Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*							
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	36.693	80.723	297.375	-	297.375	267.505	285.529	326.073	354.190	Continuing	Continuing
MD10: *Precision Tracking Space System (PTSS)*	35.630	74.132	282.283	-	282.283	256.544	277.704	308.787	328.663	Continuing	Continuing
MD40: *Program-Wide Support*	1.063	6.591	15.092	-	15.092	10.961	7.825	17.286	25.527	Continuing	Continuing

Note

N/A

A. Mission Description and Budget Item Justification

Space-based sensors offer on-demand, geographically independent and persistent coverage of areas of specific concern for ballistic missiles with no need for indications and warning. Space-based sensors also expand the battle space of all BMD ships operating in the northern hemisphere with increased raid size handling and threat range capability. With the successful launch of two Space Tracking & Surveillance System (STSS) demonstration satellites in 2009, the agency has assets on-orbit to validate remote sensor and fire control integration and inform the design and operation of the Precision Tracking Space System (PTSS).

The PTSS is a space and ground segment system that will provide persistent sensor coverage of enemy ballistic missiles. The PTSS is designed to be an integrated part of the BMDS: one that receives cues from all acquisition sensors and provides outputs to the BMDS battle manager & missile systems. The program mitigates cost, schedule and performance risk by: 1) simplifying the design by focusing on the BMDS mission, 2) incorporating components and subsystems with high technology readiness levels and on-orbit pedigrees and 3) involving industry and the military services up front & early to inform the design for producibility, operations and sustainment.

The PTSS has inherent capability for other missions such as Space Situational Awareness. The agency expects that capability to be exploited by the joint warfighter when the PTSS is not engaged in a missile defense mission.

The Combatant Commands and Services have a need for a persistent ability to provide fire-control quality tracking of a raid of ballistic missiles over their entire trajectory for both homeland and regional defense scenarios, specifically, improve birth-to-death tracking, identification, and targeting, including the capability to detect, track, discriminate and counter large, dense raids, and structured attacks. Overhead Persistent Infrared (OPIR) systems acquire and track the boost and early post-boost phases of a missile`s trajectory, but the PTSS is required to continue to track ballistic missiles through their accent, apogee, and until they reenter into the earth`s atmosphere.

Goals and objectives for the PTSS are:

-Develop an operational missile tracking capability from space, which will close the BMDS fire control loop, specifically the Aegis Ballistic Missile Defense and Ground Based Interceptor weapon systems, by way of the BMDS battle manager.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*

-Reduce operational, fire control risk by co-locating the national lab design teams for PTSS and Aegis Ballistic Missile Defense, and by embedding US Navy and US Air Force operations and sustainment experts in the PTSS hybrid program office.
-Focus on tracking raids of regional Medium-Range Ballistic Missiles, Intermediate-Range Ballistic Missiles and Intercontinental Ballistic Missiles from today`s regional threats.
-Develop and test the developmental satellite articles and the integrated ground system with the BMDS.
-Ensure early industry involvement by awarding contracts to join the Integrated Systems Engineering Team (ISET) during the developmental satellite article design. Six Industry partners (Ball, Boeing, Lockheed Martin, Northrop Grumman, Orbital, and Raytheon) contribute to the national lab development effort to improve the Precision Tracking Space System design for manufacturability and reduce the production risk.
-Use data from the on-orbit Space Tracking & Surveillance System (STSS) demonstration satellite testing events
-Benchmark models and simulations.
-Allocate requirements, interface controls, and evaluate operations concepts.
-Leverage experience gained from STSS test events to demonstrate capability and insight into Command, Control, Communication, Computers, Intelligence, Surveillance, and Reconnaissance linkages and hand off to the Aegis Ballistic Missile Defense fire control system.
-Develop a government owned design to foster production competition over the life of the program.

The Precision Tracking Space System (PTSS) contributes to defense of the U.S. Homeland and regional, missile defense, including large raid protection.

