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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	163.333	61.684	52.095	58.530	-	58.530	51.738	61.594	53.885	55.414	Continuing	Continuing
MD22: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	160.492	58.658	48.823	54.605	-	54.605	48.216	57.261	49.609	50.805	Continuing	Continuing
MC22: <i>Cyber Operations</i>	-	-	0.534	0.537	-	0.537	0.482	0.472	0.635	0.651	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	2.841	3.026	2.738	3.388	-	3.388	3.040	3.861	3.641	3.958	Continuing	Continuing

MDAP/MAIS Code: 362

The FY 2015 OCO Request will be submitted at a later date.

Note
Starting in FY 2014, Modeling and Simulation Systems Engineering and Integration content transfers to Ballistic Missile Defense Midcourse Sector, Program Element 0603882C (Budget Project MD08).

Project MC22 is a new Defensive Cyber Operations Project established in this Program Element (PE) for PB 2014. Funds were previously reported in Project MD22 of this PE.

A. Mission Description and Budget Item Justification

The Missile Defense Integration and Operations Center (MDIOC) is the Missile Defense Agency's (MDA) field operating activity in Colorado Springs, Colorado. It provides the necessary infrastructure and support services through a mission execution platform for MDA elements/components and designated Combatant Commanders' Ballistic Missile Defense System (BMDS) operations executing missions at the MDIOC. The Integration Center is the organization responsible for providing a single, integrated set of skilled personnel matrixed from across MDA to manage this mission. The MDIOC mission facilities consists of a highly secure research and development complex and a mission support module (area) located within a military installation (Schriever Air Force Base) that is adjacent to North American Aerospace Defense Command (NORAD) and United States Northern Command (USNORTHCOM). The MDA Integration Center provides mission critical system technical capabilities and subject matter expertise in a dedicated and adaptable environment that enables developers, testers, and operators to evolve, assess and deliver the capabilities for layered missile defense execution for homeland defense and theater/regional support. The Missile Defense Integration and Operations Center (MDIOC) interfaces with the Information Technology/Information Assurance Enterprise to provide high availability access to worldwide secure communications, network health and status monitoring, mission critical restoral capability, and technical expertise for all MDA directed activities and events. The MDIOC functions as the mission control for BMDS distributed ground test and system wide flight tests. The mission and test directors for these key tests control both main and associated test operations using secure voice, test, and mission network hubs at the MDIOC. The MDIOC also functions (within MDA's capabilities-based acquisition strategy) as the only system-level integration and interoperability mission execution platform for BMDS fire control; and it provides the physical interface between the developers and the Combatant Command warfighters.

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MDIOC mission facilities contribute to the BMDS by directly supporting the concept of Concurrent Test, Training, and Operations (CTTO) for the BMDS. The MDIOC accomplishes this by providing engineering integration, resource scheduling, configuration management, and implementation development support for MDA and BMDS-level test, training, and operational mission execution. The Integration Center provides engineering and operational integration by:

- Implementing the technical event architectures for the models and simulations used to support missile defense planning seminars, wargames, exercises, and analyses
- Supporting the planning and execution of the only end-to-end operator-in-the-loop/element-in-the-loop missile defense wargames
- Supporting BMDS Critical Engagement Conditions (CEC) testing and analysis by operating the Test Execution Control (TEC) for distributed BMDS ground tests, and ensuring the integrity of their technical system architecture
- Providing network operations and information assurance for all on-site integration activities
- Integrating and sustaining the enabling infrastructure, services, and processes that support the operation of designated elements of the BMDS and resident Combatant Command operations and/or support centers
- Providing technical support for the BMDS Watch Officers, BMDS Safety Officers, and Information Assurance Officers in their efforts to monitor and assess the health and status of the networks and elements that impact BMDS test and operations
- Operating the Joint Early Warning Laboratory for anomaly resolution
- Supporting the Intelligence Support Center for critical situational awareness intelligence on worldwide ballistic missile developments that could affect the development and/or operation of the BMDS

Missile Defense Integration and Operations Center (MDIOC) Major Program Goals:

- Provide the capabilities and services necessary to support engineering integration, resource scheduling for ground and flight tests, configuration management, and implementation development support of on-site activities
- Ensure around the clock support and restoral of designated BMDS operational activities
- Improve interface with designated Combatant Command missile defense activities; host/support the headquarters and operations center for United States Strategic Command Joint Functional Component Command - Integrated Missile Defense
- Continue to achieve cost effectiveness and efficiencies through the leveraging of existing Missile Defense Integration and Operations Center infrastructure, services, processes, and expertise to support assigned missions
- Maintain and improve as designated the reliability, availability, and maintainability of mission critical systems

MD40 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).

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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	63.043	52.131	59.893	-	59.893
Current President's Budget	61.684	52.095	58.530	-	58.530
Total Adjustments	-1.359	-0.036	-1.363	-	-1.363
• Congressional General Reductions	-0.083	-0.036			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	4.527	-			
• SBIR/STTR Transfer	-0.688	-			
• Other Adjustment	-5.115	-	-1.363	-	-1.363

Change Summary Explanation

The FY 2015 reduction of \$1.363 reflects a realignment of Department of Defense priorities.

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD22 / <i>Missile Defense Integration and Operations Center (MDIOC)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MD22: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	160.492	58.658	48.823	54.605	-	54.605	48.216	57.261	49.609	50.805	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
N/A

A. Mission Description and Budget Item Justification

The Missile Defense Integration and Operations Center (MDIOC) sustains and operates a 24 hours a day, 7 days a week, 365 days a year mission complex for critical research, development, testing, training, and operations for BMDS activities. The MDIOC supports the Ground-based Midcourse Missile Defense Mission Control Center Facility, as well as the Command, Control, Battle Management, and Communications (C2BMC) Integration and Test Centers and the C2BMC Experimentation Laboratories. It provides infrastructure support for the Satellite Tracking and Surveillance System's (STSS) Missile Defense Space Development Center (MDSDC); and the Targets and Countermeasures' (TC) Joint Target Operations Center (JTOC). The MDIOC also provides developmental support to the External Sensors Laboratory (ESL) composed of a common satellite ground station and sensor netting test bed for designated Ballistic Missile Defense System (BMDS) elements. Support to Missile Defense Agency test events is provided based on the Integrated Master Test Plan (IMTP) schedule. It supports BMDS Critical Engagement Conditions testing and analysis through the operation of the Test Execution Control node for distributed BMDS ground tests. During system flight test, the MDIOC provides infrastructure (power, Heating, Ventilation and Air Conditioning, and communications) support to the Flight Test Director and crew, and ensures the protection of those critical facility and test assets throughout the test window. Further, the MDIOC provides the facilities that support operations of the Missile Defense Element, manned by the U.S. Army 100th Missile Defense Brigade, the United States Northern Command (USNORTHCOM) Command, Control, Battle Management and Communications (C2BMC) Command and Control Center (CCC), the United States Strategic Command's (USSTRATCOM's) Joint Functional Component Command-Integrated Missile Defense (JFCC-IMD) and the Missile Defense Agency (MDA) Warfighter Support Center. In addition, the MDIOC supports the MDA Operations Support Center, which provides situational awareness of the health and status of the end-to-end BMDS, and provides network subject matter expertise and technical reach back for the program elements and Combatant Commanders. The MDIOC hosts BMDS wargames and exercises in support of the warfighter, and delivers requisite infrastructure for modeling and simulation to provide and integrate digital modeling and simulation assets to the Digital Simulation Architecture that form system-level constructive simulations for full-envelope BMDS performance assessment with surrogate capability for BMDS ground tests. The MDIOC maintains a technical repository of BMDS Implementation Architectures for real-time operations and configuration control; provides both state change management and asset management technical support for the BMDS; and provides the technical environment for BMDS Watch Officers, Safety Officers, and Information Assurance Officers to their assigned duties. The MDIOC also supports the operations of the Joint Early Warning Laboratory (JEWL), which provides USSTRATCOM with quick response analyses of real-world launches, and rapid anomaly identification and resolution.

