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 0206625M *I USMC Intelligence/Electronics Warfare Sys*

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	175.597	30.990	29.983	37.695	-	37.695	-	-	-	-	-	-
2272: *Intel Command and Control (C2) Sys*	169.122	18.078	23.394	31.066	-	31.066	-	-	-	-	-	-
3771: *Tactical Exploitation of National Capabilities (TENCAP)*	6.475	6.484	6.589	6.629	-	6.629	-	-	-	-	-	-
9999: *Congressional Adds*	0.000	6.428	0.000	0.000	-	0.000	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This Program Element (PE) for Intelligence Command and Control (C2) includes Military Intelligence Program (MIP) funds for Marine Corps Intelligence capabilities necessary to support the employment of intelligence, reconnaissance, surveillance (ISR), and target acquisition resources integral to delivering decision advantage at the speed of operational relevance outlined in the 2018 National Defense Strategy. Marine Corps intelligence capabilities are divided into three functional areas organized along intelligence processes: Sensing (Persistent ISR), Analysis (Distributed Common Ground/Surface System Marine Corps (DCGS-MC)), and Dissemination (Intelligence Dissemination and Utilization (IDU)). This PE funds the Sensing and Dissemination portfolios while the Analysis portfolio is budgeted under DCGS-MC PE 0305208M.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	27.886	29.977	35.936	-	35.936
Current President's Budget	30.990	29.983	37.695	-	37.695
Total Adjustments	3.104	0.006	1.759	-	1.759
• Congressional General Reductions	-	-2.994			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.104	0.000			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	3.000	2.500	-	2.500
• Rate/Misc Adjustments	0.000	0.000	-0.741	-	-0.741

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Project: 9999: *Congressional Adds*		
Congressional Add: *Advanced electronic warfare digital payload*	6.428	0.000

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Congressional Add Details ($ in Millions, and Includes General Reductions)

	FY 2020	FY 2021
Congressional Add Subtotals for Project: 9999	6.428	0.000
Congressional Add Totals for all Projects	6.428	0.000

Change Summary Explanation

The FY 2021 to FY 2022 overall increase of $7.712M is primarily attributed to CESAS development of new services related to the Spectrum Services Framework (SSF) and migration of SSF into a Common Hosting Environment, initiation of Constructive Electromagnetic Operational Environment System (CEMOES) development, and initiation of Advanced Electronic Warfare Digital Payload (AEWDP) scalable development efforts.

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*				Project (Number/Name) 2272 / *Intel Command and Control (C2) Sys*			
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**
2272: *Intel Command and Control (C2) Sys*	169.122	18.078	23.394	31.066	-	31.066	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

INTELLIGENCE COMMAND AND CONTROL (C2): includes Military Intelligence Program (MIP) funds for Marine Corps Intelligence capabilities necessary to support the employment of intelligence, reconnaissance, surveillance (ISR), and target acquisition resources integral to delivering decision advantage at the speed of operational relevance outlined in the National Defense Strategy. Enables key Marine Corps Force Design capabilities for both Force Design initial operational capability (IOC) and full operational capability (FOC).

This capability involves sensing the operational environment through a variety of systems, from satellites overhead to reconnaissance Marines on the ground.

COMMUNICATION EMITTER SENSING and ATTACKING SYSTEM (CESAS). This is a Marine Corps Force Design program. CESAS II FoS is the USMC high power, back-packable, team portable, and ground mobile electronic warfare (EW) asset employed by Radio Battalion trained Signals Intelligence Electronic Warfare (SIEW) operators capable of supporting electromagnetic spectrum (EMS) dominance against a peer threat. CESAS supports the MAGTF commander in the execution of his EW operations and information operations, by detecting, denying, and disrupting hostile communication emitters across a broad range of communication frequencies. CESAS covers the high frequency (HF), very high frequency (VHF), and ultra-high frequency (UHF) frequency ranges against enemy emitters using modern modulation schemes. CESAS allows flexible employment to conduct EW while on the move or in a stationary position, thus optimizing the commander's ability to employ this asset for the greatest success of the mission. CESAS addresses Force Design shortfalls in EW and disruptive, less-lethal capabilities appropriate for countering malign activity by actors pursuing maritime gray zone strategies. An increase to the CESAS II FoS Authorized Acquisition Objective (AAO) in support of Force Design 2030 initiatives equips SIEW Teams to the infantry battalion, and Radio Reconnaissance Teams (RRTs), Light Armored Vehicle - Electronic Warfare (LAV-EW), Marine Corps Forces Special Operations (MARSOC) and the Support Establishment with modern electronic warfare (EW) systems capable of countering peer threat systems. CESAS uses an incremental acquisition strategy, providing technical refresh for legacy systems as the systems become obsolete and/or require technology insertions to maintain pace with our adversaries. CESAS also includes Advanced Electronic Warfare Digital Payload (AEWDP), Spectrum Services Framework (SSF), and Constructive Electromagnetic Operational Environment System (CEMOES). AEWDP provides the MAGTF a modular, scalable, and transportable EW system able to exploit and disrupt enemy command and control, and intelligence surveillance reconnaissance in an anti-access/area denial environment using non-traditional attack vectors. SSF is a Services Oriented Framework enabling the Electromagnetic Operations Cell to perform its mission by providing a critical open backend framework for rapid development of software services and applications across real-time and historical Electromagnetic Spectrum (EMS) data to support mission planning and execution of Electromagnetic Spectrum Operations (EMSO) and Cyberspace Operations across the MAGTF's Operational Environment. CEMOES provides an organic, unit-employable capability that creates a realistic operational frequency environment for multiple occupational fields to perform full electromagnetic spectrum home station training. The Marine Corps affirms with a high degree of confidence that the programs in this line item are executable.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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INTEGRATED BROADCAST RADIO (IBR). This is a top critical Marine Corps Force Design program. IBR is a family of terminals that provide direct, over-the-air access to the Integrated Broadcast Service (IBS) and receive and process near-real time (NRT) multi-intelligence data from strategic, theater, and tactical sensors to include: Theater Missile Defense indications and warnings, target tracks, and battlefield awareness information to the tactical user and long-range Fires platforms. IBR terminals conform to the Department of Defense (DoD) objectives of interoperability and commonality to receive and process multi-intelligence data. Able to operate receive-only for critical emissions control, IBR terminals adhere to the 38th Commandant's Planning Guidance and is essential to Force Design 2030 by providing the Marine Stand-In force with low signature, tactical, and affordable capabilities that support Expeditionary Advanced Base Operations, and Distributed Maritime Operations in a fast paced, widely dispersed, peer-threat maritime operating environment. The IBR program is an evolving, multiservice architecture designed to keep pace with Commanders' targeting and information requirements, currently accomplished using the universal serial bus (USB) Embedded National Tactical Receiver (ENTR) version 2 (V2) and the ENTR version 4 (V4) which provides a 50% weight reduction and doubles the life expectancy of the battery compared to the USB ENTR V2. Additionally, IBR is instituting Primary, Alternate, Contingency, Emergency (PACE) Plan requirements identified in the Joint Requirements Oversight Counsel (JROC) approved IBS Enterprise Information Systems - Capability Development Document (IS-CDD). IBR terminals provide connectivity to IBS Common Interactive Broadcast and IBS Alternative Path via UHF satellite communications (SATCOM) channels. The IBR program is also planning a transmit capability to deliver USMC sensor data to the IBS.

TACTICAL SIGNALS INTELLIGENCE (SIGINT) COLLECTION SYSTEM (TSCS). This is a Marine Corps Force Design program. TSCS provides modular, lightweight, and team portable/body worn systems and components that provide signals intercept, collection, direction-finding (DF) precision geo-location, reporting and collection management capability in the Marine Air-Ground Task Force (MAGTF). TSCS contributes to the MAGTF's Intelligence, Surveillance, and Reconnaissance (ISR) capability, enables Electronic Warfare (EW), and lethal strike capabilities; and provides the disruptive and less-lethal capabilities appropriate for countering malign activity by actors pursuing maritime "gray zone" strategies that is desired in the 38th Commandant's Force Design 2030. These capabilities enable Expeditionary Advanced Base Operations (EABO) by supporting operations to both locate and target more advanced threat communications technology. The TSCS Family of Systems (FoS) incorporates the Radio Reconnaissance Equipment Program (RREP) and Team Portable Collection Systems - Multi-Platform Capable (TPCS-MPC) programs into a single program, providing a modular and scalable suite of equipment that exploits information from more technically advanced target sets. Platform Integration Kits (PIK) allow Marines to utilize equipment from the TSCS FoS, on USMC tactical vehicles and the MV-22 to provide Precision Geolocation (PGL) capability which enables Marines to locate specific signal emitters with much higher levels of accuracy and enables precision targeting. The TSCS FoS has an incremental acquisition strategy, providing technical refresh for legacy TPCS-MPC and RREP systems as the systems become obsolete and/or require technology insertions to maintain pace with our adversaries.

