

# 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 0305265F: GPS III Space Segment							
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	1,264.070	444.840	318.992	221.276	-	221.276	215.224	161.621	76.642	78.021	307.210	3,087.896
676007: DASS Integration, GPS	0.000	2.143	1.795	2.688	-	2.688	1.452	1.314	1.331	1.355	0.000	12.078
67A019: GPS III	1,264.070	442.697	317.197	218.588	-	218.588	213.772	160.307	75.311	76.666	307.210	3,075.818
MDAP/MAIS Code(s): 292,456												
# 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												
A. Mission Description and Budget Item Justification												
The Global Positioning System (GPS) is a space based navigation system that fills validated Joint Service requirements for worldwide, accurate, common grid three dimensional positioning/navigation for military aircraft, ships, and ground personnel. The consistent accuracy, unaffected by location or weather and available in real time, significantly improves effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all services. GPS must comply with Title 10 United States Code (USC) 2281 which requires that the Secretary of Defense ensures that continued sustainment and operations of GPS for military and civilian purposes and 51 USC sec 50112 which requires that GPS complies with certain standards and facilitates international cooperation.												
The system is composed of three segments: user equipment (funded under PE 0305164F), space (funded under this PE and PE 0305165F) and a control network (funded under PE 0305165F and PE 0603423F). The satellites broadcast high accuracy data using precisely synchronized signals which are received and processed by user equipment installed in military platforms. This equipment computes the platform position and velocity and provides steering vectors to target locations or navigation waypoints. The control segment provides daily updates to the navigation messages broadcast from the satellites to maintain system precision in three dimensions to 16 meters spherical error probable worldwide. Additionally, GPS supports the Unites States Nuclear Detonation (NUDET) Detection System (NDS) mission and provides strategic and tactical support to the following Department of Defense (DoD) missions: Joint Operations by providing capabilities for Positioning, Navigation, and Timing (PNT); Command, Control, Communications, and Intelligence; Special Operations; Military Operations in Urban Terrain; Defense-Wide Mission Support; Air Mobility; and Space Launch Orbital Support.												
GPS III is the next generation Space Vehicle (SV) to join the GPS constellation. GPS III SVs will deliver significant enhancements, including a new civil (L1C) Galileo-compatible signal, enhanced anti-jam power, and affordable on-ramps to provide full warfighter capabilities (e.g., better signal maintainability (Digital Waveform Generator (DWG), Unified S-Band (USB), near-real time Command and Control) and the civil search and rescue payload (SAR/GPS).												
RDT&E, AF PE 0305265F funds GPS III and will support research, development, test and evaluation of GPS III SVs 01-02, and risk-reducing simulators through a structured systems engineering approach that matures and delivers space vehicles for launch. Space Modernization Initiatives (SMI), formerly known as Capability Insertion Program (CIP), includes capability maturation and risk reduction efforts to affordably develop follow-on performance parameters including the engineering and development for full GPS III warfighter capabilities. For example, as a part of reducing the cost to orbit, SMI includes dual launch initiatives to support 2 (two) SVs launching on 1 (one) launch vehicle. These initiatives develop and refine satellite integration/launch/on-orbit operations concepts, requirements, interfaces, integrated												

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force				DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
3600: Research, Development, Test & Evaluation, Air Force		PE 0305265F: GPS III Space Segment				
BA 7: Operational Systems Development						
schedule, and design trades. A GPS III SV-09+ delta Preliminary Design Review (dPDR) will produce radiation hardness assessments, a preliminary dual launch annex to the GPS III - Atlas V Interface Control Document (ICD), a dual-band, dual-launch Telemetry Tracking and Control (TT&C) design, and preliminary updates to the ground segment ICDs.						
Additionally the program includes engineering studies and analyses, trade studies, system development, test and evaluation efforts, integrated logistics support products, on-orbit support, and mission operations supporting civil applications that protect U.S. military and allies' use of GPS. SAR/GPS is an approved secondary payload on GPS III beginning with SV 09. SAR/GPS will fill a validated National Search and Rescue Committee requirement to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under international agreements for Search and Rescue. GPS III SVs 03-08 are in the Production and Deployment Phase. GPS III SVs 09+ are utilizing RDT&E funds for risk reduction towards an approved delta Critical Design Review (dCDR) in FY14.						
This program is a Budget Activity 7 - Operational System Development because it supports operational systems (GPS).						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		455.095	318.992	221.276	-	221.276
Current President's Budget		444.840	318.992	221.276	-	221.276
Total Adjustments		-10.255	0.000	0.000	-	0.000
• 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		-6.057	0.000			
• Other Adjustments		-4.198	0.000	0.000	-	0.000
Change Summary Explanation						
FY12: -\$6.057M for SBIR; -\$4.198M decrease due to higher Air Force priorities.						

