Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy											Date: May 2017	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604512N *I Shipboard Aviation Systems*							
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
Total Program Element	671.395	117.401	112.158	177.926	-	177.926	204.354	98.549	44.861	13.592	Continuing	Continuing
2232: *CV/CVN Launch and Recover*	671.395	117.401	112.158	177.926	-	177.926	204.354	98.549	44.861	13.592	Continuing	Continuing

A. Mission Description and Budget Item Justification

CV Launch & Recovery System - This Navy unique project addresses the System Development and Demonstration (SDD) of all systems required to recover and launch Navy/Marine Corps Aircraft (Fixed/Rotary Wing and Vertical/Short Take Off and Landing) operating aboard aircraft carriers, amphibious assault ships and air capable ships. This program element includes the following:

(1) Advanced Arresting Gear (AAG)
(2) Aircraft Launch & Recovery Equipment Modernization
(3) Aircraft Launch and Recovery Equipment Service Life Management program

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	120.217	112.158	45.880	-	45.880
Current President's Budget	117.401	112.158	177.926	-	177.926
Total Adjustments	-2.816	0.000	132.046	-	132.046
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.816	0.000			
• Program Adjustments	0.000	0.000	131.274	-	131.274
• Rate/Misc Adjustments	0.000	0.000	0.772	-	0.772

Change Summary Explanation

Cost/Summary:

Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy	Date: May 2017
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604512N *I Shipboard Aviation Systems*

FY 2018 increased $132.046 million for Advanced Arresting Gear (AAG) System Development and Demonstration (SDD) Completion to support SDD delays resulting from technical failures during test and for revised requirements and program executability to complete remaining aircraft recovery bulletins (ARB)s for the entire air wing to support CVN 78's Initial Operational Test and Evaluation (IOT&E) period.

Schedule:
AAG: Updated the AAG schedule to move Milestone C from 3rd quarter FY 2018 to 4th quarter FY 2020; SDD end date moved from 4th quarter FY 2017 to 4th quarter FY2020; Technical Readiness Review 3 (TRR3) moved from 1st quarter FY 2016 to 4th quarter FY 2016; Independent Logistics Assessment (ILA) moved from 4th quarter FY 2017 to 2nd quarter FY 2020; Jet Car Test Site (JCTS) Test end date moved from 2nd quarter FY 2017 to 2nd quarter FY 2019; Environmental Qualification Testing (EQT) end date moved from 3rd quarter FY 2016 to 3rd quarter FY 2020; Runway Arrested Landing Site (RALS) testing end date moved from 4th quarter FY 2017 to 1st quarter FY 2020; Shipboard Test end date moved from 1st quarter FY 2019 to 4th quarter FY 2019; Integrated Test & Evaluation (IT&E) start date moved from 1st quarter FY 2017 to 4th quarter FY 2018 and the end date moved to 4th quarter FY 2022; Jet Car Test Site (JCTS) Technical Evaluation moved from 2nd quarter FY 2017 to 2nd quarter FY 2019; Runway Arrested Landing Site (RALS) Technical Evaluation moved from 1st quarter FY 2018 to 1st quarter FY 2020.

Technical: Not applicable

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy											Date: May 2017	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604512N / *Shipboard Aviation Systems*				Project (Number/Name) 2232 / *CV/CVN Launch and Recover*			
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
2232: *CV/CVN Launch and Recover*	671.395	117.401	112.158	177.926	-	177.926	204.354	98.549	44.861	13.592	Continuing	Continuing
Quantity of RDT&E Articles	1	2	4	2	-	2	-	-	-	-		

Note

PY article is Jet Car Track Site. FY16 Articles: Due to higher Aircraft Launch & Recovery Equipment (ALRE) program priorities, the test articles were shifted one year to the right. Service Life Management Program (SLMP) test articles refer to actual units (there are two units per ship set).

