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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	1,245.489	1,159.456	903.172	-	903.172	914.603	954.069	948.650	862.884	Continuing	Continuing
MD08: <i>Ground Based Midcourse</i>	1,194.267	1,111.226	569.622	-	569.622	531.906	567.019	542.809	458.062	Continuing	Continuing
MT08: <i>Ground Based Midcourse Test</i>	-	-	80.381	-	80.381	131.304	132.956	142.869	143.823	Continuing	Continuing
MX08: <i>Ground Based Midcourse Development Support</i>	-	-	207.133	-	207.133	205.210	207.563	216.272	217.317	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	51.222	48.230	46.036	-	46.036	46.183	46.531	46.700	43.682	Continuing	Continuing

Note

N/A

A. Mission Description and Budget Item Justification

The Ground-based Midcourse Defense (GMD) program is the element of the Ballistic Missile Defense System (BMDS) that provides combatant commanders with a continuously available (24 hours a day, 7 days a week, 365 days a year) capability to defend the Homeland against limited Intercontinental Ballistic Missile (ICBM) attacks. The GMD capability consists of Ground Based Interceptors (GBI), GMD Fire Control system (GFC) , GMD Communications Network (GCN), In-Flight Interceptor Communications System Data Terminals (IDT) and all of the ground launch support systems (silos, silo interface vaults, environmental control systems, command launch equipment, firing circuits and safety systems). The 30 operationally deployed GBIs located at Fort Greely, Alaska (26 GBIs) and Vandenberg Air Force Base, California (4 GBIs) each deliver a single Exoatmospheric Kill Vehicle (EKV) to defeat threat warheads in space during the midcourse phase of the ballistic trajectory. GMD has the ability to quickly expand to 38 GBIs by FY 2015. The GMD Fire Control System consists of fire control nodes in Fort Greely, Alaska and Missile Defense Integration and Operations Center (MDIOC) Colorado Springs, Colorado. IDTs are currently located in Fort Greely, Alaska, Vandenberg Air Force Base, California, Eareckson Air Station, Alaska, and the Missile Defense Agency (MDA) plans to deliver an additional IDT to Fort Drum, New York in FY 2015. The GMD capability leverages integration of Ballistic Missile Defense System sensors in Japan, Alaska, California, United Kingdom, Greenland, and Turkey. Development objectives for GMD include: testing and validating the performance of the Capability Enhancement I and II (CE-I and CE-II) GBIs, development and testing of capability upgrades (e.g., Near-Term Discrimination improvements), manufacturing additional GBIs in support of operational requirements, flight testing, the Stockpile Reliability Program including GBI upgrades to improve interceptor fleet reliability and sustaining the fielded system.

MD40 Program-Wide Support (PWS) consists of essential non-headquarters management costs in support of MDA functions and activities across the entire Ballistic Missile Defense System (BMDS).

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B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	1,346.181	1,161.001	1,040.949	-	1,040.949
Current President's Budget	1,245.489	1,159.456	903.172	-	903.172
Total Adjustments	-100.692	-1.545	-137.777	-	-137.777
• Congressional General Reductions	-8.926	-1.545			
• Congressional Directed Reductions	-35.000	-			
• Congressional Rescissions	-23.500	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.755	-			
• SBIR/STTR Transfer	-33.481	-			
• Other Adjustment	0.970	-	-137.777	-	-137.777

Change Summary Explanation

FY 2011 adjustments include Congressional reduction (DoD and Full year continuing Appropriation Act, Public Law 112-10) and reflects realignment to DoD priorities.

FY 2012 decrease of \$1.545M reflects a congressional general reduction (Consolidated Appropriation Act of FY 2012 (Public Law 112-74)).

FY 2013 adjustments reflects realignment to DoD priorities.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD08: <i>Ground Based Midcourse</i>	1,194.267	1,111.226	569.622	-	569.622	531.906	567.019	542.809	458.062	Continuing	Continuing
Quantity of RDT&E Articles	1	5	5		5	0	0	0	0		

Note

Changes from President's Budget FY 2012 Submission:

The Flight Test Ground Based Interceptor-06a (FTG-06a) Test Failure drove changes to the Ground-Based Midcourse Defense (GMD) development and test program. The test failure identified a technical issue with the Capability Enhancement-II (CE-II) Ground Based Interceptor (GBI) configuration, causing MDA to halt planned CE-II deliveries as root cause of the failure and resolution of the failure was confirmed. Having now identified root cause of failure through additional ground testing of the CEII EKV, GMD implemented the necessary design changes in order to support and conduct a non-intercept flight test, Controlled Test Vehicle-01 (CTV-01), to prove the resolution is effective and then re-conduct the intercept test mission, Flight Test Ground Based Interceptor-06b (FTG-06b).

Starting in FY 2013, the Sustainment accomplishment will move from Project MD08 into Project MX08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.

Starting in FY 2013, the BMDS Level Testing accomplishment will move from Project MD08 into Project MT08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.

A. Mission Description and Budget Item Justification

The Ground-Based Midcourse Defense (GMD) program is described as follows:

The focus of the GMD program is to enhance the reliability of GBIs and sensor architecture to ensure the probability of successful intercepts against first generation Intercontinental Ballistic Missiles (ICBMs).

MDA will continue to provide for the operations, training, and sustainment of GMD fielded capability at Fort Greely, Alaska; Eareckson Air Station, Alaska; Vandenberg Air Force Base, California; the Missile Defense Integration Operations Center (MDIOC), Colorado and across the nation-wide GMD Communications Network.

In FY 2011, a Failure Review Board (FRB) determined the cause of unsuccessful intercept of Flight Test Ground-Based Midcourse Defense-06a (FTG-06a). GMD is executing a Return to Intercept program that addresses the root cause, develops modified designs, and confirms a solution to the issue through intensive ground testing and a non-intercept flight test, CTV-01. This will be followed by an intercept test mission, Flight Test Ground-Based Midcourse Defense-06b (FTG-06b).

GMD continued to build sub-assemblies that are not affected by FTG-06a root cause failure for the Interceptors (GBI) 34-44, and the Flight Test Interceptors required to support the Return to Intercept program (CTV-01 and FTG-06b). GMD will continue long lead development and manufacturing for GBIs 48-57 in support of operational

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requirements incorporating FRB resolutions, flight testing, and the Stockpile Reliability Program. Once the corrective action is verified through ground testing and a controlled flight test (CTV-01), operational interceptor manufacturing will resume.

The Ground Based Midcourse Defense (GMD) continues building upon the Initial Homeland Defense that provides the fundamental capability against intermediate and long-range Ballistic Missiles threats. Work scope includes: 1) Ground Systems 6B1.5 suite delivery to integrate an additional forward based Army/Navy Transportable Radar Surveillance-2 (AN/TPY-2) radar using the Ballistic Missile Defense System Command, Control, Battle Management, and Communications (C2BMC) System; 2) Ground Systems 6B2 suite delivery to provide expanded C2BMC essential elements of information for situational awareness, dynamic positioning capability for the In Flight Interceptor Communications System Data Terminal on the Sea Based X-Band Radar platform, Sea Based X-Band Radar version 3 interoperability, Warfighter requested changes, enables the use of data provided by up to 14 AN-TPY-2 radars; 3) Ground Based Interceptor Exoatmospheric Kill Vehicle (EKV) software version 9 (CE- II) and version 22 (CE-I) to incorporate in-flight performance improvements and support to the flight test program; 4) Fort Greely Power Plant, Missile Field-2, and 2nd GMD Fire Control Node delivery to improve operational reliability, survivability and availability; 5) Flight Test the weapon system against an Intermediate Range Ballistic Missile (IRBM) target with associated objects; 6) Ground Test the weapon system as a part of Ground Test - 04 (GT-04) campaign to assess Ballistic Missile Defense System capabilities.

GMD also continues to develop an Enhanced Homeland Defense capability against intermediate and long-range Ballistic Missiles threats. Work scope includes: 1) Ground Systems 6B3 suite delivery to use Near Term Discrimination data, integrate the Clear, AK Upgrade to Early Warning Radar (UEWR) and Ft. Drum, NY In-Flight Interceptor Communications System Data Terminals (IDT) assets, support Space-Based Infrared System interface changes, incorporate evolving threats, Warfighter requirements, and BMDS element interoperability associated changes; 2) Ground Based Interceptor EKV software version 10 (CE-II) and version 23 (CE-I) to incorporate in-flight performance improvements and support to the flight test program; 3) Fort Drum IDT delivery to increase system performance in specific engagement scenarios; 4) Flight Test the weapon system against targets with increasing complexity and in a salvo launch sequence; 5) Demonstrate the ability to integrate future BMDS sensor improvements (e.g., Precision Tracking Space Surveillance); 6) Ground Test the weapon system as a part of Ground Test - 06 (GT-06) campaign to assess Ballistic Missile Defense System capabilities.

