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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV							
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	2,211.976	240.234	120.180	244.514	-	244.514	369.014	328.899	307.451	325.463	356.428	4,504.159
675145: RQ-4 Block 30	0.000	16.000	10.000	208.775	-	208.775	264.347	221.470	129.674	117.229	178.160	1,145.655
675146: RQ-4 Block 40	0.000	132.272	61.651	12.910	-	12.910	16.064	9.050	14.418	15.276	21.450	283.091
675147: RQ-4 Grnd Segment/ Comm System	0.000	55.268	22.309	-	-	-	19.537	53.551	113.726	142.596	94.771	501.758
675148: Common-Airborne Sense & Avoid (C-ABSAA)	0.000	19.011	17.098	11.829	-	11.829	52.866	37.105	37.733	38.451	62.047	276.140
67RTIP: MP-RTIP	180.599	17.683	9.122	11.000	-	11.000	16.200	7.723	11.900	11.911	-	266.138
MDAP/MAIS Code: 252												
⁽⁺⁾ The sum of all Prior Years is \$2031.377 million less than the represented total due to several projects ending # The FY 2015 OCO Request will be submitted at a later date.												
Note Per direction of USD(AT&L), the Global Hawk program was restructured from the original project 675144 (Baseline) into multiple projects: (1) Block 30, (2) Block 40, (3) Ground Segment/Communications System, and (4) Common Airborne Sense and Avoid (C-ABSAA). Prior year funds in the amount of \$2031.377M were accounted for in project 675144. In FY15 and beyond, the RQ-4 Block 30 project 675145 includes budget necessary for enterprise management, test and evaluation, management services and fielding support for projects 675145, 675146 (Block 40) and 675147 (Ground Segment/Comm System). This reflects contracting/acquisition strategy for these common elements within the Global Hawk program. Projects 675148 (C-ABSAA) and 67RTIP (MP-RTIP) reflect separate costs as they are separately managed/supported programs. The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. Total Cost on the R2 is not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding for previous program element.												
A. Mission Description and Budget Item Justification This program element funds six (6) related Air Force projects sharing the Global Hawk platform in common: the Global Hawk Baseline (Block 10/20) sub-program, the RQ-4 Block 30 sub-program, the RQ-4 Block 40 sub-program, the RQ-4 Ground Segment/Communications System subprogram, the Common Airborne Sense & Avoid (C-ABSAA) sub-program, and the Multi-Platform Radar Technology Insertion Program (MP-RTIP). Global Hawk:												

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	
<p>The Global Hawk Unmanned Aircraft System (UAS) provides a high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios. This funding supports the development of Global Hawk aircraft, payloads, ground and support segments. The RQ-4B Remotely Piloted Aircraft (RPA) is the successor to the Block 10 RQ-4A, and is designed to employ 3,000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The Block 20 employs the Battlefield Airborne Communications Node (BACN) payload.</p> <p>Block 30 (Project Number 675145) employs upgraded Synthetic Aperture Radar (SAR) and Electro-Optical/Infrared (EO/IR) sensors known as the Enhanced Integrated Sensor Suite (EISS) and the Airborne Signals Intelligence Payload (ASIP) sensor. Activities include mission planning development and testing, adverse weather capability development and testing, airspace and interoperability updates, airframe/sensor upgrades and Next Generation Sensor integration. In FY15 and beyond, the RQ-4 Block 30 project 675145 includes budget necessary for enterprise management, test and evaluation, management services and fielding support for projects 675145, 675146 (Block 40) and 675147 (Ground Segment/Comm System) as well as program protection projects, studies and analysis supporting future system enhancements. This reflects contracting/acquisition strategy for these common elements within the Global Hawk program.</p> <p>The Block 40 (Project Number 675146) will integrate the Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar sensor. In FY15 and beyond, the RQ-4 Block 40 project 675146 includes the Block 40 delta costs for the development of adverse weather capability development and testing, mission planning development and testing, airspace integration activities including IFF Mode 5 and ADS-B, airframe and sensor software and interoperability enhancements to the Block 40 fleet.</p> <p>The Ground Station Modernization (GSM)/Communication System Modernization (CSM) Project Number 675147 includes the GSM, CSM and Next Generation Communication System. The ground segment includes the Mission Control Element (MCE) and the Launch and Recovery Element (LRE). As a result of the reinstatement of the Block 30s in the FY15 PB, the operational need for ground stations increased and drives the need for a GSTR that is planned to be re-initiated with phase 2 in FY16 in support of 20 year operational lifecycle. CSM and Next Generation Communications are planned for development and testing in FY18 and out.</p> <p>When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards to enhance joint, allied, and coalition interoperability. Studies and activities may be initiated to explore the utility of incorporating the emerging architectural standards such as the USAF UAS Command and Control Initiative (UCI) or the DoD's Unmanned Control Segment standards (UCS).</p> <p>The Global Hawk program will maintain capability and interoperability for Blocks 20/30/40 including efforts with system of systems partners and continue to incorporate applicable synergies with other platforms such as the U.S. Navy's Triton, other RPA weapon systems, and Processing, Exploitation & Dissemination (PED) elements.</p> <p>Common Airborne Sense & Avoid (C-ABSAA): The C-ABSAA funding supports design, development, integration, and testing of an Airborne Sense and Avoid capability for Group 3-5 UAS on a yet to be determined Threshold Platform. Ongoing activities include technology development and maturation, sub-system integration and risk reductions activities. C-ABSAA is a separate ACAT II program in the Technology Maturation and Risk Reduction phase of the acquisition lifecycle, supports the "Worldwide Operations" Key Performance Parameter (KPP) found in larger UAS requirement documents, and provides the ability for UAS integration into the National Airspace System (NAS) and full worldwide UAS operations across all mission environments. This is a continuation of efforts which began in FY10 under OSD PEC, 64400D. This project does not support platform specific integration or testing.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force	Date: March 2014
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV
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Multi-Platform Radar Technology Insertion Program (MP-RTIP):

The MP-RTIP sensor was designed as a family of modular, scalable sensors that provide next generation capabilities to support sustainable network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability. MP-RTIP provides the Global Hawk Block 40 aircraft with advanced Synthetic Aperture Radar (SAR) and Moving Target Indicator (MTI) sensor capabilities.

This project includes all MP-RTIP design, development, test, and integration efforts onto the GH Block 40 platform. Integration activities include platform integration of the MP-RTIP sensor and sustainment logistics planning support. MP-RTIP studies and development insertion include the implementation of Maritime Modes (MM), High Range Resolution (HRR) modes, electronic protection, technical refresh, product improvements and other advanced capabilities.

Activities also include studies and analysis supporting current and future program planning and future modes development based on user requirements.

