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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605024N / <i>Anti-Tamper Technology Support</i>
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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	31.426	7.243	8.340	3.317	-	3.317	3.506	3.590	3.669	3.754	Continuing	Continuing
2801: <i>Anti-Tamper</i>	5.572	1.576	1.626	1.625	-	1.625	1.663	1.696	1.733	1.770	Continuing	Continuing
3414: <i>Anti-Tamper Technology Support</i>	25.854	5.667	6.714	1.692	-	1.692	1.843	1.894	1.936	1.984	Continuing	Continuing

A. Mission Description and Budget Item Justification

Develops new and novel Anti-Tamper technologies for all Department of Navy weapon and combat systems. The technologies to be developed will be new countermeasures to prevent reverse engineering of critical U.S. military systems. The technologies include secure processing, sensors, architecture components, and enabling technologies.

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)	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>
Previous President's Budget	7.271	8.340	11.569	-	11.569
Current President's Budget	7.243	8.340	3.317	-	3.317
Total Adjustments	-0.028	0.000	-8.252	-	-8.252
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.028	0.000			
• Program Adjustments	0.000	0.000	-8.230	-	-8.230
• Rate/Misc Adjustments	0.000	0.000	-0.022	-	-0.022

Change Summary Explanation

FY25 funding decrease of \$8.230M is due to Primary Hardware Development completion.
 FY25 program reduced by \$.022K for misc. rate adjustments.

Schedule 3414: N/A
 Schedule 2801: N/A

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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 0605024N / <i>Anti-Tamper Technology Support</i>				Project (Number/Name) 2801 / <i>Anti-Tamper</i>			
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
2801: <i>Anti-Tamper</i>	5.572	1.576	1.626	1.625	-	1.625	1.663	1.696	1.733	1.770	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Anti-Tamper Program - Perform as the Navy Technical Process Owner for the Anti-Tamper (AT) systems engineering activity that is intended to prevent and/or delay the exploitation of critical technologies in U.S. Systems. Manage the research, design, development, implementation, and testing of AT measures. Coordinate with Department of Defense AT Executive Agent and implement Department of Navy AT policy in conjunction with the Deputy Assistant Secretary Navy. Manage Security and Information Security requirements commensurate with the requirements of ALL Navy Programs throughout their lifecycles.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Anti Tamper Support	1.576	1.626	1.625	0.000	1.625
Articles:	-	-	-	-	-
FY 2024 Plans: Continue championing new technology with a focused and disciplined approach of development, assessment, evaluation, and transition to meet Navy program AT requirements. Maintain role in Anti-Tamper policy development for implementation and execution by the SYSCOMs incorporating Navy program AT requirements. Provide secure facilities, networks, computers, video/telephone conference and support personnel for collateral and classified operational environments to enable Anti-Tamper implementation and execution by SYSCOM's programs, incorporating AT requirements.					
FY 2025 Base Plans: Continue championing new technology with a focused and disciplined approach of development, assessment, evaluation, and transition to meet Navy program AT requirements. Maintain role in Anti-Tamper policy development for implementation and execution by the SYSCOMs incorporating Navy program AT requirements. Provide secure facilities, networks, computers, video/telephone conference and support personnel for collateral and classified operational environments to enable Anti-Tamper implementation and execution by SYSCOM's programs, incorporating AT requirements.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement:					

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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 0605024N / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) 2801 / <i>Anti-Tamper</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Decrease due to Anti-Tamper support demands and SYSCOM AT policy implementation.					
Accomplishments/Planned Programs Subtotals	1.576	1.626	1.625	0.000	1.625

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The program will fund project to provide secure facilities, networks, computers, video/telephone conference and support personnel for collateral and Special Program operational environments.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0605024N / Anti-Tamper Technology Support				2801 / Anti-Tamper							
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	WR	NAWCWD : China Lake, CA	4.397	1.240	Nov 2022	1.291	Nov 2023	1.291	Nov 2024	-		1.291	Continuing	Continuing	Continuing
Subtotal			4.397	1.240		1.291		1.291		-		1.291	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWCWD : China Lake, CA	1.175	0.336	Oct 2022	0.335	Nov 2023	0.334	Nov 2024	-		0.334	Continuing	Continuing	Continuing
Subtotal			1.175	0.336		0.335		0.334		-		0.334	Continuing	Continuing	N/A
Project Cost Totals			5.572	1.576		1.626		1.625		-		1.625	Continuing	Continuing	N/A
Remarks															

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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 0605024N / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) 2801 / <i>Anti-Tamper</i>
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Proj 2801	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
<i>Anti Tamper</i>																																
Product Development	<i>Anti Tamper Technology Development Plan</i>																															
Intelligence Analysis	<i>Anti Tamper Technology Development Intelligence Analysis</i>																															
Anti Tamper Steering Group	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

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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 0605024N / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) 2801 / <i>Anti-Tamper</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2801				
Product Development: Anti Tamper Technology Development Plan	1	2023	4	2029
Intelligence Analysis: Anti Tamper Technology Intelligence Analysis	1	2023	4	2029
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2023	1	2023	1	2023
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2023	3	2023	3	2023
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2024	1	2024	1	2024
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2024	3	2024	3	2024
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2025	1	2025	1	2025
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2025	3	2025	3	2025
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2026	1	2026	1	2026
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2026	3	2026	3	2026
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2027	1	2027	1	2027
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2027	3	2027	3	2027
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2028	1	2028	1	2028
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2028	3	2028	3	2028
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 1-2029	1	2029	1	2029
Anti Tamper Steering Group: Anti Tamper Technology Steering Group 3-2029	3	2029	3	2029

