

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Missile Defense Agency										Date: May 2017		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)					PE 0603898C I Ballistic Missile Defense Joint Warfighter Support							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	72.829	47.566	47.776	48.954	-	48.954	49.524	52.628	53.573	54.636	Continuing	Continuing
MD03: Joint Warfighter Support	62.665	14.238	15.417	15.394	-	15.394	15.473	16.576	16.849	17.191	Continuing	Continuing
MT03: Joint Warfighter Support Test	1.051	31.148	30.423	31.206	-	31.206	31.504	33.445	33.973	34.664	Continuing	Continuing
MC03: Cyber Operations	-	0.000	0.000	0.152	-	0.152	0.155	0.157	0.160	0.162	0	0.786
MD40: Program-Wide Support	9.113	2.180	1.936	2.202	-	2.202	2.392	2.450	2.591	2.619	Continuing	Continuing
Program MDAP/MAIS Code: 362												
Note												
N/A												
A. Mission Description and Budget Item Justification												
<p>The Joint Warfighter Support Program (JWSP) is Missile Defense Agency's primary means for providing direct technical support to Combatant Commands (CCMDs), the Military Services and the Joint Staff on Ballistic Missile Defense System (BMDS) development, testing, and operational support, to include real world testing and validation of the warfighter's operational Integrated Broadcast Service (IBS). It enables delivery of BMDS capabilities to Warfighters and ensures their participation in identification and development of new Ballistic Missile Defense (BMD) capabilities via the Warfighter Involvement Process (WIP). The JWSP allows the Warfighter and Missile Defense Agency to work together to identify gaps, seams, and needs in warfighting capability and enhance BMDS attributes by submitting modification and fielding requests. It also provides 24 hours a day, 365 days a year BMD operational support to Warfighters worldwide. The program enables rapid response to Warfighter Requests for Information (RFIs) and Requests for Analyses (RFAs), which are especially critical to mission success in protecting U.S. forces and other defended assets during "Real World" threat events. The program supports improving products delivered to Warfighters through technical reviews and technical analyses supporting strategic and regional BMD planning, development of shot doctrine and BMD defense design. The JWSP also enables the inclusion of both CCMD and MDA BMD objectives in CCMD/Joint Staff-sponsored wargames and exercises, which are used to sharpen and enhance joint BMD warfighting skills.</p>												
<p>MD40 Program-Wide Support (PWS) consists of essential non-headquarters management efforts providing integrated and efficient support to MDA functions and activities across the entire BMDS.</p>												

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0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0603898C I Ballistic Missile Defense Joint Warfighter Support			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	47.898	47.776	49.621	-	49.621
Current President's Budget	47.566	47.776	48.954	-	48.954
Total Adjustments	-0.332	0.000	-0.667	-	-0.667
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.332	0.000			
• Other Adjustment	0.000	0.000	-0.667	-	-0.667
Change Summary Explanation					
N/A					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Missile Defense Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support				Project (Number/Name) MD03 / Joint Warfighter Support			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
MD03: Joint Warfighter Support	62.665	14.238	15.417	15.394	-	15.394	15.473	16.576	16.849	17.191	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

N/A

**A. Mission Description and Budget Item Justification**

There are six primary functions in Joint Warfighter Support (MD03):

- (1) Current Operations Support
- (2) Combatant Command Support
- (3) Military Department Engagement
- (4) Operational BMDS Verification and Validation
- (5) Warfighter Training Support
- (6) Joint Staff Engagement

Detailed descriptions and accomplishments are provided in the following section.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<b>Title:</b> Strategic Warfighter Integration	14.238	15.417	15.394
<b>Articles:</b>	-	-	-
<b>Description:</b> (1) Current Operations Support: - Manages and operates MDA Operations Support Center (OSC) 24 hours a day, 365 days a year and two MDA Operations Centers (MOCs) in VA and AL 16 hours a day, 5 days a week which coordinates BMDS configuration changes (historical average: 3000 per year); daily execution of scheduled BMDS activities (historical average: 32,000 per year); monitors, captures and reports scheduled			

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>
<p>and unscheduled outages; prepares and transmits Logistic Reports (LOGREPs, approx. 500 per year); monitors health and status of deployed BMDS assets, and provides Critical Information Reports</p> <ul style="list-style-type: none"> <li>- Manages and executes BMDS Asset Management (BAM) scheduling and execution process; publishes daily schedule encompassing sustainment, testing, upgrade and training activities for missile warning, space situational awareness, and homeland and regional defense assets (historical averages: 900 events; 1,260 revisions; 4,430 schedule change requests)</li> <li>- Collects and reports BMDS operational availability and readiness data</li> <li>- Leads MDA Operations Support Planning Team (OSPT) an MDA-wide task force supporting Warfighters, Services and the Joint Staff to address real-world contingencies and crisis events</li> <li>- Leads Warfighter RFA/RFI staffing and processing (average 30 RFIs / 44 RFAs annually)</li> <li>- Plans and executes continuity of operations activities ensuring continuous execution of mission essential functions</li> <li>- Develops BMDS Annual Plan and BMDS Operating Schedule facilitating key stakeholder coordination and maximizing operational availability of the BMDS</li> <li>- Develops and maintains the Integrated Scheduling Tool</li> <li>- Facilitates major software/hardware additions to the Operational Capacity Baseline for homeland/regional defenses</li> <li>- Develops and maintains the BORRS application to collect and report BMDS operational availability and readiness data through the network-based tool to distribute data to OSD, CCMDs, Joint Staff, Military Services, and BMDS Operators</li> <li>- Provides certification training to BMDS watch officers (BWO), BMDS Safety Officers (BSO), and other Operations Support Center staff (includes over 1,300 sustainment and initial qualification training hours annually)</li> <li>- Develops/publishes the BMDS Handbook to aid Warfighter understanding of capabilities and limitations of the fielded BMDS</li> </ul> <p>(2) Combatant Command Support (USSTRATCOM, USNORTHCOM):</p> <ul style="list-style-type: none"> <li>- Supports the WIP and other MDA Warfighter engagement efforts by assisting Warfighters in their update to the annual BMDS Prioritized Capabilities List (PCL) and Modification and Fielding Request List (MFRL) reflecting changes in CCMD and Service priorities for needed BMDS enhancements to address a full range of CCMD needs</li> <li>- Shares BMDS information and knowledge with CCMDs to help develop common BMDS operational procedures</li> <li>- Coordinates with CCMDs and schedules Missile Defense executive forums (Operations Forces Standing Committee; Missile Defense Executive Board) to facilitate program decisions</li> </ul>			