SENSITIVE COMPARTMENTED INFORMATION COMMUNICATIONS (SCI COMMS) is a Ultra-High Frequency multi-band satellite communications Family of Systems (FoS), that provides a tactical capability at the Top Secret (TS)/SCI and Secret Collateral levels to USMC intelligence units. The SCI COMMS FoS is the only deployable communications system that is dedicated for TS/SCI data and voice communications that can receive, transmit, and disseminate bulk data and imagery products to and from national tactical intelligence sources. It supports Force Design 2030 by enabling a resilient, federated system of networks to ensure all elements can fight in a degraded command and control environment. The FoS consists of palletized, team level, and mobility pack (previously referred to as man-packable systems) - High Bandwidth Special Intelligence- Palletized Terminal (HBSI-PT), and Sensitive Compartmented Intelligence Kit (SCIK) - which provide USMC tactical commanders with high-capacity, near-real-time access to intelligence from national agencies, joint, coalition service activities, intelligence producers, and other tactical units via

connectivity to Sensitive Compartmented Information Network (SCI NET), National Security Agency (NSA) Network, coalition networks, and Secret Internet Protocol Router Network.

TERRESTRIAL COLLECTION provides a tactical sensor Family of Systems (FoS) organic to the MAGTF ground and maritime reconnaissance elements to facilitate near-real time Persistent ISR (PISR) sensing to MAGTF decision makers and users. Sensors are networked to enable the sharing of standard data, support of Expeditionary Advanced Basing Operations, and information to support all Marine Corps warfighting functions (Command and Control, Intelligence, Operations, Protection, Fires, Maneuver, and Information) with targeting and battlespace awareness. An array of sensor delivery methods and a variety of sensor characteristics enable operational forces to sense in air, land, and maritime environments to determine threat location, disposition, movement and direction. The Terrestrial Collection Systems portfolio includes Ground Based Operational Surveillance System (GBOSS), MAGTF Secondary Imagery Dissemination System (MSIDS), and Tactical Remote Sensor System (TRSS). GBOSS is an expeditionary, ground-based, self-contained, multi-spectral sensor-oriented, persistent surveillance system used to observe, collect, detect, identify, classify, track, and report on contacts, objects of interest, and assessed threats twenty-four hours a day utilizing a fused video and sensor data display. MSIDS provides organic tactical digital imagery collection, transmission and receiving capability to the MAGTF Commander. TRSS provides all-weather multi-modal sensing, location determination, targeting, and tactical indications and warning of enemy activity in the MAGTF Commander's Area of Interest. Starting in FY-21, the program focuses on providing a next generation Family of Persistent Sensors Advanced Unattended Ground Sensors (UGS) as the successor to the legacy TRSS.

COUNTER INTELLIGENCE and HUMAN INTELLIGENCE (CI/HUMINT) EQUIPMENT PROGRAM (CIHEP) provides the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) with an integrated, standardized, and interoperable suite of information and communication systems. The CIHEP program provides specialized equipment that is lightweight, modular, and tailorable, in deployable packages to conduct full spectrum, tactical CI/HUMINT activities, to include technical operations. The technical side of CIHEP operations use techniques to detect, neutralize, and exploit hostile technical surveillance technologies and hazards that permit the unauthorized access to or removal of information. CI/HUMINT elements are generally task-organized in support of a MAGTF or other supported commanders, providing them the capability to rapidly collect, process, and disseminate counterintelligence and human intelligence information in support of military planning and operations. CIHEP is comprised of commercial and government off the-shelf equipment. Different components are selected for refresh each year to maintain current capabilities and ensure interoperability and standardization with related systems. This results in an equipment suite that enhances the operating force's CI/HUMINT capabilities, while maintaining interoperability within the USMC and joint CI/HUMINT communities. The modularity of the CIHEP program allows Marines to perform a variety of missions in support of commanders, while carrying only those items necessary to accomplish the mission. CIHEP provides state-of-the-art mission critical information protection capabilities, as well as the ability to detect, identify, and locate specific technical threats.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: *Communication Emitter Sensing and Attacking System (CESAS): Product Development	4.192	4.255	13.413	0.000	13.413
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue development of Spectrum Services Framework (SSF) and CESAS II Family of Systems (FOS) - Continue development efforts related to hardware/software modifications via Engineering Change Proposals (ECPs)					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Complete development of Advanced Electronic Warfare Digital Payload (AEWDP) prototype. - Continue development of CESAS II Team Portable to improve transportability and provide capabilities such as high frequency jamming and multichannel tasking. - Initiate development of Joint Light Tactical Vehicle (JLTV) Platform Integration Kit (PIK). ***FY 2022 Base Plans:*** - Continue development of Spectrum Services Framework (SSF). - Initiate development of new services onto the SSF, allowing users to ingest critical spectrum information to increase Unit Commanders' situational awareness of the battlefield. - Initiate the migration of the SSF onto a Common Hosting Environment in order to reside on currently existing program of record hardware, thus reducing the logistical footprint of the units. - Continue development of CESAS II Family of Systems (FoS) Enhanced Electronic Warfare (EW) to include vehicle Platform Integration Kits (PIKs), Artificial Intelligence/Machine Learning software for increased speed and identification of threats, and increase Electronic Support (ES) frequency range. - Continue development efforts related to Engineering Change Proposals (ECPs) for hardware/software modifications and enhancements via Engineering Change Proposals (ECPs) to the CESAS II FoS. - Initiate development of Advanced Electronic Warfare Digital Payload (AEWDP) scalable effort to provide a modular system capable of integration into USMC vehicles. - Initiate development of Constructive Electromagnetic Operational Environment System (CEMOES) to generate a contested Electromagnetic Spectrum (EMS) environment to provide the Operating Forces (OPFOR) the ability to conduct realistic spectrum training. - Initiate tech refresh of laptops and tablets. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $9.158M from FY 2021 to FY 2022 is due to initiation of development of new services onto the SSF and migration of SSF onto a Common Hosting Environment, initiation of CEMOES development, and initiation of AEWDP scalable development. Initiation of these key Force Design initiatives in FY 2022 support an IOC for AEWDP in FY 2024 and CEMOES in FY 2025, in line with the Force Design capabilities timeline.					
Title: *Communication Emitter Sensing and Attacking System (CESAS): Support	0.050	0.075	0.075	0.000	0.075
Articles:	-	-	-	-	-
FY 2021 Plans:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Continue to provide program support for CESAS II FoS, Advanced Electronic Warfare Digital Payload (AEWDP) and Spectrum Services Framework (SSF). ***FY 2022 Base Plans:*** - Continue to provide program support for CESAS II FoS, Advanced Electronic Warfare Digital Payload (AEWDP) and Spectrum Services Framework (SSF). - Initiate program support for CEMOES. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant change FY 2021 to FY 2022.					
Title: *Communication Emitter Sensing and Attacking System (CESAS): Test and Evaluation	0.700	0.500	0.500	0.000	0.500
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue development and delivery of System Engineering artifacts, system design, test plans and reports, and requirements analysis. ***FY 2022 Base Plans:*** - Complete development and delivery of System Engineering artifacts, system design, test plans and reports, and requirements analysis. - Conduct vehicle Platform Integration Kits (PIKs) test and evaluation to include Hazards of Electromagnetic Radiation to Ordinance, Personnel, and Fuel (HERO/HERP/HERF), Antenna Pattern, Direction Finding (DF) Manifold Generation, Co-Site, Aberdeen PIK testing and Component Electromagnetic Interference (EMI) and Environmental Testing. ***FY 2022 OCO Plans:*** N/A					
Title: *Tactical Signal Intelligence (SIGINT) Collection System (TSCS): Product Development	5.120	5.192	6.974	0.000	6.974
Articles:	-	-	-	-	-
FY 2021 Plans:					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Continue development and integration of Advanced Signal Processor (ASP) (Formerly advanced digital payload/electronic warfare technology) (Increment 4). - Complete development of Niche Antenna Kit. - Complete development of TSCS Body Worn System to replace legacy RREP system which are approaching obsolescence. - Complete market research for the next generation TSCS workstation. - Continue development of required software capability to the TSCS baseline in order to counter emerging near peer asymmetric adversary threats. - Initiate integration of Artificial Intelligence/Machine Learning (AI/ML) software. ***FY 2022 Base Plans:*** - Complete development and integration of Advanced Signal Processor (ASP) (Formerly advanced digital payload/electronic warfare technology) (Increment 4). - Continue development of required software capability to the TSCS baseline in order to counter emerging near peer asymmetric adversary threats. - Complete integration of Artificial Intelligence/Machine Learning (AI/ML) software. - Initiate development of Precision Geolocation (PGL). The PGL capability allows Marines to locate specific signal emitters with more accuracy. The fielded PGL capability is outdated and incapable of operating against modern communications technology. - Initiate development of the MV-22 Platform Integration Kit (PIK) to allow Marines to use TSCS equipment on the MV-22 Osprey to conduct Aerial Signal Research and Target Development (A-SRTD) operations to locate specific signal emitters. The current MV-22 PIK relies on outdated receiver technology and is incapable of operations against near-peer communications technology. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $1.782M FY 2021 to FY 2022 reflects initiation of Precision Geolocation (PGL) and MV-22 Platform Integration Kit (PIK) development efforts.					
Title: *Integrated Broadcast Radio (IBR): Product Development	0.480	3.092	4.586	0.000	4.586
Articles:	-	-	-	-	-