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

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	66.969	160.818	272.881	-	272.881
Current President's Budget	36.693	80.723	297.375	-	297.375
Total Adjustments	-30.276	-80.095	24.494	-	24.494
• Congressional General Reductions	-0.250	-0.095			
• Congressional Directed Reductions	-	-80.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-30.000	-			
• Reprogrammings	-0.026	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-	-	24.494	-	24.494

Change Summary Explanation

The launch of the developmental satellites is 4Q FY 2017, a 12-month change from the date reported in the FY 2012 President`s Budget. The Precision Tracking Space System (PTSS) schedule was affected by several fact-of-life events, namely:

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*

-The seven-month continuing resolution in FY 2011 that restricted PTSS development to only those activities that were authorized in FY 2010.
-The FY 2011 decrease of $30M reflects a congressional reduction (Department of Defense and Full Year Continuing Appropriation Act, FY 2011 (Public Law 112-10)).
-The FY 2012 decrease of $80M reflects a congressional reduction (Consolidated Appropriation Act of FY 2012 (Public Law 112-74)).
-The FY 2013 increase reflects realignment of DoD priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD10: *Precision Tracking Space System (PTSS)*	

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
MD10: *Precision Tracking Space System (PTSS)*	35.630	74.132	282.283	-	282.283	256.544	277.704	308.787	328.663	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

This Program Element funds the development of a space-borne sensor constellation and ground system that closes the fire control loop with the BMDS shooters, specifically the Aegis Ballistic Missile Defense and Ground Based Interceptor weapon systems, by way of the BMDS battle manager. The PTSS also focuses on tracking large raids of regional Medium-Range Ballistic Missiles, Intermediate-Range Ballistic Missiles and Intercontinental Ballistic Missiles from today`s regional threats. As threats expand and mature the need for continuously available sensors and faster interceptors supports continued investment in a PTSS development in FY 2013. Lessons learned from the two Space Tracking & Surveillance System demonstration satellites currently on orbit are guiding our decisions on the development of a fiscally sustainable, continuously available, operational precision track space sensor constellation and ground system.

The PTSS provides the effectiveness of a highly available early missile tracking capability from space by developing, launching and operating a pair of developmental satellite articles using an integrated ground control system in FY 2017. The PTSS developmental satellite articles will demonstrate early, precise, real-time tracking of ballistic missiles to close the BMDS fire control loop from space. This capability significantly improves BMDS performance by effectively expanding the threat engagement range of all BMD ships operating in the northern hemisphere.

The PTSS avoids some of the challenges of terrestrial and airborne sensors.

-Provides reliable and constantly available ballistic missile tracking capability in the areas of the world of most concern.
-Eliminates the need for host nation agreements.
-Does not require transport to theater or limit our operational flexibility.
-Mitigates the impacts of weather effects (clouds, crosswinds and icing for airborne, and rain for radar).
-Deals with threats arising from unexpected locations or adversaries.
-Greatly lowers operation and maintenance costs.
-Observes and tracks launches beyond the range of airborne and terrestrial sensors.

PTSS supports essential BMDS functions by:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604883C: *Precision Tracking Space System*	**PROJECT** MD10: *Precision Tracking Space System (PTSS)*

-Continuously observing the U.S. Homeland regional and rogue ballistic missile threat in post-boost.
-Sending fire-control quality tracks to the BMDS shooters, specifically the Aegis Ballistic Missile Defense and Ground Based Interceptor weapon systems, by way of the BMDS battle manager.
-Tracking large raids of nearly simultaneously launched missiles.
-Providing radiometric data supporting challenging post-boost detection requirements, object classification, and hit/kill assessments.
-Adding infrared-based tracking to the existing radio frequency sensors in the architecture for dual phenomenology.
-Providing coverage of the geographic regions and latitudes of concern.
-Contributing modeling and simulation (M&S) emulation models to the BMDS-level M&S environment. The Precision Tracking Space System models, when added to M&S products from other BMDS elements and advanced technology projects, will facilitate trade studies and analyses for SM3-IIB development.

