Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0208006F / *Mission Planning Systems*							
COST ($ in Millions)	**Prior Years** (+)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	0.660	55.432	60.679	55.835	-	55.835	78.323	75.567	75.113	87.771	Continuing	Continuing
675302: *Precision Aerial Delivery Systems (PADS)*	0.000	4.299	6.972	7.390	-	7.390	10.567	8.937	3.710	5.065	Continuing	Continuing
675380: *Mission Planning Systems (MPS) Modernization*	0.000	51.133	53.707	48.445	-	48.445	67.756	66.630	71.403	82.706	Continuing	Continuing
Program MDAP/MAIS Code: N35												

(+) The sum of all Prior Years is $0.660 million less than the represented total due to several projects ending

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapons, cargo, passenger, and/or fuel delivery, calculate fuel requirements, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print, and brief the mission plan; and download pertinent flight information to on-board aircraft avionics.

The Mission Planning Systems (MPS) program is a collaborative program with the Army and Navy to leverage technical solutions and business practices for all Department of Defense (DoD) platforms. It provides automated mission planning tools and support for fixed and rotary wing aircraft and guided munitions. It replaces two closed architecture legacy mission planning systems (UNIX-based MPS (UNIX-MPS) and the PC-based Portable Flight Planning Software (PFPS)), with a single multi-service open architecture system more commonly referred to as the Joint Mission Planning System (JMPS). MPS will compress the mission planning cycle by providing an improved integrated planning environment, reducing the time required to respond to changing situations and urgent needs such as striking time sensitive/ critical targets and conducting combat search and rescue. MPS products have the potential to support all DoD fixed-wing and rotary-wing aircraft and will be shared with other AF programs as well as the Army and Navy. MPS will deliver significant benefits to command and control performance by enhancing information superiority for the warfighter and by providing unique capabilities in support of both precision engagement and dominant maneuver.

The Mobility Air Force Automated Flight Planning Service (MAFPS) component of MPS will provide a centralized, net-centric global mobility mission flight planning capability. This capability will provide significant fuel savings through automated flight route optimization utilizing aircraft performance, air traffic management, weather, and other data.

In addition to the above, elements of Mission Planning Systems will be utilized to continue development of a Joint Precision Airdrop System - Mission Planning(JPADS-MP) in conjunction with the Army. The JPADS capability provides a planning and execution capability for DoD airdrop requirements. It is the primary airdrop mission planning and execution system for all ballistic airdrop mission as well as precision guided airdrops that are required when the mission profile or surface-to-air threat assessment warrants a high-altitude and/or standoff precision delivery. JPADS-MP enables high-altitude, precise airdrop delivery to forward ground forces, mitigating

surface-to-air threats, reducing risk of Improvised Explosive Device (IED) and insurgent attack on ground convoys. JPADS allows the warfighter to consider weather, terrain, aircraft capabilities, threat, etc. to accurately deliver payloads to keep the warfighter supplied and in the fight.

FY16 funding will continue the MPS software development program. It will develop pre and in-flight mission planning capabilities for Air Force aircraft and weapons migrating from legacy mission planning systems to the Joint Mission Planning System (JMPS) as well as continuing to update Air Force weapon systems that have already migrated to JMPS. These weapon systems include, but are not limited to the: A-10, B-1B, C-5, C-17, C-130, HC-130, EC-130, E-3, E-8, F-15, F-16, F-22A, RC-135, HH-60, and their associated weapons (e.g. Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM), Joint Air-to-Surface Standoff Munitions (JASSM), etc.). FY16 funding will also continue the development of MAFPS to realize fuel savings and other efficiencies. Additionally, it will continue the development of JPADS-MP airdrop software (and other system components) to provide a precision airdrop capability for the C-17, C-130, and other selected platforms as necessary.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	62.432	60.679	65.701	-	65.701
Current President's Budget	55.432	60.679	55.835	-	55.835
Total Adjustments	-7.000	-	-9.866	-	-9.866
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-5.050	-			
• SBIR/STTR Transfer	-1.950	-			
• Other Adjustments	-	-	-9.866	-	-9.866

Change Summary Explanation

FY14 RDT&E includes reprogramming actions of 5.05M to support JSTARS RECAP ($4.55M) and GSIN ($.5M) development programs
FY16 RDT&E reduced $9.0M for higher Air Force priorities
FY16 RDT&E funding request was reduced by $.5M to account for the availability of prior execution balances.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208006F / *Mission Planning Systems*	Project (Number/Name) 675302 / *Precision Aerial Delivery Systems (PADS)*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675302: *Precision Aerial Delivery Systems (PADS)*	-	4.299	6.972	7.390	-	7.390	10.567	8.937	3.710	5.065	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on multiple inputs including threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirement and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print and brief the plan; download pertinent flight information to on-board aircraft avionics; and, conduct dynamic/in-flight replanning as applicable.

This project continues the development of a Joint Precision Airdrop System-Mission Planner (JPADS-MP) Phase I capability in conjunction with the Army. JPADS provides a planning and execution capability for DoD airdrop requirements. It is the primary airdrop mission planning and execution system for all ballistic airdrop missions as well as precision guided airdrops that are required when the mission profile or surface-to-air threat assessment warrants a high-altitude and/ or standoff precision delivery. It enables high-altitude, precise airdrop delivery to forward ground forces, mitigating surface-to-air threats, reducing risk of Improvised Explosive Devices (IEDs) and insurgent attack on ground convoys. JPADS allows the warfighter to consider weather, terrain, aircraft capabilities, threat, etc., to accurately deliver payloads to combat and other friendly forces.

