Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy											Date: March 2019	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605500N *I Multi-mssn Maritime Aircraft (MMA) (P-8A)*							
COST ($ in Millions)	**Prior Years**	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**Cost To Complete**	**Total Cost**
Total Program Element	7,914.080	11.422	34.196	21.472	-	21.472	10.310	10.523	10.696	10.909	Continuing	Continuing
2696: *Multi-Mission Maritime Aircraft*	7,910.593	8.695	7.466	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7,926.754
3368: *P-8 Improvements*	3.487	2.727	26.730	21.472	-	21.472	10.310	10.523	10.696	10.909	Continuing	Continuing
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 334												

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft (MMA) will replace the aging P-3 aircraft. The P-8A program was initiated in response to the Joint Requirements Oversight Council (JROC) validated Mission Needs Statement, "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the P-8A Capability Production Document #791-88-09, validated and approved on 22 June 2009. A successful Critical Design Review was completed in June 2007. In August 2007 the Design Readiness Review was conducted and resulted in approval to obligate funding for the fabrication of the Stage II flight test aircraft. The first flight of P-8A occurred on 25 Apr 2009. Milestone C was successfully completed on 11 August 2010. The program completed Initial Operational Test and Evaluation (IOT&E) in March 2013 and achieved Initial Operational Capability (IOC) in November 2013. The Acquisition Decision Memorandum approved entry into Full Rate Production on January 3, 2014.

The primary objectives of Systems Development and Demonstration (SDD) are to perform the system detailed design, develop and produce Systems Integration Labs, develop and build ground and flight test articles, and conduct ground and flight tests to successfully achieve program milestones. Ground testing includes the conduct of static testing, fatigue testing and Live Fire Test and Evaluation. Six flight test aircraft have been built during SDD (PU 2696). These test aircraft are grouped into two stages based on which phase of the test program the aircraft will support. SDD Stage I flight test aircraft (FY06/Qty-3) support Integrated Test and Evaluation (IT&E). SDD Stage II flight test aircraft (FY09/Qty-3) supported the completion of IT&E and IOT&E after being updated to the production configuration. The SDD contract includes the development and initial building of training devices to support IOT&E. The scope of SDD includes activities necessary to facilitate an efficient transition of the fleet to achieve the P-8A IOC of SDD (PU 2696) in CY13. The scope of SDD also includes the engineering and verification of corrected deficiencies identified in testing and Fleet operational use. P-8A entered Production and Deployment phase in the 4th quarter of FY10 and entered Full Rate Production in 2nd quarter of FY14.

P-8A program is based on an evolutionary acquisition strategy consisting of sequential incremental enhancements to system capabilities that will retain cost-wise effectiveness for winning major combat operations. In order to pace the threat, Spiral One (Increment 2), the Next Phase of Capabilities, will incorporate the following capabilities into the P-8A: Multi-Static Active Coherent (MAC), Automatic Identification System, Rapid Capabilities Insertion (RCI), updates to the Tactical Operations Center (TOC), as well as additional Anti-Submarine Warfare (ASW), Anti-Surface Warfare and Intelligence Surveillance and Reconnaissance capabilities as Engineering Change Proposals (ECPs). The scope of this effort includes the integration, design, ground testing (lab & aircraft) and flight test of the capability enhancements to the P-8A and associated Tactical Operations Center ground support facilities and initial trainers. Integration and test of these capabilities as well as integration of Advanced

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy	Date: March 2019
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605500N *I Multi-mssn Maritime Aircraft (MMA) (P-8A)*

Airborne Sensor capability will be accomplished incrementally, based on the scope of the integration effort. This includes support of Special Mission Configuration Test Program.

The P-8A MMA program also includes a sequence of RCI's and rapid development efforts to respond to evolving threats which will retain cost-wise effectiveness for winning major combat operations. In order to pace the threat, these efforts will incorporate incremental software and hardware improvements to existing sensors, communications systems, mission systems, weapons capabilities and TOC to build on the P-8A capability baseline. These capabilities, and other emergent capability requirements, will be prioritized through the Navy Integration and Interoperability (I&I)-aligned Capability Prioritization Process (CPP) and P-8A Tier 3 Capability Roadmap. The CPP process will be supported by detailed analysis and the maturation of developing technologies.