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<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MD03 / <i>Joint Warfighter Support</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>
<ul style="list-style-type: none"> <li>- Supports Assistants to the Director (ATDs) and Liaison Officers (LNOs) in communication with CCMD staffs on BMDS capabilities and deployments</li> <li>- Supports Joint Functional Component Command Integrated Missile Defense (JFCC IMD) integration by participating in the Warfighter Forum (WFF); a multi-lateral information and decision event to address CCMD, Service and DoD BMDS equities.</li> <li>- Assists USNORTHCOM in broadening homeland defense planning to address the full range of USNORTHCOM threats by conducting the Homeland Defense Architecture Working Group (HDAWG) and Shot Management Analysis Cell (SMAC).</li> <li>- Supports BMD senior leader forums as well as asset management, test, training, and exercises</li> </ul> <p>(3) Military Department Engagement:</p> <ul style="list-style-type: none"> <li>- Facilitates and coordinates Service Boards of Directors (BODs) on Lead Service BMDS related equities, POM development and execution; and element fielding, operations and maintenance</li> <li>- Maintains daily, strategic-level interfaces with Military Services and Joint Staff; plans for the delivery, fielding, and operation of respective Lead Service BMDS capabilities via senior-level working groups, General Officer Air and Missile Defense and Space forums; and maintains close coordination with respective lead Service counterparts regarding BMDS resource, logistic and training element annexes</li> <li>- Supports and provides the BMDS capability delivery process and transition and transfer to the Military Services through participation in senior-level working groups, Joint staff directorates and facilitates General Officer forums and , ; ensures successful transfer of BMDS solutions to the warfighter-</li> <li>- Provides planner-level coordination for Joint Staff and interagency staff actions to ensure Joint Staff Action Packages of warfighter plans, orders, and doctrine to synchronize Agency and MILDEP positions</li> <li>- Coordinates internal Agency RFA/RFI responses to senior Service, CCMD, and Joint staff working groups; allows informed decisions related to BMDS operational, logistic, training and maintenance concerns</li> </ul> <p>(4) Operational BMDS Verification and Validation</p> <ul style="list-style-type: none"> <li>- Provides 24 hours a day, 365 days a year, global system verification and validation operational Integrated Broadcast Service, Common Integrated Broadcast, and Shared Early Warning System for BMD early warning data.</li> </ul>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency		<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MD03 / <i>Joint Warfighter Support</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>
<p>- Supports Tactical Data Processor software development, MDA flight tests and other software development efforts using live real-world broadcasts of simulated missile threats</p> <p>- Support Naval Board of Inspection and Survey (INSURV), Shipboard installation, Aegis On-Demand, Aegis program releases, US and Coalition operational readiness and BMD Exercise requirements to validate equipment, materiel, and tactical readiness while simultaneously providing deployment certification and crew operator qualification; verifies operational readiness of both US and Coalition partners to detect a real-world launch of a ballistic threat</p> <p>(5) Warfighter Training Support:</p> <p>- Provides Missile Defense Space Warning tool (MDST) support to increase operator proficiency, competence, and confidence; providing initial qualification training for BWOs and BMDS Safety Officers; develop and provide bi-weekly sustainment training to watch officers to maintain proficiency and understanding of the BMD</p> <p>- Provides technical and programmatic updates for BMD Warfighter training -Participates in BMD training and Education Working Group to coordinate BMD training issues with USSTRATCOM and Joint Staff.</p> <p>- Provides 25,000 hours (up to 24 hours a day, 365 days a year) of MDST support for over 170 exercise and training events annually to CCMDs, Military Services and Coalition partners comprised of more than 100,000 simulated exercise missile launches</p> <p>- Supports warfighter training and validation and Crew Operational Readiness Inspection (ORI) / Inspector General Certifications.</p> <p>- Supports Fleet Synthetic and Aegis Operator Training to ensure operational readiness of Aegis as the first step in the kill chain for BMD (3000+ hours annually)</p> <p>- Provides Early Warning missile injects for all MT03 wargames and exercises and tailored support for other Joint Warfighter Support Test events (listed in MT03 R-4)</p> <p>(6) Joint Staff Engagement</p> <p>- Facilitates and coordinates all Joint Staff interactions with the MDA</p> <p>- Maintains daily, strategic-level interfaces with the Joint Staff</p> <p>- Provides critical information required to plan for fielding and operation of BMDS capabilities</p> <p>- Coordinates Joint Staff inquiries into RFA/RFIs</p> <p><b>FY 2016 Accomplishments:</b></p>			

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Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support				Project (Number/Name) MD03 / Joint Warfighter Support				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2016	FY 2017	FY 2018
See Above												
FY 2017 Plans: See Above												
FY 2018 Plans: See Above												
Accomplishments/Planned Programs Subtotals										14.238	15.417	15.394
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 0603882C: Ballistic Missile Defense Midcourse Defense Segment	1,260.480	862.080	828.097	-	828.097	630.842	651.047	567.451	551.701	Continuing	Continuing	
• 0603884C: Ballistic Missile Defense Sensors	233.020	230.077	247.345	-	247.345	247.643	362.850	401.267	497.503	Continuing	Continuing	
• 0603890C: BMD Enabling Programs	406.326	408.594	449.442	-	449.442	466.760	540.409	629.864	501.915	Continuing	Continuing	
• 0603895C: Ballistic Missile Defense System Space Programs	21.040	20.690	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
• 0603896C: Ballistic Missile Defense Command and Control, Battle Management & Communication	425.996	456.267	430.115	-	430.115	461.275	501.956	496.411	514.139	Continuing	Continuing	
• 0603904C: Missile Defense Integration and Operations Center (MDIOC)	46.191	54.750	53.265	-	53.265	54.505	57.588	58.574	59.738	Continuing	Continuing	
• 0901598C: Management HQ - MDA	35.871	31.160	29.947	-	29.947	28.024	27.269	27.878	28.450	Continuing	Continuing	
Remarks												

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>
<b>D. Acquisition Strategy</b> Missile Defense Agency will continue to enable effective delivery of Ballistic Missile Defense System capabilities to the Warfighter by ensuring their participation in the identification and development of new capabilities via the Warfighter Involvement Process.		
<b>E. Performance Metrics</b> N/A		



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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Missile Defense Agency</b>												<b>Date: May 2017</b>			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>						<b>Project (Number/Name)</b> MD03 / <i>Joint Warfighter Support</i>			
<b>Product Development (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-
<b>Remarks</b> N/A															
<b>Support (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Strategic Warfighter Integration - Strategic Warfighter Integration - HR A&AS	C/CPFF	MiDAESS : Colorado Springs	0.140	0.139		0.143	Nov 2016	0.147	Aug 2018	-		0.147	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - IC A&AS	C/CPFF	MiDAESS : Huntsville	0.218	0.226		0.232	Mar 2017	0.000		-		0.000	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Administrative A&AS	C/CPFF	MiDAESS : Colorado Springs	1.032	0.114	Oct 2015	0.116	May 2017	0.252	May 2018	-		0.252	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Asset Management Server Maintenance	C/CPAF	JRDC : Colorado Springs, Huntsville	2.164	0.519	Nov 2015	0.582	Nov 2016	0.530	Nov 2017	-		0.530	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Civilian Salaries/ Operations Sustainment	Allot	MDA : Colorado Springs/Huntsville, NCR	22.718	3.898	Oct 2015	4.123	Oct 2016	4.205	Oct 2017	-		4.205	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic	C/CPAF	JRDC : Colorado Springs	12.068	2.539	Nov 2015	3.162	Oct 2016	3.056	Nov 2017	-		3.056	Continuing	Continuing	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Missile Defense Agency</b>												<b>Date: May 2017</b>			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>						<b>Project (Number/Name)</b> MD03 / <i>Joint Warfighter Support</i>			
<b>Support (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Warfighter Integration - Current Operations															
Strategic Warfighter Integration - Strategic Warfighter Integration - MDST	C/CPAF	JRDC : Colorado Springs	13.936	1.589	Nov 2015	1.963	Oct 2016	2.180	Nov 2017	-		2.180	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Travel and Training	Allot	MDA : Colorado Springs, Huntsville, NCR	0.719	0.213	Oct 2015	0.200	Oct 2016	0.225	Oct 2017	-		0.225	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Warfighter Support A&AS	C/CPFF	MiDAESS : Colorado Springs, Huntsville, NCR	9.670	5.001	Oct 2015	4.896	Oct 2016	4.799	Jun 2018	-		4.799	Continuing	Continuing	Continuing
<b>Subtotal</b>			62.665	14.238		15.417		15.394		-		15.394	-	-	-
<b>Remarks</b> N/A															
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-
<b>Remarks</b> N/A															
<b>Management Services (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Missile Defense Agency</b>												<b>Date:</b> May 2017		
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Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
<b>Remarks</b> N/A															

  

	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	62.665	14.238	15.417	15.394	-	15.394	-	-	-

  

<b>Remarks</b> Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.									
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PE 0603898C: Ballistic Missile Defense Joint Warfight...  
Missile Defense Agency

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Missile Defense Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support	Project (Number/Name) MD03 / Joint Warfighter Support	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Strategic Integration Wargame Events	1	2016	4	2022

