

**UNCLASSIFIED**

PE NUMBER: 0603421F  
 PE TITLE: GLOBAL POSITIONING SYSTEM

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2006</b>
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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0603421F GLOBAL POSITIONING SYSTEM</b>
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Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	33.773	85.172	315.314	492.094	781.671	912.128	839.576	Continuing	TBD
4993 GPS III	33.773	85.172	315.314	492.094	781.671	912.128	839.576	Continuing	TBD

**(U) A. Mission Description and Budget Item Justification**

Navstar Global Positioning System (GPS) is a space-based radio positioning, navigation, and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS Block III Space and Control Segments. This includes, but is not limited to, advanced concept development, systems engineering and analysis, satellite systems development, the study of augmentation systems, modernized control segment development, user equipment interfaces, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources.

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, 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.

Increased funding in FY07 supports the GPS III Space Vehicle (SV) and the new modernized control segment development efforts. Funding for the GPS III SV supports the addition of revised GPS III requirements in light of the US-European Union agreement for a compatible signal (L1C) on both GPS III and Galileo and the US Space-Based Position, Navigation and Timing Policy directing the inclusion of the Distress Alert Satellite System (DASS) secondary payload to enhance search and rescue capabilities and operations prior to adding new GPS III SV capabilities and operations.

This program is Budget Activity 4 - Advanced Component Development and Prototypes because it is in Phase A (Concept Development).

**(U) B. Program Change Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	39.913	87.364	236.635
(U) Current PBR/President's Budget	33.773	85.172	315.314
(U) Total Adjustments	-6.140	-2.192	
(U) Congressional Program Reductions		-0.947	
Congressional Rescissions		-1.245	
Congressional Increases			
Reprogrammings	-5.031		
SBIR/STTR Transfer	-1.109		

**(U) Significant Program Changes:**

FY05: -\$5.031M for higher Air Force priorities; FY07: +\$50.900M for GPS III space vehicle requirements and +\$27.779 for new modernized control segment (OCX)

**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2006**

BUDGET ACTIVITY <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>				PE NUMBER AND TITLE <b>0603421F GLOBAL POSITIONING SYSTEM</b>			PROJECT NUMBER AND TITLE <b>4993 GPS III</b>		
Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4993 GPS III	33.773	85.172	315.314	492.094	781.671	912.128	839.576	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

Navstar Global Positioning System (GPS) is a space-based radio positioning, navigation, and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS Block III Space and Control Segments. This includes, but is not limited to, advanced concept development, systems engineering and analysis, satellite systems development, the study of augmentation systems, modernized control segment development, user equipment interfaces, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources.

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, 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.

Increased funding in FY07 supports the GPS III Space Vehicle (SV) and the new modernized control segment development efforts. Funding for the GPS III SV supports the addition of revised GPS III requirements in light of the US-European Union agreement for a compatible signal (L1C) on both GPS III and Galileo and the US Space-Based Position, Navigation and Timing Policy directing the inclusion of the Distress Alert Satellite System (DASS) secondary payload to enhance search and rescue capabilities and operations prior to adding new GPS III SV capabilities and operations.

This program is Budget Activity 4 - Advanced Component Development and Prototypes because it is in Phase A (Concept Development).

**(U) B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue GPS III/Modernization Development	26.214	63.532	149.392
(U) Begin Modernized Control Segment (OCX)	0.000	0.000	144.193
(U) Continue Program Support for GPS III/Modernization	7.559	21.640	21.729
(U) Total Cost	33.773	85.172	315.314

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

	<u>FY 2005</u> <u>Actual</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) AF RDT&E									
(U) PE 0305165F Navstar GPS (Space & Ground), R-191	128.349	184.756	177.792	106.837	77.123	56.396	35.103	Continuing	TBD
(U) Other APPN									

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**Exhibit R-2a, RDT&E Project Justification**

