Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy											Date: February 2016	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604270N *I Electronic Warfare (EW) Dev*							
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	915.610	27.251	20.113	48.766	-	48.766	45.809	32.399	32.727	33.432	Continuing	Continuing
0556: *EW Counter Response*	447.063	15.026	11.890	15.389	-	15.389	16.395	17.633	18.009	18.389	Continuing	Continuing
1742.: *EW Technical Development and T&E*	0.000	1.112	1.629	1.585	-	1.585	1.585	1.617	1.652	1.685	Continuing	Continuing
2175: *Tactical Air Electronic Warfare*	468.547	11.113	6.594	3.927	-	3.927	2.074	2.069	2.089	0.000	0.000	496.413
3308: *Technology Development*	0.000	0.000	0.000	2.016	-	2.016	2.502	6.316	6.382	8.652	Continuing	Continuing
3309: *Assault Survivability Optimization*	0.000	0.000	0.000	3.375	-	3.375	0.849	0.835	0.836	0.858	Continuing	Continuing
3327: *MAGTF EW Aviation Development*	0.000	0.000	0.000	20.817	-	20.817	20.776	2.984	2.794	2.862	Continuing	Continuing
3371: *MAGTF EW Interoperability Development*	0.000	0.000	0.000	1.657	-	1.657	1.628	0.945	0.965	0.986	Continuing	Continuing

Program MDAP/MAIS Code: 418

A. Mission Description and Budget Item Justification

Decrease in ELECTRONIC WARFARE (EW) DEV by $1.115M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

This program element includes development of Electronic Warfare (EW) systems for the United States Navy (USN), United States Marine Corps (USMC), and United States Army tactical aircraft, USMC helicopters, surface combatants, data link vulnerability assessments, precision targeting, USN and USMC radio frequency jammers, and development and testing of electronic warfare devices for emerging threats and emergency contingencies. This element also includes development of Aircraft Survivability Equipment (ASE) and Electronic Warfare (EW)/countermeasures solutions for the United States Navy, United States Marine Corps and Coalition Aircraft to include studies and evaluations of current and future aircraft threats, modeling and simulation for improved countermeasure capabilities, and development and testing to address new and emerging threats.

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

PE 0604279N and 0604376M consolidated to PE 0604270N beginning in FY 2017.

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy					Date: February 2016
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*		R-1 Program Element (Number/Name) PE 0604270N *I Electronic Warfare (EW) Dev*			
B. Program Change Summary ($ in Millions)	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**
Previous President's Budget	28.742	23.685	20.306	-	20.306
Current President's Budget	27.251	20.113	48.766	-	48.766
Total Adjustments	-1.491	-3.572	28.460	-	28.460
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.572			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.272	0.000			
• SBIR/STTR Transfer	-0.219	0.000			
• Program Adjustments	0.000	0.000	30.586	-	30.586
• Rate/Misc Adjustments	0.000	0.000	-2.126	-	-2.126

Change Summary Explanation

Technical: Not Applicable.

Schedule:
Project Unit 0556 / EW COUNTER RESPONSE: N/A.

Project Unit 2175 / Tactical Air Electronic Warfare:

Software Improvement: IDECM Block 4 (IB4)ALQ-214 Software Improvement (SWIP) Initial Operational Capability (IOC) date changed from 1st Qtr FY 2017 to 4th Qtr FY 2017 due to delayed schedule for ALQ-214 SWIP Operational Testing (OT). ALQ-214 SW Improvement Development added and extended to 1st Qtr FY 2018. ALQ-214 SWIP Developmental Testing (DT)/OT testing dates changed from 1st Qtr FY 2015 through 3rd Qtr FY 2015 to 1st Qtr 2016 through 4th Qtr FY 2016 due to delays with ALQ-214 software development and integration. ALQ-214 SWIP OT flights dates changed from 2nd Qtr FY 2016 through 3rd Qtr FY 2016 to 2nd Qtr FY2017 through 3rd Qtr 2017 due to the schedule slide of ALQ-214 SWIP DT/OT completion. Verification of Correction of Deficiencies (VCD) DT added to verify software anomalies identified during ALQ-214 SWIP DT/OT testing. VCD OT added to verify software anomalies identified during ALQ-214 SWIP OT testing.

Project Unit 3308 / Technology Development:

Release 16 added to 1st Qtr FY 2017 from PE 0604279N. Release 17 added to 1st Qtr FY 2018. Release 18 moved from 3rd Qtr FY 2018 to 1st Qtr FY 2019 to better align with Program Related Engineering (PRE) Software releases. Release 19 added to 1st Qtr FY 2020. Release 20 added to 1st Qtr FY 2021. FY 2016 System Development Analysis completion moved from 1st Qtr FY 2017 to 4th Qtr FY 2016 and is reflected under PE 0604279N. FY 2017 Software Technique

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy	Date: February 2016
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604270N *I Electronic Warfare (EW) Dev*

Development moved from 1st Qtr FY 2017 through 4th Qtr 2021 to 1st Qtr FY 2017 to 3rd Qtr 2017 as an annualized effort. FY 2018 through 2021 Software Technique Development effort annualized to 1st Qtr through 3rd Qtr of each FY. FY 2017 through 2021 Integrated Evaluation moved to 4th Qtr of each FY as a 1 Qtr event.

Project Units 3308, 3309, 3327, and 3371 were incorporated into PE 0604270N.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 0556 / *EW Counter Response*	

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
0556: *EW Counter Response*	447.063	15.026	11.890	15.389	-	15.389	16.395	17.633	18.009	18.389	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops upgrades to combat the increasingly complex and dense Electronic Warfare (EW) threat environment. Required improvements in Airborne Electronic Attack (AEA) will achieve application of state-of-the-art signal exploitation, processing, display techniques, improved tactics, and jamming capabilities against EW threats.

Efforts include continued development of Force Protection/Overseas Contingency Operations (classified discussion available upon request) Navigation and Information Operations applications and enhanced communications jamming. Efforts also include risk reduction activities to support the upgrade of the ALQ-99 Tactical Jamming System (TJS) capabilities to include technology studies, breadboard/demonstrator development, and testing in laboratory and relevant environments. The efforts under this project provide for electronic countermeasure responses to advanced threat weapon systems and Command, Control, and Communications (C3) networks that are expanding in density and technical complexity. This project funds the continued development and integration of all EW and Electronic Attack systems for the US Navy electronic attack aircraft including improvements within precision Direction of Arrival, geo-location, Specific Emitter Identification, Auto-Electronic Support Measures, and selective reactive jamming.

Electronic Attack Jammer Techniques Optimization (JATO) and test support is required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B, EA-18G, and Next Generation Jammer (NGJ). JATO will continue to generate techniques, tactics, and procedures that will optimize the capabilities of existing weapon systems, and to assist in requirements definitions of emerging AEA systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: ICAP III UPDATE	1.330	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments: In FY 2015, the ICAP III program continued development, integration, and enhancement of Link-16 capabilities, ALQ-218 capabilities, USQ-113 capabilities, USB ENTR, and VACM into ICAP III Aircraft, and resolved OPEVAL and FOT&E related deficiencies via ICAP III Block release.					
FY 2016 Plans: N/A					
FY 2017 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 0556 / *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A ***FY 2017 OCO Plans:*** N/A					
Title: MISSION PLANNING ***Articles:*** ***FY 2015 Accomplishments:*** In FY 2015, the EA-6B Mission Planning program completed development of all elements and supported Operational Test of the EA-6B Mission Planning Environment (MPE), including Unique Planning Component (UPC), Electronic Tactical Information and Report Management System (ETIRMS), and Electronic Warfare Database System (EWDS). The program executed all tasks required to obtain Navy and Marines Corp IA accreditation for product and support subsequent MPE fielding. Mission Planning Environment (MPE) development of .NET 64 bit Operating System (OS) migration began, synchronizing with new Joint Mission Planning System (JMPS) FW 64 bit evolution for continued Information Assurance (IA) sustainment and OS obsolescence avoidance. ***FY 2016 Plans:*** N/A ***FY 2017 Base Plans:*** N/A ***FY 2017 OCO Plans:*** N/A	1.100 -	0.000 -	0.000 -	0.000 -	0.000 -
Title: JAMMER TECHNIQUES OPTIMIZATION (JATO) ***Articles:*** ***FY 2015 Accomplishments:*** Continue engineering development and test support required to address new and evolving radar/ communications threats in support of existing and emerging systems such as the EA-6B, EA-18G, and Next Generation Jammer. Jammer Techniques Optimization (JATO) will continue to generate techniques, tactics, and procedures to optimize the capabilities of ALQ-99, USQ-113, ALQ-218, ALQ-227, ALQ-231, ALE-43, and Airborne Electronic Attack Expendable (AEAE) systems, and to assist in requirements definitions of emerging	12.451 -	11.400 -	15.389 -	0.000 -	15.389 -

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 0556 / *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Airborne Electronic Attack (AEA) systems. JATO continues to lead efforts in support of Overseas Contingency Operation and Force Protection issues. (Classified discussion available upon request.) ***FY 2016 Plans:*** Continue engineering development and test support of existing and emerging systems such as the EA-6B, EA-18G, and Next Generation Jammer to address potential Radio Frequency (RF) and Cyber Electronic Warfare (Cyber/EW) effects on current and evolving radar/communications threats. Jammer Techniques Optimization (JATO) will continue to generate techniques, tactics, and procedures to optimize the capabilities of systems such as, but not limited to, the ALQ-99, USQ-113, ALQ-218, ALQ-227, ALQ-231, ALE-43, and Airborne Electronic Attack Expendable (AEAE) systems; and assist in requirements definitions of emerging Airborne Electronic Attack (AEA) systems. JATO continues to lead efforts in support of Overseas Operations and Force Protection issues. (Classified discussion available upon request.) ***FY 2017 Base Plans:*** The Jammer Techniques Optimization (JATO) organization will continue engineering development and test support of existing and emerging systems such as the EA-6B, EA-18G, and Next Generation Jammer to address potential Radio Frequency (RF) and Cyber Electronic Warfare (Cyber/EW) effects on current and evolving radar/ communications threats. JATO will continue to generate techniques, tactics, and procedures to optimize the capabilities of systems such as, but not limited to, the ALQ-99, USQ-113, ALQ-218, ALQ-227, ALQ-231, ALE-43, and Airborne Electronic Attack Expendable (AEAE) systems; and assist in requirements definitions of emerging Airborne Electronic Attack (AEA) systems. JATO continues to lead efforts in support of Overseas Operations and Force Protection issues. (Classified discussion available upon request.) Increase in funding from FY2016 to FY2017 is due to increased flight and ground testing against adversary systems and increased efforts of the Advanced Techniques Group (ATG) to address Cyber/EW threats. ***FY 2017 OCO Plans:*** N/A					
Title: AIRBORNE ELECTRONIC ATTACK EXPENDABLE (AEAE)	0.145	0.490	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 0556 / *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
In FY 2015, the Airborne Electronic Attack Expendable (AEAE) program continued risk reduction efforts in conjunction with other partner services and entities. ***FY 2016 Plans:*** Continue risk reduction efforts including evaluation of Electronic Warfare payload(s) for integration into AEAE platform. ***FY 2017 Base Plans:*** N/A ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	15.026	11.890	15.389	0.000	15.389

C. 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
• APN/0511: *EA-6 Series*	10.881	7.799	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3,394.443
• APN/0513: *AEA Systems*	44.768	36.233	51.900	-	51.900	52.818	51.878	58.282	70.078	315.316	880.351

Remarks

D. Acquisition Strategy

The Jammer Techniques Optimization Group (JATO), comprised of a partnership between the Government and a University Aligned Research Center (UARC), continues to research Electronic Warfare tactics and techniques. The JATO prime delivery order, a cost plus fixed fee contract that covers the period of FY 2013 through FY 2017, was awarded to Johns Hopkins University in 3Q FY 2013.

