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

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational

PE 0206625M I USMC Intelligence/Electronics Warfare Sys

Systems Development

COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	107.146	30.630	37.821	21.458	-	21.458	22.338	16.426	22.397	22.051	Continuing	Continuing
2272: Intel Command and Control (C2) Sys	107.146	30.630	31.346	14.974	-	14.974	15.744	9.695	15.528	15.045	Continuing	Continuing
3771: Tactical Exploitation of National Capabilities (TENCAP)	0.000	0.000	6.475	6.484	-	6.484	6.594	6.731	6.869	7.006	Continuing	Continuing

#### Note

Beginning in FY20, Intelligence Analysis System (IAS) and Technical Control Analysis Center (TCAC) resources have been realigned from PE 0206625M project 2272 to PE 0305208M project 2268, Distributed Common Ground/Surface Systems. Transition into the DCGS portfolio is necessary to concentrate investments in an integrated architecture thereby improving DCGS Enterprise alignment and more effectively leveraging the rapid integration of new technology.

#### 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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	30.886	39.976	33.554	-	33.554
Current President's Budget	30.630	37.821	21.458	-	21.458
Total Adjustments	-0.256	-2.155	-12.096	-	-12.096
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-2.155			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
Reprogrammings	-0.177	0.000			
SBIR/STTR Transfer	-	-			
Program Adjustments	0.000	0.000	-12.006	-	-12.006
Rate/Misc Adjustments	0.000	0.000	-0.090	-	-0.090

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 319: Research, Development, Test & Evaluation, Navy I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/Electronics Warfare	: Sys
Congressional General Reductions -0.079     Adjustments	-	-
Change Summary Explanation The FY19 to FY20 funding decrease is due to transition of IAS and TC/completion of Tactical Signal Intelligence (SIGINT) Collection System (Communication Emitter Sensing and Attacking System (CESAS II) rediction development; Terrestrial Collection completion of MSIDS test and evaluation, system testing, and evaluation of advanced network compositioning in FY20.	(TSCS) Core Receivers, Modular Case, and MV-22 Aviat uced hardware/software modifications and Spectrum Ser uation for Base Station and Outstation data controllers ar	ion PIK product development; vices Framework (SSF) nd completion of G-BOSS

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

Exhibit R-2A, RDT&E Project Ju	stification:	PB 2020 N	lavy							Date: Marc	ch 2019	
Appropriation/Budget Activity 1319 / 7					` ,			Project (Number/Name) 2272 I Intel Command and Control (C2) S				
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
2272: Intel Command and Control (C2) Sys	107.146	30.630	31.346	14.974	-	14.974	15.744	9.695	15.528	15.045	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

#### Note

Beginning in FY20, Intelligence Analysis System (IAS) and Technical Control Analysis Center (TCAC) resources have been realigned from PE 0206625M project 2272 to PE 0305208M project 2268, Distributed Common Ground/Surface Systems. Transition into the DCGS portfolio is necessary to concentrate investments in an integrated architecture thereby improving DCGS Enterprise alignment and more effectively leveraging the rapid integration of new technology.

#### 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 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 project funds the Sensing and Dissemination portfolios while the Analysis portfolio is budgeted under the DCGS-MC PE.

PERSISTENT INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (PISR) GROUND SYSTEMS: PISR is a comprehensive strategy that synchronizes organic and external ISR assets in support of MAGTF operations. This capability involves sensing the operational environment through a variety of systems, from satellites overhead to reconnaissance Marines on the ground. PISR incorporates terrestrial sensing capability from the following ground collection systems.

TERRESTRIAL COLLECTION provides a tactical ground sensor Family of Systems (FoS) that are organic to the MAGTF and facilitate near-real time PISR sensing to MAGTF decision-makers and users. Sensors are networked to the maximum extent possible to enable the sharing of standard data and information to support all six Marine Corps warfighting functions (C2,Intelligence, Operations, Protection, Fires, and Maneuver) with both targeting and battlespace awareness. An array of sensor delivery methods, and a variety of sensor characteristics enable the MAGTF to sense air (low altitude), land (surface, underground), sea (surface and subsurface), environmental effects (weather), and man-made objects (e.g. inside buildings) to determine threat location, disposition, movement and direction. The Terrestrial Collection portfolio includes, but not limited to, 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 direction, location determination, targeting, and tactical indications and warning of enemy activity in the MAGTF Commander's Area of Interest.