The Consolidated Airdrop Tool (CAT) is the key JPADS-MP software deliverable. It will increase the accuracy of airdrop mission planning by improving aircraft, payload, and chute specific calculations along with weather analysis visualization tools specifically adapted for airdrop. Future initiatives are designated to achieve automation of airdrop planning and execution to reduce task saturation in the cockpit and support AMC's objective of moving to a two man cockpit. These efforts include, but are not limited to the ability to automatically receive and use real-time winds in any location, calculation of a release point and airdrop in a single pass, the ability to conduct real-time objective area analysis to calculate probable damage estimates and execute dynamic re-tasking, the ability to conduct post-drop assessments, implementation of new technologies (e.g. Service Oriented Architecture (SOA) Touch Screen environment. In addition and in support of these objectives, the AFRL-led Precision Airdrop (PAD) Flagship Capability Concept (FCC) effort will transition technology capabilities (including but not limited to Bundle Tracking, Forced Exit release point computations, data from Autonomous Weather Sensing, Humanitarian Airdrop release point computations, and improved Airdrop Performance data) to the JPADS-MP PoR and into various CAT software release/deliverables. The PAD FCC is also charged with updating airdrop platforms and airdrop related systems to improve accuracy across all airdrop mission types. Following capabilities planned for development within the JPADS-MP program, include but are not limited to:

Development, testing and incorporation of updates to Wireless Gate Release System (WGRS), use the digital terrain data on the mission planning laptop, the Local Area Prediction System (LAPS), Airdrop Damage Estimate (ADE), Operating System/Standard, migration to the new Mission Planning Systems (MPS) Capability (JMPS), combination airdrop, support of new map projections including polar stereographic, Touch Screen (Tablet) User Interface, Advanced Launch Acceptable Range (LAR), Advanced Guidance Failure Footprints, Drogues and Wireless Activation Device (WAD), Automation and Health Status/Monitoring, Autonomous Guidance Unit (AGU)

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675302 / *Precision Aerial Delivery Systems (PADS)*

Data Transfer updates, bundle tracking, Service Oriented Architecture (SOA) to enable seamless data communication between devices, secondary point of impact for cargo airdrop, forced exit, humanitarian airdrop, support for ParaNavSys, Dropsonde Optimization, transference of wind along a flight path, replacement of weather assimilation engine with Kalman Filter, weather analysis and visualization, use of ensemble weather, new chute configurations and aerial guidance units, updates to ballistics data and dispersion models, implementation of new weather observation sources (i.e. Light Detection and Ranging (LIDAR) and RADAR sensing capabilities) for real-time weather, support for structured Wifi network, simulator and rehearsal mode for Aircraft WSTs, ingest navigation, weather and flight performance data from the aircrafts data bus, workflow enhancements to reduce task saturation, OS/SDC updates, and implementation of human effectiveness improvements.

FY16 funding continues development and testing in preparation for fielding of CAT v3.2 software to provide precision and conventional airdrop capabilities including Airdrop Damage Estimate (ADE), Combination Airdrop, Personnel Airdrop, Unified Mission Configuration Editor, Falconview Overlays and Advanced LAR and Failure Footprints for AF and other services (e.g. the Army) aircraft platforms. FY16 also begins effort to migrate CAT to a JMPS Framework.

This program is in Budget Activity 7, Operational System Development, which includes development efforts to upgrade systems that have been fielded or have received approval for full rate production, and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: JPADS-MP Phase I	4.299	6.972	7.390
Description: Continues development of a JPADS capability for precise, high altitude delivery of material to forward ground forces.			
FY 2014 Accomplishments: Phase I: Completed fielding of CAT v2.2 and CAT v3.0. Continued CAT v3.x development. Also continued prototyping, development and integration of weather forecast and analysis tools (customized for precision airdrop) and integration of an Airdrop Damage Estimate (ADE) tool for improved planning. Efforts also included revising the work-flow of the software. Started development of CAT v4.x activities to expand precision airdrop capabilities for accurate calculation and developing calculations and capabilities for combination airdrop for personnel and heavy equipment. Efforts also included the migration of airdrop software to a JMPS framework.			
FY 2015 Plans: Phase I: Complete development and test of CAT v3.2 for fielding in FY16. Will continue CAT 4.x development activities to migrate CAT to a JMPS Framework and expand precision airdrop capabilities for accurate calculation of established operational requirements which include support for advanced failure footprints for guided delivery systems, assessment of airdrop damage estimates based on inflight constraints identified by the aircrew during improved container delivery system (CDS) airdrops, new 45ft parachute for High Speed CDS airdrops, Launch Acceptable Range calculation for Ultra-Light Weight guided delivery systems, 2K Halo, Mass CDS, Bundle Tracking, and improved user workflows. Will also initiate CAT 5.x competition for projected award in 1st QTR FY16 to continue evolution of CAT S/W into an automated suite of airdrop mission tools.			
FY 2016 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675302 / *Precision Aerial Delivery Systems (PADS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Phase I: Field CAT v3.2. Will continue CAT 4.x development activities to migrate CAT to a JMPS Framework and expand precision airdrop capabilities for accurate calculation of established operational requirements. Will also initiate CAT 5.x competition for projected award in 1st QTR FY16 to continue evolution of CAT S/W into an automated suite of airdrop mission tools. Projected CAT v5.x capabilities include, but are not limited to, mission rehearsal and simulation, replacement of the weather assimilation engine with a dedicated Kalman Filter, implementation of Ensemble Weather for support of single pass airdrop, improved accuracy of airdrop solutions and Airdrop Damage Estimate as well as Humanitarian Airdrop, Automation features and SOA optimization.			
Accomplishments/Planned Programs Subtotals	4.299	6.972	7.390

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833170: *Mission Planning Systems*	6.725	8.400	6.581	-	6.581	6.074	5.882	6.449	6.565	Continuing	Continuing