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Title: Infrastructure Systems and Support</p> <p align="right">Articles:</p> <p>Description: N/A</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Computing Center (Operating Systems, Print/Storage Services, Audio/Visual, Operations and Maintenance): - Continued to maintain a mission execution platform that provided an enabling infrastructure (to include hardware, software maintenance, licenses, and upgrades) that supported MDA Research, Development, Test and Evaluation (RDT&E) efforts at the Missile Defense Integration and Operations Center (MDIOC) for the MDA elements/components, and Combatant Command and Warfighter operational elements - Provided computer hosting of specified threat models and supported the integration of other threat tools as required - Planned/Initiated, when directed, the installation of any additional data feeds required to support the Operations Support Center (OSC) - Provided file, print, and messaging services; managed and maintained automated patching software, and virus protection servers. Managed and maintained the MDA Enterprise directory services supporting user access to MDA Enterprise network resources; performed preventive maintenance and ensured data recovery capability through proper data backup scheduling and execution - Planned/Designed enhancements to the MDIOC Data Center including floor space allocations, equipment staging areas, and streamlined logistics support function - Designed/Implemented upgrades to audio/visual support to the MDIOC supporting the distribution of signals over Internet Protocol <p>MDIOC Communication Services:</p> <ul style="list-style-type: none"> - Installed communications and networking infrastructure (hardware/software) in support of evolving mission requirements of resident MDA development, testing, training, and operational activities - Implemented Classified and Unclassified Voice Over Internet Protocol (VOIP) expansion to include the completion of the MDIOC VOIP implementation - Provided telephony services to include: Telephone/Fax Service: Provided local, long distance, Defense Switch Network and Defense Red Switch telephone systems. Telephone Switch Operations: Operated, maintained, and upgraded telephone switches, nodes, and Private Branch Exchanges to include 911 support 	24.406	17.378	20.475
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Network Management Transport Services:</p> <ul style="list-style-type: none"> - Acquired and distributed mission critical unclassified and secure communications capability to ten resident MDA elements/ components and BMDS and Warfighter operational elements - Provided management of network capabilities by monitoring and controlling the network infrastructure, available bandwidth, hardware, and distributed software resources - Maintained the technical infrastructure and equipment which included, routers and switches, Core Cryptographic Devices; Edge Encryption Devices; Global Engagement Manager (GEM); base and long-haul communications <p>Information Assurance Systems</p> <ul style="list-style-type: none"> - Provided information assurance to MDA elements/components, BMDS elements, and Combatant Command (COCOM) and Warfighter operational elements resident at the Missile Defense Integration and Operations Center (MDIOC) - Maintained DoD Information Assurance Certification and Accreditation Process (DIACAP) accreditation packages; managed the Information Assurance Vulnerability Assessment Program and provided technical assistance to Controls Validation Tests - Provided DoD Information Assurance Certification and Accreditation Process (DIACAP) package management; ensured timely submissions to Information Assurance Manager/Designated Accrediting Authority (IAM/DAA) for MDA Admin/General Services (GENSER) and Event Packages - Performed architecture design, engineering, and configuration management reviews for all assigned projects - Managed the Information Assurance Vulnerability Assessment and Communications Tasking Order remediation and implementation efforts to ensure Defense Information Systems Agency/Joint Task Force - Global Network Operations (DISA/JTF-GNO) directed compliance <p>Infrastructure Implementation Engineering:</p> <ul style="list-style-type: none"> - Implemented intelligence hardware/software updates as required to support the Operations Support Center - Provided MDIOC centric test event network related detailed designs in support of Test Events and real world operational events, provided implementation plans, updated interface control documents and performed Change Control and Configuration Management services - Planned, designed, tested and operated the IT and communications technical architecture including Internet Protocol addressing schema, routing tables, switching policies, data paths, information assurance controls, fire wall configurations, application configurations, band width allocations for sub networks and eventual post event return to base line 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>- Provided technical health and status monitoring, troubleshooting, and break/fix, IT/Communications support for each of the event architectures including critical asset identification, monitoring, Quality Assurance/Quality Control (QA/QC) seals with configuration management and job control</p> <p>- Implemented final Defense Information Systems Agency - Global Information Grid (DISA GIG) Mission Assurance node configuration</p> <p>Software Licenses, Services and Applications:</p> <p>- Maintained critical software licensing and maintenance agreements to meet critical customer and legal requirements, enabled continued software support necessary to maintain the directed computer network defense posture and ensured continued system operational availability</p> <p>- Planned/Designed/Implemented technical lifecycle, refresh, and standardization of MDIOC print services</p> <p>- Implemented MDIOC web cam upgrade and technology refresh</p> <p>- Implemented a consolidated Microsoft Project Server and delivered as a web based service</p> <p>FY 2014 Plans: Provide Infrastructure Systems and Support that ensures continuous operation of the following essential services:</p> <ul style="list-style-type: none"> - Computing Center (Operating Systems, Print/Storage Services, Audio/Visual, Operations and Maintenance) - Missile Defense Integration and Operations Center (MDIOC) Communication Services - Network Management Transport Services - Infrastructure Implementation Engineering - Software Licenses, Services and Applications <p>Decrease in FY 2014 funding is a result of deferring Information Technology conveyance projects (information transport backbone and high capacity network fiber cable installation) to future years.</p> <p>FY 2015 Plans: Computing Center (Operating Systems, Print/Storage Services, Audio/Visual, Operations and Maintenance):</p> <ul style="list-style-type: none"> - Continue to maintain a mission execution platform to provide an enabling infrastructure (to include hardware, software maintenance, licenses, and upgrades) that supports MDA Research, Development, Test and Evaluation (RDT&E) efforts at the Missile Defense Integration and Operations Center (MDIOC) for the MDA elements/components, and Combatant Command and Warfighter operational elements - Provide computer hosting of specified threat models and support the integration of other threat tools as required 			