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 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	236.265	134.406	200.896	-	200.896
Current President's Budget	240.234	120.180	244.514	-	244.514
Total Adjustments	3.969	-14.226	43.618	-	43.618
• Congressional General Reductions	-0.333	-0.226			
• Congressional Directed Reductions	-	-24.000			
• Congressional Rescissions	-	-			
• Congressional Adds	16.000	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-11.698	-	43.618	-	43.618

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 675145: *RQ-4 Block 30*

Congressional Add: *Global Hawk Block 30 Congressional Add*

Congressional Add Subtotals for Project: 675145

Congressional Add Totals for all Projects

FY 2013	FY 2014
16.000	10.000
16.000	10.000
16.000	10.000

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305220F I RQ-4 UAV	
<div>Change Summary Explanation</div> <div>FY13 reductions in Other Adjustments were due to Sequestration.</div> <div>FY14 (-)\$24.0M decrease: Congressional reduction due to execution issues.</div> <div>FY15 (+)\$43.6M increase: Restoration of the Global Hawk Block 30.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675145 / RQ-4 Block 30			
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
675145: RQ-4 Block 30	-	16.000	10.000	208.775	-	208.775	264.347	221.470	129.674	117.229	178.160	1,145.655
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
Note												
The FY13 President's budget directed divesture of all Block 30 efforts. The FY14 President's Budget reflected a continuation of the proposed Block 30 program divesture; however, Congressional funding was added to the FY13 and 14 President's Budget submissions. The FY15 PB funds the Block 30s for their full planned lifecycle.												
A. Mission Description and Budget Item Justification												
The Global Hawk Unmanned Aircraft System (UAS) provides a high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.												
RDT&E funding in this project supports design, development, integration, and testing of items needed to meet Key Performance Parameters (KPPs) for Block 30 aircraft, including continuing aircraft system modernization for Enhanced Integrated Sensor Suite (EISS) sensors and Block 30 Airborne Signals Intelligence Payload (ASIP) contractor support.												
This funding also supports aircraft systems modernization to include continuing aircraft operations surety for information assurance and mission critical repair of test Government Furnished Equipment (GFE).												
The Global Hawk program will maintain capability and interoperability for Block 30 including efforts with system of systems partners and continue to incorporate applicable synergies with other platforms, such as the U.S. Navy's Triton, other RPA weapon systems, and Processing, Exploitation & Dissemination (PED) elements.												
Activities include mission planning development and testing, adverse weather capability development and testing, airspace and interoperability updates, airframe and software upgrades and deficiency report resolution across Global Hawk fleet, ASIP and EISS sensor upgrades, integration activities associated with Next Generation Sensor capability including the comparison of how differences in flight performance would affect sensor performance, program protection projects, and studies and analysis supporting future system enhancements.												
When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards to enhance joint, allied, and coalition interoperability. Likewise, studies and activities may be initiated to explore the utility of incorporating the emerging architectural standards such as the USAF UAS Command and Control Initiative (UCI) or the DoD's Unmanned Control Segment standards (UCS).												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675145 / RQ-4 Block 30		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
Title: Global Hawk Block 30 System Development and Demonstration (SDD) Description: Global Hawk Development and Demonstration FY 2013 Accomplishments: see Congressional Add below FY 2014 Plans: see Congressional Add below FY 2015 Plans: Development activities to support the development of next generation sensors for the RQ-4 as well as development of adverse weather capabilities, mission planning, airspace integration activities including IFF Mode 5 and ADS-B, sensor interoperability enhancements and continued system interoperability, information assurance and R&M improvements			-	-	184.561
Title: Global Hawk Block 30 Government Test and Non Prime Support Description: Government test, non-prime technical support and Other Government Costs (OGC) -- The majority of this funding supports Global Hawk development testing at the 412 Test Wing at Edwards AFB, CA and also includes funding for incidental support from Air Force Operational Test and Evaluation Center (AFOTEC), Joint Interoperability Test Command (JITC), Distributed Common Ground System (DCGS) and OGC. FY 2013 Accomplishments: see Congressional Add below FY 2014 Plans: see Congressional Add below FY 2015 Plans: Continuing government test and non-prime engineering and technical support and Other Government Costs			-	-	24.214
Accomplishments/Planned Programs Subtotals			-	-	208.775
			FY 2013	FY 2014	
Congressional Add: Global Hawk Block 30 Congressional Add			16.000	10.000	
FY 2013 Accomplishments: Continued Aircraft system modernization for Block 30 to include Enhanced Integrated Sensor Suite (EISS) sensors and aircraft operations surety for					

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675145 / RQ-4 Block 30	

	FY 2013	FY 2014
information assurance, flight test support and repair of test Government Furnished Equipment (GFE)		
FY 2014 Plans: Feasibility study and assessment for integration of U-2 sensors or alternative sensors of comparable capability onto the RQ-4B to include comparing how differences in flight performance would affect sensor performance such as adverse weather, mission planning and airspace and sensor interoperability.		
Congressional Adds Subtotals	16.000	10.000

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
• APAF: BA04: Line Item # HAEUAV: RQ-4	118.360	11.000	65.403	-	65.403	103.935	29.699	31.534	29.908	432.821	5,079.019
• APAF: BA04: Line Item # RQ440P: RQ-4 Block 40 Proc	10.691	1.747	-	-	-	-	-	-	-	-	12.438
• APAF: BA05: Line Item # HAWK00: RQ-4 Mods	6.997	9.313	21.354	-	21.354	46.127	34.493	89.248	67.265	487.907	1,140.417
• APAF: BA05: Line Item # RQ4GCM: RQ-4 GSRA/CSRA Mods	-	23.668	-	-	-	-	-	-	-	328.708	352.376

Remarks

D. Acquisition Strategy

The Global Hawk program uses an evolutionary acquisition strategy to provide the warfighter with a near-term combat capability with increased time-phased capability improvements as technology and risk achieve satisfactory levels. Northrop Grumman Corporation is the prime contractor. Development efforts are contracted on a legacy EMD contract which is being phased out with the completion of current efforts, and on the follow on IDIQ contract that was awarded May 2013 for future modernization efforts. The next major planned programmatic event is a Milestone C decision (date TBD).

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675145 / RQ-4 Block 30					
Product Development (\$ 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
Engineering Manufacturing & Development/IDIQ Block 30	SS/ Various	Northrop Grumman Integrated Systems : San Diego, CA	0.000	15.000	Sep 2013	10.000	Apr 2014	184.561	Nov 2014	-		184.561	802.126	1,011.687	1,011.687
Subtotal			0.000	15.000		10.000		184.561		-		184.561	802.126	1,011.687	1,011.687
Remarks Target Value of the Global Hawk EMD & IDIQ Contracts is not segregated by Budget Project Number. FY15 and beyond contains budget necessary for GH fleet support with Northrop Grumman.															
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
Subtotal			-	-		-		-		-		-	-	-	-
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
Flight Test & Evaluation	MIPR	412 TW : Edwards AFB, CA	0.000	1.000	Sep 2013	-		16.022	Oct 2014	-		16.022	63.912	80.934	-
Subtotal			0.000	1.000		-		16.022		-		16.022	63.912	80.934	-
Remarks Target Value of the Global Hawk effort is not segregated by Budget Project Number. FY15 and beyond contains budget necessary for GH fleet test support.															
Management Services (\$ 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
PMA: A&AS	Various	Various : Dayton, OH	0.000	-		-		4.915	Nov 2014	-		4.915	26.906	31.821	-
PMA: Other Government Costs	Various	Various : Dayton, OH	0.000	-		-		3.277	Oct 2014	-		3.277	17.936	21.213	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force	Date: March 2014
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675145 / RQ-4 Block 30
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Management Services (\$ 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			0.000	-		-		8.192		-		8.192	44.842	53.034	-

Remarks

Target Value of the Global Hawk Contracts is not segregated by Budget Project Number. FY15 and beyond contains budget necessary for GH fleet management services support.

	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	16.000		10.000		208.775		-		208.775	910.880	1,145.655	-

Remarks

Target Value of the Global Hawk EMD & IDIQ Contracts is not segregated by Budget Project Number.