E. Performance Metrics

1. Jammer Techniques Optimization development counters enemy radar systems and communication systems to provide techniques to protect allied forces.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 0556 / *EW Counter Response*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HDW Develop - ICAP III	C/FFP	Various : Various	261.704	0.400	Dec 2014	0.000		0.000		-		0.000	0.000	262.104	262.104
Systems Engineering NRL	WR	Naval Research Lab : Maryland	8.732	1.615	Nov 2014	1.600	Dec 2015	1.606	Nov 2016	-		1.606	Continuing	Continuing	Continuing
Systems Engineering NAWCAD	WR	NAWCAD : Patuxent River, MD	24.211	0.530	Nov 2014	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering NAWCWD	WR	NAWCWD : Point Mugu, CA	76.065	5.987	Nov 2014	4.784	Nov 2015	4.376	Nov 2016	-		4.376	Continuing	Continuing	Continuing
Systems Engineering NSWC	WR	NSWC Det : Crane, IN	10.451	0.260	Dec 2014	0.250	Dec 2015	0.625	Nov 2016	-		0.625	Continuing	Continuing	Continuing
Systems Engineering VAR	WR	Various : Various	14.893	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Prior Year Development cost no longer Funded in the FYDP	Various	Various : Various	1.043	0.000		0.000		0.000		-		0.000	0.000	1.043	1.043
		Subtotal	397.099	8.792		6.634		6.607		-		6.607	-	-	-

Remarks

Obligation date for FY 2017 efforts moved to November 2016 to ensure continuity of JATO operations.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support - JATO	SS/CPFF	Johns Hopkins Unv : Maryland	31.202	4.302	Dec 2014	3.709	Dec 2015	4.744	Nov 2016	-		4.744	Continuing	Continuing	Continuing
Eng & Tech Srvc (Non FFRDC)	Various	Various : Various	15.301	1.760	Dec 2014	1.417	Dec 2015	1.833	Nov 2016	-		1.833	Continuing	Continuing	Continuing
Prior year Support costs no longer funded in the FYDP	Various	Various : Various	2.256	0.000		0.000		0.000		-		0.000	0.000	2.256	-
		Subtotal	48.759	6.062		5.126		6.577		-		6.577	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 0556 / *EW Counter Response*	

Support ($ in Millions)

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

Remarks

Obligation date for FY 2017 efforts moved to November 2016 to ensure continuity of JATO operations.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JATO Flight Test	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.000		1.556	Nov 2016	-		1.556	0.000	1.556	-
JATO Ground/Lab Test	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.000		0.519	Nov 2016	-		0.519	0.000	0.519	-
		Subtotal	0.000	0.000		0.000		2.075		-		2.075	0.000	2.075	-

Remarks

JATO Flight and Ground/Lab Tests broken out separately from Systems Engineering efforts for budget clarity in FY 2017. These lines will fund tests of JATO techniques, tactics, and procedures (TTPs) against real and simulated adversary systems. Obligation date for FY 2017 efforts moved to November 2016 to ensure continuity of JATO operations.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	Various : Various	1.205	0.021	Dec 2014	0.030	Oct 2015	0.030	Oct 2016	-		0.030	Continuing	Continuing	Continuing
Travel	WR	Various : Various	0.000	0.151	Oct 2014	0.100	Oct 2015	0.100	Oct 2016	-		0.100	0.000	0.351	-
		Subtotal	1.205	0.172		0.130		0.130		-		0.130	-	-	-

	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	447.063	15.026		11.890		15.389		-		15.389	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 0556 / *EW Counter Response*	

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 0556 / *EW Counter Response*

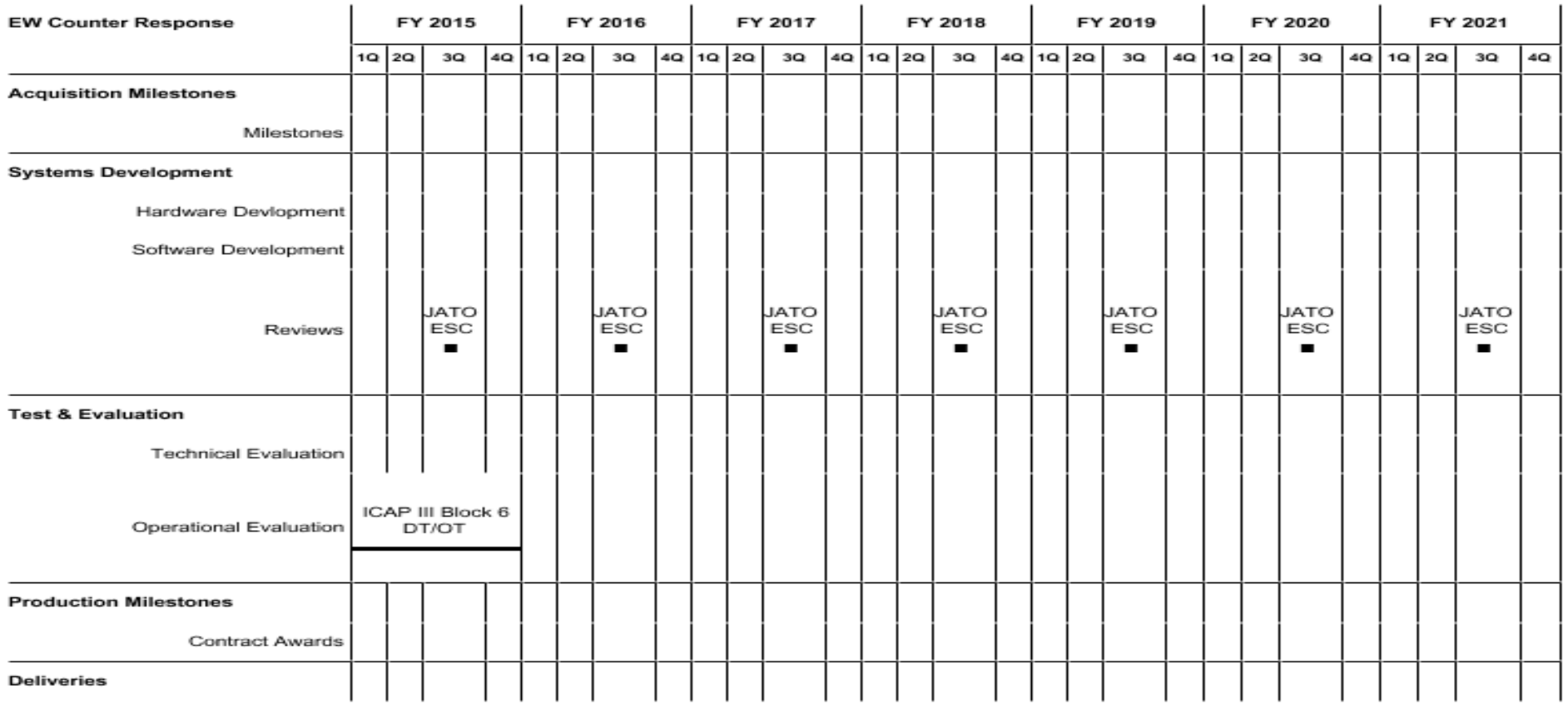

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 0556 / *EW Counter Response*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
EW Counter Response				
Systems Development: Reviews: JATO Executive Steering Committee 2015	3	2015	3	2015
Systems Development: Reviews: JATO Executive Steering Committee 2016	3	2016	3	2016
Systems Development: Reviews: JATO Executive Steering Committee 2017	3	2017	3	2017
Systems Development: Reviews: JATO Executive Steering Committee 2018	3	2018	3	2018
Systems Development: Reviews: JATO Executive Steering Committee 2019	3	2019	3	2019
Systems Development: Reviews: JATO Executive Steering Committee 2020	3	2020	3	2020
Systems Development: Reviews: JATO Executive Steering Committee 2021	3	2021	3	2021
Test & Evaluation: Operational Evaluation: ICAP III Block 6 DT/OT	1	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 1742. / *EW Technical Development and T&E*	

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
1742.: *EW Technical Development and T&E*	0.000	1.112	1.629	1.585	-	1.585	1.585	1.617	1.652	1.685	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element includes development of Electronic Warfare (EW) systems for the United States Navy (USN), United States Marine Corps (USMC), and United States Army tactical aircraft, USMC helicopters, surface combatants, data link vulnerability assessments, precision targeting, USN and USMC radio frequency jammers, and development and testing of electronic warfare devices for emerging threats and emergency contingencies.

This project funds efforts that focus on the quick reaction prototyping of tactical information and electronic warfare systems. This program directly addresses various Fleet requirements across multiple platforms (airborne, surface and subsurface), airborne and surface cryptologic operational requirements documents and the joint oversight council missions needs statement to research, assess, and develop information warfare and electronic warfare systems and capabilities. These systems/ capabilities provide information dominance to friendly forces during conflict, which is necessary for successful mission accomplishment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Electronic Warfare Technical Development Studies and Test & Evaluation	1.112	1.629	1.585	0.000	1.585
Articles:	-	-	-	-	-
Description: This project funds efforts that focus on the quick reaction prototyping of tactical information and electronic warfare systems.					
FY 2015 Accomplishments: *Develop, tested, and integrated two waveforms into MCS-21 systems					
FY 2016 Plans: *Continue studies and vulnerability analysis on emerging/changing threats/targets for EW programs. *Continue IW/IO EA capability development & integration (Details held at higher classification level) *Continue specific wave form (EA) Research and Analysis (Details held at higher classification level).					
FY 2017 Base Plans: *Continue studies and vulnerability analysis on emerging/changing threats/targets for EW programs. *Develop and test ES capabilities across various platforms. *Develop and test IO Countermeasures capabilities across various platforms.					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 1742. / *EW Technical Development and T&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
*Purchase a system to support next generation electronic support and electronic attack capability development ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	1.112	1.629	1.585	0.000	1.585

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

BSO 60: Development of classified prototypes and special capabilities. The Navy Cyber Warfare Development Group (NCWDG) is granted streamlined acquisition authority for the development of classified prototypes and special capabilities under the DASN(C4I).

