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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Navy **Date:** March 2019

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>					<b>R-1 Program Element (Number/Name)</b> PE 0604636N / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	0.000	0.000	5.500	-	5.500	5.610	5.722	5.836	5.953	Continuing	Continuing
3241: <i>Counter Unmanned Aircraft Systems (C-UAS)</i>	0.000	0.000	0.000	5.500	-	5.500	5.610	5.722	5.836	5.953	Continuing	Continuing

## Note

This is a new Program Element (PE) in FY 2020.

## A. Mission Description and Budget Item Justification

The Counter Unmanned Aircraft System (C-UAS) program was initiated in response to a Joint Emergent Operational Need (JEON) Statement issued by U.S. Strategic Command. The program originated as a Rapid Deployment Capability (RDC). The RDC strategy introduced the employment of integrated C-UAS solution sets designed to protect high value or critical Naval assets, and support public safety against threats posed by the inadvertent or unlawful misuse of unmanned aircraft systems (UAS). More details available at a higher classification level.

FY20 funding is requested to manage, evaluate, verify and implement system assessments, strategies, improvements, program management, and systems engineering support.

A deployed C-UAS capability improves defenses against the rapidly evolving capabilities of remote and autonomously-controlled devices. With UAS becoming more readily available, affordable and capable, the threat of inadvertent or unlawful flight over restricted spaces multiplies exponentially, raising concern that these UAS may be used as tools for surveillance, espionage or hostile actions at critical Navy Installations.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.500	-	5.500
Total Adjustments	0.000	0.000	5.500	-	5.500
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	5.500	-	5.500

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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 4: Advanced Component Development & Prototypes (ACD&P)		R-1 Program Element (Number/Name) PE 0604636N I Counter Unmanned Aircraft Systems (C-UAS)
<div>Change Summary Explanation</div> <div>Technical: Not applicable.</div> <div>Schedule: Not applicable.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604636N / Counter Unmanned Aircraft Systems (C-UAS)				Project (Number/Name) 3241 / Counter Unmanned Aircraft Systems (C-UAS)			
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
3241: Counter Unmanned Aircraft Systems (C-UAS)	0.000	0.000	0.000	5.500	-	5.500	5.610	5.722	5.836	5.953	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Note This is a new Project in FY 2020.												
A. Mission Description and Budget Item Justification The Counter Unmanned Aircraft System (C-UAS) program was initiated in response to a Joint Emergent Operational Need (JEON) Statement issued by U.S. Strategic Command. The program originated as a Rapid Deployment Capability (RDC). The RDC strategy introduced the employment of integrated C-UAS solution sets designed to protect high value or critical Naval assets, and support public safety against threats posed by the inadvertent or unlawful misuse of unmanned aircraft systems (UAS). More details available at a higher classification level.  FY20 funding is requested to manage, evaluate, verify and implement system assessments, strategies, improvements, program management, and systems engineering support.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: C-UAS System Development and Integration  Articles:  FY 2019 Plans: N/A  FY 2020 Base Plans: Initiate to manage, evaluate, verify and implement system assessments, strategies, improvements, program management, and systems engineering support. Initiate initial design and system interface design. Begin capabilities development efforts through threat assessment analysis.  FY 2020 OCO Plans: N/A  FY 2019 to FY 2020 Increase/Decrease Statement: Program initiated in FY20, no prior year funding.								0.000	0.000	5.500	0.000	5.500
								-	-	-	-	-
Accomplishments/Planned Programs Subtotals								0.000	0.000	5.500	0.000	5.500

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604636N / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>	Project (Number/Name) 3241 / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> The Navy's acquisition strategy capitalizes on prior Rapid Development Capability efforts while leveraging existing program investments with the Government acting as Lead Systems Integrator. This acquisition strategy maintains commonality of current C-UAS solutions while continuing to evaluate, improve, and implement an integrated family of systems to meet evolving threats. More details available at a higher classification level.		
<b>E. Performance Metrics</b> Successfully provide C-UAS solutions for operational deployments, and the continued evaluation of current systems and future requirements to include the identification of material solutions for concept refinement, and analysis of architectures.		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2020 Navy</b>												<b>Date: March 2019</b>			
<b>Appropriation/Budget Activity</b> 1319 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0604636N / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>						<b>Project (Number/Name)</b> 3241 / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>			
<b>Product Development (\$ in Millions)</b>				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
System Development	TBD	Not Specified : TBD	0.000	0.000		0.000		2.400	Jan 2020	-		2.400	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		2.400		-		2.400	Continuing	Continuing	N/A
<b>Support (\$ in Millions)</b>				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Material solutions and threat assessments	TBD	Not Specified : TBD	0.000	0.000		0.000		1.750	Dec 2019	-		1.750	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		1.750		-		1.750	Continuing	Continuing	N/A
<b>Management Services (\$ in Millions)</b>				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Program Management	Various	Not Specified : Various	0.000	0.000		0.000		0.550	Oct 2019	-		0.550	Continuing	Continuing	Continuing
Government Engineering Support	WR	Not Specified : NAWC AD PAX	0.000	0.000		0.000		0.750	Oct 2019	-		0.750	Continuing	Continuing	Continuing
Travel	WR	Not Specified : Various	0.000	0.000		0.000		0.050	Oct 2019	-		0.050	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		0.000		1.350		-		1.350	Continuing	Continuing	N/A
			<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Project Cost Totals</b>			0.000	0.000		0.000		5.500		-		5.500	Continuing	Continuing	N/A
<b>Remarks</b>															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2020 Navy</b>			<b>Date: March 2019</b>		
<b>Appropriation/Budget Activity</b> 1319 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0604636N / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>			<b>Project (Number/Name)</b> 3241 / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>

C-UAS Budget Schedule PB20	FY2018				FY2019				FY2020				FY2021				FY2022				FY2023				FY2024			
	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
<b>Acquisition Milestones</b>																												
<b>System Development</b>																												
Initial Design Review																												
System Interface Design																												
Design Requirements Verification																												
Capability Upgrade Development																												
System Integration Assessment																												
<b>Technology Maturation</b>																												
Threat Assessments																												
Trade Studies																												
<b>Test &amp; Evaluation</b>																												
System Test																												
<b>Management Services</b>																												
System Engineering and Program Management																												
<b>Production Milestones</b>																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2020 Navy			<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604636N / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>	<b>Project (Number/Name)</b> 3241 / <i>Counter Unmanned Aircraft Systems (C-UAS)</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3241</b>				
Initial Design Review	2	2020	3	2020
System Interface Design	2	2020	3	2020
Design Requirements Verification 1	4	2020	2	2021
Design Requirements Verification 2	2	2022	1	2023
Design Requirements Verification 3	3	2023	2	2024
System Integration Assessment 1	2	2021	4	2021
System Integration Assessment 2	1	2023	3	2023
Threat Assessments	1	2020	4	2024
Trade Studies	2	2023	3	2023
System Test 1	3	2021	1	2022
System Test 2	1	2023	3	2023
System Test 3	2	2024	4	2024
SEPM	1	2020	4	2024