The PTSS team capitalizes on expertise from external organizations to aid the design process:

-US Air Force. The USAF, as lead service for the PTSS, provides operations and sustainment strategies and concepts to ensure the ground and space segments can be easily transferred to a service. The USAF has embedded its personnel in the PTSS hybrid program office to facilitate this function.
-US Navy. The USN, as operator of the Aegis Ballistic Missile Defense weapon system, is providing assured communications and weapon system expertise so that the PTSS can effectively close the fire control loop from space. To the same end, the USN will embed its personnel in the PTSS hybrid program office.
-Johns Hopkins University Applied Physics Laboratory (JHU/APL). As both the lead performer on the PTSS and design expert for the Aegis Ballistic Missile Defense weapon system, JHU/APL shortens the communications chain by leveraging the collocation of its two design teams. JHU/APL allows the government to manage BMDS interface changes effectively throughout the development articles and maintain intellectual property within the government for future competition.

The launch of the developmental satellites is 4Q FY 2017, a 12-month change from the date reported in the FY 2012 President`s Budget. The PTSS schedule was affected by several fact-of-life events, namely:

-The seven-month continuing resolution in FY 2011 that restricted PTSS development to only those activities that were authorized in FY 2010.
-An appropriation reduction of $30M (45%) in the FY 2011 spending bill that limited the pace of activities in the first year as a program of record.
-A continuing resolution in FY 2012 that held back the pace of development to that of the appropriated FY 2011 program.
-An appropriation reduction of $80M (50%) in FY 2012 that will further slow planned activities in FY 2012.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Precision Tracking Space System	35.630	74.132	282.283
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD10: *Precision Tracking Space System (PTSS)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Completed trades, alternatives analysis, technology readiness assessment, and concept review for PTSS -Conducted systems engineering efforts to allocate performance between the space segment and ground segment -Determined location of PTSS ground entry points and interfaces to the BMDS -Defined and documented internal and external interfaces including track quality and timeliness requirements for successful Command and Control, Battle Management and Communications and sensor integration -Allocated functions among major components (satellite, ground station, and command and control) -Defined feasible system implementation to meet requirements including establishing technical trades Conducted integrated fire-control risk reduction activity with software-in-the-loop testing initially, but moving towards more complicated hardware-in-the-loop testing -Conducted System Requirements Review / System Design Review-1 -Awarded 6 subcontracts to industry (Ball, Boeing, Lockheed Martin, Northrop Grumman, Orbital, and Raytheon) to join the Integrated Systems Engineering Team (ISET) during developmental satellite article design for manufacturability and producibility analyses -Completed joint AFSPC / MDA study on the use of the PTSS design for Space Situational Awareness (SSA)			
FY 2012 Plans: -Complete the requirements and conceptual designs for subsystems in the satellite bus, optical payload and communications payload -Complete conceptual design of the ground entry point; begin procurement and equipment installation to support 2014 segment test -Complete conceptual design of engineering models for satellite bus, optical payload and communications payload -Complete initial test bed approach for the space segment (satellite bus, optical payload and communications payload) -Complete baseline mission trajectory design -Complete preliminary architect-engineer (A-E) design of the PTSS ground segment components necessary to support developmental article testing -Jointly with the Air Force, evaluate options for warfighter tasking and data processing to take advantage of the inherent capability of PTSS for other missions, such as SSA			
FY 2013 Plans: -Characterize and obtain measurements from the breadboard models of the optical tracking and communications payload subassemblies -Complete preliminary design for subsystems in the satellite bus, optical payload and communications payload -Develop initial test beds for system components including command and data handler, communication payload data handler, optical payload data processing unit and communications crosslinks -Complete first-pass of focal plane array (FPA) read-out integrated circuits and detectors; deliver the FPA prototype			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604883C: *Precision Tracking Space System*	**PROJECT** MD10: *Precision Tracking Space System (PTSS)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Breadboard optical payload sensor cold-box subsystem -Complete primary manufacturing and production readiness studies with the ISET -Complete final Ballistic Missile Defense system test plan for flight and ground elements -Complete PTSS to C2BMC ICD functional and physical interface definitions (signed ICD) -Complete system preliminary design review -Complete architecture and engineering of PTSS Ground Entry Point (GEP)			
Title: FY 2010 Accomplishments ***Articles:*** ***Description:*** See Description Below ***FY 2011 Accomplishments:*** NA ***FY 2012 Plans:*** NA ***FY 2013 Plans:*** NA	- 0	- 0	- 0
Accomplishments/Planned Programs Subtotals	35.630	74.132	282.283