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

Date: March 2014

Appropriation/Budget Activity
3600 / 7

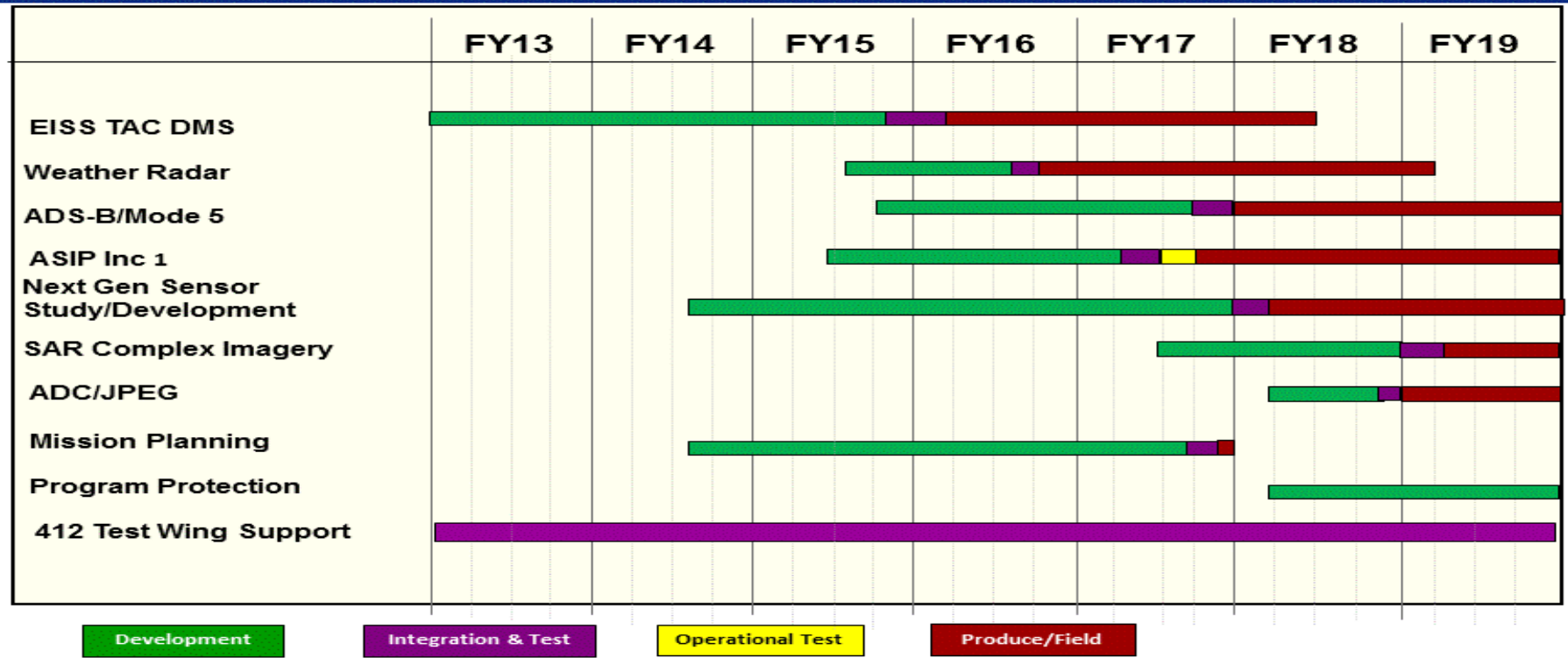
R-1 Program Element (Number/Name)
PE 0305220F / RQ-4 UAV

Project (Number/Name)
675145 / RQ-4 Block 30



U.S. AIR FORCE

RQ-4 Global Hawk Block 30 Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675145 / RQ-4 Block 30	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Enhanced Integrated Sensor Suite (EISS) TAC DMS	1	2013	4	2015
Weather Radar	3	2015	3	2016
ADS-B/Mode 5 Development	4	2015	3	2017
ASIP Inc 1	2	2015	2	2017
Next Gen Sensor Study/Development	3	2014	4	2017
SAR Complex Imagery	2	2017	1	2019
ADC/JPEG	1	2018	4	2018
Mission Planning	3	2014	3	2017
Program Protection	1	2018	4	2019
412 Test Wing Test Support	1	2013	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675146 / RQ-4 Block 40			
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
675146: RQ-4 Block 40	-	132.272	61.651	12.910	-	12.910	16.064	9.050	14.418	15.276	21.450	283.091
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Note

1. The Global Hawk Block 40 Sub-Program was directed by an ADM signed 14 Jun 2011 by USD (AT&L). At the time of the ADM signature, and subsequent designation of sub-program projects, the FY11 and FY12 budgets had already been finalized within DoD. The FY11 and FY12 budgets for all sub-programs are captured under the Global Hawk Baseline sub-program, as its related Project (675144) was the core project for the Global Hawk program prior to the directed restructure.

2. Since the FY13 President's budget directed divestiture of all Block 30 efforts, Block 40 activities were fully burdened with enterprise management, flight test and management servies in FY13 and 14. The FY15 PB funds the Block 30s for their full planned lifecycle and includes budget necessary for enterprise management, test and evaluation, management services and fielding support for projects in Project Number 675145. The Block 40 Project Number 675146 contains delta costs specific to Block 40 development/modernization.

A. Mission Description and Budget Item Justification

The Global Hawk Unmanned Aircraft System (UAS) provides a high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

RDT&E funding in this project supports design, development, integration, and testing of items needed to meet Key Performance Parameters (KPPs) for Block 40 aircraft, including integration and test of the Multi-Platform Radar Technology Insertion Program (MP-RTIP) sensor. Associated Block 40 airworthiness certifications are included in this effort. The Block 40 program provides critical Synthetic Aperture Radar and Ground Moving Target Indicator data to the warfighter.

This funding also supports continued aircraft/communications systems modernization to include Identification Friend or Foe (IFF) Mode 5, Automatic Dependent Surveillance Broadcast (ADSB), mission planning upgrade development and testing, program protection projects, adverse weather capability, and reliability and maintainability improvements. Funding continues MP-RTIP sensor integration and integration of upgraded radar SW and capabilities deferred to post Block 40 IOT&E.

In FY15 and beyond, the RQ-4 Block 40 project 675146 includes the delta costs only for the development of above capabilities with the RQ-4 Block 30 project, 675145. The RQ-4 Block 30 project, 675145, also contains the budget necessary for enterprise management, test and evaluation, management services and fielding support for the fleet.