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

	FY 2011	FY 2012	FY 2013
<p>Title: Ground Based Interceptor</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Due to the Flight Test Ground-Based Midcourse Defense-06a (FTG-06a) Test failure, delivery of Capability Enhancement-II (CE-II) Interceptors (Ground Based Interceptors 34-44) was put on hold. However, GMD continued to build sub-assemblies that are not affected by FTG-06a root cause failure for the Ground-Based Interceptors (GBI) 34-44, and the Flight Test Interceptors required to support the Return to Intercept program (CTV-01 and FTG-06b). Root cause of the FTG-06a failure has been determined and failure resolution development is ongoing for the CE-II GBI configuration. Flight Test Interceptor manufacturing continues and once the corrective action is verified through ground testing and a controlled test vehicle flight (CTV-01), operational</p>	<p>352.613</p> <p>0</p>	<p>446.679</p> <p>5</p>	<p>295.242</p> <p>5</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<p>interceptor manufacturing and delivery will resume. The GBI program supports defense of the Homeland by manufacturing both flight test and operational interceptors (GBIs 34-44) to both demonstrate interceptor performance as part of the Return to Intercept (RTI) program, and then to replace older fielded configuration GBIs to ensure a total of 30 operational assets are available to the Warfighter. To aid in the accomplishment of this mission, the GBI program provides developmental assets through conversion of older fielded GBIs to Flight Test configuration to support the Integrated Master Test Plan. Ground Based Interceptor software builds will also be initiated to implement Single Shot Probability of Kill improvements and booster software changes to accommodate the Fleet Avionics Upgrade / Obsolescence Program.</p> <ul style="list-style-type: none"> -Completed three limited upgrades of CE-I fielded GBIs and initiated 2 additional limited upgrades -Completed testing of Exoatmospheric Kill Vehicle (EKV) software version 9.4 (CE-II) and initiated software version 22.1 (CE-I) -Continued acquisition of eleven Interceptors (GBIs 34-44) to support both operations and testing for non-flight failure related assemblies, components, and boosters -Continued acquisition of booster and EKV components including motor sets for five additional new Interceptors (GBIs 48-52), mitigating manufacturing restart costs of the select group of warm GBI 3rd and 4th tier suppliers -Initiated flight test rotation plan of older fielded GBI to Flight Test configuration to support Integrated Master Test Plan requirements and Stockpile Reliability Program -Continued GBI Stockpile Reliability Program which includes testing of available GBI components to collect reliability and aging data and assessment of operational fleet and flight test rotation upgrade requirements -Completed FTG-06a Failure Review Board (FRB) and published report -Initiated Return-to-Intercept (RTI) component lab testing (failure resolution testing and risk reduction testing) with the completion of 6 different test series and initiation of one other test series -Initiated repurposing of three operational GBIs to support GMD RTI series: GM CTV-01, FTG-06b, and FTG-06b Backup -Initiated RTI EKV hardware mitigation / redesign efforts for Isolated Inertial Measurement Unit (IMU) Assembly. -Initiated EKV Divert and Attitude Control System (DACS) Alternate Thruster design <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> -Continue GBI Fleet Upgrade program to enhance reliability of the fielded GMD system and to support the Stockpile Reliability Program by providing hardware for data collection events, such as Aging & Surveillance testing -Continue acquisition of Interceptors (GBIs 34-44) (subject to FTG-06a Failure Review Board (FRB) findings and resolution) to support both operations and testing -Complete the repurposing of two operational Ground Based Interceptors (GBIs) to support GMD Return-to-Intercept (RTI) series: GM Controlled Vehicle Test-01 (CTV-01) and Flight Test Ground Based Interceptor-06b (FTB-06b) -Continue the repurposing of one operational GBI to support GMD RTI series: FTG-06b Flight Test Back-up 			
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<ul style="list-style-type: none"> -Continue flight test rotation program of older fielded GBIs to support Integrated Master Test Plan requirements, Stockpile Reliability Program, and to increase operational reliability -Complete RTI component lab testing (failure resolution testing and risk reduction testing): complete Test E (Chamber Hot Fire) test series -Complete RTI Exoatmospheric Kill Vehicle (EKV) software mitigation / redesign efforts and Inertial Measurement Unit (IMU) firmware resolution / validation -Initiate incorporation of RTI resolution findings into GBI fleet -Initiate Upgrade Kit and Limited Life Item Hardware purchases that will be used to upgrade the fielded GBIs to support flight test rotations of older GBIs as part of the program plan to sustain the GBI to FY 2032 and beyond -Complete purchase of booster and EKV components including motor sets for five Interceptors (GBIs 48-52), mitigating manufacturing restart costs of the select group of warm GBI 3rd and 4th tier suppliers -Initiate acquisition of 5 Interceptors (GBIs 48-52) that are supported by the completion of the booster and EKV component purchases -Continue GBI Stockpile Reliability Program which includes testing of available GBI components to collect reliability and aging data and assessment of operational fleet upgrade requirements -Continue EKV Divert and Attitude Control System Alternate Thruster design <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Continue acquisition of Interceptors (GBIs 34-44) (subject to FTG-06a Failure Review Board (FRB) findings and resolution) to support both operations and testing -Complete the repurposing of one operational GBI to support GMD RTI series: FTG-06b Backup -Continue incorporation of RTI resolution findings into GBI fleet -Continue GBI Software Builds and Sustainment to support operational and flight test objectives -Continue GBI Stockpile Reliability Program which includes testing of available GBI components to collect reliability and aging data and assessment of operational fleet upgrade requirements -Continue acquisition of five Interceptors (GBIs 48-52) that are supported by the completion of the booster and Exoatmospheric Vehicle component purchases -Continue EKV Divert and Attitude Control System (DACS) Alternate Thruster design -Initiate acquisition of five additional Interceptors (GBIs 53-57) to support enhanced GMD testing 			
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
-Variance Analysis: FY 2011 budget increase to FY 2012 position due to RTI activities for Flight Test Ground Based Interceptor-06a (FTG-06a) hardware/software design resolutions and qualification in ground and flight test events. FY 2012 budget decrease to FY 2013 position due to completion of Return to Intercept (RTI) activities.				
Title: Ground Systems		205.790	73.301	69.975
		Articles: 1	0	0
Description: See Description Below				
FY 2011 Accomplishments: The Ground-Based Midcourse Defense (GMD) Ground Systems enable control and operation of the GMD Element as part of the Ballistic Missile Defense System (BMDS). Ground Systems consists of the GMD Fire Control, Test Exerciser, and External Systems Interface (ESI), GMD Communications Network, In-Flight Interceptor Communications System (IFICS) Data Terminal (IDT), Launch Site Components (LSC) (silos, silo interface vaults (SIVs)), and Launch Support Systems (LSS) (Command Launch Equipment (CLE) and Launch Support Equipment (LSE)).				
-Fielded Ground Systems suite 6B1.5 to integrate additional forward based Army/Navy Transportable Radar Surveillance radar using the Ballistic Missile Defense System Command and Control, Battle Management, and Communications (C2BMC) with the GMD Ground System				
-Delivered Formal Qualification Tested (FQT) Ground Systems suite 6B2 for GMD to provide C2BMC essential elements of information for situational awareness, dynamic positioning capability for the In Flight Interceptor Communications System Data Terminal on the Sea Based X-Band Radar platform, Sea Based X-Band Radar version 3 interoperability, Warfighter requested changes, use of data provided by Army Navy/Transportable Radar Surveillance radars with the GMD Ground Systems, and supports activation of Fort Greely, Alaska Missile Field-2				
-Continued construction and integration of a new fourteen silo Missile Field-2 and Missile Field-2 Mechanical Electrical Building (MEB) to provide the Warfighter with an operationally configured Missile Field capability at Fort Greely, Alaska				
-Continued the Missile Defense Complex Communications infrastructure repairs at Fort Greely, Alaska to meet current DoD / Army operational standards				
-Completed construction of the Fort Greely Power Plant to improve operational reliability and survivability				
-Initiated design and installation of a second Fire Direction Center (FDC) Node at Fort Greely, Alaska to provide the Warfighter with continuous dual-node operations				
FY 2012 Plans:				
