Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force

Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

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

PE 0305165F I NAVSTAR Global Positioning System (Space and Control Segments)

Operational Systems Development

COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO [#]	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	2,226.120	12.436	-	-	-	-	-	-	-	-	-	2,238.556
673030: NAVSTAR GPS (Space & Control)	2,226.120	12.436	-	-	-	-	-	-	-	-	-	2,238.556
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

MDAP/MAIS Code: 166

Note

No FY2015 funding requested. In FY2013, Navstar GPS (Space & Control) Project 673030 is complete.

A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments for GPS Block II satellites. It includes, but is not limited to: training simulators, Integrated Logistics Support (ILS) products, ground control segment development, sustaining engineering, space and ground segments upgrades, and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military (M)-Code signal power. The Operational Control Segment (OCS) delivers control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

Funding provides development of upgrades to integrate the Selective Availability Anti-Spoofing Module (SAASM) mission planning system (SMPS) and implement the new STRATCOM/SAASM operations concept. FY13 is the final year of funding.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

PE 0305165F: NAVSTAR Global Positioning System (Space and Contr... Air Force

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^{*}The FY 2015 OCO Request will be submitted at a later date.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force

R-1 Program Element (Number/Name)

Appropriation/Budget Activity

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

Operational Systems Development

PE 0305165F I NAVSTAR Global Positioning System (Space and Control Segments)

Date: March 2014

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	14.335	-	-	-	-
Current President's Budget	12.436	-	-	-	-
Total Adjustments	-1.899	-	-	-	-
 Congressional General Reductions 	-0.019	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
Congressional Adds	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-	-			
SBIR/STTR Transfer	-0.697	-			
 Other Adjustments 	-1.183	-	-	-	-

Change Summary Explanation

FY13: \$-1.183M sequestration reduction

In FY13, Navstar GPS (Space & Control) Project 673030 is complete.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Title: OCS	12.436	-	_
Description: Development of GPS Block II Operational Control Segment (OCS).			
FY 2013 Accomplishments: Completed ground segment upgrades and System Engineering & Integration (SE&I).			
Accomplishments/Planned Programs Subtotals	12.436	-	-

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

		•	FY 2015	FY 2015	FY 2015					Cost To	
<u>Line Item</u>	FY 2013	FY 2014	Base	OCO	<u>Total</u>	FY 2016	FY 2017	FY 2018	FY 2019	Complete	Total Cost
MPAF: BA05: Line	48.084	55.895	52.090	-	52.090	22.615	13.393	-	-	-	192.077
Item # MGPS00: Global											
Positioning (Space)											
OPAF: BA03: Line Item #	7.182	9.774	12.656	-	12.656	11.960	1.990	-	-	-	43.562
836790: Space Mods Space											
OPAF: BA05: Line Item #	0.324	0.252	0.309	-	0.309	0.537	0.474	0.423	0.431	0.894	3.644
861900: Spares and Repair Parts											

PE 0305165F: NAVSTAR Global Positioning System (Space and Contr... Air Force

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

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

PE 0305165F I NAVSTAR Global Positioning System (Space and Control Segments)

Operational Systems Development

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

FY 2015 FY 2015 FY 2015

Cost To

Line Item FY 2013 FY 2014 Base OCO Total FY 2016 FY 2017 FY 2018 FY 2019 Complete Total Cost

Remarks

E. Acquisition Strategy

GPS OCS upgrade was competitively awarded to a single contractor (Lockheed Martin) in July 1995. Block IIF satellite and IIF ground systems development contract was competitively awarded to a single contractor (Boeing) in April 1996. The Single Prime Initiative (SPI) consolidated these efforts and was added to the Boeing IIF contract (with Lockheed Martin as a subcontractor) on 1 Oct 1999. GPS Modernization efforts Block IIR were awarded sole-source to Lockheed Martin under a new contract in August 2000. Modernization efforts for Block IIF were added to the existing contract with Boeing in 2002 as Engineering Change Proposals (ECPs).