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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: - Continue ENTR system integration and test support, common integrated broadcast (CIB) upgrade and system optimization support, and CIB operational testing. - Continue testing and integration efforts for resilient waveform and cryptographic technologies. - Coordinate clarification on future waveform requirements within the Department of Defense (DoD) to inform IBR transmit product development efforts. ***FY 2022 Base Plans:*** - Continue ENTR system integration and test support, common integrated broadcast (CIB) upgrade and system optimization support, and CIB operational testing. - Initiate research, testing and development for transceivers identified in the Integrated Broadcast Services (IBS) Enterprise Information Systems - Capability Development Document (IS-CDD). - Continue testing and integration efforts for resilient waveform and cryptographic technologies. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $1.494M from FY 2021 to FY 2022 reflects initiation of transceiver capability development.					
Title: *Tactical Signal Intelligence (SIGINT) Collection System (TSCS): Test and Evaluation	1.077	1.853	1.850	0.000	1.850
Articles:	-	-	-	-	-
FY 2021 Plans: - Testing of the TSCS software baseline updates. - Continue testing of the Advanced Signal Processor (ASP) (Formerly advanced digital payload/electronic warfare technology). - Initiate testing for Artificial Intelligence/Machine Learning (AI/ML) algorithm development. ***FY 2022 Base Plans:*** - Complete testing for Artificial Intelligence/Machine Learning (AI/ML) algorithm development. - Procure test articles for Precision Geolocation (PGL) and MV-22 Platform Integration Kit (PIK). - Continue testing of the TSCS software baseline updates.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Continue testing of the Advanced Signal Processor (ASP) (Formerly advanced digital payload/electronic warfare technology). ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant change from FY 2021 to FY 2022.					
Title: *SCI COMMS: Product Development ***Articles:*** ***FY 2021 Plans:*** - N/A ***FY 2022 Base Plans:*** - Initiate development of the High Bandwidth Special Intelligence-Palletized Terminal (HBSI-PT) replacement. - Initiate and complete development of Mobility Pack Modification kits/upgrades. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $0.714M from FY 2021 to FY 2022 reflects initiation of the HBSI-PT replacement and Mobility Pack kits/upgrades development.	0.459 -	0.000 -	0.714 -	0.000 -	0.714 -
Title: *SCI COMMS: Support ***Articles:*** ***FY 2021 Plans:*** - Complete support for end-of-life/end-of-sale equipment and modernization efforts for security-based products. ***FY 2022 Base Plans:*** - N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***	0.113 -	0.021 -	0.000 -	0.000 -	0.000 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
The decrease of $0.021M from FY 2021 to FY 2022 reflects completion of support for end-of-life/end-of-sale equipment and modernization efforts for security-based products.					
Title: *SCI COMMS: Test and Evaluation ***Articles:***	0.148 -	0.682 -	0.000 -	0.000 -	0.000 -
FY 2021 Plans: - Initiate and complete testing to validate Marine Corps Wideband Satellite Communications (MC-WSATCOM) requirements for the mobility Pack. The development of the mobility pack originally planned for FY 2021 was completed in FY 2020, the mobility pack will be tested in FY 2021. ***FY 2022 Base Plans:*** - N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease of $0.682M FY 2021 to FY 2022 reflects the completion of the Mobility Pack testing.					
Title: *Terrestrial Collection: Product Development ***Articles:***	4.101 -	4.379 -	2.604 -	0.000 -	2.604 -
FY 2021 Plans: - Initiated efforts to develop next generation Family of Persistent Sensors. - Complete integration of MILWAVE Radio into Hand Held Programmable Monitor (HHPM). - Initiate engineering, integration, and technical support required for planned Terrestrial Collection modernization. - Initiate engineering and integration required for the Ground Reconnaissance Communications System (GRCS) capability to allow users to more efficiently provide imagery intelligence products to the larger enterprise, increase battlespace awareness, and increase fires capability. - Initiate product development and integration of Artificial Intelligence/Machine Learning hardware and software within Sensor Family of Systems which will provide object detection capabilities resulting in decreased time required to conduct Indications and Warnings (I&W). ***FY 2022 Base Plans:*** - Continue engineering, integration, and technical support required for planned Terrestrial Collection modernization.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Continue product development and integration of Artificial Intelligence/Machine Learning hardware and software within Sensor Family of Systems which will provide object detection capabilities resulting in decreased time required to conduct Indications and Warnings (I&W). - Complete engineering and integration required for the Ground Reconnaissance Communications Capability to allow users to more efficiently provide imagery intelligence products to the larger enterprise, increase battlespace awareness, and increase fires capability. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease of $1.775M from FY 2021 to FY 2022 reflects completion of integration of MILWAVE Radio into Hand Held Programmable Monitor (HHPM).					
Title: *Counterintel and Human Intel Equip (CIHEP): Test and Evaluation	1.638	3.345	0.350	0.000	0.350
Articles:	-	6	-	-	-
FY 2021 Plans: - Continue to provide engineering, integration and technical support required for planned CIHEP modernization of the TSCM (Technical Surveillance Countermeasures) equipment and CIHEP Family of Systems (FOS). Acquiring test artifacts to integrate modernized proof of concept equipment for the Commercial Handheld Satellite Communications Set (CHSCS), Commercial Satellite Communications Set (CSCS), Advanced Imagery Module (AIM), Technical Surveillance Module (TSM), Event Surveillance Capability, Technical Surveillance Set (TSS), and Surveillance Communications Set (SCS). OCO: - Initiate efforts to develop six technical surveillance countermeasures (TSCM) prototype components, which are used to protect sensitive spaces, including the F-35 areas. Current capability set is insufficient given a discovered threat resulting in a capability gap, and details are held at a higher classification level. The prototypes will enable TSCM operators to test out mitigations to the known threat to current OCONUS operations. ***FY 2022 Base Plans:*** - Continue to provide engineering, integration and technical support required for planned CIHEP modernization of the TSCM (Technical Surveillance Countermeasures) equipment and CIHEP Family of Systems (FOS). Acquiring test artifacts to integrate modernized proof of concept equipment for CIHEP next generation					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Commercial Handheld Satellite Communications Set (CHSCS), verification testing, Expeditionary Office Module - Mobile (EOM-M). (CHSCS Smartphone as EOM-Mobile), and CIHEP FoS Validation testing using use cases and test scenarios. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease of $2.995M from FY 2021 to FY 2022 reflects completion of the OCO funding for technical surveillance countermeasures (TSCM) prototype components.					
Accomplishments/Planned Programs Subtotals	18.078	23.394	31.066	0.000	31.066

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/4747/CESAS: *CESAS*	5.187	10.217	38.460	-	38.460	-	-	-	-	-	-
• PMC/4747/IBR: *IBR*	4.109	1.494	1.503	-	1.503	-	-	-	-	-	-
• PMC/4747/TSCS: *TSCS*	30.883	16.310	13.482	-	13.482	-	-	-	-	-	-
• PMC/4747/ SCICOMMS: *SCI COMMS*	2.483	6.669	0.249	-	0.249	-	-	-	-	-	-
• PMC/4747/TC: *TERRESTRIAL COLLECTION*	4.011	2.448	0.888	-	0.888	-	-	-	-	-	-
• PMC/4747/CIHEP: *CIHEP*	12.974	14.947	4.285	-	4.285	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

(U) CESAS: CESAS II FoS production will consist of COTS and NDI integration into an existing GOTS architecture. Production efforts will be conducted at Naval laboratories. AEWDP production efforts are TBD. CEMOES production efforts are TBD. CEMOES shall be fielded to each Marine Expeditionary Force (MEF) to provide tailorable, realistic, mission-oriented, electromagnetic operational environment to support training and rehearsal at home stations.

(U) IBR: IBR software upgrades are developed at Naval laboratories and integrated into the system. IBR makes maximum use of COTS, GOTS and NDI with Firm Fixed Price Production.

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Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

(U) TSCS: Software upgrades are developed at Naval laboratories and integrated into the system. TSCS makes maximum use of COTS, GOTS, and NDI with Firm Fixed Price Production.

(U) SCI COMMS: SCI COMMS leverages NIWC-LANT support for Engineering Change Proposal (ECP) support, test asset procurements and existing Army Communication-Electronic Command (CECOM) Small Business Innovation Research (SBIR).

(U) Terrestrial Collection: Tech refresh for sustainability to ensure operational readiness of the assets, assumes required engineering and logistics refresh funded per additional capability initiative. Makes maximum use of COTS, GOTS and NDI with Firm Fixed Price Production.

(U) CIHEP: CIHEP makes maximum use of COTS, GOTS and NDI with Firm Fixed Price Production.