-Initiate Ground Systems suite 6B3 to utilize Near Term Discrimination (NTD) data, integrate the Clear, AK UEWR and Ft. Drum, NY IDT assets, support Space-Based Infrared System interface changes, incorporate evolving threats, Warfighter requirements, and BMDS element interoperability associated changes				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Deliver the new fourteen silo Missile Field-2 (MF-2) and Missile Field-2 Mechanical Electrical Building (MEB) to provide the Warfighter with a reliable and hardened Missile Field capability at Fort Greely, Alaska</p> <p>-Deliver the second Fire Direction Center (FDC) Node at Fort Greely, Alaska to provide the Warfighter with continuous dual-node operations</p> <p>-Initiate preliminary design in preparation for construction of an In Flight Interceptor Communications System (IFICS) Data Terminal (IDT) for Ft Drum, New York increased defensive capability against emerging threats</p> <p>-Initiate design efforts for storage state of MF-1 once MF-2 is complete and operational</p> <p>-Complete the deployment of the Fort Greely Power Plant</p> <p>FY 2013 Plans:</p> <p>-Continue Ground Systems suite 6B3 to utilize Near-Term Discrimination (NTD) data, integrate the Clear, AK UEWR and Ft. Drum, NY IDT assets, support Space-Based Infrared System interface changes, incorporate evolving threats, Warfighter requirements, and BMDS element interoperability associated changes</p> <p>-Complete the preliminary design and initiate construction efforts for an In-Flight Interceptor Communications System (IFICS) Data Terminal (IDT) at Fort Drum that will increase system performance in specific engagement scenarios</p> <p>-Continue storage state efforts for the Fort Greely, AK Missile Field-1 (MF-1)</p> <p> </p> <p>-Variance Analysis: FY 2011 budget decrease to FY 2012 position due to completion of: Missile Field 2, Fort Greely Power Plant, and Ground Systems suite 6B1.5 and 6B2. FY 2012 budget decrease to FY 2013 N/A.</p>				
<p>Title: Sustainment</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: The Operations and Sustainment mission provides for the operations, maintenance, repair, training, sustaining engineering (including stock pile reliability and logistics) of the Ground-Based Midcourse Defense (GMD) System. In addition to the above, provide base operations support for Ground-Based Midcourse Defense facilities in Colorado Springs, Colorado; Vandenberg Air Force Base, California; Fort Greely, Alaska; and Eareckson Air Station, Alaska. Execution of the Operations and Sustainment mission will be achieved through a combination of directed activities under the competitively awarded Performance Based Logistics contract (operations, maintenance, repair and training) and through direct placement of funding to mission essential activities (stockpile reliability, logistics, base operations costs and Government Furnished Equipment).</p>		182.184 0	198.138 0	- 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Provided Ground Based Midcourse Defense (GMD) Element operations and sustainment for Primary Mission Equipment (PME), support equipment, and operational facilities at all GMD sites</p> <p>-Continued utilizing logistics repair analysis to optimize spares replenishment, and performance metrics to improve maintenance processes and procedures to improve weapon system reliability.</p> <p>-Continued on-site sustaining engineering, ensuring logistics analysis is incorporated in technical data products</p> <p>-Continued Stockpile Reliability Program (SRP) and component aging testing to understand the health of the deployed assets</p> <p>-Continued to train, educate, qualify and certify the Warfighter as well as develop and field technical manuals to maintain crew proficiency and support architecture baseline changes</p> <p>-Continued Base Operations Support at all GMD sites in accordance with host installation support agreements</p> <p>FY 2012 Plans:</p> <p>-Continue to provide Ground-Based Midcourse Defense (GMD) element operations and sustainment for Primary Mission Equipment (PME), support equipment, and operational facilities at all Ground-based Midcourse Defense sites</p> <p>-Continue to support Base Operations at all Ground-Based Midcourse Defense Sites in accordance with host installation support agreements</p> <p>-Continue utilizing logistics repair analysis to optimize spares replenishment, and performance metrics to improve maintenance processes and procedures to improve weapon system reliability</p> <p>-Continue on-site sustaining engineering, for real time trouble shooting and ensuring logistics analysis is incorporated in technical data products</p> <p>-Continue to collect Reliability, Availability, Maintainability and Test (RAM-T) data and calculate and track performance metrics on the Operational System</p> <p>-Continue to perform failure analysis and resolve systemic issues to reduce sustainment costs</p> <p>-Continue to identify and prioritize obsolescence issues for resolution to support Ground Systems Obsolescence Upgrade Program</p> <p>-Continue to provide training to qualify the Warfighter to operate the GMD Weapon System, as well as educating other staff members on the system</p> <p>-Continue to develop and field technical manuals to maintain crew proficiency and support architecture baseline changes</p> <p> </p> <p>-Variance Analysis: FY 2011 budget increase to FY 2012 N/A.</p> <p>FY 2013 Plans:</p>				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				
Starting in FY 2013, the Sustainment accomplishment will move into Project MX08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.				FY 2011
				FY 2012
				FY 2013
Title: BMDS Level Testing				
				Articles:
				88.233
				102.572
				-
				0
				0
				0
Description: See Description Below				
FY 2011 Accomplishments:				
Ground-Based Midcourse Defense (GMD) executes an enhanced test program that includes expanding our flight and ground test programs to demonstrate our Initial Homeland Defense and Enhanced Homeland Defense capabilities against long-range threats. The GMD elements of the Ballistic Missile Defense System Integrated Master Test Plan are intended to demonstrate the integrated missile defense capabilities under development and ensure the capabilities transferred to the Warfighter are operationally effective, suitable, and survivable.				
-Conducted Flight Test Ground-Based Midcourse Defense 06a (FTG-06a), a 3-stage intercept of Intermediate Range Ballistic Missile (IRBM) target based on results from the FTG-06 3-stage intercept engagement with associated objects, using a Ground Based Interceptor (GBI) launch from Vandenberg Air Force Base, California against a target launched from Reagan Test Site (RTS) but did not achieve planned intercept.				
-Verified corrective actions from FTG-06 failure				
-Collected Critical Engagement Conditions / Empirical Measurement Event data that validates Models and Simulations estimates on interceptor performance in medium closing velocity engagements and EKV performance with multiple competing objects				
-Initiated the Flight Test Ground Based Interceptor-06a (FTG-06a) failure response, which includes the conduct of a non-intercept test in FY 2012, to verify FTG-06a corrective actions. The non-intercept test will be Controlled Test Vehicle-01 (CTV-01), a 3-stage Capability Enhancement II (CE-II) non-intercept test of the EKV, using a GBI launch from Vandenberg Air Force Base, California. There is no target planned for this test				
-Demonstrated increased sensor coverage during Ground Test Integrated-04 (GTI-04) with the addition of the Thule Upgraded Early Warning Radar (UEWR) Hardware in the Loop (HWIL) capability				
-Continued to support execution of Ballistic Missile Defense System (BMDS) Ground Test-04 test campaign to assess BMDS capabilities with integration of additional BMDS sensors (e.g., additional AN TPY-2 and Thule)				
-Initiated planning for Flight Test Ground-Based Midcourse Defense-06b (FTG-06b), a 3-stage intercept engagement with associated objects, using a Ground Based Interceptor (GBI) launch from Vandenberg Air Force Base against a target launched from Reagan Test Site (RTS)				
FY 2012 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Continue to support execution of Ballistic Missile Defense System (BMDS) Ground Test-04 test campaign to assess BMDS capabilities with integration of additional BMDS sensors</p> <p>-Conduct non-intercept flight test (GM CTV-01), to convincingly demonstrate corrective actions from flight test FTG-06a as part of the GMD Return to Intercept (RTI) Plan, a 3-stage Capability Enhancement II (CEII) non-intercept test of the Exoatmospheric Kill Vehicle (EKV), using a Ground-Based Interceptor(GBI) launch from Vandenberg Air Force Base, California. There is no target planned for this test.</p> <p>-Verify FTG-06a corrective actions</p> <p>-Collect critical Engagement Conditions / Empirical Measurement Event data that validates Models and Simulations estimates on EKV discrimination performance</p> <p>-Demonstrate upgrades on the EKV as a risk reduction in preparation for GMD intercept flight test FTG-06b</p> <p>-Conduct Flight Test Ground-Based Midcourse Defense-06b (FTG-06b) as early as FY 2012 but not later than 1QFY13, a 3-stage Capability Enhancement II (CEII) intercept engagement with associated objects, using a GBI launch from Vandenberg Air Force Base, California against a target launched from RTS</p> <p>-Collect critical Engagement Conditions / Empirical Measurement Event data that validates Models and Simulations estimates on booster, avionics and divert systems performance over time and EKV discrimination performance on new threat scene with more and different types of multiple competing objects</p> <p> </p> <p>-Variance Analysis: FY 2011 budget increase to FY 2012 position due to support of RTI program requirements through the addition of a Control Test Vehicle-01 (CTV-01) flight test and Flight Test Ground-Based Interceptor-06b (FTG-06b).</p> <p>FY 2013 Plans: Starting in FY 2013, the BMDS Level Testing accomplishment will move from Project MD08 into Project MT08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.</p>				
Title: Element Engineering and Integration		157.675	133.721	85.466
		Articles: 0	0	0
Description: See Description Below				
FY 2011 Accomplishments: Ground-Based Midcourse Defense (GMD) Element Engineering and Integration (EE&I) provides systems engineering and integration essential for the development and fielding of the Ground-Based Midcourse Defense hardware and software. Included in this effort are concept definition, requirements and interfaces, system design, integration, test planning and verification efforts.				