When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards to enhance joint, allied, and coalition interoperability. Likewise, studies and activities may be initiated to explore the utility of incorporating the emerging architectural standards such as the USAF UAS Command and Control Initiative (UCI) or the DoD's Unmanned Control Segment standards (UCS).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014		
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675146 / RQ-4 Block 40		
<p>The Global Hawk program will maintain capability and interoperability for Block 40 including efforts with system of systems partners and continue to incorporate applicable synergies with other platforms, such as the U.S. Navy's Triton, other RPA weapon systems, and Processing, Exploitation & Dissemination (PED) elements.</p> <p>Activities also include studies and analysis supporting future system enhancements, current and future program planning, and project execution.</p>				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
<p>Title: Global Hawk Block 40 System Development and Demonstration (SDD)</p> <p>Description: Global Hawk Block 40 Payload and Aircraft/Communications Development and Demonstration</p> <p>FY 2013 Accomplishments: Developed and integrated MP-RTIP sensor integration, test and sustainment capability for Early Operational Capability for Block 40. Ramped up Aircraft/Communication systems modernization to include IFF Mode 5/ADSB pre-contract activities, and mission planning upgrade. Continued aircraft operations surety for Information Assurance and Reliability and Maintainability initiatives.</p> <p>FY 2014 Plans: Continuing development and integration of MP-RTIP sensor integration, IOT&E and sustainment capability for Block 40. Continuing Aircraft/Communication systems modernization to include IFF Mode 5, ADSB, and mission planning upgrade and program protection. Continuing aircraft operations surety for Information Assurance and Reliability and Maintainability.</p> <p>FY 2015 Plans: Delta costs for the development of adverse weather capabilities, mission planning, airspace integration activities including IFF Mode 5 and ADS-B, sensor SW and interoperability enhancements and continued system interoperability, information assurance and R&M improvements</p>		116.132	40.126	12.910
<p>Title: Global Hawk Block 40 Government Test and Non Prime Support</p> <p>Description: Government test, non-prime technical support and Other Government Costs (OGC) -- The majority of this funding supports Global Hawk development testing at the 412 Test Wing at Edwards AFB, CA and also includes funding for incidental support from Air Force Operational Test and Evaluation Center (AFOTEC), Joint Interoperability Test Command (JITC), Distributed Common Ground System (DCGS) and OGC.</p> <p>FY 2013 Accomplishments: Continued government test and non-prime engineering and technical support and Other Government Costs for Block 40 aircraft</p> <p>FY 2014 Plans: Continuing government test and non-prime engineering and technical support for Block 40 IOT&E and Other Government Costs</p> <p>FY 2015 Plans:</p>		16.140	21.525	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675146 / RQ-4 Block 40				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2013	FY 2014	FY 2015
Costs are covered in the Block 30 project												
Accomplishments/Planned Programs Subtotals										132.272	61.651	12.910
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	
• APAF: BA04: Line Item # HAEUAV: RQ-4	118.360	11.000	65.403	-	65.403	103.935	29.699	31.534	29.908	432.821	5,079.019	
• APAF: BA04: Line Item # RQ440P: RQ-4 Blk 40 Proc	10.691	1.747	-	-	-	-	-	-	-	-	12.438	
• APAF: BA05: Line Item # HAWK00: RQ-4 Mods	6.997	9.313	21.354	-	21.354	46.127	34.493	89.248	67.265	487.907	1,140.417	
• APAF: BA05: Line Item # RQ4GCM: RQ-4 GSRA/CSRA Mods	-	23.668	-	-	-	-	-	-	-	328.708	352.376	
• RDTE: BA07: PE 0305238F: NATO AGS	192.571	221.589	232.851	-	232.851	138.400	39.604	-	-	-	825.015	
Remarks												
D. Acquisition Strategy												
The Global Hawk program uses an evolutionary acquisition strategy to provide the warfighter with a near-term combat capability with increased time-phased capability improvements as technology and risk achieve satisfactory levels. Northrop Grumman Corporation is the prime contractor. Development efforts are contracted on a legacy EMD contract which is being phased out with the completion of current efforts, and on the follow on IDIQ contract that was awarded May 2013 for future modernization efforts. The next major planned programmatic event is a Milestone C decision (date TBD).												
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.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675146 / RQ-4 Block 40					
Product Development (\$ 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
Engineering Manufacturing & Development/IDIQ Block 40	SS/ Various	Northrop Grumman Integrated Systems : San Diego, CA	0.000	116.132	Oct 2012	40.126	Oct 2013	12.910	Nov 2014	-		12.910	76.258	245.426	245.433
Subtotal			0.000	116.132		40.126		12.910		-		12.910	76.258	245.426	245.433
Remarks Target Value of the Global Hawk EMD & IDIQ Contracts is not segregated by Budget Project Number.															
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
Non-Prime Technical Support	Various	Various : Dayton, OH	0.000	1.212	Oct 2012	0.594	Oct 2013	-		-		-	-	1.806	TBD
Subtotal			0.000	1.212		0.594		-		-		-	-	1.806	-
Remarks Target Value of the Global Hawk Contract is not segregated by Budget Project Number.															
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
Flight Test & Evaluation	MIPR	412 TW : Edwards AFB, CA	0.000	8.700	Oct 2012	14.531	Oct 2013	-		-		-	-	23.231	TBD
Subtotal			0.000	8.700		14.531		-		-		-	-	23.231	-
Remarks Target Value of the Global Hawk effort is not segregated by Budget Project Number. FY15 and beyond budget necessary for GH fleet test support is contained in Budget Project Number 675145, RQ-4 Block 30.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force	Date: March 2014
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675146 / RQ-4 Block 40
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Management Services (\$ 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
PMA: A&AS	Various	Various : Dayton, OH	0.000	4.339	Oct 2012	4.000	Nov 2013	-		-		-	-	8.339	TBD
PMA: Other Gov't Cost	Various	Various : Dayton, OH	0.000	1.889	Oct 2012	2.400	Oct 2013	-		-		-	-	4.289	TBD
Subtotal			0.000	6.228		6.400		-		-		-	-	12.628	-

Remarks

Target Value of the Global Hawk Contracts is not segregated by Budget Project Number. FY15 and beyond budget necessary for GH fleet management services support is contained in Budget Project Number 675145, RQ-4 Block 30.

	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	132.272		61.651		12.910		-		12.910	76.258	283.091	-

Remarks

Target Value of the Global Hawk EMD & IDIQ Contracts is not segregated by Budget Project Number.

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

Date: March 2014

Appropriation/Budget Activity
3600 / 7

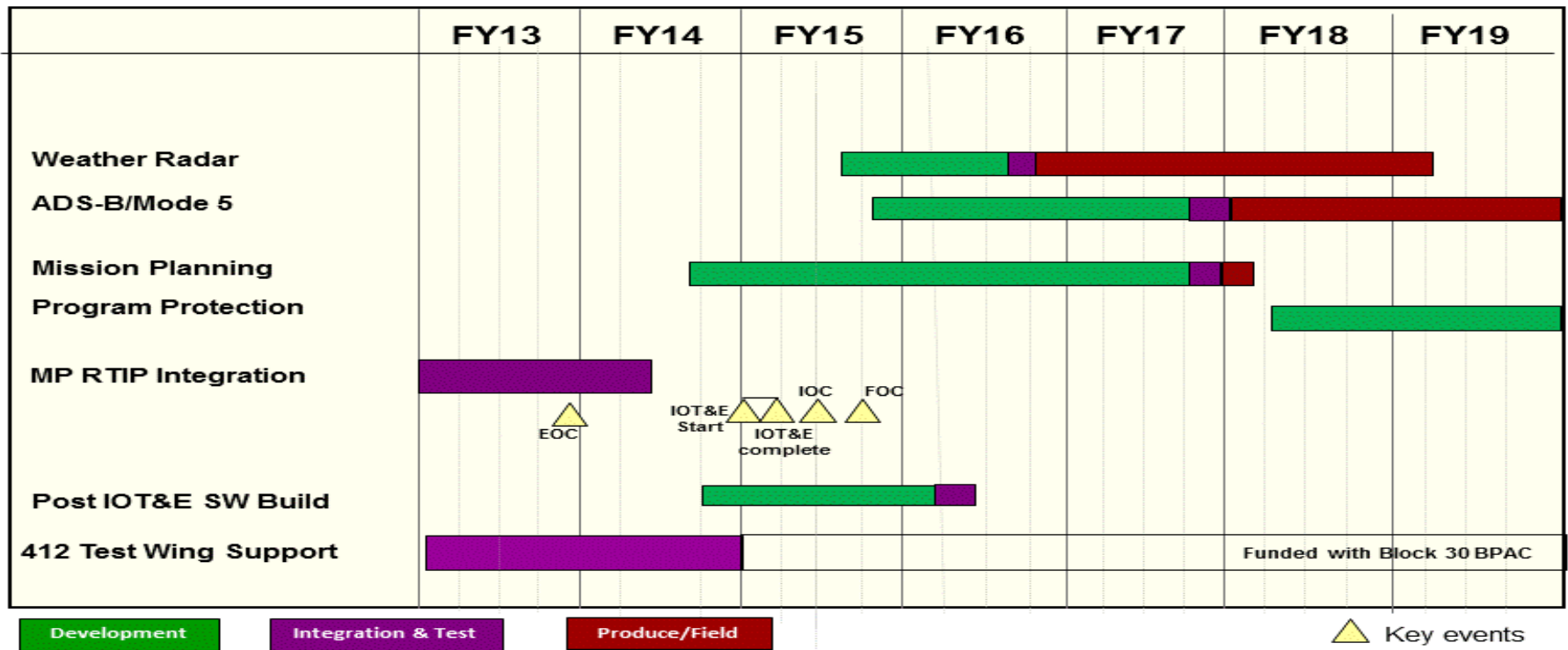
R-1 Program Element (Number/Name)
PE 0305220F / RQ-4 UAV