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	Project (Number/Name) 2272 / *Intel Command and Control (C2) Sys*	

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
CESAS	WR	NIWC-LANT : CHARLESTON, SC	9.155	1.624	Dec 2019	3.545	Dec 2020	4.906	Dec 2021	-		4.906	-	-	-
CESAS	WR	PT MUGU : PT MUGU, CA	2.000	2.237	Jan 2020	0.710	Jan 2021	5.090	Jan 2022	-		5.090	-	-	-
CESAS	C/FFP	MSCS : Quantico, VA	6.082	0.331	Jul 2020	0.000		3.417	Apr 2022	-		3.417	-	-	-
IBR	MIPR	VARIOUS : VARIOUS	1.155	0.480	Dec 2019	3.092	Jan 2021	4.586	Jan 2022	-		4.586	-	-	-
TSCS	WR	NIWC-LANT : CHARLESTON, SC	11.640	0.572	Dec 2019	1.191	Dec 2020	3.476	Dec 2021	-		3.476	-	-	-
TSCS	C/CPFF	NSMA : Charleston, SC	2.322	0.548	Jun 2020	1.001	Jun 2021	0.498	Jun 2022	-		0.498	-	-	-
TSCS	C/FFP	MSCS : QUANTICO, VA	0.294	4.000	Feb 2020	3.000	Feb 2021	3.000	Feb 2022	-		3.000	-	-	-
SCI COMMS	C/IDIQ	DLA-1 : PHILADELPHIA, PA	0.212	0.312	Mar 2020	0.000		0.000		-		0.000	-	-	-
SCI COMMS	C/IDIQ	DLA-2 : PHILADELPHIA, PA	0.296	0.147	May 2020	0.000		0.000		-		0.000	-	-	-
SCI COMMS	WR	NIWC-Lant : Charleston, SC	0.000	0.000		0.000		0.714	Dec 2021	-		0.714	-	-	-
Terrestrial Collection	WR	NIWC-LANT : CHARLESTON, SC	0.699	3.382	Nov 2019	0.000		0.604	Nov 2021	-		0.604	-	-	-
Terrestrial Collection	C/CPFF	NIWC-LANT CTR : CHARLESTON, SC	0.000	0.176	Oct 2020	0.689	Mar 2021	0.000		-		0.000	-	-	-
Terrestrial Collection AI/ML	C/FFP	NIWC-LANT : CHARLESTON, SC	0.000	0.000		2.000	Aug 2021	1.500	Mar 2022	-		1.500	-	-	-
Terrestrial Collection AI/ML	WR	NSWC-CRANE : CRANE,IN	0.000	0.000		0.222	Mar 2021	0.150	Mar 2022	-		0.150	-	-	-
Terrestrial Collection AI/ML	C/CPFF	NSWC-CRANE CTR : CRANE,IN	0.000	0.000		0.277	Mar 2021	0.350	Mar 2022	-		0.350	-	-	-
Terrestrial Collection AI/ML	WR	DLA : PHILADELPHIA, PA	0.000	0.000		0.501	Apr 2021	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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

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
Terrestrial Collection	WR	NSWC-DNATC : Virginia Beach ,VA	0.476	0.452	Nov 2019	0.440	Nov 2020	0.000		-		0.000	-	-	-
Terrestrial Collection	C/CPFF	NSWC-DNA : Virginia Beach ,VA	0.700	0.091	Mar 2020	0.250	Dec 2020	0.000		-		0.000	-	-	-
Prior Years Cumulative Funding	Various	Various : Various	91.716	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	126.747	14.352		16.918		28.291		-		28.291	-	-	N/A

Remarks

Product Development increase of $11.373M from FY 2021 to FY 2022 is primarily attributed to CESAS development of new services related to the Spectrum Services Framework (SSF) and migration of SSF into a Common Hosting Environment, initiation of Constructive Electromagnetic Operational Environment System (CEMOES) development, and initiation of Advanced Electronic Warfare Digital Payload (AEWDP) scalable development efforts. Increase also supports SCI COMM initiation of the HBSI-PT replacement and Mobility Pack kits/upgrades development and TSCS initiation of Precision Geolocation (PGL) and MV-22 Platform Integration Kit (PIK) development efforts.

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
CESAS	WR	NIWC-LANT : Charleston, SC	0.000	0.050	Nov 2019	0.075	Dec 2020	0.075	Dec 2021	-		0.075	-	-	-
SCI COMMS	WR	NIWC-LANT : Charleston, SC	0.172	0.113	Feb 2020	0.021	Feb 2021	0.000		-		0.000	-	-	-
Prior Years Cumulative Funding	Various	Various : Various	15.066	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	15.238	0.163		0.096		0.075		-		0.075	-	-	N/A

Remarks

No significant change from FY 2021 to FY 2022.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
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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
CESAS	WR	NIWC-LANT : CHARLESTON, SC	0.000	0.700	Dec 2019	0.500	Dec 2020	0.500	Dec 2021	-		0.500	-	-	-
TSCS	WR	NIWC-LANT : CHARLESTON, SC	4.365	0.827	Dec 2019	1.248	Dec 2020	1.570	Dec 2021	-		1.570	-	-	-
TSCS	C/IDIQ	NSMA : BOLLING AFB	0.250	0.250	Jun 2020	0.255	Dec 2020	0.280	Dec 2021	-		0.280	-	-	-
TSCS	C/CPFF	MCSC : Quantico, VA	0.000	0.000		0.350	Jul 2021	0.000		-		0.000	-	-	-
SCI COMMS	C/CPIF	MCSC : QUANTICO, VA	0.050	0.148	Mar 2020	0.000		0.000		-		0.000	-	-	-
SCI COMMS	WR	NIWC-LANT : Charleston,SC	0.000	0.000		0.682	Dec 2020	0.000		-		0.000	-	-	-
CIHEP	WR	NIWC-LANT : CHARLESTON, SC	0.982	0.000		0.000		0.350	Mar 2022	-		0.350	-	-	-
CIHEP	C/CPFF	NIWC-LANT CTR : CHARLESTON, SC	0.000	0.335	Mar 2020	0.000		0.000		-		0.000	-	-	-
CIHEP	C/FFP	PNNL : RICHLAND, WA	0.000	0.000		3.000	Apr 2021	0.000		-		0.000	-	-	-
CIHEP	WR	NSWC-Dahlgren : DAHLGREN, VA	0.760	0.303	Mar 2020	0.345	Nov 2020	0.000		-		0.000	-	-	-
CIHEP	C/CPFF	NSWC- CTR : DAHLGREN,VA	0.000	0.100	Mar 2020	0.000		0.000		-		0.000	-	-	-
CIHEP	WR	NSWC-Dahlgren ATR WR : DAHLGREN,VA	0.000	0.650	Jan 2021	0.000		0.000		-		0.000	-	-	-
CIHEP	C/CPFF	NSWC-Dahlgren ATR CTR : DAHLGREN,VA	0.000	0.250	Mar 2021	0.000		0.000		-		0.000	-	-	-
Prior Years Cumulative Funding	Various	Various : Various	20.730	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	27.137	3.563		6.380		2.700		-		2.700	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
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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

Remarks

Test and Evaluation decrease of $3.680M from FY 2021 to FY 2022 is due to the completion of SCI COMMS Mobility Pack testing and CIHEP procurement of technical surveillance countermeasures (TSCM) prototype components.

	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	169.122	18.078		23.394		31.066		-		31.066	-	-	N/A