E. Performance Metrics

BSO 60: Research, assess and develop EW/IW capabilities. The NCWDG serves as the Program Management Office of the EW Technical Development and Information Warfare (IW) program. As such, NCWDG is tasked as the Navy's principal technical agent to research, assess, and develop EW/IW capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 1742. / *EW Technical Development and T&E*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test and Evaluation	C/CPFF	Classified : Classified	0.000	0.195	Feb 2015	0.195	Feb 2016	0.195	Feb 2017	-		0.195	Continuing	Continuing	Continuing
Operation Test & Evaluation	C/CPFF	Classified : Classified	0.000	0.000		0.262	Feb 2016	0.262	Feb 2017	-		0.262	Continuing	Continuing	Continuing
		Subtotal	0.000	0.195		0.457		0.457		-		0.457	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Personnel	Various	Classified : Various	0.000	0.917	Feb 2015	1.172	Feb 2016	1.128	Feb 2017	-		1.128	Continuing	Continuing	Continuing
		Subtotal	0.000	0.917		1.172		1.128		-		1.128	-	-	-

	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	1.112		1.629		1.585		-		1.585	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 1742. / *EW Technical Development and T&E*

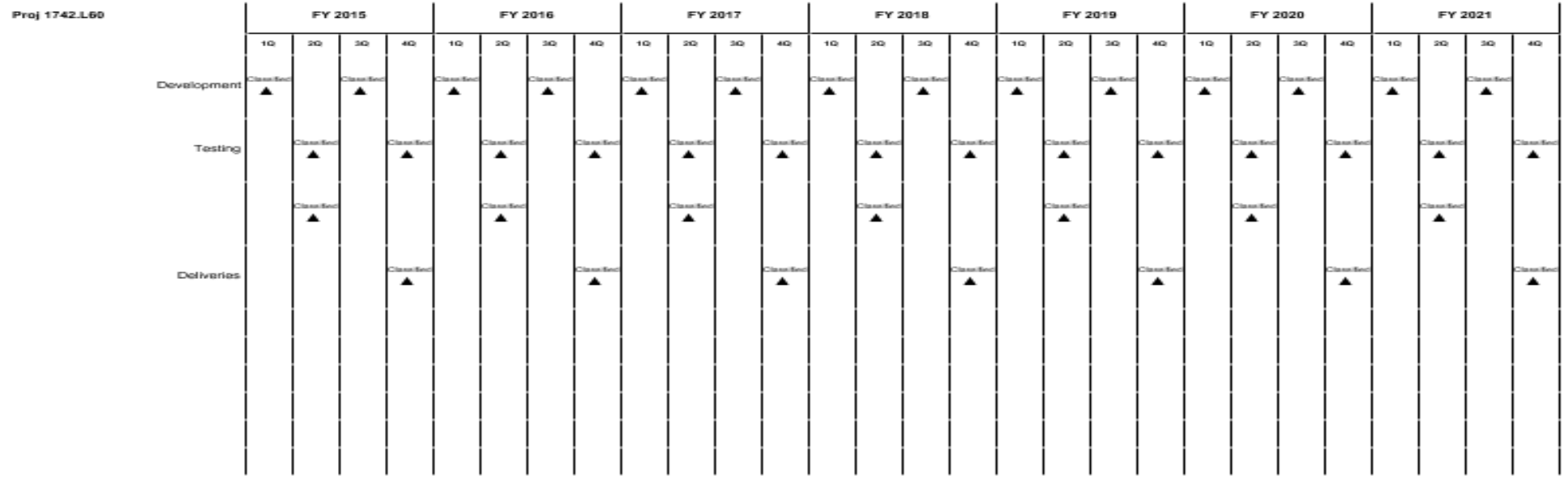


Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 1742. / *EW Technical Development and T&E*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1742.L60				
Development: 1 - Waveforms	1	2015	1	2015
Development: 2 - Waveforms	3	2015	3	2015
Development: 3 - Waveforms	1	2016	1	2016
Development: 4 - Waveforms	3	2016	3	2016
Development: 5 - Waveforms	1	2017	1	2017
Development: 6 - Waveforms	3	2017	3	2017
Development: 7 - Waveforms	1	2018	1	2018
Development: 8 - Waveforms	3	2018	3	2018
Development: 9 - Waveforms	1	2019	1	2019
Development: 10 - Waveforms	3	2019	3	2019
Development: 11 - Waveforms	1	2020	1	2020
Development: 12 - Waveforms	3	2020	3	2020
Development: 13 - Waveforms	1	2021	1	2021
Development: 14 - Waveforms	3	2021	3	2021
Testing: 1 - Protype	2	2015	2	2015
Testing: 2 - Protype	4	2015	4	2015
Testing: 3 - Protype	2	2016	2	2016
Testing: 4 - Protype	4	2016	4	2016
Testing: 5 - Protype	2	2017	2	2017
Testing: 6 - Protype	4	2017	4	2017
Testing: 7 - Protype	2	2018	2	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 1742. / *EW Technical Development and T&E*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Testing: 8 - Protype	4	2018	4	2018
Testing: 9 - Protype	2	2019	2	2019
Testing: 10 - Protype	4	2019	4	2019
Testing: 11 - Protype	2	2020	2	2020
Testing: 12 - Protype	4	2020	4	2020
Testing: 13 - Protype	2	2021	2	2021
Testing: 14 - Protype	4	2021	4	2021
Testing: 1 - MCS-21 Integration	2	2015	2	2015
Testing: 2 - MCS-21 Integration	2	2016	2	2016
Testing: 3 - MCS-21 Integration	2	2017	2	2017
Testing: 4 - MCS-21 Integration	2	2018	2	2018
Testing: 5 - MCS-21 Integration	2	2019	2	2019
Testing: 6 - MCS-21 Integration	2	2020	2	2020
Testing: 7 - MCS-21 Integration	2	2021	2	2021
Deliveries: 1 - IO Capabilities	4	2015	4	2015
Deliveries: 2 - IO Capabilities	4	2016	4	2016
Deliveries: 3 - IO Capabilities	4	2017	4	2017
Deliveries: 4 - IO Capabilities	4	2018	4	2018
Deliveries: 5 - IO Capabilities	4	2019	4	2019
Deliveries: 6 - IO Capabilities	4	2020	4	2020
Deliveries: 7 - IO Capabilities	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 2175 / *Tactical Air Electronic Warfare*	

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
2175: *Tactical Air Electronic Warfare*	468.547	11.113	6.594	3.927	-	3.927	2.074	2.069	2.089	0.000	0.000	496.413
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Integrated Defensive Electronic Countermeasures (IDECM) Block 3 (IB-3) introduced the new Fiber Optic Towed Decoy (FOTD), ALE-55, capability to the IDECM Block 2 Electronic Warfare (EW) suite as a replacement for the ALE-50 decoy. The FOTD, when integrated with the rest of the F/A-18E/F EW suite (i.e., ALQ-214, ALR-67(V)3, ALE-47 and ALE-50), the associated cockpit controls, displays and other avionics significantly improves the survivability of the host aircraft in a radio frequency threat environment. IB-3 MS III (Full Rate Production Decision) was approved in the 4th Qtr FY 2011. IB-3 Initial Operational Capability (IOC) achieved 4th Qtr FY 2011.

IDECM Block 4 (IB-4) is an Engineering Change Proposal (ECP) to the ALQ-214 to render it suitable for operation on F/A-18C/D aircraft (replacing the ALQ-126B and significantly improving F/A-18C/D survivability) while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. The IB-4 acquisition and contract strategy includes development of the Common On-Board Jammer for the F/A-18 C/D/E/F aircraft through sole source contract awards for modifications to the ALQ-214. IB-4, ALQ-214 ECP efforts include hardware and software design, development and test, delivery of 17 engineering development models, integration and testing on the host aircraft. The F/A-18C/D EW suite includes the ALR-67(V)2 Radar Warning Receiver (RWR), the ALE-47 Countermeasures Dispensing Set (CMDS), the mission computer and other avionics. In addition to performing the RWR function, the ALR-67(V)2 is the EW bus controller. The EW bus is the primary interface between the EW systems (Jammer, RWR, and CMDS). The mission computer is the avionics bus controller, the interface between the EW suite and other avionics.

ALQ-214 software improvement will provide the ALQ-214 with digital radio frequency memory deny-delay, technique capability significantly improving F/A-18C/D/E/F survivability. Acquisition and contract strategy includes development, integration and test of the ALQ-214 software improvements through sole-source contract award. Minor modification to other avionics are required in order to integrate this new capability. These other avionics may include, but are not limited to, the ALR-67(V)2, ALR-67(V)3, ALE-47, ALE-50, ALE-55, mission computer and fire control radar.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Tactical Air EW	11.113	6.594	3.927	0.000	3.927
Articles:	-	-	-	-	-
FY 2015 Accomplishments: Successfully awarded the ALE-55 FRP 5 contract. Successfully achieved IB-4 Initial Operational Capability (IOC). ALQ-214 software improvement contract and developmental testing will continue into FY 2016.					
FY 2016 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
The ALQ-214 software improvement contract will continue into FY 2016. Integrated testing for software improvement will begin and will continue through FY 2016. ***FY 2017 Base Plans:*** ALQ-214 Software Improvement operational testing will begin and will continue through FY 2017. ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	11.113	6.594	3.927	0.000	3.927

C. 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
• APN/0576 004-12: *Common On-Board Jammer*	94.310	94.095	57.568	-	57.568	49.911	46.873	47.722	48.680	328.662	932.934
• PANMC/0182: *Airborne Expendable CM*	21.574	21.723	20.905	-	20.905	24.517	24.929	25.384	25.799	Continuing	Continuing

Remarks

D. Acquisition Strategy

IDECM Block 3 (IB-3) sole source award of Full Rate Production (FRP) in FY 2013. Annual IB-3 production contracts will continue through FY 2046. The ALQ-214 Engineering Change Proposal (ECP) engineering manufacturing & development contract effort was awarded sole source to Harris (formerly ITT/EXELIS) in December 2009. The contract will conclude in FY 2016. ALQ-214 software improvement acquisition awarded to Harris in FY 2012. Harris is the original developer/manufacturer and current sustainer of the ALQ-214.