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>Key products are development and maintenance of the technical baseline and critical engineering processes for implementation and delivery of an integrated Ground-Based Midcourse Defense element capability.</p> <ul style="list-style-type: none"> -Continued requirements development, engineering analysis, capability integration, and performance verification for Ground-Based Midcourse Defense (GMD) development and Ballistic Missile Defense System (BMDS) integration, including GMD compliance with the BMDS Specification, BMDS Description Document, and Master Integration Plan -Continued Technical Performance Measurement program to assess the current GMD capabilities against the evolving BMDS threat -Continued modeling and simulation development and integration to assess component and system performance in support of annual Technical Assessments and Performance Assessments -Continued modeling and simulation verification and validation to establish high confidence in Warfighter assessments -Conducted GMD Build D Element Requirements Review for Ground Systems 6B3, Exoatmospheric Kill Vehicle (EKV) software version 10 Capability Enhancement-II (CE-II) and version 23 Capability Enhancement-I (CE-I) software development for successful integration and synchronization of future BMDS capabilities -Continued design, planning, pre- and post-flight test analysis for current and future flight and ground tests to assess system performance and implement a rigorous test plan for verifying successful operation of capabilities delivered to the Warfighter -Utilized EKV Hardware-In-The-Loop 10-foot vacuum space chamber (10V Chamber) for Pre-Mission Testing and Post Flight Reconstruction in support of Return-To-Intercept (RTI) -Continued to define requirements on the Ground Systems suite 6B2 of products for GMD to provide Command and Control, Battle Management and Communications essential elements of information for situational awareness, dynamic positioning capability for the In-Flight Interceptor Communications System Data Terminal on the Sea Based X-Band Radar platform, Sea Based X-Band Radar version 3 interoperability, Warfighter requested changes, use of data provided by Army Navy/Transportable Radar Surveillance radars with the GMD Ground Systems, and support activation of Fort Greely, Alaska Missile Field-2. <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> -Continue requirements development, engineering analysis, capability integration, and performance verification for Ground-Based Midcourse Defense development and Ballistic Missile Defense System integration, including GMD compliance with the BMD System Specification, BMD System Description Document, and Master Integration Plan -Continue Technical Performance Measurement program to assess the current GMD capabilities against the evolving BMDS threat -Continue modeling and simulation development and integration to assess component and system performance in support of annual Technical Assessments and Performance Assessments -Continue modeling and simulation verification and validation to establish high confidence in Warfighter assessments 				

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Support Component Requirements Reviews and Preliminary Design Reviews for the Ground-based Missile Defense contribution to the Ballistic Missile Defense Systems Enhanced Homeland Defense including the Ground System Fire Control and Communications software development and Ground Based Interceptor (GBI) hardware (e.g., Fleet Avionics Upgrade / Obsolescence Program) and software capabilities development to ensure delivery of a successful capability</p> <p>-Continue design, planning, pre- and post-flight test analysis for current and future flight and ground tests to assess system performance and implement a rigorous test plan for verifying successful operation of capabilities delivered to the Warfighter</p> <p>-Utilize Exoatmospheric Kill Vehicle Hardware-In-The-Loop 10-foot vacuum space chamber (10V Chamber) for Pre-Mission Testing (PMT) and Post Flight Reconstruction (PFR) in support of Return to Intercept</p> <p>-Conduct Exoatmospheric Kill Vehicle (EKV) Capability Enhancement II (CE-II) performance and flight environment analysis from Controlled Test Vehicle (CTV-1) flight test to assess EKV mitigations</p> <p>FY 2013 Plans:</p> <p>-Continue requirements development, engineering analysis, capability integration, and performance verification for GMD development and BMDS integration, including GMD compliance with the BMDS Specification, BMDS Description Document, and Master Integration Plan</p> <p>-Continue Technical Performance Measurement program to assess the current GMD capabilities against the evolving BMDS threat</p> <p>-Continue modeling and simulation development and integration to assess component and system performance in support of annual Technical Assessments and Performance Assessments</p> <p>-Continue modeling and simulation verification and validation to establish high confidence in Warfighter assessments</p> <p>-Support Component Requirements Reviews and Preliminary Design Reviews for the GMD contribution to the BMDS Enhanced Homeland Defense including the Ground System Fire Control and Communications software development and GBI hardware (e.g., Fleet Avionics Upgrade / Obsolescence Program) and software capabilities development to ensure delivery of a successful capability</p> <p>-Continue design, planning, pre- and post-flight test analysis for current and future flight and ground tests to assess system performance and implement a rigorous test plan for verifying successful operation of capabilities delivered to the Warfighter</p> <p>-Utilize EKV Hardware-In-The-Loop 10-foot vacuum space chamber (10V Chamber) for Pre-Mission Testing and Post Flight Reconstruction in accordance with the Integrated Master Test Plan to reduce execution risks from additional data and gaining confidence that capabilities performed as expected</p>				

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
-Variance Analysis: FY 2011 budget decrease to FY 2012 position due to focus on GBI RTI and completion of systems engineering and integration activities on legacy contracts. FY 2012 budget decrease to FY 2013 position due to systems engineering and integration activities moving to MX08 and MT08 from MD08.				
Title: Program Integration and Control		207.772	156.815	118.939
Articles:		0	0	0
Description: See Description Below				
FY 2011 Accomplishments: Program Integration and Control provides for the prime contractor and government management of the Ground-Based Midcourse Defense (GMD) program. Included in this effort is program and business management, program administration, technical and testing oversight, verification of hardware and software development, quality / safety / mission assurance, integrated logistic support, and government manpower and infrastructure to develop, test and sustain the GMD system and components. -Provided technical and business management support activities, financial management, cost and schedule performance analysis, cost estimation and analysis, configuration management and integration activities, to provide the Program Director with critical program status and decision quality data -Provided contractor program management, subcontract management, quality assurance, verification of hardware and software development, and test oversight to identify variances and initiate corrective actions to mitigate cost, schedule, or performance impacts -Ensured GMD program compliance with internal and external direction, policies, and regulations to deliver capability critical within a consistent and disciplined process -Conducted internal Baseline Execution Reviews to measure program progress against the six Missile Defense Agency approved baselines -Continued a Mission Assurance and Manufacturing Engineering Program to include Quality, Configuration Management, Manufacturing, Engineering, and Safety in all phases of the system life cycle, throughout the supply chain, and at all levels of assembly emphasizing high yield rates which minimize test and rework costs -Provided Quality Safety and Mission Assurance operations to ensure compliance with Agency requirements for design, test, manufacturing, quality, safety and reliability to ensure high quality products are delivered to the Warfighter				
FY 2012 Plans: -Provide technical and business management support activities, financial management, cost and schedule performance analysis cost estimation and analysis, configuration management and integration activities -Provide contractor program management, subcontract management, quality assurance, verification of hardware and software development, and technical and testing oversight				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Ensure GMD program compliance with internal and external direction, policies, and regulations -Conduct Internal Baseline Reviews that align with the six Missile Defense Agency (MDA) approved baselines -Continue a Mission Assurance and Manufacturing Engineering Program to include Quality, Configuration Management, Manufacturing, Engineering, and Safety -Provide Quality Safety and Mission Assurance (QSMA) operations to ensure compliance with Agency requirements for design, test, manufacturing, quality, safety and reliability to ensure high quality products are delivered to the Warfighter <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Provide technical and business management support activities, financial management, cost and schedule performance analysis, cost estimation and analysis, configuration management and integration activities, to provide the Program Director with critical program status and decision quality data -Provide contractor program management, subcontract management, quality assurance, verification of hardware and software development, and test oversight to identify variances and initiate corrective actions to mitigate cost, schedule, or performance impacts -Ensure Ground-Based Midcourse Defense program compliance with internal and external direction, policies, and regulations to deliver capability critical within a consistent and disciplined process -Conduct internal Baseline Execution Reviews to measure program progress against the six Missile Defense Agency approved baselines -Continue a Mission Assurance and Manufacturing Engineering Program to include Quality, Configuration Management, Manufacturing, Engineering, and Safety in all phases of the system life cycle, throughout the supply chain, and at all levels of assembly emphasizing high yield rates which minimize test and rework costs -Provide Quality Safety and Mission Assurance (QSMA) operations to ensure compliance with Agency requirements for design, test, manufacturing, quality, safety and reliability to ensure high quality products are delivered to the Warfighter <p>-Variance Analysis: FY 2011 budget decrease to FY 2012 position due to completion of program management activities on legacy contracts and transition to lower rate MDA contractor support services. FY 2012 budget decrease to FY 2013 position due to program management activities moving to MT08 and MX08 from MD08 and for Global Deployment support.</p>				
Accomplishments/Planned Programs Subtotals		1,194.267	1,111.226	569.622