# 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 0305265F: GPS III Space Segment				PROJECT 676007: DASS Integration, GPS			
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
676007: DASS Integration, GPS	0.000	2.143	1.795	2.688	-	2.688	1.452	1.314	1.331	1.355	0.000	12.078
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												
A. Mission Description and Budget Item Justification												
Search and Rescue GPS (SAR/GPS), previously known as Distress Alerting Satellite System (DASS), is an approved secondary payload on GPS III beginning with Satellite Vehicle (SV) 09. SAR/GPS fills validated National Search and Rescue Committee requirements to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under international agreements for Search and Rescue.												
In addition, the USAF has on-going requirements to rescue US Military personnel in harm's way per Air Force Doctrine Document 2-1.6. The implementation of a US Mid Earth Orbiting Search and Rescue Space Segment is via a Canadian-Provided 406 MHz SAR repeater on GPS III satellites. This system presents a cost effective, low-risk opportunity that accommodates existing and planned 406 MHz beacons across the globe. Per NSPD-39, USAF and USCG, the US operators of the civil COSPAS/SARSAT system and the international search and rescue system, share costs (50/50) associated with integrating the Canadian provided SAR repeater to GPS III beginning with SV09. Costs presented in this document represent the USAF 50% Share.												
This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014	
Title: SAR GPS									2.143	1.795	2.688	
Description: GPS III space segment nonrecurring costs to add one SAR/GPS unit to each SV beginning with SV09.												
FY 2012 Accomplishments: Designed and developed SAR/GPS antennas, associated hardware and cabling, and space vehicle software; system engineering associated with integrating SAR payload onto the GPS III SVs; system engineering and program management (SE/PM), Enterprise-level contractor System Engineering, Integration, Test, and Program Management (SEIT/PM). Costs do not include development and production of Canadian payload unit.												
FY 2013 Plans: Design and develop SAR/GPS antennas, associated hardware and cabling, and space vehicle software; system engineering associated with integrating SAR payload onto the GPS III SVs; system engineering and program management (SE/PM),												

# UNCLASSIFIED

<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 0305265F: <i>GPS III Space Segment</i>				<b>PROJECT</b> 676007: <i>DASS Integration, GPS</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>										<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
Enterprise-level contractor SEIT/PM; risk reduction effort toward an approved delta Preliminary Design Review (dPDR). Costs do not include development and production of Canadian payload unit.												
<b>FY 2014 Plans:</b> Continue to design and develop SAR/GPS antennas, associated hardware and cabling, and space vehicle software; system engineering associated with integrating SAR payload onto the GPS III SVs; system engineering and program management (SE/PM), Enterprise-level contractor SEIT/PM; risk reduction efforts toward an approved delta Critical Design Review (dCDR). Costs do not include development and production of Canadian payload unit.												
<b>Accomplishments/Planned Programs Subtotals</b>										2.143	1.795	2.688
<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>	
• MPAF: BA05: Line Item # GPSIII: <i>GPS III TOA</i>	494.055	492.910	477.598		477.598	530.949	644.921	889.509	905.639	4,737.885	9,173.466	
• USCG: <i>U.S. Coast Guard</i>	2.915	2.915	2.915		2.915	2.915	2.915	2.915	2.915	5.830	26.235	
<b>Remarks</b>												
<b>D. Acquisition Strategy</b> SAR/GPS will be integrated as part of the GPS III program and follows the GPS III acquisition strategy with funding provided by USCG and USAF.												
<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: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development							<b>R-1 ITEM NOMENCLATURE</b> PE 0305265F: GPS III Space Segment				<b>PROJECT</b> 676007: DASS Integration, GPS				