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
• 0603175C: *Ballistic Missile Defense Technology*	92.617	74.920	79.975		79.975	81.388	115.427	133.742	136.654	Continuing	Continuing
• 0603890C: *BMD Enabling Programs*	401.113	415.048	362.711		362.711	339.197	373.346	395.350	394.085	Continuing	Continuing
• 0603892C: *AEGIS BMD*	1,530.767	988.928	992.407		992.407	960.870	950.097	1,030.201	958.680	Continuing	Continuing
• 0603893C: *Space Tracking & Surveillance System*	105.580	96.232	51.313		51.313	45.355	32.423	34.195	35.087	Continuing	Continuing
• 0603896C: *Ballistic Missile Defense Command and Control, Battle Management & Communication*	454.440	363.640	366.552		366.552	376.116	383.055	358.431	364.725	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD10: *Precision Tracking Space System (PTSS)*

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: *Ballistic Missile Defense Test*	0.000	487.699	454.400		454.400	420.357	446.542	373.395	421.632	Continuing	Continuing
• 0603915C: *Ballistic Missile Defense Targets*	0.000	454.357	435.747		435.747	475.175	505.591	406.931	485.950	0.000	2,763.751

D. Acquisition Strategy

-PTSS will leverage the technical expertise of Federally Funded Research and Development Centers, University Affiliated Research Centers, National and DoD Laboratories.

-A national lab team will develop the PTSS development satellites and ground segment in a nonproprietary environment; that government owned design will foster production competition over the life cycle of the program. The team is comprised of Johns Hopkins University Applied Physics Laboratory, Department of Energy`s Sandia National Laboratories, Utah State University`s Space Dynamics Laboratory, Massachusetts Institute of Technology Lincoln Laboratory and the Naval Research Laboratory. The development article effort will define the system performance of the production system. MDA will discourage subcontractors and suppliers on the development program from establishing exclusive teaming arrangements with potential bidders on the production program to maximize competition on the production program source selection. Once system performance is established through test, the Development Articles will by transitioned by the government, with the national laboratory team technical support, to the Air Force as lead service.

-PTSS awarded contracts to incorporate industry early in the laboratory-led phase via the PTSS ISET. Industry examined candidate system, subsystem and component designs for manufacturing and producibility and provided feedback to inform the overall design.

-The acquisition strategy for the launch of PTSS satellites is to competitively award launch vehicle and launch services contracts. MDA plans to use the Air Force as the contracting entity for PTSS launch vehicles and services. The first two development satellites are compatible with the existing Evolved Expendable Launch Vehicle (EELV) class of launch vehicles and future satellites will be compatible with multiple launch vehicles, including EELV-class and others as they become available in the commercial marketplace.

-For production of the constellation, we will fully, openly, and competitively award a contract with industry between Preliminary Design Review and Critical Design Review. It is projected that industry participants on the ISET will be among the bidders in the production competition in an acquisition strategy that will mitigate the transition risk to industry.