E. Performance Metrics

IDECM Block 3: Successfully award ALE-55 FRP 6-10 contract in 2nd Qtr FY 2016. ALE-55 FRP 6-10 is planned as Sole Source Firm Fixed Price (SS/FFP) contract with a base plus 4 options to BAE Systems.

IDECM Block 4: Successfully award ALQ-214 FRP 12-13 contract in 4th Qtr FY 2015. ALQ-214 FRP 12-13 is planned as Sole Source Firm Fixed Price (SS/FFP) contract with a base plus 1 option to Harris.

ALQ-214 Software Improvement: Successfully achieve IOC in 4th Qtr FY 2017.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Integration -IDECM Boeing	Various	Various : Various	7.519	0.000		0.000		0.000		-		0.000	0.000	7.519	7.519
Systems Eng - IDECM	SS/CPFF	Various : Various	64.169	0.000		0.000		0.000		-		0.000	0.000	64.169	64.169
Prior Year Prod Dev costs no longer funded in FYDP	Various	Various : Various	236.024	0.000		0.000		0.000		-		0.000	0.000	236.024	-
		Subtotal	307.712	0.000		0.000		0.000		-		0.000	0.000	307.712	-

Remarks

Aircraft Integration and Systems Engineering efforts have been completed. Previously budgeted Product Development funding reallocated into NAWCWD "Dev Test & Evaluation Supt ALQ-214 SW Imp", China Lake line to cover additional testing efforts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Log Supt-IDECM	WR	NAWCAD : Pax River, MD	0.113	0.116	Nov 2014	0.111	Nov 2015	0.112	Nov 2016	-		0.112	0.344	0.796	-
Integrated Log Supt-IDECM	SS/CPFF	WYLE : Pax River, MD	0.000	0.050	Apr 2015	0.000		0.000		-		0.000	0.000	0.050	0.050
Software Dev-ALQ-214 SW Dev	SS/CPFF	ITT : Clifton, NJ	22.227	0.000		1.000	Mar 2016	0.000		-		0.000	0.000	23.227	23.227
Engineering Support	WR	Various : Various	1.130	0.782	Nov 2014	0.979	Nov 2015	0.644	Nov 2016	-		0.644	3.243	6.778	-
Engineering Support	WR	NAWCWD : China Lake, CA	0.000	0.195	Nov 2014	0.000		0.000		-		0.000	0.000	0.195	-
Engineering Support	WR	NAWCWD : Point Mugu, CA	2.440	0.334	Nov 2014	1.472	Nov 2015	0.000		-		0.000	0.000	4.246	-
Studies and Analysis SW Dev	SS/CR	Johns Hopkins : Baltimore, MD	1.160	0.313	Jan 2015	0.000		0.000		-		0.000	0.000	1.473	1.473
Prior Year Support costs no longer funded in FYDP	Various	Various : Various	10.307	0.000		0.000		0.000		-		0.000	0.000	10.307	-
		Subtotal	37.377	1.790		3.562		0.756		-		0.756	3.587	47.072	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval Supt ALQ-214 SW Imp	WR	Various : Various	0.420	0.000		0.000		0.000		-		0.000	0.000	0.420	-
Oper Test & Eval ALQ-214 SW Imp	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		1.445	Oct 2016	-		1.445	0.000	1.445	-
Dev Test & Eval Supt ALQ-214 SW Imp	WR	NAWCWD : China Lake, CA	2.980	6.386	Nov 2014	0.740	Nov 2015	0.770	Nov 2016	-		0.770	0.000	10.876	-
Dev Test & Eval Supt ALQ-214 SW IMP	WR	NAWCWD : Point Mugu, CA	0.000	0.743	Nov 2014	0.361	Nov 2015	0.000		-		0.000	0.000	1.104	-
Oper Test & Eval IDECM	WR	NAWCWD : China Lake, CA	2.737	0.000		0.000		0.000		-		0.000	0.000	2.737	-
Eng Test & Eval IDECM	WR	Various : Various	1.172	1.057	Nov 2014	1.106	Nov 2015	0.715	Nov 2016	-		0.715	1.816	5.866	-
Eng & Tech Srvcs (Non-FFRDC)	SS/CPFF	Various : Various	0.517	1.052	Dec 2014	0.748	Jun 2016	0.172	Jun 2017	-		0.172	0.649	3.138	3.721
Prior Year T&E costs no longer funded in FYDP	Various	Various : Various	26.007	0.000		0.000		0.000		-		0.000	0.000	26.007	-
		Subtotal	33.833	9.238		2.955		3.102		-		3.102	2.465	51.593	-

Remarks

Additional Engineering & Technical Services due to Award of FY 2015 Contract which will run through 3rd Qtr of FY 2016. Currently IDECM has two major test events in progress.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Allot	NAWCAD : Pax River, MD	0.690	0.085	Nov 2014	0.077	Oct 2015	0.069	Oct 2016	-		0.069	0.180	1.101	-
Prior Year Mgmt costs no longer funded in FYDP	Various	Various : Various	88.935	0.000		0.000		0.000		-		0.000	0.000	88.935	-
		Subtotal	89.625	0.085		0.077		0.069		-		0.069	0.180	90.036	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 2175 / *Tactical Air Electronic Warfare*	

	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	468.547	11.113		6.594		3.927		-		3.927	6.232	496.413	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*

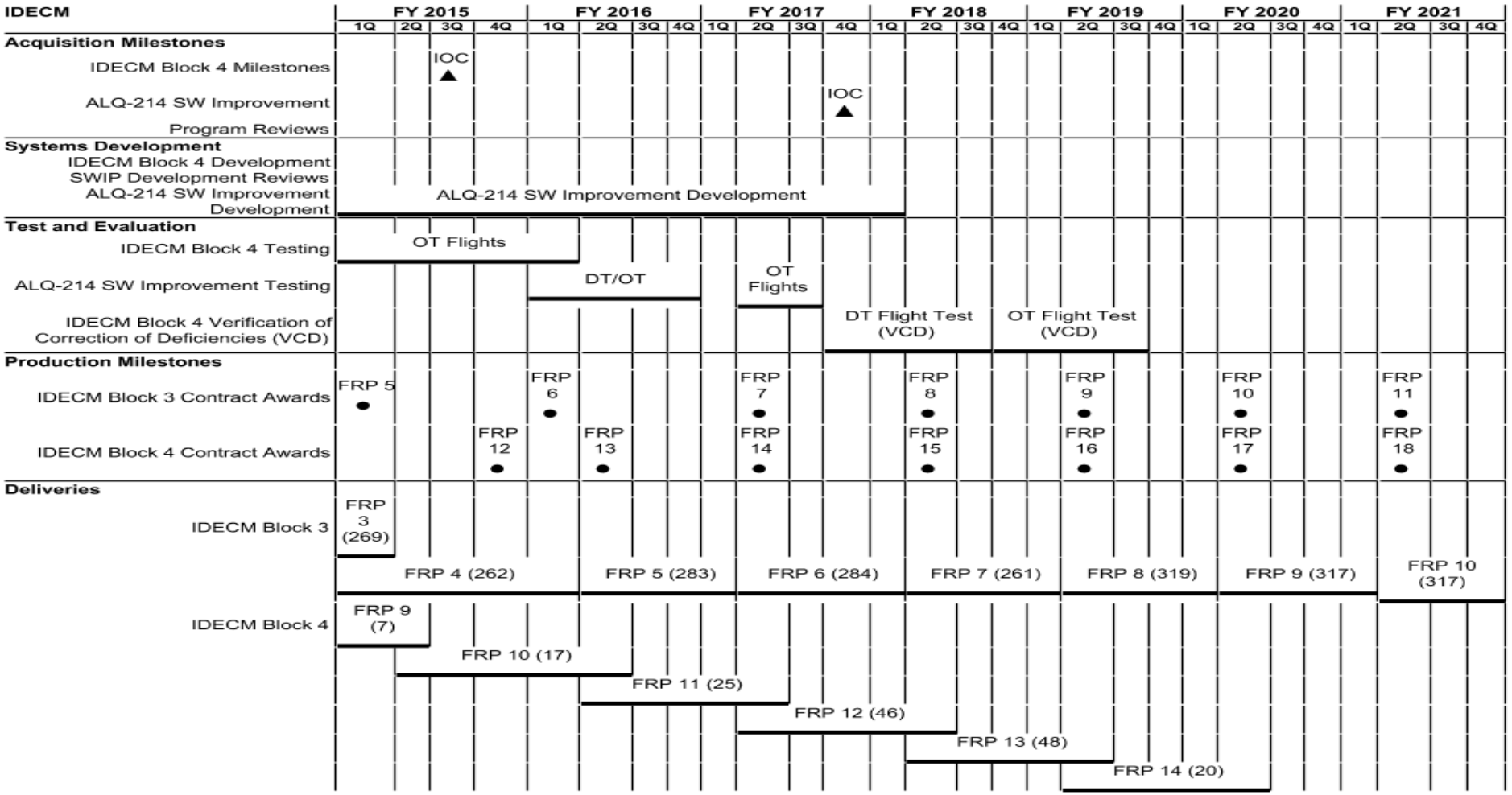
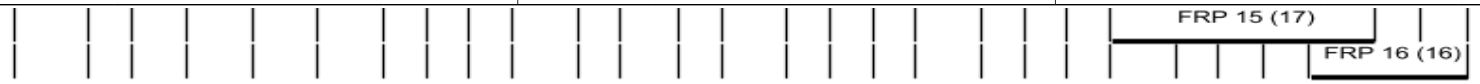


Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*



2017PB - 0604270N - 2175 IDECM Block 4 is an ECP to Block 2

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
IDECM				
Acquisition Milestones: IDECM Block 4 Milestones: IDECM Block 4 IOC	3	2015	3	2015
Acquisition Milestones: ALQ-214 SW Improvement: ALQ-214 SW Improvement (IOC)	4	2017	4	2017
Systems Development: ALQ-214 SW Improvement Development: ALQ-214 SW Improvement Development	1	2015	1	2018
Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Operational Testing Flights	1	2015	1	2016
Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Development Testing(DT)/Operational Testing (OT) Flights	1	2016	4	2016
Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Operational Testing (OT) Flights	2	2017	3	2017
Test and Evaluation: IDECM Block 4 Verification of Correction of Deficiencies (VCD): IDECM Block 4 Verification of Correction of Deficiencies DT (VCD)	4	2017	3	2018
Test and Evaluation: IDECM Block 4 Verification of Correction of Deficiencies (VCD): IDECM Block 4 Verification of Correction of Deficiencies OT(VCD)	4	2018	3	2019
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 5	1	2015	1	2015
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 6	1	2016	1	2016
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 7	2	2017	2	2017
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 8	2	2018	2	2018
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 9	2	2019	2	2019