COUNTER INTELLIGENCE AND HUMAN INTELLIGENCE (CI/HUMINT) Equipment Program (CIHEP) provides each Marine CI/HUMINT Company within the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) with an integrated, standardized, and interoperable suite of information and communication

UNCLASSIFIED
Page 3 of 45

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/ Electronics Warfare Sys	, ,	umber/Name) I Command and Control (C2) Sys

systems. The CIHEP program provides specialized equipment that is lightweight, modular, and tailorable, in deployable packages to conduct full spectrum, tactical CI and HUMINT activities, to include Technical Surveillance Countermeasures (TSCM) operations. TSCM 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 ten modules of commercial and government off the-shelf equipment. Different components are selected for refresh each year in order 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.

TACTICAL SIGNALS INTELLIGENCE (SIGINT) Collection System (TSCS) provides rapidly deployable capability that is the only Tactical Signals collection capability in the Marine Air-Ground Task Force (MAGTF) in both man packable and vehicular configurations, and provides collections capabilities needed to develop intelligence. 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. 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. The prioritization of capabilities included in each increment is based on obsolescence and required capability upgrades against advanced target sets. Fluctuations within the funding profile is due to different components being refreshed each year.

COMMUNICATION EMITTER SENSING and ATTACKING SYSTEM (CESAS) is the sole USMC high power, man-packable, and ground mobile Electronic Attack (EA) asset. CESAS supports the MAGTF Commander in the execution of his Electronic Warfare (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 ranges against enemy emitters using modern modulation schemes. CESAS allows flexible employment to conduct EA 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 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.

PROCESSING, EXPLOITATION, ANALYSIS AND PRODUCTION SYSTEMS: Processing, exploitation, analysis and production actions of the Intelligence process enables Marines to understand the all-source information/data revealed by PISR. The Distributed Common Ground System - Marine Corps (DCGS-MC) Enterprise (BLI 4767) will serve as the Marine Corps ISR Enterprise (MCISRE) backbone, migrating select capabilities into a single, integrated, net-centric baseline via clearly defined capability drops. The Intelligence Analysis System (IAS) FoS (All-Source) and the Technical Control Analysis Center (TCAC) FoS (Signal Intelligence (SIGINT)) transition to Project 2268 DCGS-MC beginning FY20.

UNCLASSIFIED
Page 4 of 45

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
1319 / 7	 - , (	umber/Name) I Command and Control (C2) Sys

INTELLIGENCE DISSEMINATION AND UTILIZATION (IDU) SYSTEMS: The IDU capability set performs the dissemination and integration functions of the Intelligence process. Dissemination connects the Intelligence product to the Commander who "operationalizes" these products through informed decisions.

The ITELLIGENCE BROADCAST RECEIVER(IBR) acquisition program is a family of terminals that conform to the Department of Defense (DoD) Integrated Broadcast Service (IBS) objectives of interoperability and commonality to receive and process near-real time multi-intelligence data. The IBR family of terminals provide MAGTF Commanders with the only direct access to IBS data via UHF Satellite Communications (SATCOM) broadcast channels. The IBR program is an evolving, multi-Service architecture designed to keep pace with Commanders' targeting and information requirements and conforms to the DoD IBS objectives of interoperability and commonality, which is currently accomplished using the Universal Serial Bus (USB) Embedded National Tactical Receiver (ENTR). The ENTR Version 4 (V4) will supplement and replace the USB ENTR which is no longer in production. The ENTR V4 provides a 50% weight reduction and doubles the life expectancy of the battery compared to the USB ENTR. Additionally, the IBR program is researching technology to meet the existing transceiver requirement identified in the Joint Tactical Terminal Joint Operational Requirements Document (JORD). The IBR family of terminals receive Blue Force Tracker data, which is a key element in developing and maintaining situational awareness as it relates to the common threat/common operating picture. The IBR provides NRT strategic, theater, and tactical sensor-to-shooter connectivity as well as NRT Theater Missile Defense indications and warnings. Additionally, the IBR provides connectivity to IBS Common Interactive Broadcast and IBS Alternative Path.