RCI 4 capabilities include Tactical Swap Application; Theatre ASW Application; PMA 264 Advanced Product Build (APB) which consists of MAC Continuous Active Sonar/Continuous CW transmission (CAS/CCW), SSQ-62 DICASS Auto Dect and MAC Adaptive Beamforming; Combat System Optimization and Digital Wideband Receiver (DWR).

Rapid Development efforts include Airborne Weapons Simulator and ASW Sonobuoy receiver digitization for SSQ-125A.

Budget Activity 5.
JUSTIFICATION FOR BUDGET ACTIVITY: 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.

B. Program Change Summary ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	11.795	37.296	10.184	-	10.184
Current President's Budget	11.422	34.196	21.472	-	21.472
Total Adjustments	-0.373	-3.100	11.288	-	11.288
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.100			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.373	0.000			
• Program Adjustments	0.000	0.000	11.300	-	11.300
• Rate/Misc Adjustments	0.000	0.000	-0.012	-	-0.012

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy	Date: March 2019
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605500N *I Multi-mssn Maritime Aircraft (MMA) (P-8A)*

Change Summary Explanation

The FY 2020 funding request was increased by $11.300M to support the final phase of Airborne Weapons Simulator development. This is a critical enabler for crew weapons currency and proficiency for all P-8A weapons and will contribute to decreasing future weapons procurement training costs.

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy											Date: March 2019	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*				Project (Number/Name) 2696 / *Multi-Mission Maritime Aircraft*			
COST ($ in Millions)	**Prior Years**	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**Cost To Complete**	**Total Cost**
2696: *Multi-Mission Maritime Aircraft*	7,910.593	8.695	7.466	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7,926.754
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 334

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft (MMA) will replace the aging P-3 aircraft. The P-8A program was initiated in response to the Joint Requirements Oversight Council validated Mission Needs Statement, "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the P-8A Capability Production Document (CPD) #791-88-09, validated and approved on 22 June 2009. A successful Critical Design Review was completed in June 2007. In August 2007 the Design Readiness Review was conducted and resulted in approval to obligate funding for the fabrication of the Stage II flight test aircraft. The first flight of P-8A occurred on 25 Apr 2009. Milestone C was successfully completed on 11 August 2010. The program completed Initial Operational Test and Evaluation (IOT&E) in March 2013 and achieved Initial Operational Capability (IOC) in November 2013. The Acquisition Decision Memorandum approved entry into Full Rate Production on January 3, 2014.

The primary objectives of Systems Development and Demonstration (SDD) are to perform the system detailed design, develop and produce Systems Integration Labs, develop and build ground and flight test articles, and conduct ground and flight tests to successfully achieve program milestones. Ground testing includes the conduct of static testing, fatigue testing and Live Fire Test and Evaluation. Six flight test aircraft have been built during SDD. These test aircraft are grouped into two stages based on which phase of the test program the aircraft will support. SDD Stage I flight test aircraft (FY06/Qty-3) support Integrated Test and Evaluation (IT&E). SDD Stage II flight test aircraft (FY09/Qty-3) supported the completion of IT&E and IOT&E after being updated to the production configuration. The SDD contract includes the development and initial building of training devices to support IOT&E. The scope of SDD includes activities necessary to facilitate an efficient transition of the fleet to achieve the P-8A IOC of SDD (PU 2696) in CY13. The scope of SDD also includes the engineering and verification of corrected deficiencies identified in testing and Fleet operational use and the baseline air to air refueling. P-8A entered Production and Deployment phase in the 4th quarter of FY10 and entered Full Rate Production in 2nd quarter of FY14.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**
Title: Continue System Development & Demonstration	8.110	7.096	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2019 Plans: SDD phase. Scope of effort includes: support and update to ground and flight test articles (Stage I and II), and completion of Third Lifetime Full-Scale Fatigue Test analysis.					
FY 2020 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 2696 / *Multi-Mission Maritime Aircraft*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Not applicable. ***FY 2020 OCO Plans:*** Not applicable. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** No funds are allocated to the program in FY20.					
Title: Continue Engineering and Technical Development and Test for Sys Dev & Demonstration contracts	0.585	0.370	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2019 Plans: Continue analysis of contracted deliverables; direct technical and logistic support of system development test aircraft; conduct fatigue analysis and delivery of reports; evaluate contract cost, schedule, and performance; test preparations, provide necessary government furnished equipment and test articles, risk assessment/mitigation; program control; and performance status. Conduct and support FOT&E/VCD. ***FY 2020 Base Plans:*** Not applicable. ***FY 2020 OCO Plans:*** Not applicable. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** No funds are allocated to the program in FY20.					
Accomplishments/Planned Programs Subtotals	8.695	7.466	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• APN1/0193: *P-8A MMA*	1,709.642	1,761.753	1,206.701	-	1,206.701	80.325	0.000	0.000	0.000	0.000	22,011.962
• APN6/0605: *P-8A Initial Spares*	101.188	37.428	3.152	-	3.152	0.000	0.000	0.000	0.000	0.000	141.768