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

	FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Plan/Initiate, when directed, the installation of any additional data feeds required to support the Operations Support Center (OSC) - Provide file, print, and messaging services; manage and maintain automated patching software and virus protection servers. Manage and maintain the MDA Enterprise directory services supporting user access to MDA Enterprise network resources; perform preventive maintenance and ensure data recovery capability through proper data backup scheduling and execution - Plan/Design enhancements to the MDIOC Data Center including floor space allocations, equipment staging areas, and streamlined logistics support function - Design/Implement upgrades to audio/visual support to the MDIOC supporting the distribution of signals over Internet Protocol <p>MDIOC Communication Services:</p> <ul style="list-style-type: none"> - Install communications and networking infrastructure (hardware/software) in support of evolving mission requirements of resident MDA development, testing, training, and operational activities - Implement Classified and Unclassified Voice Over Internet Protocol (VOIP) expansion to include the completion of the MDIOC VOIP implementation - Provide telephony services to include: Telephone/Fax Service: Provide local, long distance, Defense Switch Network and Defense Red Switch telephone systems. Telephone Switch Operations: Operate, maintain, and upgrade telephone switches, nodes, and Private Branch Exchanges to include 911 support <p>Network Management Transport Services:</p> <ul style="list-style-type: none"> - Acquire and distribute mission critical unclassified and secure communications capability to ten resident MDA elements/components and BMDS and Warfighter operational elements - Provide management of network capabilities by monitoring and controlling the network infrastructure, available bandwidth, hardware, and distributed software resources - Maintain the technical infrastructure and equipment which includes, routers and switches, Core Cryptographic Devices; Edge Encryption Devices; Global Engagement Manager (GEM); base and long-haul communications Information Assurance Systems - Provide information assurance to MDA elements/components, BMDS elements, and Combatant Command (COCOM) and Warfighter operational elements resident at the Missile Defense Integration and Operations Center (MDIOC) - Maintain DoD Information Assurance Certification and Accreditation Process (DIACAP) accreditation packages; 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>manage the Information Assurance Vulnerability Assessment Program and provide technical assistance to Controls Validation Tests</p> <ul style="list-style-type: none"> - Provide DoD Information Assurance Certification and Accreditation Process (DIACAP) package management; ensure timely submissions to Information Assurance Manager/Designated Accrediting Authority (IAM/DAA) for MDA Admin/General Services (GENSER) and Event Packages - Perform architecture design, engineering, and configuration management reviews for all assigned projects - Manage the Information Assurance Vulnerability Assessment and Communications Tasking Order remediation and implementation efforts to ensure Defense Information Systems Agency/Joint Task Force - Global Network Operations (DISA/JTF-GNO) directed compliance <p>Infrastructure Implementation Engineering:</p> <ul style="list-style-type: none"> - Implement intelligence hardware/software updates as required to support the Operations Support Center - Provide MDIOC centric test event network related detailed designs in support of Test Events and real world operational events, provide implementation plans, update interface control documents and perform Change Control and Configuration Management services - Plan, design, test and operate the IT and communications technical architecture including Internet Protocol addressing schema, routing tables, switching policies, data paths, information assurance controls, fire wall configurations, application configurations, band width allocations for sub networks and eventual post event return to base line - Provide technical health and status monitoring, troubleshooting, and break/fix, IT/Communications support for each of the event architectures including critical asset identification, monitoring, Quality Assurance/Quality Control (QA/QC) seals with configuration management and job control - Implement final Defense Information Systems Agency - Global Information Grid (DISA GIG) Mission Assurance node configuration <p>Software Licenses, Services and Applications:</p> <ul style="list-style-type: none"> - Maintain critical software licensing and maintenance agreements to meet critical customer and legal requirements, enable continued software support necessary to maintain the directed computer network defense posture and ensure continued system operational availability - Plan/Design/Implement technical lifecycle, refresh, and standardization of MDIOC print services - Implement a consolidated Microsoft Project Server and deliver as a web based service. 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015	
<p>Property/Asset Management and Accountability</p> <ul style="list-style-type: none"> - Manage government property in accordance with the Federal Acquisition Regulations (FAR)/DoD FAR Supplements (DFARs) to include accountability, reporting, warehouse management, asset transportation and excess asset management - Maintain an inventory of IT hardware and software assets connected or used in the ULAN, CLAN, SIPRNET and TS/SCI networks <p>Cable Plant Cubicle Workstation</p> <ul style="list-style-type: none"> - Install facility connectivity cabling; provide trouble-shooting and repair on a critical basis - Install and reconfigure furniture and workstations on a critical basis <p>The FY 2015 increase is a result of planning for projects deferred in FY 2014.</p>					
<p>Title: Facilities and Maintenance</p> <p>Description: N/A</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Utilities (Electrical, Gas, Sewer, Water, Steam, and Chilled Water): - Procured utility services through 50th Air Force Space Wing (Host Base) - Sustained utility infrastructure and delivery systems <p>Environmental, Safety and Occupational Health (ESOH):</p> <ul style="list-style-type: none"> - Continued maintenance and updating of the program accident prevention plan - Provided required industrial safety training to facility services personnel - Procured and distributed personal protection equipment for contracted activities - Ensured compliance with Hazardous Waste, Hazardous Material Recycling, and National Environmental Policy Act (NEPA) programs - Conducted recurring safety and environmental audits 		Articles:	18.354 -	15.198 -	13.786 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>Facilities Operations and Sustainment:</p> <ul style="list-style-type: none"> - Provided 24 hours a day, 7 days a week, 365 days a year, facility maintenance break/fix response for all facility systems (electrical; Heating, Ventilation, and Air Conditioning; plumbing; locksmith) - Conducted preventative maintenance inspections (PMIs) for all building systems <p>Facilities Repair & Sustainment:</p> <ul style="list-style-type: none"> - Electrical distribution component end-of-life replacement in two quadrants - Electrical distribution substation circuit breaker testing completed for electrical code compliance - Heating, Ventilation, and Air Conditioning (HVAC) Evaporative Cooler end-of-life replacement - Upgraded Basement Area (B79) to support mission essential information management open storage capability - Fire protection system modifications and upgrades completed to meet fire code compliance - Computer Room (2200 Quadrant) air conditioning capacity upgrades completed to meet mission critical capabilities - Elevator end-of-life component replacement and upgrades completed. - Emergency lighting module replacement completed as fire and safety compliance project - Provided emergency response and repair of infrastructure systems as required <p>Facilities Engineering:</p> <ul style="list-style-type: none"> - Conducted Management Process Facility Installation Standard Audits - Provided risk management analysis and mitigation plans - Maintained infrastructure drawings configuration management databases on a limited minimum basis - Developed and documented facility long range planning and programming - Provided consulting services, preliminary designs and engineering rough order of magnitude estimates for required infrastructure buildout changes <p>Missile Defense Integration and Operations Center (MDIOC) Operating Expenses:</p> <ul style="list-style-type: none"> - Leased General Services Administration (GSA) Vehicles and a commercial warehouse - Funded Schriever Air Force Base Support Costs (Local Dial Tone, Long Distance, Cable TV, and Grounds Maintenance) <p>Facility Services:</p>				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Provided custodial services for over 675,000 square feet of floor space in Buildings 720 and 730 - Provided limited Copy Center and Shuttle Services for over 2,000 personnel - Provided In/Out Processing and Personnel Moves <p>Cable Plant Cubicle Workstation:</p> <ul style="list-style-type: none"> - Installed facility connectivity cabling; provide trouble shooting and repair on a critical basis - Installed and reconfigured furniture and workstations on a critical basis <p>FY 2014 Plans: Provide the Facilities and Maintenance essential for the sustainment and task execution as follows:</p> <ul style="list-style-type: none"> - Utilities (electrical, gas, sewer, water, steam, and chilled water) - Environmental, Safety and Occupational Health (ESOH) - Facilities Operations and Maintenance - Facility Engineering - Missile Defense Integration and Operations Center (MDIOC) Operating Expenses - Facility Services <p>Decrease in FY 2014 funding is a result of deferring replacement of electrical distribution and heating, ventilation, and air conditioning components to future years.</p> <p>FY 2015 Plans: Host Tenant Support(Electrical, Gas, Sewer, Water, Steam, Chilled Water, Waste Water, Landscaping, and Refuse Removal):</p> <ul style="list-style-type: none"> - Procure utility services through 50th Air Force Space Wing (Host Base) - Sustain utility infrastructure and delivery systems <p>Environmental, Safety and Occupational Health (ESOH):</p> <ul style="list-style-type: none"> - Continue maintenance and updating of the program accident prevention plan - Provide required industrial safety training to facility services personnel - Procure and distribute personal protection equipment for contracted activities - Ensure compliance with Hazardous Waste, Hazardous Material Recycling, and National Environmental Policy Act (NEPA) programs 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Conduct recurring safety and environmental audits <p>Facilities Operations and Sustainment:</p> <ul style="list-style-type: none"> - Provide 24 hours a day, 7 days a week, 365 days a year, facility maintenance break/fix response for all facility systems (electrical; Heating, Ventilation, and Air Conditioning; plumbing; locksmith) with a response time of 15 minutes after normal duty hours - Conduct preventative maintenance inspections (PMIs) for all building systems <p>Facilities Engineering:</p> <ul style="list-style-type: none"> - Conduct Management Process Facility Installation Standard Audits - Provide risk management analysis and mitigation plans - Maintain infrastructure drawings configuration management databases on a limited minimum basis - Develop and document facility long range planning programming - Provide consulting services, preliminary designs and engineering rough order of magnitude estimates for required infrastructure buildout changes <p>Missile Defense Integration and Operations Center (MDIOC) Operating Expenses:</p> <ul style="list-style-type: none"> - Lease General Services Administration (GSA) Vehicles and a commercial warehouse - Fund Schriever Air Force Base Support Costs (Defense Red Switch Network (DRSN) Support, Local Dial Tone, Long Distance, Cable TV, and Grounds Maintenance) - Fund calibration of measuring and monitoring equipment - Fund repair of classified network switches <p>Facility Services:</p> <ul style="list-style-type: none"> - Provide custodial services for over 675,000 square feet of floor space in Buildings 720 and 730 - Provide limited Copy Center and Shuttle Services for over 2,000 personnel - Provide In/Out Processing and Personnel Moves 				