JOINT WORLDWIDE INTELLIGENCE COMMUNICATIONS SYSTEM (JWICS) is the Top Secret Sensitive Compartmented Information (TS/SCI) portion of the Defense Information System Network. It incorporates advanced networking technologies that permit point-to-point or multi-point information exchange involving voice, text, graphics, data and video teleconferencing within the DoD Intelligence Community. JWICS provides Marine Forces with special intelligence that significantly enhances the detail and quality of intelligence support that intelligence organizations provide to operating forces.

SENSITIVE COMPARTMENTED INFORMATION COMMUNICATIONS(SCI COMMS) is a Super-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. The FoS consists of palletized, team level, and man-packable systems - TROJAN SPIRIT, 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 Joint Worldwide Intelligence Communications System, National Security Agency (NSA) Network, coalition networks, and Secret Internet Protocol Router Network.

The overall decrease of \$16.372M is principally due to the realignment of TCAC and IAS resources to RDTE PRJ 2268, DCGS-MC, concentrating investments in an integrated architecture thereby improving DCGS Enterprise alignment and more effectively leveraging the rapid integration of new technology.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: *Intelligence Analysis System (IAS): Product Development	2.930	3.905	0.000	0.000	0.000
Articles:	-	-	-	-	-

PE 0206625M: USMC Intelligence/Electronics Warfare Sy...
Navy

UNCLASSIFIED
Page 5 of 45

R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019		
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/ PE 0206625M / USMC Intelligence Electronics Warfare Sys					Control (C2) Sys	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities	in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	
FY 2019 Plans:  - Continue integration, system testing, and evaluation of Intelligence Servers  - Continue integration, system testing, and evaluation of advanced analytic te Analysis  System (IAS) Family of Systems (FoS).  - Complete integration, system testing, and evaluation of DCGS Integrated Bases	chnologies into the Intelligence						
FY 2020 Base Plans: Refer to PE 0305208M Project: 2268; IAS will be funded in 2268 in FY20.							
FY 2020 OCO Plans: N/A							
FY 2019 to FY 2020 Increase/Decrease Statement: The \$3.905M decrease from FY19 to FY20 is the realignment of IAS resource element.	es under the DCGS-MC program						
Title: *Intelligence Analysis System (IAS): Support	Articles:	0.966	0.567	0.000	0.000	0.000	
FY 2019 Plans:  - Continue program management support for integration of advanced analytic baseline.  - Continue program management support for integration and testing of Intelligent Continue integration, system testing, and evaluation of DCGS Integrated Baseline.	gence Servers into the IAS FoS.						
FY 2020 Base Plans: Refer to PE 0305208M Project: 2268; IAS will be funded in 2268 in FY20.							
FY 2020 OCO Plans: N/A							
FY 2019 to FY 2020 Increase/Decrease Statement: The \$0.567M decrease from FY19 to FY20 is the realignment of IAS resource element.	es under the DCGS-MC program						
Title: *Intelligence Analysis System (IAS): Test and Evaluation	Articles:	0.961	1.700	0.000	0.000	0.000	

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy Page 6 of 45 R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/ PE 0206625M / USMC Intelligend Electronics Warfare Sys		Project (Number/Name) 2272 I Intel Command and Control			ol (C2) Sys
B. Accomplishments/Planned Programs (\$ in Millions, Article Qua	antities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
FY 2019 Plans:  - Continue support for integration of advanced analytics tools into the language of continue support for integration and testing of Intelligence Servers in a Continue integration, system testing, and evaluation of DCGS Integration of Integration and evaluation for the Cross Domain Solution.	nto the IAS FoS.					
<i>FY 2020 Base Plans:</i> Refer to PE 0305208M Project: 2268; IAS will be funded in 2268 in FY	<b>′</b> 20.					
<b>FY 2020 OCO Plans:</b> N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: The \$1.700M decrease from FY19 to FY20 is the realignment of IAS relement.	esources under the DCGS-MC program					
Title: *SCI COMMS: Product Development	Articles:	0.370	0.539	0.459 -	0.000	0.459
FY 2019 Plans:  - Continue efforts to procure new test assets, such as modems, and mecurity-based product improvements and ECPs.	nonitor and control devices to support					
FY 2020 Base Plans: - Will continue efforts to develop new test assets, such as netflow network obsolesence, and man-packable system test assets to support SWaP improvements and ECPs.						
<b>FY 2020 OCO Plans:</b> N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: Decrease of \$0.080K from FY 2019 to FY 2020 reflects completion of	HBSI-PT test asset procurements.					
Title: *SCI COMMS: Support	Articles:	0.000	0.106	0.113 -	0.000	0.113
FY 2019 Plans:						

