

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	1,840.693	423.301	236.265	134.406	-	134.406	200.896	114.927	77.246	78.538	Continuing	Continuing
675144: Global Hawk Baseline	1,700.381	300.269	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2,000.650
675146: RQ-4 Block 40	0.000	0.000	144.179	67.980	-	67.980	39.842	7.456	0.000	0.000	0.000	259.457
675147: RQ-4 Grnd Segment/ Comm System	0.000	0.000	55.343	34.448	-	34.448	83.131	42.421	27.557	28.053	0.000	270.953
675148: RQ-4 Airborne Sense & Avoid (ABSAA)	0.000	0.000	19.036	20.815	-	20.815	66.477	53.477	37.477	38.053	Continuing	Continuing
676001: NATO AGS	0.000	82.745	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	82.745
67RTIP: MP-RTIP	140.312	40.287	17.707	11.163	-	11.163	11.446	11.573	12.212	12.432	0.000	257.132
MDAP/MAIS Code(s): 252,293												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
In FY 2012, Project 676001, NATO Alliance Ground Surveillance (AGS) efforts were transferred from OSD PE 1001018D8Z, NATO AGS, Project P018, NATO AGS, to PE 0305220F, RQ-4 Global Hawk (GH), Project 676001, NATO AGS in order to transfer control of this effort from OSD to the USAF.												
In FY 2013, Project 676001, NATO AGS, efforts were transfered from PE 0305220F, RQ-4 GH, NATO AGS, Project 676001, to PE 0305238F, NATO AGS, Project 676001, NATO AGS in order to manage NATO AGS as a separate OSD special interest program.												
Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.												
In two related Acquisition Decision Memorandums (ADM) 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 Segment/Communications System. Additionally, the Air Force created a RQ-4 Preplanned Product Improvement (P3I) for Airborne Sense and Avoid line item (name has been changed to RQ-4 Airborne Sense & Avoid (ABSAA)) to accommodate inclusion of required capability to meet warfighter needs beyond those requirements satisfied in the directed sub-programs.												
Subsequent to the decision to establish subprograms, the Global Hawk budget was significantly reduced by the 2013 President's Budget Request, and the Ground Segment/Communications System subprogram tasks were only funded to address key DMS/obsolescence problems that affect service life.												

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Air Force		<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>
<p>The program is progressing to an FY13 Defense Acquisition Board (DAB) decision planned as a Milestone C decision. The program will maintain capability and interoperability with system of system's partners and regulatory agencies examples include: Distributed Common Ground Segment (DCGS-A), AF DCGS, tactical ground segment/operational (TGS/OGS), Virtual Image Processing-Common (VIP-C), Real Time Dissemination Operational Transmission Services (RDOTS) National Geospatial Intelligence Agency (NGA), Extended Tether Program (ETP), Federal Aviation Agency (FAA).</p> <p>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 PEC.</p> <p><b>A. Mission Description and Budget Item Justification</b></p> <p>This program element funds five (5) related Air Force projects sharing the Global Hawk platform in common: the Global Hawk Baseline (Block 10/20/30) subprogram, the RQ-4 Block 40 subprogram, the RQ-4 Ground Segment/ Communications System subprogram, the RQ-4 Airborne Sense &amp; Avoid (ABSAA) subprogram, and the Multi-Platform Radar Technology Insertion Program (MP-RTIP).</p> <p>Global Hawk:</p> <p>The Global Hawk Unmanned Aircraft System (UAS) provides a high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.</p> <p>This funding supports the development of Global Hawk aircraft, payloads and 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 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The Block 20 employs the Battlefield Airborne Communications Node (BACN) payload and Block 30I employs upgraded Synthetic Aperture Radar (SAR) and Electro-Optical/Infrared (EO/IR) sensors known as the Enhanced Integrated Sensor Suite (EISS) in the imagery intelligence (IMINT) - only configuration. The Block 30M employs the same EISS sensors as the Block 30I, but adds the Airborne Signals Intelligence Payload (ASIP) sensor. The Block 40 will only integrate the Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar sensor. The ground segment includes the Mission Control Element (MCE) and the Launch and Recovery Element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the Global Hawk system.</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 UAV Command and Control Initiative (UCI) or the DoD's UAV Control Segment standards.</p> <p>The Global Hawk program will maintain capability and interoperability for Blocks 20/30/40 including efforts with system of system's partners and continue to incorporate applicable synergies with other platforms such as the U.S. Navy's Triton, USAF Predator/Reaper, other RPA weapon systems, and Processing, Exploitation &amp; Dissemination (PED) elements.</p>		

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2014 Air Force **DATE:** April 2013

<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>
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Activities also include studies and analysis supporting current and future program planning, mission planning upgrade development and testing, program protection and project execution. FY14 funding continues MP-RTIP sensor integration and funds Block 40 IOT&E.

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. Future MP-RTIP studies and development insertion include the implementation of maritime modes, High Range Resolution (HRR) modes, electronic protection, technical refresh, product improvements and other advanced capabilities.

FY14 funding continues post MP-RTIP Initial Operational Test & Evaluation (IOT&E) software update and design/development of remaining requirements. Funding continues to provide MP-RTIP government acquisition support services, with emphasis on acquisition management, documentation delivery and remaining requirements. MP-RTIP Test & Evaluation cost includes test planning, sensor integration and post IOT&E software updates. MP-RTIP Other Government Costs also provide acquisition services for program office infrastructure, contract planning, and contract awards for remaining program requirements.

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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>
Previous President's Budget	423.301	236.265	197.258	-	197.258
Current President's Budget	423.301	236.265	134.406	-	134.406
Total Adjustments	0.000	0.000	-62.852	-	-62.852
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-62.852	-	-62.852

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PE 0305220F: RQ-4 UAV  
Air Force

