMDs Targets Program</i>					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Resources - Resources/ Logistics - 7	MIPR	Missile Defense Agency : Huntsville, AL	8.038	0.682	Nov 2017	0.148	Nov 2018	0.174	Nov 2019	-		0.174	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 1	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	105.288	6.172	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 14	MIPR	Naval Air Warfare Center : Point Mugu, CA	5.949	0.739	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 17	MIPR	Defense Finance & Accounting Service : Indianapolis, IN	0.000	0.244	Nov 2017	0.336	Nov 2018	0.287	Nov 2019	-		0.287	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 18	MIPR	Redstone Arsenal Garrison : Huntsville, AL	0.000	0.000		0.033	Nov 2018	0.035	Nov 2019	-		0.035	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 19	FFRDC	Sandia National Lab : Albuquerque, NM	0.000	5.821	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 2	FFRDC	Aerospace Corporation : El Segundo, CA	16.728	4.825	Dec 2017	4.376	Dec 2018	3.969	Dec 2019	-		3.969	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 20	MIPR	Space and Missile Defense Command : Huntsville, AL	0.000	0.720	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 6	FFRDC	Johns Hopkins University, Applied Physics Lab : Baltimore, MD	3.513	1.814	Nov 2017	0.919	Nov 2018	0.823	Nov 2019	-		0.823	Continuing	Continuing	Continuing
Resources - Resources/ Systems Engineering - 8	MIPR	Aviation & Missile Research, Dev & Eng Center : Huntsville, AL	54.202	9.742	Nov 2017	12.855	Nov 2018	8.654	Nov 2019	-		8.654	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets					Project (Number/Name) MT05 / BMDS Targets Program				
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test Execution - 1	MIPR	Missile Defense Agency : Huntsville, AL	0.756	6.376	Oct 2017	3.196	Oct 2018	2.829	Oct 2019	-		2.829	Continuing	Continuing	Continuing
Flight Test Execution - 10	MIPR	Hickam Field : Pearl Harbor, HI	0.389	0.021	Dec 2017	0.017	Dec 2018	0.052	Dec 2019	-		0.052	Continuing	Continuing	Continuing
Flight Test Execution - 11	MIPR	Redstone Army Airfield : Redstone Arsenal, AL	0.038	0.037	Dec 2017	0.057	Dec 2018	0.062	Dec 2019	-		0.062	Continuing	Continuing	Continuing
Flight Test Execution - 12	MIPR	Redstone Test Center : Huntsville, AL	0.226	0.012	Nov 2017	0.008	Nov 2018	0.075	Nov 2019	-		0.075	Continuing	Continuing	Continuing
Flight Test Execution - 13	C/CPAF	Orbital Sciences Corporation : Chandler, AZ	3.560	6.253	Nov 2017	3.022	Nov 2018	3.894	Nov 2019	-		3.894	Continuing	Continuing	Continuing
Flight Test Execution - 14	MIPR	Naval Air Warfare Center : Pt. Mugu, CA	0.865	0.000		1.153	Dec 2018	3.848	Dec 2019	-		3.848	Continuing	Continuing	Continuing
Flight Test Execution - 15	C/CPAF	Lockheed Martin Space Systems Company : Courtland, AL	0.000	0.000		0.129	Dec 2018	0.089	Dec 2019	-		0.089	Continuing	Continuing	Continuing
Flight Test Execution - 17	MIPR	Columbus Air Force Base : Columbus, MS	0.000	0.000		0.023	Dec 2018	0.025	Dec 2019	-		0.025	Continuing	Continuing	Continuing
Flight Test Execution - 18	MIPR	Naval Surface Warfare Center : Dahlgren, VA	0.000	0.147	Nov 2017	0.000		0.275	Nov 2019	-		0.275	Continuing	Continuing	Continuing
Flight Test Execution - 19	MIPR	National Security Agency : Fort Meade, MD	0.000	0.026	Dec 2017	0.068	Dec 2018	0.068	Dec 2019	-		0.068	Continuing	Continuing	Continuing
Flight Test Execution - 2	MIPR	Defense Finance and Accounting Services : Indianapolis, IN	15.440	2.716	Oct 2017	8.220	Oct 2018	10.364	Nov 2019	-		10.364	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MT05 / BMDS Targets Program					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test Execution - 20	MIPR	Naval Surface Warfare Center : Port Hueneme, CA	0.000	2.168	Dec 2017	6.912	Dec 2018	7.137	Dec 2019	-		7.137	Continuing	Continuing	Continuing
Flight Test Execution - 21	MIPR	Aviation and Missile Research Dev and Eng Center : Huntsville, AL	0.000	0.040	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Flight Test Execution - 22	MIPR	Andersen AFB : Guam	0.000	0.577	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Flight Test Execution - 23	MIPR	Defense Logistics Agency : Fort Belvoir, VA	0.000	0.126	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Flight Test Execution - 24	MIPR	Kauai Test Facility : Kauai, HI	0.000	0.202	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Flight Test Execution - 3	MIPR	Pacific Missile Range Facility : Barking Sands, HI	17.888	1.604	Nov 2017	3.477	Nov 2018	4.925	Nov 2019	-		4.925	Continuing	Continuing	Continuing
Flight Test Execution - 4	MIPR	Reagan Test Site : Kwajalein Atoll	9.155	0.515	Nov 2017	3.237	Nov 2018	7.228	Nov 2019	-		7.228	Continuing	Continuing	Continuing
Flight Test Execution - 5	MIPR	Edwards Air Force Base : Lancaster, CA	8.434	7.346	Dec 2017	4.608	Nov 2018	7.627	Nov 2019	-		7.627	Continuing	Continuing	Continuing
Flight Test Execution - 6	MIPR	US Army Yuma Proving Ground : Yuma, AZ	0.583	0.919	Nov 2017	0.417	Nov 2018	1.593	Nov 2019	-		1.593	Continuing	Continuing	Continuing
Flight Test Execution - 7	MIPR	Eglin Air Force Base : Eglin AFB, FL	0.304	0.380	Nov 2017	0.130	Nov 2018	0.210	Nov 2019	-		0.210	Continuing	Continuing	Continuing
Flight Test Execution - 8	C/CPAF	L3 Communications/ Coleman Aerospace : Orlando, FL	2.393	0.000		1.385	Nov 2018	1.448	Nov 2019	-		1.448	Continuing	Continuing	Continuing
Flight Test Execution - 9	MIPR	Air Force Research Laboratory : Wright Patterson AFB, OH	0.974	0.725	Dec 2017	0.682	Dec 2018	1.729	Dec 2019	-		1.729	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency													Date: March 2019		
Appropriation/Budget Activity 0400 / 4							R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>					Project (Number/Name) MT05 / <i>BMDs Targets Program</i>			

Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			2,255.079	494.055		539.537		532.413		-		532.413	Continuing	Continuing	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets					Project (Number/Name) MT05 / BMDS Targets Program					
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2,255.079	494.055		539.537		532.413		-		532.413	Continuing	Continuing	N/A

Remarks

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

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency														Date: March 2019																												
Appropriation/Budget Activity 0400 / 4														R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets												Project (Number/Name) MT05 / BMDS Targets Program																
Significant Event Complete ▲ Significant Event Planned △				Milestone Decision Complete ★ Milestone Decision Planned ☆				Element Test Complete ◆ Element Test Planned ◇				System Level Test Complete ● System Level Test Planned ○				Complete Activity ◆ Planned Activity ◇																										
														FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024																
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 5)														▲																												
ICBM Pre-Ship Readiness Review (Ship Set 2)																	▲																									
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 6)																	▲																									
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 7)																	▲																									
SRBM T4-G Pre-Ship Readiness Review (Ship Set 1)																		△																								
SRBM T4-G Pre-Ship Readiness Review (Ship Set 2)																		△																								
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 1)																		△																								
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 8)																		△																								
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 9)																		△																								
MRBM Type 3/Configuration 2 Pre-Ship Readiness Review (Ship Set 5)																		△																								
SRBM Type 4-B Pre-Ship Readiness Review (Ship Set 25)																		△																								
Award Future Subscale Targets Contract																		△																								
ICBM Pre-Ship Readiness Review (Ship Set 3)																			△																							
MRBM Type 3/Configuration 2 Pre-Ship Readiness Review (Ship Set 6)																			△																							
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 2)																				△																						
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 10)																				△																						
SRBM Type 4-B Pre-Ship Readiness Review (Ship Set 26)																				△																						
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 6)																					△																					
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 7)																					△																					
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 5)																					△																					
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 3)																						△																				
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 12)																						△																				
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 8)																						△																				
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 1)																								△																		

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency										Date: March 2019														
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets										Project (Number/Name) MT05 / BMDS Targets Program									
Significant Event Complete ▲		Milestone Decision Complete ★		Element Test Complete ◆		System Level Test Complete ●		Complete Activity ◆																
Significant Event Planned △		Milestone Decision Planned ☆		Element Test Planned ◇		System Level Test Planned ○		Planned Activity ◇																
					FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024							
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 2)														△										
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 3)														△										
MRBM Type 3/Configuration 2 Pre-Ship Readiness Review (Ship Set 7)														△										
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 4)														△										
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 11)														△										
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 5)															△									
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 4)															△									
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 6)																△								
ICBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 4)																	△							
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 14)																		△						
ICBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 5)																		△						

