Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0206335M *I Common Aviation Command and Control Sys (CAC2S)*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	52.883	4.484	4.406	9.324	-	9.324	-	-	-	-	-	-
3373: *Common Aviation Command and Control System (CAC2S)*	52.883	4.484	4.406	9.324	-	9.324	-	-	-	-	-	-
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** MN36												

A. Mission Description and Budget Item Justification

Common Aviation Command and Control System (CAC2S) - Provides the Aviation Combat Element (ACE) with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. CAC2S accomplishes the missions with a family of systems to support the Marine Air Ground Task Force (MAGTF), Naval forces, Joint Services, and Coalition Forces. CAC2S integrates the functions of aviation command and control (C2) into an interoperable system that supports the core competencies of all Marine Corps warfighting concepts. CAC2S, in conjunction with the Marine Air Command and Control System (MACCS) organic sensors, AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR), and the weapon system Composite Tracking Network (CTN) provides enhanced air control, improved situational awareness, sensor integration (G/ATOR and emerging passive sensors), full Tactical Data Link integration, airspace and battle planning and command functionality, as well as sensor netting integration (CTN). CAC2S, with these organic MACCS programs, support the tenets of Expeditionary Maneuver Warfare and fosters joint interoperability. CAC2S Increment I replaced legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center (DASC), Tactical Air Command Center (TACC), and Tactical Air Operations Center (TAOC). In line with Force Design, CAC2S is to begin the development and prototyping of the Small Form Factor (SFF) variant in FY22. The SFF is a CAC2S variant required to meet the needs of Expeditionary Advance Base Operations and Force Design. The SFF variant will possess the same Tactical System, Data Link, and interface capabilities as the CAC2S Increment 1 system with the added benefits of being rapidly deployable, emitting at a lower signature, and reduced size and weight. SFF's versatility will be a key enabling capability to support the task organization of the Marine Littoral Regiment.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0206335M *I Common Aviation Command and Control Sys (CAC2S)*

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	4.489	4.406	6.062	-	6.062
Current President's Budget	4.484	4.406	9.324	-	9.324
Total Adjustments	-0.005	0.000	3.262	-	3.262
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.100	0.000			
• SBIR/STTR Transfer	-0.105	0.000			
• Program Adjustments	0.000	0.000	3.381	-	3.381
• Rate/Misc Adjustments	0.000	0.000	-0.119	-	-0.119

Change Summary Explanation

The funding increase of $4.918M from FY 2021 to FY 2022 supports the development, integration, and testing of the AC2S small form factor (SFF) variant and interface testing for the technology refresh of the AN/TSQ-297 Air Command & Control Systems. The development of an AC2S Small Form Factor variant (SFF) is required to the meet critical shortfalls of forward deployed small, scalable, survivable aviation C2 nodes capable of performing control of aircraft and missiles necessary for integration and defeat of dynamic targets performed by MAGTF, naval, joint, and national technical enabling capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*				Project (Number/Name) 3373 / *Common Aviation Command and Control System (CAC2S)*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
3373: *Common Aviation Command and Control System (CAC2S)*	52.883	4.484	4.406	9.324	-	9.324	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: MN36

A. Mission Description and Budget Item Justification

Common Aviation Command and Control System (CAC2S) is a Commandant of the Marine Corps (CMC) Force Design (FD) program which provides the Aviation Combat Element (ACE) with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. CAC2S accomplishes the missions with a family of systems to support the Marine Air Ground Task Force (MAGTF), Naval forces, Joint Services, and Coalition Forces. CAC2S integrates the functions of aviation command and control (C2) into an interoperable system that supports the core competencies of all Marine Corps warfighting concepts. CAC2S, in conjunction with the Marine Air Command and Control System (MACCS) organic sensors, AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR), and the weapon system Composite Tracking Network (CTN) provides enhanced air control, improved situational awareness, sensor integration, full Tactical Data Link integration, airspace and battle planning and command functionality, as well as sensor netting integration (CTN). CAC2S, with these organic MACCS programs, support the tenets of Expeditionary Maneuver Warfare and foster joint interoperability. CAC2S Increment I replaced legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center (DASC), Tactical Air Command Center (TACC), Tactical Air Operations Center (TAOC), and Marine Air Traffic Control (MATC).

