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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0207131F I A-10 Squadrons							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	16.200	21.353	17.459	0.000	17.459	31.355	36.816	23.000	23.000	Continuing	Continuing
674809: A-10 Squadrons	-	16.200	21.353	17.459	0.000	17.459	31.355	36.816	23.000	23.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 07 PE 0207131F, project 674809, ADS-B Out, is a new start.

A. Mission Description and Budget Item Justification

The A-10 is a twin engine, single seat weapon system capable of delivering a full range of air-to-ground munitions and self-defense air-to-air missiles. The A-10 is an essential capability for successful joint air operations and represents a crucial component of the Combat Air Forces. The A-10 concept of operations requires a flexible, adaptable and survivable weapon system to conduct close air support (CAS), combat search and rescue and special operations missions. The A-10 must conduct around-the-clock air operations under various weather conditions against numerous and varied enemy threats. Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA and other mandates to ensure continued aircrew safety and mission effectiveness within the provisions of 10 USC 2244A.

Operational Flight Program (OFP) development addresses evolving and continuing user requirements that must be incorporated in the aircraft software in order to employ advanced weapons, increase situational awareness and enhance targeting capabilities as they become available. The funds budgeted continue regular OFP suite development efforts.

Additionally, these OFP funds provide for updates and incorporation of capabilities for weapons integration, targeting pod updates, and communication/navigation/data link improvements (e.g., M-Code, Mobile User Objective System (MUOS) communication system, Automatic Dependent Surveillance Broadcast (ADS-B), Anti-Jam Embedded Global Positioning System/Inertial Navigation System (Embedded GPS/ INS) and cyber security upgrades). These funds will ensure concurrency with systems impacted by OFP development, including but not limited to the Full Mission Trainer (FMT), mission planning and support equipment, as well as required upgrades to the Software Integration Laboratory (SIL).

FMT's DMS efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total		
Previous President's Budget		16.200	14.853	13.409	0.000	13.409		
Current President's Budget		16.200	21.353	17.459	0.000	17.459		
Total Adjustments		0.000	6.500	4.050	0.000	4.050		
• 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	6.500	4.050	0.000	4.050		
Change Summary Explanation								
FY17 \$6.5M increase for OFP Upgrades								
FY18 increase of \$4.0M for ADS-B out								
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: OFP Development				16.200	21.353	13.459	0.000	13.459
Description: Updates to the A-10C OFP Suite software to permit timely integration of new precision weapons, updated targeting pods, improved avionics and enhanced electronic warfare capabilities. These upgraded capabilities are in response to evolving operational requirements, including Urgent Operational Needs, generated by the ever-changing operational environment of air combat.								
FY 2016 Accomplishments: Funded Suite 9 design, and candidate software development and integration.								
FY 2017 Plans: Funds Suite 9 candidate development by completing the software design, development and integration. In addition, we will complete Suite 10 requirement maturation efforts and start software design.								
FY 2018 Base Plans: Continues Suite 9 development and funds Suite 10 candidate development by completing the software design, development and integration.								
FY 2018 OCO Plans:								

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
N/A					
Title: ADS-B Out Description: This effort initiates Operational and Developmental Testing for AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B) Out. ADS-B Out is an FAA mandate to meet future air traffic demands and improve air traffic safety. This requirement was identified and approval for the A-10 by means of an AF Form 1067 dated 15 September 2006. FY 2016 Accomplishments: N/A FY 2017 Plans: N/A FY 2018 Base Plans: This effort initiates Operational and Developmental Testing for AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B) Out. FY 2018 OCO Plans: N/A	0.000	0.000	4.000	0.000	4.000
Accomplishments/Planned Programs Subtotals	16.200	21.353	17.459	0.000	17.459

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• APAF: BA05: Line Item # A01000: <i>A-10 Squadrons, PE 0207131F</i>	0.000	25.139	6.010	0.000	6.010	19.530	0.000	0.000	0.000	0.000	25.139
Remarks											
E. Acquisition Strategy A-10 OFP development efforts will be conducted organically by the 309th Software Maintenance Group (309 SMXG) at Ogden Air Logistics Complex, Hill AFB UT. The ADS-B missionization efforts will be conducted by contractor and organically by the 309 SMXG. The A-10 FMT simulator OFP is managed by the Simulator Division at Wright-Patterson Air Force Base and is currently contractor-developed and integrated.											