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 10	2	2020	2	2020
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 11	2	2021	2	2021
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 12	4	2015	4	2015
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 13	2	2016	2	2016
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 14	2	2017	2	2017
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 15	2	2018	2	2018
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 16	2	2019	2	2019
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 17	2	2020	2	2020
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 18	2	2021	2	2021
Deliveries: IDECM Block 3: IDECM Block 3 FRP 3 Deliveries (269)	1	2015	1	2015
Deliveries: IDECM Block 3: IDECM Block 3 FRP 4 Deliveries (262)	1	2015	1	2016
Deliveries: IDECM Block 3: IDECM Block 3 FRP 5 Deliveries (283)	2	2016	1	2017
Deliveries: IDECM Block 3: IDECM Block 3 FRP 6 Deliveries (284)	2	2017	1	2018
Deliveries: IDECM Block 3: IDECM Block 3 FRP 7 Deliveries (261)	2	2018	1	2019
Deliveries: IDECM Block 3: IDECM Block 3 FRP 8 Deliveries (319)	2	2019	1	2020
Deliveries: IDECM Block 3: IDECM Block 3 FRP 9 Deliveries (317)	2	2020	1	2021
Deliveries: IDECM Block 3: IDECM Block 3 FRP 10 Deliveries (317)	2	2021	4	2021
Deliveries: IDECM Block 4: IDECM Block 4 FRP 9 Deliveries (7)	1	2015	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 2175 / *Tactical Air Electronic Warfare*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: IDECM Block 4: IDECM Block 4 FRP 10 Deliveries (17)	2	2015	2	2016
Deliveries: IDECM Block 4: IDECM Block 4 FRP 11 Deliveries (25)	2	2016	2	2017
Deliveries: IDECM Block 4: IDECM Block 4 FRP 12 Deliveries (46)	2	2017	2	2018
Deliveries: IDECM Block 4: IDECM Block 4 FRP 13 Deliveries (48)	2	2018	2	2019
Deliveries: IDECM Block 4: IDECM Block 4 FRP 14 Deliveries (20)	2	2019	2	2020
Deliveries: IDECM Block 4: IDECM Block 4 FRP 15 Deliveries (17)	2	2020	2	2021
Deliveries: IDECM Block 4: IDECM Block 4 FRP 16 Deliveries (16)	2	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 3308 / *Technology Development*	

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
3308: *Technology Development*	0.000	0.000	0.000	2.016	-	2.016	2.502	6.316	6.382	8.652	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

PE 0604279N consolidated to PE 0604270N beginning in FY 2017 pursuant to PDASN (FM&C) memorandum signed 5 December 2014.

A. Mission Description and Budget Item Justification

Project Unit (PU) 3308 Technology Development: Funds efforts that focus on the quick reaction prototyping of tactical Electronic Warfare (EW)/countermeasures solutions for increased survivability providing friendly forces the self protection necessary for successful mission accomplishment. This program directly addresses the operational requirement of strike platforms for optimization of EW/countermeasure solutions across the Department of the Navy. Improved countermeasure capabilities and techniques through modeling and simulation, validated in subsequent field testing to address new and emerging threats, capitalize upon upgrades to Aircraft Survivability Equipment systems capabilities for strike platforms and evaluate new radio frequency countermeasure and infra red countermeasure technologies.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: New Accomplishment/Planned Program Entry	0.000	0.000	2.016	0.000	2.016
Articles:	-	-	-	-	-
FY 2015 Accomplishments: N/A					
FY 2016 Plans: N/A					
FY 2017 Base Plans: Continue EW vulnerability studies/analysis, product development and test conducted for strike aircraft.					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	2.016	0.000	2.016

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3308 / *Technology Development*

D. Acquisition Strategy

EW vulnerability studies/analysis, product development and test conducted for strike aircraft across the FYDP.

E. Performance Metrics

Electronic Warfare (EW) vulnerability studies/analysis, product development and test conducted for strike aircraft across the FYDP.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3308 / *Technology Development*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Dev-ALQ-214 SW Dev	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.000		0.587	Nov 2016	-		0.587	Continuing	Continuing	Continuing
Software Dev-ALQ-214 SW Dev	WR	Various : Various	0.000	0.000		0.000		0.240	Nov 2016	-		0.240	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		0.827		-		0.827	-	-	-

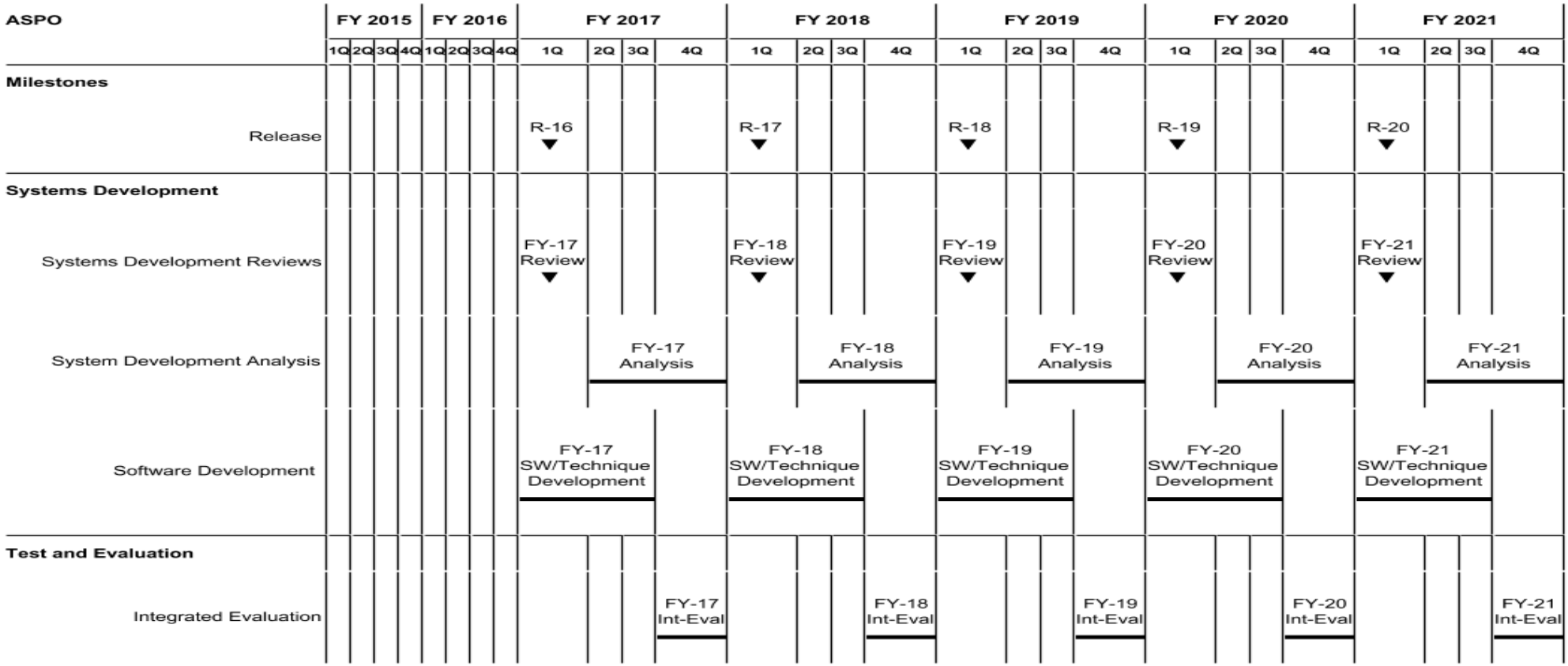
Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Evaluation	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.000		0.879	Nov 2016	-		0.879	Continuing	Continuing	Continuing
Engineering & Evaluation	WR	Various : Various	0.000	0.000		0.000		0.310	Nov 2016	-		0.310	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		1.189		-		1.189	-	-	-

	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	0.000		0.000		2.016		-		2.016	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3308 / *Technology Development*



2017PB - 0604270N - 3308

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3308 / *Technology Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ASPO				
Milestones: Release: Release-16	1	2017	1	2017
Milestones: Release: Release-17	1	2018	1	2018
Milestones: Release: Release-18	1	2019	1	2019
Milestones: Release: Release-19	1	2020	1	2020
Milestones: Release: Release-20	1	2021	1	2021
Systems Development: Systems Development Reviews: FY-17 Review	1	2017	1	2017
Systems Development: Systems Development Reviews: FY-18 Review	1	2018	1	2018
Systems Development: Systems Development Reviews: FY-19 Review	1	2019	1	2019
Systems Development: Systems Development Reviews: FY-20 Review	1	2020	1	2020
Systems Development: Systems Development Reviews: FY-21 Review	1	2021	1	2021
Systems Development: System Development Analysis: FY-17 Analysis	2	2017	4	2017
Systems Development: System Development Analysis: FY-18 Analysis	2	2018	4	2018
Systems Development: System Development Analysis: FY-19 Analysis	2	2019	4	2019
Systems Development: System Development Analysis: FY-20 Analysis	2	2020	4	2020
Systems Development: System Development Analysis: FY-21 Analysis	2	2021	4	2021
Systems Development: Software Development: FY-17 SW/Technique Development	1	2017	3	2017
Systems Development: Software Development: FY-18 SW/Technique Development	1	2018	3	2018
Systems Development: Software Development: FY-19 SW/Technique Development	1	2019	3	2019
Systems Development: Software Development: FY-20 SW/Technique Development	1	2020	3	2020
Systems Development: Software Development: FY-21 SW/Technique Development	1	2021	3	2021
Test and Evaluation: Integrated Evaluation: FY-17 Integrated Evaluation	4	2017	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3308 / *Technology Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test and Evaluation: Integrated Evaluation: FY-18 Integrated Evaluation	4	2018	4	2018
Test and Evaluation: Integrated Evaluation: FY-19 Integrated Evaluation	4	2019	4	2019
Test and Evaluation: Integrated Evaluation: FY-20 Integrated Evaluation	4	2020	4	2020
Test and Evaluation: Integrated Evaluation: FY-21 Integrated Evaluation	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 3309 / *Assault Survivability Optimization*	

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
3309: *Assault Survivability Optimization*	0.000	0.000	0.000	3.375	-	3.375	0.849	0.835	0.836	0.858	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

PE 0604279N consolidated to PE 0604270N beginning in FY 2017 pursuant to PDASN (FM&C) memorandum signed 5 December 2014.