Project (Number/Name)
675146 / RQ-4 Block 40



U.S. AIR FORCE

RQ-4 Global Hawk Block 40 Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675146 / RQ-4 Block 40	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Weather Radar Development	3	2015	3	2016
ADS-B/IFF Mode 5	4	2015	4	2017
Mission Planning Upgrade	3	2014	4	2017
Program Protection	1	2018	4	2019
Early Operational Capability	4	2013	4	2013
Block 40 IOT&E	1	2015	1	2015
Post IOT&E Build	4	2014	2	2016
Block 40 IOC	3	2015	3	2015
Block 40 FOC	4	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675147 / RQ-4 Grnd Segment/Comm System			
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
675147: RQ-4 Grnd Segment/Comm System	-	55.268	22.309	-	-	-	19.537	53.551	113.726	142.596	94.771	501.758
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
Note												
1. The Global Hawk Ground Segment/Communications System Sub-Program was directed by an ADM signed 14 Jun 2011 by USD (AT&L). At the time of the ADM signature, and subsequent designation of sub-program projects, the FY11 and FY12 budgets had already been finalized within DoD. The FY11 and FY12 budgets for all sub-programs are captured under the Global Hawk Baseline sub-program, as its related Project (675144) was the core project for the Global Hawk program prior to the directed restructure.												
2. Ground Segment Modernization (GSM) was initiated to resolve significant obsolescence issues in the ground station in order to support a 20 year planned operational lifecycle for the Block 20/30/40 fleet; this effort was contracted in phases. The FY13 PB proposed divestiture of the Block 30s and ACC resolved to divest of the Block 20 BACN aircraft within the FYDP leaving only the Block 40s. As a result of the reduced ground segment requirements, the GSM effort was halted in favor of a Diminishing Manufacturing Sources (DMS) only approach which leveraged the equipment from Block 30 ground stations planned for divestiture. As a result of the reinstatement of the Block 30s in the FY15 PB, the operational need for ground stations increased making a DMS only strategy unfeasible; GSM will be re-initiated with phase 2 in FY16.												
3. The FY14 President's Budget (PB) reflected a continuation of the proposed Block 30 program divesture. The FY15 PB funds the Block 30s in support of the full planned lifecycle and resumes funding of the GSM and Communications System Modernization (CSM) efforts.												
A. Mission Description and Budget Item Justification												
The Global Hawk Unmanned Aircraft System (UAS) provides a high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.												
RDT&E funding in this project supports design, development, integration and testing of the Ground Segment and the Communication System Modernization in support of the planned 20 year operational lifecycle and next generation communications system. GSM solves fleet grounding DMS issues associated with legacy ground segment equipment and provides critical warfighter capabilities such as multi-aircraft control and net-ready KPP requirements. CSM also resolves critical DMS issues in the GH communication infrastructure and provides communication enhancements across all five primary comm links.												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014		
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675147 / RQ-4 Grnd Segment/Comm System		
When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards to enhance joint, allied, and coalition interoperability. Likewise, studies and activities may be initiated to explore the utility of incorporating the emerging architectural standards such as the USAF UAS Command and Control Initiative (UCI) or the DoD's Unmanned Control Segment standards (UCS).				
Activities also include studies and analysis supporting future system enhancements, current and future program planning and project execution.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Title: Global Hawk Ground Station / Communications System- Critical Obsolescence Issues Description: Global Hawk Ground Segment/ Communications System Development FY 2013 Accomplishments: Continued ground station and communication systems updates to resolve critical obsolescence issues in the legacy Global Hawk ground segment equipment and communications infrastructure. FY 2014 Plans: Continuing ground station and communication system updates to resolve critical obsolescence issues FY 2015 Plans: N/A		50.786	21.080	-
Title: Government Test and non prime support Description: Government test, non-prime technical support and Other Government Costs (OGC) -- The majority of this funding supports Global Hawk development testing at the 412 Test Wing at Edwards AFB, CA and also includes funding for incidental support from Air Force Operational Test and Evaluation Center (AFOTEC), Joint Interoperability Test Command (JITC), Distributed Common Ground System (DCGS) and OGC. FY 2013 Accomplishments: Continued government test and non-prime engineering and technical support and Other Government Costs for Ground Segment / Comm systems. FY 2014 Plans: Continuing government test and non-prime engineering and technical support and Other Government Costs for Ground Segment / Comm systems. FY 2015 Plans: N/A		4.482	1.229	-
Accomplishments/Planned Programs Subtotals		55.268	22.309	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force									Date: March 2014		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675147 / RQ-4 Grnd Segment/Comm System			
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
• APAF: BA04: Line Item # HAEUAV: RQ-4	118.360	11.000	65.403	-	65.403	103.935	29.699	31.534	29.908	432.821	5,079.019
• APAF: BA04: Line Item # RQ440P: RQ-4 Block 40 Proc	10.691	1.747	-	-	-	-	-	-	-	-	12.438
• APAF: BA05: Line Item # HAWK00: RQ-4 Mods	6.997	9.313	21.354	-	21.354	46.127	34.493	89.248	67.265	487.907	1,140.417
• APAF: BA05: Line Item # RQ4GCM: RQ-4 GS/CS Mods	-	23.668	-	-	-	-	-	-	-	328.708	352.376
Remarks											
D. Acquisition Strategy											
The Global Hawk program uses an evolutionary acquisition strategy to provide the warfighter with a near-term combat capability with increased time-phased capability improvements as technology and risk achieve satisfactory levels. Northrop Grumman Corporation is the prime contractor. Development efforts are contracted on a legacy EMD contract which is being phased out with the completion of current efforts, and on the follow on IDIQ contract that was awarded May 2013 for future modernization efforts. The next major planned programmatic event is a Milestone C decision (date TBD).											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675147 / RQ-4 Grnd Segment/Comm System					
Product Development (\$ 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
Engineering, Manufacturing & Development/IDIQ Ground Segment and Communication Systems	SS/CPIF	Northrop Grumman Integrated Systems : San Diego, CA	0.000	50.786	Oct 2012	21.080	Oct 2013	-		-		-	424.181	496.047	496.122
Subtotal			0.000	50.786		21.080		-		-		-	424.181	496.047	496.122
Remarks Target Value of the Global Hawk EMD & IDIQ Contracts is not segregated by Budget Project Number.															
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
Non-Prime Technical Support	Various	Various : Dayton, OH	0.000	1.596	Oct 2012	0.629	Oct 2013	-		-		-	-	2.225	TBD
Subtotal			0.000	1.596		0.629		-		-		-	-	2.225	-
Remarks Target Value of the Global Hawk Contracts is not segregated by Budget Project Number.															
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
Flight Test & Evaluation	MIPR	412 TW : Edwards AFB, CA	0.000	2.500	Oct 2012	-	Oct 2013	-		-		-	-	2.500	TBD
Subtotal			0.000	2.500		-		-		-		-	-	2.500	-
Remarks Target Value of the Global Hawk effort is not segregated by Budget Project Number.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675147 / RQ-4 Grnd Segment/Comm System					
Management Services (\$ 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
PMA: A&AS	Various	Various : Dayton, OH	0.000	0.269	Oct 2012	0.350	Oct 2013	-		-		-	-	0.619	TBD
PMA: Other Gov't Cost	Various	Various : Dayton, OH	0.000	0.117	Oct 2012	0.250	Oct 2013	-		-		-	-	0.367	TBD
Subtotal			0.000	0.386		0.600		-		-		-	-	0.986	-
Remarks															
Target Value of the Global Hawk Contracts is not segregated by Budget Project Number. FY15 and beyond budget necessary for GH fleet management services support is contained in Budget Project Number 675145, RQ-4 Block 30.															
			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	55.268		22.309		-		-		-	424.181	501.758	-
Remarks															
Target Value of the Global Hawk EMD & IDIQ Contracts is not segregated by Budget Project Number.															