Title: Engineering and Event Services		9.558	6.501	6.864
Articles:		-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Description: N/A</p> <p>FY 2013 Accomplishments: Mission Assurance and Event Execution Support</p> <ul style="list-style-type: none"> - Implemented baseline technical control for all Missile Defense Integration and Operations Center (MDIOC) mission critical subsystems and services - Executed MDIOC engineering management, quality assurance, configuration management and integration of all mission critical systems including: <ul style="list-style-type: none"> - Technical power distribution, Uninterruptable Power Supply Systems, major transformer substations, and circuit protection - Heating, Ventilation and Air Conditioning, chilled water and steam systems - Secure and non-secure voice communications for Ballistic Missile Defense Systems (BMDS); Operations, major tests, and general constituencies - Local and wide area secure data networking environments and network health and status tools 24 hours a day, 7 days a week, 365 days a year - Ensured high availability of integrated MDIOC systems and BMDS Operations support 24 hours a day, 7 days a week, 365 days a year - Implemented `last mile` integration for BMDS Operations, BMDS test, War gaming, exercise, training and general admin services - Executed comprehensive configuration baseline integrity freezes, periods of interest and work screening for all major tests and real world contingencies - Coordinated process improvement investments across all mission areas - Executed aggressive, proactive and tailored risk management to ensure integrity and persistent connectivity for all MDIOC missions including: <ul style="list-style-type: none"> - Command, Control, Battle Management and Communications (C2MBC) incremental development and integration across the Integration Laboratory, Experimentation Laboratory (X-Lab), and the International Point of Presence - BMDS focused, system and distributed ground testing and Hardware-in-the-Loop (HWIL) execution - Modeling and Simulation program management; Digital Simulation Architecture Development; Validation, Verification and Accreditation - Ballistic Missile Defense Systems (BMDS) flight tests including Flight Test Ground-Based Midcourse Defense (FTG) execution; Flight Test - Aegis (FTM) and Flight Test - THAAD (FTT) planning, coordination and situational awareness. (For system flight tests directed from the MDIOC, ensure the protection of power, Heating, Ventilation and Air Conditioning, and communications critical to test execution and control). - Joint Target Operations Center (JTOC) Target of Opportunity (TOO) and target tracking, coordination and visualization 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - BMDS Operational Support Center and technical integration and implementation services 24 hours a day, 7 days a week, 365 days a year - MDA Intelligence Support Cell and Threat Modeling Center services - BMDS Wargame, exercise and Distributed Multi-Echelon Training System (DMETS) training execution; Warfighter Support Center program integration - Missile Defense Space Development Center (MDSDC) Satellite Operations, Ground System and experiment support operations, and Airborne Infrared Radar (ABIR); and Space Tracking and Surveillance System (STSS) testing - Enterprise Sensor Laboratory experimental, networking and facility support and coordination - Ground-Based Midcourse Defense (GMD) Fire Control component-level operations, integration, testing, and training - Joint Early Warning Laboratory mission services and connectivity - Combatant Command (COCOM) operations work centers including the United States Northern Command (USNORTHCOM) Command, Control, Battle Management and Communications (C2BMC) Control Center (CCC), Army 100th Missile Defense Brigade, and United States Strategic Command's Joint Functional Component Command-Integrated Missile Defense - MDA General Services Network and Operational Support Center and Network Communications Center - MDA Computer Emergency Response Team <p>Technical Watch Support</p> <ul style="list-style-type: none"> - Provided on-site technical environment for Ballistic Missile Defense System (BMDS); Watch Officers, Safety Officers, and Information Assurance Officers to execute their duties 24 hours a day, 7 days a week, 365 days a year - Implemented recall procedures to augment subject matter expertise availability during contingencies and major events - Executed tabletop exercises to assess readiness for COCOM Operational contingencies and major BMDS tests - Provided state change management and asset management technical support for the BMDS - Coordinated, reported and escalated critical information and BMDS test and operational event information to all Missile Defense Integration and Operations Center (MDIOC) technical and management staff to ensure rapid break/fix actions are executed <p>Joint National Integration Center (JNIC) Research and Development Contract (JRDC) Business and Finance Operations</p> <ul style="list-style-type: none"> - Provided overarching contract and financial management support for all JNIC JRDC integrated programs projects - Provided engineering coordination, resource management, and event integration across all MDIOC mission areas - Conducted continuous process improvement and implementation across all JRDC execution and MDIOC missions - Delivered integrated skill mix planning, coordination and workforce deployment across the dynamic spectrum of MDIOC events - Executed integrated resource forecasting and de-confliction - Performed project management for discrete enterprise enhancements 				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Event Architecture & Engineering Design:</p> <ul style="list-style-type: none"> - Coordinated design and implementation of technical architectures for all major MDIOC hosted BMDS tests, training and operations - Delivered technical documentation packages for all major BMDS flight tests, ground tests, training and COCOM exercise support - Led requirements coordination and technical architecture enhancements for Ballistic Missile Defense System (BMDS); wargame, exercise and training networks - Updated BMDS end-to-end Combatant Command (COCOM) deployed architecture as-built documentation reflecting new incremental content and deployments - Maintained a technical repository of BMDS Implementation Architectures for real-time operations and configuration management <p>FY 2014 Plans: Provide Mission Assurance and Event Services to reduce risk of infrastructure failures, prevent over-taxing of shared resources, and ensure the rapid restoration of impacted services through the following:</p> <ul style="list-style-type: none"> - Mission Assurance - Technical Watch Support - Program quality management, risk management, and earned value management - Event Architecture & Engineering Design <p>FY 2015 Plans: Mission Assurance and Event Execution Support</p> <ul style="list-style-type: none"> - Implement baseline technical control for all Missile Defense Integration and Operations Center (MDIOC) mission critical subsystems and services - Execute MDIOC engineering management, quality assurance, configuration management and integration of all mission critical systems including: <ul style="list-style-type: none"> - Technical power distribution, Uninterruptable Power Supply Systems, major transformer substations, and circuit protection - Heating, Ventilation and Air Conditioning, chilled water and steam systems - Secure and non-secure voice communications for Ballistic Missile Defense Systems (BMDS); Operations, major tests, and general constituencies - Local and wide area secure data networking environments and network health and status tools 24 hours a day, 7 days a week, 365 days a year - Ensure high availability of integrated MDIOC systems and BMDS Operations support 24 hours a day, 7 days 			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>a week, 365 days a year</p> <ul style="list-style-type: none"> - Implement 'last mile' integration for BMDS Operations, BMDS test, War gaming, exercise, training and general admin services - Execute comprehensive configuration baseline integrity freezes, periods of interest and work screening for all major tests and real world contingencies - Coordinate process improvement investments across all mission areas - Execute aggressive, proactive and tailored risk management to ensure integrity and persistent connectivity for all MDIOC missions including: <ul style="list-style-type: none"> - Command, Control, Battle Management and Communications (C2MBC) incremental development and integration across the Integration Laboratory, Experimentation Laboratory (X-Lab), and the International Point of Presence - BMDS focused, system and distributed ground testing and Hardware-in-the-Loop (HWIL) execution - Modeling and Simulation program management; Digital Simulation Architecture Development; Validation, Verification and Accreditation - BMDS flight tests including Flight Test Ground-Based Midcourse Defense (FTG) execution; Flight Test - Aegis (FTM) and Flight Test - THAAD (FTT) planning, coordination and situational awareness. (For system flight tests directed from the MDIOC, ensure the protection of power, Heating, Ventilation and Air Conditioning, and communications critical to test execution and control). - Joint Target Operations Center (JTOC) Target of Opportunity (TOO) and