A. Mission Description and Budget Item Justification

Program was established by OPNAV N98 to fill USN and USMC aircraft survivability gaps against current and future threat systems using current and advanced technology expendable countermeasures as well as improvements in Aircraft Survivability Equipment (ASE) systems. Project is required for DoN aircraft self-protection against MANPADs including accelerated proliferation of threat addressed in JUONS #SO-0010. This project funds the development, testing, and rapid fielding of advanced countermeasures and enhanced employment techniques needed to support current and future operations for USN and USMC aircraft. Incorporates capability advancements in ASE and expendable countermeasures to develop and deploy countermeasure responses resulting in increased platform survivability. Countermeasure Techniques developed for improved survivability are supported by Statement of Functionality for Aircraft Survivability Equipment Smart Dispense, dated 19 January 2012. Resources will be applied to the following areas: 1) studies and evaluations to optimize current countermeasures and ASE capabilities, 2) development and demonstration of advanced expendable countermeasures and countermeasure techniques, 3) testing and evaluation of advanced countermeasures, 4) development of system software integration for the testing and deployment of advanced countermeasure techniques, and 5) development of and upgrades to modeling tools and specialized equipment required to conduct evaluation of advanced countermeasures against proliferating threats.

Advanced countermeasures procured in FY 2016 (PE 0604279N) will support flight test for optimized/advanced countermeasures techniques in FY 2017. The quantity of 1,500 units is required by Air Expendable Countermeasures Test and Evaluation Master Plan #1480 to complete the flight testing for test Mission Data Files (MDF) and optimized/advanced countermeasures techniques. (RDT&E Articles are advanced air expendable countermeasures.)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: New Accomplishment/Planned Program Entry	0.000	0.000	3.375	0.000	3.375
Articles:	-	-	480	-	480
FY 2015 Accomplishments: N/A					
FY 2016 Plans: N/A					
FY 2017 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Continue development and testing of advanced countermeasure techniques and upgrade specialized evaluation equipment for advancing threat systems. 480 test articles procured in FY17 are advanced expendable countermeasures for flight effectives testing /optimization flight tests in FY18. ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	3.375	0.000	3.375

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Acquisition strategy is to leverage improvements in air expendable countermeasures technology and integration of existing Aircraft Survivability Equipment (ASE) sensor data to enhance platform survivability on USN and USMC platforms through more effective dispense techniques, invest in enhancements to modeling and simulation tools to better evaluate countermeasure effectiveness, upgrade test and evaluation equipment to incorporate current and future threats for effectiveness tests and develop and demonstrate advanced concept countermeasures for future threats. Advanced countermeasures procured in FY16 will support flight test for optimized/ advanced countermeasure techniques in FY17. New advanced countermeasures are then transitioned to the Procurement of Ammunition Navy and Marine Corps appropriation for procurement and fielding. New optimized and advanced countermeasure techniques are delivered to government software support activities for fleet release to increase aircraft/aircrew survivability.

E. Performance Metrics

Maintain Air Expendable Countermeasures (AECM) ORD: #512-88-89 dated 28 May 99 requirement to provide operationally effective mixture of countermeasures that can be employed to degrade and/or neutralize the effectiveness of current and projected threats. Continued development of optimized/advanced countermeasure techniques and advance countermeasures by ongoing analysis and test flight efforts related to aircraft platform survivability based on threat development and proliferation. Countermeasure Techniques developed for improved survivability are further supported by Statement of Functionality for Aircraft Survivability Equipment Smart Dispense, dated 19 January 2012. PU 3309 efforts will continue to change in response to this requirement when similar threat proliferation, advances in countermeasures technology and integrated ASE capability advancements are accomplished in particular the RF and UV spectrums. Project will include efforts to satisfy DoN aircraft self-protection against MANPADs including accelerated proliferation of threat addressed in JUONS #SO-0010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Expendable Countermeasure Technique Modeling and Simulation	WR	NSWC CRANE : Crane, IN	0.000	0.000		0.000		1.116	Oct 2016	-		1.116	Continuing	Continuing	Continuing
Radio Frequency Countermeasures Modeling and Simulation	WR	NSWC CRANE : Crane, IN	0.000	0.000		0.000		0.632	Oct 2016	-		0.632	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		1.748		-		1.748	-	-	-

Remarks

Modeling and simulation to develop advanced countermeasure techniques prior to flight test. Radio Frequency Countermeasures (RFCM) Modeling and Simulation will evaluated RFCM effectiveness and support mission data optimization for DoN aircraft.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Mission Data File Software Development	WR	FRCSE : Jacksonville, FL	0.000	0.000		0.000		0.120	Nov 2016	-		0.120	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		0.120		-		0.120	-	-	-

Remarks

Software development to create Mission Data Files (MDF) and enhanced operational flight program algorithms for flight effectiveness testing.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental T&E Flight Tests	WR	Various : Various	0.000	0.000		0.000		0.600	Nov 2016	-		0.600	Continuing	Continuing	Continuing
Advanced Countermeasures for Flight Tests	MIPR	DOTC : Picatinny Arsenal, NJ	0.000	0.000		0.000		0.550	Mar 2017	-		0.550	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Seeker Test Van Advanced Threat Capability	MIPR	DOTC : Picatinny Arsenal, NJ	0.000	0.000		0.000		0.255	Jan 2017	-		0.255	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		1.405		-		1.405	-	-	-

Remarks

Developmental T&E flight test following modeling and simulation evaluation in FY 2017 will optimize expendable countermeasure effectiveness for UH-1Y, AH-1Z and MH-60S aircraft. Advanced expendable countermeasures procured in FY 2017 will support flight effectiveness testing /optimization flight tests in FY 2018. Equipment procurement required to evaluate advanced countermeasure techniques and integrate new threat systems into SDV, STV, and ESDV for evaluation capability will continue FY 2017

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	WR	FRCSE : Jacksonville, FL	0.000	0.000		0.000		0.102	Oct 2016	-		0.102	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		0.102		-		0.102	-	-	-

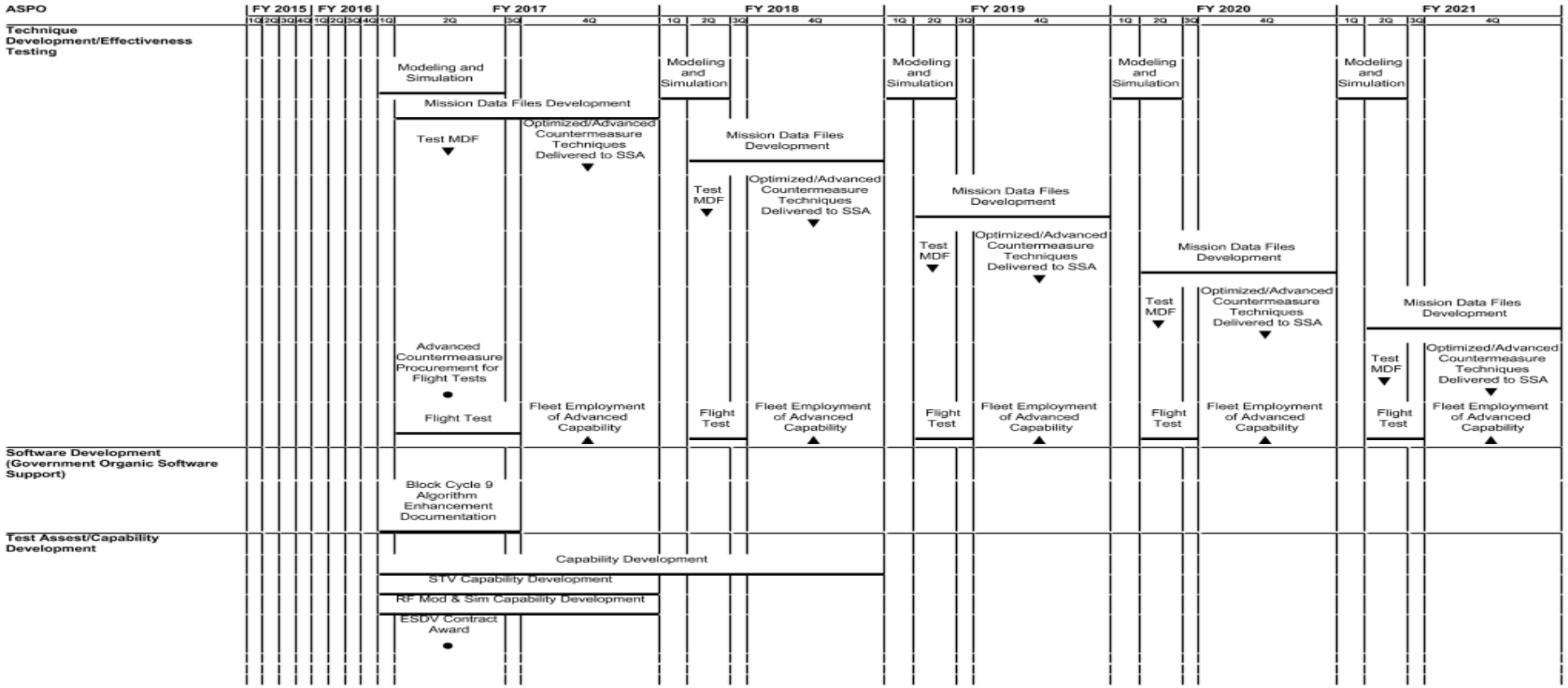
Remarks

Project management required to coordinate increased development activities.

	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	0.000		0.000		3.375		-		3.375	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*



2017PB - 0604270N - 3309 Project 3309 moved from PE 0604279N to PE 0604270N in FY 17 and out.