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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
MT03: Joint Warfighter Support Test	1.051	31.148	30.423	31.206	-	31.206	31.504	33.445	33.973	34.664	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note N/A												
A. Mission Description and Budget Item Justification Joint Warfighter Support Test is comprised of two primary responsibilities: wargames and exercises and warfighter operational support.  Wargames and exercises: -Support the Warfighter to plan and conduct worldwide wargames and exercises supporting BMDS development and fielding. -Enable the Warfighter to define, test, deploy, and employ new missile defense capabilities. -Support JFCC-IMD BMDS table top exercises to facilitate the global missile defense capability and to refine the European capability concept of operations through low-fidelity demonstration Models & Simulation (M&S). -Examine current and future BMDS operational capabilities for Geographic (i.e., USCENTCOM, USEUCOM, and USPACOM) and Strategic (i.e., USNORTHCOM and USSTRATCOM) Combatant Commands (CCMDs). -Complete test planning for BMDS events as shown in the Exhibit R-4 schedule.  Warfighter operational support (program planning and operations): -Prepare MDA senior leadership for engagements with the Geographic Combatant Commands (GCCs) by providing logistical support and developing briefings for the GCC Assistant Test Directors (ATDs) and MDA Director. -Interface with the GCCs on BMD operational issues by providing planning and analysis support and capturing/transmitting GCC Request for Analysis/Request for Information (RFA/RFIs). -Support GCC contingency activation planning for real-world contingencies and theater security cooperation programs by supervising the activation of MDA assets to use in the operational BMDS. -Aid GCC participation in BMDS capability definition, design, development, integration, and delivery processes through the Warfighter Involvement Process (WIP) to synchronize capability delivery with operational readiness and acceptance. -Provide resource management and administration of MT03 personnel and funding.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2016	FY 2017	FY 2018	
Title: Wargames and Exercises									24.058	23.516	24.161	
Articles:									-	-	-	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency		<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>
<p><b>Description:</b> The Missile Defense Agency will continue to focus on providing operational-level interfaces to the Global Combatant Commands (GCCs) and increasing Warfighter participation to develop future missile defense capabilities as listed in FY 2016 accomplishments and FY 2017 Base Plans.</p> <p>The MDA will continue to enhance Warfighter operational support through internal support activities and proactive execution of Combatant Command (CCMD) interface activities.</p> <ul style="list-style-type: none"> <li>- Work with CCMDs on the inclusion of Allies and regional partners into MDA Ground and Flight tests, and wargame &amp; exercise simulations.</li> <li>- Provide warfighter training simulations in direct support of flight and ground tests.</li> <li>- Serve as liaison between internal MDA organizations and the Joint Functional Component Commander for Integrated Missile Defense (JFCC-IMD) across all functional areas to facilitate Geographic Combatant Command (GCC) participation in the BMDS capability definition, design, development, integration and delivery processes.</li> <li>- Support JFCC IMD and EUCOM in the European Phased Adaptive Approach (EPAA) implementation process through the planning, testing, integration and execution of BMDS wargames and exercises.</li> <li>- Support Joint Staff integration of MDA models into Tier I events through the JOINT, LIVE VIRTUAL CONSTRUCTIVE (JLVC) campaign.</li> <li>- Work with Program Offices and the Warfighter; publish a Concept of Operations that will support future MDA Models and Simulation (M&amp;S) support to BMD wargames and exercises.</li> <li>- Coordinate and integrate CCMD requirements into the BMDS Integrated Master Test Plan.</li> <li>- Support the GCC Assistants to the Director (ATDs) and Liaison Officers (LNOs).</li> <li>- Provide support to the development and update of Ballistic Missile Defense (BMD) portions of CCMD Operation Plans (OPLANS) and Contingency Plans (CONPLANS).</li> <li>- Engage in MDA/GCC interface and synchronization of information regarding capabilities and security cooperation strategies.</li> <li>- Develop and provide Table Top Exercises (TTX) in support of CCMD-specific scenarios to include: <ul style="list-style-type: none"> <li>o TTX: BMDS Wargame TTX with each CCMD, two PACOM Multilateral TTX (US/JPN/ROK), PACOM Bilateral TTX (US/AUS), NATO NAC TTX, and STRIKFORNATO TTX.</li> <li>o Support through the planning, testing and execution of developer, policy and familiarization wargames to include: Wargames: BMDS Wargame 17 (planning events), NIMBLE TITAN 16, NIMBLE FIRE 16A, NIMBLE FIRE 16B</li> </ul> </li> </ul> <p>Conduct planning, testing, integration and execution of CCMD-supported globally-executed BMDS exercises to include the following (by GCC):</p> <p>EUCOM: BLUE FLAG 16-1, JOINT TASK FORCE-ISRAEL COMMAND POST EXERCISE, CROSS-AOR AIR AND MISSILE DEFENSE EXERCISE 16, STEADFAST ALLIANCE 16, HOST NATION EXERCISE 16</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency		<b>Date:</b> May 2017		
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<p>PACOM: KEEN EDGE 16, FLEET SYNTHETIC TRAINING-JOINT 16-71, KEY RESOLVE 16, ULCHI FREEDOM GUARDIAN 16, PACIFIC SENTRY 16</p> <p>CENTCOM: AIR AND MISSILE DEFENSE EXERCISE (AMDEX) 16-1, JOINT AIR DEFENSE EXERCISE (JADEX) 16-1, JADEX 16-2, AMDEX 16-2, JADEX 16-3, ARABIAN GULF SHIELD</p> <p>NORTHCOM/JFCC-IMD/STRATCOM: VIGILANT SHIELD/GLOBAL THUNDER 16</p> <p>Additional GCC interface activities by region will include:</p> <p>USEUCOM Engagement:</p> <ul style="list-style-type: none"> <li>- Coordinate with USEUCOM for continued MDA support of key European Phased Adaptive Approach milestones in order to provide a full range of BMDS capabilities addressing ballistic missile threats to the European theater.</li> <li>- Work with USEUCOM to include NATO Allies and regional partners during MDA Ground tests, Flight tests, Wargames, and Exercises in order to improve Allied - US BMDS interoperability.</li> <li>- Coordinate with MDA program elements to facilitate rapid agency responses to USEUCOM requests for analysis and information. Provide reach-back support for the MDA ATD and LNO in USEUCOM for activities requiring visibility by the MDA Director and Director for Test.</li> <li>- Coordinate with MDA Global Deployment Program Office to plan and execute actions required for deployment of BMDS assets in the USEUCOM AOR.</li> <li>- Synchronize MDA EPAA Phase II and III deployment plans with Warfighter Operational Readiness and Acceptance (OR&amp;A) efforts in support of the European Phased Adaptive Approach.</li> <li>- Prepare MDA Senior Leadership for engagements with the USEUCOM. Support MDA Senior Leadership Engagements including the USEUCOM Senior Leader Forum, CY2015 Multinational Conference, and multiple other engagements.</li> </ul> <p>USCENTCOM Engagement:</p> <ul style="list-style-type: none"> <li>- Assist CCMD leadership to develop a regional partner data sharing system supporting USCENTCOM regional IAMD architecture development.</li> <li>- Coordinate with MDA program elements; assist in planning and execution activities supporting USCENTCOM and improving interoperability with regional partners.</li> <li>- Provide reach-back support to the USCENTCOM ATD and LNO in USCENTCOM activities requiring visibility by senior MDA leadership to include the MDA Director.</li> <li>- Support all cross-AOR planning and execution activities.</li> <li>- Coordinate with MDA Deployment Program Office, planned and executed activities required for deployment of BMDS assets and components in the USCENTCOM AOR.</li> <li>- Manage MDA and USCENTCOM interface activities.</li> </ul>				