A. Mission Description and Budget Item Justification

This Navy unique project addresses the System Development and Demonstration (SDD) of all systems required to recover and launch Navy/Marine Corps Aircraft (Fixed/Rotary Wing and Vertical/Short Take-Off and Landing) operating aboard aircraft carriers (CVN), amphibious assault ships and air capable ships. This program includes the following systems under Project 2232, including the funding of production representative models for:

(1) Advanced Arresting Gear (AAG): The AAG program will design, develop, test and field an aircraft arrestment system to replace the legacy Mark 7 arresting gear. AAG systems will be installed on all new construction aircraft carriers. AAG will provide the U.S. Navy with improved operational capability, while reducing operating and support costs. The AAG system will recover all existing and projected carrier based tail hook-equipped air vehicles well into the 21st century. The AAG Program's SDD phase test article consists of a single wire configured aircraft arresting system, which includes associated hardware and software needed to conduct system integrated testing by arresting both dead-loads and aircraft.

(2) Aircraft Launch & Recovery Equipment (ALRE) Modernization: ALRE Modernization encompasses efforts required to ensure continued functional performance, operational relevance, and cybersecurity accreditation for all product lines across the ALRE program. This includes efforts required to resolve emerging obsolescence issues (both hardware and software), implement fleet driven operational capability upgrades, and comply with cybersecurity requirements and computer task order requirements for security threat mitigation. Effort includes:

(a) Improved Manually Operated Visual Landing Aid System (IMOVLAS): IMOVLAS will be the manual backup for Improved Fresnel Lens Optical Landing System (IFLOLS), which is the primary carrier Visual Landing Aid. IMOVLAS will be used in high sea states or if IFLOLS is inoperable, and will mirror current IFLOLS configuration in size & display. Two production representative models will be procured in FY 2016; the models will be utilized for environmental and developmental testing.

(3) Aircraft Launch & Recovery Equipment (ALRE) Service Life Management Program (SLMP): The ALRE SLMP for Launcher and Recovery is required to sustain carrier aviation operations of higher energy aircraft launch and recoveries that are increasing loads on the ALRE systems, and that are affecting availability, maintainability and cost. This program will consist of service life assessment and extension initiatives and will establish the design foundation (structural, reliability, and maintainability analyses), permit appropriate assessment, track and focus design changes where most needed. Four SLMP prototypes will be procured in FY 2017 and two in FY 2018.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Advanced Arresting Gear (AAG)	106.768	102.033	170.526	0.000	170.526
Articles:	-	-	-	-	-
Description: The Advanced Arresting Gear (AAG) program is designing, developing, testing and fielding an aircraft arrestment system to replace the legacy Mark 7 arresting gear.					
FY 2016 Accomplishments: Continued SDD execution of system integrated performance testing at the JCTS utilizing deadloads. Completed AAG hardware and software installations and AAG system commissioning at the RALS test facility. Commenced Aircraft Compatibility Testing (ACT) at RALS. Continued AAG component EQ testing. Completed CVN 78 PCU crew training for AAG maintainers and operators who will participate in shipboard testing and system turnover to Navy. Continued development of AAG logistics products and technical documentation.					
FY 2017 Plans: Continue SDD execution of system integrated performance testing at the JCTS, ACT at RALS and continued development of AAG shipboard system/flight deck certification products (recovery bulletins for F/A-18 variants, and E-2/C-2) and logistics products (e.g. technical manuals and PCU courseware). Continue developing formal curriculum for fleet operations and maintenance training. Provide interim training for crews until formal curriculum is completed and approved. Conduct component shock testing, EQT hardware refurbishment and reliability growth testing to achieve fleet operational requirements and maintain test unit cycles above shipboard cycles.					
FY 2018 Base Plans: ***Note: The increase to FY 2018 above PB 2017 baseline is for Advanced Arresting Gear (AAG) System Development and Demonstration (SDD) Completion to support SDD delays resulting from technical failures during test and for revised requirements and program executability to complete remaining aircraft recovery bulletins (ARB)s for the entire air wing to support CVN 78's Initial Operational Test and Evaluation (IOT&E) period. Continue execution of SDD integrated system performance testing and requirements verification at JCTS and during ACT at RALS. Develop and deliver additional AAG shipboard system/flight deck certification products (expanded recovery bulletins for F/A-18 variants). Conduct high cycle system testing. Continue development of AAG logistics products (e.g. technical manuals and training products). Continue developing formal curriculum for fleet operations and maintenance training. Provide interim training for crews until formal curriculum is completed and approved. Continue AAG land-based testing at JCTS using deadloads for development of the barricade					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
ARB, correction of deficiency testing, EQT, EQT hardware refurbishment, and component shock testing to achieve fleet operational requirements and maintain test unit cycles above shipboard cycles. ***FY 2018 OCO Plans:*** N/A					
Title: Aircraft Launch & Recovery Equipment Modernization ***Articles:*** ***Description:*** Improved Manually Operated Visual Landing Aid System (IMOVLAS) to improve carrier aviation operations. ***FY 2016 Accomplishments:*** IMOVLAS - Conducted the Systems Requirements Review (SRR), Preliminary Design Review (PDR) and manufactured two production representative models. ***FY 2017 Plans:*** IMOVLAS - Conduct Critical Design Review (CDR) and Test Readiness Review (TRR). ***FY 2018 Base Plans:*** IMOVLAS - Continue and complete Integrated Testing (IT). ***FY 2018 OCO Plans:*** N/A	1.241 2	1.722 -	0.575 -	0.000 -	0.575 -
Title: Aircraft Launch & Recovery Equipment (ALRE) Service Life Management Program (SLMP) ***Articles:*** ***Description:*** ALRE SLMP analyzes launch and recovery equipment to determine feasible fielded equipment improvements. ***FY 2016 Accomplishments:*** Completed the design, development and testing of MARK 7 components and subcomponents. ***FY 2017 Plans:*** Award Crosshead and Fixed Sheave contracts and procure four Crosshead and Fixed Sheave prototypes. Continue analysis of the launch and recovery equipment. ***FY 2018 Base Plans:***	9.392 -	8.403 4	6.825 2	0.000 -	6.825 2