Remarks

D. Acquisition Strategy

PADS utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network-centric, mission planning system tailored for numerous Air Force platforms using competition and multiple contract vehicles.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208006F / *Mission Planning Systems*	Project (Number/Name) 675302 / *Precision Aerial Delivery Systems (PADS)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	MIPR	TYBRIN : Ft Walton Beach, FL	0.000	3.043	Nov 2013	5.969	Nov 2014	6.189		-		6.189	Continuing	Continuing	TBD
Systems Engineering and Integration	C/CPAF	SAIC : McLean, VA	0.000	0.982	Nov 2013	0.832	Nov 2014	0.650		-		0.650	Continuing	Continuing	TBD
		Subtotal	0.000	4.025		6.801		6.839		-		6.839	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Engineering	C/T&M	SEI : Pittsburgh, PA	0.000	-	Nov 2013	-	Nov 2014	-		-		-	Continuing	Continuing	TBD
Cost Estimating	C/T&M	Tecolote Inc : Bedford, MA	0.000	0.047	Nov 2013	0.015	Nov 2014	-		-		-	Continuing	Continuing	TBD
		Subtotal	0.000	0.047		0.015		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Responsible Test Organization (RTO)	PO	46TW : Eglin AFB, FL	0.000	-	Nov 2013	-	Nov 2014	-		-		-	Continuing	Continuing	TBD
Certification and Accreditation	MIPR	JITC : Indian Head, MD	0.000	-	Jan 2014	-	Jan 2015	-		-		-	Continuing	Continuing	TBD
Type I Training	C/FP	Ogden Air Logistics Center : Hill AFB, UT	0.000	-	Nov 2013	0.074	Nov 2014	-		-		-	Continuing	Continuing	TBD
Field Representative Hardware	C/Various	Various : Various,	0.000	-	Nov 2013	-	Nov 2014	-		-		-	Continuing	Continuing	TBD
		Subtotal	0.000	-		0.074		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675302 / *Precision Aerial Delivery Systems (PADS)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Support	RO	MITRE Corp : Bedford, MA	0.000	-		-		-		-		-	Continuing	Continuing	TBD
Program Management Administration	Various	Various : Various,	0.000	0.227	Nov 2013	0.082	Nov 2014	0.551		-		0.551	Continuing	Continuing	TBD
		Subtotal	0.000	0.227		0.082		0.551		-		0.551	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	4.299		6.972		7.390		-		7.390	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675302 / *Precision Aerial Delivery Systems (PADS)*

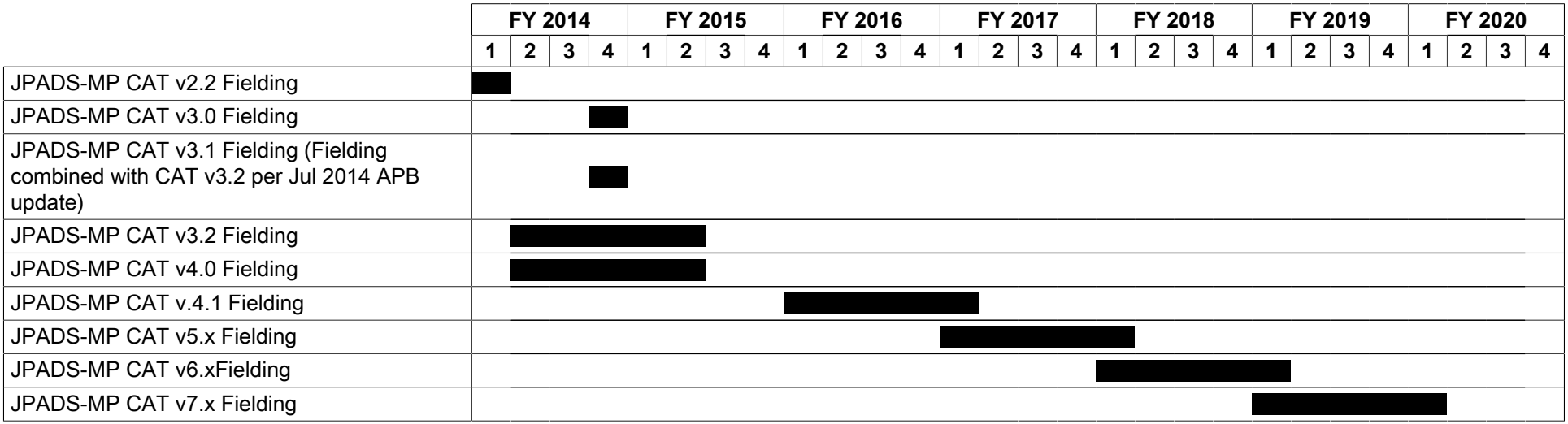

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675302 / *Precision Aerial Delivery Systems (PADS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JPADS-MP CAT v2.2 Fielding	1	2014	1	2014
JPADS-MP CAT v3.0 Fielding	4	2014	4	2014
JPADS-MP CAT v3.1 Fielding (Fielding combined with CAT v3.2 per Jul 2014 APB update)	4	2014	4	2014
JPADS-MP CAT v3.2 Fielding	2	2014	2	2015
JPADS-MP CAT v4.0 Fielding	2	2014	2	2015
JPADS-MP CAT v.4.1 Fielding	1	2016	1	2017
JPADS-MP CAT v5.x Fielding	1	2017	1	2018
JPADS-MP CAT v6.xFielding	1	2018	1	2019
JPADS-MP CAT v7.x Fielding	1	2019	1	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208006F / *Mission Planning Systems*	Project (Number/Name) 675380 / *Mission Planning Systems (MPS) Modernization*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675380: *Mission Planning Systems (MPS) Modernization*	-	51.133	53.707	48.445	-	48.445	67.756	66.630	71.403	82.706	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan(s) based on threats, targets, terrain, weather, aircraft performance capability and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapons, cargo, passenger, and/or fuel delivery, calculate fuel requirement, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft, review, print and brief the plan; and download pertinent flight information to on-board aircraft avionics.