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675144: Global Hawk Baseline			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675144: Global Hawk Baseline	1,700.381	300.269	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2,000.650
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
1. Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.												
2. The Global Hawk Baseline Sub-Program was directed by an ADM signed 14 Jun 11 by USD (AT&L). Since 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. FY13 and beyond activities are covered in restructured sub-program projects RQ-4 Block 40 subprogram, RQ-4 Ground Segment/ Communications System subprogram, and RQ-4 Airborne Sense & Avoid (ABSAA) subprogram.												
A. Mission Description and Budget Item Justification												
The Global Hawk Unmanned Aircraft System (UAS) provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.												
RDT&E funding in this project (and PEC 0305205F, project 674799 in FY01-04) captures design, development, integration, and testing of all prior years for all sub-programs prior to the ADM restructure into separate projects. See Budget Item Justifications in other sub-programs for descriptions of supported activities. This sub-program (and PEC 0305205F, project 674799) captures all historical costs of RQ-4A and RQ-4B baseline development, as well as development of the Integrated Sensor Suite, Enhanced Integrated Sensor Suite, and legacy ground segments.												
Activities also included studies and analysis supporting current and future program planning, program protection and project execution.												
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 2012	FY 2013	FY 2014	
Title: Global Hawk Development and Demonstration (SDD)									279.957	0.000	0.000	
Description: Global Hawk Development and Demonstration (SDD)												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675144: Global Hawk Baseline			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Continued Aircraft/Comm system modernization, and BAMS Synergies. Continued testing of software blocks 3.1/4.0. This effort also includes Block 30, 40, and Ground Segment/Communications System upgrades. Continued to develop a scalable autonomous, Airborne Sense and Avoid (ABSAA) system to provide a capability to meet DoD training and operational objectives at locations where airspace restrictions currently limit routine and flexible flying operations.  FY13 and beyond activities are covered in restructured sub-program projects RQ-4 Block 40 subprogram, RQ-4 Ground Segment/Communications System subprogram, and RQ-4 Airborne Sense & Avoid (ABSAA) subprogram.											
Title: Support Segment Description: Support Segment									12.722	0.000	0.000
FY 2012 Accomplishments: Continued development and integration logistics support.											
Title: Other Government Costs Description: Program Management Administration (PMA) - includes Advisory & Assistance Services, Travel, Training, Supplies, etc.  FY 2012 Accomplishments: Mission Support: PMA									7.590	0.000	0.000
Accomplishments/Planned Programs Subtotals									300.269	0.000	0.000
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA04: Line Item # HAEUAV: RQ-4 UAV	574.300	75.000	27.000		27.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA05: Line Item # HAWK00: RQ-4 Mods	89.177	9.257	9.313		9.313	8.847	9.446	6.444	6.560	Continuing	Continuing
• APAF: BA07: Line Item # HAWK07: Other Production Charges RQ-4	26.466	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force										<b>DATE:</b> April 2013	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>				<b>PROJECT</b> 675144: <i>Global Hawk Baseline</i>			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• APAF: BA04: Line Item # RQ440P: <i>RQ-4 Block 40 Proc</i>	0.000	11.654	1.747		1.747	1.801	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA05: Line Item # RQ4GCM: <i>RQ-4 Grnd/Comm Mods</i>	0.000	0.000	30.000		30.000	32.700	21.801	10.000	10.180	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
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.											
<b>E. Performance Metrics</b>											
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 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE				PROJECT					
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						PE 0305220F: RQ-4 UAV				675144: Global Hawk Baseline					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	SS/CPAF	Northrop Grumman Integrated Systems:San Diego, CA	1,479.007	252.707	Oct 2011	0.000		0.000		-		0.000	0.000	1,731.714	TBD
Subtotal			1,479.007	252.707		0.000		0.000		0.000		0.000	0.000	1,731.714	
Remarks															
Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Program Support	SS/CPFF	Northrop Grumman Integrated Systems:San Diego, CA	27.719	4.800	Nov 2011	0.000		0.000		-		0.000	0.000	32.519	TBD
Contractor Depot Support	C/TBD	TBD:TBD, NA	0.000	11.477	Apr 2013	0.000		0.000		-		0.000	0.000	11.477	TBD
Government Program Support	Various	Various:Various,	5.706	0.895	Nov 2011	0.000		0.000		-		0.000	0.000	6.601	TBD
Subtotal			33.425	17.172		0.000		0.000		0.000		0.000	0.000	50.597	
Remarks															
Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	PO	412 TW:Edwards, AFB, CA	98.458	22.800	Nov 2011	0.000		0.000		-		0.000	0.000	121.258	TBD
Subtotal			98.458	22.800		0.000		0.000		0.000		0.000	0.000	121.258	



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675144: Global Hawk Baseline					
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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/Various	Various:Dayton, OH	55.820	4.705	Nov 2011	0.000		0.000		-		0.000	0.000	60.525	TBD
PMA: Other Gov't Cost	Various	Various:Dayton, OH	33.671	2.885	Oct 2011	0.000		0.000		-		0.000	0.000	36.556	TBD
Subtotal			89.491	7.590		0.000		0.000		0.000		0.000	0.000	97.081	
Remarks Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1,700.381	300.269		0.000		0.000		0.000		0.000	0.000	2,000.650	
Remarks Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															

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**Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force**

**DATE:** April 2013

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

PE 0305220F: RQ-4 UAV

**PROJECT**

675144: Global Hawk Baseline



**U.S. AIR FORCE**

*This schedule is based on elimination of Block 30 development and production from the Global Hawk baseline. Block 40 aircraft and associated modifications remain. Ground and Communications obsolescence-related modifications remain.*

# RQ-4 Global Hawk Baseline Schedule

	FY 2012	FY 2013	FY 2014	FY 2015	FY2016	FY2017	FY2018
Block 20/30	Post-IOT&E HAT Activities	Beginning in FY13, the Global Hawk Baseline sub-program is broken out into the following projects for more visibility into program activities: 675146, RQ-4 Block 40 sub-program; 675147, RQ-4 Ground Station/Communications System sub-program; and 675148, RQ-4 Airborne Sense & Avoid (ABSAA)					
Block 40	Radar / Air Vehicle Integration and Flight Test						
	Mission Planning/JMPS						
	Reliability and Maintainability						
Ground and Comms	Obsolescence-related modifications						

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Air Force			<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675144: <i>Global Hawk Baseline</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 20/30 Post-IOT&E HAT Activities	1	2012	4	2012
Block 40 Radar/Air Vehicle Integration and Flight Test	1	2012	4	2012
Mission Planning / JMPS	1	2012	4	2012
Reliability and Maintainability	4	2012	4	2012
Ground and Comms Obsolescence-related modifications	1	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675146: RQ-4 Block 40			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675146: RQ-4 Block 40	0.000	0.000	144.179	67.980	-	67.980	39.842	7.456	0.000	0.000	0.000	259.457
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
1. Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.												
2. The Global Hawk Block 40 Sub-Program was directed by an ADM signed 14 Jun 11 by USD (AT&L). Since 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.												
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 compliments 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 ISR and Battle Management Command and Control (BMC2) 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 and reliability and maintainability improvements.												
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 UAV Command and Control Initiative (UCI) or the DoD's UAV Control Segment standards.												
The Global Hawk program will maintain capability and interoperability for Blocks 40 including efforts with system of system's partners and continue to incorporate applicable synergies with other platforms, such as the U.S. Navy's Triton, USAF Predator/Reaper, other RPA weapon systems, and Processing, Exploitation & Dissemination (PED) elements.												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV	PROJECT 675146: RQ-4 Block 40		
Activities also include studies and analysis supporting current and future program planning, mission planning upgrade development and testing, program protection and project execution. FY14 funding continues MP-RTIP sensor integration and funds Block 40 IOT&E.					
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 2012	FY 2013	FY 2014
<b>Title:</b> Global Hawk Block 40 System Development and Demonstration (SDD) <b>Description:</b> Global Hawk Block 40 Payload and Aircraft/Communications Development and Demonstration  <b>FY 2013 Plans:</b> Development and integration of MP-RTIP sensor integration, test and sustainment capability for Early Operational Capability for Block 40. Ramp up Aircraft/Communication systems modernization to include IFF Mode 5/ADSB pre-contract activities, and mission planning upgrade. Continue aircraft operations surety for Information Assurance and Reliability and Maintainability initiatives.  <b>FY 2014 Plans:</b> Will continue development and integration of MP-RTIP sensor integration, IOT&E and sustainment capability for Block 40. Will continue Aircraft/Communication systems modernization to include IFF Mode 5, ADSB, and mission planning upgrade and program protection. Continue aircraft operations surety for Information Assurance and Reliability and Maintainability.			0.000	123.006	52.634
<b>Title:</b> Global Hawk Block 40 Government Test and Non Prime Support <b>Description:</b> Government test and non-prime technical support -- 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 AFOTEC, JITC and DCGS.  <b>FY 2013 Plans:</b> Continuing government test and non-prime engineering and technical support for Block 40 aircraft  <b>FY 2014 Plans:</b> Continuing government test and non-prime engineering and technical support for Block 40 IOT&E			0.000	14.034	10.946
<b>Title:</b> Other Government Costs <b>Description:</b> Program Management Administration (PMA) - includes Advisory & Assistance Services, Travel, Training, Supplies, etc.  <b>FY 2013 Plans:</b>			0.000	7.139	4.400

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force							<b>DATE:</b> April 2013					
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>			<b>PROJECT</b> 675146: <i>RQ-4 Block 40</i>					
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014</b>	
Mission Support: PMA												
<b><i>FY 2014 Plans:</i></b> Mission Support: PMA												
<b>Accomplishments/Planned Programs Subtotals</b>							0.000		144.179		67.980	
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<b>Line Item</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
• APAF: BA04: Line Item # RQ440P: <i>RQ-4 Blk 40 Proc</i>	0.000	11.654	1.747		1.747	1.801	0.000	0.000	0.000	0.000	15.225	
<b>Remarks</b>												
<b>D. Acquisition Strategy</b> 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.												
<b>E. Performance Metrics</b> 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.												

