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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 1203269F I GPS IIIC							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	451.889	0.000	451.889	474.235	435.063	371.441	306.158	Continuing	Continuing
653170: GPS IIIC	-	0.000	0.000	451.889	0.000	451.889	474.235	435.063	371.441	306.158	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 5, PE 1203269F, project 653170, GPS III Follow-On Development, is a new start.

Program Element (PE) 1203269F GPS III Follow-On is a New Start comprised of some activities formerly documented in PE 1203265F GPS III Space Segment (BPAC 67A019 GPS III, SV11+ Production Readiness, Space Modernization Initiative (SMI) and BPAC 676007 SAR-GPS) from FY2019 forward and provides distinct and comprehensive documentation of the RDT&E activities supporting the GPS III Follow-On program.

In December 2017, Principal Deputy Office of the Assistant Secretary of the Air Force (Acquisition & Logistics) declared the GPS III Follow-On program a new start beginning in FY2019 and, consistent with the 2016 National Defense Authorization Act, the program is therefore categorized as an ACAT 1B Major Defense Acquisition Program (MDAP) with the Service Acquisition Executive (SAE) serving as the Milestone Decision Authority (MDA).

A. Mission Description and Budget Item Justification

GPS III Follow-On program will deliver GPS III satellites beyond the first ten Space Vehicles (SVs) being delivered by the GPS III program (funded in PE 1203265F GPS III Space Segment). The GPS III Follow-On satellites will maintain the same capabilities as the GPS III satellites, but will also deliver significant enhancements to include: backward compatibility, Unified S-Band (USB) interface compliance, integration of hosted payloads (redesigned Nuclear Detonation Detection System (NDS), Laser Retro-reflector Arrays (LRAs), Search and Rescue/GPS (SAR/GPS), Energetic Charged Particles (ECP) sensor), and Regional Military Protection (RMP) capabilities that provide the ability to deliver high-power regional M-Code signals in specific areas of intended effect. Implementation of RMP into the GPS Enterprise will require integration with the ground and user segments, executed by the Global Positioning System Next Generation Operational Control System (OCX) and Military GPS User Equipment (MGUE) programs, respectively.

This PE includes Space Modernization Initiative (SMI) funding. SMI focuses on space vehicle affordability, capability and addresses future requirements and resiliency needs. The Air Force is using its research laboratories to mature mission related capabilities, technologies (advanced clocks, amplifiers, crosslinks, etc.), and inform future PNT architectures.

This PE funds the research, development, test and evaluation of GPS III SV11-12 (to include non-recurring engineering support efforts). This activity includes risk-reducing simulators and systems engineering associated with delivering the new capabilities required of GPS III Follow-On.

The current and future space domain demands that space systems be responsive to new and changing threats, and can rapidly integrate new capabilities to make our warfighting force more resilient in a contested battlespace. This agility, survivability, and rapid reconstitution must extend through the entire space warfighting enterprise,

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to include how we learn about the threat; develop solutions; acquire, test, deploy, train, operate and integrate new systems into the greater system of systems; and ensure our space mission force is ready to defeat a thinking adversary in a complex, multi-domain battlespace. The enterprise will use all of its elements to accelerate decision-making, prototype potential solutions, rapidly integrate decision-making tools and sustain a war-winning capability by delivering multi-domain effects in, from, and through space and cyberspace enabling battle management and resilience options to "fight through."						
This PE may include necessary civilian Pay expenses required to manage, execute, and deliver GPS III Space Segment weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in PEs 1206392F and 1206398F.						
This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.						
B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		0.000	0.000	0.000	0.000	0.000
Current President's Budget		0.000	0.000	451.889	0.000	451.889
Total Adjustments		0.000	0.000	451.889	0.000	451.889
• Congressional General Reductions		0.000	0.000			
• Congressional Directed Reductions		0.000	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		0.000	0.000			
• Other Adjustments		0.000	0.000	451.889	0.000	451.889
Change Summary Explanation						
FY2019: +\$451.889M transferred from PE 1203265F to new PE 1203269F GPS IIIC Follow-On to create GPS IIIC MDAP program transparency.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2017	FY 2018	FY 2019
Title: GPS III Follow-On Development				-	-	451.889
Description: The program will utilize RDT&E funds to develop and deliver SV11-12, conduct the non-recurring engineering (NRE) of developing risk reducing simulators, support test equipment, and conducting the systems engineering associated with delivering the new capabilities required of GPS III Follow-On including backward compatibility, dual band TT&C, integration of Government Furnished Equipment (GFE) hosted payloads, and Regional Military Protection (RMP), which provides the ability to deliver high-power regional M-Code signals in specific areas of intended effect.						