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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603888C: <i>Ballistic Missile</i> <i>Defense Test & Targets</i>	999.068	85.569	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1,084.637

D. Acquisition Strategy

The Ground-Based Midcourse Defense (GMD) program will continue to follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, development, and evolutionary acquisition through incremental development. The Agency acquisition strategy ensures that the GMD components are upgraded to improve both system performance and interceptor reliability in order to retain the proven GMD contribution to the Integrated Ballistic Missile Defense System. This acquisition approach minimizes the risk of obsolescence, provides opportunities for incremental capability improvements, and allows decision makers to make informed trades between cost, schedule, and performance while exploring improved operational and technological capabilities.

Ground-Based Midcourse Defense (GMD) awarded a competitive Development and Sustainment Contract (DSC) on December 30, 2011. This contract continues development; fielding; test; systems engineering, integration, and configuration management; equipment manufacturing and upgrade; training; operations and sustainment of the GMD system and associated support facilities. The DSC emphasizes the application of performance-based tenets to provide timely high quality support of the core GMD system while reducing life cycle and long-term ownership costs. GMDs DSC acquisition strategy for transition of the legacy content into the DSC provides uninterrupted field operations; development of both Ground Systems and Interceptor products, including manufacturing additional interceptors to support both operations and testing; and the requirement to demonstrate war-fighting capability through a rigorous ground and flight test program.

E. Performance Metrics

NA

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground Based Interceptor Ground Based Interceptors 34-44	SS/CPAF	Boeing AL/AK/AZ:CA/ CO/TX/VA	429.644	146.702		116.956		-		116.956	Continuing	Continuing	Continuing
Ground Based Interceptor Ground Based Interceptors Upgrades & Operational Spares	C/CPIF	Boeing AL/AK/AZ:CA/ CO/TX/VA	95.159	82.162	Dec 2011	59.784		-		59.784	Continuing	Continuing	Continuing
Ground Based Interceptor Ground Based Interceptors Supplier Restart / Requalification	SS/CPAF	Boeing AL/AK/AZ:CA/ CO/TX/VA	90.029	18.765		-		-		-	0.000	108.794	0.000
Ground Based Interceptor Ground Based Interceptors Software Maintenance & Updates	C/CPIF	Boeing AL/AK/AZ:CA/ CO/TX/VA	9.590	10.074	Dec 2011	11.550		-		11.550	Continuing	Continuing	Continuing
Ground Based Interceptor Ground Based Interceptors New Interceptor Development	C/CPIF	Boeing AL/AK/AZ:CA/ CO/TX/VA	39.114	21.007	Dec 2011	59.789		-		59.789	Continuing	Continuing	Continuing
Ground Based Interceptor Ground Based Interceptors Rotations for Ballistic Missile Defense System Level Testing	C/CPIF	Boeing AL/AK/AZ:CA/ CO/TX/VA	146.677	67.170	Dec 2011	23.095		-		23.095	Continuing	Continuing	Continuing
Ground Based Interceptor Stockpile Reliability Program	C/CPIF	Boeing AL/AK/AZ:CA/ CO/TX/VA	4.364	12.381	Dec 2011	12.607		-		12.607	Continuing	Continuing	Continuing
Ground Based Interceptor Ground Based Interceptors 48-57	C/CPIF	Boeing AL/AK/AZ:CA/ CO/TX/VA	-	2.777	Dec 2011	11.461		-		11.461	Continuing	Continuing	Continuing
Ground Based Interceptor Return to Intercept Program	SS/CPAF	Boeing AL/AK/AZ:CA/ CO/TX/VA	27.317	85.641		-		-		-	0.000	112.958	0.000
Ground Systems Long Haul Communications Transfer to Defense Information Systems Agency	MIPR	MDA DISA:AL/AK/AZ/ CA/CO/TX/VA	32.967	5.585		-		-		-	0.000	38.552	0.000

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground Systems Ground Systems Engineering Services	C/CPIF	Boeing AL/AK/AZ:CA/CO/VA	39.378	-	Dec 2011	1.359		-		1.359	Continuing	Continuing	Continuing
Ground Systems Ground Systems Software Development 6B.3	C/CPIF	Boeing AL/AK/AZ:CA/CO/VA	27.804	32.823	Dec 2011	33.183		-		33.183	Continuing	Continuing	Continuing
Ground Systems Fort Drum IDT	C/CPIF	Boeing AL:CO/NY/VA	-	4.100	Dec 2011	7.600		-		7.600	Continuing	Continuing	Continuing
Ground Systems Ground Systems Information Assurance	C/CPIF	Boeing AL/AK/AZ:CA/CO/VA	-	14.291	Dec 2011	7.714		-		7.714	Continuing	Continuing	Continuing
Ground Systems Ground Systems FAU/OP Hardware Development	C/CPIF	Boeing AL/AK/AZ:CA/CO/VA	-	-	Dec 2011	15.964		-		15.964	Continuing	Continuing	Continuing
Ground Systems Storage State MF-1	C/CPIF	Boeing AL/AK/AZ:CA/CO	-	-	Dec 2011	4.155		-		4.155	Continuing	Continuing	Continuing
Ground Systems FGA Future Power Plant Integration	SS/CPAF	Boeing AL/AK/AZ:CA/CO/VA	-	16.502		-		-		-	0.000	16.502	0.000
Subtotal			942.043	519.980		365.217		-		365.217			

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sustainment Maintenance of Primary System	C/CPIF	Boeing AL/AK/AZ:CA	340.137	71.028	Dec 2011	-		-		-	0.000	411.165	0.000
Sustainment Sustaining Support Services	C/CPIF	Boeing AL/AK/AZ:CA	309.149	47.379	Dec 2011	-		-		-	0.000	356.528	0.000
Sustainment Operations & Sustainment Repair and Maintenance Personnel	C/CPIF	Boeing AL/AK/AZ:CA	54.333	12.353	Dec 2011	-		-		-	0.000	66.686	0.000