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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 0605024N / <i>Anti-Tamper Technology Support</i>				Project (Number/Name) 3414 / <i>Anti-Tamper Technology Support</i>			
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
3414: <i>Anti-Tamper Technology Support</i>	25.854	5.667	6.714	1.692	-	1.692	1.843	1.894	1.936	1.984	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops new and novel Anti-Tamper technologies for all Department of Navy weapon and combat systems. The technologies to be developed will be new countermeasures to prevent reverse engineering of critical U.S. military systems. The technologies include secure processing, sensors, architecture components, and enabling technologies. Low technology readiness level projects will be tested for maturation and implemented to protect US technologies. Government laboratory expertise will mature in Anti Tamper technologies and techniques. Integration of various techniques will enhance the strength of the protection scheme which limits the opportunities to exploit our technological advantage on the battlefield.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Anti Tamper Technology Development	5.667	6.714	1.692	0.000	1.692
Articles:	-	-	-	-	-
Description: This project develops new and novel Anti-Tamper technologies for all Department of Navy weapon and combat systems. The technologies to be developed will be new countermeasures to prevent reverse engineering of critical U.S. military systems. The technologies include secure processing, sensors, secure architecture components, and enabling technologies.					
FY 2024 Plans: Continue development of new and novel technologies that will become reverse engineering countermeasures for Department of the Navy (DoN) weapon and combat systems. The project will include awarding technology development contracts and securing engineering support from DoN engineering facilities. Test and perform technical evaluations of low technical readiness level projects for implementation to protect US technologies. Extensively evaluate the technology prototypes and demonstration units in the labs, which will provide increased technical information and feedback to the technology developers. The technology development tasks of QuickSilver (QSD) and Advanced Manufacturing for Technology Protection (AMTP) will consume the additional FY24 funding. QSD is working on transitioning technologies which is above-and-beyond the technical work currently scoped and AMTP has gained so much community interest that the AMTP Consortium is needing to					

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Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605024N / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) 3414 / <i>Anti-Tamper Technology Support</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p>expand the OTA technology demos. These technology development tails are crucial to keeping the technologies headed towards transition.</p> <p>FY 2025 Base Plans: Continue development of new and novel technologies that will become reverse engineering countermeasures for Department of the Navy (DoN) weapon and combat systems. Test and perform technical evaluations of low technical readiness level projects for implementation to protect US technologies.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: This decrease is due to Primary Hardware Development completion.</p>					
Accomplishments/Planned Programs Subtotals	5.667	6.714	1.692	0.000	1.692

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

This is a non-ACAT program. The strategy will be to issue technology development contracts and use Department of Navy (DoN) labs for technology development, along with using DoN engineering organizations for engineering support.

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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 0605024N / <i>Anti-Tamper Technology Support</i>					Project (Number/Name) 3414 / <i>Anti-Tamper Technology Support</i>				

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Dev	WR	NAWCWD : China Lake, CA	18.121	4.004	Oct 2022	4.816	Oct 2023	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			18.121	4.004		4.816		0.000		-		0.000	Continuing	Continuing	N/A

Remarks
Decrease from FY24 to FY25 is due to funding being realigned to PE 0603536N.

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	WR	NAWCWD : China Lake, CA	7.733	1.663	Oct 2022	1.898	Oct 2023	1.692	Nov 2024	-		1.692	Continuing	Continuing	Continuing
Subtotal			7.733	1.663		1.898		1.692		-		1.692	Continuing	Continuing	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			25.854	5.667	6.714	1.692	-	1.692	Continuing	Continuing	N/A	

Remarks

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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 0605024N / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) 3414 / <i>Anti-Tamper Technology Support</i>
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Proj 3414	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
<i>Anti Tamper Support</i>																																
<i>Contract Awards</i>	▲					▲					▲				▲																	
Technology Development	Anti Tamper Technology Development																															
Lab Support	Anti Tamper Technology Lab Support																															
Gap Analysis	▲					▲					▲				▲																	

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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 0605024N / <i>Anti-Tamper Technology Support</i>	Project (Number/Name) 3414 / <i>Anti-Tamper Technology Support</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3414				
Contract Awards: Anti Tamper Technology Contract Award 2023	2	2023	2	2023
Contract Awards: Anti Tamper Technology Contract Award 2024	2	2024	2	2024
Contract Awards: Anti Tamper Technology Contract Award 2025	2	2025	2	2025
Contract Awards: Anti Tamper Technology Contract Award 2026	2	2026	2	2026
Contract Awards: Anti Tamper Technology Contract Award 2027	2	2027	2	2027
Contract Awards: Anti Tamper Technology Contract Award 2028	2	2028	2	2028
Technology Development: Anti Tamper Technology Development	2	2023	4	2029
Lab Support: Anti Tamper Technology Lab Support	1	2023	4	2029
Gap Analysis: Anti Tamper Technology Gap Analysis 2023	1	2023	1	2023
Gap Analysis: Anti Tamper Technology Gap Analysis 2024	1	2024	1	2024
Gap Analysis: Anti Tamper Technology Gap Analysis 2025	1	2025	1	2025
Gap Analysis: Anti Tamper Technology Gap Analysis 2026	1	2026	1	2026
Gap Analysis: Anti Tamper Technology Gap Analysis 2027	1	2027	1	2027
Gap Analysis: Anti Tamper Technology Gap Analysis 2028	1	2028	1	2028
Gap Analysis: Anti Tamper Technology Gap Analysis 2029	1	2029	1	2029