F. 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.

PE 0305165F: NAVSTAR Global Positioning System (Space and Contr... Air Force

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Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2015 Air F	orce								Date:	March 20)14	
Appropriation/Budge 3600 / 7	et Activity	1				R-1 Program Element (Number/Name) PE 0305165F I NAVSTAR Global Positioning System (Space and Control Segments)					Project (Number/Name) 673030 I NAVSTAR GPS (Space & Control)				
Product Developmen	nt (\$ in Mi	illions)		FY	2013	FY 2014		FY 2015 Base			2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Navstar GPS OCS Development & IIF Modernization	C/Various	Boeing : Seal Beach, CA	1,470.445	-		-		-		-		-	-	1,470.445	-
Navstar GPS IIF Development	C/Various	Boeing : Seal Beach, CA	76.272	-		-		-		-		-	-	76.272	-
Navstar GPS Control Segment Support	MIPR	Various : Various,	40.860	-		-		-		-		-	-	40.860	-
Navstar GPS Completed Development Efforts	Various	Various : Various,	478.170	-		-		-		-		-	-	478.170	-
Navstar GPS OCS Prime Contract	C/Various	Boeing : Seal Beach, CA	0.000	3.000	Nov 2012	-		-		-		-	-	3.000	-
Navstar GPS SE&I	C/FFP	SAIC : El Segundo, CA	0.000	2.718	Nov 2012	-		-		-		-	-	2.718	-
		Subtotal	2,065.747	5.718		-		-		-		-	-	2,071.465	-
Support (\$ in Million	s)			FY 2	2013	FY 2	2014	FY 2 Ba	2015 ise		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	_
Test and Evaluation	(\$ in Milli	ons)		FY	2013	FY :	2014		2015 ise		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Navstar GPS Completed T&E Efforts	Various	Various : Various,	4.588	-		-		-		-		-	-	4.588	-
Navstar GPS Integrated System Test (IST)	РО	Various : Various,	3.635	-		-		-		-		-	-	3.635	-
	•	Subtotal	8.223	-		-		-		-		-	-	8.223	-

PE 0305165F: NAVSTAR Global Positioning System (Space and Contr... Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force Date: March 2014 Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) 3600 / 7 PE 0305165F I NAVSTAR Global 673030 Î NAVSTAR GPS (Space & Control)

Positioning System (Space and Control Segments)

Management Services (\$ in Millions)			FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Navstar GPS System Engineering/Support	C/CPAF	Various : Various,	75.653	-		-		-		-		-	-	75.653	-
Navstar GPS Program Office Engineering Support (FFRDC)	Various	Aerospace : El Segundo, CA	3.544	5.756	Oct 2012	-		-		-		-	-	9.300	-
Navstar GPS Program Management Administration (PMA)	Various	Various : ,	72.953	0.962	Nov 2012	-		-		-		-	-	73.915	-
		Subtotal	152.150	6.718		-		-		-		-	-	158.868	-

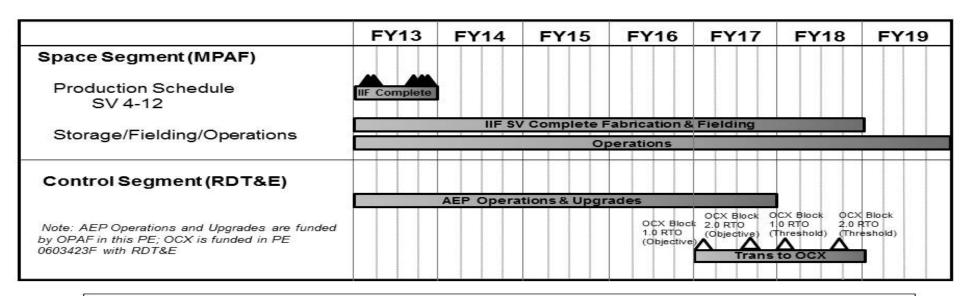
_									
	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	2,226.120	12.436	-	-	-	_	-	2,238.556	-

Remarks

PE 0305165F: NAVSTAR Global Positioning System (Space and Contr... Air Force

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
3600 / 7	PE 0305165F I NAVSTAR Global	673030 / N	IAVSTAR GPS (Space & Control)
	Positioning System (Space and Control		
	Segments)		



AEP – Architecture Evolution Plan
OCX – Next Generation Operational Control System
RTO – Ready to Transition to Operations
SV – Space Vehicle

MOT&E – Multi-Service Operational Test & Evaluation
RDT&E – Research, Development, Test and Evaluation
SAASM – Selective Availability Anti-Spoofing Module

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
3600 / 7	PE 0305165F / NAVSTAR Global	673030 / N	IAVSTAR GPS (Space & Control)
	Positioning System (Space and Control		
	Segments)		

Schedule Details

	St	art	End		
Events	Quarter	Year	Quarter	Year	
Development effort complete	4	2013	4	2013	

PE 0305165F: NAVSTAR Global Positioning System (Space and Contr... Air Force