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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sustainment RAM-T	MIPR	Naval Surface Warfare Center:IN	51.047	3.780		-		-		-	0.000	54.827	0.000
Sustainment Fort Greely, Alaska Operations (Gov't Leases & Services)	MIPR	Army:Ft. Greely, AK	38.729	19.935		-		-		-	0.000	58.664	0.000
Sustainment Vandenberg Air Force Base Operations (Gov't Leases & Services)	MIPR	Air Force:Vandenberg, CA	4.500	3.925		-		-		-	0.000	8.425	0.000
Sustainment Colorado Springs Operations (Gov't Leases & Services)	MIPR	Air Force:COS, CO	8.200	3.920		-		-		-	0.000	12.120	0.000
Sustainment Government Furnished Equipment & Services (GFX)	MIPR	Military Traffic Management Command:Various AL/AK/AZ/CA/CO/TX/VA	33.797	10.684		-		-		-	0.000	44.481	0.000
Sustainment Storage State Missile Field 1 Planning	C/CPIF	Boeing AL/AK/AZ:CA/CO/VA	-	0.200		-		-		-	Continuing	Continuing	Continuing
Sustainment Information Assurance	C/CPIF	Boeing AL/AK/AZ:CA/CO/VA	20.996	4.064	Dec 2011	-		-		-	0.000	25.060	0.000
Sustainment Warfighter Training	C/FPIF	Boeing AL/AK:CA/CO/VA	-	20.870	Dec 2011	-		-		-	0.000	20.870	0.000
Element Engineering and Integration Ballistic Missile Defense System Hardware-In-The-Loop	C/CPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	68.402	32.845		25.748		-		25.748	Continuing	Continuing	Continuing
Element Engineering and Integration Modeling and Simulation	C/CPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	88.342	43.750	Dec 2011	30.740		-		30.740	Continuing	Continuing	Continuing
Element Engineering and Integration System Engineering and Integration	C/CPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	189.728	28.886	Dec 2011	15.764		-		15.764	Continuing	Continuing	Continuing
Element Engineering and Integration EKV HWIL Tests in Space Chamber	C/CPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	53.224	28.240	Dec 2011	13.214		-		13.214	Continuing	Continuing	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Integration and Control Global Deployment Support	MIPR	MDA:AL	53.847	22.218		-		-		-	0.000	76.065	0.000
Program Integration and Control Prime Program Management	SS/FPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	221.220	39.438	Dec 2011	17.024		-		17.024	Continuing	Continuing	Continuing
Program Integration and Control Govt Civilian Salaries	MIPR	MDA:AL/VA	73.750	31.616		39.083		-		39.083	Continuing	Continuing	Continuing
Program Integration and Control FFRDC Support	MIPR	MIT/LL:AL/VA/CO	16.742	3.949		2.107		-		2.107	Continuing	Continuing	Continuing
Program Integration and Control Contract Support Services	C/CPFF	Sparta, BCF, Quantech, Paradigm:AL/AK/CA/CO/VA	194.729	35.808		38.619		-		38.619	Continuing	Continuing	Continuing
Program Integration and Control Other Govt Agencies	MIPR	Various:AL/VA/FL/CO	15.300	5.034		3.154		-		3.154	Continuing	Continuing	Continuing
Program Integration and Control Travel	MIPR	MDA:AL/VA	-	1.913		1.346		-		1.346	Continuing	Continuing	Continuing
Program Integration and Control Misc Software/BB/ Change of Station	MIPR	MDA:AL/CA/VA/CO/AK	-	0.550		0.931		-		0.931	Continuing	Continuing	Continuing
Program Integration and Control Small Business Innovation Research (SBIR)	MIPR	MDA:AL/VA	-	15.863		16.675		-		16.675	Continuing	Continuing	Continuing
Program Integration and Control Safety and Quality	MIPR	MDA:AL/AK/CA/VA	-	0.426		-		-		-	Continuing	Continuing	Continuing
Subtotal			1,836.172	488.674		204.405		-		204.405			

Remarks
Starting in FY 2013, the Sustainment accomplishment will move from Project MD08 into Project MX08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
BMDS Level Testing Ground Test-04 Campaign (Focused-Integrated-Distributed)	C/CPAF	Boeing AL/AK/AZ:CA/CO/TX/VA	15.640	11.013	Dec 2011	-		-		-	0.000	26.653	0.000
BMDS Level Testing Flight Test Range Costs	MIPR	VAFB, CA/RTS, Kwaj:PMRF, HI	24.486	6.400		-		-		-	0.000	30.886	0.000
BMDS Level Testing Flight Test Planning, Analysis & Execution	C/CPAF	Boeing AL/AK/AZ:CA/CO/TX/VA	137.872	53.478	Dec 2011	-		-		-	0.000	191.350	0.000
BMDS Level Testing Test Infrastructure & Support	C/CPAF	Boeing AL/AK/AZ:CA/CO/TX/VA	86.629	16.872	Dec 2011	-		-		-	0.000	103.501	0.000
BMDS Level Testing Flight Test Silo Turnaround	C/CPAF	Boeing AL/AK/AZ:CA/CO/TX/VA	7.420	6.586	Dec 2011	-		-		-	0.000	14.006	0.000
BMDS Level Testing EKV HWIL Flight Tests in Space Chamber	C/CPAF	Boeing AL/AK/AZ:CA/CO/TX/VA	-	8.223	Dec 2011	-		-		-	0.000	8.223	0.000
Subtotal			272.047	102.572		-		-		-	0.000	374.619	0.000

Remarks
Starting in FY 2013, the BMDS Level Testing accomplishment will move into Project MT08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3,050.262	1,111.226	569.622	-	569.622			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks NA								
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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FTG-06a (Ground Based Interceptor Asset)	1	2011	1	2011
FTG-06a (GM Intercept Flight Test)	1	2011	1	2011
Ground Systems 6B2 (FQT)	2	2011	2	2011
GTD-04b (BMDS Distributed Ground Test)	2	2011	2	2011
2nd FGA GMD Fire Control Node	1	2012	1	2012
GTX-04e (BMDS Focused Ground Test)	2	2012	2	2012
Fort Greely, Alaska Missile Field - 2	1	2011	2	2012
Ground Based Interceptor CTV-01 (GBI 42)	3	2012	3	2012
GM CTV-01 (GM Non-Intercept Flight Test)	3	2012	3	2012
Ground Based Interceptor FTG-06b (GBI 43)	4	2012	4	2012
FTG-06b (GM Intercept Flight Test)	4	2012	4	2012
Ground Based Interceptor FTG-06b Back-up (GBI 44)	1	2013	1	2013
Fort Greely, Alaska Power Plant	1	2011	3	2012
Ground-based Midcourse Defense Ground Test-04 test campaign	2	2011	4	2013
Ground Based Interceptors (34-44)	1	2011	2	2014
Ground Based Interceptor 34	3	2013	3	2013
Ground Based Interceptor 35	3	2013	3	2013
Ground Systems 6B3 (FQT)	4	2013	4	2013
Ground Based Interceptor 36	4	2013	4	2013
Ground Based Interceptor 37	4	2013	4	2013
Ground Based Interceptor 38	1	2014	1	2014
Ground Based Interceptor 39	2	2014	2	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD08: <i>Ground Based Midcourse</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
Ground Based Interceptor 40	2	2014	2	2014
Ground Based Interceptor 41	3	2014	3	2014
Fort Drum, NY IDT	2	2012	1	2015
Ground Based Interceptors (48-57)	1	2012	4	2017
Ground Based Interceptor (48)	2	2016	2	2016
Ground Based Interceptor (49)	3	2016	3	2016
Ground Based Interceptors Rotation and Upgrades	1	2011	4	2017
Ground Based Interceptor (50)	4	2016	4	2016
Ground Based Interceptor (51)	4	2016	4	2016
Ground Based Interceptor (52)	1	2017	1	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>				PROJECT MT08: <i>Ground Based Midcourse Test</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MT08: <i>Ground Based Midcourse Test</i>	-	-	80.381	-	80.381	131.304	132.956	142.869	143.823	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

Starting in FY 2013, the Ballistic Missile Defense System (BMDS) Level Testing accomplishment will move from Project MD08 into Project MT08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment.

Variance Analysis: FY 2012 budget decrease to FY 2013 position due to FTG-06b moving from FY 2013 to FY 2012 and Integration of Exoatmospheric Kill Vehicle Hardware-In-The-Loop and Space Chamber tests moving to Element Engineering and Integration.

A. Mission Description and Budget Item Justification

Ground-Based Midcourse Defense (GMD) executes an enhanced test program that includes expanding our flight and ground test programs to demonstrate our Initial Homeland Defense and Enhanced Homeland Defense capabilities against long-range threats. The GMD elements of the BMDS Integrated Master Test Plan are intended to demonstrate the integrated missile defense capabilities under development and ensure the capabilities transferred to the Warfighter are operationally effective, suitable, and survivable.