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 2696 / *Multi-Mission Maritime Aircraft*

D. Acquisition Strategy

The MMA Milestone 0 was approved 22 March 2000 and the resulting Acquisition Decision Memorandum directed P-8A to begin the Concept Exploration phase consisting of an Analysis of Alternatives and industry concept studies. These activities began 3Q/01 and were funded under Program Element 0702207N Project Unit W2737. Approval to enter Component Advance Development (CAD) was attained from the Overarching Integrated Product Team on 18 Jan 2002 and the Milestone Decision Authority Under Secretary of Defense for Acquisition, Technology, & Logistics approved the program Acquisition Strategy on 8 Feb 2002. The CAD was a competitive award to multiple contractors to define alternative MMA concept system architectures and evaluate associated risks and proposed mitigations. Selection of MMA concept and approval to enter SDD phase occurred at MS B decision review on 28 May 2004. The contract was awarded to Boeing on 14 June 2004. The SDD phase is being used to design, develop and test the P-8A system. The P-8A program was initiated in response to the Joint Requirements Oversight Council validated Mission Needs Statement, "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the Capability Production Document. MS C was successfully completed on 11 August 2010 approving entry into the Production and Deployment Phase. P-8A Initial Operational Capability achieved in November 2013. Entry into Full Rate Production was approved on 3 January 2014.

E. Performance Metrics

Completed first period of Follow-On Test & Evaluation (FOT&E) and Verification of Corrected Deficiencies (VCD) in 2nd quarter 2014. Completed second and third FOT&E and VCD Feb 2015 and Dec 2015. Completed Air to Air Refueling (AAR) ground and developmental flight testing, H-Stab fatigue and residual strength testing, and Second Lifetime Full- Scale Fatigue Test cycling in FY16. H-Stab static and AAR operational test completed in FY17. Completion of FY18 & FY19 FOT&E and VCD. Completion of Fatigue Testing analysis.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	Project (Number/Name) 2696 / *Multi-Mission Maritime Aircraft*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev - Boeing	C/CPAF	Boeing : Seattle, WA	6,993.972	7.451	Dec 2017	6.946	Dec 2018	0.000		-		0.000	0.000	7,008.369	7,008.369
Sys Eng (gov)	WR	NAWC AD : Pax River, MD	85.157	0.659	Nov 2017	0.150	Nov 2018	0.000		-		0.000	0.000	85.966	-
Prior year Prod Dev cost no longer funded in the FYDP	Various	Various : Various	319.530	0.000		0.000		0.000		-		0.000	0.000	319.530	-
		Subtotal	7,398.659	8.110		7.096		0.000		-		0.000	0.000	7,413.865	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Int. Log Gov	WR	NAWC AD : Pax River, MD	43.918	0.000		0.000		0.000		-		0.000	0.000	43.918	-
Tech Dev Gov	WR	NAWC AD : Pax River, MD	77.766	0.162	Nov 2017	0.160	Nov 2018	0.000		-		0.000	0.000	78.088	-
Prior year Support cost no longer funded in the FYDP	Various	Various : Various	31.369	0.000		0.000		0.000		-		0.000	0.000	31.369	-
		Subtotal	153.053	0.162		0.160		0.000		-		0.000	0.000	153.375	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev T&E - Gov	WR	NAWC AD : Pax River, MD	100.210	0.000		0.000		0.000		-		0.000	0.000	100.210	-
GFE & GFI	WR	NAWC AD : Pax River, MD	89.688	0.000		0.000		0.000		-		0.000	0.000	89.688	-
Oper Test & Eval	WR	NAWC AD : Pax River, MD	6.642	0.000		0.000		0.000		-		0.000	0.000	6.642	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	Project (Number/Name) 2696 / *Multi-Mission Maritime Aircraft*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior year T&E cost no longer funded in the FYDP	Various	Various : Various	39.471	0.000		0.000		0.000		-		0.000	0.000	39.471	-
		Subtotal	236.011	0.000		0.000		0.000		-		0.000	0.000	236.011	N/A