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Air Force													<b>DATE:</b> April 2013		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>							<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>				<b>PROJECT</b> 675146: <i>RQ-4 Block 40</i>				

<b>Product Development (\$ in Millions)</b>				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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 Block 40	SS/CPIF	Northrop Grumman Integrated Systems:San Diego, CA	0.000	0.000		123.396	Oct 2012	52.634	Oct 2013	-		52.634	39.622	215.652	246.903
<b>Subtotal</b>			0.000	0.000		123.396		52.634		0.000		52.634	39.622	215.652	246.903

<b>Remarks</b> Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
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<b>Support (\$ in Millions)</b>				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Support	Various	Various:Dayton, OH	0.000	0.000		0.844	Oct 2012	0.594	Oct 2013	-		0.594	0.250	1.688	TBD
<b>Subtotal</b>			0.000	0.000		0.844		0.594		0.000		0.594	0.250	1.688	

<b>Remarks</b> Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
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<b>Test and Evaluation (\$ in Millions)</b>				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	PO	412 TW:Edwards AFB, CA	0.000	0.000		12.800	Oct 2012	10.352	Oct 2013	-		10.352	0.000	23.152	TBD
<b>Subtotal</b>			0.000	0.000		12.800		10.352		0.000		10.352	0.000	23.152	

<b>Remarks</b> Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
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## UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675146: RQ-4 Block 40					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	0.000		3.226	Oct 2012	2.000	Oct 2013	-		2.000	3.640	8.866	TBD
PMA: Other Gov't Cost	Various	Various:Dayton, OH	0.000	0.000		3.913	Oct 2012	2.400	Oct 2013	-		2.400	3.786	10.099	TBD
Subtotal			0.000	0.000		7.139		4.400		0.000		4.400	7.426	18.965	
Remarks Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		144.179		67.980		0.000		67.980	47.298	259.457	
Remarks Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															



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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

PE 0305220F: RQ-4 UAV

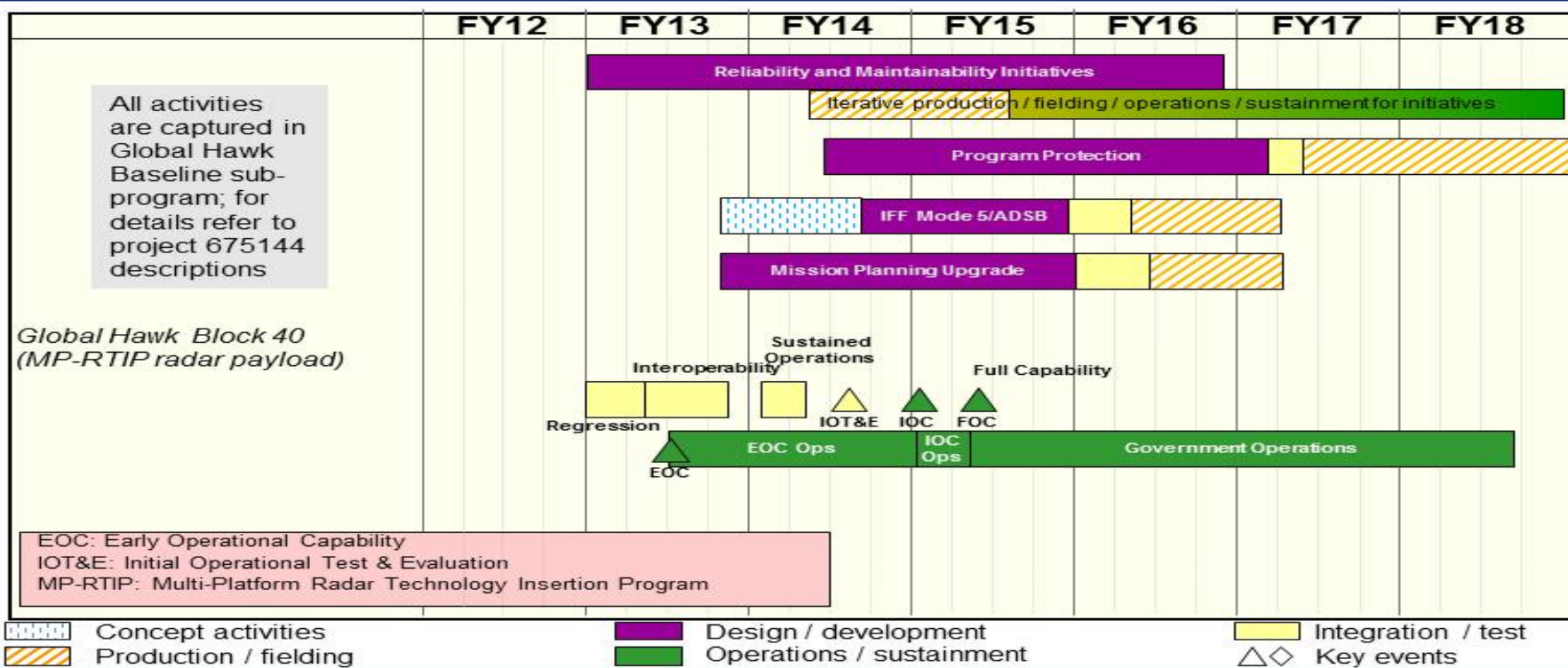
**PROJECT**

675146: RQ-4 Block 40



*This schedule is based on elimination of Block 30 development and production from the Global Hawk baseline. Block 40 aircraft and associated modifications remain. Ground and Communications obsolescence-related modifications remain.*