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Install and test Crosshead and Fixed Sheave prototypes. Award Main Engine Cylinder contract and procure 2 Main Engine Cylinder prototypes. Continue analysis, design, development and testing of Mark 7, C-13 and Recovery Assist, Securing and Traversing (RAST) components and subcomponents. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	117.401	112.158	177.926	0.000	177.926

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• OPN/4213: *Aircraft Launch & Recovery Equipment-Aircraft Launch & Recovery Equipment*	87.643	82.179	63.695	-	63.695	65.105	77.503	73.937	74.562	Continuing	Continuing
• SCN/2001: *Carrier Replacement Program*	2,555.689	2,662.567	4,461.772	-	4,461.772	1,576.966	2,234.571	2,966.013	2,351.884	2,326.440	39,854.130
• OPN/4217: *Advanced Arresting Gear*	0.000	0.000	10.900	-	10.900	11.200	4.800	3.200	2.522	284.100	316.722

Remarks

OPN 4213 includes a portion of line item funding for Aircraft Launch & Recovery Equipment.

D. Acquisition Strategy

Advanced Arresting Gear (AAG): The Navy competitively awarded two Cost Plus Fixed Fee Technical Development phase contracts to develop the AAG system. Upon completion of the Preliminary Design and Integrated Baseline reviews, the Navy awarded a single Cost Plus Award Fee option to General Atomics for the System Development and Demonstration (SDD) phase to develop and demonstrate a production representative AAG at the NAVAIR Lakehurst Jet Car Track Site and Runway Arrested Landing Site. Continuing development on the SDD contract awarded in 2004.

Aircraft Launch & Recovery Equipment Modernization:
Improved Manually Operated Visual Landing Aid System (IMOVLAS): The Navy will develop IMOVLAS using commercial equipment racks, processors and Light Emitting Diodes (LEDs).

Aircraft Launch & Recovery Equipment Service Life Management Program (SLMP): This program will consist of Service Life Assessment and Extension initiatives and will establish the design foundation (structural, reliability and maintainability analyses), permit appropriate assessment, track and focus design changes where most needed.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

E. Performance Metrics

Advanced Arresting Gear (AAG) will complete System Development and Demonstration and Integrated testing at Jet Car Track Site and Runway Arrested Landing Site. AAG will demonstrate its key performance parameters and readiness for operational test.

