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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2012 Air Force **DATE:** February 2011

<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 0603423F: <i>Global Positioning System III - Operational Control Segment</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	390.889	-	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
67A021: <i>IMWS</i>	-	-	390.889	-	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing

**Note**

FY12-16 funding is in an incorrect BPAC - should be in 64A021, GPS III OCX.

**A. Mission Description and Budget Item Justification**

The Global Positioning System (GPS) is a space based Position, Navigation and Time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for the next generation GPS control segment (OCX). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly legacy and GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities. Funds will support science and technology, technology development and systems development efforts.

This program element is Budget Activity 4. OCX is in the Technology Development Phase.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	390.889	-	390.889
Total Adjustments	-	-	390.889	-	390.889
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	390.889	-	390.889

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0603423F: Global Positioning System III - Operational Control Segment	
<p><b><u>Change Summary Explanation</u></b></p> <p>FY12 funding is in an incorrect BPAC - should be in 64A021, GPS III OCX.</p> <p>FY10 funds are in this PE (0603423F), BPAC 64A021.</p> <p>FY11 funds are in PE 0305265F.</p> <p>FY12 funds transferred from PE 0305265F in PE 0603423F.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0603423F: Global Positioning System III - Operational Control Segment				PROJECT 67A021: IMWS			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A021: IMWS	-	-	390.889	-	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note FY12-16 funding was transferred to this PE from PE 0305265F, however is was incorrectly loaded into this BPAC - should be in 64A021, GPS III OCX.											
A. Mission Description and Budget Item Justification The Global Positioning System (GPS) is a space based Position, Navigation and Time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for the next generation GPS control segment (OCX). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly legacy and GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).  Funds will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities. Funds will support science and technology, technology development and systems development efforts.  This program element is Budget Activity 4. OCX is in the Technology Development Phase.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OCX							-	-	390.889	-	390.889
Description: Development of the next generation control segment.											
FY 2010 Accomplishments:											
FY 2011 Plans:											
FY 2012 Base Plans:											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force								<b>DATE:</b> February 2011				
<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 0603423F: <i>Global Positioning System III - Operational Control Segment</i>				<b>PROJECT</b> 67A021: <i>IMWS</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Continue OCX Block 1-2 Integrated System Design, Systems Engineering & Integration (SE&I) and technical and program support.												
<b><i>FY 2012 OCO Plans:</i></b>												
<b>Accomplishments/Planned Programs Subtotals</b>								-	-	390.889	-	390.889
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
• RDT&E: <i>AF PE 0305265F GPS III Space Segment</i>	410.469	446.304	460.297	0.000	460.297	316.328	217.458	247.201	227.330	Continuing	Continuing	
• RDT&E (1): <i>AF PE 0305265F, OCX</i>	0.000	381.867	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
• MPAF PE 0305265F: <i>GPS III Space Segment</i>	0.000	122.490	515.337	0.000	515.337	515.408	529.623	555.924	626.121	Continuing	Continuing	
• OPAF 0603423F: <i>OCX</i>	0.000	0.000	0.000	0.000	0.000	0.000	11.431	12.656	13.385	Continuing	Continuing	
<b>D. Acquisition Strategy</b>												
The Air Force is pursuing a "Block" approach to the next generation GPS control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition strategy approach follows the "Back to Basics" space program acquisition philosophy which focuses on mission success and on-time delivery.												
<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 2012 Air Force** **DATE:** February 2011

<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 0603423F: <i>Global Positioning System III - Operational Control Segment</i>	<b>PROJECT</b> 67A021: <i>IMWS</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Phase B OCX Block 1 & 2 Development	C/CPAF	Raytheon:Aurora, CO	-	-		288.156	Nov 2011	-		288.156	Continuing	Continuing	0.000
SE&I	C/CPAF	SAIC:Huntington Beach, CA	-	-		5.900	Nov 2011	-		5.900	0.000	5.900	0.000
Modernization/SE & Technical Support	Various	Various:,	-	-		27.906	Nov 2011	-		27.906	0.000	27.906	0.000
<b>Subtotal</b>			-	-		321.962		-		321.962			0.000