Remarks

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

CESAS Combined Program Schedule

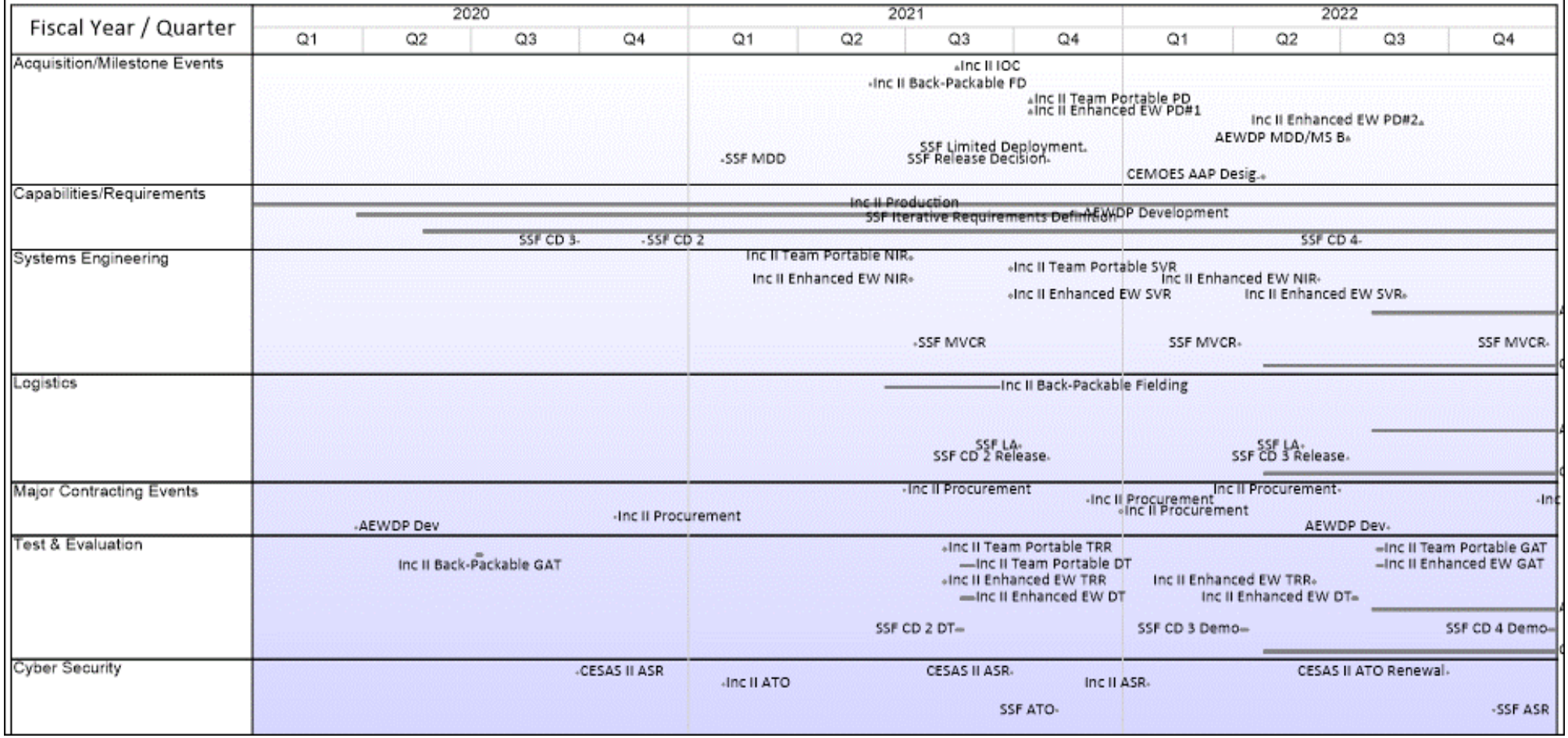

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

IBR Schedule

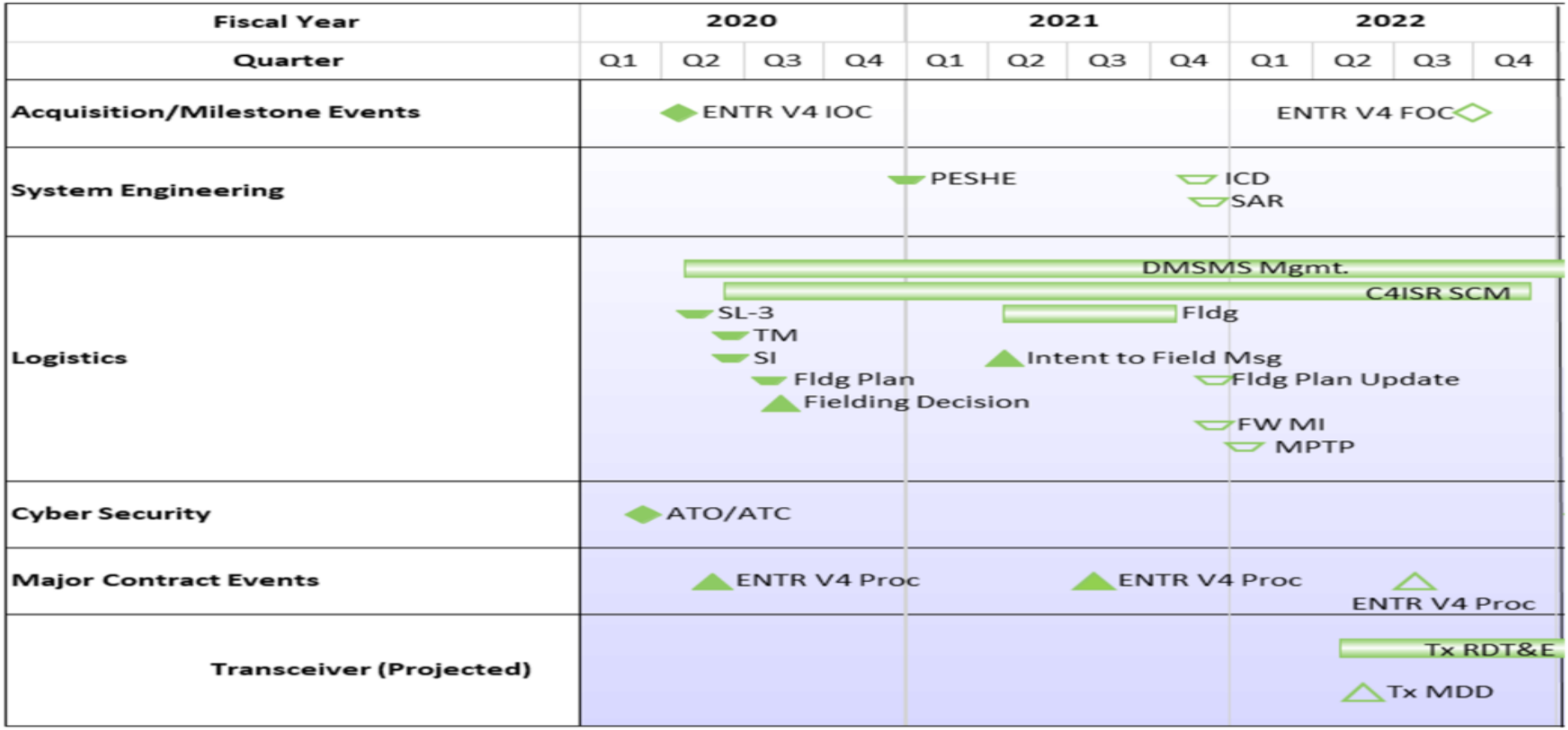

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

TSCS FoS Schedule

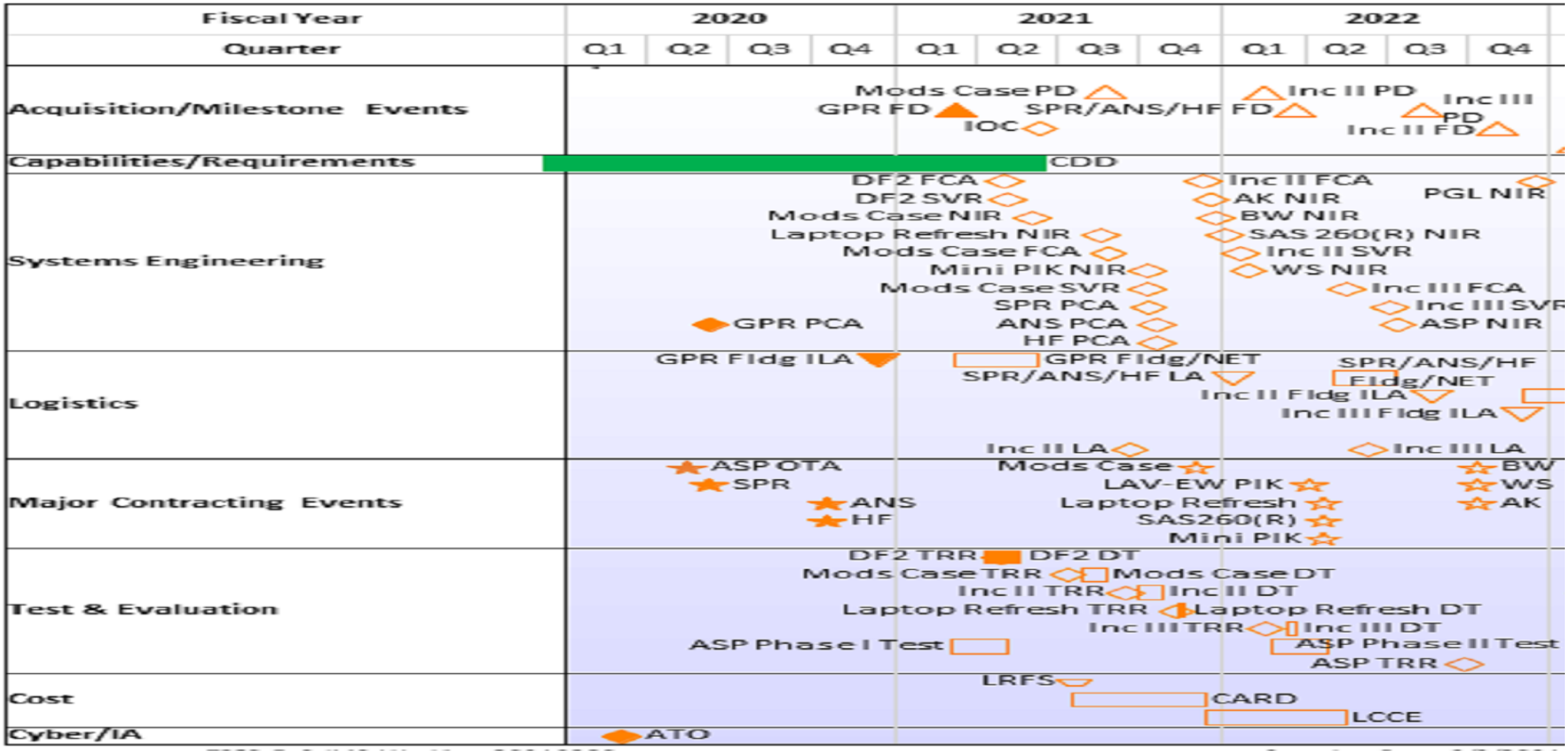

