Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy												Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604530N *I Advanced Arresting Gear (AAG)*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	348.187	0.150	10.658	9.142	-	9.142	14.035	10.555	21.846	22.298	0.000	436.871
2367: *Advanced Arresting Gear*	348.187	0.150	10.658	9.142	-	9.142	14.035	10.555	21.846	22.298	0.000	436.871
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 529												

Note

FY18 and prior year funding for Advanced Arresting Gear (AAG) is funded under Shipboard Aviation Systems program element 0604512N, CV/CVN Launch and Recover project unit 2232.

A. Mission Description and Budget Item Justification

The Advanced Arresting Gear (AAG) program designed, developed, tested and fielded an aircraft arrestment system to replace the legacy Mark 7 arresting gear. AAG systems are being installed on all new construction aircraft carriers. AAG will provides 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 will undergo future system improvements to address safety, obsolescence, and reliability, to include but not limited to AAG Software Stability. The Software Stability development efforts will address software deficiencies, stability and reliability issues documented in a System Safety Risk Assessment (SSRA) for AAG software, and in a separate investigative report by a NAVAIR Independent Review Team (IRT). Development efforts will mitigate specific findings related to non-deterministic behavior and latency of the software that contribute to the SSRA Hazard rating (1D-Serious). Per IRT report recommendations, these efforts will address findings via software modernization and re-architecture, with new software adhering to improved Level or Rigor (LOR) standards and processes.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604530N *I Advanced Arresting Gear (AAG)*

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.151	10.658	9.228	-	9.228
Current President's Budget	0.150	10.658	9.142	-	9.142
Total Adjustments	-0.001	0.000	-0.086	-	-0.086
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.001	0.000			
• Program Adjustments	0.000	0.000	-0.087	-	-0.087
• Rate/Misc Adjustments	0.000	0.000	0.001	-	0.001

Change Summary Explanation

Funding: N/A

Technical: Software Stability plan changed from Non-Organic to Organic development approach.

Schedule: Software Stability start moved from 1Q 2024 to 2Q 2024, Schoolhouse Curriculum Development end moved from 4Q 2023 to 2Q 2024, Ready for Training (RFT) moved from 1Q 2024 to 4Q 2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604530N / *Advanced Arresting Gear (AAG)*				Project (Number/Name) 2367 / *Advanced Arresting Gear*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
2367: *Advanced Arresting Gear*	348.187	0.150	10.658	9.142	-	9.142	14.035	10.555	21.846	22.298	0.000	436.871
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 529

Note

Advanced Arresting Gear (AAG) was previously funded under Shipboard Aviation Systems program element 0604512N, CV/CVN Launch and Recovery project unit 2232 in FY 2018 and prior.

A. Mission Description and Budget Item Justification

The Advanced Arresting Gear (AAG) program designed, developed, tested and fielded an aircraft arrestment system to replace the legacy Mark 7 arresting gear. AAG systems are being installed on all new construction aircraft carriers. AAG will provides 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 will undergo future system improvements to address safety, obsolescence, and reliability, to include but not limited to AAG Software Stability. The Software Stability development efforts will address software deficiencies, stability and reliability issues documented in a System Safety Risk Assessment (SSRA) for AAG software, and in a separate investigative report by a NAVAIR Independent Review Team (IRT). Development efforts will mitigate specific findings related to non-deterministic behavior and latency of the software that contribute to the SSRA Hazard rating (1D-Serious). Per IRT report recommendations, these efforts will address findings via software modernization and re-architecture, with new software adhering to improved Level or Rigor (LOR) standards and processes.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Advanced Arresting Gear (AAG) System Improvements	0.150	10.658	9.142	0.000	9.142
Articles:	-	-	-	-	-
FY 2024 Plans: Begin Software Stability Development efforts.					
FY 2025 Base Plans: Continue Software Stability Development efforts.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604530N / *Advanced Arresting Gear (AAG)*	**Project (Number/Name)** 2367 / *Advanced Arresting Gear*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Decrease from FY2024 to FY2025 due to current program plan.					
Accomplishments/Planned Programs Subtotals	0.150	10.658	9.142	0.000	9.142