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

Date: March 2014

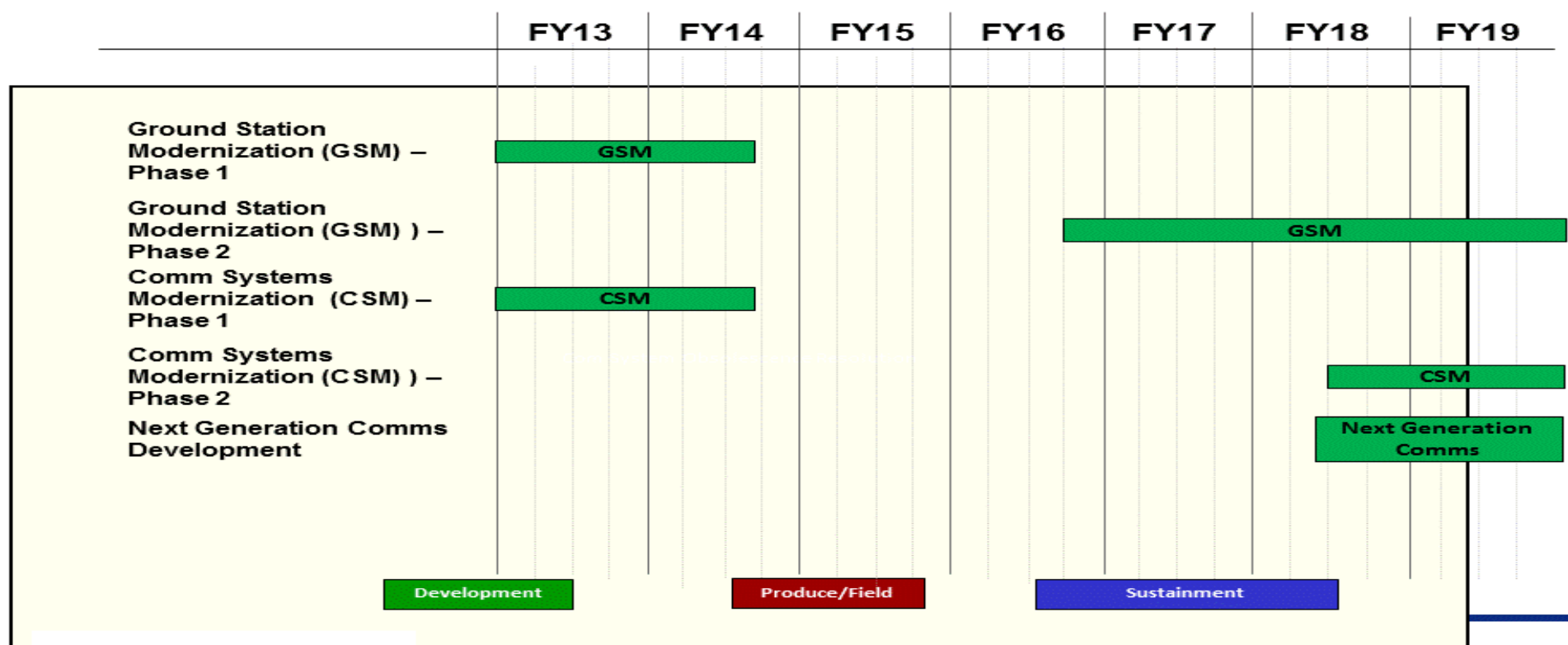
Appropriation/Budget Activity
3600 / 7

R-1 Program Element (Number/Name)
PE 0305220F / RQ-4 UAV

Project (Number/Name)
675147 / RQ-4 Grnd Segment/Comm
System



RQ-4 Global Hawk GSM/CSM Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675147 / RQ-4 Grnd Segment/Comm System	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Ground Station Modernization-Phase 1	1	2013	3	2014
Ground Station Modernization-Phase 2	4	2016	4	2019
Comm Systems Modernization-Phase 1	1	2013	3	2014
Comm Systems Modernization-Phase 2	3	2018	4	2019
Next Generation Comms	2	2018	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 675148 / Common-Airborne Sense & Avoid (C-ABSAA)			
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
675148: Common-Airborne Sense & Avoid (C-ABSAA)	-	19.011	17.098	11.829	-	11.829	52.866	37.105	37.733	38.451	62.047	276.140
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
Note												
In two related Acquisition Decision Memoranda signed by USD(AT&L) in January and June 2011, the Global Hawk program was directed to restructure into four major sub-programs: (1) Global Hawk baseline, (2) Block 30, (3) Block 40, and (4) Ground Station Re-Architecture (GSRA)/Communications System Re-Architecture (CSRA). The AF created this Pre-Planned Product Improvement (P3I) line item to accommodate inclusion of required capability to meet warfighter needs beyond those requirements satisfied in the directed sub-programs. In April 2013 the AF transitioned this line item from a Global Hawk platform-specific program to a platform-agnostic capability for Group 4-5 Unmanned Aircraft Systems (UAS), scalable to Group 3 UAS.												
A. Mission Description and Budget Item Justification												
RDT&E funding in this project supports design, development, integration, and testing of a Common Airborne Sense and Avoid(C-ABSAA) capability for Group 3-5 Unmanned Aircraft Systems(UAS) on a yet to be determined Threshold Platform. Ongoing activities include technology development and maturation, sub-system integration and risk reduction activities. C-ABSAA is a separate ACAT II program in the Technology Maturation and Risk Reduction phase of the acquisition lifecycle, supports the "Worldwide Operations" Key Performance Parameter (KPP) found in larger UAS requirement documents, and provides the ability for UAS integration into the National Airspace System (NAS) and full worldwide UAS operations across all mission environments. Funding covers the Common Airborne Sense and Avoid development activities as well as program infrastructure and other government costs. Platform specific integration and testing is not included.												
Activities also include C-ABSAA related studies and analysis supporting current and future C-ABSAA system capabilities, program planning and project execution.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2013	FY 2014	FY 2015	
Title: C-ABSAA System Technology Maturation and Risk Reduction									19.011	17.098	11.829	
Description: Develop a scalable & automatic Common Airborne Sense & Avoid (C-ABSAA) system for Group 3-5 Unmanned Aircraft Systems (UAS) providing the capability to integrate UAS operations into the US national airspace and globally. Fielding of this capability is dependent upon DoD self-certification to meet the standards for operation & certification expected from the Federal Aviation Administration (FAA) IAW the FAA Modernization and Reform Act of 2012.												
FY 2013 Accomplishments:												
Approved to initiate the program into the Technology Maturation and Risk Reduction (pre-MS B) phase of acquisition. Conducted science and technology sense and avoid flight demonstrations with Air Force Research Lab (AFRL) and FAA on a surrogate												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014	
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 675148 / <i>Common-Airborne Sense & Avoid (C-ABSAA)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
<p>UAS against multiple intruder aircraft, demonstrating automatic collision avoidance against both cooperative and non-cooperative threats. Continued to develop and mature both the radar and next generation electro-optical sensors.</p> <p><i>FY 2014 Plans:</i> Refining and clarifying C-ABSAA requirements with Air Combat Command. Continuing C-ABSAA system maturation with AFRL. Building sub-system Modeling and Simulation capabilities to a sufficient level of fidelity to support Airworthiness under MIL-HDBK-516 and operational approval by the FAA. Preparing to award technology development contract(s) for Preliminary Design Review. Preparing plans and documents in support of Milestone (MS) B. Perform early logistics planning.</p> <p><i>FY 2015 Plans:</i> Will continue to refine C-ABSAA requirements. Will continue C-ABSAA system maturation with AFRL. Will continue to define and build sub-system Modeling and Simulation models to a sufficient level of fidelity to support Airworthiness under MIL-HDBK-516. Will prepare to award technology development contract (s) for Preliminary Design Review. Will continue to prepare plans and documents in support of MS B. Will continue logistics planning.</p>			
Accomplishments/Planned Programs Subtotals		19.011	17.098
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
The C-ABSAA program has integrated Better Buying Power 2.0 initiatives throughout its acquisition strategy and relies upon acquisition of government data rights to maximize contractor competition from Technology Development through Production. The program uses an evolutionary acquisition strategy to provide the warfighter with a capability for Group 3-5 UAS with increased, time-phased capability improvements as technology and risks achieve satisfactory levels. Group 3-5 UAS platforms will be required to integrate the C-ABSAA provided capability into their unique systems.			
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.			