target tracking, coordination and visualization - BMDS Operational Support Center and technical integration and implementation services 24 hours a day, 7 days a week, 365 days a year - MDA Intelligence Support Cell and Threat Modeling Center services - BMDS Wargame, exercise and DMETS training execution; Warfighter Support Center program integration - Missile Defense Space Development Center (MDSDC) Satellite Operations, Ground System and experiment support operations, and Airborne Infrared Radar (ABIR); and Space Tracking and Surveillance System (STSS) testing - Enterprise Sensor Laboratory experimental, networking and facility support and coordination - Ground-Based Midcourse Defense (GMD) Fire Control component-level operations, integration, testing, and training - Joint Early Warning Laboratory mission services and connectivity - Combatant Command (COCOM) operations work centers including the United States Northern Command (USNORTHCOM) Command, Control, Battle Management and Communications (C2BMC) Control Center (CCC), Army 100th Missile Defense Brigade, and United States Strategic Command's Joint Functional 			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>Component Command-Integrated Missile Defense</p> <ul style="list-style-type: none"> - MDA General Services Network and Operational Support Center and Network Communications Center - MDA Computer Emergency Response Team <p>Technical Watch Support</p> <ul style="list-style-type: none"> - Provide on-site technical environment for Ballistic Missile Defense System (BMDS) ;Watch Officers, Safety Officers, and Information Assurance Officers to execute their duties 8 hours a day, 5 days a week with a capability to surge to 24 hours a day, 7 days a week for contingency operations - Implement recall procedures to augment subject matter expertise availability during contingencies and major events - Execute tabletop exercises to asses readiness for COCOM Operational contingencies and major BMDS tests - Provide state change management and asset management technical support for the BMDS - Coordinate, report and escalate critical information and BMDS test and operational event information to all Missile Defense Integration and Operations Center (MDIOC) technical and management staff to ensure rapid break/fix actions are executed <p>Program Quality Management, Risk Management, and Earned Value Management</p> <ul style="list-style-type: none"> - Provide overarching contract and financial management support for all JNIC JRDC integrated programs projects - Provide engineering coordination, resource management, and event integration across all MDIOC mission areas - Conduct continuous process improvement and implementation across all JRDC execution and MDIOC missions - Deliver integrated skill mix planning, coordination and workforce deployment across the dynamic spectrum of MDIOC events - Execute integrated resource forecasting and de-confliction - Perform project management for discrete enterprise enhancements <p>Event Architecture & Engineering Design:</p> <ul style="list-style-type: none"> - Coordinate design and implementation of technical architectures for all major MDIOC hosted BMDS tests, training and operations - Deliver technical documentation packages for all major BMDS flight tests, ground tests, training and COCOM exercise support - Lead requirements coordination and technical architecture enhancements for Ballistic Missile Defense System 				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>(BMDS); wargame, exercise and training networks</p> <ul style="list-style-type: none"> - Update BMDS end-to-end Combatant Command (COCOM) deployed architecture as-built documentation reflecting new incremental content and deployments - Maintain a technical repository of BMDS Implementation Architectures for real-time operations and configuration management 				
<p>Title: Operations and Sustainment</p> <p>Description: N/A</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Fund Government Civilian, CSS, Training, Travel, FFRDC - Funded Civilian, Contract Services and Support (CSS) and Federally Funded Research and Development (FFRDC) positions supporting operations and sustainment of all Missile Defense Integration and Operations Center (MDIOC) activities contributing to the mission execution platform - Provided quality event planning, coordination, logistics, security access and host support for all MDIOC events and visitors - Delivered integrated service coordination for all MDIOC event and protocol support including: <ul style="list-style-type: none"> - Event Registration Web site - Offsite event registration - Security processing, including clearance verification and badging - Coordination of group lodging - Arrangement/Coordination/Scheduling of bus transportation - Liaison between event Point of Contact (POC) and catering POC - Reserved, setup, and coordinated access for all primary shared MDIOC conference rooms - Operated Audio Visual equipment during events - Prepared and conducted official ceremonies; coordinated and hosted Distinguished Visitor itineraries; obtained information disclosure approval; coordinated offsite dinners and socials - Developed and coordinated Cross-Domain Solution architectures for high priority Ballistic Missile Defense System (BMDS); testing and contingency deployments - Coordinated MDA leveraged involvement in multi-mission integration opportunities sponsored by external agencies and customers 		<p>4.874</p> <p align="center">Articles:</p> <p align="center">-</p>	<p>6.245</p> <p align="center">-</p>	<p>6.389</p> <p align="center">-</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>- Funded Training and Travel</p> <p>FY 2014 Plans: Continuation of Operations and Sustainment tasks as listed in FY 2013 Plan for:</p> <ul style="list-style-type: none"> - Government Civilian Salaries - Contract Support Services (CSS) - Training - Travel - Federally Funded Research and Development <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Fund Government Civilian, CSS, Training, Travel, FFRDC - Fund Civilian, CSS and FFRDC positions supporting operations and sustainment of all Missile Defense Integration and Operations Center (MDIOC) activities contributing to the mission execution platform - Provide quality event planning, coordination, logistics, security access and host support for all MDIOC events and visitors - Deliver integrated service coordination for all MDIOC event and protocol support including: <ul style="list-style-type: none"> - Event Registration Web site - Offsite event registration - Security processing, including clearance verification and badging - Coordination of group lodging - Arrangement/Coordination/Scheduling of bus transportation - Liaison between event Point of Contact (POC) and catering POC - Reserve, setup, and coordinate access for all primary shared MDIOC conference rooms - Operate Audio Visual equipment during events - Prepare and conduct official ceremonies; coordinate and host Distinguished Visitor itineraries; obtain information disclosure approval; coordinate offsite dinners and socials - Develop and coordinate Cross-Domain Solution architectures for high priority Ballistic Missile Defense System (BMDS); testing and contingency deployments - Coordinate MDA leveraged involvement in multi-mission integration opportunities sponsored by external agencies and customers - Fund Training and Travel 				
Title: Modeling & Simulation Systems Engineering and Integration		1.466	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p align="right">Articles:</p> <p>Description: N/A</p> <p>FY 2013 Accomplishments: Conducted alternative concepts, technical Feasibility Analysis, and preliminary trade studies. This included technical assessment of unique high-performance design options for SM-3 Block IIB. Provided analysis support to the Chief Architect (Architecture Trade Studies, Initiatives by Office of the Secretary of Defense (OSD), Joint Chiefs of Staff (JCS), Combatant Command (COCOMs), Special Programs, and other Special Studies.</p> <ul style="list-style-type: none"> - Continued design work on high-performance design options for SM-3 Block IIB - Supported pre-mission analysis involving Space Tracking and Surveillance System (STSS) with Aegis testing - Continued to support assigned Office of the Secretary of Defense (OSD), Joint Chiefs of Staff (JCS), Combatant Command (COCOMs) and other special studies <p>FY 2014 Plans: Plans captured in Project MD08, Program Element 0603882C beginning in FY 2014 in the amount of \$1.621 million.</p> <p>FY 2015 Plans: N/A</p>		-	-	-
<p>Title: Infrastructure Systems Repair, Sustainment, and Critical Upgrades</p> <p align="right">Articles:</p> <p>Description: N/A</p> <p>FY 2013 Accomplishments: N/A</p> <p>FY 2014 Plans: Beginning in FY 2014, the repair, sustainment, and critical upgrade projects were realigned under this accomplishment from Infrastructure Systems and Support Accomplishments and Operations and Maintenance Accomplishments.</p> <ul style="list-style-type: none"> - Electrical power distribution in two mission quadrants to replace end-of-life systems, increase reliability, improve power distribution efficiency, and redundancy to mission critical areas within the facility (multi-year project) - Electrical distribution non-technical power switchgear scheduled maintenance (first phase) 		- -	3.501 -	7.091 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Heating, Ventilation, and Air Conditioning capacity upgrades to Missile Defense Integration and Operations Center (MDIOC) Computing Hub - Safety compliance project to replace non-compliant Emergency Lighting Modules - Install high capacity network fiber cable in MDIOC (Backbone) that handles the major information and data traffic and serves to connect access networks that provide data connectivity down to the end user (multi-year project) <p>FY 2015 Plans: Beginning in FY 2014, the repair, sustainment, and critical upgrade projects were realigned under this accomplishment from Infrastructure Systems and Support Accomplishments and Operations and Maintenance Accomplishments.</p> <ul style="list-style-type: none"> - Electrical power distribution in two mission quadrants to replace - End-of-life systems, increase reliability, improve power distribution efficiency, and redundancy to mission critical areas (multi-year project) - Install high capacity network fiber cable in MDIOC (Backbone) that handles the major information and data traffic and serves to connect access networks that provide data connectivity down to the end user (multi-year project) - Electrical Distribution non-technical power switchgear scheduled maintenance (second phase) - Heating, Ventilation, and Air Conditioning end-of-life component replacement and capacity upgrade to improve mission assurance to critical mission areas within the facility (second phase) - Compliance project (first of multiple phases) to modify fire suppression system to meet building code requirements 			
Accomplishments/Planned Programs Subtotals	58.658	48.823	54.605