# RQ-4 Global Hawk Block 40 Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Air Force			<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675146: <i>RQ-4 Block 40</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Reliability and Maintainability Initiatives	1	2013	4	2018
Program Protection	2	2014	4	2018
IFF Mode 5/ADSB	4	2013	2	2017
Mission Planning Upgrade	4	2013	2	2017
Block 40 MP-RTIP Radar Air Vehicle Integration and Flight Test (Regression, Interoperability and Sustained Operations Testing)	1	2013	2	2014
Block 40 IOT&E	3	2014	3	2014
Block 40 IOC	1	2015	1	2015
Block 40 FOC	2	2015	2	2015
Block 40 EOC	3	2013	3	2013
Early Operational Capability Ops	3	2013	1	2015
Initial Operational Capability Ops	1	2015	2	2015
Block 40 Government Ops	2	2015	3	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675147: RQ-4 Grnd Segment/Comm System			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675147: RQ-4 Grnd Segment/Comm System	0.000	0.000	55.343	34.448	-	34.448	83.131	42.421	27.557	28.053	0.000	270.953
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
1. Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.												
2. The Global Hawk Ground Segment/Communications System Sub-Program was directed by an ADM signed 14 Jun 11 by USD (AT&L). Since 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.												
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 compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.												
RDT&E funding in this project supports limited design, development, integration, and testing of the Ground Segment and Communication Systems required to resolve obsolescence issues. The Ground Segment effort solves fleet-grounding obsolescence issues associated with upgrading legacy ground segment equipment. Communication Systems updates also resolves critical obsolescence issues in the Global Hawk communications infrastructure.												
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 UAV Command and Control Initiative (UCI) or the DoD's UAV Control Segment standards.												
Activities also include studies and analysis supporting current and future program planning, mission planning upgrade development and testing, program protection and project execution.												
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.												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force		<b>DATE:</b> April 2013	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675147: <i>RQ-4 Grnd Segment/Comm System</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2012</b>	<b>FY 2013</b>
<b>Title:</b> Global Hawk Communications System- Critical Obsolescence Issues <b>Description:</b> Global Hawk Communications System Development  <b>FY 2013 Plans:</b> Ramp up communication systems updates to resolve critical obsolescence issues in the Global Hawk communications infrastructure.  <b>FY 2014 Plans:</b> Continue communication systems updates to resolve critical obsolescence issues in the Global Hawk communications infrastructure		0.000	11.644
<b>Title:</b> Global Hawk Ground Segment- Critical Obsolescence Issues <b>Description:</b> Global Hawk Ground Segment Development  <b>FY 2013 Plans:</b> Continuing ground segment updates to resolve critical obsolescence issues in the Global Hawk legacy ground segment equipment.  <b>FY 2014 Plans:</b> Ground Station Phase 1A ramps down; continuing ground segment updates to resolve critical obsolescence issues in the Global Hawk legacy ground segment equipment.		40.203	12.850
<b>Title:</b> Government Test and non prime support <b>Description:</b> Government test and non-prime technical support -- 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 AFOTEC, JITC and DCGS.  <b>FY 2013 Plans:</b> Continuing government test and non-prime engineering and technical support  <b>FY 2014 Plans:</b> Continuing government test and non-prime engineering and technical support		6.810	8.004
<b>Title:</b> Other Government Costs <b>Description:</b> Program Management Administration (PMA) - includes Advisory & Assistance Services, Travel, Training, Supplies, etc.		1.658	1.950

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force							<b>DATE:</b> April 2013				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>			<b>PROJECT</b> 675147: <i>RQ-4 Grnd Segment/Comm System</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>		
<b>FY 2013 Plans:</b> Mission Support: PMA											
<b>FY 2014 Plans:</b> Mission Support: PMA											
<b>Accomplishments/Planned Programs Subtotals</b>							0.000	55.343	34.448		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF: BA05: Line Item # RQ4GCM: <i>RQ-4 GS/CS Mods</i>	0.000	0.000	30.000		30.000	32.700	21.801	10.000	10.180	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b> 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.											
<b>E. Performance Metrics</b> 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.											

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Air Force</b>												<b>DATE:</b> April 2013			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: RQ-4 UAV						<b>PROJECT</b> 675147: RQ-4 Grnd Segment/Comm System			
<b>Product Development (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Engineering, Manufacturing & Development Ground Segment and Communication Systems	SS/CPIF	Northrop Grumman Integrated Systems:San Diego, CA	0.000	0.000		46.875	Oct 2012	24.494	Oct 2013	-		24.494	157.534	228.903	230.070
<b>Subtotal</b>			0.000	0.000		46.875		24.494		0.000		24.494	157.534	228.903	230.070
<b>Remarks</b> Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
<b>Support (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Government Program Support	Various	Various:Dayton, OH	0.000	0.000		1.610	Oct 2012	0.125	Oct 2013	-		0.125	0.184	1.919	TBD
<b>Subtotal</b>			0.000	0.000		1.610		0.125		0.000		0.125	0.184	1.919	
<b>Remarks</b> Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Flight Test & Evaluation	PO	412 TW:Edwards AFB, CA	0.000	0.000		5.200	Oct 2012	7.879	Oct 2013	-		7.879	11.000	24.079	TBD
<b>Subtotal</b>			0.000	0.000		5.200		7.879		0.000		7.879	11.000	24.079	
<b>Remarks</b> Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.															

## UNCLASSIFIED

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Air Force	<b>DATE:</b> April 2013
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675147: <i>RQ-4 Grnd Segment/Comm System</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	0.000		0.750	Oct 2012	1.000	Oct 2013	-		1.000	6.330	8.080	TBD
PMA: Other Gov't Cost	Various	Various:Dayton, OH	0.000	0.000		0.908	Oct 2012	0.950	Oct 2013	-		0.950	6.114	7.972	TBD
<b>Subtotal</b>			0.000	0.000		1.658		1.950		0.000		1.950	12.444	16.052	

**Remarks**

Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	0.000	0.000	55.343	34.448	0.000	34.448	181.162	270.953	

**Remarks**

Target Value of the Global Hawk EMD Contract is not segregated by Budget Project Number.

# UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

## APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

## R-1 ITEM NOMENCLATURE

PE 0305220F: RQ-4 UAV

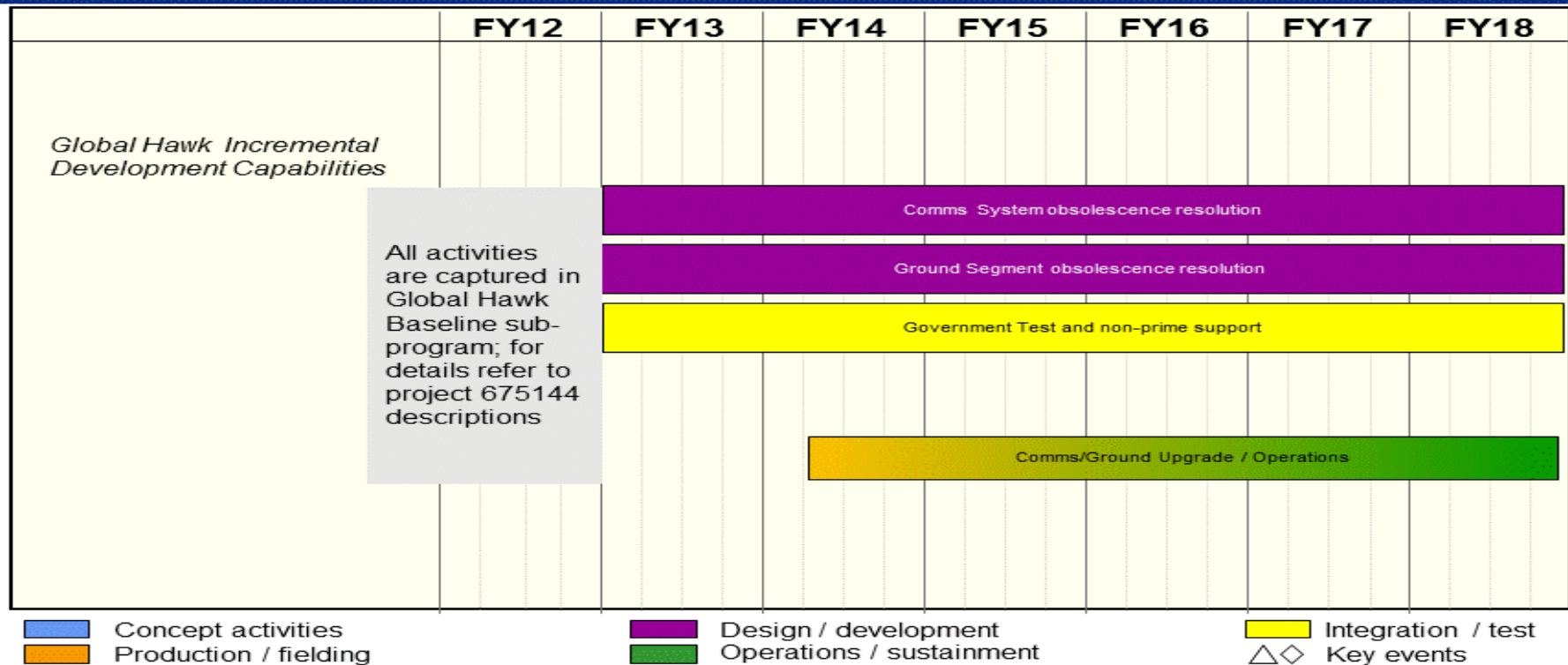
## PROJECT

675147: RQ-4 Grnd Segment/Comm System



This schedule is based on elimination of Block 30 development and production from the Global Hawk baseline. Block 40 aircraft and associated modifications remain. Ground and Communications obsolescence-related modifications remain.

## RQ-4 Global Hawk Ground Segment/ Communications System Schedule





**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Air Force			<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675147: <i>RQ-4 Grnd Segment/Comm System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Comms System obsolescence resolution	1	2013	4	2018
Ground Segment obsolescence resolution	1	2013	4	2018
Government test and non-prime technical support	1	2013	4	2018
Ground and Comms Upgrade / Operations	2	2014	4	2018

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 675148: RQ-4 Airborne Sense & Avoid (ABSAA)			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675148: RQ-4 Airborne Sense & Avoid (ABSAA)	0.000	0.000	19.036	20.815	-	20.815	66.477	53.477	37.477	38.053	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
1. Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.												
2. 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). Additionally, the Air Force 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.												
A. Mission Description and Budget Item Justification												
RDT&E funding in this project supports design, development, integration, and testing of RQ-4 Airborne Sense and Avoid (ABSAA). Global Hawk is the Pathfinder for ABSAA. SAA development planning is concurrent with Global Hawk ABSAA. Ongoing activities include technology maturation, sub system integration and risk reductions activities. ABSAA is a separate ACAT II program in the Technological Development phase of the acquisition lifecycle, supports the "Worldwide Operations" Key Performance Parameter (KPP), and provides the ability for UAS integration into the National Airspace System (NAS) and full UAS operations across all mission environments. Funding covers the Sense and Avoid development activities as well as program infrastructure and other government costs. This is a continuation of efforts which began in FY10 under OSD PEC, 64400D.												
Activities also include ABSAA related studies and analysis supporting current and future ABSAA program planning and project execution.												
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 2012	FY 2013	FY 2014	
Title: Global Hawk System Development and Demonstration (SDD) ABSAA									0.000	17.732	19.615	
Description: Continue to develop a scalable, autonomous ABSAA system providing the capability to integration UAS operations in to non-segregated airspace, both within the National Airspace and Globally. Fielding of this capability is dependent upon DoD												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force		<b>DATE:</b> April 2013	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675148: <i>RQ-4 Airborne Sense &amp; Avoid (ABSAA)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2012</b>	<b>FY 2013</b>
self-certification of the ABSAA capability to meet the Standards for Operation and Certification the FAA is required to deliver not later than December 31, 2015 in accordance with the FAA Modernization and Reform Act of 2012.			
<b>FY 2013 Plans:</b> Briefed and obtained approval to initiate the program at MDD. Completed science and technology ABSAA flight demonstrations with AFRL and FAA on a surrogate UAS, against multiple intruder aircraft, demonstrating autonomous collision avoidance against both cooperative and non-cooperative threats. Continuing to mature and tune the Unmanned Sense, Track, and Avoid Radar and development of the next generation electro-optical sensor system.			
<b>FY 2014 Plans:</b> Build a Common ABSAA CDD with ACC. Define and build sub-system M&S models to a sufficient level of fidelity to support airworthiness under MIL-HDBK-516. Conduct preliminary design reviews for all major ABSAA subsystems (C-ABSAA, EO and Radar), negotiate and award Global Hawk platform integration contract for PRD design. Prepare all plans and documentation in support of MSB. Perform EMD acquisition planning and all pre-EMD contract activities (RFPs, proposal evals, etc). Perform early logistics support planning.			
<b>Title:</b> Other Government Costs		0.000	1.304
<b>Description:</b> Program Management Administration (PMA) - includes Advisory & Assistance Services, Travel, Training, Supplies, etc.			
<b>FY 2013 Plans:</b> Mission Support: PMA			
<b>FY 2014 Plans:</b> Mission Support: PMA			
<b>Accomplishments/Planned Programs Subtotals</b>		0.000	19.036
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> 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.			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675148: <i>RQ-4 Airborne Sense &amp; Avoid (ABSAA)</i>
<b>E. Performance Metrics</b> 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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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Air Force</b>												<b>DATE:</b> April 2013			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: RQ-4 UAV						<b>PROJECT</b> 675148: RQ-4 Airborne Sense & Avoid (ABSAA)			
<b>Product Development (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Engineering Manufacturing and Development ABSAA	C/Various	various:various,	0.000	0.000		17.732	Dec 2012	19.615	Dec 2013	-		19.615	168.004	205.351	TBD
<b>Subtotal</b>			0.000	0.000		17.732		19.615		0.000		19.615	168.004	205.351	
<b>Support (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Flight Test & Evaluation	PO	412 TW:Edwards AFB, CA	0.000	0.000		0.000		0.000		-		0.000	15.000	15.000	TBD
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000		0.000	15.000	15.000	
<b>Management Services (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
PMA: A&AS	Various	Various:Dayton, OH	0.000	0.000		0.850	Oct 2012	0.650	Oct 2013	-		0.650	6.250	7.750	TBD
PMA:Other Gov't Cost	Various	Various:Dayton, OH	0.000	0.000		0.454	Oct 2012	0.550	Oct 2013	-		0.550	6.230	7.234	TBD
<b>Subtotal</b>			0.000	0.000		1.304		1.200		0.000		1.200	12.480	14.984	
<b>Project Cost Totals</b>			0.000	0.000		19.036		20.815		0.000		20.815	195.484	235.335	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force							DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV			PROJECT 675148: RQ-4 Airborne Sense & Avoid (ABSAA)			
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