CAC2S will experience a $4.918M increase in FY 2022 to support the development and prototyping of the AN/TSQ-297 Air Command & Control System Small Form Factor (SFF) variant. This is an approved priority FD initiative from the Capabilities Development Directorate (CDD). SFF's versatility will be a key enabling capability to support the task organization of the Marine Littoral Regiments (MLRs) as it meets the needs of US Marine Corps Expeditionary Advance Base Operations and Force Design due to it possessing the same Tactical System, Data Link, and interface capabilities as the newly fielded AN/TSQ-297 AC2S Increment 1 system yet being more survivable as a part of the MLRs as it is rapidly deployable, emitting at a lower signature, and having reduced size and weight.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Title: Product Development	0.000	0.000	4.800	0.000	4.800
Articles:	-	-	-	-	-
FY 2021 Plans: N/A					
FY 2022 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- To initiate the development of the AN/TSQ-297 Air Command & Control (AC2S) Small Form Factor (SFF) variant configuration development, and testing. This is an approved FD requirement which is to be developed and produced to the meet critical shortfalls of forward deployed small, scalable, survivable aviation C2 nodes capable of performing control of aircraft and missiles necessary for integration and defeat of dynamic targets performed by MAGTF, naval, joint, and national technical enabling capabilities. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The funding increase of $4.800M from FY 2021 to FY 2022 is due to the development of the AC2S SFF variant.					
Title: Support	1.365	1.299	2.015	0.000	2.015
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue yearly Cyber Compliance Tests required with each of the CAC2S quarterly software releases and conduct the Annual Security Review testing to support the maintenance of the CAC2S Authority To Operate (ATO)/ Authority To Connect (ATC), which is scheduled for reaccreditation in 2nd quarter FY 2021. ***FY 2022 Base Plans:*** - To continue yearly Cyber Compliance Tests required with each of the CAC2S quarterly software releases and conduct the Annual Security Review testing to support the maintenance of the CAC2S ATO/ATC. - To support integration development for new military-grade commercial-off-the-shelf (COTS) information technology (IT) hardware and software in support the technology refresh of the AN/TSQ-297 Air Command & Control Systems. This technical refresh is required to replace all obsolete hardware and software with new military-grade commercial-off-the-shelf (COTS) information technology (IT) configuration items every 5 years to maintain operational performance of the product baseline, and remain aligned with industry standard and service enterprise computing environment directives. - To begin the development required to integrate Multifunctional Information Distribution System Joint Tactical Radio Systems (MIDS JTRS) for the AN/TSQ-297 AC2S Link-16 modernization. This is a Deputy SECDEF mandated system upgrade which enhances operational effectiveness without consuming more space, weight or power. ***FY 2022 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The funding increase of $0.755M from FY 2021 to FY 2022 is due to the integration development efforts associated with the AC2S technology refresh and AC2S Link-16 modernization.					
Title: Test and Evaluation	1.876	2.507	1.827	0.000	1.827
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue required integration and interface testing of upgraded hardware components and software enhancements. - Continue testing to support system software capability enhancements for capability improvement and to maintain system ATO and ATC. ***FY 2022 Base Plans:*** - To continue testing to support system software capability enhancements for capability improvement and to maintain system ATO and ATC. - To initiate interface testing for new military-grade COTS IT hardware and software for the technology refresh of the AN/TSQ-297 Air Command & Control Systems. The technology refresh is required to replace all obsolete hardware and software with new military-grade commercial-off-the-shelf (COTS) information technology (IT) configuration items every 5 years to maintain operational performance of the product baseline, and remain aligned with industry standard and service enterprise computing environment directives - To complete Field User Evaluation (FUE) tests for AC2S Air Traffic Control integration/interface development and AN/MRQ-13 Communications System (CS) radio and crypto modernization. The CS upgrade is to replace obsolete voice/data communications components with modernized equipment that is more reliable, readily supportable and cyber-secure, enabling integration with CAC2S networks and interoperability with joint forces. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The funding decrease of $0.680M from FY 2021 to FY 2022 is due to the completion of interface testing of upgraded hardware components and software for the AN/TSQ-297 AC2S FRP units.					
Title: Management Services	1.243	0.600	0.682	0.000	0.682
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
FY 2021 Plans: - To continue support from vendor MITRE. MITRE is to monitor CAC2S integration efforts with the Marine Air Control Squadron (MACS) sensors, Ground/Air Task Oriented Radar (G/ATOR), Composite Tracking Network (CTN)/ Cooperative Engagement Capability (CEC), and Ground Based Air Defense (GBAD) development. MITRE is to developing prototype radar and track data injection tools to facilitate contractor integration and Government laboratory testing of CAC2S. ***FY 2022 Base Plans:*** - To fund continued support from vendor MITRE to monitor CAC2S integration efforts with the MACS sensors, G/ATOR, CTN/CEC, and GBAD development. MITRE continue its development of prototype radar and track data injection tools to facilitate contractor integration and Government laboratory testing of CAC2S. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** $0.082M increase from FY 2021 to FY 2022 is due to the inclusion of MITRE development tools to support government laboratory testing.					
Accomplishments/Planned Programs Subtotals	4.484	4.406	9.324	0.000	9.324