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

Date: March 2014

Appropriation/Budget Activity
3600 / 7

R-1 Program Element (Number/Name)
PE 0305220F / RQ-4 UAV

Project (Number/Name)
675148 / Common-Airborne Sense & Avoid
(C-ABSAA)

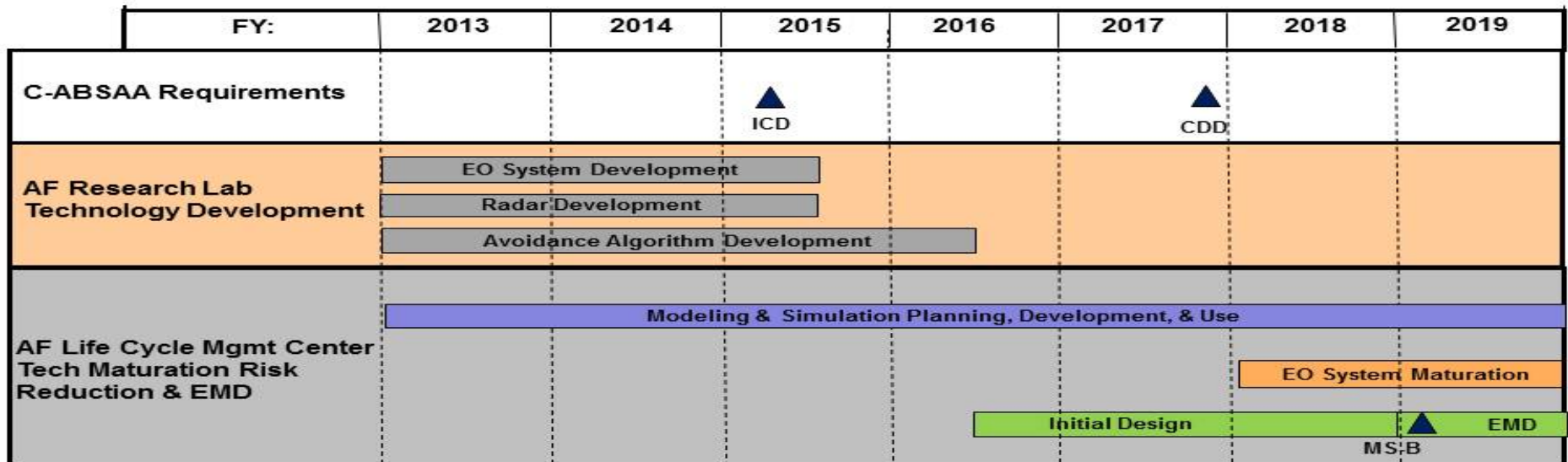


U.S. AIR FORCE

C-ABSAA Schedule

(As of 31 Jan 2014)

AFLCMC... Providing the Warfighter's Edge



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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 67RTIP / MP-RTIP			
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
67RTIP: MP-RTIP	180.599	17.683	9.122	11.000	-	11.000	16.200	7.723	11.900	11.911	-	266.138
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Note

The Multi-Platform Radar Technology Insertion Program (MP-RTIP) program was previously funded by program 0207450F (MP-RTIP) from FY05 through FY08. Beginning in FY09 funding was transferred to program 0305220F (RQ-4) Global Hawk. Therefore, the data in this package includes only FY09 and subsequent funding related to program 0305220F.

A. Mission Description and Budget Item Justification

The MP-RTIP sensor was designed as a family of modular, scalable sensors that provide next generation capabilities to support sustainable network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability. MP-RTIP provides the Global Hawk (GH) Block 40 aircraft advanced Synthetic Aperture Radar (SAR) and Moving Target Indicator (MTI) sensor capabilities.

This project includes all MP-RTIP design, development, test, and integration efforts on the GH Block 40 Platform. Integration activities include platform integration of the MP-RTIP sensor and sustainment support including logistics planning support. MP-RTIP studies and development insertion include the implementation of Maritime Modes (MM), High Range Resolution (HRR) modes, electronic protection, technical refresh, product improvements and other advanced capabilities.

Activities also include studies and analysis supporting current and future program planning and future modes development based on user requirements.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Title: Development and integration	16.921	8.964	9.955
Description: MP-RTIP development and integration			
FY 2013 Accomplishments: Completed sensor integration of MP-RTIP on GH platform for GMTI/SAR/Concurrent modes, including software release to GH, and FCA/PCA. Initiated planning for additional modes for MP-RTIP based on user requirements. Completed Radar Software Development (RSD) 1.4 software build.			
FY 2014 Plans: Completing MP-RTIP RSD 1.4.5 software build. Initiating MP-RTIP RSD 1.5 software build. Completing System Level Performance Verification (SLPV)/Integrated System Evaluation (ISE).			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force									Date: March 2014		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 67RTIP / MP-RTIP			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2013	FY 2014	FY 2015
Will complete RSD 1.5 software build. Will initiate U.S. Maritime Modes (MM) and design/development for remaining requirements.											
Title: Test & Evaluation									0.762	0.158	1.045
Description: MP-RTIP Test & Evaluation											
FY 2013 Accomplishments: Completed MP-RTIP sensor regression and RSD 1.4 software build Test and Evaluation on GH including but not limited to ground and flight integration of sensor and air vehicle, test force and range support. Initiated interoperability compliance and third party performance reviews.											
FY 2014 Plans: Completing Test & Evaluation support for SLPV (ISE) and MP-RTIP RSD 1.4.5 software build. Initiating Test & Evaluation support for MP-RTIP RSD 1.5 software build including but not limited to test planning, test force and range support, interoperability compliance and third party performance reviews.											
FY 2015 Plans: Will complete MP-RTIP Test & Evaluation support for Radar Software Development (RSD) 1.5 software build. Also, will initiate and complete Test and Evaluation support for U.S. MM. Also initiates Test and Evaluation Planning for remaining requirements including but not limited to test planning, test force and range support, interoperability compliance and third party performance reviews.											
Accomplishments/Planned Programs Subtotals									17.683	9.122	11.000
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
• APAF: BA04: Line Item # HAEUAV: RQ-4	118.360	11.000	65.403	-	65.403	103.935	29.699	31.534	29.908	432.821	5,079.019
• APAF: BA04: Line Item # RQ440P: RQ-4 Blk 40 Proc	10.691	1.747	-	-	-	-	-	-	-	-	12.438
• APAF: BA05: Line Item # HAWK00: RQ-4 Mods	6.997	9.313	21.354	-	21.354	46.127	34.493	89.248	67.265	487.907	1,140.417
• APAF: BA05: Line Item # RQ4GCM: RQ-4 GSRA/CSRA Mods	-	23.668	-	-	-	-	-	-	-	328.708	352.376