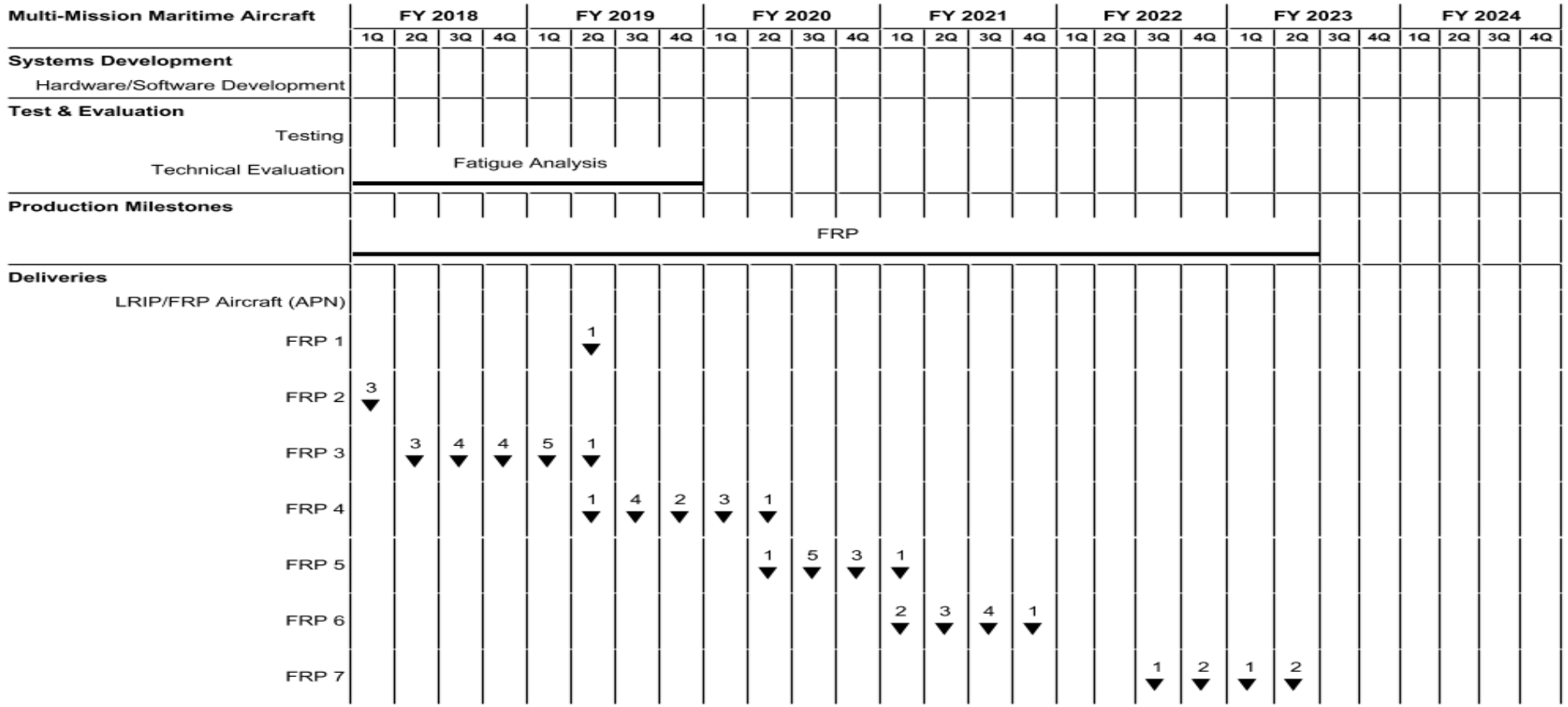
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mgmt Suppt Serv (NON-FFRDC)	C/CPFF	RBC INC : Alexandria, VA	33.537	0.000		0.000		0.000		-		0.000	0.000	33.537	33.537
Eng Tech Serv (NON-FFRDC)	C/CPFF	ASEC : Lexington Park MD	11.453	0.000		0.000		0.000		-		0.000	0.000	11.453	11.453
Program Mgmt Support	WR	NAWC AD : Pax River, MD	53.231	0.360	Nov 2017	0.160	Nov 2018	0.000		-		0.000	0.000	53.751	-
Travel	Allot	NAWC AD : Pax River, MD	4.291	0.063	Nov 2017	0.050	Oct 2018	0.000		-		0.000	0.000	4.404	-
Prior year Mgmt cost no longer funded in the FYDP	Various	Various : Various	20.358	0.000		0.000		0.000		-		0.000	0.000	20.358	-
		Subtotal	122.870	0.423		0.210		0.000		-		0.000	0.000	123.503	N/A

