

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV							
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	6.477	0.537	0.533	1.234	-	1.234	2.107	2.016	1.815	1.832	Continuing	Continuing
2292: <i>Unmanned Air Systems (Intel)</i>	6.477	0.537	0.533	1.234	-	1.234	2.107	2.016	1.815	1.832	Continuing	Continuing

A. Mission Description and Budget Item Justification

Family of Small Unmanned Aircraft Systems (FoSUAS) [formerly Small Unit Remote Scouting System (SURSS)] - The FoSUAS program provides small unmanned aircraft systems (SUAS) for battalion/company/detachment level units with scalable airborne Reconnaissance, Surveillance and Target Acquisition (RSTA) capabilities to aid in detecting, identifying, engaging, and/or avoiding enemy units. SUAS meet validated operational requirements delineated in the Operational Requirements Document (ORD), Vertical Take Off and Landing (VTOL) Rapid Acquisition Top Level Requirements (TLR), and Long Range/Long Endurance (LR/LE) TLR.

The ORD and TLRs are transitioning to a new Capability Development Document (CDD) that will incorporate unique mission kits, mission payloads, air vehicle enhancements, and modifications of UAS and related Ground Control Stations (GCS) for tactical FoSUAS systems. FoSUAS consists of Short Range/Short Endurance (SR/SE), Medium Range/ Medium endurance (MR/ME), and LR/LE systems. In addition to supporting the requirements in the ORD and TLR documents, the FoSUAS program also supports Field User Evaluations (FUEs) for Urgent Universal Needs Statements (UUNS). SUAS Reusable Architecture (SRA) capability will reduce the size, weight, and manpower required to operate a FoSUAS GCS, increases the mobility of the operator, and improves digital interoperability.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.537	0.533	0.000	-	0.000
Current President's Budget	0.537	0.533	1.234	-	1.234
Total Adjustments	0.000	0.000	1.234	-	1.234
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	1.234	-	1.234

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	
<u>Change Summary Explanation</u> Increase in FY 2023 submissions of \$0.701M is due to USMC realignment in support of FD 2030 initiatives: expanding all R&D activities to incorporate and focus on SR/SE and LR/LE capabilities. --- FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy										Date: April 2022		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV				Project (Number/Name) 2292 / Unmanned Air Systems (Intel)			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
2292: Unmanned Air Systems (Intel)	6.477	0.537	0.533	1.234	-	1.234	2.107	2.016	1.815	1.832	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Family of Small Unmanned Aircraft Systems (FoSUAS) [formerly Small Unit Remote Scouting System (SURSS)] - In support of the Commandant of the Marine Corps (CMC) 2019 Planning Guidance and service Force Design 2030 requirements, the FoSUAS program provides small unmanned aircraft systems (SUAS) for battalion/ company/detachment level units with scalable airborne Reconnaissance, Surveillance and Target Acquisition (RSTA) capabilities to aid in detecting, identifying, engaging, and/or avoiding enemy units. SUAS meet validated operational requirements delineated in the Operational Requirements Document (ORD), Vertical Take Off and Landing (VTOL) Rapid Acquisition Top Level Requirements (TLR), and Long Range/Long Endurance (LR/LE) TLR.

The ORD and TLRs are transitioning to a new Capability Development Document (CDD) that will incorporate unique mission kits, mission payloads, air vehicle enhancements, and modifications of UAS and related Ground Control Stations (GCS) for tactical FoSUAS systems. FoSUAS consists of Short Range/Short Endurance (SR/SE), Medium Range/ Medium endurance (MR/ME), and Long range/Long endurance (LR/LE) systems. In addition to supporting the requirements in the ORD and TLR documents, the FoSUAS program also supports Field User Evaluations (FUEs) relative to Urgent Universal Needs Statements (UUNS). SUAS Reusable Architecture (SRA) capability will reduce the size, weight, and manpower required to operate a FoSUAS GCS, increases the mobility of the operator, and improves digital interoperability.

The SUAS Reusable Architecture (SRA) project, a technology improvement effort, will increase interoperability, protect cyber security and reduce cyber security risk, decrease maintenance and sustainment costs, minimize risk and cost associated with technology insertion and improvement, and reduce manpower required to operate a FoSUAS. Development efforts for FoSUAS are ongoing in order to keep SUAS capabilities aligned with emerging technologies and threats. FoSUAS is developing SRA to establish reference implementations and industry guidance for all key SUAS interfaces, drastically improving interoperability by permitting industry, government, and academia to design-to-field hardware and software capabilities with well-defined integration and cybersecurity requirements up front. In addition to accelerating payload integration, SRA will allow portability of both software and hardware-based functionality across disparate platforms and control segments, as well as enable rapid integration of both open and closed-source artificial intelligence/machine learning (AI/ML) tools to inject autonomy and target recognition capabilities into FoSUAS. This effort will reduce duplicative engineering, training, integration, and sustainment efforts associated with closed, proprietary systems. SRA also seeks to authorize all SRA-compliance systems under a single service accreditation in order to define, address, and mitigate security vulnerabilities at the enterprise-level in current and future platforms. Software updates, improved batteries, and alternative repair components are also being explored to increase effectiveness and reliability. In addition, required initial and recurring cyber assessments are conducted in order to meet OSD-mandated waivers for both CONUS and OCONUS FoSUAS operations.