PE 0305220F: RQ-4 UAV

**PROJECT**

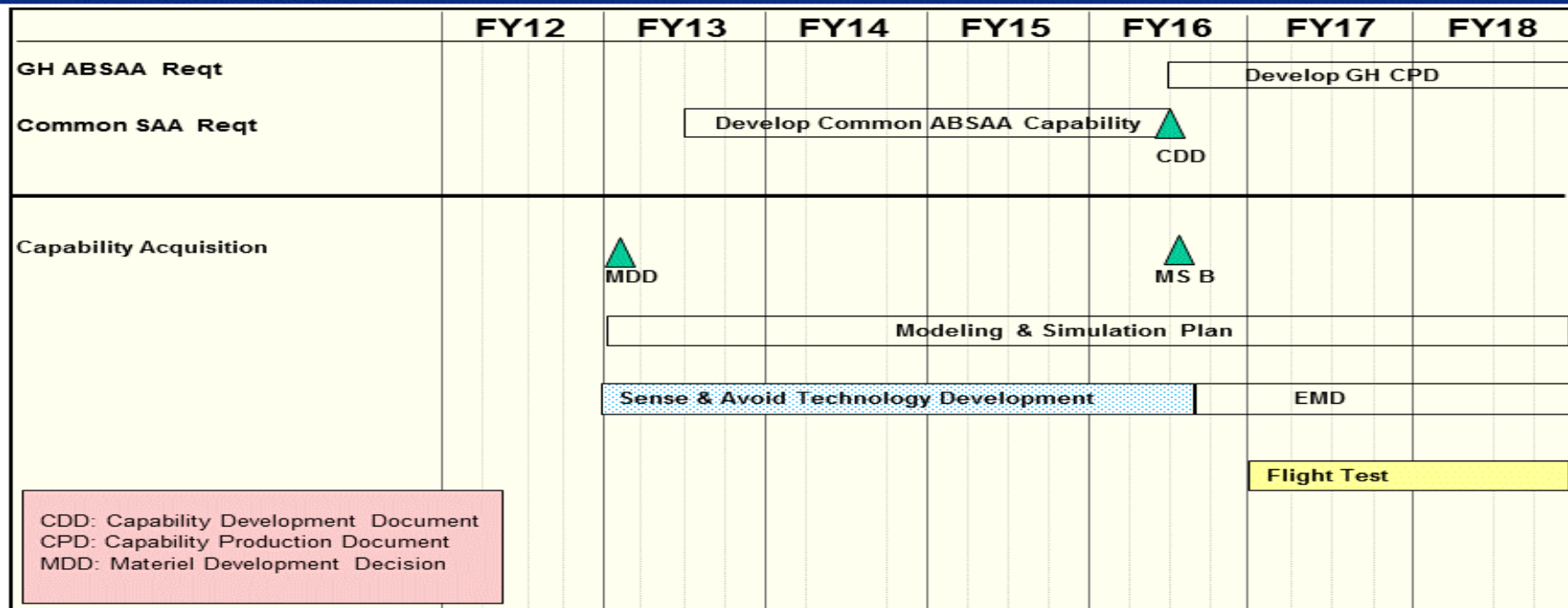
675148: RQ-4 Airborne Sense & Avoid (ABSAA)



U.S. AIR FORCE

*This schedule is based on elimination of Block 30 development and production from the Global Hawk baseline. Block 40 aircraft and associated modifications remain. Ground and Communications obsolescence modifications remain.*

# RQ-4 Global Hawk ABSAA Schedule



CDD: Capability Development Document  
CPD: Capability Production Document  
MDD: Materiel Development Decision



Technology Development



Design / development



Integration / test



Key events

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Air Force			<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 675148: <i>RQ-4 Airborne Sense &amp; Avoid (ABSAA)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Develop Global Hawk Capability Production Document (CPD)	2	2016	4	2018
Develop Common ABSAA capability	2	2013	3	2016
Capability Development Document (CDD)	1	2016	1	2016
Material Development Decision (MDD)	1	2013	1	2013
ABSAA MS B	3	2016	3	2016
Modeling & Simulation Plan	1	2013	4	2018
ABSAA Tech Dev	1	2013	3	2016
EMD	3	2016	4	2018
Flight Test	1	2017	4	2018



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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 676001: NATO AGS			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
676001: NATO AGS	0.000	82.745	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	82.745
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
<b>Note</b> In FY 2012, Project 676001, NATO Alliance Ground Surveillance (AGS) efforts were transferred from OSD PE 1001018D8Z, NATO AGS, Project P018, NATO AGS, to PE 0305220F, RQ-4 Global Hawk (GH), Project 676001, NATO AGS in order to transfer control of this effort from OSD to the USAF.  In FY 2013, Project 676001, NATO AGS, efforts transferred from PE 0305220F, RQ-4 GH, Project 676001, NATO AGS to PE 0305238F, NATO AGS, Project 676001, NATO AGS in order to manage NATO AGS as a separate OSD special interest program.												
<b>A. Mission Description and Budget Item Justification</b> U.S. participation in NATO AGS was ratified by SECDEF signature of the NATO AGS Program Memorandum of Understanding (PMOU) in June 2009. The PMOU went into effect in Sept 2009 when fifteen nations, including the United States, financially committed for procurement and delivery of the NATO Commander's number one priority to the war fighter. Canada withdrew in August 2011, leaving 14 participating nations.  In FY2012, OSD transferred the NATO AGS project to the USAF for management and execution. The NATO AGS project funds the U.S. share of the cost for NATO to acquire an air-to-ground ground surveillance capability, improvements to the radar, and the U.S. support of NATO AGS-related activities. Operations and continuing support will be funded through a future NATO Military Commanders' Capability Package funded within the NATO Security Investment Program (NSIP).  The AGS system will be a NATO-owned and operated airborne ground surveillance capability that provides continuous, wide area surveillance information in all weather conditions for use at the strategic, operational and tactical levels of command. Interoperable with other national assets, AGS will provide NATO decision makers with near real time, continuous information and situational awareness concerning friendly, neutral, and opposing ground forces to support mission planning and execution, including force protection and targeting.  The NATO AGS Program includes an air segment consisting of a five (5) NATO-developed air vehicles, using elements of the USN Triton (previously Broad Area Maritime Surveillance (BAMS)) command and control architecture and the U.S. Radar Technology Insertion Program (RTIP) radar; a unique configuration to allow export of system; a ground segment for data exploitation and distribution that consists of fixed-based site and transportable/mobile ground stations; establishment and operation of a management organization; development of operations and support concepts; and definition and establishment of an initial support capability. As part of the U.S. government agreement with NATO AGS Management Agency (NAGSMA), the U.S. will integrate Maritime Moving Target and Inverse Synthetic Aperture												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV	PROJECT 676001: NATO AGS		
<p>Radar capability into the RTIP radar for NATO AGS. This design and development includes correcting deficiencies, flight testing on the modes and system level performance validation.</p> <p>The system level configuration changes include a unique configuration to allow for export of the system. (Additional details are classified and available on a need-to know basis.)</p> <p>Deliveries are planned for 2016-2017. The follow-on sustainment and operations will be supported by all 28 NATO nations through their contributions of funding to the program. Mission elements will support 2 orbits. The main operating base (MOB) air vehicles and mission C2 will be in Naval Air Station Sigonella, Italy. Exploitation at MOB will be developed by Selex. EADS and Selex will develop the transportable and mobile general ground stations.</p> <p>The program, managed by the NAGSMA, is composed of design, development and demonstration, as well as initial in-service support (IISS). While the current program includes IISS, the current Direct Commercial Sale (DCS) contract with Northrop Grumman does not include these tasks.</p> <p>The DCS contract between Northrop Grumman and NAGSMA was signed on 20 May 2012. This funding is the U.S. cost share for the acquisition of the NATO airborne ground surveillance capability as well as the cost share associated with the IISS. IISS and In-Service Support (ISS) will be contracted under separate action. It is anticipated that ISS costs will be commonly funded through a future NATO Military Commanders' Capability Package, using the NATO Security Investment Program (NSIP). This funding also includes developmental activity for RTIP to include additional functionality and configuration requirements, studies and analysis related to mission security and exportability, and current and future program planning, project execution, engineering, and program management support to NATO.</p> <p>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.</p>				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Title: Design/Develop NATO AGS Description: To provide US Government NATO AGS development funding FY 2012 Accomplishments: To provide US Government NATO AGS development funding		74.985	0.000	0.000
Title: Support the NATO AGS Management Agency (NAGSMA) Description: Establish and support a program office within NATO for AGS development and initial fielding. Serve as interface and US program office to the prime contractor for NATO AGS capability FY 2012 Accomplishments:		7.760	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force							<b>DATE:</b> April 2013				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>			<b>PROJECT</b> 676001: <i>NATO AGS</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>		
US contribution to NATO for AGS development acquisition and initial fielding											
<b>Accomplishments/Planned Programs Subtotals</b>							82.745	0.000	0.000		
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDTE: BA07: PE 0305238F: NATO AGS	0.000	210.109	264.134		264.134	235.757	140.000	40.000	40.720	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
The U.S. signed the PMOU committing the U.S. Government to NATO-derived cost shares of the AGS prime contract for design, development, demonstration, and initial production of the NATO AGS system. The system will be delivered via a fixed price Direct Commercial Sale contract between Northrop Grumman Integrated Sensor Systems International, Incorporated (NGISSI) & NATO, which was signed on 20 May 2012.											
<b>E. Performance Metrics</b>											
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 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 676001: NATO AGS					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NATO AGS PMOU/Prime Contract	SS/FFP	NATO AGS Managment Agency:Brussels, Belgium,	0.000	77.587	Feb 2012	0.000		0.000		-		0.000	0.000	77.587	
Subtotal			0.000	77.587		0.000		0.000		0.000		0.000	0.000	77.587	
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AFFTC Support	SS/T&M	US Air Force:Edwards AFB, CA	0.000	0.778	Feb 2012	0.000		0.000		-		0.000	0.000	0.778	
Subtotal			0.000	0.778		0.000		0.000		0.000		0.000	0.000	0.778	
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	Multiple:Hanscom, WPAFB, Pax River,	0.000	3.958	Feb 2012	0.000		0.000		-		0.000	0.000	3.958	
PMA: Other Gov't Cost	Various	Multiple:Hanscom, WPAFB, Pax River,	0.000	0.422	Feb 2012	0.000		0.000		-		0.000	0.000	0.422	
Subtotal			0.000	4.380		0.000		0.000		0.000		0.000	0.000	4.380	