This project focuses on modernizing MPS to support Combat Air Forces (CAF) and Mobility Air Forces (MAF), including the development, test and sustainment of Joint Mission Planning Environments (JMPEs) to support the B-1B, C-5, C-17, C-130, HC-130, EC-130, E-3, E-8, F-15, F-16, F-22A, KC-10, KC-46, KC-135, RC-135, other platforms, and all common component (CCs)software tools currently approved as necessary for mission requirements. Activities also include studies and analysis to support both current program planning and execution and future program planning. MPS Modernization efforts are as follows:

a. CAF MPE Modernization: These development efforts modernize CAF MPE that were previously developed and delivered under MPS Increments II and III and IV. The modernization effort will provide new and improved mission planning capability for individual Operational Flight Program (OFP) requirements, such as new weapons, avionics upgrades, communications systems, etc. The OFPs requiring MPE updates under the CAF modernization effort in Fiscal Years 2014 through 2020 include but are not limited to those for A-10, B-1B (Sustainment Blocks 15, 16, 16a, 17 and 18), F-15 (Suites 7, 8, 9, and 10), F-16 Block 30 (System Capability Upgrade [SCU] 8, 9, and 10), F-16 Block 40/50 (M6.1, M6.5, M7.1, and M7.2) and F-22 (Increments 3.2B, 3.2C, and 4.0). CAF modernization also includes updates to mission planning capabilities supporting associated weapons, including Small Diameter Bomb (SDB-II), Joint Direct Attack Munitions (JDAM) and the Joint Air-to-Surface Standoff Missile (JASSM). Finally, CAF modernization will address required improvements to CAF related JMPS MPE CCs, including Weapon Planning System (WPS), Electronic Warfare CC (EWCC), Weather CC, etc. CAF MPE Modernization includes the following platform efforts:

1) F-15 Modernization Phase II: This modernization program consists of multiple software development efforts driven by OFP updates for F-15 Suites 7, 8, and 9. Suite 7 MPE capabilities include, but are not limited to, Data Transfer Device (DTD) improvements, updates for new features in weapons such as Joint Direct Attack Munition (JDAM), Small Diameter Bomb (SDB), AIM-9X, AIM-120D, and Network Enable Weapon support elements (e.g. key handling, weapon data link, and Link 16). It will also include enhancements to the synthetic aperture radar planning tool (SAR-PT) and the global area reference tool as well as radar modernization updates (e.g. combat identification, radar planning tool enhancements). Development efforts for F-15 Suite 8 include, but are not limited to, integration of B61 Life Extension Program (LEP), feature updates for several weapons, and the expansion of Link-16 messages sets. F-15 Suite 9 MPE will include a variety of updates and enhancements for weapons and aircraft systems to include, but are not limited to, a new Advanced Dual Core Process II (ADCP-II) computer as well as Digital Transfer Device/Modules (DTD/DTM) modernization.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675380 / *Mission Planning Systems (MPS) Modernization*

2) F-16 Block 30 Modernization Phase I: The F-16 Block 30 modernization effort will support new aircraft capabilities established in OFPs for the SCU8 and SCU9. The effort will also migrate the F-16 Block 30 Mission Planning Environment (MPE) to the Windows 7 operating system and the current version of the MPS Framework. SCU8 system capabilities include, but are not limited to, the addition of Helmet Mounted Integrated Targeting (HMIT), Small Diameter Bomb (SDB), the AIM-120D missile variant and Center Display Unit (CDU) Integration. SCU9 capabilities include, but are not limited to, finishing HMIT and CDU integrations, support of Threat Symbology/Correlation (TS/C) file import (commonality with F-16 Block 40/50) and the addition of the Laser JDAM.

3) F-16 Block 40/50 Modernization Phases I&II: The F-16 Block 40/50 modernization efforts will provide the capability within the MPE to plan/utilize a number or OFP-driven capabilities in the platform. The modernization efforts will support new aircraft capabilities established in OFPs for M6.5 (joint USAF/European Participation Air Force effort, 6.5 will be fielded by EPAF, USAF will roll 6.5 capabilities in 7.1), M7.1 and M7.2. These capabilities include, but are not limited to, integrating the universal armament interface (UAI) with the most recent version of weapons planning software to give the platform the ability to plan missions for any type of network enabled weapon (NEW). It will also provide for UAI compliance with the small diameter bomb (SDB; GBU-39) and the laser joint direct attack munition (LJDAM; GBU-54). The modernization effort will also provide for the use of the advanced identification friend or foe (AIFF) Mode 5 capability in the F-16 Blk 40/50. AIFF will allow use of enhanced authentication and verification of friendly signals, through the incorporation of cryptographically secured signals. It will also introduce Automatic Dependent Surveillance-Broadcast (ADS-B) technology and facilitate compliance with standards for the Next Generation Air Transportation System (NextGen). The development effort will also migrate the F-16 Block 40/50 MPE to the Windows 7 operating environment

4) F-22 Modernization Phase I: The F-22 Modernization program includes OFP-driven software updates v13. F-22 OFP-driven enhancements include, but are not limited to the addition of improved capabilities for the AIM-9X and AIM-120D, the incorporation of additional electronic protection tasks, combat identification improvements, addition of an Inter-flight Data Link Gateway, and incorporation of the synthetic aperture radar planning tool. Additionally, other new and emerging OFP-generated requirements will be addressed as identified by the operational user(s). Other common component updates will also be completed as required.