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

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Product Development and Support	0.401	0.401	0.926	0.000	0.926
Articles:	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy	Date: April 2022
--	-------------------------

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)
--	---	---

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
<p>FY 2022 Plans: -Continue development and integration of SRA -Complete initial (on new components) and mandatory recurring cyber assessments of FoSUAS as required</p> <p>FY 2023 Base Plans: -Maintain oversight/tracking of contracted and follow on phase of SRA efforts -Track and report on foregone mandatory recurring SUAS cyber assessments and required initial cyber assessments on new SUAS systems/component</p> <p>FY 2023 OCO Plans: N/A</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Net increase of \$0.525M from FY 2022 to FY 2023 is a result of more complex SRA & IA/Cyber program element</p>					
<p>Title: Test and Evaluation (Operational Assessment)</p> <p align="right">Articles:</p>	0.136 -	0.132 -	0.308 -	0.000 -	0.308 -
<p>FY 2022 Plans: - Continue operational assessment of SUAS Reusable Architecture (SRA) for FoSUAS platforms. - Continue assessment of low cost, commercial available Unmanned Aerial Systems to inform future procurements, and determine potential adversary capabilities.</p> <p>FY 2023 Base Plans: - Continue operational assessment of SUAS Reusable Architecture (SRA) for FoSUAS platforms. - Continue assessment of low cost, commercial available Unmanned Aerial Systems to inform future procurements, and determine potential adversary capabilities.</p> <p>FY 2023 OCO Plans: N/A</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: Net Increase of \$0.176M from FY 2022 to FY 2023 is due to additional T&E required to successfully field increased quantities of LR/LE capabilities.</p>					
Accomplishments/Planned Programs Subtotals	0.537	0.533	1.234	0.000	1.234

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy	Date: April 2022
--	-------------------------

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)
--	---	---

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

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PMC/4757: RQ-11 UAV	20.889	24.299	47.595	-	47.595	92.273	63.793	65.962	98.190	26.718	599.443

Remarks

D. Acquisition Strategy

The program office continues to implement a rapid acquisition approach to quickly field new technology and capabilities to meet requirements set forth by USMC in order to meet FD2030 objectives.