DATE

**February 2006**

BUDGET ACTIVITY

**04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE

**0603421F GLOBAL POSITIONING SYSTEM**

PROJECT NUMBER AND TITLE

**4993 GPS III**

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

(U) Operations and Maintenance (PE 0305165F, BA 1 - Operating Forces, SAG 13D)	55.569	68.787	77.664	84.376	85.116	93.212	102.326	Continuing	TBD
(U) Missile Procurement (PE 0305165F, BA 5-Space and Other Support, P-22, 23)	327.423	313.089	140.441	267.468	326.219	162.245	520.155	Continuing	TBD
(U) Other Procurement (PE 0305165F, BP 83-Electronics and Telecommunications Equipment, WSC 836790, P-70 and WSC 836730; BP 86 - Spares & Repair Parts WSC 86190A, P-62)	7.777	13.454	12.280	5.653	6.234	11.008	69.051	Continuing	TBD

**(U) D. Acquisition Strategy**

On 15 Sep 03, the USECAF signed an Acquisition Decision Memorandum directing the GPS JPO to re-initiate Phase A activities (concept exploration/risk reduction) for GPS III. Two Phase A contracts were awarded in Jan 04 to Lockheed-Martin and Boeing, with direction to mature the GPS III program through Systems Requirements Review (SRR), culminating in a Key Decision Point-B (KDP-B) by 3QFY05. In Dec 04, the National Security Space Acquisition Policy was updated, which now requires the completion of a System Design Review (SDR) prior to KDP-B. To comply with this policy, the program will now conduct RFP release, source selection and contract award prior to KDP-B in order to minimize budget and schedule impacts. The winning contractor will then conduct SDR in 2QFY07, and KDP-B in 3QFY07. Concept exploration/risk reduction activities will evaluate the potential for incremental delivery of GPS III capabilities, which could potentially be fielded sooner than FY13.

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE

**February 2006**

BUDGET ACTIVITY

**04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE

**0603421F GLOBAL POSITIONING SYSTEM**

PROJECT NUMBER AND TITLE

**4993 GPS III**

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2005 Cost</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>												
Phase A Continuation Contracts											0.000	
Boeing	CPFF	Huntington Bch, CA	12.774	5.917	Jan-05	2.800	Jan-06	0.000		0.000	21.491	24.257
Lockheed Martin	CPFF	King of Prussia, PA	12.774	5.894	Jan-05	2.800	Jan-06	0.000		0.000	21.468	24.234
Anticipated OCX Contract	CPAF	TBD	0.000	0.000		0.000		144.193	Nov-06	Continuing	TBD	
Anticipated Block IIIA Contract	CPAF	TBD	0.000	0.000		4.500	Sep-06	102.500	Nov-06	Continuing	TBD	
GPS III Development PRDAs	Various	Various	0.000	1.805	Jul-05	2.547	Sep-06	0.000		0.000	4.352	
GPS III/Modernization System Engineering & Technical Support	Various	Various	57.637	12.598	Dec-04	50.885	Jan-06	46.892	Nov-06	Continuing	TBD	
Subtotal Product Development			83.185	26.214		63.532		293.585		Continuing	TBD	48.491
Remarks:												
(U) <u>Support</u>												
JPO Support for GPS III / Modernization	Various	Various	19.865	5.085	Nov-04	16.360	Jan-06	16.129	Nov-06	Continuing	TBD	
Other Agency Support for GPS III/ Modernization	Various	Various	9.200	2.474	Nov-04	5.280	Jan-06	5.600	Nov-06	Continuing	TBD	
Subtotal Support			29.065	7.559		21.640		21.729		Continuing	TBD	0.000
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			112.250	33.773		85.172		315.314		Continuing	TBD	48.491