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

	FY 2011	FY 2012	FY 2013
Title: Infrastructure	-	-	40.557
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: Currently located in Budget Project MD08 (\$17.720M)			
FY 2012 Plans: Currently located in Budget Project MD08 (\$16.872M)			
FY 2013 Plans: Provides support associated with day to day operations of the Flight and Ground Test programs to include engineering support for Ground Test planning, execution, and post-event reconstruction, as well as flight test execution and post-flight analysis. -Provide test infrastructure and coordination of flight test range support from Vandenberg Air Force Base for all range activities, engineering, operators and GBI transportation			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Provide Ballistic Missile Defense System (BMDS) flight and ground test execution situational awareness through the use of the Missile Defense Agency Integration and Operations Center (MDIOC) housing flight, ground and operational controlled assets of the Ground Based Midcourse Defense system from Colorado Springs, CO</p> <p>-Support pre and post-flight test mission communications to include fulfillment of Government Furnished Equipment/Government Furnished Services requirements and data analysis</p> <p>-Provide System Test Lab support to the engineering, accreditation, operations and maintenance of Flight and Ground Test Programs</p> <p>-Support risk reduction testing through the use of the Prime Consolidated Integration Lab designed for engineering and integration activities leading up to scheduled flight tests and supported by appropriate analysts, environments and equipment</p>				
<p>Title: Flight Test</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Currently located in Budget Project MD08 (\$56.690M)</p> <p>FY 2012 Plans: Currently located in Budget Project MD08 (\$74.687M)</p> <p>FY 2013 Plans: Flight tests demonstrate the capabilities and/or phenomenology that cannot be adequately tested or obtained during ground testing. Flight tests also provide opportunities to test actual hardware and to demonstrate BMDS Element interoperability under operationally realistic conditions.</p> <p>-Complete post-mission analysis for Flight Test Ground-Based Midcourse Defense-06b (FTG-06b), a 3-stage Capability Enhancement II (CEII) intercept engagement with associated objects, using a GBI launch from Vandenberg Air Force Base, California against a target launched from Reagan Test Site (RTS)</p> <p>-Initiate planning for the Flight Test Ground-Based Midcourse Defense-08 (FTG-08), intercept engagement with associated objects, using a GBI launch from Vandenberg Air Force Base, California against an Intermediate Range Ballistic Missile target</p> <p>-Initiate planning for the Flight Test Ground-Based Midcourse Defense-11 (FTG-11), a salvo intercept test against one Intercontinental Ballistic Missile target with associated objects, using Ground-Based Interceptors launched from Vandenberg Air Force Base, California</p>		Articles:	-	-
		0	0	27.119
Title: Ground Test		-	-	12.705
		0	0	0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Currently located in Budget Project MD08 (\$13.823M)</p> <p>FY 2012 Plans: Currently located in Budget Project MD08 (\$11.013M)</p> <p>FY 2013 Plans: Ground tests demonstrate and validate Warfighter tactics, techniques, and procedures. Ground tests are executed both in the Hardware-in-the-loop (HWIL) lab and in the field. HWIL lab tests integrate and assess Ballistic Missile Defense System (BMDS) system- level performance based on new element capabilities. Ground tests in the field use existing fielded element assets and tactical communication networks, to integrate, assess and demonstrate the new element capabilities.</p> <p>-Complete support and execution of BMDS Ground Test-04 test campaign to assess BMDS capabilities with integration of additional BMDS sensors -Initiate planning of BMDS Ground Test-06 test campaign</p>			
Accomplishments/Planned Programs Subtotals	-	-	80.381

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603914C: <i>Ballistic Missile Defense Test</i>	0.000	487.699	454.400		454.400	420.357	446.542	373.395	421.632	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	0.000	454.357	435.747		435.747	475.175	505.591	406.931	485.950	0.000	2,763.751

D. Acquisition Strategy

The Ground-Based Midcourse Defense (GMD) program will continue to follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, development, and evolutionary acquisition through incremental development. The Agency acquisition strategy ensures that the GMD components are upgraded to improve both system performance and interceptor reliability in order to retain the proven GMD contribution to the Integrated Ballistic Missile Defense System. This acquisition approach minimizes the risk of obsolescence, provides opportunities for incremental capability improvements, and allows decision makers to make informed trades between cost, schedule, and performance while exploring improved operational and technological capabilities.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	MT08: <i>Ground Based Midcourse Test</i>

Ground-Based Midcourse Defense (GMD) awarded a competitive Development and Sustainment Contract (DSC) on December 30, 2011. This contract continues development; fielding; test; systems engineering, integration, and configuration management; equipment manufacturing and upgrade; training, operations and sustainment of the GMD system and associated support facilities. The DSC emphasizes the application of performance-based tenets to provide timely high quality support of the core GMD system while reducing life cycle and long-term ownership costs. GMDs DSC acquisition strategy for transition of the legacy content into the DSC provides uninterrupted field operations; development of both Ground Systems and Interceptor products, including manufacturing additional interceptors to support both operations and testing; and the requirement to demonstrate war-fighting capability through a rigorous ground and flight test program.

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Infrastructure Prime Program Management	C/FPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	1.004		-		1.004	Continuing	Continuing	Continuing
Infrastructure Systems Engineering	C/CPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	0.930		-		0.930	Continuing	Continuing	Continuing
Infrastructure Ballistic Missile Defense System Hardware-In-The-Loop	C/CPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-		7.753		-		7.753	Continuing	Continuing	Continuing
Flight Test Prime Program Management	C/FPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	1.067		-		1.067	Continuing	Continuing	Continuing
Flight Test Systems Engineering	C/CPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	0.988		-		0.988	Continuing	Continuing	Continuing
Ground Test Prime Program Management	C/FPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	0.543		-		0.543	Continuing	Continuing	Continuing
Ground Test System Engineering	C/CPIF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	0.503		-		0.503	Continuing	Continuing	Continuing
Subtotal			-	-		12.788		-		12.788			

Remarks

Starting in FY 2013, the BMDS Level Testing accomplishment moved from MD08 into Project MT08.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Infrastructure Test Communications	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	7.794		-		7.794	Continuing	Continuing	Continuing
Infrastructure Support Infrastructure	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	9.693		-		9.693	Continuing	Continuing	Continuing
Infrastructure Test Labs	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	12.916		-		12.916	Continuing	Continuing	Continuing
Infrastructure Additional Ground Test Activities	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	0.467		-		0.467	Continuing	Continuing	Continuing
Flight Test Integration EKV HWIL Tests in Space Chamber	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	-		-		-	Continuing	Continuing	Continuing
Flight Test Planning, Analysis & Execution	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	18.182		-		18.182	Continuing	Continuing	Continuing
Flight Test Flight Test Range Costs	MIPR	VAFB, CA:RTS, Kwaj PMRF, HI	-	-	Dec 2011	2.143		-		2.143	Continuing	Continuing	Continuing
Flight Test Flight Test Silo Turnaround	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	4.739		-		4.739	Continuing	Continuing	Continuing
Ground Test Ground Test-04 Campaign (Focused-Integrated-Distributed)	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	10.356		-		10.356	Continuing	Continuing	Continuing
Ground Test Ground Test-06 Campaign (Focused-Integrated-Distributed)	C/CPAF	Boeing AL/AK/AZ/ CA:CO/TX/VA	-	-	Dec 2011	1.303		-		1.303	Continuing	Continuing	Continuing
Subtotal			-	-		67.593		-		67.593			

Remarks

Starting in FY 2013, the BMDS Level Testing accomplishment moved from MD08 into Project MT08.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		80.381		-		80.381			

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MT08: <i>Ground Based Midcourse Test</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Ground-based Midcourse Defense Ground Test-04 test campaign	2	2011	4	2013
GTI-04e (BMDS Integrated HWIL Ground Test) (NORTHCOM/PACOM)	2	2013	2	2013
GTI-04e (BMDS Integrated HWIL Ground Test)	3	2013	3	2013
GTD-04e (BMDS Distributed Ground Test) (NORTHCOM/PACOM)	4	2013	4	2013
GTX-06a (Focused Strategic Ground Test)	1	2014	3	2014
Ground-based Midcourse Defense Ground Test-06 test campaign	1	2014	1	2017
FTG-08 (GM Intercept Flight Test)	3	2014	3	2014
GTI-06a (BMDS Integrated HWIL Ground Test)	1	2015	1	2015
GTD-06a (BMDS Distributed Ground Test) (NORTHCOM/PACOM)	2	2015	3	2015
GTX-06b (NORTHCOM/PACOM)	3	2015	1	2016
FTX-10	3	2015	3	2015
FTG-11 (GM SALVO Intercept Flight Test)	4	2015	4	2015
GTI-06b	1	2016	3	2016
GTD-06B (NORTHCOM/PACOM)	4	2016	1	2017
FTG-13 (GM Intercept Flight Test)	4	2016	4	2016
Ground-based Midcourse Defense Ground Test-07 test campaign	4	2016	4	2017
GTX-07b (Focused Strategic Ground Test) (NORTHCOM/PACOM)	2	2017	4	2017
FTG-15 (GM Intercept Flight Test)	4	2017	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MX08: <i>Ground Based Midcourse Development</i> <i>Support</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MX08: <i>Ground Based Midcourse Development Support</i>	-	-	207.133	-	207.133	205.210	207.563	216.272	217.317	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

Starting in FY 2013, the Sustainment accomplishment will move from Project MD08, which is part of this PE: 0603882C: Ballistic Missile Defense Mid-Course Segment, to Project MX08.

