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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	-	-	186.481	-	186.481	214.428	120.158	247.368	127.855	Continuing	Continuing
657108: EPAWSS DEVELOPMENT	-	-	-	186.481	-	186.481	214.428	120.158	247.368	127.855	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2016, PE 0207171F, F-15 EPAWSS, Project 676038 was transferred to PE 0207171F, F-15 EPAWSS, Project 657108 BA05 to align BA with stage of development

A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15C continues to provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night / under-the-weather, air-to-surface attack. A mainstay in operations both domestic and abroad, upgrades to the F-15 (avionics, armament, airframe and engines) are critical to maintaining combat viability (lethality, survivability and supportability). Projected to remain in service past 2040, avionics modernization is key to long-term weapon system viability. This modernization is built on a foundation of technical and acquisition support studies (both internal to the Air Force and through outside contractors). The proliferation of fourth generation enemy aircraft, sophisticated "double-digit" anti-aircraft missile systems and other enemy systems pose a significant threat to F-15 survivability. The F-15 Eagle Passive Active Warning and Survivability System (EPAWSS) will replace the F-15's functionally obsolete self-defense Tactical Electronic Warfare System (TEWS) to enhance weapon system situational awareness and survivability against enemy threats. F-15 EPAWSS will also improve reliability and sustainability. F-15 EPAWSS is linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. Incorporation of corresponding spiral and / or phased technology / equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability and aircrew training.

The F-15 EPAWSS upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations within highly contested environments through 2040. The F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. The F-15 EPAWSS will prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.

This program is in Budget Activity 5, Engineering and Manufacturing Development(EMD), beginning in FY 2016, because this budget activity includes design, engineering, and manufacturing development tests.

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B. Program Change Summary (\$ in Millions)					FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total		
Previous President's Budget					-	-	-	-	-		
Current President's Budget					-	-	186.481	-	186.481		
Total Adjustments					-	-	186.481	-	186.481		
• Congressional General Reductions					-	-					
• Congressional Directed Reductions					-	-					
• Congressional Rescissions					-	-					
• Congressional Adds					-	-					
• Congressional Directed Transfers					-	-					
• Reprogrammings					-	-					
• SBIR/STTR Transfer					-	-					
• Other Adjustments					-	-	186.481	-	186.481		
Change Summary Explanation											
In FY 2015, EPAWSS efforts were transferred from Budget Activity 7, Operational Systems Development, PE 0207134F, Project Number 670131 to Budget Activity 7, Operational Systems Development, PE 0207171F, Project Number 676038 per Air Force direction.											
In FY 2016, EPAWSS efforts were transferred from Budget Activity 7, Operational Systems Development, PE 0207171F, Project Number 676038 to Budget Activity 5, Engineering and Manufacturing Development, PE 0207171F, Project Number 657108 per OSD direction.											
C. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016	
Title: Eagle Passive/Active Warning Survivability System (EPAWSS)								-	-	186.481	
Description: Planned replacement of the existing F-15 self-protection, Tactical Electronic Warfare System (TEWS). This includes technical and acquisition related studies.											
FY 2016 Plans: Complete TMRR PDR-level design to support Milestone B decision. Refine design for FY 17 CDR. Continue acquisition planning for EMD and Milestone B. Award and execute EMD development and test contract.											
Accomplishments/Planned Programs Subtotals								-	-	186.481	
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• F15EWS: Aircraft Modification	-	-	-	-	-	-	-	233.400	195.600	4,322.868	4,751.868

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D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks FY 19 & FY 20 funding is for F-15 C/D & F-15 E Procurement.											
E. Acquisition Strategy Pending MDA approval the overall acquisition approach is to design a solution that leverages mature non-developmental components that integrate into the existing footprint on the F-15 aircraft left behind by the legacy F-15 electronic warfare system. To further improve schedule, affordability and program risk outcomes, and consistent with the JROC approved CDD, the F-15 EPAWSS program will pursue a two-increment acquisition approach. Increment 1 replaces the existing Radar Warning Receiver, Internal Countermeasures System and Countermeasures Dispenser System. Increment 2 adds a towed decoy / angle countermeasure capability.											
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 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS	Project (Number/Name) 657108 / EPAWSS DEVELOPMENT
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Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
F-15 EPAWSS TMRR	TBD	TBD : TBD,	-	-		-		91.673	Dec 2015	-		91.673	Continuing	Continuing	137.501
F-15 EPAWSS EMD	TBD	TBD : TBD,	-	-		-		78.370	Aug 2016	-		78.370	Continuing	Continuing	611.055
F-15 EPAWSS	Various	Various : Various,	-	-		-		15.299	Dec 2015	-		15.299	Continuing	Continuing	146.741
Subtotal			-	-		-		185.342		-		185.342	-	-	895.297

Remarks

FY16PB- EPAWSS efforts were transferred from Budget Activity 7, Operational Systems Development, PE 0207171F, Project Number 676038 to Budget Activity 5, Engineering and Manufacturing Development, PE 0207171F, Project Number 657108 per OSD direction

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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 Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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			-	-		-		-		-		-	-	-	-

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Program Management Support Costs	Various	Various : Various,	-	-		-		1.139	Dec 2015	-		1.139	Continuing	Continuing	1.139
Subtotal			-	-		-		1.139		-		1.139	-	-	1.139

Remarks

The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, etc. that are required to meet F-15 EPAWSS program objectives. The execution vehicles between these DoD entities vary by effort.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force											Date: February 2015				
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS					Project (Number/Name) 657108 / EPAWSS DEVELOPMENT					
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		-		186.481		-		186.481	-	-	896.436

Remarks

FY16PB- EPAWSS efforts were transferred from Budget Activity 7, Operational Systems Development, PE 0207171F, Project Number 676038 to Budget Activity 5, Engineering and Manufacturing Development, PE 0207171F, Project Number 657108 to provide budget transparency.

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force																Date: February 2015			
Appropriation/Budget Activity 3600 / 5								R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS								Project (Number/Name) 657108 / EPAWSS DEVELOPMENT			

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
AoA Complete																												
CDD JROC Approved																												
EPAWSS MS A																												
EPAWSS TMRR Contract Award																												
EPAWSS MS B																												
EPAWSS EMD Contract Award																												
EPAWSS MS C																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207171F / <i>F-15 EPAWSS</i>	Project (Number/Name) 657108 / <i>EPAWSS DEVELOPMENT</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AoA Complete	2	2014	2	2014
CDD JROC Approved	4	2014	4	2014
EPAWSS MS A	4	2015	4	2015
EPAWSS TMRR Contract Award	4	2015	4	2015
EPAWSS MS B	4	2016	4	2016
EPAWSS EMD Contract Award	4	2016	4	2016
EPAWSS MS C	2	2019	2	2019