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency			<b>Date:</b> May 2017		
<b>Appropriation/Budget Activity</b> 0400 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>		<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<p>USPACOM Engagement:</p> <ul style="list-style-type: none"> <li>- Share operational information and knowledge in order to increase allied interoperability</li> <li>- Support BMD training, wargames, and exercises with Australia, Taiwan, Japan and South Korea.</li> <li>- Assist USPACOM leadership to broaden Phased Adaptive Approach planning to address a full range of threats and integration of allies into the BMDS.</li> <li>- Coordinate with MDA program elements; assist in planning and execution activities supporting USPACOM's regional partners.</li> <li>- Provide reach-back support to the USPACOM ATD and LNO in USPACOM activities requiring visibility by the MDA Director and Director of Test.</li> <li>- Coordinate with MDA Global Deployment Program Office, plan and execute activities required for deployment of BMDS assets and components in the USPACOM AOR.</li> <li>- Synchronize MDA-integrated fielding plans with Warfighter Operational Readiness and Acceptance (OR&amp;A) efforts in support of new missile defense capabilities (e.g., Theater High Altitude Area Defense system to South Korea [Jul 2016]). Share operational information and knowledge and help allies develop common operational procedures.</li> <li>- Prepare MDA Senior Leadership for engagements with USPACOM. Support MDA Senior Leadership Engagements in conjunction with wargames, exercises, and ground tests.</li> <li>- Sponsor working groups consisting of appropriate MDA elements and GCC leads to improve processes in order to efficiently address cross organizational requirements and taskers.</li> <li>- Plan and execute all wargame and exercise events per the R-4/4A schedule.</li> </ul> <p><b>FY 2016 Accomplishments:</b> The MDA continued to enhance Warfighter operational support through internal support activities and proactive execution of Combatant Command (CCMD) interface activities as stated in the Description above. Addendum activities completed in FY 2016 are as follows:</p> <ul style="list-style-type: none"> <li>- Synchronized MDA-integrated fielding plans with Warfighter Operational Readiness and Acceptance (OR&amp;A) efforts in support of new missile defense capabilities (i.e. Theater High Altitude Area Defense system to South Korea [Jul 2016]). Shared operational information and knowledge to help allies develop common operational procedures.</li> <li>- Prepared MDA Senior Leadership for engagements with USPACOM. Supported MDA Senior Leadership Engagements in conjunction with wargames, exercises, and ground tests.</li> </ul> <p><b>FY 2017 Plans:</b> SEE ABOVE</p> <p><b>FY 2018 Plans:</b></p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency		<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>
SEE ABOVE			<b>FY 2018</b>
<b>Title:</b> Program, Planning and Operations  <b>Description:</b> The MDA will continue to focus on providing operational-level interface to the GCCs and increasing Warfighter participation in the development of future missile defense capabilities. The key Warfighter interface activities include:  MDA Operational Support: - Support OSPT activation during heightened period of interest. - Support Warfighters, DoD Agencies, and Military Services in identifying desired missile defense capabilities and characteristics. - Obtain Warfighter participation and advice on desired operational features and approaches to system fielding throughout development. - Track analysis and responses for CCMD Requests for Analysis (RFA) and Requests for Information (RFI). - Serve as the immediate link between MDA and the GCCs on all Warfighter activities and requirement. - Prepare MDA senior leadership for U.S. Army, Navy, and Air Force BOD meetings and AMD General Officer Steering Committee meetings. - Coordinate MDA and GCC participation in BMDS capability definition, design, development, and integration. - Provide resource management and administration of BMDS Warfighter personnel and budget. - Support and staff the HMOC during surge operations and sustained 24 hours per day/7 days per week of MDA operations. - Manage travel, including travel to support the wargames and exercises and the Assistant to the Director (ATDs) and Liaison Officer (LNOs) as MDA representatives at the GCC HQs.  <b>FY 2016 Accomplishments:</b> The MDA continued to focus on providing operational-level interface to the GCCs and increasing Warfighter participation in the development of future missile defense capabilities as stated in the Description above.  <b>FY 2017 Plans:</b> SEE ABOVE.  <b>FY 2018 Plans:</b> SEE ABOVE.		7.090 -	6.907 -
			7.045 -
<b>Accomplishments/Planned Programs Subtotals</b>		31.148	30.423
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency		<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> <b>Remarks</b>  <b>D. Acquisition Strategy</b> <p>In order to optimize the performance of the Ballistic Missile Defense System, MDA leverages Defense Department executive agents as well as the MDA Joint National Integration Center Research and Development (JRDC) contract.</p> <p>The executing agents utilize various contracting strategies in a flexible manner to maximize their contribution to the BMDS. Products and Services will be acquired by competitive means to the extent that is possible and practical.</p> <p>In 2017, the MDA JRDC contract is scheduled to be recompeted and will be called the Integrated Research and Development for Enterprise Solutions (IRES).</p> <b>E. Performance Metrics</b> N/A		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Missile Defense Agency</b>												<b>Date: May 2017</b>			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>						<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>			
<b>Support (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Wargames and Exercises - Combatant Commanders (COCOM) Support	C/CPAF	JRDC/MIPR : Colorado Springs, Huntsville, NCR	0.000	18.240	Nov 2015	16.650	Nov 2016	17.158	Nov 2017	-		17.158	Continuing	Continuing	Continuing
Wargames and Exercises - Wargame Support	C/CPAF	JRDC/MIPR : Colorado Springs	0.000	5.818	Nov 2015	6.866	Nov 2016	7.003	Nov 2017	-		7.003	Continuing	Continuing	Continuing
Program, Planning and Operations - Civilian Salaries/Operations Sustainment	Allot	MDA : Colorado Springs, Huntsville, NCR	0.000	2.343		2.543		2.594	Oct 2017	-		2.594	Continuing	Continuing	Continuing
Program, Planning and Operations - Combatant Commanders (COCOM) Support A&AS	C/CPFF	MiDAESS : Colorado Springs, Huntsville, NCR	0.000	1.049		0.998		1.018	Oct 2017	-		1.018	Continuing	Continuing	Continuing
Program, Planning and Operations - Government Travel & Training	Allot	MDA : Colorado Springs, Huntsville, NCR	0.000	0.650		0.850		0.867	Oct 2017	-		0.867	Continuing	Continuing	Continuing
Program, Planning and Operations - Support to MDA Leadership A&AS	C/CPFF	MiDAESS : Colorado Springs, Huntsville, NCR	1.051	3.048		2.516		2.566	Oct 2017	-		2.566	Continuing	Continuing	Continuing
<b>Subtotal</b>			1.051	31.148		30.423		31.206		-		31.206	-	-	-
<b>Remarks</b> N/A															
			<b>Prior Years</b>	<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			1.051	31.148		30.423		31.206		-		31.206	-	-	-
<b>Remarks</b> Prior year funding was captured in MD03 budget project.															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Missile Defense Agency										Date: May 2017									
Appropriation/Budget Activity					R-1 Program Element (Number/Name)					Project (Number/Name)									
0400 / 4					PE 0603898C / Ballistic Missile Defense Joint Warfighter Support					MT03 / Joint Warfighter Support Test									
Significant Event Complete ▲					Milestone Decision Complete ★					Element Test Complete ◆					System Level Test Complete ●				
Significant Event Planned △					Milestone Decision Planned ☆					Element Test Planned ◇					System Level Test Planned ○				
(EX) Air and Missile Defense Exercise Series 16					▲														
(WG) Demonstration, Table-top Exercises & Experiments 15					◆														
(EX) Vigilant Shield/Global Thunder 16					▲														
(EX) Arabian Gulf Shield (AGS) Event 1 16					▲														
(EX) KEEN Edge 16					◆ ◆														
(EX) Host Nation 16					◆ ◆														
(WG) Nimble Titan Year 2 16					◆ ◆ ◆ ◆														
(EX) Fleet Synthetic Training-Joint 16					▲														
(EX) Key Resolve 16					▲														
(EX) Arabian Gulf Shield (AGS) Event 2 16					▲														
(EX) Steadfast Alliance 16					◆ ◆														
(WG) Demonstration, Table-top Exercises & Experiments 16					◆ ◆ ◆ ◆														
(EX) Joint Air Defense Exercise Series 16					▲														
(EX) Pacific Sentry 16					▲														
(EX) Arabian Gulf Shield (AGS) Event 3 16					▲														
(EX) Ulchi Freedom Guardian 16					▲														
(WG) Space & Missile Defense Symposium 16					▲														
(WG) BMDS Wargames 17					◆ ◆ ◆ ◆														
(WG) Nimble Titan Year 1 18					◆ ◆ ◆ ◆														
(EX) Air and Missile Defense Exercise Series 17					△														
(EX) EPOCH PLANEX 18					△														
(EX) Arabian Gulf Shield (AGS) Event 1 17					△														
(EX) Global Response Exercise (GREx) 17					△														
(EX) European Test Bed 16-1					△														