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2006

BUDGET ACTIVITY

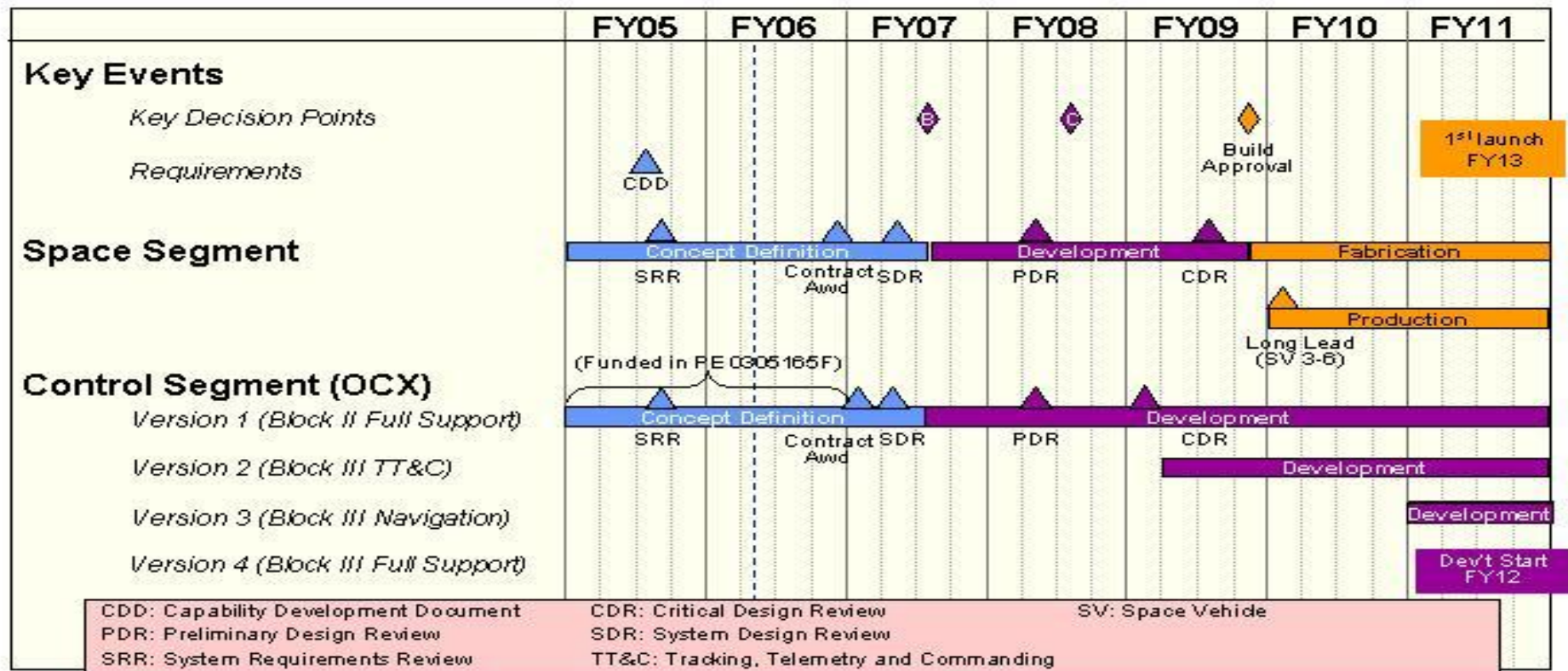
04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603421F GLOBAL POSITIONING SYSTEM

PROJECT NUMBER AND TITLE

4993 GPS III



<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2006</b>
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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0603421F GLOBAL POSITIONING SYSTEM</b>	<b>PROJECT NUMBER AND TITLE</b> <b>4993 GPS III</b>
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<b>(U) <u>Schedule Profile</u></b>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Joint Requirements Oversight Council (JROC) Capabilities Development Document (CDD)	3Q		
(U) System Requirements Review (SRR)	3Q		
(U) Acquisition Strategy Panel (ASP)		2Q	
(U) Block IIIA System Development Review (SDR) Request for Proposal (RFP) Released		2Q	
(U) Block IIIA (SDR) Contract Award		4Q	
(U) OCX System Development Review (SDR) Request for Proposal (RFP) Released			1Q
(U) OCX (SDR) Contract Award			1Q
(U) Block IIIA SDR			2Q
(U) OCX SDR			2Q