<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>
Search and Rescue SAR/ GPS	C/CPIF	Lockheed Martin:Newtown, PA	0.000	2.143	Nov 2011	1.795	Dec 2012	2.688	Dec 2013	-		2.688	5.452	12.078	
<b>Subtotal</b>			0.000	2.143		1.795		2.688		0.000		2.688	5.452	12.078	

<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>
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

<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>
<b>Subtotal</b>			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

			<b>All Prior Years</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 To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			0.000	2.143		1.795		2.688		0.000		2.688	5.452	12.078	

<b>Remarks</b>															
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

# UNCLASSIFIED

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

DATE: April 2013

## APPROPRIATION/BUDGET ACTIVITY

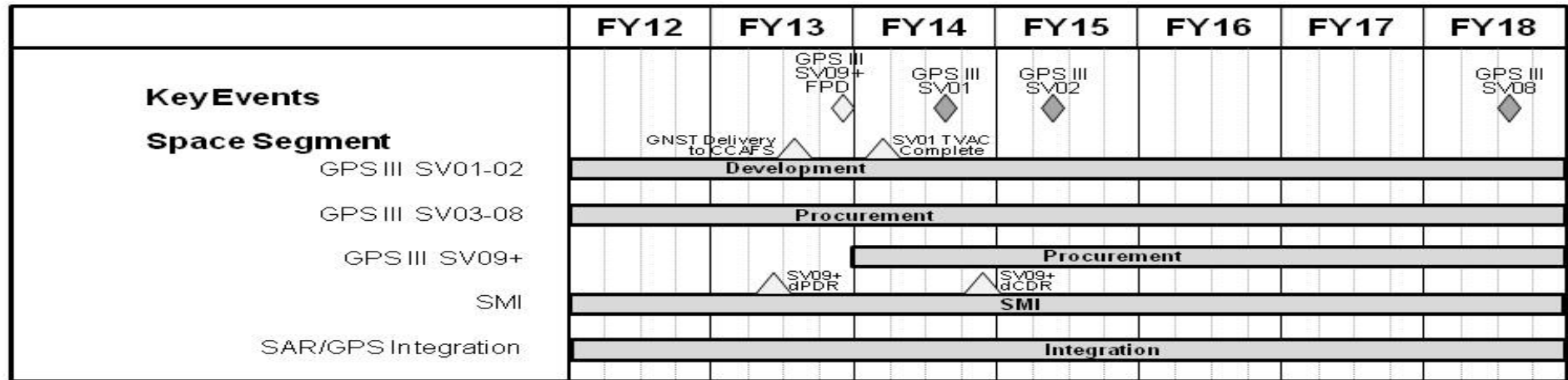
3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

## R-1 ITEM NOMENCLATURE

PE 0305265F: GPS III Space Segment

## PROJECT

676007: DASS Integration, GPS



CDR – Critical Design Review  
CCAFS – Cape Canaveral Air Force Station  
d – Delta  
FPD – Follow-on Production Decision

GNST – GPS Non-flight Satellite Test Bed  
PDR – Preliminary Design Review  
SMI – Space Modernization Initiative  
SAR – Search and Rescue

SV – Space Vehicle  
TVAC – Thermal Vacuum

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: 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 0305265F: *GPS III Space Segment*

**PROJECT**

676007: *DASS Integration, GPS*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GPS III SV 09+ delta Preliminary Design Review (dPDR)	2	2013	2	2013
GPS III SV 09+ Follow-on Production Decision	4	2013	4	2013
GPS III SV 09+ delta Critical Design Review (CDR)	4	2014	4	2014