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Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Missile Defense Agency

Date: May 2017

## Appropriation/Budget Activity

0400 / 4

## R-1 Program Element (Number/Name)

PE 0603898C / Ballistic Missile Defense  
Joint Warfighter Support

## Project (Number/Name)

MT03 / Joint Warfighter Support Test

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 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
(EX) Global Lightning 17					◇	◇																						
(EX) Austere Challenge 17					◇	◇	◇	◇	◇	◇	◇																	
(EX) Fleet Synthetic Training-Joint 17					△																							
(EX) Eagle Resolve 17					△																							
(EX) European Air & Missile Defense Exercise Alliance 16					△																							
(EX) Arabian Gulf Shield (AGS) Event 2 17					△																							
(EX) Key Resolve 17					△																							
(EX) European Test Bed 17					△																							
(EX) Steadfast Alliance 17					◇	◇																						
(EX) Joint Project Optic Windwill 2017					◇	◇																						
(EX) Steadfast Armour 17					◇	◇																						
(EX) Joint Live, Virtual, and Constructive 2017					◇	◇	◇	◇																				
(WG) Huntsville Wargames 17						△																						
(EX) KEEN Sword 17						◇	◇	◇																				
(WG) Demonstration, Table-top Exercises & Experiments 17						◇	◇	◇																				
(EX) KEEN Edge 18						◇	◇	◇	◇																			
(EX) Joint Air Defense Exercise Series 17							◇																					
(EX) Arabian Gulf Shield (AGS) Event 3 17							△																					
(EX) Pacific Sentry 17							△																					
(EX) Ulchi Freedom Guardian 17							△																					
(WG) Space & Missile Defense Symposium 17							△																					
(WG) Multi-National Missile Defense Conference (MNC) 17							◇	◇																				
(EX) Vigilant Shield 18							◇	◇																				
(EX) Global Thunder 18							◇	◇																				

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Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Missile Defense Agency

Date: May 2017

## Appropriation/Budget Activity

0400 / 4

## R-1 Program Element (Number/Name)

PE 0603898C / Ballistic Missile Defense  
Joint Warfighter Support

## Project (Number/Name)

MT03 / Joint Warfighter Support Test

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 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
(WG) Nimble Titan Year 2 18									◇	◇	◇	◇																
(EX) Air and Missile Defense Exercise Series 18									△																			
(EX) EPOCH PLANEX 19									△																			
(EX) Arabian Gulf Shield (AGS) Event 1 18									△																			
(EX) Host Nation 18									◇	◇																		
(EX) Global Lightning 18									◇	◇																		
(EX) European Air & Missile Defense Exercise Alliance 17									△																			
(EX) Arabian Gulf Shield (AGS) Event 2 18									△																			
(EX) Key Resolve 18									△																			
(EX) European Test Bed 18									△																			
(EX) Global Response Exercise (GREx) 18									◇	◇																		
(EX) Steadfast Alliance 18									◇	◇																		
(EX) Joint Live, Virtual, and Constructive 2018									◇	◇	◇	◇																
(WG) Demonstration, Table-top Exercises & Experiments 18										◇	◇	◇																
(WG) BMDS Wargames 19										◇	◇	◇	◇	◇														
(EX) Joint Air Defense Exercise Series 18										△																		
(EX) Arabian Gulf Shield (AGS) Event 3 18										△																		
(EX) Pacific Sentry 18										△																		
(EX) Ulchi Freedom Guardian 18										△																		
(WG) Multi-National Missile Defense Conference (MNC) 18										◇	◇																	
(EX) Vigilant Shield 19										◇	◇																	
(EX) Global Thunder 19										◇	◇																	
(WG) Nimble Titan Year 1 20										◇	◇	◇	◇															
(EX) Air and Missile Defense Exercise Series 19											△																	

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Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Missile Defense Agency

Date: May 2017

## Appropriation/Budget Activity

0400 / 4

## R-1 Program Element (Number/Name)

PE 0603898C / Ballistic Missile Defense  
Joint Warfighter Support

## Project (Number/Name)

MT03 / Joint Warfighter Support Test

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 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
(EX) EPOCH PLANEX 20													△															
(EX) Arabian Gulf Shield (AGS) Event 1 19													△															
(EX) Global Lightning 19													◇	◇														
(EX) Fleet Synthetic Training-Joint 18													△															
(EX) Eagle Resolve 19													△															
(EX) European Air & Missile Defense Exercise Alliance 18													△															
(EX) Fleet Synthetic Training-Joint 19													△															
(EX) Arabian Gulf Shield (AGS) Event 2 19													△															
(EX) Key Resolve 19													△															
(EX) European Test Bed 19													△															
(EX) Joint Project Optic Windwill 2019													◇	◇														
(EX) Steadfast Armour 19													◇	◇														
(EX) Joint Live, Virtual, and Constructive 2019													◇	◇	◇	◇												
(EX) Austere Challenge 19													◇	◇	◇	◇	◇	◇										
(WG) Huntsville Wargames 19													△															
(EX) KEEN Sword 19													◇	◇	◇													
(WG) Demonstration, Table-top Exercises & Experiments 19													◇	◇	◇													
(EX) KEEN Edge 20													◇	◇	◇	◇												
(EX) Joint Air Defense Exercise Series 19														△														
(EX) Arabian Gulf Shield (AGS) Event 3 19														△														
(EX) Pacific Sentry 19														△														
(EX) Ulchi Freedom Guardian 19														△														
(WG) Space & Missile Defense Symposium 19														△														
(WG) Multi-National Missile Defense Conference (MNC) 19														◇	◇													



## UNCLASSIFIED

Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Missile Defense Agency

Date: May 2017

## Appropriation/Budget Activity

0400 / 4

## R-1 Program Element (Number/Name)

PE 0603898C / Ballistic Missile Defense  
Joint Warfighter Support

## Project (Number/Name)

MT03 / Joint Warfighter Support Test

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 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
(EX) Vigilant Shield 20															◇	◇												
(EX) Global Thunder 20															◇	◇												
(WG) Nimble Titan Year 2 20															◇	◇	◇	◇										
(EX) EPOCH PLANEX 21																◇												
(EX) Air and Missile Defense Exercise Series 20																△												
(EX) Arabian Gulf Shield (AGS) Event 1 20																△												
(EX) Global Lightning 20																◇	◇											
(EX) European Air & Missile Defense Exercise Alliance 19																	△											
(EX) Fleet Synthetic Training-Joint 20																	△											
(EX) Arabian Gulf Shield (AGS) Event 2 20																	△											
(EX) Global Response Exercise (GREx) 19																	△											
(EX) Key Resolve 20																	△											
(EX) European Test Bed 20																	△											
(EX) Steadfast Alliance 20																	◇	◇										
(EX) Joint Live, Virtual, and Constructive 2020																	◇	◇	◇	◇								
(EX) Host Nation 20																	△											
(WG) Demonstration, Table-top Exercises & Experiments 20																	◇	◇	◇									
(EX) KEEN Sword 21																	◇	◇	◇	◇								
(EX) KEEN Sword 23																	◇	◇	◇	◇								
(WG) BMDs Wargames 21																	◇	◇	◇	◇	◇							
(EX) Arabian Gulf Shield (AGS) Event 3 20																		△										
(EX) Pacific Sentry 20																		△										
(EX) Ulchi Freedom Guardian 20																		△										
(WG) Multi-National Missile Defense Conference (MNC) 20																		◇	◇									