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

UNCLASSIFIED Page 7 of 45

R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/ PE 0206625M / USMC Intelligenc Electronics Warfare Sys		Project (Number/Name) 2272 I Intel Command and Control			ol (C2) Sys
B. Accomplishments/Planned Programs (\$ in Millions, Article Quan	tities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<ul> <li>Initiate development of ECPs for end-of-life/end-of-sale equipment and products.</li> </ul>	I modernization efforts for security-based					
FY 2020 Base Plans: - Continue development support of ECPs for end-of-life/end-of-sale equ security-based products.	ipment and modernization efforts for					
<b>FY 2020 OCO Plans:</b> N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: No significant change from FY 2019 to FY 2020						
Title: *SCI COMMS: Test and Evaluation	Articles:	0.000	0.061	0.148	0.000	0.148
FY 2019 Plans: - Initiate test and evaluation efforts which support engineering change pmonitor control devices.	roposals (ECPs) such as modems and					
FY 2020 Base Plans:  - Continue test and evaluation efforts which support engineering change package and man-packable test assets.	e proposals (ECPs) such as network					
<b>FY 2020 OCO Plans:</b> N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: Increase of \$0.087K from FY 2019 to FY 2020 supports man-packable	esting.					
Title: *Tactical Exploitation of National Capabilities (TENCAP): Product	Development & Technical Assessments Articles:	9.293 -	0.000	0.000	0.000	0.000
<b>Description:</b> Tactical Exploitation of National Capabilities (TENCAP): Description transitions to Project 3771.	Decrease of \$6.448M from FY18 to FY19					
FY 2019 Plans:						

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy Page 8 of 45 R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/ PE 0206625M / USMC Intelligence Electronics Warfare Sys		Project (Number/Name) 2272 I Intel Command and Control (			l (C2) Sys
B. Accomplishments/Planned Programs (\$ in Millions, Article Qu	antities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Refer to Project: 3771; TENCAP will be funded in 3771 in FY19.		2010	20.0	2400		
<b>FY 2020 Base Plans:</b> N/A						
<b>FY 2020 OCO Plans:</b> N/A						
Title: *Tactical Signal Intelligence (SIGINT) Collection System (TSCS	): Product Development Articles:	1.299	5.045 -	5.520 -	0.000	5.520 -
<ul> <li>Complete hardware and software development of the TSCS Core Recollection and Direction Finding (DF) antennas.</li> <li>Initiate development of a Niche Antenna Kit.</li> <li>Complete development of the TSCS Modular Case and MV-22 Avia:</li> <li>Initiate required hardware/software modifications to TSCS/TPCS/RF</li> <li>Initiate development and integration of advanced digital payload/elections.</li> </ul>	tion PIK (Increment 2). REP to enhance capability via ECPs.					
FY 2020 Base Plans:  - Complete development and integration of advanced digital payload/o2).  - Complete development of a Niche Antenna Kit.  - Initiate required hardware modifications to legacy TPCS LAV-EW ar requirements.  - Initiate development of the TSCS Body Worn System to replace legal obsolescence.  - Initiate market research for the next generation TSCS workstation.  - Continue development of required software capability to the TSCS because peer asymmetric adversary threats.	electronic warfare technology (Increment ad HMMWV PIKs to meet TSCS SWaP acy RREP system which are approaching					
FY 2020 OCO Plans:						
N/A						