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• PMC/4644: *Common Aviation Command And Control System (CAC2S)*	30.812	35.057	18.247	-	18.247	-	-	-	-	-	-

Remarks

RDT&E prior to FY 2015 was in PE 0206313M Marine Corps Comms Systems, Project 2273 Air Operations Command & Control (C2) Systems.

PMC funding for FY 2015 and beyond was in BLI 4644 Common Aviation Command and Control System (CAC2S). Prior to FY 2015 PMC funding is listed in BLI 4640 Air Operations C2 Systems, Common Aviation Command and Control Systems (CAC2S).

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

D. Acquisition Strategy

CAC2S employs an evolutionary acquisition strategy utilizing an incremental and phased approach for development and fielding of the CAC2S. The Capability Production Document (CPD) identifies two increments to achieve the full requirements of CAC2S. The current acquisition strategy addresses Increment I of the CAC2S development process and focuses on the requirements that will modernize the assault and air support, air defense and control, and Aviation Combat Element (ACE) battle management capabilities of the Marine Air Command and Control System (MACCS). Increment I of the CAC2S has been accomplished through a two phased approach. Phase 1 addressed the requirements to establish the baseline CAC2S capabilities for the MACCS and improved Air Command and Control (AC2) performance and effectiveness. Phase 2 addresses the requirements for remaining ACE Battle Management Command & Control (BMC2) requirements. Nine (9) Phase 2 Limited Deployment Unit systems were procured in FY 2015 and FY 2016 and fielded in FY 2017. The Full Deployment Unit (FDU) production contract was awarded 24 August 2017 and a total of forty one (41) systems were procured and fielded over three years (FY 2018-FY 2020).

CAC2S is currently upgrading its AN/MRQ-13 Communications Subsystem (CS) via a technology refresh for Radio and Crypto Modernization Integration, FUE, Procurement, and Fielding. The CS upgrade replaces 2006-era, obsolete voice/data communications components with modernized equipment that is more reliable, readily supportable and cyber-secure, enabling integration with CAC2S networks and interoperability with joint forces. This is to be completed in FY 2022.

In FY 2022, CAC2S will start the development and testing a small form factor (SFF) variant prototype of the AN/TSQ-297 Air Command & Control System. This is an approved FD initiative from the Capabilities Development Directorate (CDD) which is to take into account lessons learned from the Marine Corps Warfighting Laboratory (MCWL) Rapid Capabilities Office (RCO) initiatives with 15th Marine Expeditionary Unit (MEU) and war gaming exercises per CMC guidance, in support the USMC Expeditionary Advanced Base Operations (EABO) concept, which is an amphibious forward operating unit that will secure, sustain, and maintain warfighters and their weapons systems on a more amorphous and difficult-to-target forward-basing infrastructure. This system variant is to be developed and produced to the meet critical shortfalls of forward deployed small, scalable, survivable aviation C2 nodes capable of performing control of aircraft and missiles necessary for integration and defeat of dynamic targets performed by MAGTF, naval, joint, and national technical enabling capabilities like the current fielded AN/TSQ-297. The SFF variant will be fielded to the Marine Littoral Regiments (MLRs).