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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: FY 2018 Air Force												Date: May 2017			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0207131F / A-10 Squadrons				Project (Number/Name) 674809 / A-10 Squadrons					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
OFP Development 2nd Qtr FY16 (309th SMXG)	PO	309th SMXG : Hill AFB, UT	-	2.200	Jan 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
OFP Development (309th SMXG)	PO	309th SMXG : Hill AFB, UT	-	6.900	Mar 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
OFP Development 3rd Qtr FY16 (309 SMXG)	PO	309th SMXG : Hill AFB, UT	-	2.200	Apr 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
OFP Development 4th Qtr (309 SMXG)	PO	309th SMXG : Hill AFB, UT	-	3.933	Jul 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
OFP Development (309 SMXG) FY16	PO	309th SMXG : Hill AFB, UT	-	0.622	May 2017	0.000		0.000		0.000		0.000	Continuing	Continuing	-
OFP Development (309 SMXG) FY16 BTR	PO	309th SMXG : Hill AFB, UT	-	0.015	May 2017	0.000		0.000		0.000		0.000	Continuing	Continuing	-
OFP Development (309 SMXG) FY17	PO	309th SMXG : Hill AFB, UT	-	0.000		20.679	May 2017	0.000		0.000		0.000	Continuing	Continuing	-
OFP Development 1st Qtr FY18 (309 SMXG)	PO	309 SMXG : Hill AFB, UT	-	0.000		0.000		1.180	Nov 2017	0.000		1.180	Continuing	Continuing	-
OFP Development 2nd Qtr FY18 (309 SMXG)	PO	309 SMXG : Hill AFB, UT	-	0.000		0.000		1.800	Jan 2018	0.000		1.800	Continuing	Continuing	-
OFP Development 3rd Qtr FY18 (309 SMXG)	PO	309 SMXG : Hill AFB, UT	-	0.000		0.000		4.800	Apr 2018	0.000		4.800	Continuing	Continuing	-
OFP Development 4th Qtr FY18 (309 SMXG)	PO	309 SMXG : Hill AFB, UT	-	0.000		0.000		2.870	Jun 2018	0.000		2.870	Continuing	Continuing	-
Subtotal			-	15.870		20.679		10.650		0.000		10.650	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
USAF (Multiple)	Various	Various : Various	-	0.192	Sep 2016	0.514	May 2017	4.799	Jan 2018	0.000		4.799	Continuing	Continuing	-
Subtotal			-	0.192		0.514		4.799		0.000		4.799	-	-	-
Remarks FY16 \$0.125M - SIM SPO Full Mission Trainers (FMT)															

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Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
FY16 \$0.067M - SPO TDY FY17 \$0.351M - SIM SPO Full Mission Trainers (FMT) FY17 \$0.351M - PMA Tax FY17 \$0.020M - SPO TDY FY18 \$4.00M - ADS-B Out FY18 \$0.750M - SIM SPO Full Mission Trainers (FMT) FY18 \$0.049M - SPO TDY															
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
USAF (OFP)	Various	Various : Various	-	0.000		0.000		1.850	Sep 2018	0.000		1.850	Continuing	Continuing	-
Subtotal			-	0.000		0.000		1.850		0.000		1.850	-	-	-
Remarks RDT&E Test and Evaluation will not begin until 1st Quarter FY18 due to FY17 cut/mark of \$10M.															
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
PMA	Various	Various : Various	-	0.138	Mar 2017	0.160	Aug 2017	0.160	Aug 2018	0.000		0.160	Continuing	Continuing	-
Subtotal			-	0.138		0.160		0.160		0.000		0.160	-	-	-
Remarks FY16 contracts were six month increments with the last awarded 1/Mar/17. FY17 and beyond are contingent on the EPASSCCTO contract being awarded by Wright Patterson AFB.															
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	16.200		21.353		17.459		0.000		17.459	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force																Date: May 2017			
Appropriation/Budget Activity 3600 / 7								R-1 Program Element (Number/Name) PE 0207131F / A-10 Squadrons								Project (Number/Name) 674809 / A-10 Squadrons			

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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
Suite 9 - OFP System Design, Development and Flight Test																												
Suite 9 - OFP Fields																												
Suite 10 - OFP System Design, Development and Flight Test																												
Suite 10 - OFP Fields																												
ADSB-out																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force			Date: May 2017
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207131F / A-10 Squadrons	Project (Number/Name) 674809 / A-10 Squadrons	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Suite 9 - OFP System Design, Development and Flight Test	2	2016	1	2019
Suite 9 - OFP Fields	1	2019	1	2019
Suite 10 - OFP System Design, Development and Flight Test	2	2018	4	2020
Suite 10 - OFP Fields	4	2020	4	2020
ADSB-out	2	2018	4	2020

Note

The FY16 BTR (\$3.240M) and limited FY17 funding is being reserved for Suite 9 activities to continue with the current fielding plan. Scope will be reduced from Suite 9 due to the FY17 mark/cut but schedule should remain steady contingent upon receiving FY18 in a timely manner. Without receiving FY18 funding when requested it will cause a day for day slip to Suite 9 due to funds needed for flight testing.

Suite 10 has been put on indefinite hold due to \$10M mark/cut budget (\$14.853 reduced to \$4.850) of FY17 RDT&E funding. Suite 10 activities will resume as soon as full FY18 funding becomes available. The estimated release date for Suite 10 is based upon receiving FY18 funds when requested. If FY18 funds are not available when requested, Suite 10 will continue to slip day for day.