**Remarks**  
FY10 funding is in this PE (0603423F) in BPAC 64A021, GPS III OCX.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Wing Support	Various	Various:,	-	-		44.247	Nov 2011	-		44.247	Continuing	Continuing	0.000
FFRDC	Various	Aerospace:El Segundo, CA	-	-		24.680	Nov 2011	-		24.680	0.000	24.680	0.000
<b>Subtotal</b>			-	-		68.927		-		68.927			0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Air Force						<b>DATE:</b> February 2011		
<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 0603423F: <i>Global Positioning System III - Operational Control Segment</i>			<b>PROJECT</b> 67A021: <i>IMWS</i>		
	<b>Total Prior Years Cost</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	-	-	390.889	-	390.889			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

## APPROPRIATION/BUDGET ACTIVITY

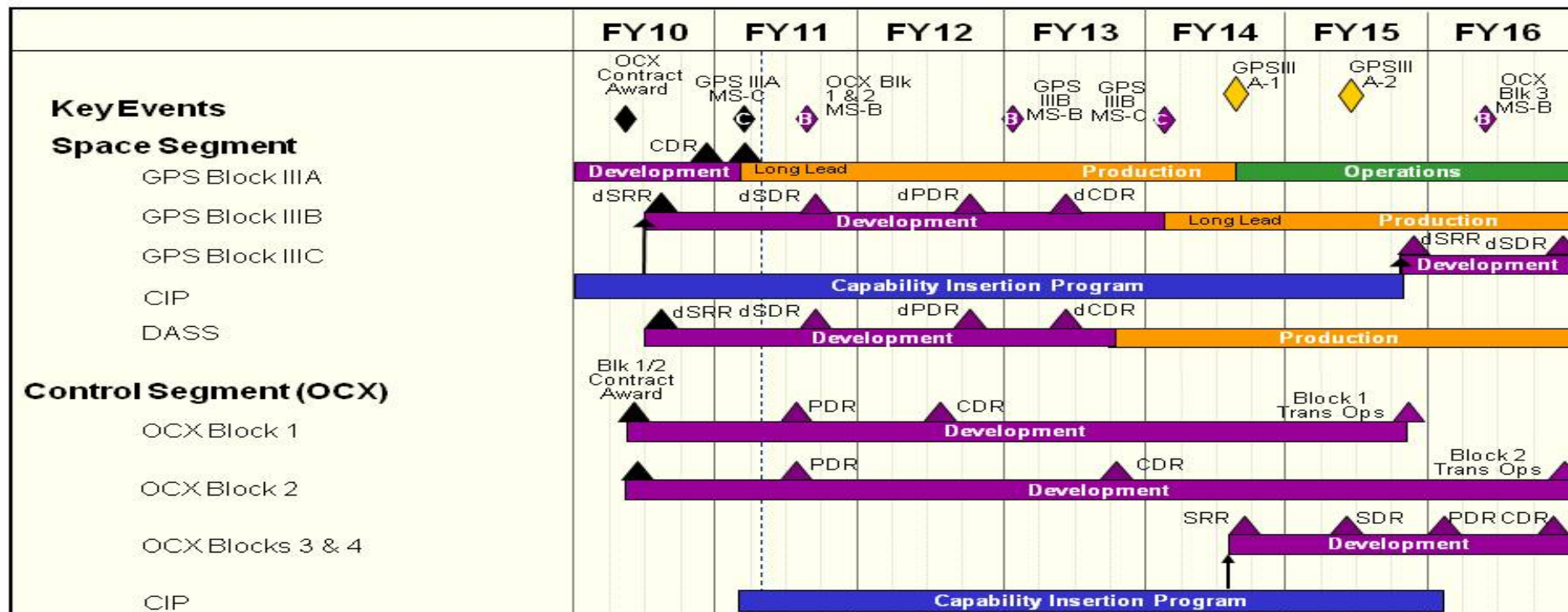
3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

## R-1 ITEM NOMENCLATURE

PE 0603423F: Global Positioning System III -  
Operational Control Segment

## PROJECT

67A021: IMWS



CDR – Critical Design Review  
CIP – Capability Insertion Program  
DASS – Distress Alerting Satellite System

PDR – Preliminary Design Review  
SRR – System Requirements Review  
SV – Space Vehicle

SDR – System Design Review  
d – Delta

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
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 0603423F: <i>Global Positioning System III - Operational Control Segment</i>	PROJECT 67A021: <i>IMWS</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
OCX Block 1 Critical Design Review (CDR)	3	2012	3	2012