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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207171F / <i>F-15 EPAWSS</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	37.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.726
676038: <i>EPAWSS</i>	0.000	37.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.726
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Program MDAP/MAIS Code: 485

Note

In FY 2015, PE 0207134F, F-15E Squadrons, Project 6760131, Initial Operational Test and Evaluation, F-15 EPAWSS development efforts were transferred to PE 0207171F, F-15 EPAWSS, Project 676038, EPAWSS in order to provide budget transparency.

In FY 2016, PE 0207171F, F-15 EPAWSS, Project 676038, EPAWSS, Budget Activity 07, Operational Systems Development was transferred to PE 0207171F, F-15 EPAWSS, Project 657108, EPAWSS Development, Budget Activity 05, System Development and Demonstration to align the program in the correct budget activity.

Prior Years funding \$14.677M was executed in PE 0207134F.

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

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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.

BA7- 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.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	38.944	0.000	0.000	0.000	0.000
Current President's Budget	37.726	0.000	0.000	0.000	0.000
Total Adjustments	-1.218	0.000	0.000	0.000	0.000
• 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	-1.218	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

Change Summary Explanation

No Significant Program Changes

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Eagle Passive/Active Warning Survivability System (EPAWSS)	37.726	0.000	0.000	0.000	0.000
Description: Planned replacement of the existing F-15 self-protection, Tactical Electronic Warfare System (TEWS). This includes technical and acquisition related studies.					
FY 2015 Accomplishments: Awarded and executed TMRR design contract. Developed and released Request for Proposal for EMD contract. Continued acquisition planning for EMD and Milestone B. Continued acquisition and technical related studies.					
FY 2016 Plans: N/A					
FY 2017 Base Plans:					

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
<i>FY 2017 OCO Plans:</i>					
N/A					
Accomplishments/Planned Programs Subtotals	37.726	0.000	0.000	0.000	0.000

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• APAF: BA05: Line Item # F15EWS: <i>Aircraft Modification</i>	0.000	0.000	0.000	0.000	0.000	0.000	203.406	257.340	396.968	4,045.100	4,902.810
• APAF: BA06: Line Item # 000999: <i>Aircraft Spare and Repair Parts</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.960	8.130	125.100	141.190
• RDT&E: BA05: PE0207171F: <i>F-15 EPAWSS BA05</i>	0.000	186.481	286.300	0.000	286.300	202.500	155.200	63.610	2.090	0.146	896.327

Remarks

E. Acquisition Strategy
 Acquisition Strategy is under development.

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 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207171F / F-15 EPAWSS	Project (Number/Name) 676038 / EPAWSS
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
F-15 EPAWSS TMRR	Various	Various : Various	0.000	29.378	Sep 2015	0.000		0.000		0.000		0.000	0.000	29.378	31.131
F-15 EPAWSS	Various	Various : Various	0.000	7.256	Aug 2015	0.000		0.000		0.000		0.000	0.000	7.256	7.256
Subtotal			0.000	36.634		0.000		0.000		0.000		0.000	0.000	36.634	38.387

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.

FY15PB - PE 27171F, project 676038 includes EPAWSS only.

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.

FY17PB - 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 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

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Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support Costs	Various	Various : Various	0.000	1.092	Sep 2015	0.000		0.000		0.000		0.000	0.000	1.092	-
Subtotal			0.000	1.092		0.000		0.000		0.000		0.000	0.000	1.092	-

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 programming objectives. The execution vehicles between these DoD entities vary by effort.

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	37.726	0.000	0.000	0.000	0.000	0.000	37.726	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force **Date:** February 2016

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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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

EPAWSS MS A																												
EPAWSS TMRR Contract Award																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207171F / <i>F-15 EPAWSS</i>	Project (Number/Name) 676038 / <i>EPAWSS</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EPAWSS MS A	4	2015	4	2015
EPAWSS TMRR Contract Award	4	2015	4	2015

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