A. Mission Description and Budget Item Justification

The Ground-Based Midcourse Defense (GMD) sustainment program is described as follows:
MDA will continue to provide for the operations, training, and sustainment of GMD fielded capability at Fort Greely, Alaska; Eareckson Air Station, Alaska; Vandenberg Air Force Base, California; the Missile Defense Integration Operations Center (MDIOC), Colorado and across the nation-wide GMD Communications Network.

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

	FY 2011	FY 2012	FY 2013
Title: Sustainment	-	-	207.133
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: Currently located in Budget Project MD08, 0603882C (\$182.184M)			
FY 2012 Plans: Currently located in Budget Project MD08, 0603882C (\$198.138M)			
FY 2013 Plans: The Operations and Sustainment mission provides for the operations, maintenance, repair, training, sustaining engineering (including stock pile reliability and logistics) of the Ground-Based Midcourse Defense (GMD) System. In addition to the above, provide base operations support for GMD facilities in Colorado Springs, Colorado; Vandenberg Air Force Base, California; Fort Greely, Alaska; and Eareckson Air Station, Alaska. Execution of the Operations and Sustainment mission will be achieved through a combination of directed activities under the competitively awarded Performance Based Logistics contract (operations, maintenance, repair and training) and through direct placement of funding to mission essential activities (stockpile reliability, logistics, base operations costs and Government Furnished Equipment).			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MX08: <i>Ground Based Midcourse Development Support</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Continue to provide GMD element operations and sustainment for Primary Mission Equipment (PME), support equipment, and operational facilities at all GMD sites -Continue to support Base Operations at all GMD sites in accordance with host installation support agreements -Continue utilizing logistics repair analysis to optimize spares replenishment, and performance metrics to improve maintenance processes and procedures to improve weapon system reliability -Continue on-site sustaining engineering, for real time trouble shooting and ensuring logistics analysis is incorporated in technical data products -Continue to collect Reliability, Availability, Maintainability and Test data and calculate and track performance metrics on the Operational System -Continue to perform failure analysis and resolve systemic issues to reduce sustainment costs -Continue to identify and prioritize obsolescence issues for resolution to support Ground Systems Obsolescence Upgrade Program -Continue to provide training to qualify the Warfighter to operate the GMD Weapon System, as well as educating other staff members on the system -Continue to develop and field technical manuals to maintain crew proficiency and support architecture baseline changes <p style="margin-top: 20px;">-Variance Analysis: FY 2012 budget decrease to FY 2013 position due to ramp down of Obsolescence Mitigation activities and transition of Stockpile Reliability Program to Ground Based Interceptor accomplishments. FY 2012 portion is located in Project MD08, Sustainment Accomplishment, 0603882C.</p>			
Accomplishments/Planned Programs Subtotals	-	-	207.133

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

The Ground-Based Midcourse Defense (GMD) program will continue to follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, development, and evolutionary acquisition through incremental development. The Agency acquisition strategy ensures that the GMD components are upgraded to improve both system performance and interceptor reliability in order to retain the proven GMD contribution to the Integrated Ballistic Missile Defense System. This acquisition approach minimizes the risk of obsolescence, provides opportunities for incremental capability improvements, and allows decision makers to make informed trades between cost, schedule, and performance while exploring improved operational and technological capabilities.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	MX08: <i>Ground Based Midcourse Development</i> <i>Support</i>

Ground-Based Midcourse Defense (GMD) awarded a competitive Development and Sustainment Contract (DSC) on December 30, 2011. This contract continues development; fielding; test; systems engineering, integration, and configuration management; equipment manufacturing and upgrade; training, operations and sustainment of the GMD system and associated support facilities. The DSC emphasizes the application of performance-based tenets to provide timely high quality support of the core GMD system while reducing life cycle and long-term ownership costs. GMDs DSC acquisition strategy for transition of the legacy content into the DSC provides uninterrupted field operations; development of both Ground Systems and Interceptor products, including manufacturing additional interceptors to support both operations and testing; and the requirement to demonstrate war-fighting capability through a rigorous ground and flight test program.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MX08: <i>Ground Based Midcourse Development</i> <i>Support</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sustainment Maintenance of Primary System	SS/CPIF	Boeing AL/AK/AZ:CA/VA	-	-	Dec 2011	72.551		-		72.551	Continuing	Continuing	Continuing
Sustainment Sustaining Support Services	SS/CPIF	Boeing AL/AK/AZ:CA/VA	-	-	Dec 2011	54.466		-		54.466	Continuing	Continuing	Continuing
Sustainment Operations & Sustainment Repair and Maintenance Personnel	SS/CPIF	Boeing AL/AK/AZ:CA/VA	-	-	Dec 2011	11.310		-		11.310	Continuing	Continuing	Continuing
Sustainment RAM-T	MIPR	Naval Surface Warfare Center:IN	-	-		3.245		-		3.245	Continuing	Continuing	Continuing
Sustainment Fort Greely, Alaska Operations (Gov't Leases & Services)	MIPR	Army Ft. Greely:AK	-	-		19.196		-		19.196	Continuing	Continuing	Continuing
Sustainment Vandenberg Air Force Base Operations (Gov't Leases & Services)	MIPR	Air Force Vandenberg:CA	-	-		4.304		-		4.304	Continuing	Continuing	Continuing
Sustainment Colorado Springs Operations (Gov't Leases & Services)	MIPR	Air Force COS:CO	-	-		3.905		-		3.905	Continuing	Continuing	Continuing
Sustainment Government Furnished Equipment & Services (GFX)	MIPR	Military Traffic Management Command:Various AL/AK/AZ/CA/CO/TX/VA	-	-		8.081		-		8.081	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MX08: <i>Ground Based Midcourse Development</i> <i>Support</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sustainment Warfighter Training, Exercises, and Wargames	MIPR	MDA:AL/CO	-	-		12.669		-		12.669	Continuing	Continuing	Continuing
Sustainment Information Assurance	C/CPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	-	-	Dec 2011	3.312		-		3.312	Continuing	Continuing	Continuing
Sustainment Program Management	C/FPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	-	-	Dec 2011	7.334		-		7.334	Continuing	Continuing	Continuing
Sustainment Systems Engineering	C/CPIF	Boeing AL/AK/AZ:CA/CO/TX/VA	-	-	Dec 2011	6.760		-		6.760	Continuing	Continuing	Continuing
Subtotal			-	-		207.133		-		207.133			

Remarks
Starting in FY 2013, the Sustainment accomplishment moved from Project MD08 into Project MX08.

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency							DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>			PROJECT MX08: <i>Ground Based Midcourse Development</i> <i>Support</i>				
	Total Prior Years Cost		FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-		-	207.133		-		207.133		

Remarks

NA

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	PROJECT MD40: <i>Program-Wide Support</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	51.222	48.230	46.036	-	46.036	46.183	46.531	46.700	43.682	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In FY 2012 and FY 2013, Program Wide Support reflects proportional decreases as a result of decreases to the Ballistic Missile Defense Mid-Course Defense Segment.

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) consists of essential non-headquarters management costs in support of the MDA functions and activities across the entire Ballistic Missile Defense System (BMDS). Includes Government Civilians, Advisory and Assistance Services, and Federally Funded Research and Development contracts providing integrity and oversight of the BMDS as well as supporting MDA in enabling the development and evaluation of technologies that will respond to the changing threat. In addition, includes Global Deployment personnel and support performing deployment site preparation and activation. Other costs included provide facility capabilities for MDA Executing Agent locations (with the exception of Federal Office Building 2 after FY 2011), such as physical and technical security, legal services, travel and agency training, office and equipment leases, rents and utilities, data and unified communications support, supplies and maintenance, logistics and central property management of equipment, and similar operating expenses. Also includes legal settlements, and foreign currency fluctuations on a limited number of foreign contracts. In keeping with congressional intent, PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the total MDA budget.

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

	FY 2011	FY 2012	FY 2013
Title: Civilian Salaries and Support	51.222	48.230	46.036
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: See paragraph A, Mission Description and Budget Item Justification			
FY 2012 Plans: See paragraph A, Mission Description and Budget Item Justification			
FY 2013 Plans: See paragraph A, Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	51.222	48.230	46.036

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603882C: <i>Ballistic Missile Defense</i> <i>Midcourse Defense Segment</i>	MD40: <i>Program-Wide Support</i>

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A