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2017	FY 2018	FY 2019
FY 2019 Plans: Program office will award the Phase 2 contract in early FY 2019. Upon contract award, the program will initiate efforts to prepare for and conduct Critical Design Review (CDR), continue development of SV11-12, and prepare for Milestone C in early 2020. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, prototyping, etc.												
FY 2018 to FY 2019 Increase/Decrease Statement: This program is an FY19 New Start. Related FY18 efforts are included in PE 1203265F.												
Accomplishments/Planned Programs Subtotals										-	-	451.889
D. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost	
• RDTE 07 1203265F: GPS III Space Segment	165.794	243.435	144.543	-	144.543	42.440	10.780	7.296	8.893	12.008	635.189	
• SPAF 01 Line Item: GPS III: GPS III Space Segment	33.974	85.894	69.386	-	69.386	773.398	782.838	1,152.975	1,152.796	4,185.159	8,236.420	
Remarks												
E. Acquisition Strategy												
In December 2017, Principal Deputy Office of the Assistant Secretary of the Air Force (Acquisition & Logistics) declared the GPS III Follow-On program a new start beginning in FY 2019 and, consistent with the 2016 National Defense Authorization Act, the program was categorized as an ACAT 1B Major Defense Acquisition Program (MDAP) with the Service Acquisition Executive (SAE) serving as the Milestone Decision Authority (MDA). During this time, the MDA approved the second phase of the two-phased GPS III Follow-On acquisition strategy. Executed using funds in PE 1203265F, GPS III Space Segment, the Phase 1 Production Readiness Feasibility Assessments conducted during FY2016-2017 provided data and insight into contractors' GPS satellite production designs with emphasis on a mature navigation payload and production-ready designs. Phase 1 results affirmed the viability of a competitive approach for Phase 2. The Phase 2 strategy directs the Air Force to conduct a full-and-open competition for GPS III Follow-On space vehicles and specifies the use of RDT&E funds to deliver SV11-12 and conduct associated non-recurring engineering (NRE). In addition to SV11-12, the RDT&E effort will be comprised of developing risk reducing simulators, support test equipment, and conducting the systems engineering associated with delivering the new capabilities required of GPS III Follow-On.												
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.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 1203269F / GPS IIIC				Project (Number/Name) 653170 / GPS IIIC					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
GPS III-Follow-On Development (includes SMI)	C/Various	TBD : TBD	-	-		-		412.689	Nov 2018	-		412.689	Continuing	Continuing	-
GPS III Follow-On Technical Mission Analysis	MIPR	Various : Various	-	-		-		18.700	Oct 2018	-		18.700	Continuing	Continuing	-
GPS III Follow-On Enterprise SE&I	C/CPAF	Engility (TASC) : El Segundo, CA	-	-		-		3.200	Nov 2018	-		3.200	Continuing	Continuing	-
Subtotal			-	-		-		434.589		-		434.589	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
GPS III Follow-On FFRDC	MIPR	Aerospace Corp : El Segundo, CA	-	-		-		8.700	Dec 2018	-		8.700	Continuing	Continuing	-
GPS III Follow-On A&AS	Various	Various : El Segundo, CA	-	-		-		7.100	Nov 2018	-		7.100	Continuing	Continuing	-
GPS III Follow-On Other Support	Various	Various : El Segundo, CA	-	-		-		1.500	Oct 2018	-		1.500	Continuing	Continuing	-
Subtotal			-	-		-		17.300		-		17.300	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		0.000		451.889		-		451.889	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force	Date: February 2018
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Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 1203269F / <i>GPS IIIC</i>	Project (Number/Name) 653170 / <i>GPS IIIC</i>
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>GPS III Follow-On</i>																												
GPS III Follow-On Acquisition Decision																												
GPS III Follow-On Request for Proposal (RFP) Release																												
GPS III Follow-On Contract Award																												
GPS III Follow-On CDR																												
GPS III Follow-On Milestone C																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>GPS III Follow-On</i>				
GPS III Follow-On Acquisition Decision	1	2018	1	2018
GPS III Follow-On Request for Proposal (RFP) Release	2	2018	2	2018
GPS III Follow-On Contract Award	1	2019	1	2019
GPS III Follow-On CDR	4	2019	4	2019
GPS III Follow-On Milestone C	2	2020	2	2020