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ASPO				
Technique Development/Effectiveness Testing: FY17 Modeling and Simulation	1	2017	2	2017
Technique Development/Effectiveness Testing: FY18 Modeling and Simulation	1	2018	2	2018
Technique Development/Effectiveness Testing: FY19 Modeling and Simulation	1	2019	2	2019
Technique Development/Effectiveness Testing: FY20 Modeling and Simulation	1	2020	2	2020
Technique Development/Effectiveness Testing: FY21 Modeling and Simulation	1	2021	2	2021
Technique Development/Effectiveness Testing: FY17 Mission Data Files Development	2	2017	4	2017
Technique Development/Effectiveness Testing: FY17 Test MDF	2	2017	2	2017
Technique Development/Effectiveness Testing: FY17 Optimized/Advanced Countermeasure Techniques Delivered to Software Support Activity (SSA) for fleet release	4	2017	4	2017
Technique Development/Effectiveness Testing: FY18 Mission Data Files Development	2	2018	4	2018
Technique Development/Effectiveness Testing: FY18 Test MDF	2	2018	2	2018
Technique Development/Effectiveness Testing: FY18 Optimized/Advanced Countermeasure Techniques Delivered to Software Support Activity (SSA) for fleet release	4	2018	4	2018
Technique Development/Effectiveness Testing: FY19 Mission Data Files Development	2	2019	4	2019
Technique Development/Effectiveness Testing: FY19 Test MDF	2	2019	2	2019
Technique Development/Effectiveness Testing: FY19 Optimized/Advanced Countermeasure Techniques Delivered to Software Support Activity (SSA) for fleet release	4	2019	4	2019
Technique Development/Effectiveness Testing: F20 Mission Data Files Development	2	2020	4	2020
Technique Development/Effectiveness Testing: FY20 Test MDF	2	2020	2	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Technique Development/Effectiveness Testing: FY20 Optimized/Advanced Countermeasure Techniques Delivered to Software Support Activity (SSA) for fleet release	4	2020	4	2020
Technique Development/Effectiveness Testing: F21 Mission Data Files Development	2	2021	4	2021
Technique Development/Effectiveness Testing: FY21 Test MDF	2	2021	2	2021
Technique Development/Effectiveness Testing: FY21 Optimized/Advanced Countermeasure Techniques Delivered to Software Support Activity (SSA) for fleet release	4	2021	4	2021
Technique Development/Effectiveness Testing: Advanced Countermeasure Procurement for Flight Tests	2	2017	2	2017
Technique Development/Effectiveness Testing: FY17 Flight Test	2	2017	3	2017
Technique Development/Effectiveness Testing: FY18 Flight Test	2	2018	3	2018
Technique Development/Effectiveness Testing: FY19 Flight Test	2	2019	3	2019
Technique Development/Effectiveness Testing: FY20 Flight Test	2	2020	3	2020
Technique Development/Effectiveness Testing: FY21 Flight Test	2	2021	3	2021
Technique Development/Effectiveness Testing: FY17 Fleet Employment of Advanced Capability	4	2017	4	2017
Technique Development/Effectiveness Testing: FY18 Fleet Employment of Advanced Capability	4	2018	4	2018
Technique Development/Effectiveness Testing: FY19 Fleet Employment of Advanced Capability	4	2019	4	2019
Technique Development/Effectiveness Testing: FY20 Fleet Employment of Advanced Capability	4	2020	4	2020
Technique Development/Effectiveness Testing: FY21 Fleet Employment of Advanced Capability	4	2021	4	2021
Software Development (Government Organic Software Support): Block Cycle 9 Algorithm Enhancement Documentation	1	2017	3	2017
Test Assest/Capability Development: SDV/ESDV Capability Development	1	2017	4	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3309 / *Assault Survivability Optimization*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test Assest/Capability Development: STV Capability Development	1	2017	4	2017
Test Assest/Capability Development: RF Mod & Sim Capability Development	1	2017	4	2017
Test Assest/Capability Development: FY17 ESDV Contract Award	2	2017	2	2017

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 3327 / *MAGTF EW Aviation Development*	

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
3327: *MAGTF EW Aviation Development*	0.000	0.000	0.000	20.817	-	20.817	20.776	2.984	2.794	2.862	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

PE 0604376M was consolidated to PE 0604270N beginning in FY 2017 pursuant to PDASN (FM&C) memorandum signed 5 December 2014.

A. Mission Description and Budget Item Justification

This project unit supports the United States Marine Corps development of Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) and the various elements of its distributed System of Systems (SoS) that support the Commandant of the Marine Corps' Strategy and Vision 2025 and Joint Vision 2025. The SoS will address MAGTF EW sufficiency gaps
in the areas of Electronic Attack, EW Support, and Electronic Protection with a multitude of payloads designed for carriage on a variety of organic MAGTF air and ground assets. Payload development plans follow an adaptable, modular and open architecture philosophy to combat the increasing capability gap and enable future growth at a reduced operational and sustainment cost.

The ALQ-231(v)1 pod is the Fixed-Wing variant of the Intrepid Tiger II pod flown on the AV-8B and F/A-18A-D platforms. The ALQ-231(v)2 will be the variant of the Intrepid Tiger II pod flown on unmanned aerial vehicle (UAV) platforms once integration is complete. The ALQ-231(v)3 is the Rotary-Wing variant of the Intrepid Tiger II pod flown on the AH-1
and UH-1 platforms. As of the PresBud15 submission, the ALQ-231(v)1 was the only approved configuration and nomenclature for the Intrepid Tiger II pod. The re-designation of the ALQ-231 variants occurred with the approval of Rapid Deployment Capability authorization for ALQ-231 on Rotary Wing platforms by the Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RD&A)) on January 14, 2014.

Prior to FY 2011, Intrepid Tiger II efforts were budgeted under Program Element (PE) 0604270N, Project Unit (PU) 0556.
In FY 2012, Intrepid Tiger II efforts were budgeted under PE 0604376M, PU 3327. In FY 2017, Intrepid Tiger II efforts are budgeted under PE 0604270N, PU 3327.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Intrepid Tiger II (ALQ-231)	0.000	0.000	20.817	0.000	20.817
Articles:	-	-	-	-	-
FY 2015 Accomplishments: N/A					
FY 2016 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A ***FY 2017 Base Plans:*** *The ALQ-231 V(1) BLK X received a $6.000M investment in FY 2016 by the Office of Secretary of Defense's Science and Technology (S&T) program under Program Element (PE) 0603618D8Z Project Unit (PU) P244* In FY 2017, technologies developed for the ALQ-231 V(1) BLK X by the Office of Secretary of Defense's Science and Technology (S&T) program under Program Element (PE) 0603618D8Z Project Unit (PU) P244 will transition to the USMC. The Intrepid Tiger II (ALQ-231) program will continue to mature hardware technology, update targeting techniques, and correct identified software discrepancies to ensure relevance against emerging communication and radar threats. The USMC will assume responsibility for all efforts to develop and test Intrepid Tiger II based solutions to radar threats in support of the penetrating jammer mission, culminating in the release of the ALQ-231(v)1 BLK X Radar Jammer for the AV-8B, F/A-18C/D, and MV-22. Updates to major components of the ALQ-231 to address this new threat set will commence in FY 2016 and are expected to include upgrades to amplifiers, transceivers, antennas, radios/encryptors, a direction finding array, and the development of a modular pod shell. Other components may also require upgrade/update due to configurations in the ALQ-231 V(1) pod. Additionally, lab testing of upgraded components is expected to occur in FY 2017. FY 2017 efforts also include the investigation of the potential for integration of the Intrepid Tiger II capability on the C-130 platform. Related research efforts will work to develop an enabling capability to facilitate Collaborative Electronic Warfare (CEW) through shared organic, national and space-based Electromagnetic Spectrum (EMS) sensing (ES) and coordinated non-kinetic fires (EA) in accordance with spectrum operations objectives by linking Command and Control (C2), operators and sensors across a network interface, and continue to explore uses for Intrepid Tiger II with the Cyber Electronic Warfare Coordination Cell (CEWCC). Intrepid Tiger II (ALQ-231) was funded in Program Element 0604376M Project Unit 3327 in FY 2016 and prior. ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	20.817	0.000	20.817

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*

C. 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
• APN/0587: *MAGTF EW For Aviation*	17.170	7.680	5.676	-	5.676	5.682	11.267	11.360	11.588	135.059	277.109

Remarks

D. Acquisition Strategy

This project unit is part of United States Marine Corps led efforts to ensure Marine Corps requirements are included in the budget process for the Future Year Defense Program and beyond. These efforts include ALQ-231 Intrepid Tiger II(v)1, Intrepid Tiger II(v)2, Intrepid Tiger II(v)3, Collaborative Electronic Warfare (EW)/EW Battle Management, EW Payload, and EW Service Architecture (formerly Collaborative Online Reconnaissance Provider Operationally Responsive Attack Link). These programs are the Marine Corps' initial steps to create systems to distribute EW capability across the battle space.

E. Performance Metrics

Successful completion of Intrepid Tiger II(v)3 (ALQ-231) Initial Operational Capability (IOC). Commencement of research into Engineering Change Proposals (ECPs) for capability upgrades for Intrepid Tiger II(v)1 and Intrepid Tiger II(v)3 pods.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Intrepid Tiger BLK X Hardware Development - Amplifiers	C/CPIF	TBD : TBD	0.000	0.000		0.000		1.000	Nov 2016	-		1.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Hardware Development - Transceivers	C/CPIF	TBD : TBD	0.000	0.000		0.000		3.000	Nov 2016	-		3.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Hardware Development - Antennas	C/CPIF	TBD : TBD	0.000	0.000		0.000		1.500	Nov 2016	-		1.500	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Hardware Development - Modular Pod Shell	C/CPIF	TBD : TBD	0.000	0.000		0.000		2.000	Nov 2016	-		2.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Hardware Development - Radios/Encryptors	C/CPIF	TBD : TBD	0.000	0.000		0.000		2.000	Nov 2016	-		2.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Hardware Development - Direction Finding Array	C/CPIF	TBD : TBD	0.000	0.000		0.000		2.000	Nov 2016	-		2.000	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		1.300	Nov 2016	-		1.300	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.000		6.437	Nov 2016	-		6.437	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		19.237		-		19.237	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Various : Various	0.000	0.000		0.000		0.425	Nov 2016	-		0.425	Continuing	Continuing	Continuing
Eng & Tech Services	Various	Various : Various	0.000	0.000		0.000		0.103	Nov 2016	-		0.103	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		0.528		-		0.528	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*

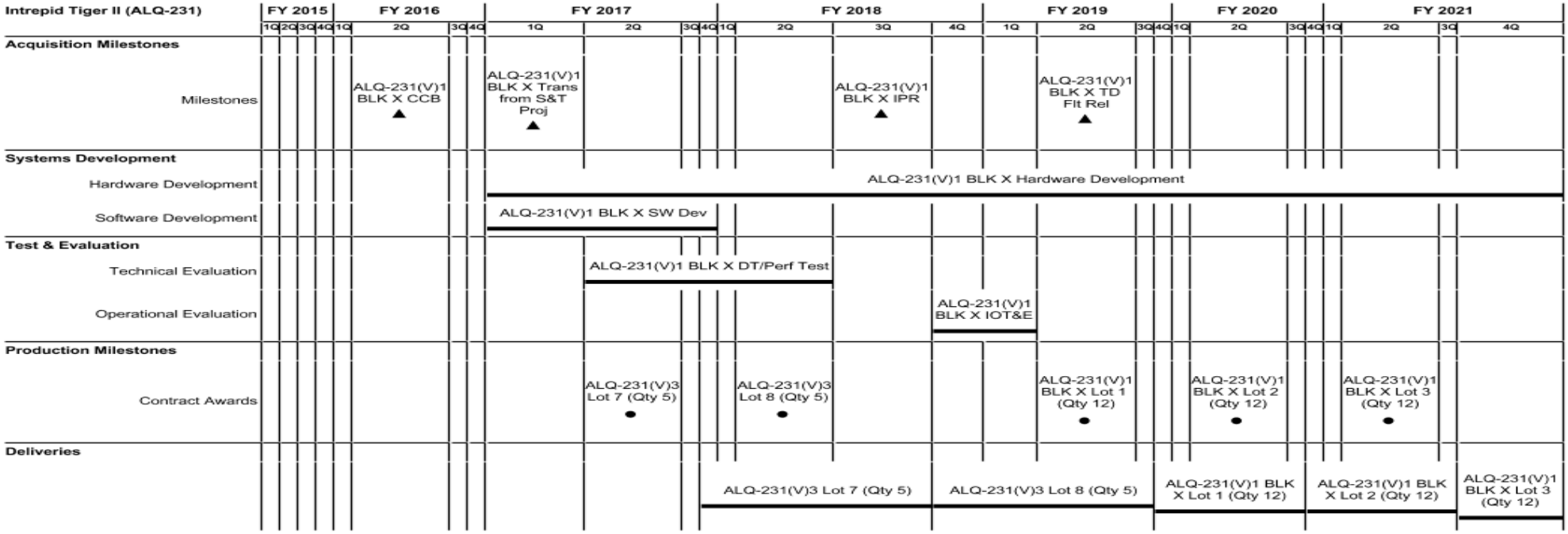
Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Intrepid Tiger BLK X Flight Testing	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Flight Testing	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Flight Testing	C/BA	NAWCWD : Point Mugu, CA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Intrepid Tiger BLK X Testing	C/BA	Point Mugu, CA : Point Mugu, CA	0.000	0.000		0.000		1.052	Nov 2016	-		1.052	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		1.052		-		1.052	-	-	-