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	69.438	9.321	38.800	-	38.800	76.400	52.000	112.800	178.000	-	536.759
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	267.396	255.918	299.598	-	299.598	221.008	288.405	286.421	273.365	Continuing	Continuing
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	923.506	910.852	1,003.768	-	1,003.768	1,131.060	937.998	690.524	628.342	Continuing	Continuing
• 0603890C: <i>BMD Enabling Programs</i>	336.763	372.309	410.863	-	410.863	412.264	400.813	531.752	637.123	Continuing	Continuing

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0603892C: <i>AEGIS BMD</i>	958.506	909.928	929.208	-	929.208	955.825	911.095	866.678	721.426	Continuing	Continuing
• 0603893C: <i>Space Tracking and Surveillance System</i>	45.420	40.347	31.346	-	31.346	33.697	34.542	35.317	36.316	Continuing	Continuing
• 0603895C: <i>Ballistic Missile Defense System Space Programs</i>	5.977	6.515	6.389	-	6.389	7.112	7.290	7.454	7.665	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management & Communication</i>	344.431	405.319	443.484	-	443.484	456.182	462.525	452.937	465.638	Continuing	Continuing
• 0603898C: <i>Ballistic Missile Defense Joint Warfighter Support</i>	47.710	42.619	46.387	-	46.387	52.619	53.552	54.699	56.252	Continuing	Continuing
• 0603907C: <i>Sea Based X-Band Radar (SBX)</i>	23.703	44.478	64.409	-	64.409	57.081	58.975	64.759	63.016	Continuing	Continuing
• 0603913C: <i>Israeli Cooperative Programs</i>	246.881	283.782	96.803	-	96.803	103.940	106.020	107.929	110.627	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	438.114	337.993	386.482	-	386.482	340.811	369.920	417.712	413.194	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Joint National Integration Center Research and Development Contract is the major performing integrated contract that is competed periodically. The acquisition strategy for Missile Defense Integration and Operation Center (MDIOC) mission execution is to employ a contract to perform designated integration and sustainment tasks to conduct Ballistic Missile Defense System (BMDS) Research, Development, Test and Evaluation (RDT&E). The MDIOC is operated by missile defense subject matter experts (SME) composed of Government military and civilian personnel, Federally Funded Research and Development Center (FFRDC), MDIOC Contract Support Services, and major defense contractors.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal				-		-		-		-		-	-	-	-