5) B-1 Modernization Phase I: The B-1 Modernization program includes OFP-driven software updates for Releases 7.0, 8.0, and 9.0. It will incrementally update the platform MPE and provide for integration with the Reliability and Maintainability Improvement Program (RMIP)/Inertial Navigation System Replacement (INSR), Laptop Computer Targeting Pod Phase 2 (LCTP), Integrated Battle Station elements (including Fully Integrated Data Link/Visual Situation Display Upgrade (VSDU)), Central Integrated Test System Upgrade (CITS), and related follow on enhancements. Additionally it will migrate the B-1 MPE to the Windows 7 operating system and convert the B-1 Unit Planning Component (UPC) Visual Basic (VB) code to C# .NET.

b). MAF MPE Modernization: This effort modernizes the E-8 MPE developed and deployed during MPS Increment IV for use on MAF programs following the approach briefed and endorsed by the OIPT and documented in the OIPT report of 09 November 2011. The modernization activities will provide new and improved mission planning capabilities for the MAF fleet as required to meet evolving OFP, fuel efficiency, and global planning netcentric

1. Special Missions ACC (SMACC). SMACC Modernization Phase I and Phase II: This includes two programs; the Special Missions ACC (SMACC) Phase I Modernization Program and the SMACC Combat Search and Rescue (CSAR) MPE. The SMACC Modernization Program includes development, testing, and fielding of MP software for the E-3/E-8, RC-135 and EC-130. The E-3/E-8 v3.0 development effort will provide a Windows 7 capability and upgrade to the latest Framework while maintaining SDC compliance. It will also deliver software that is compatible with the E-3 DRAGON avionics upgrade including CNS ATM Certification. The RC-135 and

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0208006F / *Mission Planning Systems*	**Project (Number/Name)** 675380 / *Mission Planning Systems (MPS) Modernization*

EC-130H efforts will update their respective mission planning environments to include the latest Framework and SDC version. The SMACC CSAR MPE program will transition to PFPS-based HH-60 and HC/MC-130P/N/J CSAR mission planning functionality, tools, and plugins to Joint Mission Planning Systems (JMPS) environment.

2. MAF MPS Modernization (AMC Transition): This effort builds upon the fielded E-8 MPE to provide new and improved mission planning capabilities for the MAF fleet (e.g. C-5, C-130, KC-10, etc.) as required to meet OFP, fuel efficiency, and global planning net-centric requirements. It includes enhanced capabilities to accommodate avionics upgrades, improved communications systems, interfaces with command and control systems, new parachutes, etc. for various MAF platforms. Development efforts also include integrating improvements to MAF related Common Components (CCs). Examples of these CCs include the Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) CC, Consolidated Airdrop Tool (CAT), Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART). This effort also provides the capability to use the new Digital Aeronautical Information File (DAFIF) services-based data structure being produced by National Geospatial Agency.

c. Mobility Air Forces Automated Flight Planning Service (MAFPS): This effort includes development of a centralized/net-centric global mobility flight planning capability, which will provide significant fuel savings through automated flight route, airspeed, and altitude optimization utilizing aircraft performance, air traffic management, weather, and other data.

d. Test, Training and Certification: Continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.

e. Program Support: Continues all program office management operations and support activities to ensure the timely development, testing, and delivery of mission planning systems to the warfighter.

FY16 funding will continue the development and modernization of the Mission Planning Environments (MPEs) and related planning capabilities for a variety of Air Force aircraft and weapons platforms for the CAF, MAF, and other operational users. The modernization programs will be closely aligned and compatible with the capabilities being developed for the platforms within their respective and regularly scheduled Operational Flight Programs (OFPs).

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: F-15 Modernization Phase II	7.005	11.237	8.334
Description: Continues the modernization of previously fielded F-15 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs.			
FY 2014 Accomplishments:			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Completed development and Development Testing (DT) for v3.2, which includes SDB II and JDAM improvements. Received final v5.0 OFP requirements and sent out an Request for Proposal for an Engineering Change Proposal. ***FY 2015 Plans:*** Will finish Operational Testing (OT) for v3.2 in Q1 and field in Q2. Will finish development of v4.0 in Q2, complete Formal Qualification Test(FQT) in Q2, and enter DT in Q3. Development efforts of v4.0 include, but are not limited to, integration of B61 Life Extension Program (LEP), feature updates for several weapons, SDB II mission planning, and the expansion of Link-16 messages sets. Will complete v5.0 ECP (newest version of set requirements) and begin development.v5.0 will include Digital Transfer Device/Modules (DTD/DTM) modernization and radar library updates. ***FY 2016 Plans:*** Will finish Operation Testing (OT) for v4.0 in Q2 and field in Q3. Will continue development of v5.0.			
Title: F-16 Block 30 Modernization Phase I ***Description:*** Continues the modernization of previously fielded F-16 Block 30 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2014 Accomplishments:*** Completed 3 development and test build releases (engineering) for preliminary development testing, early user looks, and for software integration lab testing and user evaluation and development testing. Capabilities developed and under testing include but are not limited to Helmet Mounted Integrated Targeting improvements to finish integration, center display unit (CDU) improvements, a threat symbology/correlation file commonality with F-16 Block 40/50. ***FY 2015 Plans:*** Will complete development and full qualification testing (FQT) and begin final development testing of in 4Q F-16 SCU9 updates mentioned above. Will initiate requirements definitization/planning and initial design activities for F-16 SCU10 updates. ***FY 2016 Plans:*** Will complete DT/OT, and field SCU 9.	2.971	1.504	0.092
Title: F-16 Block 40/50 Modernization Phases I&II ***Description:*** Continues the modernization of previously fielded F-16 Block 40/50 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2014 Accomplishments:*** Completed F-16 M6.5+ (USAF) coding and transitioned developed code into F-16 M7.1+. Phase II: Completed initial requirements definition for M7.1+. Developed and released two F-16 M7.1+ software builds for early development testing, early user feedback	4.512	4.663	5.351