The Technology refresh of the AN/TSQ-297 Air Command & Control Systems and integration of the Multifunctional Information Distribution System Joint Tactical Radio Systems (MIDS JTRS) also begins in FY 2022. The technology refresh is required to replace all obsolete hardware and software with new military-grade commercial-off-the-shelf (COTS) information technology (IT) configuration items every 5 years to maintain operational performance and remain aligned with industry standard and service enterprise computing environment directives. The MIDS JTRS upgrade is a mandated requirement in accordance with the Deputy Secretary of Defense memorandum for record (MFR) 25 October 2019 to support the modernization of Link 16 across all Services. MIDS JTRS is a four-channel radio. It runs the Link 16 waveform and up to three additional communication protocols, including the Airborne Networking Waveform (ANW). The system enhances operational effectiveness without consuming more space, weight or power.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AC2S SFF Development	C/BA	NSWC Crane : Crane, IN	0.000	0.000		0.000		4.800	Nov 2021	-		4.800	-	-	-
		Subtotal	0.000	0.000		0.000		4.800		-		4.800	-	-	N/A

Remarks

The funding increase of $4.800M from FY 2021 to FY 2022 is due to the development of the AC2S SFF variant.The development of an AC2S Small Form Factor variant (SFF) is required to the meet critical shortfalls of forward deployed small, scalable, survivable aviation C2 nodes capable of performing control of aircraft and missiles necessary for integration and defeat of dynamic targets performed by MAGTF, naval, joint, and national technical enabling capabilities.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	Travel : TBD	0.304	0.055	Oct 2019	0.050	Oct 2020	0.075	Oct 2021	-		0.075	-	-	-
Engineering Support	WR	NSWC DD : Dahlgren, VA	2.676	0.000	Nov 2019	0.085	Nov 2020	0.000		-		0.000	-	-	-
Acquisition Support	WR	NSWC CD : Crane, IN	0.912	0.401	Nov 2019	0.350	Nov 2020	0.796	Nov 2021	-		0.796	-	-	-
Software Support	C/FFP	Raytheon Solipsys : Fulton, MD	0.000	0.450	May 2020	0.631	May 2021	0.746	May 2022	-		0.746	-	-	-
Software Support	C/FFP	Ternion : Huntsville, AL	0.000	0.161	May 2020	0.183	May 2021	0.198	May 2022	-		0.198	-	-	-
Software Support	C/FFP	Ultra : San Diego, CA	0.000	0.298	Jun 2020	0.000		0.200	Jun 2022	-		0.200	-	-	-
Prior Years Cumulative Funding	Various	Various : Various	4.121	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	8.013	1.365		1.299		2.015		-		2.015	-	-	N/A

Remarks

The funding increase of $0.716M from FY 2021 to FY 2022 is due to the integration development efforts associated with the AC2S technology refresh and AC2S Link-16 modernization. The technology refresh is required to replace all obsolete hardware and software with new military-grade commercial-off-the-shelf (COTS) information technology (IT) configuration items every 5 years to maintain operational performance of the product baseline, and remain aligned with industry standard and service enterprise

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	Project (Number/Name) 3373 / *Common Aviation Command and Control System (CAC2S)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
computing environment directives. MIDS JTRS is a four-channel radio. It runs the Link 16 waveform and up to three additional communication protocols, including the Airborne Networking Waveform (ANW). The system enhances operational effectiveness without consuming more space, weight or power.															