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDs Targets Program</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 5)	1	2018	1	2018
ICBM Pre-Ship Readiness Review (Ship Set 2)	4	2018	4	2018
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 6)	4	2018	4	2018
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 7)	4	2018	4	2018
SRBM T4-G Pre-Ship Readiness Review (Ship Set 1)	2	2019	2	2019
SRBM T4-G Pre-Ship Readiness Review (Ship Set 2)	2	2019	2	2019
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 1)	3	2019	3	2019
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 8)	3	2019	3	2019
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 9)	3	2019	3	2019
MRBM Type 3/Configuration 2 Pre-Ship Readiness Review (Ship Set 5)	3	2019	3	2019
SRBM Type 4-B Pre-Ship Readiness Review (Ship Set 25)	3	2019	3	2019
Award Future Subscale Targets Contract	3	2019	3	2019
ICBM Pre-Ship Readiness Review (Ship Set 3)	1	2020	1	2020
MRBM Type 3/Configuration 2 Pre-Ship Readiness Review (Ship Set 6)	1	2020	1	2020
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 2)	3	2020	3	2020
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 10)	3	2020	3	2020
SRBM Type 4-B Pre-Ship Readiness Review (Ship Set 26)	3	2020	3	2020
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 6)	1	2021	1	2021
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 7)	1	2021	1	2021
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 5)	1	2021	1	2021
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 3)	2	2021	2	2021
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 12)	2	2021	2	2021

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency **Date:** March 2019

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MT05 / <i>BMDs Targets Program</i>
--	--	--

Events	Start		End	
	Quarter	Year	Quarter	Year
MRBM Type 4-E Pre-Ship Readiness Review (Ship Set 8)	2	2021	2	2021
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 1)	2	2022	2	2022
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 2)	2	2022	2	2022
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 3)	2	2022	2	2022
MRBM Type 3/Configuration 2 Pre-Ship Readiness Review (Ship Set 7)	3	2022	3	2022
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 4)	4	2022	4	2022
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 11)	4	2022	4	2022
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 5)	2	2023	2	2023
SRBM Type 4 Pre-Ship Readiness Review (Ship Set 4)	2	2023	2	2023
MRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 6)	3	2023	3	2023
ICBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 4)	4	2023	4	2023
IRBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 14)	1	2024	1	2024
ICBM Type 1/Type 2 Pre-Ship Readiness Review (Ship Set 5)	4	2024	4	2024

Note

FY 2020 USFK JEON tests are funded in PE 0603914C BMD Test.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019			
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MD40 / Program Wide Support				
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
MD40: Program Wide Support	100.321	18.211	16.464	20.845	-	20.845	21.142	18.008	15.194	14.404	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			
Note Program Wide Support (PWS) is allocated on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.													
A. Mission Description and Budget Item Justification PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.													
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2018	FY 2019	FY 2020		
Title: Program Wide Support									18.211	16.464	20.845		
Articles:									-	-	-		
Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.													
FY 2019 Plans:													

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency		Date: March 2019	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019
- SEE ABOVE. FY 2020 Plans: - SEE ABOVE. FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY 2019 to FY 2020 reflects the PWS allocation on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.			
Accomplishments/Planned Programs Subtotals		18.211	16.464
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics N/A			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets				Project (Number/Name) MD40 / Program Wide Support					
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Wide Support - Agency Facilities and Maintenance (MIPR)	MIPR	Various Multi : AL, CO, CA, VA etc.	20.377	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Facilities and Maintenance (Reqn)	Reqn	Various Multi : AL, CO, CA, VA etc.	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Infrastructure Support (MIPR)	MIPR	Various; Multi : AL, VA	27.237	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Infrastructure Support (FFP)	C/FFP	Northrop Grumman; Multi : AL, VA	9.460	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various; Multi : AL, CA, CO, VA	6.383	0.358	Jul 2018	0.249	Jul 2019	0.313	Jul 2020	-		0.313	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services (FFP)	C/FFP	Mantech Security Mission Assurance Corporation : Multi: AL, CO, CA, VA	0.000	0.000		2.422	Apr 2019	2.968	Dec 2019	-		2.968	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi:AL, CA, CO, VA	12.205	10.591	Aug 2018	11.000	Apr 2019	17.054	Jun 2020	-		17.054	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support, International, and Materiel and Readiness	MIPR	Various Multi: : AK, AL, CA, CO, HI, VA	0.623	0.000		0.000		0.510	Jul 2020	-		0.510	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations, Sustainment and GPC	Allot	Various, Multi : AL, CO, CA, VA etc	5.074	1.500	Sep 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Facilities and Maintenance SRM	MIPR	Various : Multi: AK, AL, CA, VA	18.962	5.762	Jan 2018	2.793	May 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			100.321	18.211		16.464		20.845		-		20.845	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>				Project (Number/Name) MD40 / <i>Program Wide Support</i>				

Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks N/A															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			100.321	18.211		16.464		20.845		-		20.845	Continuing	Continuing	N/A
Remarks Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency														Date: March 2019																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0603915C / Ballistic Missile Defense Targets										Project (Number/Name) MD40 / Program Wide Support																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Significant Event Complete ▲ Significant Event Planned △					Milestone Decision Complete ★ Milestone Decision Planned ☆					Element Test Complete ◆ Element Test Planned ◇					System Level Test Complete ● System Level Test Planned ○					Complete Activity ◆ Planned Activity ◇																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
										FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
MD40 Program-Wide Support										◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603915C / <i>Ballistic Missile Defense Targets</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2018	4	2024