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
and integration testing with the OFP. Capabilities include, but are not limited to, UAI MP2 completion, Weapons Data Link, and Common Weapons Employment Zone updates. ***FY 2015 Plans:*** Phase II: Finalize requirement definition, complete development and Functional Qualification Test (FQT), start combined Development Testing and Operational Testing for F-16 M7.1+. Begin development of M7.2+. Capabilities for M7.2+ include, but are not limited to, JASSM-ER and Link 16 compliance. ***FY 2016 Plans:*** Complete combined Development Testing and Operational Testing, and field M7.1+ Complete initial requirements definition, develop and release F-16 M7.2+ software development build for early development testing, early user feedback and integration testing with the OFP.			
Title: F-22 Modernization Phase I ***Description:*** Continues the modernization of previously fielded F-22 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2014 Accomplishments:*** Delivered v13.0 FQT release to Avionics Integration Lab (AIL)/ Raptor Avionics Integration Lab (RAIL) testing. ***FY 2015 Plans:*** Will continue development of v13.0 in FY15. The beta-2 release is scheduled for FY15 and will support a User Evaluation. Capabilities for v13.0 include, but are not limited to, addition of AIM-9X and AIM-120D, incorporation of additional Electronic Protection Tasks, Combat Identification improvements, and the Synthetic Aperture Radar Planning Tool. For the follow on F-22 Modernization Phase II program, efforts will focus on requirements definition interfacing with the aircraft program with DO release planned for FY16Q2. ***FY 2016 Plans:*** Will complete development of v13.0 for 2nd FQT and proceed into DT/OT in FY16. The Development for the F-22 Phase II Modernization Program will begin in FY16 with v14.0 MPE, which will be built from the v13.1 baseline and will integrate with requirements established through OFP Inc 3.2M. These new Inc 3.2M capabilities are planned to include the Mark XIIA System with Joint Requirements Oversight Council (JROC) mandated Mode 5/S Identification Friend or Foe (IFF) as well as the Communication Navigation Surveillance (CNS) / Air Traffic Management (ATM) upgrade designated as Tactical Mandates (TACMAN) and Link 16 transmit capabilities.	4.129	4.054	5.953
Title: A-10 Modernization Phase I	0.770	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Continues the modernization of previously fielded A-10 MPEs to enable efficient use of new and improved capabilities developed in the OFPs. ***FY 2014 Accomplishments:*** Complete A-10 Suite 8 DT/OT and field capability. Initiate design reviews for A-10 suite 9. ***FY 2015 Plans:*** Complete A-10 Suite 8 DT/OT fielding. ***FY 2016 Plans:*** No FY16 RDT&E funds requested.			
Title: B-1 Modernization Phase I ***Description:*** Continues the modernization of previously fielded B-1 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2014 Accomplishments:*** Executed ECP-006, extending period of performance of the Release 8.0 B-1 Mission Planning Environment schedule and includes Universal Armament Interface support and testing. Completed scheduled user evaluation for Tel 8.0 and Formal Qualification Test for Release 8.0. Initiated Requirements Development for Long Range Air to Surface Missile (LRASM) into Rel 9.0. ***FY 2015 Plans:*** Conduct Full Qualification Testing (FQT) for Rel 8.0 (which will update de-clutter configuration tool and defensive threat rings) and complete DT/OT to support SB-16A requirements. Field Rel 8.0 in Q4. Rel 9.0 (which will update the migration to Framework v. 1.5.3xx, SDC 3,5and operation in WoW64 environment, compleation of transition to UAI Mission Planner 2 version, fully Integrated Data Link updates, Integrated Battlestation replacement, Long Range Ait to Surface Missile (LRASM), and replacement of RPS Super microcomputer) for SB-17. ***FY 2016 Plans:*** Continue development of Rel 9.0 up to Beta 1 release (update and finalize preliminary design) in Q2, Beta 2 release (update and finalize detailed design) in Q3, Beta 3 release (finalize MPE integration prior to FQT) for SB-17.	6.029	5.452	8.497
Title: MAF MPS Modernization (AMC Transition) ***Description:*** Description: Migrates Airlift (C-5), Tanker (KC-135, KC-10, and KC-46), and Air Drop (C-17, C-130) platforms from their legacy mission planning systems to the Joint Mission Planning Systems (JMPS) ***FY 2014 Accomplishments:***	13.429	15.303	7.446

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
The first component, Global Mobility (GM) version 1.1 proceeded with development and is on track for Formal Qualification Testing in December of 2014. ***FY 2015 Plans:*** Continue software development for the transition of AMC Aircraft to JMPS via a phased approach with GM 1.1 (C-5A), GM1.2 (Tankers) and GM1.3 (Airdrop). The GM 1.1 software is targeted for FQT. The GM 1.2 software is targeted for FQT and entery into Development and Operational testing (DT/OT). The GM 1.3 software is targeted for FQT and then entery into DT/OT. Also, as part of this effort, there are four common components supporting the GM releases; the Assault Zone Common component scheduled for FQT, the Air Refueling Tool scheduled for FQT, the Consolidated Airdrop CC scheduled for FQT, and Global Flight Planning CC scheduled for FQT. ***FY 2016 Plans:*** The GM release development will complete with release of GM 1.2 in October of 2015 and GM 1.3 in April of 2016. Following these fieldings, the software builds will continue to be modernized in support of Operational Flight Profile, fuel efficiency, and evolving global planning netcentric requirements.			
Title: ACC Special Mission MPE ***Description:*** Continues the modernization of previously fielded mission planning software environments for the E-3, E-8, E-4, EC-130, and RC-135. This also includes the SMACC CSAR MPS program which transitions the PFPS-based HH-60 and HC/MC-130P/N/J CSAR mission planning functionality, tools, and plugins to Joint Mission Planning Systems (JMPS) environment. The program ***FY 2014 Accomplishments:*** Awarded CSAR Tools development contracts for the Survivor and Search Pattern Tools. Development of these tools in FY 14 was critical to support the primary CSAR product development which begins in the 2nd quarter of FY15. Conducted Formal Qualification Testing for EC-130 Release 1.0 and RC-135 Release 3.0. E-3/8 v2.0 fielded. ***FY 2015 Plans:*** Will initiate SMACC CSAR MPS HH60 and HC/MC-130P/N/J JMPS UPC development and continue development of CSAR Tool in support of MPE integration. Will field EC-130 Release 1.0 & 1.1 and RC-135 Release 3.0 & 3.1. E-3/8 v2.1 will field. ***FY 2016 Plans:*** Will complete DT/OT on SMACC CSAR MPS HH60 and HC/MC-130P/N/J MPEs. Will field RC-135 Release 3.2 and EC-130 Release 2.0 E-3 v3.0 will fielled (interim fielding recommendation for the US tail).	7.422	6.142	8.384
Title: MAF Automated Flight Planning Service (MAFPS)	4.866	5.352	4.388