# 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 0305265F: GPS III Space Segment				PROJECT 67A019: GPS III			
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
67A019: GPS III	1,264.070	442.697	317.197	218.588	-	218.588	213.772	160.307	75.311	76.666	307.210	3,075.818
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												
A. Mission Description and Budget Item Justification												
GPS III is the next generation Space Vehicle (SV) supporting the GPS constellation. GPS III SVs will deliver significant enhancements, including a new civil (L1C) Galileo-compatible signal, enhanced anti-jam power, and a growth path to full warfighter capabilities. GPS III Satellite Vehicles (SVs) 03 - 08 are in the Production & Deployment Phase.												
Funds in this project are for GPS III SVs 01 - 08 design and development and will support research, development, test and evaluation of GPS III SVs 01-02 and risk reducing simulators through a structured systems engineering approach that matures and delivers two SVs for launch. The program includes capability maturation and risk reduction efforts (Space Modernization Initiatives (SMI)) to affordably develop follow-on performance parameters. For example, as part of reducing the cost to orbit, SMI includes dual launch initiatives to support 2 (two) SVs launching on 1 (one) launch vehicle. These initiatives develop and refine satellite integration/ launch/on-orbit operations concepts, requirements, interfaces, integrated schedule, and design trades. A GPS III SV-09+ delta Preliminary Design Review (dPDR) will produce radiation hardness assessments, a preliminary dual launch annex to the GPS III - Atlas V ICD, a dual-band, dual-launch TT&C design, and preliminary updates to the ground segment ICDs.												
Additionally, the program includes engineering studies and analyses, trade studies, system development, test and evaluation efforts, integrated logistics support products, on-orbit support, and mission operations supporting civil applications that protect U.S. military and allies' use of GPS.												
Funds in this Project for GPS III SVs 09 and beyond include engineering and development, affordable on-ramps for full GPS III warfighter capabilities (e.g., better signal maintainability, digital waveform generator (DWG), increased regional power, Unified S-Band (USB), near real-time command and control, and the civil search and rescue payload (SAR/GPS)).												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014	
Title: GPS III SV01-08									406.397	276.943	163.557	
Description: Development, test and evaluation of two GPS III space vehicles and associated simulators, engineering studies and analyses, trade studies, system development, test and evaluation efforts, and integrated logistics support products.												
FY 2012 Accomplishments:												



# UNCLASSIFIED

<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 0305265F: <i>GPS III Space Segment</i>		<b>PROJECT</b> 67A019: <i>GPS III</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>
Continued GPS III space vehicle development, SE&I, technical and program support. Completed flight software (FSW) version 1.0, Navigation Payload Element (NPE)-lite testing, and the GPS Non-Satellite Testbed (GNST) mate of system and core modules. Delivered GNST Earth Deck Antenna (EDA) to the GPS Processing Facility (GPF).					
<b>FY 2013 Plans:</b> Continue GPS III space vehicle development, SE&I, technical and program support. Complete FSW version 2.0. Ship GNST to Cape Canaveral Air Force Station (CCAFS). Complete thermal vacuum testing of SV01.					
<b>FY 2014 Plans:</b> Continue GPS III space vehicle development, SE&I, technical and program support. Provide SV-01 for launch availability.					
<b>Title:</b> GPS III SV09+  <b>Description:</b> Development activities to support the integration of NDS, SAR/GPS, DWG and Dual Launch on GPS III SV09+. GPS III SMI, formerly known as Capability Insertion Program (CIP), addresses issues related to design, systems engineering, program management, obsolescence, and efficiencies for GPS SVs 09 and beyond. Focus is on capability maturation and risk reduction.  <b>FY 2012 Accomplishments:</b> Addressed affordability/obsolescence issues and initial system designs of future capabilities, capability maturation and risk reduction efforts. Completed an initial dual launch capability study. Additional activities include large solar cell and dual band capability work.  <b>FY 2013 Plans:</b> Perform integration activities to support NDS, SAR/GPS, and DWG. Address affordability/obsolescence issues and initial system designs of future capabilities, capability maturation and risk reduction efforts. Begin delta Preliminary Design Review (dPDR) activities which would incorporate on-ramp technology improvements for items such as clocks, Lithium ion battery, Full Communication Unit, and dual launch.  <b>FY 2014 Plans:</b> Continue integration activities to support NDS, SAR/GPS, and DWG. Address affordability/obsolescence issues and initial system designs of future capabilities, capability maturation and risk reduction efforts. Begin delta Critical Design Review (dCDR) activities to assess design maturity for the implementation of technology improvements for items such as clocks, Lithium ion battery, Full Communication Unit, and dual launch.			36.300	40.254	55.031
<b>Accomplishments/Planned Programs Subtotals</b>			442.697	317.197	218.588