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 67RTIP / MP-RTIP	

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDT&E: BA07: PE 0305238F: NATO AGS	192.571	221.589	232.851	-	232.851	138.400	39.604	-	-	-	825.015

Remarks

D. Acquisition Strategy

Continue to incrementally fund a sole source cost-plus fixed fee multi-year development contract to continue software development, integration, and testing on Global Hawk Block 40 platform. Radar software development 1.5 software build, System level performance verification/integrated system evaluation schedule extension and U.S. Maritime Modes are currently planned as cost-plus incentive fee.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 67RTIP / MP-RTIP					
Product Development (\$ 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
MP-RTIP	SS/CPFF	Northrop Grumman Integrated Systems : El Segundo, CA	143.604	14.178	Nov 2012	6.826	Apr 2014	7.543	Nov 2014	-		7.543	32.724	204.875	TBD
Subtotal			143.604	14.178		6.826		7.543		-		7.543	32.724	204.875	-
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
IRT Study	Various	Various : Various,	0.105	-		-		-		-		-	-	0.105	0.105
Logistics Planning	SS/CPFF	Northrop Grumman Integrated Systems : El Segundo, CA	3.667	-		-		-		-		-	-	3.667	3.667
Subtotal			3.772	-		-		-		-		-	-	3.772	3.772
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
Joint Test Force, Edward AFB, Joint Interoperability Test Center, Navy, & IV&V	MIPR	Various : Various,	8.174	0.762	Jan 2013	0.158	Dec 2013	1.045	Nov 2014	-		1.045	4.360	14.499	TBD
Subtotal			8.174	0.762		0.158		1.045		-		1.045	4.360	14.499	-
Management Services (\$ 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
PMA: A&AS	C/CPFF	Various : Various,	22.063	2.234	Oct 2012	1.759	Oct 2013	1.929	Nov 2014	-		1.929	8.520	36.505	TBD
PMA: Other Gov't Cost	Various	Various : Boston, MA	2.986	0.509	Oct 2012	0.379	Oct 2013	0.483	Oct 2014	-		0.483	2.130	6.487	TBD
Subtotal			25.049	2.743		2.138		2.412		-		2.412	10.650	42.992	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force										Date: March 2014			
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV				Project (Number/Name) 67RTIP / MP-RTIP				
	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	180.599	17.683		9.122		11.000		-		11.000	47.734	266.138	-
Remarks													

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

Date: March 2014

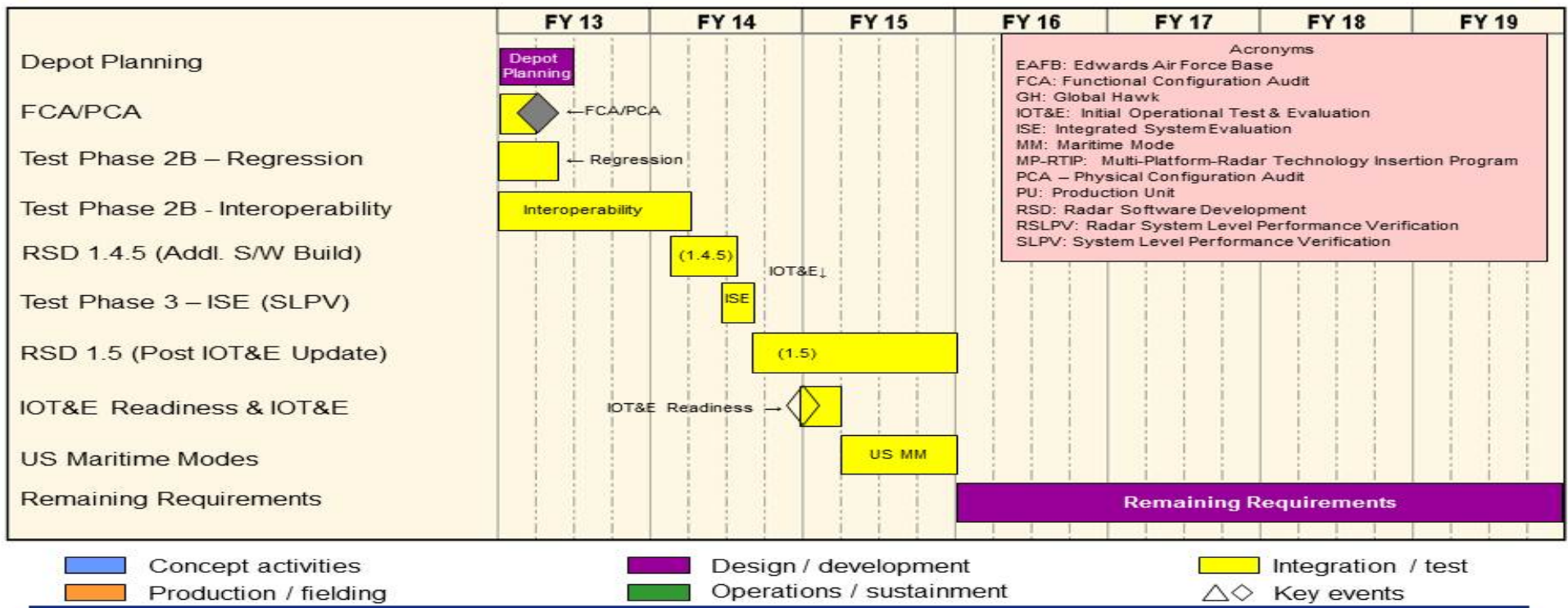
Appropriation/Budget Activity
3600 / 7

R-1 Program Element (Number/Name)
PE 0305220F / RQ-4 UAV

Project (Number/Name)
67RTIP / MP-RTIP



RQ-4 Global Hawk MP-RTIP Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305220F / RQ-4 UAV	Project (Number/Name) 67RTIP / MP-RTIP	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Depot Planning	1	2013	2	2013
Functional Configuration Audit (LAB/Qual/Flight)	1	2013	1	2013
Test Phase 2B - Regression	1	2013	2	2013
Test Phase 2B - Interoperability	1	2013	1	2014
RSD 1.4.5 (additional software builds)	1	2014	3	2014
Test Phase 3 - ISE (SLPV)	2	2014	3	2014
RSD 1.5 software build (Post IOT&E Updates)	3	2014	4	2015
OT&E Readiness & IOT&E	1	2015	1	2015
US MM Integration/test	2	2015	4	2015
Remaining Requirements Design/Development	1	2016	4	2019