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

SCI Comms FoS Schedule

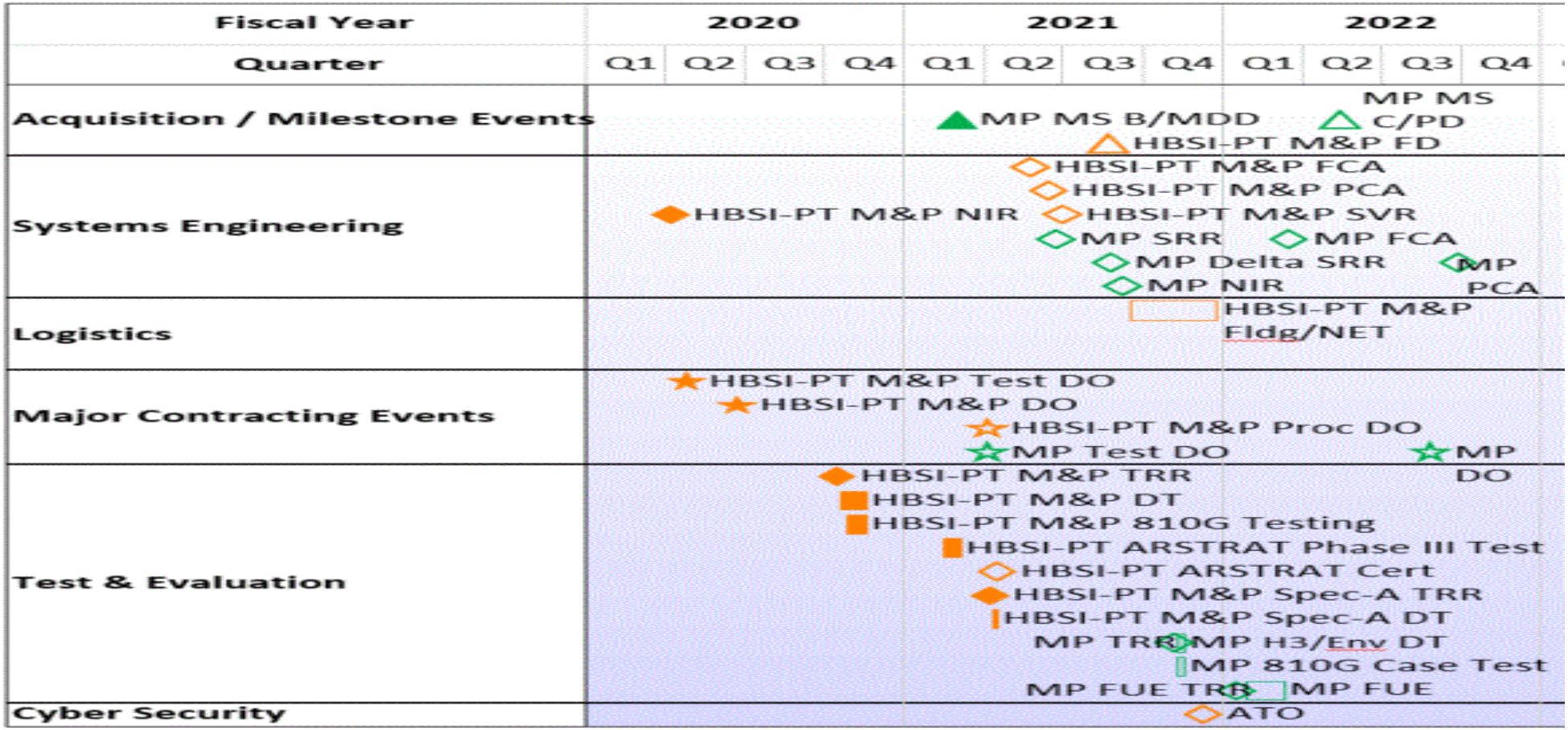

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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Terrestrial Collection Schedule

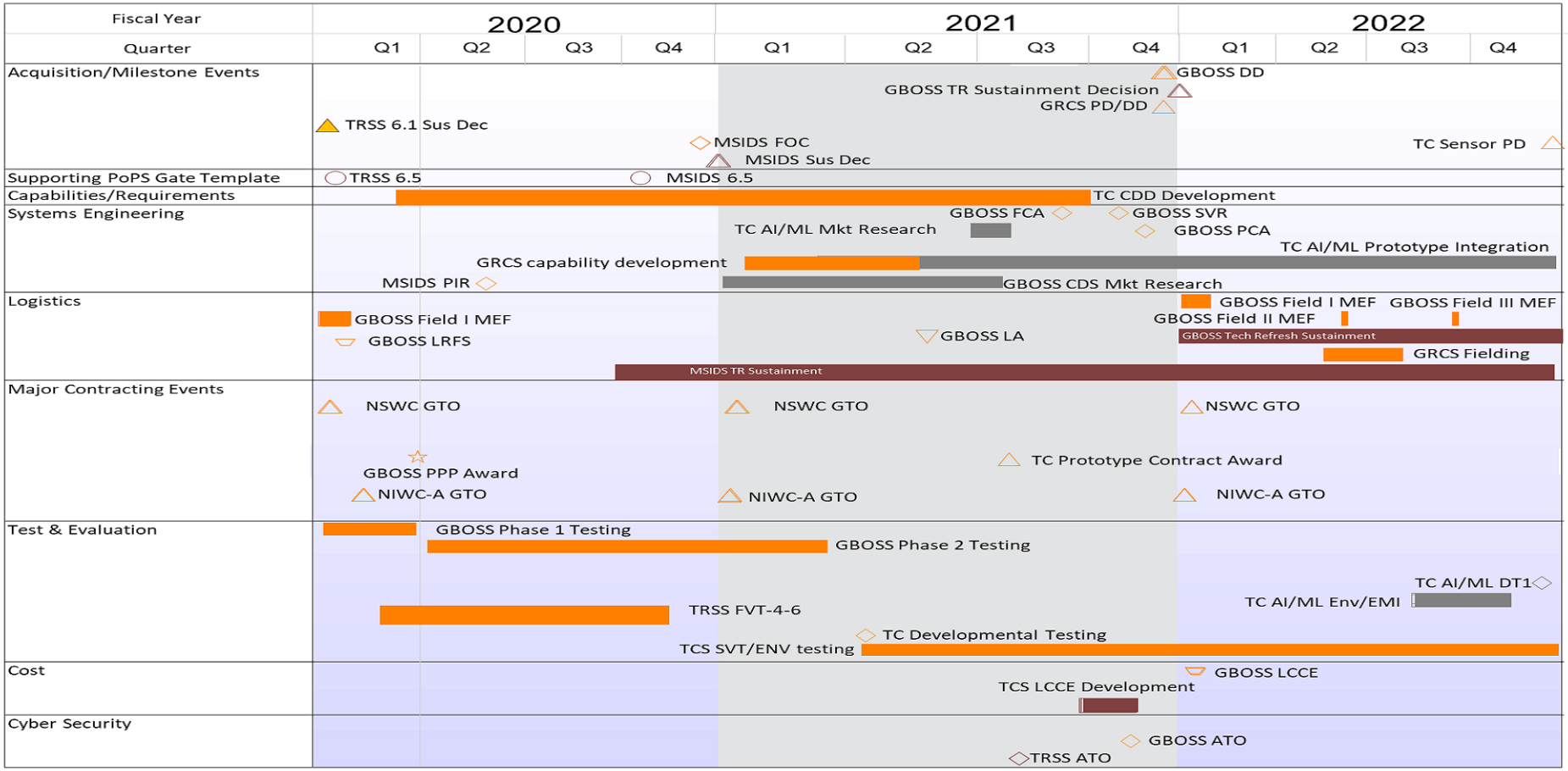

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 2272 / *Intel Command and Control (C2) Sys*