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force										DATE: 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 0305265F: GPS III Space Segment				<b>PROJECT</b> 67A019: GPS III			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
			<b>FY 2014</b>	<b>FY 2014</b>	<b>FY 2014</b>					<b>Cost To</b>	
<b>Line Item</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>Base</b>	<b>OCO</b>	<b>Total</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>Complete</b>	<b>Total Cost</b>
• MPAF: BA05: Line Item # GPSIII: GPS III TOA	494.055	492.910	477.598		477.598	530.949	644.921	889.509	905.639	4,737.885	9,173.466
• DOT: DOT (FAA) Civil Funding	12.000	27.500	17.000		17.000	8.100	0.000	0.000	0.000	0.000	64.600
<b>Remarks</b>											
<b>D. Acquisition Strategy</b> The GPS III next generation space segment rapidly and affordably responds to warfighter capability requirements. The acquisition approach utilizes a disciplined systems engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. The GPS III satellites will have GPS IIF capabilities plus up to a 3x - 8x increase in anti-jam signal power, 3x improved accuracy, 3+ year increased design life, a new civil (L1C) signal compatible with the European Galileo system and a satellite bus capable of supporting future SV's capability additions.											
<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**

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 0305265F: GPS III Space Segment				67A019: GPS III					
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
Block III Development	C/CPIF	Lockheed Martin:Newtown, PA	1,098.050	314.549	Nov 2011	243.177	Feb 2013	137.801	Dec 2013	-		137.801	91.528	1,885.105	1,902.000
SE&I	C/CPAF	SAIC:Huntington Beach, CA	17.107	9.337	Nov 2011	1.320	Mar 2013	0.854	Dec 2013	-		0.854	1.268	29.886	
Modernization/SE & Technical Support	Various	Various:Various,	64.722	27.765	Nov 2011	0.000		0.000		-		0.000	0.000	92.487	
Launch & Checkout System (LCS)	C/CPIF	Raytheon:Aurora, CO	0.000	19.000	Nov 2011	5.000	Apr 2013	3.000	Nov 2013	-		3.000	3.000	30.000	
Launch Services	C/CPFF	ULA:,	0.000	1.250	Nov 2011	0.991	Apr 2013	1.737	Mar 2014	-		1.737	2.369	6.347	
Launch Support	RO	45th:Cape Canaveral, FL	0.000	0.150	Nov 2011	1.300	Apr 2013	1.300	Mar 2014	-		1.300	4.975	7.725	
SMI	C/CPIF	Lockheed:Newtown, PA	0.000	36.300	Nov 2011	40.254	Mar 2013	55.031	Dec 2013	-		55.031	725.443	857.028	
Subtotal			1,179.879	408.351		292.042		199.723		0.000		199.723	828.583	2,908.578	
Remarks															
SMI funding in FY12 is captured in the prime contractor line. Starting in FY13, SMI is broken out separately.															
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
Integrated Systems Test	Various	Various:,	0.000	0.871	Nov 2011	0.325	May 2013	0.000		-		0.000	0.000	1.196	
Subtotal			0.000	0.871		0.325		0.000		0.000		0.000	0.000	1.196	

**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 0305265F: <i>GPS III Space Segment</i>				<b>PROJECT</b> 67A019: <i>GPS III</i>				