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Missile Defense Agency																Date: May 2017													
Appropriation/Budget Activity										R-1 Program Element (Number/Name)										Project (Number/Name)									
0400 / 4										PE 0603898C / Ballistic Missile Defense Joint Warfighter Support										MT03 / Joint Warfighter Support Test									
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 2016		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022							
(EX) Vigilant Shield 21																			◇	◇									
(EX) Global Thunder 21																			◇	◇									
(WG) Nimble Titan Year 1 22																			◇	◇	◇	◇							
(WG) Nimble Titan Year 2 22																			◇	◇	◇	◇							
(EX) EPOCH PLANEX 22																				△									
(EX) Joint Air Defense Exercise Series 20																				△									
(EX) Air and Missile Defense Exercise Series 21																				△									
(EX) Arabian Gulf Shield (AGS) Event 1 21																				△									
(EX) Global Lightning 21																				◇	◇								
(EX) Global Lightning 22																				◇	◇								
(EX) European Air & Missile Defense Exercise Alliance 20																					△								
(EX) Eagle Resolve 21																					△								
(EX) Arabian Gulf Shield (AGS) Event 2 21																					△								
(EX) Fleet Synthetic Training-Joint 21																					△								
(EX) Key Resolve 21																					△								
(EX) European Test Bed 21																					△								
(EX) Joint Project Optic Windwill 2021																				◇	◇								
(EX) Steadfast Armour 21																				◇	◇								
(EX) Joint Live, Virtual, and Constructive 2021																				◇	◇	◇	◇						
(EX) Austere Challenge 21																				◇	◇	◇	◇	◇	◇				
(WG) Huntsville Wargames 21																					△								
(WG) Demonstration, Table-top Exercises & Experiments 21																					◇	◇	◇						
(WG) Demonstration, Table-top Exercises & Experiments 22																					◇	◇	◇						
(EX) KEEN Edge 22																					◇	◇	◇	◇					

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Exhibit R-4, RDT&amp;E Schedule Profile: FY 2018 Missile Defense Agency

Date: May 2017

## Appropriation/Budget Activity

0400 / 4

## R-1 Program Element (Number/Name)

PE 0603898C / Ballistic Missile Defense  
Joint Warfighter Support

## Project (Number/Name)

MT03 / Joint Warfighter Support Test

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 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
(EX) Pacific Sentry 21																												
(EX) Arabian Gulf Shield (AGS) Event 3 21																												
(EX) Ulchi Freedom Guardian 21																												
(WG) Space & Missile Defense Symposium 21																												
(EX) Eagle Resolve 23																												
(EX) Pacific Sentry 22																												
(WG) Multi-National Missile Defense Conference (MNC) 21																												
(EX) Global Thunder 22																												
(EX) Vigilant Shield 22																												
(WG) Multi-National Missile Defense Conference (MNC) 22																												
(EX) Joint Air Defense Exercise Series 21																												
(EX) Air and Missile Defense Exercise Series 22																												
(EX) Arabian Gulf Shield (AGS) Event 1 22																												
(EX) Joint Air Defense Exercise Series 22																												
(EX) European Air & Missile Defense Exercise Alliance 21																												
(EX) Global Response Exercise 20																												
(EX) European Test Bed 22																												
(EX) Arabian Gulf Shield (AGS) Event 2 22																												
(EX) Fleet Synthetic Training-Joint 22																												
(EX) Key Resolve 22																												
(EX) Steadfast Alliance 22																												
(EX) Joint Live, Virtual, and Constructive 2022																												
(EX) Host Nation 22																												
(WG) BMDS Wargames 23																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Missile Defense Agency														Date: May 2017											
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support					Project (Number/Name) MT03 / Joint Warfighter Support Test															
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 2016			FY 2017			FY 2018			FY 2019			FY 2020			FY 2021			FY 2022		
(EX) Arabian Gulf Shield (AGS) Event 3 22																								△	
(EX) Ulchi Freedom Guardian 22																								△	
(EX) Global Thunder 23																								◇	
(EX) Vigilant Shield 23																								◇	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency			<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
(EX) Air and Missile Defense Exercise Series 16	1	2016	1	2016
(WG) Demonstration, Table-top Exercises & Experiments 15	1	2016	1	2016
(EX) Vigilant Shield/Global Thunder 16	1	2016	1	2016
(EX) Arabian Gulf Shield (AGS) Event 1 16	1	2016	1	2016
(EX) KEEN Edge 16	1	2016	2	2016
(EX) Host Nation 16	1	2016	2	2016
(WG) Nimble Titan Year 2 16	1	2016	4	2016
(EX) Fleet Synthetic Training-Joint 16	2	2016	2	2016
(EX) Key Resolve 16	2	2016	2	2016
(EX) Arabian Gulf Shield (AGS) Event 2 16	2	2016	2	2016
(EX) Steadfast Alliance 16	2	2016	3	2016
(WG) Demonstration, Table-top Exercises & Experiments 16	3	2016	1	2017
(EX) Joint Air Defense Exercise Series 16	4	2016	4	2016
(EX) Pacific Sentry 16	4	2016	4	2016
(EX) Arabian Gulf Shield (AGS) Event 3 16	4	2016	4	2016
(EX) Ulchi Freedom Guardian 16	4	2016	4	2016
(WG) Space & Missile Defense Symposium 16	4	2016	4	2016
(WG) BMDS Wargames 17	4	2016	3	2017
(WG) Nimble Titan Year 1 18	4	2016	3	2017
(EX) Air and Missile Defense Exercise Series 17	1	2017	1	2017
(EX) EPOCH PLANEX 18	1	2017	1	2017
(EX) Arabian Gulf Shield (AGS) Event 1 17	1	2017	1	2017

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Missile Defense Agency			Date: May 2017	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support		Project (Number/Name) MT03 / Joint Warfighter Support Test	
	Start		End	
Events	Quarter	Year	Quarter	Year
(EX) Global Response Exercise (GREx) 17	1	2017	1	2017
(EX) European Test Bed 16-1	1	2017	1	2017
(EX) Global Lightning 17	1	2017	2	2017
(EX) Austere Challenge 17	1	2017	3	2018
(EX) Fleet Synthetic Training-Joint 17	2	2017	2	2017
(EX) Eagle Resolve 17	2	2017	2	2017
(EX) European Air & Missile Defense Exercise Alliance 16	2	2017	2	2017
(EX) Arabian Gulf Shield (AGS) Event 2 17	2	2017	2	2017
(EX) Key Resolve 17	2	2017	2	2017
(EX) European Test Bed 17	2	2017	2	2017
(EX) Steadfast Alliance 17	2	2017	3	2017
(EX) Joint Project Optic Windwill 2017	2	2017	3	2017
(EX) Steadfast Armour 17	2	2017	3	2017
(EX) Joint Live, Virtual, and Constructive 2017	2	2017	1	2018
(WG) Huntsville Wargames 17	3	2017	3	2017
(EX) KEEN Sword 17	3	2017	1	2018
(WG) Demonstration,Table-top Exercises & Experiments 17	3	2017	1	2018
(EX) KEEN Edge 18	3	2017	2	2018
(EX) Joint Air Defense Exercise Series 17	4	2017	4	2017
(EX) Arabian Gulf Shield (AGS) Event 3 17	4	2017	4	2017
(EX) Pacific Sentry 17	4	2017	4	2017
(EX) Ulchi Freedom Guardian 17	4	2017	4	2017
(WG) Space & Missile Defense Symposium 17	4	2017	4	2017
(WG) Multi-National Missile Defense Conference (MNC) 17	4	2017	1	2018
(EX) Vigilant Shield 18	4	2017	1	2018