	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7,910.593	8.695		7.466		0.000		-		0.000	0.000	7,926.754	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 2696 / *Multi-Mission Maritime Aircraft*



2020PB - 0605500N - 2696

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 2696 / *Multi-Mission Maritime Aircraft*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Multi-Mission Maritime Aircraft				
Test & Evaluation: Technical Evaluation: Fatigue Analysis	1	2018	4	2019
Production Milestones: Full Rate Production (FRP)	1	2018	2	2023
Deliveries: FRP 1: FRP Aircraft (APN) Q2 2019	2	2019	2	2019
Deliveries: FRP 2: FRP Aircraft (APN) Q1 2018	1	2018	1	2018
Deliveries: FRP 3: FRP Aircraft (APN) Q2 2018	2	2018	2	2018
Deliveries: FRP 3: FRP Aircraft (APN) Q3 2018	3	2018	3	2018
Deliveries: FRP 3: FRP Aircraft (APN) Q4 2018	4	2018	4	2018
Deliveries: FRP 3: FRP Aircraft (APN) Q1 2019	1	2019	1	2019
Deliveries: FRP 3: FRP Aircraft (APN) Q2 2019	2	2019	2	2019
Deliveries: FRP 4: FRP Aircraft (APN) Q2 2019	2	2019	2	2019
Deliveries: FRP 4: FRP Aircraft (APN) Q3 2019	3	2019	3	2019
Deliveries: FRP 4: FRP Aircraft (APN) Q4 2019	4	2019	4	2019
Deliveries: FRP 4: FRP Aircraft (APN) Q1 2020	1	2020	1	2020
Deliveries: FRP 4: FRP Aircraft (APN) Q2 2020	2	2020	2	2020
Deliveries: FRP 5: FRP Aircraft (APN) Q2 2020	2	2020	2	2020
Deliveries: FRP 5: FRP Aircraft (APN) Q3 2020	3	2020	3	2020
Deliveries: FRP 5: FRP Aircraft (APN) Q4 2020	4	2020	4	2020
Deliveries: FRP 5: FRP Aircraft (APN) Q1 2021	1	2021	1	2021
Deliveries: FRP 6: FRP Aircraft (APN) Q1 2021	1	2021	1	2021
Deliveries: FRP 6: FRP Aircraft (APN) Q2 2021	2	2021	2	2021
Deliveries: FRP 6: FRP Aircraft (APN) Q3 2021	3	2021	3	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 2696 / *Multi-Mission Maritime Aircraft*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: FRP 6: FRP Aircraft (APN) Q4 2021	4	2021	4	2021
Deliveries: FRP 7: FRP Aircraft (APN) Q3 2022	3	2022	3	2022
Deliveries: FRP 7: FRP Aircraft (APN) Q4 2022	4	2022	4	2022
Deliveries: FRP 7: FRP Aircraft (APN) Q1 2023	1	2023	1	2023
Deliveries: FRP 7: FRP Aircraft (APN) Q2 2023	2	2023	2	2023