<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>
Program Office Engineering Support (FFRDC)	RO	Aerospace:El Segundo, CA	34.218	12.966	Nov 2011	4.056	Jan 2013	8.461	Dec 2013	-		8.461	4.683	64.384	
Program Management Adminstration (PMA)	Various	Quantech:Lexington, MA	0.000	0.000		0.000		10.404	Dec 2013	-		10.404	0.000	10.404	
PMA	Various	Various:Various,	49.973	20.509	Jan 2012	20.774	Apr 2013	0.000		-		0.000	0.000	91.256	
<b>Subtotal</b>			84.191	33.475		24.830		18.865		0.000		18.865	4.683	166.044	

	<b>All Prior Years</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 To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	1,264.070	442.697		317.197		218.588		0.000		218.588	833.266	3,075.818	

**Remarks**

# UNCLASSIFIED

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

DATE: April 2013

## APPROPRIATION/BUDGET ACTIVITY

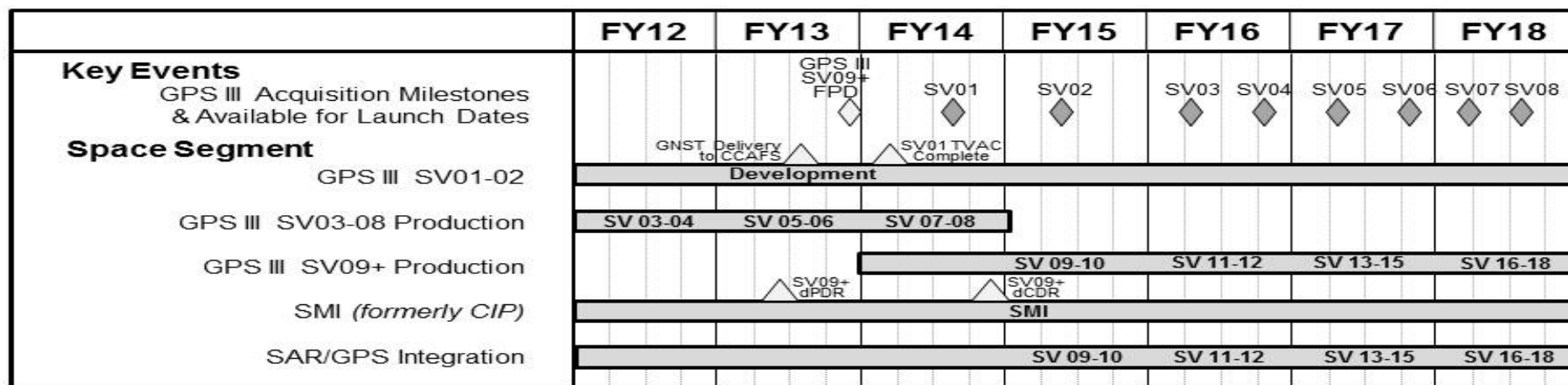
3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

## R-1 ITEM NOMENCLATURE

PE 0305265F: GPS III Space Segment

## PROJECT

67A019: GPS III



CDR – Critical Design Review  
CCAFS – Cape Canaveral Air Force Station  
d – Delta  
FPD – Follow-on Production Decision

GNST – GPS Non-flight Satellite Test Bed  
PDR – Preliminary Design Review  
SMI – Space Modernization Initiative  
CIP – Capability Insertion Program

SAR – Search and Rescue  
SV – Space Vehicle  
TVAC – Thermal Vacuum

**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 0305265F: <i>GPS III Space Segment</i>	<b>PROJECT</b> 67A019: <i>GPS III</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GPS III SV 09+ delta Preliminary Design Review (dPDR)	2	2013	2	2013
GPS III SV 09+ Follow-on Production Decision	4	2013	4	2013
GPS Non-Flight satellite test-bed (GNST) delivery to CCAFS	3	2013	3	2013
GPS III Satellite Vehicle (SV) 01 Complete Thermal Vacuum Testing	1	2014	1	2014
GPS III Satellite Vehicle (SV) 01 available for launch	3	2014	3	2014
GPS III SV 09+ delta Critical Design Review (dCDR)	4	2014	4	2014