Remarks
N/A

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Infrastructure Systems and Support - MDIOC NG	C/CPAF	MDIOC/Northrop Grumman Mission Systems : Colorado Springs, CO	55.957	24.406		17.378	Nov 2013	20.475	Nov 2014	-		20.475	Continuing	Continuing	Continuing
Facilities and Maintenance - MDIOC GSA / Leases / Calibration	MIPR	Various (GSA, 50th Space Wing, Warehouses) : Colorado Springs, CO	3.216	1.198		1.240	Nov 2013	0.636		-		0.636	Continuing	Continuing	Continuing
Facilities and Maintenance - MDIOC NG	C/CPAF	MDIOC/Northrop Grumman Mission Systems : Colorado Springs, CO	42.478	14.818		11.539	Nov 2013	9.947	Nov 2014	-		9.947	Continuing	Continuing	Continuing
Facilities and Maintenance - MDIOC Utilities	MIPR	50th Space Wing : Schriever AFB, CO	6.682	2.338		2.419	Oct 2013	3.203		-		3.203	Continuing	Continuing	Continuing
Engineering and Event Services - MDIOC NG	C/CPAF	MDIOC/Northrop Grumman Mission Systems : Colorado Springs, CO	28.900	9.558		6.501	Oct 2013	6.864	Oct 2014	-		6.864	Continuing	Continuing	Continuing
Operations and Sustainment - FFRDC	FFRDC	MDIOC : Colorado Springs, CO	1.424	0.383		0.360	Oct 2013	0.407	Oct 2014	-		0.407	Continuing	Continuing	Continuing
Operations and Sustainment - Operations & Sustainment	Allot	MDIOC : Colorado Springs, CO	9.439	2.596		3.263	Oct 2013	3.330	Oct 2014	-		3.330	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD22 / <i>Missile Defense Integration and Operations Center (MDIOC)</i>
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operations and Sustainment - Support Services	C/FFP	SRS/ManTech/ MiDAESS Multi : Colorado Springs, CO	7.555	1.833		2.481	Oct 2013	2.564	Oct 2014	-		2.564	Continuing	Continuing	Continuing
Operations and Sustainment - Travel and Training	Allot	MDIOC : Colorado Springs, CO	0.335	0.062		0.141	Oct 2013	0.088	Oct 2014	-		0.088	Continuing	Continuing	Continuing
Modeling & Simulation Systems Engineering and Integration - BMDS Architecture	C/CPAF	MDIOC/Northrop Grumman Mission Systems : Colorado Springs, CO	4.506	1.466		-		-		-		-	3.537	9.509	-
Infrastructure Systems Repair, Sustainment, and Critical Upgrades - MDIOC NG	C/CPAF	MDIOC/Northrop Grumman Mission Systems : Colorado Springs, CO	0.000	-		3.501	Nov 2013	7.091	Nov 2014	-		7.091	Continuing	Continuing	Continuing
Subtotal			160.492	58.658		48.823		54.605		-		54.605	-	-	-

Remarks
 Funds for utilities and base communications are specified in the Inter-service Support Agreement with the 50th Space Wing. In addition, the Missile Defense Integration and Operations Center (MDIOC) provides Federally Funded Research and Development Center (FFRDC) and Technical Contract Support Services employees, for MDIOC operations and oversight of the Joint Research and Development Contractor (JRDC), as well as funding for JRDC work as required by the government.

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
 FY 2012 Plans captured in Project MD01, PE 0603896C

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD22 / <i>Missile Defense Integration and Operations Center (MDIOC)</i>
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	160.492	58.658	48.823	54.605	-	54.605	-	-	-

Remarks
Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD22 / <i>Missile Defense Integration and Operations Center (MDIOC)</i>

Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
GTI-04e (VV&A) (System Ground Test)	●																											
Vigilant Shield 13	▲																											
FTO-01 (Aegis/THAAD/Patriot Multiple Engagement Flight Test)			◆																									
FTM-21 E1 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Simulated Intercept), E3 (Intercept)			◆																									
GTI-04e (DT) (System Ground Test)	●																											
FTX-19 E1 (Aegis Simulated Intercept Flight Test)			◆																									
FTM-22 E2 (Aegis Intercept Flight Test)			◆																									
PA-04 Performance Assessment 04			◆																									
Terminal Fury 13			▲																									
Global Lightning 13			▲																									
Electrical Power Distribution Upgrade Two Quadrants			✦	✦																								
Emergency Lighting System Replacement			✦	✦																								
GTD-04e (DT) (System Ground Test)			◆																									
FTP-08 (PATRIOT Intercept Flight Test)			◆																									
GTD-04e (VV&A) (System Ground Test)			◆																									
GTI-04e (OT) (System Ground Test)			◆																									
GTD-04e (OT) (System Ground Test)			◆																									