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/4217: *Advanced Arresting Gear (AAG)*	15.412	11.930	2.244	-	2.244	1.401	5.752	10.636	10.862	9.500	132.740
• SCN/2001: *Carrier Replacement Program*	1,927.580	1,115.296	1,186.873	-	1,186.873	1,135.378	1,582.108	2,574.201	2,744.200	Continuing	Continuing
• SCN/2004: *CVN-81*	1,052.024	800.492	721.045	-	721.045	2,052.709	2,569.131	2,068.582	0.000	0.000	14,015.634

Remarks

D. Acquisition Strategy

The Navy competitively awarded two Cost Plus Fixed Fee Technical Development phase contracts to develop the Advanced Arresting Gear (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. AAG has transitioned from the design and development phase into concurrent production and sustainment phase.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604530N / *Advanced Arresting Gear (AAG)*	**Project (Number/Name)** 2367 / *Advanced Arresting Gear*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Development	WR	NAWCAD : Lakehurst, NJ	42.396	0.000		0.000		0.000		-		0.000	0.000	42.396	-
Systems Engineering	WR	Various : Various	11.964	0.000		0.000		0.000		-		0.000	0.000	11.964	-
Primary SW Development - Software Stability	C/CPFF	TBD : TBD	0.000	0.000		0.500	Mar 2024	0.500	Dec 2024	-		0.500	0.000	1.000	-
Primary SW Development - Software Stability	WR	NAWCAD : Lakehurst, NJ	0.000	0.000		8.474	Jan 2024	6.943	Nov 2024	-		6.943	14.648	30.065	-
Training Development	C/CPFF	Dignitas Technologies, LLC : Orlando, FL	9.677	0.064	Jun 2023	0.000		0.000		-		0.000	0.000	9.741	-
Primary HW Development - Electrical Isolation	TBD	TBD : TBD	0.000	0.000		0.000		0.000		-		0.000	23.460	23.460	-
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	193.258	0.000		0.000		0.000		-		0.000	0.000	193.258	-
		Subtotal	257.295	0.064		8.974		7.443		-		7.443	38.108	311.884	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD : Lakehurst, NJ	16.983	0.008	Dec 2022	1.684	Nov 2023	1.699	Nov 2024	-		1.699	12.032	32.406	-
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	28.477	0.000		0.000		0.000		-		0.000	0.000	28.477	-
		Subtotal	45.460	0.008		1.684		1.699		-		1.699	12.032	60.883	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604530N / *Advanced Arresting Gear (AAG)*	**Project (Number/Name)** 2367 / *Advanced Arresting Gear*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	SS/CS	COTF : Norfolk, VA	0.154	0.078	Dec 2022	0.000		0.000		-		0.000	0.000	0.232	-
Developmental Test & Evaluation (DT&E)	TBD	Various : Various	0.000	0.000		0.000		0.000		-		0.000	10.504	10.504	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	Various	Various : Various	44.525	0.000		0.000		0.000		-		0.000	0.000	44.525	-
		Subtotal	44.679	0.078		0.000		0.000		-		0.000	10.504	55.261	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cost No Longer Funded in FYDP	Various	Various : Various	0.753	0.000		0.000		0.000		-		0.000	0.000	0.753	-
		Subtotal	0.753	0.000		0.000		0.000		-		0.000	0.000	0.753	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	348.187	0.150		10.658		9.142		-		9.142	60.644	428.781	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604530N / *Advanced Arresting Gear (AAG)*	**Project (Number/Name)** 2367 / *Advanced Arresting Gear*