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PE 0305220F: RQ-4 UAV  
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**Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force**

**DATE:** April 2013

**APPROPRIATION/BUDGET ACTIVITY**

3600: *Research, Development, Test & Evaluation, Air Force*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**

PE 0305220F: *RQ-4 UAV*

**PROJECT**

676001: *NATO AGS*



**U.S. AIR FORCE**

# ***NATO AGS Program Schedule***

	FY 12				FY 13				FY 14				FY 15				FY 16				FY 17				FY 18			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Contract Award</b>			▼																									
<b>Design and Development Activity</b>			■																									

In FY 2012, P018, NATO AGS efforts were transferred from PE 1001018D8Z, NATO AGS, P018, NATO AGS, to PE 0305220F, NATO AGS, Project 676001, NATO AGS in order to transfer control of this effort from OSD to the USAF.

In FY 2013, Project 676001, NATO AGS efforts transferred from PE 0305220F, NATO AGS, Project 676001, NATO AGS to PE 0305238F, NATO AGS, Project 676001, NATO AGS in order to manage this effort as a separate OSD special interest program.

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>RQ-4 UAV</i>	PROJECT 676001: <i>NATO AGS</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Contract Award	3	2012	3	2012
Design/Development	3	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 67RTIP: MP-RTIP			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
67RTIP: MP-RTIP	140.312	40.287	17.707	11.163	-	11.163	11.446	11.573	12.212	12.432	0.000	257.132
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
The MP-RTIP program was previously funded by PE 0207450F (MP-RTIP) from FY05 through FY08. Beginning in FY09 funding was transferred to PE 0305220F (RQ-4) Global Hawk. Therefore, the data in this package includes only FY09 and subsequent funding related to PE 0305220F.												
A. Mission Description and Budget Item Justification												
The Multi Platform-Radar Technology Insertion Program (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 onto the GH Block 40 Platform. Integration activities include platform integration of the MP-RTIP sensor and sustainment support including logistics planning support. Future MP-RTIP studies and development insertion include the implementation of maritime modes, High Range Resolution modes, electronic protection, technical refresh, product improvements and other advanced capabilities.												
FY14 funding initiates Block 40 post Initial Operational Test & Evaluation (IOT&E) software updates and design/development of remaining requirements. Funding continues to provide MP-RTIP government acquisition support services, with emphasis on acquisition management, documentation delivery, IOT&E software updates and remaining requirements. MP-RTIP Test & Evaluation cost includes test planning, sensor integration and post IOT&E software updates. MP-RTIP Other Government Costs also provide acquisition services for program office infrastructure, contract planning, and contract awards for remaining program requirements.												
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, Operation System Development. It supports integration and testing of a developed sensor onto an operational platform.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014	
Title: Development and integration									31.966	13.323	8.073	
Description: MP-RTIP development and integration												
FY 2012 Accomplishments:												



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force		<b>DATE:</b> April 2013	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 67RTIP: <i>MP-RTIP</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2012</b>	<b>FY 2013</b>
Continued Sensor platform integration of MP-RTIP on GH platform for Ground Moving Target Indicator(GMTI)/Synthetic Aperture Radar (SAR)/ Concurrent modes, completed MP-RTIP Sensor Performance Verification, planned software releases to GH, incremental FCA/PCA.  <b>FY 2013 Plans:</b> Complete Sensor integration of MP-RTIP on GH platform for GMTI/SAR/Concurrent modes, including software release to GH, and FCA/PCA. Initiates planning for additional modes for MP-RTIP based on user requirements.  <b>FY 2014 Plans:</b> Will initiate MP-RTIP post Initial Operational Test & Evaluation (IOT&E) radar software updates and design/development of remaining requirements.			
<b>Title:</b> Test & Evaluation  <b>Description:</b> MP-RTIP Test & Evaluation  <b>FY 2012 Accomplishments:</b> Continued MP-RTIP sensor Test and Evaluation effort on GH including ground and flight integration of sensor and air vehicle, Radar System Level Performance Verification (RSLPV), test force support, range support, interoperability compliance, and third party reviews.  <b>FY 2013 Plans:</b> Complete MP-RTIP sensor Test and Evaluation on GH including but not limited to ground and flight integration of sensor and air vehicle, System Level Performance Verification (SLPV), test force and range support, interoperability compliance and third party performance reviews.  <b>FY 2014 Plans:</b> Will initiate Test & Evaluation support for MP-RTIP post-IOT&E radar software updates and remaining requirements including but not limited to test planning, test force and range support, interoperability compliance and third party performance reviews.		1.229	0.974
<b>Title:</b> Logistics Planning  <b>Description:</b> MP-RTIP Depot Logistics Planning  <b>FY 2012 Accomplishments:</b> Completed Support to GH Depot Planning by providing detailed Maintenance Planning. Initiated Depot Gap Analysis.  <b>FY 2013 Plans:</b>		1.867	0.000
			0.991
			0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 67RTIP: MP-RTIP				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2012	FY 2013	FY 2014
Complete Depot Gap Analysis.												
Title: MP-RTIP Other Government Costs										5.225	3.410	2.099
Description: Program Management Administration (PMA) - includes Advisory & Assistance Services, Travel, Training, Supplies, etc.												
FY 2012 Accomplishments: Continued to provide MP-RTIP Government acquisition support services including, but not limited to, Acquisition Management, Engineering oversight, and other Program Office Infrastructure.												
FY 2013 Plans: Continue to provide MP-RTIP government acquisition support services necessary to complete MP-RTIP SDD, with emphasis on acquisition management, documentation delivery, Engineering oversight of System-Level Performance Verification (SLPV). Also provides acquisition services for program office infrastructure, contract planning, and contract awards for remaining program requirements.												
FY 2014 Plans: Will continue to provide MP-RTIP government acquisition support services necessary to complete MP-RTIP SDD, with emphasis on acquisition management, documentation delivery, Engineering oversight of post-IOT&E radar software update and design/development for remaining requirements. Also provides acquisition services for program office infrastructure, contract planning, and contract awards for remaining program requirements.												
Accomplishments/Planned Programs Subtotals										40.287	17.707	11.163
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• RDT&E: BA07: PE 0305220F: NATO AGS	82.745	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
• RDT&E: BA07: PE 0305238F: NATO AGS	0.000	210.109	264.134		264.134	235.757	140.000	40.000	40.720	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
Continue to fund a sole source CPFF multi-year development contract to continue software development, integration, and testing on Global Hawk Block 40 platform. Post Initial Operational Test & Evaluation (IOT&E)software update is currently planned as CPIF.												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Air Force		<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 67RTIP: <i>MP-RTIP</i>