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD22 / <i>Missile Defense Integration and Operations Center (MDIOC)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
HVAC repair and sustainment (OSC, BNOSC)	3	2017	4	2017
Power distribution in one quadrant (Test)	2	2017	3	2017
Environmental protection/greening (replace evaporative cooler - 1 unit)	3	2017	4	2017
Increase Ethernet to meet MDA 10GB capacity (Test)	3	2017	4	2017
Power distribution in two quadrants (Data Center, OSC, BNOSC, MCCF)	1	2014	4	2014
Install 60 percent of high capacity network fiber cable in MDIOC (Backbone)	1	2014	4	2014
Power distribution in two quadrants (C2BMC and Modeling & Sim)	1	2018	4	2018
AST-14 (Israeli Cooperative Intercept Flight Test)	1	2014	4	2014
Fire/Safety Compliance	2	2016	3	2016
Power distribution in one quadrant (MDSDC)	2	2017	3	2017
HVAC repair and sustainment (Data Center)	1	2015	4	2015
Install remaining high capacity network fiber cable in MDIOC (Backbone)	2	2015	3	2015
Install 100 percent of high capacity network fiber cable in MDIOC (Sonnet ring - Mission Areas) Completes network fiber installation	1	2015	4	2015
Increase quadrant communication rooms Power and HVAC capacity (TEST)	2	2017	3	2017
Global Thunder 13	1	2013	1	2013
Increase Ethernet to meet MDA 10GB capacity (Ops)	2	2015	3	2015
GTI-04e (VV&A) (System Ground Test)	1	2013	1	2013
Vigilant Shield 13	1	2013	1	2013
FTO-01 (Aegis/THAAD/Patriot Multiple Engagement Flight Test)	3	2013	3	2013
FTM-21 E1 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Simulated Intercept), E3 (Intercept)	3	2013	3	2013
GTI-04e (DT (System Ground Test)	1	2013	1	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD22 / <i>Missile Defense Integration and Operations Center (MDIOC)</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
FTX-19 E1 (Aegis Simulated Intercept Flight Test)	3	2013	3	2013
FTM-22 E2 (Aegis Intercept Flight Test)	3	2013	3	2013
PA-04 Performance Assessment 04	3	2013	3	2013
Terminal Fury 13	3	2013	3	2013
Global Lightening 13	3	2013	3	2013
Electrical Power Distribution Upgrade Two Quadrants	3	2013	4	2013
Emergency Lighting System Replacement	3	2013	4	2013
GTD-04e (DT) (System Ground Test)	4	2013	4	2013
FTP-08 (PATRIOT Intercept Flight Test)	4	2013	4	2013
GTD-04e (VV&A) (System Ground Test)	4	2013	4	2013
GTI-04e (OT) (System Ground Test)	4	2013	4	2013
GTD-04e (OT) (System Ground Test)	4	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MC22 / <i>Cyber Operations</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MC22: <i>Cyber Operations</i>	-	-	0.534	0.537	-	0.537	0.482	0.472	0.635	0.651	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
Project MC22 is a new Defensive Cyber Operations Project established in this Program Element (PE) for PB 2014. Funds were previously reported in Project MD22 of this PE.

A. Mission Description and Budget Item Justification
The Missile Defense Integration and Operations Center (MDIOC) conducts Cyber Defensive Operations through Key Management Infrastructure and Information Assurance Training which interfaces with the Information Technology/Information Assurance Enterprise to provide secure communications, network health and status monitoring, mission critical restoral capability, and technical expertise.

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

	FY 2013	FY 2014	FY 2015
Title: Cyber Defensive Operations	-	0.534	0.537
Articles:	-	-	-
Description: The Missile Defense Integration and Operations Center (MDIOC) conducts Defensive Cyber Operations in the following categories:			
FY 2013 Accomplishments: N/A			
FY 2014 Plans: Key Management Infrastructure			
- The MDIOC interfaces with the Information Technology/Information Assurance Enterprise to provide for the generation, production, control and distribution, and training for utilizing the keying material used with the Agency's cryptographic devices.			
Information Assurance Training			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MC22 / <i>Cyber Operations</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>- The MDIOC maintains an Information Assurance (IA) certified workforce through continuous IA training as required by DoD Directive 8570.</p> <p>FY 2015 Plans: Key Management Infrastructure</p> <p>- The MDIOC interfaces with the Information Technology/Information Assurance Enterprise to provide for the generation, production, control and distribution, and training for utilizing the keying material used with the Agency's cryptographic devices.</p> <p>Information Assurance Training</p> <p>- The MDIOC maintains an Information Assurance (IA) certified workforce through continuous IA training as required by DoD Directive 8570</p>				
Accomplishments/Planned Programs Subtotals		-	0.534	0.537
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				
E. Performance Metrics				
N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MC22 / <i>Cyber Operations</i>
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Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Cyber Defensive Operations - Cyber Defensive Operations	C/CPAF	MDIOC/Northrop Grumman Mission Systems : Colorado Springs, CO	0.000	-		0.534	Nov 2013	0.537	Nov 2014	-		0.537	Continuing	Continuing	Continuing
Subtotal			0.000	-		0.534		0.537		-		0.537	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	0.534	0.537	-	0.537	-	-	-

Remarks
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	2.841	3.026	2.738	3.388	-	3.388	3.040	3.861	3.641	3.958	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

N/A

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of Missile Defense Agency (MDA) functions and activities across the entire Ballistic Missile Defense System (BMDS). It includes Government Civilians, Contract Support Service, and Federally Funded Research and Development Center (FFRDC) 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, such as physical and technical security, legal services, travel and agency training, office and equipment leases, utilities, data and unified communications support, supplies and maintenance, materiel and readiness and central property management of equipment, and similar operating expenses. Also includes legal settlements. In keeping with congressional intent, Program Wide Support 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 2013	FY 2014	FY 2015
Title: Program Wide Support	3.026	2.738	3.388
Articles:	-	-	-
Description: N/A			
FY 2013 Accomplishments: See paragraph A: Mission Description and Budget Item Justification			
FY 2014 Plans: See paragraph A: Mission Description and Budget Item Justification			
FY 2015 Plans: See paragraph A: Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	3.026	2.738	3.388

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603904C / <i>Missile Defense Integration and Operations Center (MDIOC)</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Wide Support - Agency Facilities, Operations, and Maintenance	MIPR	Various : Multi: AK, AL, CA, CO, VA	2.600	2.701		-		-		-		-	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various : Multi: AL, CA, CO, VA	0.241	-		0.045		0.556		-		0.556	0.241	1.083	-
Program Wide Support - Agency Operations and Support Services	Reqn	Various : Multi: AK, AL, CA, CO, VA	0.000	0.325		2.693	Dec 2013	2.832	Nov 2014	-		2.832	Continuing	Continuing	Continuing
Subtotal			2.841	3.026		2.738		3.388		-		3.388	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.841	3.026	2.738	3.388	-	3.388	-	-	-

Remarks
N/A