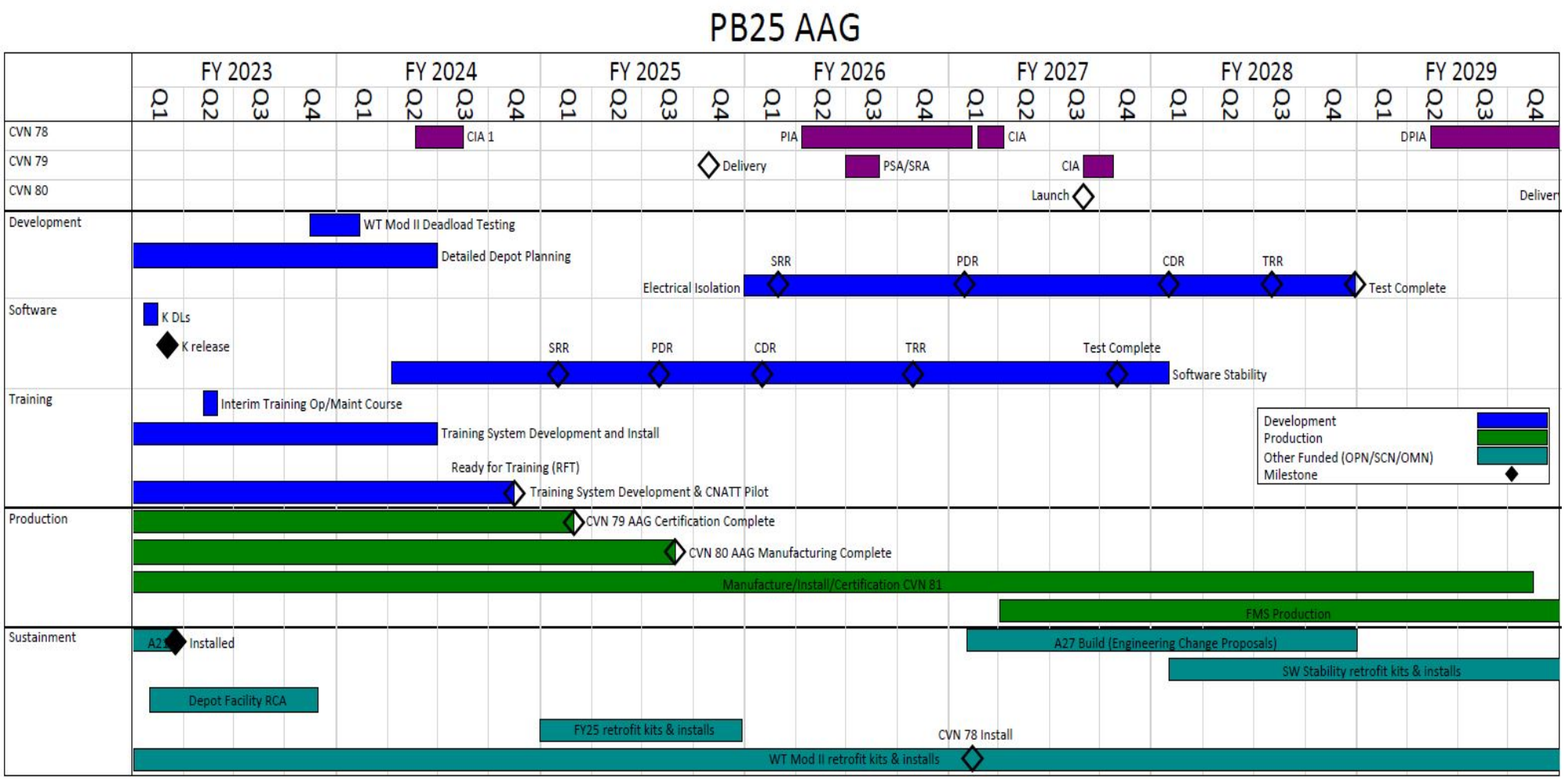

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604530N / *Advanced Arresting Gear (AAG)*	**Project (Number/Name)** 2367 / *Advanced Arresting Gear*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADVANCED ARRESTING GEAR (AAG)				
System Development: Electrical Isolation	1	2026	4	2028
System Development: Software Stability	2	2024	1	2028
Training: Training System / Schoolhouse Curriculum Development	1	2023	2	2024
Training: Ready for Training (RFT)	4	2024	4	2024
Depot Planning: Depot Planning	1	2023	2	2024