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604512N / *Shipboard Aviation Systems*	Project (Number/Name) 2232 / *CV/CVN Launch and Recover*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev-AAG	C/CPAF	Gen Atomics : San Diego, CA	472.268	75.462	Dec 2015	65.160	Dec 2016	96.769	Dec 2017	-		96.769	23.709	733.368	733.368
Primary HW Dev-AAG	WR	NAWCAD : Lakehurst, NJ	35.572	11.340	Nov 2015	12.387	Nov 2016	32.744	Nov 2017	-		32.744	Continuing	Continuing	Continuing
Primary HW Dev - AAG	C/CPAF	ESL : Cranston, RI	0.000	2.000	Jan 2017	2.700	May 2017	3.531	Dec 2017	-		3.531	2.714	10.945	10.945
System Eng-AAG	WR	NAWCAD : Lakehurst, NJ	23.798	2.431	Nov 2015	2.649	Nov 2016	8.706	Nov 2017	-		8.706	Continuing	Continuing	Continuing
Training Development - AAG	WR	NAWCAD : Lakehurst, NJ	0.000	0.173	Nov 2015	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Primary HW Dev-Modern IMOVLAS	WR	NAWCAD : Lakehurst, NJ	1.070	0.920	Nov 2015	1.148	Nov 2016	0.211	Nov 2017	-		0.211	Continuing	Continuing	Continuing
System Eng-Modern IMOVLAS	WR	NAWCAD : Lakehurst, NJ	0.368	0.146	Nov 2015	0.140	Nov 2016	0.069	Nov 2017	-		0.069	Continuing	Continuing	Continuing
Primary HW Dev-SLMP	WR	NAWCAD : Lakehurst, NJ	10.264	2.341	Nov 2015	3.668	Nov 2016	1.173	Nov 2017	-		1.173	Continuing	Continuing	Continuing
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	52.975	0.000		0.000		0.000		-		0.000	0.000	52.975	-
		Subtotal	596.315	94.813		87.852		143.203		-		143.203	-	-	-

Remarks

Note: In FY2008, $1.05M (10.5%) in Award Fees were paid out of the $10M Award Fee Pool; the remaining funding was applied to the General Atomics contract. The contractor General Atomics, San Diego, CA has waived all remaining Award Fees.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ILS-AAG	WR	NAWCAD : Lakehurst, NJ	14.370	2.283	Nov 2015	3.170	Nov 2016	5.963	Nov 2017	-		5.963	Continuing	Continuing	Continuing
ILS-Modern IMOVLAS	WR	NAWCAD : Lakehurst, NJ	0.128	0.100	Nov 2015	0.200	Nov 2016	0.110	Nov 2017	-		0.110	Continuing	Continuing	Continuing
Studies & Analysis-SLMP	WR	NAWCAD : Lakehurst, NJ	7.544	3.545	Nov 2015	2.140	Nov 2016	3.684	Nov 2017	-		3.684	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604512N / *Shipboard Aviation Systems*	Project (Number/Name) 2232 / *CV/CVN Launch and Recover*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	1.741	0.000		0.000		0.000		-		0.000	0.000	1.741	-
		Subtotal	23.783	5.928		5.510		9.757		-		9.757	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval-AAG	WR	NAWCAD : Lakehurst, NJ	37.085	12.543	Nov 2015	15.335	Nov 2016	22.167	Nov 2017	-		22.167	Continuing	Continuing	Continuing
Operational T&E-AAG	WR	Various : Various	2.082	0.207	Dec 2015	0.300	Nov 2016	0.306	Nov 2017	-		0.306	Continuing	Continuing	Continuing
Integrated Testing-Modern IMOVLAS	WR	NAWCAD : Lakehurst, NJ	0.000	0.075	Nov 2015	0.234	Nov 2016	0.185	Nov 2017	-		0.185	Continuing	Continuing	Continuing
Materials/Validation Testing-SLMP	WR	NAWCAD : Lakehurst, NJ	6.543	3.506	Nov 2015	2.595	Nov 2016	1.968	Nov 2017	-		1.968	Continuing	Continuing	Continuing
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	3.570	0.000		0.000		0.000		-		0.000	0.000	3.570	-
		Subtotal	49.280	16.331		18.464		24.626		-		24.626	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prgm Mgmt Supt	C/CPFF	Sierra : California, MD	1.454	0.289	Dec 2015	0.295	Dec 2016	0.300	Dec 2017	-		0.300	1.003	3.341	3.341
Travel	Reqn	NAVAIR : Patuxent River, MD	0.428	0.040	Oct 2015	0.037	Oct 2016	0.040	Oct 2017	-		0.040	Continuing	Continuing	Continuing
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	0.135	0.000		0.000		0.000		-		0.000	0.000	0.135	-
		Subtotal	2.017	0.329		0.332		0.340		-		0.340	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Navy			Date: May 2017
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604512N / *Shipboard Aviation Systems*	Project (Number/Name) 2232 / *CV/CVN Launch and Recover*	