Counterintelligence and Human Intelligence Equipment Program Schedule

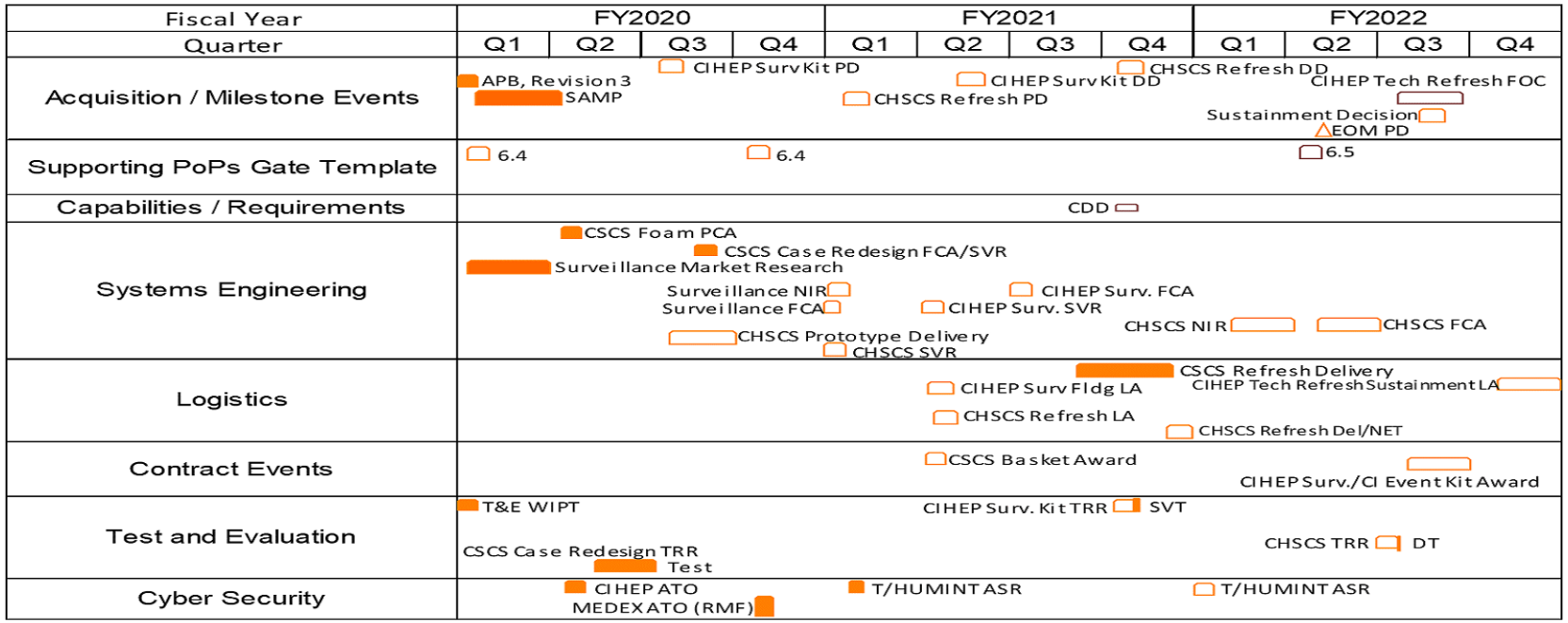

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2272				
CESAS: CESAS II FoS Back-Packable Fielding Decision	2	2021	2	2021
CESAS: CESAS II FoS Team Portable Procurement Decision	4	2021	4	2021
CESAS: CESAS II FoS Enhanced Electronic Warfare (EW) Procurement Decision #1	4	2021	4	2021
CESAS: CESAS II FoS Enhanced Electronic Warfare (EW) Procurement Decision #2	3	2022	3	2022
CESAS: AEWDP MDD/ MS B	3	2022	3	2022
CESAS: SSF MDD	1	2021	1	2021
CESAS: SSF MS C/Delivery Decision	1	2022	1	2022
IBR Fielding Decision (ENTR)	1	2021	1	2021
IBR Transceiver MDD	2	2022	2	2022
TSCS GPR Fielding Decision (Increment 1)	1	2021	1	2021
TSCS Developmental Test (Increment 2)	3	2021	3	2021
TSCS Mods Case Procurement Decision	3	2021	3	2021
TSCS Production Contract Award (Increment 2)	1	2022	1	2022
TSCS Procurement Decision (Increment 2)	1	2022	1	2022
TSCS Procurement Decision (Increment 3)	3	2022	3	2022
TSCS Fielding Decision (Increment 2)	4	2022	4	2022
SCI COMMS Modem (M&P) Fielding Decision	3	2021	3	2021
SCI COMM Mobility Pack (MP) Procurement Decision	4	2021	4	2021
SCI COMM Mobility Pack (MP) Fielding Decision	3	2022	3	2022
Terrestrial Collection: TRSS 6.1 Sustainment Decision	1	2020	1	2020
Terrestrial Collection: MSIDS FoS FOC	4	2020	4	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Terrestrial Collection: MSIDS Sustainment Decision	4	2020	4	2020
Terrestrial Collection: GBOSS Advanced Networking Components Delivery Decision	4	2021	4	2021
Terrestrial Collection: Ground Reconaissance Communications System (GRCS) Procurement/Delivery Decision	4	2021	4	2021
Terrestrial Collection: GBOSS Sustainment Decision	1	2022	1	2022
Terrestrial Collection: Sensor Procurement Decision	4	2022	4	2022
CIHEP Surveillance/CI Event Kit Procurement Decision	3	2021	3	2021
CIHEP Surveillance/CI Event Kit Delivery Decision	2	2022	2	2022
CIHEP Commercial Handheld Satellite Communication Set (CHSCS) Procurement Decision	1	2022	1	2022

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	Project (Number/Name) 3771 / *Tactical Exploitation of National Capabilities (TENCAP)*	

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
3771: *Tactical Exploitation of National Capabilities (TENCAP)*	6.475	6.484	6.589	6.629	-	6.629	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Tactical Exploitation of National Capabilities (TENCAP) programs provides the innovation and adaptability necessary for the Marine Corps Intelligence Enterprise to support MAGTF operations in increasingly complex environments against technologically savvy adversaries. TENCAP exploits current national reconnaissance systems and programs by examining both technical and operational capabilities, implementing training, and sponsoring concept demonstrations to directly support Marine Corps operating forces. The goal is to pursue technologies which exploit data from national systems to enhance intelligence support to the Marine Air-Ground Task Force (MAGTF) and/or the supported Joint Task Force commander. Additionally, TENCAP supports a persistent, distributed, development, test, and certification environment that addresses critical tactical intelligence capability gaps and delivers sustainable solutions to the operating forces and Marine Corps Systems Command (MSCS) through rapid delivery of emerging technologies.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Tactical Exploitation of National Capabilities (TENCAP): Product Development & Technical Assessments	6.484	6.589	6.629	0.000	6.629
Articles:	-	-	-	-	-
FY 2021 Plans: - Continue to conduct research and development, advanced technology demonstrations, and integration of emerging technologies into the Marine Corps Information Environment Enterprise (MCIEE). - Continue to support the Congressionally mandated TENCAP office and all associated ongoing activities, to include the coordination with national agencies, the intelligence community, research laboratories, private industry, and academia, for exploration of collaborative Research and Development (R&D) efforts to bring evolutionary MCIEE capabilities to the operating forces. - Continue to provide technical assessments and field utility evaluations for the integration of current and emerging capabilities into the tactical decision making process. - Continue to support operational planning and enhance operating force capabilities through the identification and development of advanced technologies for the MCIEE architecture. - Continue training and education efforts by providing the operating forces with supported simulation, visualization, and improved mission planning capabilities.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Continue development, integration, and FUE of innovative national data receive and dissemination capabilities for insertion into MCIEE. - FY 2021 projects will focus on Littoral Operations, Electronic Warfare and Signals Intelligence. ***FY 2022 Base Plans:*** - Continue to conduct research and development, advanced technology demonstrations, and integration of emerging technologies into the Marine Corps Information Environment Enterprise (MCIEE). - Continue to support the Congressionally mandated TENCAP office and all associated ongoing activities, to include the coordination with national agencies, the intelligence community, research laboratories, private industry, and academia, for exploration of collaborative Research and Development (R&D) efforts to bring evolutionary MCIEE capabilities to the operating forces. - Continue to provide technical assessments and field utility evaluations for the integration of current and emerging capabilities into the tactical decision making process. - Continue to support operational planning and enhance operating force capabilities through the identification and development of advanced technologies for the MCIEE architecture. - Continue training and education efforts by providing the operating forces with supported simulation, visualization, and improved mission planning capabilities. - Continue development, integration, and FUE of innovative national data receive and dissemination capabilities for insertion into MCIEE. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The increase $0.04M from FY 2021 to FY 2022 is due to inflation. There is no change to program objectives and level of effort.					
Accomplishments/Planned Programs Subtotals	6.484	6.589	6.629	0.000	6.629

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
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C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

(U) TENCAP: All work will be led in-house and necessary contractor support will be acquired using existing contracts. Research, test and integrate new technology and conduct advanced technology demonstrations to identify the most appropriate, mature programs for the integration of emerging technologies into the Marine Corps Information Environment Enterprise (MCIEE).

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 3771 / *Tactical Exploitation of National Capabilities (TENCAP)*

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
TENCAP	C/CPFF	DTIC : FT BELVOIR, VA	6.025	4.561	Jan 2020	6.589	Jan 2021	6.629	Jan 2022	-		6.629	-	-	-
TENCAP	WR	SSCLANT : CHARLESTON, SC	0.450	0.000		0.000		0.000		-		0.000	-	-	-
TENCAP	WR	NRL : WASHINGTON, DC	0.000	0.810	Mar 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	6.475	5.371		6.589		6.629		-		6.629	-	-	N/A

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
TENCAP	FFRDC	US ARMY CECOM : ABERDEEN PROVING GROUND, MD	0.000	1.113	Jan 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	1.113		0.000		0.000		-		0.000	-	-	N/A

	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	6.475	6.484		6.589		6.629		-		6.629	-	-	N/A

Remarks

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 3771 / *Tactical Exploitation of National Capabilities (TENCAP)*