**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 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE					PROJECT				
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						PE 0305220F: RQ-4 UAV					67RTIP: MP-RTIP				
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	111.638	31.966	Nov 2011	13.323	Nov 2012	8.073	Nov 2013	-		8.073	33.565	198.565	TBD
Subtotal			111.638	31.966		13.323		8.073		0.000		8.073	33.565	198.565	
Remarks															
FY11 Prime contract: Negotiating contract extension, CPFF.															
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	0.000		0.000		0.000		-		0.000	0.000	0.105	
Logistics Planning	SS/CPFF	Northrop Grumman Integrated Systems:El Segundo, CA	1.800	1.867	Nov 2011	0.000		0.000		-		0.000	0.000	3.667	
Subtotal			1.905	1.867		0.000		0.000		0.000		0.000	0.000	3.772	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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,	6.945	1.229	Jan 2012	0.974	Jan 2013	0.991	Dec 2013	-		0.991	4.140	14.279	TBD
Subtotal			6.945	1.229		0.974		0.991		0.000		0.991	4.140	14.279	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0305220F: RQ-4 UAV				PROJECT 67RTIP: MP-RTIP					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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/Various	Various:Various,	18.278	3.785	Oct 2011	2.752	Oct 2012	1.513	Oct 2013	-		1.513	7.469	33.797	TBD
PMA: Other Gov't Cost	Various	Various:Boston, MA	1.546	1.440	Oct 2011	0.658	Oct 2012	0.586	Oct 2013	-		0.586	2.489	6.719	
Subtotal			19.824	5.225		3.410		2.099		0.000		2.099	9.958	40.516	
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			140.312	40.287		17.707		11.163		0.000		11.163	47.663	257.132	
Remarks FY11 Prime contract: Negotiating contract extension, CPFF.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

PE 0305220F: RQ-4 UAV

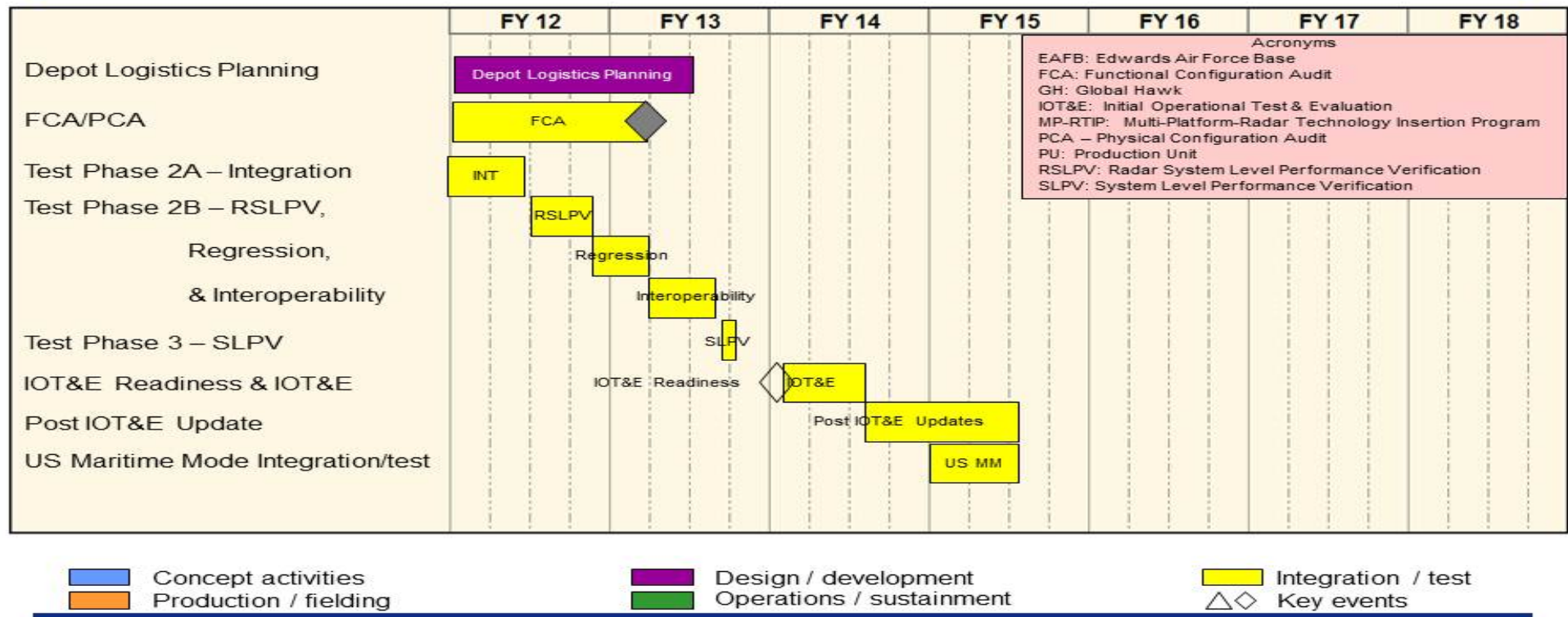
**PROJECT**

67RTIP: MP-RTIP



U.S. AIR FORCE

# RQ-4 Global Hawk MP-RTIP Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Air Force			<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305220F: <i>RQ-4 UAV</i>	<b>PROJECT</b> 67RTIP: <i>MP-RTIP</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Depot Logistics Planning	1	2012	2	2013
Functional Configuration Audit (LAB/Qual/Flight)	1	2012	1	2013
Phase 2A - Integration	1	2012	2	2012
Phase 2B - RSLPV	3	2012	4	2012
Phase 2B - Regression	4	2012	1	2013
Phase 2B - Interoperability	2	2013	3	2013
Phase 3 - SLPV	3	2013	4	2013
Operations/IOT&E Readiness	1	2014	3	2014
Post IOT&E Update	3	2014	3	2015
US MM Integration/test	1	2015	3	2015