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Develops a centralized/net-centric global mobility flight planning capability, which will provide significant fuel savings through automated flight route, airspeed, and altitude optimization utilizing aircraft performance, air traffic management, weather, and other data. ***FY 2014 Accomplishments:*** Release 1 software development. Conducted Preliminary Design Review and two (2) Interim Design Reviews. Completed two (2) scheduled Engineering Releases. ***FY 2015 Plans:*** Will complete Release 1 software development. Contractor will deliver final two (2) Engineering Releases and complete Final Qualification Test. Government will conduct Developmental Test. Contractor will begin Release 2 software development, to include a System Requirements Review and Integrated Baseline Review. ***FY 2016 Plans:*** Will complete Release 1 Developmental Test, conduct Operational Test, and field Release 1. Release 2 development will continue, with fielding planned for FY17.			
Accomplishments/Planned Programs Subtotals	51.133	53.707	48.445

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833170: *Mission Planning Systems*	5.190	7.249	7.875	-	7.875	9.925	9.573	9.270	9.432	Continuing	Continuing

Remarks

D. Acquisition Strategy

Mission Planning Systems (MPS) Modernization utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network-centric, mission planning system tailored for numerous Air Force platforms, based on new platforms leaving Operational Flight Profiles, using competition and multiple contract vehicles.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Planning Software Development (MPEC II)	C/Various	Various : Various,	0.000	15.824	Nov 2013	20.811	Nov 2014	14.742	Nov 2015	-		14.742	Continuing	Continuing	TBD
F-16 Modernization	PO	Organic : Hill AFB, UT	0.000	2.848	Nov 2013	2.676	Nov 2014	2.457	Nov 2015	-		2.457	Continuing	Continuing	-
A-10 Modernization	PO	Organic : Hill AFB, UT	0.000	-	Nov 2013	-		-		-		-	Continuing	Continuing	TBD
EC-130H Modernization	PO	Organic : Robins AFB, GA	0.000	0.145	Nov 2013	0.465	Nov 2014	1.305	Nov 2015	-		1.305	Continuing	Continuing	TBD
Systems Engineering and Integration	C/CPAF	SAIC : McLean, VA	0.000	9.623	Nov 2013	7.798	Nov 2014	9.073	Nov 2015	-		9.073	Continuing	Continuing	TBD
Framework	C/FPIF	Northrop Grumman : Herndon, VA	0.000	0.697	Nov 2013	-		-		-		-	Continuing	Continuing	TBD
Common Components	C/Various	Various : Various,	0.000	7.926	Nov 2013	6.584	Nov 2014	5.365	Nov 2015	-		5.365	Continuing	Continuing	TBD
		Subtotal	0.000	37.063		38.334		32.942		-		32.942	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Engineering	C/T&M	SEI : Pittsburgh, PA	0.000	0.080	Nov 2013	0.080	Nov 2014	0.080	Nov 2015	-		0.080	Continuing	Continuing	TBD
Cost Estimating	C/T&M	Tecolote Inc : Bedford, MA	0.000	0.304	Nov 2013	0.343	Nov 2014	0.353	Nov 2015	-		0.353	Continuing	Continuing	TBD
		Subtotal	0.000	0.384		0.423		0.433		-		0.433	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Responsible Test Organization (RTO)	PO	46TW : Eglin AFB, FL	0.000	3.475	Nov 2013	3.523	Nov 2014	3.629	Nov 2015	-		3.629	-	10.627	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Certification and Accreditation	MIPR	JITC : Indian Head, MD	0.000	0.107	Jan 2014	0.110	Jan 2015	0.113	Jan 2016	-		0.113	-	0.330	TBD
Type I Training	C/FP	Ogden Air Logistics Center : Hill AFB, UT	0.000	0.980	Nov 2013	1.005	Nov 2014	1.035	Nov 2015	-		1.035	-	3.020	TBD
Field Representative Hardware	C/Various	Various : Various,	0.000	0.608	Nov 2013	0.567	Nov 2014	0.256	Nov 2015	-		0.256	-	1.431	TBD
		Subtotal	0.000	5.170		5.205		5.033		-		5.033	-	15.408	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Support	RO	MITRE Corp : Bedford, MA	0.000	3.708	Oct 2013	4.147	Oct 2014	4.271	Oct 2015	-		4.271	Continuing	Continuing	TBD
Program Management Administration	Various	Various : Various,	0.000	4.808	Nov 2013	5.598	Nov 2014	5.766	Nov 2015	-		5.766	Continuing	Continuing	TBD
		Subtotal	0.000	8.516		9.745		10.037		-		10.037	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	51.133		53.707		48.445		-		48.445	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
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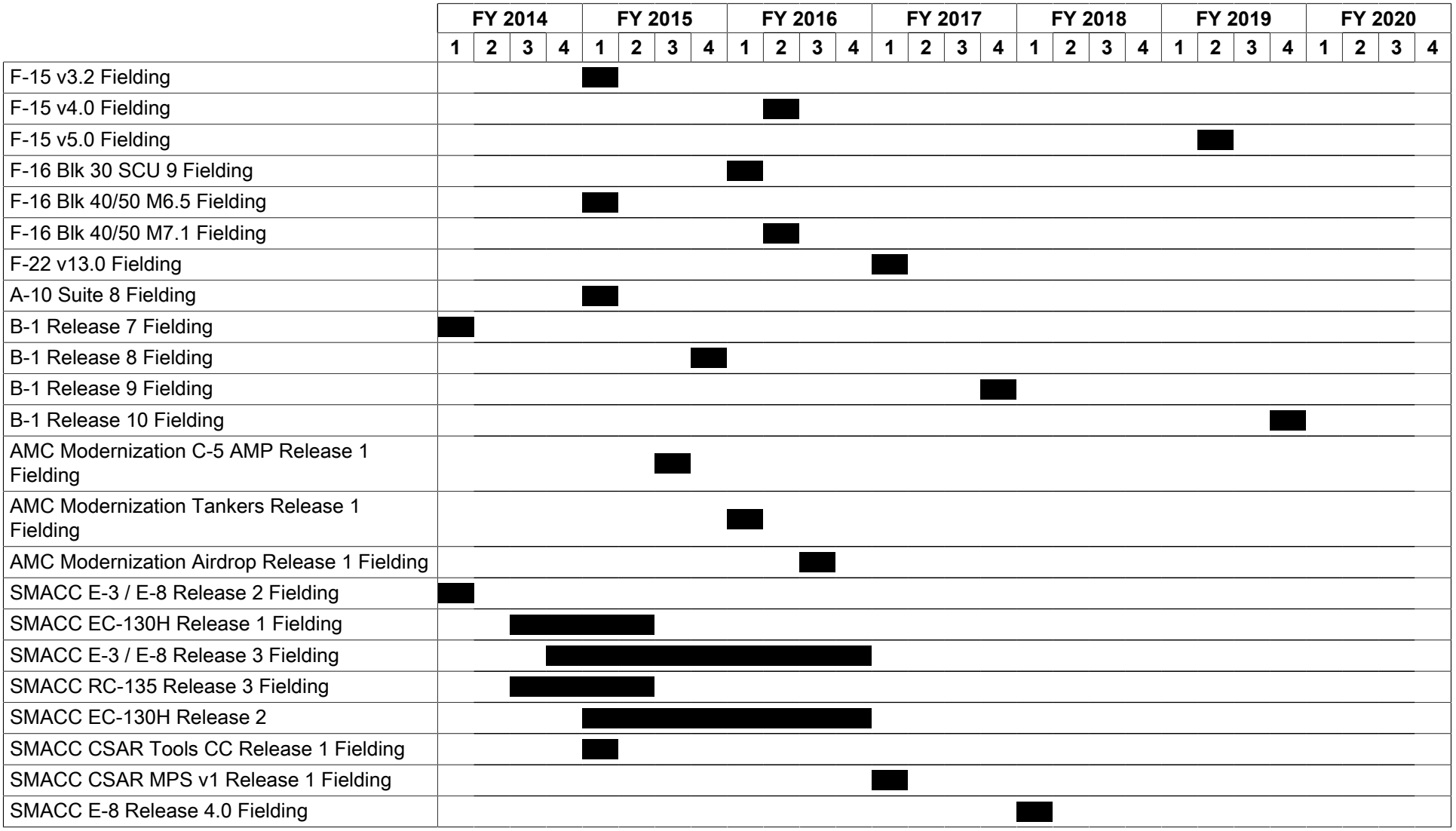