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	Project (Number/Name) 3368 / *P-8 Improvements*	

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3368: *P-8 Improvements*	3.487	2.727	26.730	21.472	-	21.472	10.310	10.523	10.696	10.909	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft (MMA) program also includes a sequence of Rapid Capability Insertions (RCI) and rapid development efforts to respond to evolving threats which will retain cost-wise effectiveness for winning major combat operations. In order to pace the threat, these efforts will incorporate incremental software and hardware improvements to existing sensors, communications systems, mission systems, weapons capabilities and Tactical Operations Center (TOC)/ TACMobile to build on the P-8A capability baseline. These capabilities, and other emergent capability requirements, will be prioritized either through the Navy Integration and Interoperability (I&I)-aligned Capability Prioritization Process (CPP), P-8A Tier 3 Capability Roadmap and/or through an Urgent Operational Need. The CPP process will be supported by detailed analysis and the maturation of developing technologies.

RCI 4 capabilities include Tactical Swap Application; Theatre ASW Application; PMA 264 Advanced Product Build (APB) which consists of MAC Continuous Active Sonar/Continuous CW transmission (CAS/CCW), SSQ-62 DICASS Auto Dect and MAC Adaptive Beamforming; Combat System Optimization and Digital Wideband Receiver (DWR).

Rapid Development efforts include Airborne Weapons Simulator and ASW Sonobuoy receiver digitization for SSQ-125A.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: Perform technology demonstrations and analyses of proposed new capabilities	2.099	25.926	20.589	0.000	20.589
Articles:	-	-	-	-	-
FY 2019 Plans: Continue to develop RCIs and rapid development efforts to incrementally incorporate software and hardware improvements to build on the existing P-8A Capability Baseline. Begin full scale development and integration of Airborne Weapons Simulator (AWS) capability and RCI-4 to include MAC/Non-Acoustic enhancements and Theatre ASW interoperability improvements.					
FY 2020 Base Plans: Continue to develop RCI packages and rapid development efforts to incrementally incorporate software and hardware capability improvements, building on the P-8A Baseline to ensure ongoing relevance of the P-8A					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 3368 / *P-8 Improvements*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
capability. Continue full scale development and integration of AWS capability and RCI-4 to include MAC/Non-Acoustic enhancements and Theatre ASW interoperability improvements. ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:*** FY 2020 funds the Airborne Weapons Simulator development enabling crew weapons currency and proficiency for all P-8A weapons via decreasing future weapons procurement training costs. FY 2020 also continues to fund the Sonobuoy receiver digitization to "harden" the Sonobuoy signals and enable follow-on encryption of Sonobuoy signals thus increasing resistance to cyber-attack.					
Title: Conduct technical, cost, risk and logistics analysis of proposed technologies	0.628	0.804	0.883	0.000	0.883
Articles:	-	-	-	-	-
FY 2019 Plans: Conduct technical, cost, risk and logistics analysis of proposed technologies. Evaluate system requirements through cost/performance trade-off analysis. Provide technical and management support for the development of acquisition documentation. Provide engineering and management of technical development effort. Increase in government led prototyping. ***FY 2020 Base Plans:*** Conduct technical, cost, risk and logistics analysis of proposed technologies. Evaluate system requirements through cost/performance trade-off analysis. Provide technical and management support for the development of acquisition documentation. Provide engineering and management of technical development effort. Increase in government led prototyping. ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Minor increase of $.115 million due to continued execution of program requirements.					
Accomplishments/Planned Programs Subtotals	2.727	26.730	21.472	0.000	21.472