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	671.395	117.401		112.158		177.926		-		177.926	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

ALRE Modernization Schedule

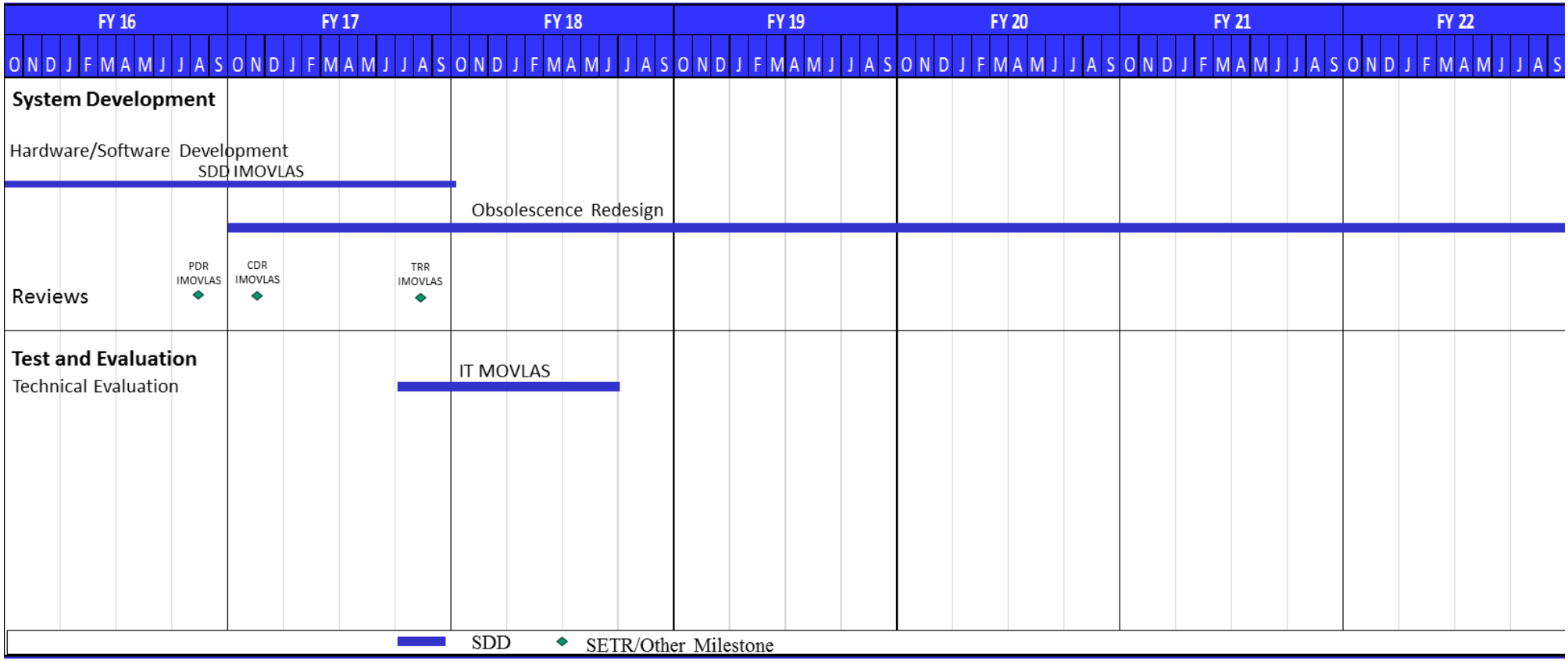

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

ALRE SLMP Schedule

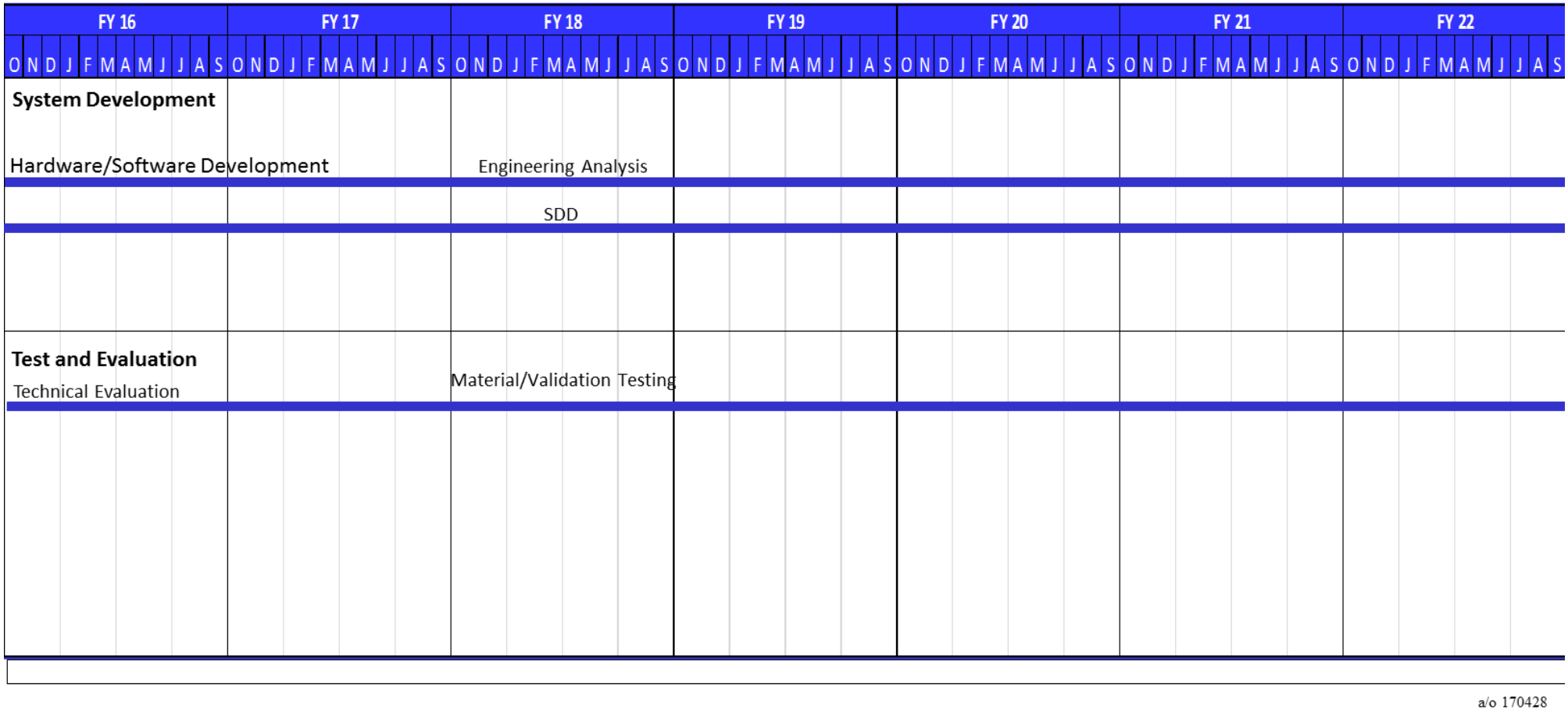

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

AAG Schedule

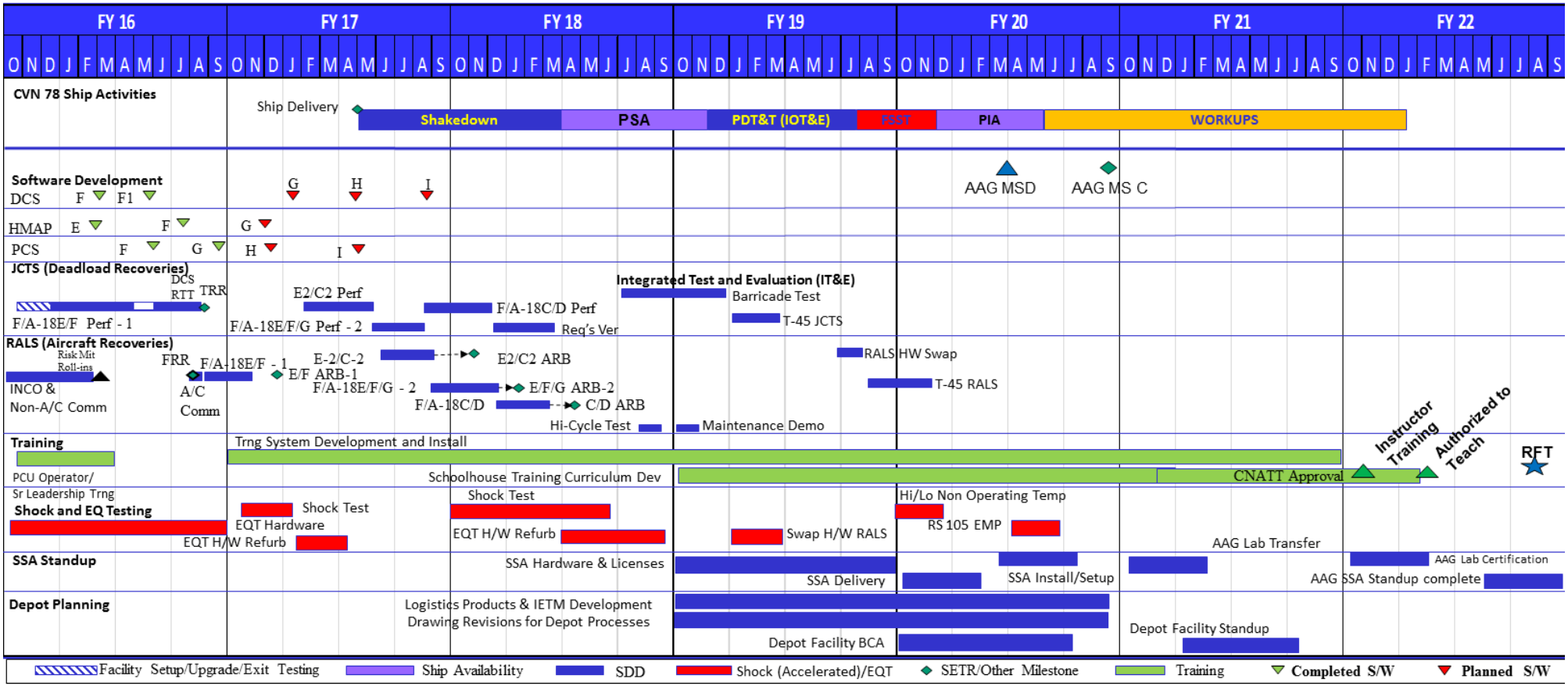

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Navy		Date: May 2017
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604512N / *Shipboard Aviation Systems*	**Project (Number/Name)** 2232 / *CV/CVN Launch and Recover*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADVANCED ARRESTING GEAR (AAG)				
Aquisition Milestones: Milestones: Milestone C	4	2020	4	2020
Test & Evaluation: Technical Evaluation: Jet Car Test Site (JCTS) Test	1	2016	2	2019
Test & Evaluation: Technical Evaluation: Runway Arrested Landing Site Test (RALS)	2	2016	1	2020
Test & Evaluation: Technical Evaluation: Integrated Test and Evaluation	4	2018	4	2022
ALRE MODERNIZATION				
Systems Development: Hardware/Software Development: Obsolescence Redesign Development and Testing	1	2017	4	2022
Test and Evaluation: Technical Evaluation: Integrated Test	4	2017	3	2018
ALRE SERVICE LIFE MANAGEMENT PROGRAM (SLMP)				
Systems Development: Hardware/Software Development: System Development	1	2016	4	2022
Test & Evaluation: Technical Evaluation: Test & Evaluation	1	2016	4	2022