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

Page 9 of 45

R-1 Line #232

UN	CLASSIFIED					
Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/I PE 0206625M / USMC Intelligence Electronics Warfare Sys	•	Project (Number/Name) 2272 I Intel Command and Control (C2) Sys			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in	n Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
The \$0.532M increase from FY19 to FY20 reflects initiation of product developed System, Niche Antenna Kit, and TSCS Workstation.	ment for the TSCS Body Worn					
Title: *Tactical Signal Intelligence (SIGINT) Collection System (TSCS): Support	t <i>Articl</i> es:	0.035	0.000	0.000	0.000	0.000
<b>FY 2019 Plans:</b> N/A						
FY 2020 Base Plans: N/A						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: No significant change from FY19 to FY20						
Title: *Tactical Signal Intelligence (SIGINT) Collection System (TSCS): Test an	d Evaluation <i>Articles:</i>	1.289 -	0.650	1.077 -	0.000	1.077
FY 2019 Plans: - Continue developmental testing, shock/vibe testing, and environmental testing Continue testing of the TSCS software baseline updates Procure test articles for advanced digital payload/electronic warfare technolog Conduct air certification of the MV-22 Aviation PIK.						
FY 2020 Base Plans: - Complete developmental testing, shock/vibe testing, and environmental testin - Complete developmental testing, shock/vibe testing, and environmental testin electronic warfare technology Procure test articles for the body worn system and Niche Antennas Continue testing of the TSCS software baseline updates.						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement:						

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy...

Navy

Pa

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M I USMC Intelligence/ Electronics Warfare Sys		Project (Number/Name) 2272 I Intel Command and Control (C		ol (C2) Sys	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities	in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
The \$0.427M increase from FY19 to FY20 reflects procurement of different te costs.	est articles which have different unit					
Title: *Technical Control and Analysis Center (TCAC): Product Development	t <i>Articl</i> es:	3.037	3.515	0.000	0.000	0.00
FY 2019 Plans: -Initiates product development for the RAWS hardware refresh in order to cor-Initiates product development on low size, weight, and power (SWAP) for CE of the next hardware refresh for TWS and TCAC-G.						
FY 2020 Base Plans: Refer to PE 0305208M Project: 2268; TCAC will be funded in 2268 in FY20.						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: The \$3.515M decrease from FY19 to FY20 is the realignment of TCAC resou element.	rces under the DCGS-MC program					
Title: *Technical Control and Analysis Center (TCAC): Support	Articles:	0.315	0.291	0.000	0.000	0.00
FY 2019 Plans: -Continues technical support of improvements to the TCAC software baseline Enterprise/ Secure the Newtork initiatives required by the National Security A connectivityContinues technical support for the next hardware refresh for each compone	gency (NSA) for network					
FY 2020 Base Plans: Refer to PE 0305208M Project: 2268; TCAC will be funded in 2268 in FY20.						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement:						

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Page 11 of 45 R-1 Line #232 Navy

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	h 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M I USMC Intelligence/ Electronics Warfare Sys			umber/Nam Command		ol (C2) Sys
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in	n Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
The \$0.291M decrease from FY19 to FY20 is the realignment of TCAC resourcelement.	es under the DCGS-MC program					
Title: *Technical Control and Analysis Center (TCAC): Test and Evaluation	Articles:	1.640 -	2.534	0.000	0.000	0.000
FY 2019 Plans: -Completes developmental testing events before a fielding decision for the TWS-Initiates testing for the RAWS low SWAP replacement. Continues test design in refresh for CDS, TWS, and TCAC-G.						
FY 2020 Base Plans: Refer to PE 0305208M Project: 2268; TCAC will be funded in 2268 in FY20.						
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: The \$2.534M decrease from FY19 to FY20 is the realignment of TCAC resource element.	es under the DCGS-MC program					
Title: *Joint Worldwide Intel Comms Sys (JWICS): Product Development	Articles:	0.000	1.714 -	0.000	0.000	0.000
FY 2019 Plans: The SCI Enterprise Office (SEO) will conduct research, development, testing are engineer a deployable voice, video, data, and circuit realignment solution that will provide to the tactical environment. The solution(s) developed will re-engineer the High Bandy Palletized Terminal (HBSI-PT) communications path to reduce the latency for Marine Corp Communication (JWICS) network, by development of a tactical Point of Present house enterprise services such as Active Directory (AD), Dynamic Host Control Protoc services	the warfighter JWCIS services in width Special Intelligence os Joint Worldwide Intelligence (POP). The solution(s) will					

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Page 12 of 45 R-1 Line #232 Navy