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 3368 / *P-8 Improvements*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

The P-8A MMA program also includes a sequence of RCI and rapid development efforts to respond to evolving threats which will retain cost-wise effectiveness for winning major combat operations beyond 2020. In order to pace the threat, these efforts will incorporate incremental software and hardware improvements to existing sensors, communications systems, mission systems, weapons capabilities and Tactical Operations Center (TOC) to build on the P-8A capability baseline. These capabilities, and other emergent capability requirements, will be prioritized through the Navy I&I-aligned Capability Prioritization Process (CPP), P-8A Tier 3 Capability Roadmap and/or through an Urgent Operational Need. The CPP process will be supported by detailed analysis and the maturation of developing technologies.

E. Performance Metrics

Complete ABA prototyping on capabilities beyond Increment 3 (PE 0605504N).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 3368 / *P-8 Improvements*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW/SW Dev - P-8 Improvements	Various	Various : Various	0.474	0.182	Nov 2017	0.244	Nov 2018	0.652	Nov 2019	-		0.652	1.199	2.751	-
Primary HW/SW Dev - RCI-4 ASW Enhancements	C/CPFF	CTI : California, MD	0.578	1.227	Feb 2018	2.716	Feb 2019	1.099	Feb 2020	-		1.099	2.395	8.015	8.015
Primary SW Dev -Airborne Weapons Simulator	C/CPFF	Boeing : Seattle, WA	0.000	0.000		20.000	Jun 2019	11.300	May 2020	-		11.300	0.000	31.300	34.400
Primary SW Dev - ASW Sonobuoy Receiver Digitization	TBD	Boeing : Seattle, WA	0.000	0.000		0.000		3.800	Mar 2020	-		3.800	1.300	5.100	-
RCI 4	TBD	TBD : TBD	0.000	0.000		0.653	Jun 2019	1.800	Mar 2020	-		1.800	20.851	23.304	-
Sys Eng - Gov	WR	NAWCAD : Pax River, MD	0.406	0.690	Nov 2017	2.313	Nov 2018	1.938	Nov 2019	-		1.938	Continuing	Continuing	Continuing
		Subtotal	1.458	2.099		25.926		20.589		-		20.589	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Tech Serv (NON-FFRDC)	C/CPFF	Sabre, Inc : Warrington, PA	0.486	0.284	Nov 2017	0.320	Nov 2018	0.290	Nov 2019	-		0.290	1.284	2.664	2.679
Mgmt Support Serv	C/CPFF	RBC : Alexandria, VA	0.451	0.118	Nov 2017	0.153	Nov 2018	0.333	Nov 2019	-		0.333	1.486	2.541	2.562
Program Mgmt Support	WR	NAWCAD : Pax River, MD	1.092	0.226	Nov 2017	0.331	Nov 2018	0.260	Nov 2019	-		0.260	Continuing	Continuing	Continuing
		Subtotal	2.029	0.628		0.804		0.883		-		0.883	Continuing	Continuing	N/A

	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.487	2.727		26.730		21.472		-		21.472	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	Project (Number/Name) 3368 / *P-8 Improvements*	