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing and Evaluation	WR	NSWC CD : Crane, IN	9.983	1.042	Nov 2019	1.607	Nov 2020	1.477	Nov 2021	-		1.477	-	-	-
Testing and Evaluation	WR	NSWC DD : Dahlgren, VA	5.541	0.150	Nov 2019	0.000		0.000		-		0.000	-	-	-
Testing and Evaluation	WR	NSWC Corona : Corona, CA	0.000	0.518	Nov 2019	0.900	Nov 2020	0.145	Nov 2021	-		0.145	-	-	-
Testing and Evaluation	C/BA	JITC : Ft. Huachuca, NM	0.000	0.166	Jan 2020	0.000		0.205	Jan 2022	-		0.205	-	-	-
Prior Years Cumulative Funding	Various	Various : Various	22.795	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	38.319	1.876		2.507		1.827		-		1.827	-	-	N/A

Remarks

The funding decrease of $0.680M from FY 2021 to FY 2022 is due to the completion of interface testing of upgraded hardware components and software for the AN/TSQ-297 AC2S Full Rate Production/Full Deployment Unit systems.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T&E Mgmt Support	C/FFP	GID : Fredericksburg, VA	0.000	0.266	May 2020	0.000		0.000		-		0.000	-	-	-
Sensor Management	C/FFP	MITRE : Bedford, MA	3.819	0.977	Sep 2020	0.600	Sep 2021	0.682	Sep 2022	-		0.682	-	-	-
Prior Years Cumulative Funding	Various	Various : Various	2.732	0.000		0.000		0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	6.551	1.243		0.600		0.682		-		0.682	-	-	N/A

Remarks

The funding increase of $0.082M from FY 2021 to FY 2022 is due to the inclusion of MITRE development tools to support government laboratory testing.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	52.883	4.484		4.406		9.324		-		9.324	-	-	N/A

Remarks

The funding increase of $4.918M from FY 2021 to FY 2022 is to support the development, integration, and testing of the AC2S small form factor (SFF) variant, the interface testing for the technology refresh of the AN/TSQ-297 Air Command & Control Systems, and the integration of the Multifunctional Information Distribution System Joint Tactical Radio Systems (MIDS JTRS).