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy	Date: March 2019					
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M I USMC Intelligence/ Electronics Warfare Sys			Project (Number/Name) 2272 / Intel Command an		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities i	n Each <u>)</u>	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
(DFS), data storage, and print services behind a tactical node. This effort will a cloud services for continuity of tactical operations support. The solution(s) will produce useful and timely intelligence in a reliable, efficient manner.						
<b>FY 2020 Base Plans:</b> N/A						
<b>FY 2020 OCO Plans:</b> N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: Funding decrease of \$1.714 from FY19 to FY20 due to Tactical JWICS fielding	beginning in FY20.					
Title: *Ground-Based Operational Surveillance System: Test and Evaluation	Articles:	1.782 -	0.000	0.000	0.000	0.000
FY 2019 Plans: - Transitions to Terrestrial Collection						
<b>FY 2020 Base Plans:</b> N/A						
<b>FY 2020 OCO Plans:</b> N/A						
Title: *MAGTF Secondary Imagery Dissemination System (MSIDS): Test and	Evaluation <i>Articles:</i>	0.169 -	0.000	0.000	0.000	0.000
FY 2019 Plans: -Transitions to Terrestrial Collection						
<b>FY 2020 Base Plans:</b> N/A						
<b>FY 2020 OCO Plans:</b> N/A						
Title: *Terrestrial Collection: Product Development	Articles:	0.000	1.088	1.071 -	0.000	1.07
FY 2019 Plans:						

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

**UNCLASSIFIED** 

Page 13 of 45

R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019				
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M I USMC Intelligence/ Electronics Warfare Sys			umber/Nan I Command	,	ol (C2) Sys
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2020 Base	FY 2020 OCO	FY 2020 Total
<ul> <li>Initiated development of Imager IIA software and hardware in order to processages; program, and confirm operational status of end items within the Initiated development of TRSS Sentinel software changes to properly refrom systems with improved radios as well as interface directly with these Initiated development of TRSS laptop software and hardware in order to messages, program, and confirm operational status of end items within the Continue integration of advanced network components and sensor assepart of scheduled technical refresh.</li> <li>Initiate Terrestrial Collection integration of artificial intelligence and mach assets aligned with updated Marine Corps operating concept and support and identify objects of interest in an autonomous manner resulting in less environment.</li> <li>FY 2020 Base Plans:</li> </ul>	ne TRSS systems of systems. ceive, parse, and display messages systems to program them. properly receive, parse, and display ne TRSS systems of systems. ets into all three variants of G-BOSS as mine learning components and sensor timproved ability to detect classify					
- Continue development of Imager IIA software and hardware in order to pressages; program, and confirm operational status of end items within the Continue development of TRSS Sentinel software changes to properly refrom systems with improved radios as well as interface directly with these Continue development of TRSS laptop software and hardware in order to messages, program, and confirm operational status of end items within the Complete integration of advanced network components and sensor asset part of scheduled technical refresh.  - Continue Terrestrial Collection integration of artificial intelligence and massets.	ne TRSS systems of systems. ecceive, parse, and display messages e systems to program them. to properly receive, parse, and display the TRSS systems of systems. ets into all three variants of G-BOSS as					
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: No significant change from FY 2019 to FY 2020.						
Title: *Tactical Remote Sensor System (TRSS): Test and Evaluation	Articles:	0.474	0.000	0.000	0.000	0.00
FY 2019 Plans:						

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy...

Navy

Page 14 of 45 R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019					
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/ Electronics Warfare Sys			ne) Project (Number/Name) 2272 I Intel Command and			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2020 Base	FY 2020 OCO	FY 2020 Total	
- Transitions to Terrestrial Collection			FY 2019			1 2 30.1	
<b>FY 2020 Base Plans:</b> N/A							
FY 2020 OCO Plans: N/A							
Title: *Tactical Remote Sensor System (TRSS): Product Development	Articles:	1.118 -	0.000	0.000	0.000	0.000	
FY 2019 Plans: - Transitions to Terrestrial Collection							
<b>FY 2020 Base Plans:</b> N/A							
FY 2020 OCO Plans: N/A							
Title: *Terrestrial Collection: Support	Articles:	0.000	1.000	0.000	0.000	0.000	
FY 2019 Plans: - Initiate technical support and technical engineering efforts related to developm range utilization, developmental test range utilization, functional verification test of test assets to and from system integrator facilities to test ranges associated we network components and sensor assets into all three variants of G-BOSS.	ng, and physical movement						
FY 2020 Base Plans:  - Complete technical support and technical engineering efforts related to develotest range utilization, developmental test range utilization, functional verification of test assets to and from system integrator facilities to test ranges associated whether the properties are sensor assets into all three variants of G-BOSS.	testing, and physical movement						
FY 2020 OCO Plans: N/A							
FY 2019 to FY 2020 Increase/Decrease Statement:							