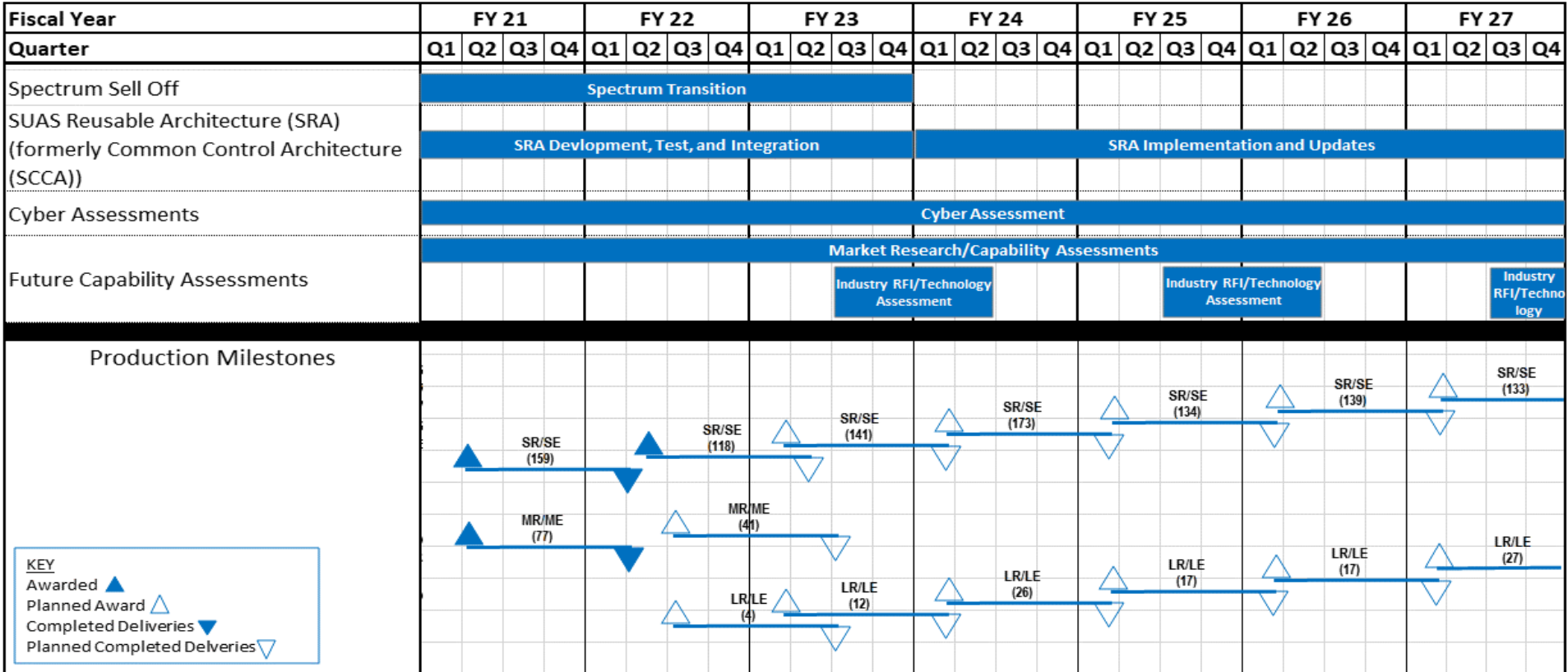
UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 7				PE 0305232M / RQ-11 UAV				2292 / Unmanned Air Systems (Intel)							
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
SIGNIT, Laser Marker, and SRA Integration	WR	NAWCAD : Pax River, MD	0.713	0.261	Dec 2020	0.261	May 2022	0.400	May 2023	-		0.400	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	2.976	0.000		0.000		0.000		-		0.000	0.000	2.976	-
Subtotal			3.689	0.261		0.261		0.400		-		0.400	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
COTS UAS Analysis/Cyber Security	WR	NAWCAD : Pax River, MD	0.375	0.140	Mar 2021	0.140	Mar 2022	0.264	Mar 2023	-		0.264	Continuing	Continuing	Continuing
Engineering Analysis	WR	NAWCAD : Pax River, MD	1.354	0.000		0.000		0.262	Nov 2022	-		0.262	0.000	1.616	-
Subtotal			1.729	0.140		0.140		0.526		-		0.526	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
SIGNIT, Laser Marker, Operational Assessment and SRA	WR	NAWCAD : Pax River, MD	0.511	0.136	Jan 2021	0.132	May 2022	0.308	May 2023	-		0.308	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	0.548	0.000		0.000		0.000		-		0.000	0.000	0.548	-
Subtotal			1.059	0.136		0.132		0.308		-		0.308	Continuing	Continuing	N/A
Project Cost Totals			6.477	0.537		0.533		1.234		-		1.234	Continuing	Continuing	N/A
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy **Date:** April 2022

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)
--	---	---



UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2292				
SUAS Reusable Architecture (SRA) (formerly Common Control Architecture (SCCA)): SRA Development and Integration Verification	1	2021	4	2027
Future Capability Assessments/Cyber Assessments: Capability & Cyber Assessment	1	2021	4	2027
Production Milestones: MIPR Orders: FY21 MR/ME	2	2021	2	2021
Production Milestones: MIPR Orders: FY21 SR/SE	2	2021	2	2021
Production Milestones: MIPR Orders: FY22 MR/ME	2	2022	2	2022
Production Milestones: MIPR Orders: FY22 SR/SE	2	2022	2	2022
Production Milestones: MIPR Orders: FY22 LR/LE	2	2022	2	2022
Production Milestones: MIPR Orders: FY23 SR/SE	2	2023	2	2023
Production Milestones: MIPR Orders: FY23 LR/LE	2	2023	2	2023
Production Milestones: MIPR Orders: FY24 SR/SE	2	2024	2	2024
Production Milestones: MIPR Orders: FY24 LR/LE	2	2024	2	2024
Production Milestones: MIPR Orders: FY25 SR/SE	2	2025	2	2025
Production Milestones: MIPR Orders: FY25 LR/LE	2	2025	2	2025
Production Milestones: MIPR Orders: FY26 SR/SE	2	2026	2	2026
Production Milestones: MIPR Orders: FY26 LR/LE	2	2026	2	2026
Production Milestones: MIPR Orders: FY27 SR/SE	2	2027	2	2027
Production Milestones: MIPR Orders: FY27 LR/LE	2	2027	2	2027