-To take advantage of commercial advances in space-qualified parts and satellite subsystems as well as industry`s own production processes, MDA expects industry to adapt and transition the development satellite design into the production design as well as facilitate testing and on-orbit check out prior to a production decision.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD10: *Precision Tracking Space System (PTSS)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Precision Tracking Space System Space and Ground Segment	Various	Various:Various	32.066	61.393	Jan 2012	263.076	Jan 2013	-		263.076	Continuing	Continuing	Continuing
		Subtotal	32.066	61.393		263.076		-		263.076			

Remarks

None.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Remarks

None.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Remarks

None.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Precision Tracking Space System MDA Civilians	Allot	MDA:Various	0.574	2.635	Jan 2012	3.832	Jan 2013	-		3.832	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD10: *Precision Tracking Space System (PTSS)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Precision Tracking Space System OGA Civilians	MIPR	NRL:Washington, D.C.	0.360	0.360	Jan 2012	0.371	Jan 2013	-		0.371	Continuing	Continuing	Continuing
Precision Tracking Space System Travel and Transportation	Allot	MDA:Various	0.068	0.195	Jan 2012	0.227	Jan 2013	-		0.227	Continuing	Continuing	Continuing
Precision Tracking Space System Contractor Support Services	C/CPFF	MDA:Various	2.562	8.295	Jan 2012	13.485	Jan 2013	-		13.485	Continuing	Continuing	Continuing
Precision Tracking Space System FFRDC	MIPR	Aerospace:Various	-	1.254	Jan 2012	1.292	Jan 2013	-		1.292	Continuing	Continuing	Continuing
		Subtotal	3.564	12.739		19.207		-		19.207			

Remarks

None.

	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	35.630	74.132		282.283		-		282.283			

Remarks

None.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604883C: *Precision Tracking Space System*	**PROJECT** MD10: *Precision Tracking Space System (PTSS)*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604883C: *Precision Tracking Space System*	**PROJECT** MD10: *Precision Tracking Space System (PTSS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Space Situational Awareness Joint Study Complete	1	2011	1	2011
Integrated System Engineering Team Contract Awards	2	2011	2	2011
Precision Tracking Space System Developmental Article Initiation	2	2011	2	2011
Developmental Article System Requirements Review-1	2	2011	2	2011
Optical Payload Study Complete	1	2012	1	2012
Developmental Article System Requirements Review-2	4	2012	4	2012
Technology Development Decision	4	2012	4	2012
Optical Payload Breadboard Subassemblies Complete	3	2013	3	2013
Developmental Article Preliminary Design Review	4	2013	4	2013
Ground Segment Component Implementation	4	2013	2	2016
Product Development Decision	1	2014	1	2014
OPIR Cue to Track Algorithms Complete	3	2014	3	2014
Production Preparation Decision	2	2014	2	2014
Production Preparation Contract Award	3	2014	3	2014
Developmental Article Critical Design Review	4	2014	4	2014
Optical Payload Engineering Model Complete	4	2014	4	2014
Satellite Flight Fabrication Complete	2	2015	2	2015
Subsystem Algorithms Integrated Complete	2	2015	2	2015
Long Lead Authorization	4	2015	4	2015
Optical Payload Flight Assembly Complete	1	2016	1	2016
Communications Payload Flight Assembly Complete	1	2016	1	2016
Satellite Assembly Complete	2	2016	2	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604883C: *Precision Tracking Space System*	**PROJECT** MD10: *Precision Tracking Space System (PTSS)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Ground Segment Component Complete	2	2016	2	2016
Pre-Environmental Review	3	2016	3	2016
Pre-Ship Review	3	2017	3	2017
Developmental Articles Launch	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD40: *Program-Wide Support*	

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: *Program-Wide Support*	1.063	6.591	15.092	-	15.092	10.961	7.825	17.286	25.527	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 increases as a result of increases to the Precision Tracking Space System.

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of 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 Centers (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 (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	1.063	6.591	15.092
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	1.063	6.591	15.092

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604883C: *Precision Tracking Space System*	PROJECT MD40: *Program-Wide Support*

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A