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency				<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>		<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
		<b>Start</b>		<b>End</b>	
<b>Events</b>	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>	
(EX) Global Thunder 18	4	2017	1	2018	
(WG) Nimble Titan Year 2 18	4	2017	3	2018	
(EX) Air and Missile Defense Exercise Series 18	1	2018	1	2018	
(EX) EPOCH PLANEX 19	1	2018	1	2018	
(EX) Arabian Gulf Shield (AGS) Event 1 18	1	2018	1	2018	
(EX) Host Nation 18	1	2018	2	2018	
(EX) Global Lightning 18	1	2018	2	2018	
(EX) European Air & Missile Defense Exercise Alliance 17	2	2018	2	2018	
(EX) Arabian Gulf Shield (AGS) Event 2 18	2	2018	2	2018	
(EX) Key Resolve 18	2	2018	2	2018	
(EX) European Test Bed 18	2	2018	2	2018	
(EX) Global Response Exercise (GREx) 18	2	2018	3	2018	
(EX) Steadfast Alliance 18	2	2018	3	2018	
(EX) Joint Live, Virtual, and Constructive 2018	2	2018	1	2019	
(WG) Demonstration, Table-top Exercises & Experiments 18	3	2018	1	2019	
(WG) BMDS Wargames 19	3	2018	3	2019	
(EX) Joint Air Defense Exercise Series 18	4	2018	4	2018	
(EX) Arabian Gulf Shield (AGS) Event 3 18	4	2018	4	2018	
(EX) Pacific Sentry 18	4	2018	4	2018	
(EX) Ulchi Freedom Guardian 18	4	2018	4	2018	
(WG) Multi-National Missile Defense Conference (MNC) 18	4	2018	1	2019	
(EX) Vigilant Shield 19	4	2018	1	2019	
(EX) Global Thunder 19	4	2018	1	2019	
(WG) Nimble Titan Year 1 20	4	2018	3	2019	
(EX) Air and Missile Defense Exercise Series 19	1	2019	1	2019	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency				<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>		<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
		<b>Start</b>		<b>End</b>	
<b>Events</b>	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>	
(EX) EPOCH PLANEX 20	1	2019	1	2019	
(EX) Arabian Gulf Shield (AGS) Event 1 19	1	2019	1	2019	
(EX) Global Lightning 19	1	2019	2	2019	
(EX) Fleet Synthetic Training-Joint 18	2	2019	2	2019	
(EX) Eagle Resolve 19	2	2019	2	2019	
(EX) European Air & Missile Defense Exercise Alliance 18	2	2019	2	2019	
(EX) Fleet Synthetic Training-Joint 19	2	2019	2	2019	
(EX) Arabian Gulf Shield (AGS) Event 2 19	2	2019	2	2019	
(EX) Key Resolve 19	2	2019	2	2019	
(EX) European Test Bed 19	2	2019	2	2019	
(EX) Joint Project Optic Windwill 2019	2	2019	3	2019	
(EX) Steadfast Armour 19	2	2019	3	2019	
(EX) Joint Live, Virtual, and Constructive 2019	2	2019	1	2020	
(EX) Austere Challenge 19	2	2019	3	2020	
(WG) Huntsville Wargames 19	3	2019	3	2019	
(EX) KEEN Sword 19	3	2019	1	2020	
(WG) Demonstration, Table-top Exercises & Experiments 19	3	2019	1	2020	
(EX) KEEN Edge 20	3	2019	2	2020	
(EX) Joint Air Defense Exercise Series 19	4	2019	4	2019	
(EX) Arabian Gulf Shield (AGS) Event 3 19	4	2019	4	2019	
(EX) Pacific Sentry 19	4	2019	4	2019	
(EX) Ulchi Freedom Guardian 19	4	2019	4	2019	
(WG) Space & Missile Defense Symposium 19	4	2019	4	2019	
(WG) Multi-National Missile Defense Conference (MNC) 19	4	2019	1	2020	
(EX) Vigilant Shield 20	4	2019	1	2020	



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency				<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>		<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
		<b>Start</b>		<b>End</b>	
<b>Events</b>		<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
(EX) Global Thunder 20		4	2019	1	2020
(WG) Nimble Titan Year 2 20		4	2019	3	2020
(EX) EPOCH PLANEX 21		1	2020	1	2020
(EX) Air and Missile Defense Exercise Series 20		1	2020	1	2020
(EX) Arabian Gulf Shield (AGS) Event 1 20		1	2020	1	2020
(EX) Global Lightning 20		1	2020	2	2020
(EX) European Air & Missile Defense Exercise Alliance 19		2	2020	2	2020
(EX) Fleet Synthetic Training-Joint 20		2	2020	2	2020
(EX) Arabian Gulf Shield (AGS) Event 2 20		2	2020	2	2020
(EX) Global Response Exercise (GREx) 19		2	2020	2	2020
(EX) Key Resolve 20		2	2020	2	2020
(EX) European Test Bed 20		2	2020	2	2020
(EX) Steadfast Alliance 20		2	2020	3	2020
(EX) Joint Live, Virtual, and Constructive 2020		2	2020	1	2021
(EX) Host Nation 20		3	2020	3	2020
(WG) Demonstration, Table-top Exercises & Experiments 20		3	2020	1	2021
(EX) KEEN Sword 21		3	2020	2	2021
(EX) KEEN Sword 23		3	2020	2	2021
(WG) BMDS Wargames 21		3	2020	3	2021
(EX) Arabian Gulf Shield (AGS) Event 3 20		4	2020	4	2020
(EX) Pacific Sentry 20		4	2020	4	2020
(EX) Ulchi Freedom Guardian 20		4	2020	4	2020
(WG) Multi-National Missile Defense Conference (MNC) 20		4	2020	1	2021
(EX) Vigilant Shield 21		4	2020	1	2021
(EX) Global Thunder 21		4	2020	1	2021

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency				<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>		<b>Project (Number/Name)</b> MT03 / <i>Joint Warfighter Support Test</i>	
		<b>Start</b>		<b>End</b>	
<b>Events</b>	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>	
(WG) Nimble Titan Year 1 22	4	2020	3	2021	
(WG) Nimble Titan Year 2 22	4	2020	3	2021	
(EX) EPOCH PLANEX 22	1	2021	1	2021	
(EX) Joint Air Defense Exercise Series 20	1	2021	1	2021	
(EX) Air and Missile Defense Exercise Series 21	1	2021	1	2021	
(EX) Arabian Gulf Shield (AGS) Event 1 21	1	2021	1	2021	
(EX) Global Lightning 21	1	2021	2	2021	
(EX) Global Lightning 22	1	2021	2	2021	
(EX) European Air & Missile Defense Exercise Alliance 20	2	2021	2	2021	
(EX) Eagle Resolve 21	2	2021	2	2021	
(EX) Arabian Gulf Shield (AGS) Event 2 21	2	2021	2	2021	
(EX) Fleet Synthetic Training-Joint 21	2	2021	2	2021	
(EX) Key Resolve 21	2	2021	2	2021	
(EX) European Test Bed 21	2	2021	2	2021	
(EX) Joint Project Optic Windwill 2021	2	2021	3	2021	
(EX) Steadfast Armour 21	2	2021	3	2021	
(EX) Joint Live, Virtual, and Constructive 2021	2	2021	1	2022	
(EX) Austere Challenge 21	2	2021	3	2022	
(WG) Huntsville Wargames 21	3	2021	3	2021	
(WG) Demonstration, Table-top Exercises & Experiments 21	3	2021	1	2022	
(WG) Demonstration, Table-top Exercises & Experiments 22	3	2021	1	2022	
(EX) KEEN Edge 22	3	2021	2	2022	
(EX) Pacific Sentry 21	4	2021	4	2021	
(EX) Arabian Gulf Shield (AGS) Event 3 21	4	2021	4	2021	
(EX) Ulchi Freedom Guardian 21	4	2021	4	2021	