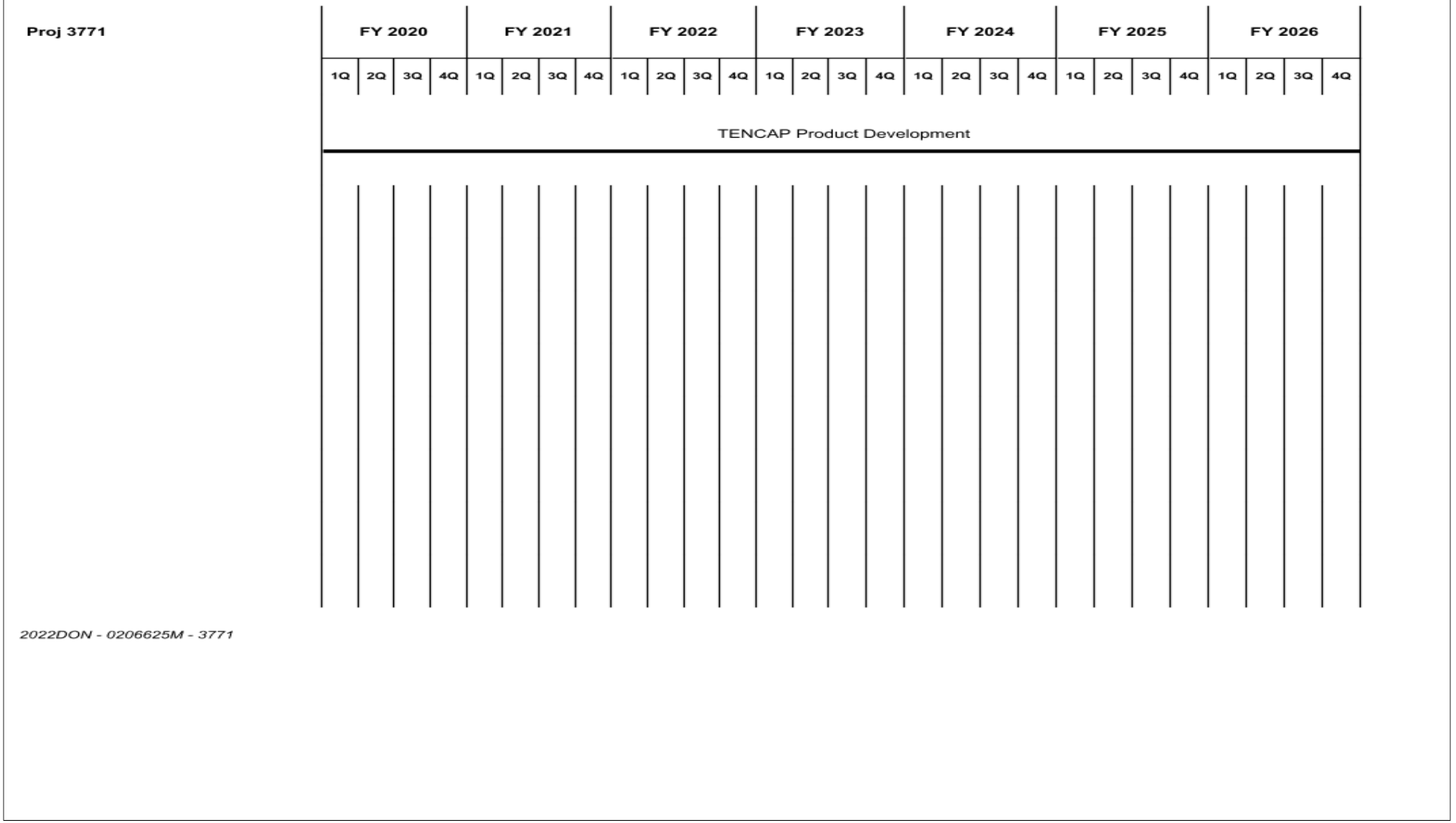


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 3771 / *Tactical Exploitation of National Capabilities (TENCAP)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3771				
Continued RDTEN of new and emerging tech into MCIEE	1	2020	4	2022

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	Project (Number/Name) 9999 / *Congressional Adds*	

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
9999: *Congressional Adds*	0.000	6.428	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Hardware and Software development of Advanced Electronic Warfare Digital Payload (AEWDP) system to enable the Marine Air-Ground Task Force (MAGTF) to exploit and disrupt enemy command and control, intelligence surveillance reconnaissance (ISR), and anti-access/area denial systems. AEWDP will provide in-band full duplex frequency operations; an advanced electronic warfare (EW) transceiver with open hardware; and a broadband, high power and low distortion radio frequency amplifier set.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021
Congressional Add: Advanced electronic warfare digital payload	6.428	0.000
FY 2020 Accomplishments: N/A		
FY 2021 Plans: - N/A		
Congressional Adds Subtotals	6.428	0.000

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
• RDTE/2272AA: *CESAS*	11.370	4.830	13.989	-	13.989	-	-	-	-	-	-
• PMC/4747AA: *CESAS*	5.187	10.217	36.710	-	36.710	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The AEWDP Program Office awarded a 20-month research and development contract 1Q FY 2020 to enable post-transition development of the Future Naval Capability-delivered prototype technology to an operationally deployable system. FY 2020 $6.428M supports the development of three AEWDP Engineering Manufacturing Development (EMD) systems. The Contractor shall develop and show traceability to the requirement, develop a draft performance specification, integrate the ONR transitioned technology with additional required AEWDP hardware and software, and conduct appropriate testing.

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 9999 / *Congressional Adds*

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
AEWDP	C/FFP	Consortium Management Group : Washington, DC	0.000	6.428	Mar 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	6.428		0.000		0.000		-		0.000	-	-	N/A

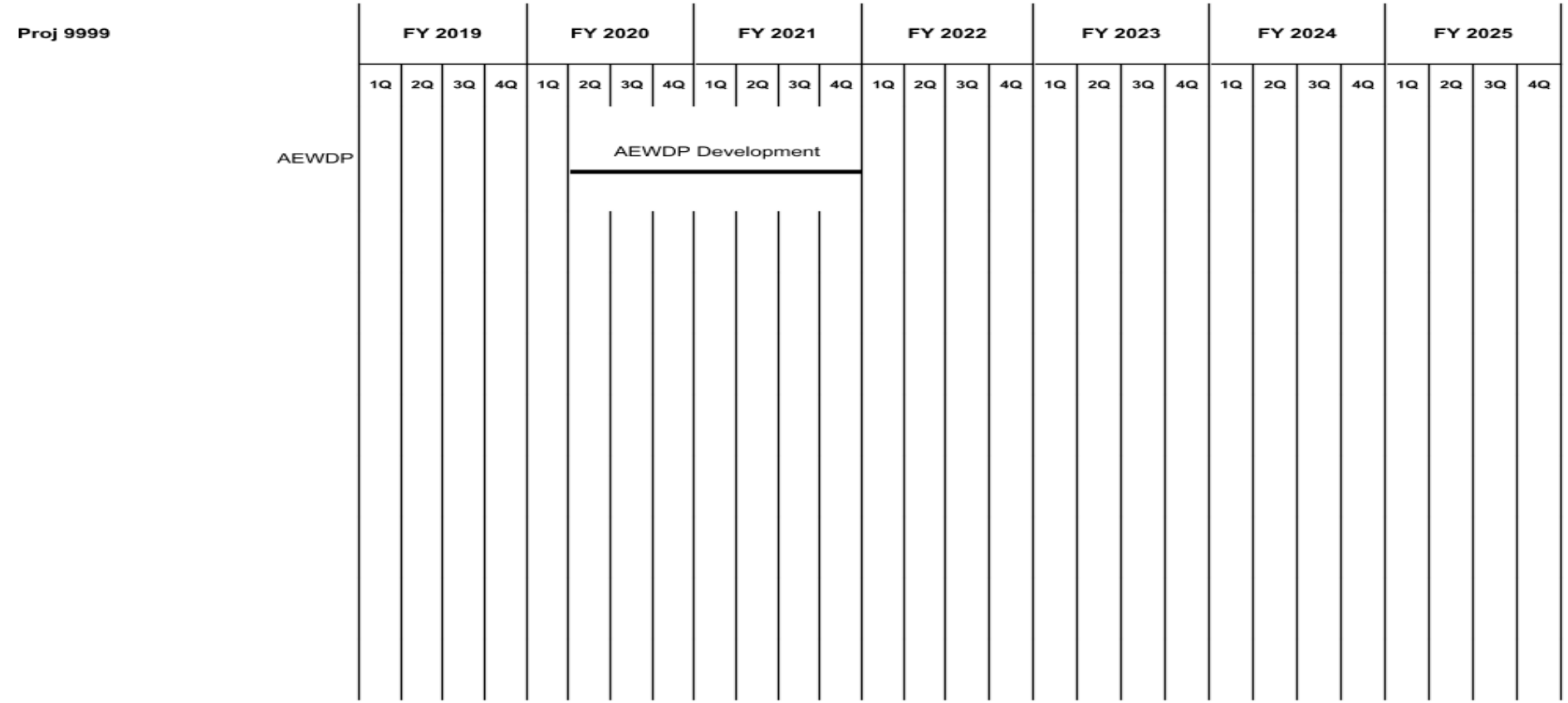
Remarks

FY 2020 Product Development of Advanced Electronic Warfare Digital Payload EMD systems which is funded with one year congressional add.

	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	0.000	6.428		0.000		0.000		-		0.000	-	-	N/A

Remarks

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 9999 / *Congressional Adds*



2021PB - 0206625M - 9999

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 0206625M / *USMC Intelligence/Electronics Warfare Sys*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
AEWDP: AEWDP Development	2	2020	4	2021