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 3368 / *P-8 Improvements*

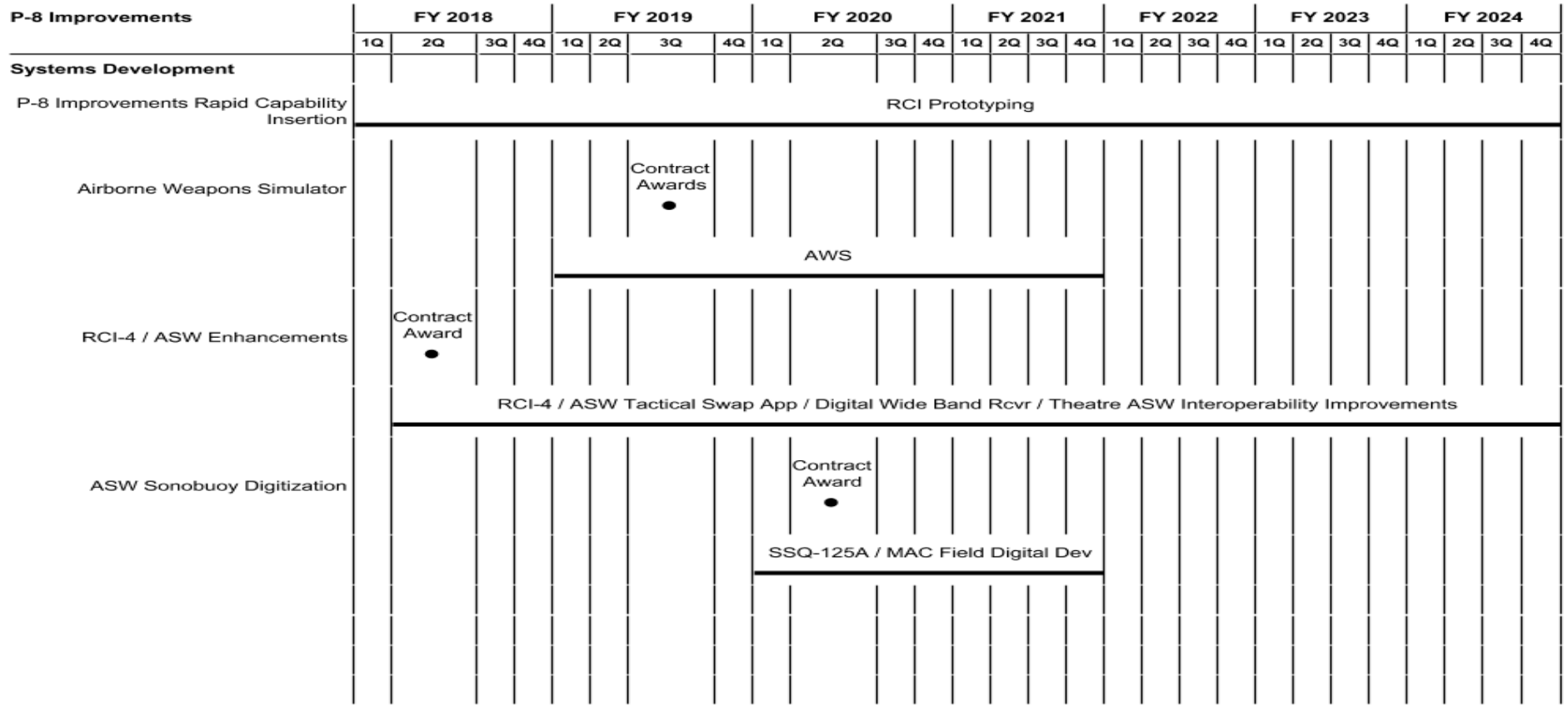


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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605500N / *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**Project (Number/Name)** 3368 / *P-8 Improvements*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
P-8 Improvements				
Systems Development: P-8 Improvements Rapid Capability Insertion: RCI-4 Prototyping	1	2018	4	2024
Systems Development: Airborne Weapons Simulator: Contract Awards	3	2019	3	2019
Systems Development: Airborne Weapons Simulator: Airborne Weapons Simulator	1	2019	4	2021
Systems Development: RCI-4 / ASW Enhancements: Contract Award	2	2018	2	2018
Systems Development: RCI-4 / ASW Enhancements: RCI-4 / ASW Enhancements	2	2018	4	2024
Systems Development: ASW Sonobuoy Digitization: Contract Award	2	2020	2	2020
Systems Development: ASW Sonobuoy Digitization: ASW Sonobuoy Digitization	1	2020	4	2021