	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	0.000		0.000		20.817		-		20.817	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*



2017PB - 0604270N - 3327 ALQ-231(V)1 BLK X EDM units funded by PE 0603618D8Z PU P244 in FY 2016.
The Intrepid Tiger II program was funded under PE 0604376M PU 3327 in FY 2016. All events prior to FY 2017 shown for clarity.

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Intrepid Tiger II (ALQ-231)				
Acquisition Milestones: Milestones: ALQ-231(V)1 BLK X Configuration Control Board (CCB)	2	2016	2	2016
Acquisition Milestones: Milestones: ALQ-231(V)1 BLK X Transition from S&T project	1	2017	1	2017
Acquisition Milestones: Milestones: ALQ-231(V)1 BLK X TD Fleet Release	2	2019	2	2019
Acquisition Milestones: Milestones: ALQ-231(V)1 BLK X In Progress Review	3	2018	3	2018
Systems Development: Hardware Development: ALQ-231(V)1 BLK X Hardware Development	1	2017	4	2021
Systems Development: Software Development: ALQ-231(V)1 BLK X Software Development	1	2017	4	2017
Test & Evaluation: Technical Evaluation: ALQ-231(V)1 BLK X Developmental/ Performance Test	2	2017	2	2018
Test & Evaluation: Operational Evaluation: ALQ-231(V)1 BLK X IOT&E	4	2018	1	2019
Production Milestones: Contract Awards: ALQ-231(V)3 Production Lot 7 (Qty 5)	2	2017	2	2017
Production Milestones: Contract Awards: ALQ-231(V)3 Production Lot 8 (Qty 5)	2	2018	2	2018
Production Milestones: Contract Awards: ALQ-231(V)1 BLK X Production Lot 1 (12 units)	2	2019	2	2019
Production Milestones: Contract Awards: ALQ-231(V)1 BLK X Production Lot 2 (12 units)	2	2020	2	2020
Production Milestones: Contract Awards: ALQ-231(V)1 BLK X Production Lot 3 (12 units)	2	2021	2	2021
Deliveries: ALQ-231(V)3 Lot 7 Deliveries (Qty 5)	4	2017	3	2018
Deliveries: ALQ-231(V)3 Lot 8 Deliveries (Qty 5)	4	2018	3	2019
Deliveries: ALQ-231(V)1 BLK X Production Lot 1 Deliveries (12 units)	4	2019	3	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3327 / *MAGTF EW Aviation Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: ALQ-231(V)1 BLK X Production Lot 2 Deliveries (12 units)	4	2020	3	2021
Deliveries: ALQ-231(V)1 BLK X Production Lot 3 Deliveries (12 units)	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604270N / *Electronic Warfare (EW) Dev*	Project (Number/Name) 3371 / *MAGTF EW Interoperability Development*	

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
3371: *MAGTF EW Interoperability Development*	0.000	0.000	0.000	1.657	-	1.657	1.628	0.945	0.965	0.986	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

PU 3371 was created in FY 2015 to administratively highlight specific work that was being done in Program Element (PE) 0604376M, Project Unit (PU) 3327. This PU has been moved to PE 0604270N in FY 2017 and continues efforts previously funded under PU 3327. It is not a new start for FY 2017.

A. Mission Description and Budget Item Justification

This project unit supports the United States Marine Corps air-ground interoperability by providing a variety of capabilities through multiple functions of the Software Reprogrammable Payload (SRP) when installed aboard SRP-capable aircraft. The spiral development plans allow adaptable, scalable, and open architecture philosophy to reduce stove-pipe solutions but enable future growth at a reduced operational and sustainment cost.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Software Reprogrammable Payload	0.000	0.000	1.657	0.000	1.657
Articles:	-	-	-	-	-
FY 2015 Accomplishments: N/A					
FY 2016 Plans: N/A					
FY 2017 Base Plans: Begin the development of the Spiral 3 SRP on the United States Marine Corps small form factor required platforms.					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	1.657	0.000	1.657

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3371 / *MAGTF EW Interoperability Development*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

This project unit is part of United States Marine Corps led efforts to ensure Marine Corps requirements are included in the budget process for the Future Year Defense Program and beyond. This effort is for the Software Reprogrammable Payload. This program is part of the Marine Corps initial steps to create a common interoperable system to distribute multiple data types across the battle-space through spiral development.

E. Performance Metrics

Successful completion of the Spiral 2 development and demonstration onboard MV-22 test platform.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3371 / *MAGTF EW Interoperability Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		0.408	Nov 2016	-		0.408	Continuing	Continuing	Continuing
Systems Engineering	WR	NRL : Washington, DC	0.000	0.000		0.000		0.200	Nov 2016	-		0.200	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	Assurance Technology Corp : Carlisle, MA	0.000	0.000		0.000		0.849	Dec 2016	-		0.849	0.000	0.849	0.849
		Subtotal	0.000	0.000		0.000		1.457		-		1.457	-	-	-

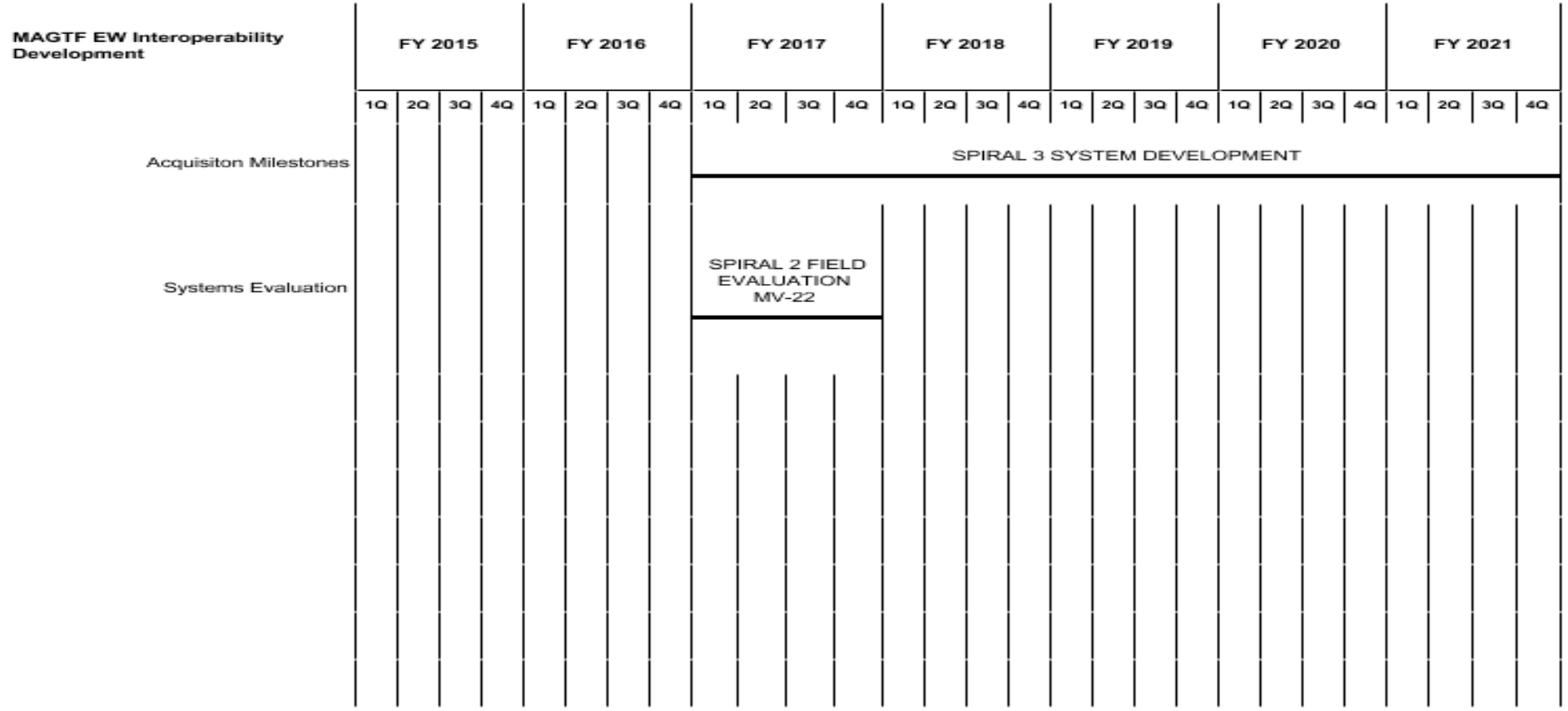
Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Tech Support	C/FFP	NSMA : Washington, DC	0.000	0.000		0.000		0.200	Dec 2016	-		0.200	0.000	0.200	0.200
		Subtotal	0.000	0.000		0.000		0.200		-		0.200	0.000	0.200	0.200

	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	0.000		0.000		1.657		-		1.657	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3371 / *MAGTF EW Interoperability Development*



2017DON - 0604270N - 3371

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604270N / *Electronic Warfare (EW) Dev*	**Project (Number/Name)** 3371 / *MAGTF EW Interoperability Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MAGTF EW Interoperability Development				
Acquisiton Milestones: SPIRAL 3 SYSTEM DEVELOPMENT	1	2017	4	2021
Systems Evaluation: SPIRAL 2 FIELD EVALUATION MV-22	1	2017	4	2017

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