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
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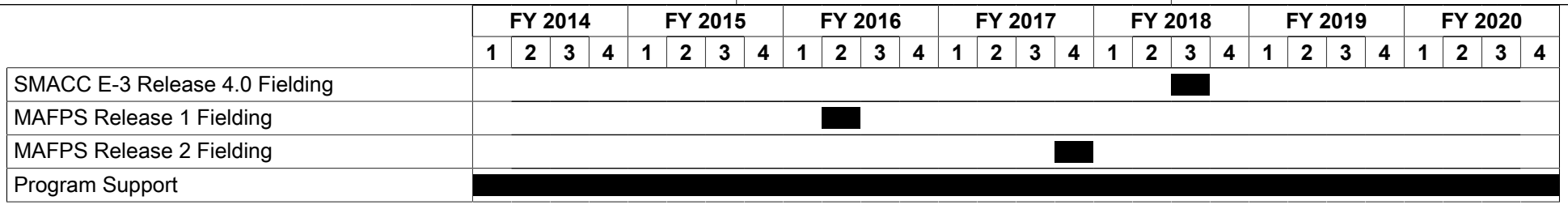

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
F-15 v3.2 Fielding	1	2015	1	2015
F-15 v4.0 Fielding	2	2016	2	2016
F-15 v5.0 Fielding	2	2019	2	2019
F-16 Blk 30 SCU 9 Fielding	1	2016	1	2016
F-16 Blk 40/50 M6.5 Fielding	1	2015	1	2015
F-16 Blk 40/50 M7.1 Fielding	2	2016	2	2016
F-22 v13.0 Fielding	1	2017	1	2017
A-10 Suite 8 Fielding	1	2015	1	2015
B-1 Release 7 Fielding	1	2014	1	2014
B-1 Release 8 Fielding	4	2015	4	2015
B-1 Release 9 Fielding	4	2017	4	2017
B-1 Release 10 Fielding	4	2019	4	2019
AMC Modernization C-5 AMP Release 1 Fielding	3	2015	3	2015
AMC Modernization Tankers Release 1 Fielding	1	2016	1	2016
AMC Modernization Airdrop Release 1 Fielding	3	2016	3	2016
SMACC E-3 / E-8 Release 2 Fielding	1	2014	1	2014
SMACC EC-130H Release 1 Fielding	3	2014	2	2015
SMACC E-3 / E-8 Release 3 Fielding	4	2014	4	2016
SMACC RC-135 Release 3 Fielding	3	2014	2	2015
SMACC EC-130H Release 2	1	2015	4	2016
SMACC CSAR Tools CC Release 1 Fielding	1	2015	1	2015
SMACC CSAR MPS v1 Release 1 Fielding	1	2017	1	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SMACC E-8 Release 4.0 Fielding	1	2018	1	2018
SMACC E-3 Release 4.0 Fielding	3	2018	3	2018
MAFPS Release 1 Fielding	2	2016	2	2016
MAFPS Release 2 Fielding	4	2017	4	2017
Program Support	1	2014	4	2020