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

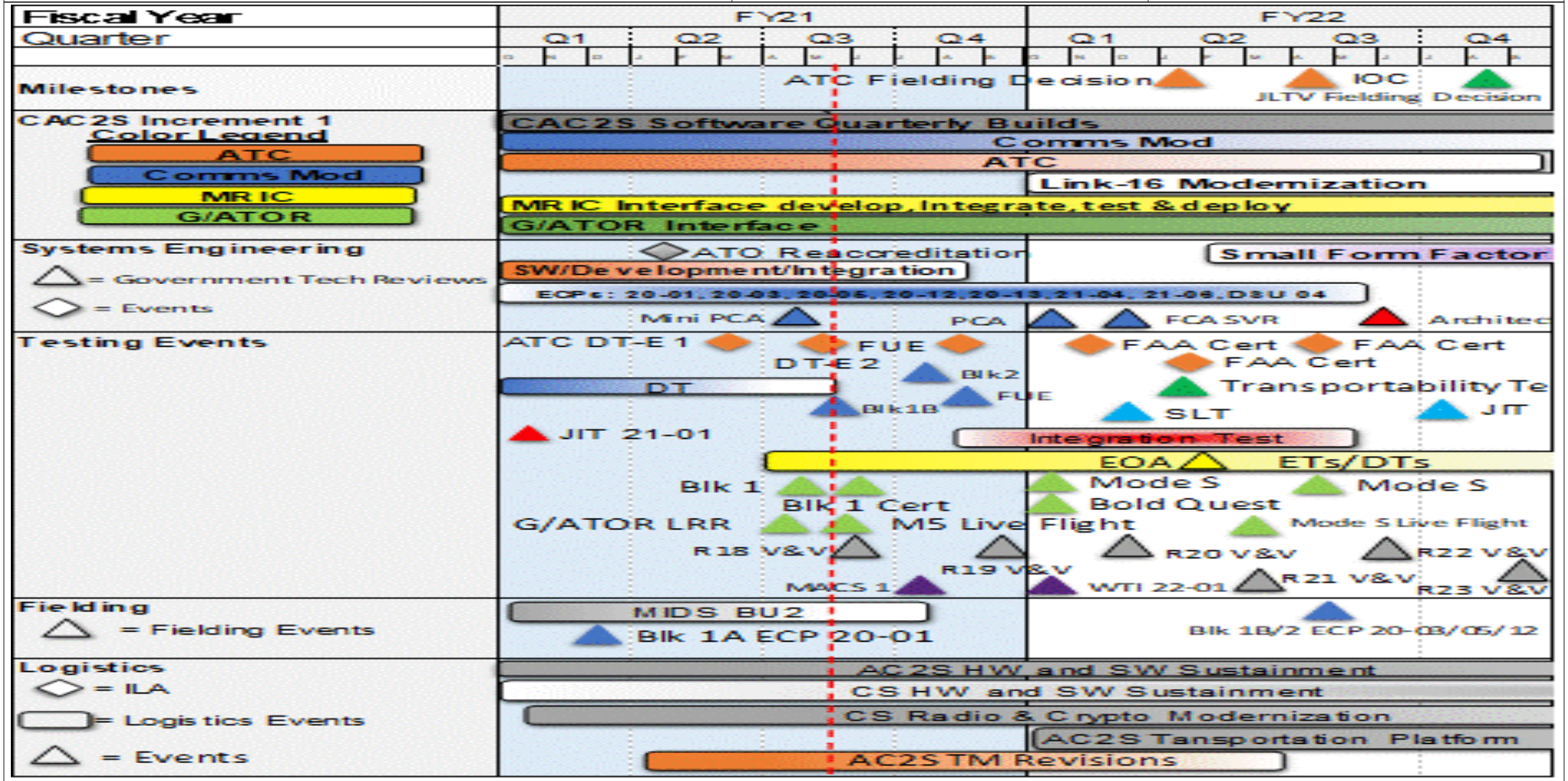

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3373				
Milestones: AN/TSQ-297 AC2S FRP/FDU FOC Objective	4	2021	4	2021
Milestones: AN/TSQ-297 AC2S FRP/FDU FOC Threshold	2	2022	2	2022
Systems Engineering & Integration (SE&I): ATO Reaccreditation	2	2021	2	2021
Systems Engineering & Integration (SE&I): AN/PRC-160 radio integration for AN/MRQ-13 CS	1	2020	1	2021
Systems Engineering & Integration (SE&I): AN/VRC-124 mount integration for AN/MRQ-13 CS	1	2020	2	2022
Systems Engineering & Integration (SE&I): Cable supply integration for AN/MRQ-13 CS	1	2020	1	2021
Systems Engineering & Integration (SE&I): Link-16 Modernization	4	2022	4	2022
Systems Engineering & Integration (SE&I): Small Form Factor Configuration Development, Integration, and Testing	4	2021	4	2022
Testing Events: Test: Block 1A	4	2020	4	2020
Testing Events: Test: Block 1B	3	2021	3	2021
Testing Events: Test: Block 2	4	2021	4	2021
Testing Events: MILSTD 6016D JIT 21-01	1	2021	1	2021
Testing Events: Air Traffic Control (ATC) Developmental Test Event 1	2	2021	2	2021
Testing Events: Air Traffic Control (ATC) Developmental Test Event 2	3	2021	3	2021
Testing Events: Air Traffic Control (ATC) Field User Event	1	2022	1	2022
Testing Events: G/ATOR Developmental Test F-2	4	2020	4	2020
Software: Quarterly SW Releases	1	2021	4	2022
Full Deployment Unit (FDU) Assets: AN/MRQ-13 CS IROAN	1	2020	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206335M / *Common Aviation Command and Control Sys (CAC2S)*	**Project (Number/Name)** 3373 / *Common Aviation Command and Control System (CAC2S)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Full Deployment Unit (FDU) Assets: AC2S IROAN	2	2020	4	2021
Full Deployment Unit (FDU) Assets: AC2S Technology Refresh	2	2021	4	2022
Fielding: Multifunctional Information Distribution System (MIDS) Block Upgrade 2	1	2021	1	2022
Logistics: AC2S hardware (HW) and software (SW) sustainment	1	2020	4	2022
Logistics: AN/MRQ-13 CS Digital Switching Unit (DS) hardware ECP fielding and transition to Phase 2	1	2020	1	2021
Logistics: AN/MRQ-13 CS Radio and Crypto Modernization Integration, FUE, Procurement and Fielding	1	2021	4	2022