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Missile Defense Agency			Date: May 2017	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support		Project (Number/Name) MT03 / Joint Warfighter Support Test	
	Start		End	
Events	Quarter	Year	Quarter	Year
(WG) Space & Missile Defense Symposium 21	4	2021	4	2021
(EX) Eagle Resolve 23	4	2021	4	2021
(EX) Pacific Sentry 22	4	2021	4	2021
(WG) Multi-National Missile Defense Conference (MNC) 21	4	2021	1	2022
(EX) Global Thunder 22	4	2021	1	2022
(EX) Vigilant Shield 22	4	2021	1	2022
(WG) Multi-National Missile Defense Conference (MNC) 22	4	2021	1	2022
(EX) Joint Air Defense Exercise Series 21	1	2022	1	2022
(EX) Air and Missile Defense Exercise Series 22	1	2022	1	2022
(EX) Arabian Gulf Shield (AGS) Event 1 22	1	2022	1	2022
(EX) Joint Air Defense Exercise Series 22	1	2022	1	2022
(EX) European Air & Missile Defense Exercise Alliance 21	2	2022	2	2022
(EX) Global Response Exercise 20	2	2022	2	2022
(EX) European Test Bed 22	2	2022	2	2022
(EX) Arabian Gulf Shield (AGS) Event 2 22	2	2022	2	2022
(EX) Fleet Synthetic Training-Joint 22	2	2022	2	2022
(EX) Key Resolve 22	2	2022	2	2022
(EX) Steadfast Alliance 22	2	2022	3	2022
(EX) Joint Live, Virtual, and Constructive 2022	2	2022	1	2023
(EX) Host Nation 22	3	2022	3	2022
(WG) BMDS Wargames 23	3	2022	3	2023
(EX) Arabian Gulf Shield (AGS) Event 3 22	4	2022	4	2022
(EX) Ulchi Freedom Guardian 22	4	2022	4	2022
(EX) Global Thunder 23	4	2022	1	2023
(EX) Vigilant Shield 23	4	2022	1	2023

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Missile Defense Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support				Project (Number/Name) MC03 / Cyber Operations			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
MC03: Cyber Operations	-	0.000	0.000	0.152	-	0.152	0.155	0.157	0.160	0.162	0	0.786
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Project MC03 is the Defensive Cyber Operations Project established in this Program Element (PE) during PBR 2018. Funds were previously reported in Project MD03 of this PE.

**A. Mission Description and Budget Item Justification**

The funds in this project are required to verify and validate that cybersecurity and/or cybersecurity-enabled products (firewalls, data/network encryption devices, routers, Intrusion Detection Systems, etc.) used within the MDA infrastructure have a current and Evaluated Assurance Level (EAL) certification and rating. They assure that validated IT products are listed on the DOD Approved Products List (APLITS). There is an additional requirement to routinely identify findings and prepare a report with recommendations. The Warfighter Strategic Integration directorate (DDW) requires this support in the IT product evaluation provided. 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)**

	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<b>Title:</b> Strategic Warfighter Integration Software Assurance Support	0.000	0.000	0.152
<b>Articles:</b>	-	-	-
<b>Description:</b> Perform manual and automated software code analysis, using GFE tools (e.g. Fortify 360), to detect false positives, weaknesses, and vulnerabilities. 1) Verify and validate cybersecurity and/or cybersecurity-enabled products (firewalls, data/network encryptors, routers, Intrusion Detection Systems, etc.) used within the MDA infrastructure have a current and Evaluated Assurance Level (EAL) certification and rating. Validate IT products are listed on the DoD Approved Products List (APLITS). 2) Participate in meetings with customers to review software analysis findings and proposed courses of action for remediation. 3) Prepare a comprehensive report detailing the weaknesses and vulnerabilities found. Document the references to files and line numbers. 4) Maintain a record of all software code analysis documentation and organized in accordance with Government policy.			
<b>FY 2016 Accomplishments:</b> N/A			
<b>FY 2017 Plans:</b> N/A			
<b>FY 2018 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> FY 2018 Missile Defense Agency		<b>Date:</b> May 2017	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MC03 / <i>Cyber Operations</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2016</b>	<b>FY 2017</b>
See Description			
<b>Accomplishments/Planned Programs Subtotals</b>		0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> N/A			
<b>E. Performance Metrics</b> N/A			

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> FY 2018 Missile Defense Agency												<b>Date:</b> May 2017			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>				<b>Project (Number/Name)</b> MC03 / <i>Cyber Operations</i>					

  

<b>Test and Evaluation (\$ in Millions)</b>				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Strategic Warfighter Integration Software Assurance Support - DDW Software Assurance Support	C/CPFF	TEAMS : COS	0.000	0.000		0.000		0.152	Mar 2018	-		0.152	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		0.152		-		0.152	-	-	-

  

<b>Remarks</b> N/A															
			Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract				
<b>Project Cost Totals</b>			0.000	0.000	0.000	0.152	-	0.152	-	-	-				

  

<b>Remarks</b> N/A											
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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Missile Defense Agency											Date: May 2017							
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support					Project (Number/Name) MC03 / Cyber Operations								
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 2016		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022	
MC03 Cyber Operations									◇	◇	◇	◇	◇	◇	◇	◇	◇	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency			<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MC03 / <i>Cyber Operations</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MC03 Cyber Operations	1	2018	1	2022



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Exhibit R-2A, RDT&E Project Justification: FY 2018 Missile Defense Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support				Project (Number/Name) MD40 / Program-Wide Support			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
MD40: Program-Wide Support	9.113	2.180	1.936	2.202	-	2.202	2.392	2.450	2.591	2.619	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In FY 2016, FY 2017, and FY 2018 Program Wide Support reflects proportional changes in Ballistic Missile Defense Joint Warfighter Support. Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests on the R-3.

**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 Global Deployment personnel and support performing deployment site preparation and activation and, provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs includes: 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 and therefore, fluctuates by year based on the adjusted RDT&E profile (which excludes: 0305103C Cyber Security Initiative, 0603274C Special Programs, 0603913C Israeli Cooperative Program and 0901598C Management Headquarters).

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>
<b>Title:</b> Program Wide Support	2.180	1.936	2.202
<b>Articles:</b>	-	-	-
<b>Description:</b> N/A			
<b>FY 2016 Accomplishments:</b> N/A			
<b>FY 2017 Plans:</b> N/A			
<b>FY 2018 Plans:</b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>	2.180	1.936	2.202

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Missile Defense Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: FY 2018 Missile Defense Agency</b>												<b>Date: May 2017</b>			
<b>Appropriation/Budget Activity</b> 0400 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>						<b>Project (Number/Name)</b> MD40 / <i>Program-Wide Support</i>			
<b>Support (\$ in Millions)</b>				<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Program Wide Support - Agency Facilities and Maintenance (MIPR)	MIPR	Various : Multi: AK, AL, CA, CO, VA	1.200	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various Multi: AL, CO, CA, VA : Various	0.663	0.145		0.039	Jul 2017	0.044	Jul 2018	-		0.044	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	MDA : Multi:AK,AL, CA, CO, VA	1.504	1.102	Nov 2015	1.464	Nov 2016	1.300	Nov 2017	-		1.300	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	ALATEC , INC, : AL, CO, VA	5.489	0.933	Oct 2015	0.433	Aug 2017	0.461	Aug 2018	-		0.461	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services (Reqn)	Reqn	Various : Multi:AK, AL, CA, CO, VA	0.000	0.000		0.000		0.397	Aug 2018	-		0.397	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support, International, and Materiel and Readiness	MIPR	Naval Surface Warfare Center; VA, AL : Various	0.257	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - FFRDC/UARC	C/CPAF	Various : Multi: AL, VA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			9.113	2.180		1.936		2.202		-		2.202	-	-	-
<b>Remarks</b> N/A															
			<b>Prior Years</b>	<b>FY 2016</b>		<b>FY 2017</b>		<b>FY 2018 Base</b>		<b>FY 2018 OCO</b>		<b>FY 2018 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			9.113	2.180		1.936		2.202		-		2.202	-	-	-
<b>Remarks</b> N/A															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Missile Defense Agency														Date: May 2017									
Appropriation/Budget Activity 0400 / 4								R-1 Program Element (Number/Name) PE 0603898C / Ballistic Missile Defense Joint Warfighter Support								Project (Number/Name) MD40 / Program-Wide Support							
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 2016		FY 2017		FY 2018		FY 2019		FY 2020		FY 2021		FY 2022			
MD40 Program-Wide Support								◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇		

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> FY 2018 Missile Defense Agency			<b>Date:</b> May 2017
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	<b>Project (Number/Name)</b> MD40 / <i>Program-Wide Support</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2016	4	2022