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

Page 15 of 45 R-1 Line #232

	UNCLASSIFIED					
Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019				
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/ Electronics Warfare Sys			umber/Nan Command		l (C2) Sys
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities)	es in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
The \$1.000M decrease from FY19 to FY20 reflects completion of technical efforts related to developmental test, electromagnetic test range utilization, functional verification testing, and physical movement of test assets to and test ranges associated with tech refresh of advanced network components variants of G-BOSS.	developmental test range utilization, from system integrator facilities to					
Title: *Terrestrial Collection: Test and Evaluation	Articles:	0.000	1.401	0.000	0.000	0.000
FY 2019 Plans:  - Continue MSIDS test and evaluation effort for Base Station and Outstation throughout for compatibility with a new organic tactical radio waveform.  - Continue system testing and evaluation of advanced network components variants of G-BOSS as part of scheduled technical refresh.  - Initiate Terrestrial Collection test and evaluation of artificial intelligence an and sensor assets aligned with updated Marine Corps operating concept at classify and identify objects of interest in an autonomous manner resulting the environment.	d machine learning components and support improved ability to detect					
FY 2020 Base Plans: - Complete MSIDS test and evaluation effort for Base Station and Outstation throughout for compatibility with a new organic tactical radio waveform Complete system testing and evaluation of advanced network component variants of G-BOSS as part of scheduled technical refresh Continue Terrestrial Collection test and evaluation of artificial intelligence and sensor assets.	s and sensor assets into all three					
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: The \$1.401M decrease from FY19 to FY20 reflects completion of MSIDS to and Outstation data controllers and completion of G-BOSS system testing a components and sensor assets into all three variants of G-BOSS.						
Title: *Counterintel and Human Intel Equip (CIHEP): Test and Evaluation		0.682	0.332	0.338	0.000	

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Page 16 of 45 R-1 Line #232 Navy

	UNCLASSIFIED						
Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019					
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/ Electronics Warfare Sys				Project (Number/Name) 2272 I Intel Command and Control		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	
FY 2019 Plans:  - Continue to provide engineering, integration and technical support requof the TSCM (Technical Surveillance Countermeasures) equipment and		-	-	-	-		
FY 2020 Base Plans: - Continue to provide engineering, integration and technical support requof the TSCM (Technical Surveillance Countermeasures) equipment and Acquiring test artifacts to integrate modernized proof of concept equipment	CIHEP Family of Systems (FOS).						
FY 2020 OCO Plans: N/A							
FY 2019 to FY 2020 Increase/Decrease Statement: No significant change from FY 2019 to FY 2020.							
Title: *Communication Emitter Sensing and Attacking System (CESAS):	Product Development  Articles:	3.776	6.383	5.193 -	0.000	5.19	
FY 2019 Plans: -Initiate development of Constructive Electromagnetic Operational Environment Spectrum Operations Range (EMSOR)), Spectrum Servactical Vehicle (JLTV) Platform Integration Kit (PIK) and transition to Clapsyload/electronic warfare technology.	vices Framework (SSF), Joint Light						
FY 2020 Base Plans: -Continue development of Constructive Electromagnetic Operational Environment Electromagnetic Spectrum Operations Range (EMSOR)), Spectrum Servactical Vehicle (JLTV) Platform Integration Kit (PIK) and transition to Clause payload/electronic warfare technology and hardware/software modification (ECPs).	vices Framework (SSF), Joint Light ESAS Next Generation advanced digital						
FY 2020 OCO Plans:							
N/A FY 2019 to FY 2020 Increase/Decrease Statement:							

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Page 17 of 45 R-1 Line #232 Navy

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019				
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/I PE 0206625M I USMC Intelligence Electronics Warfare Sys		umber/Nan Command		ol (C2) Sys	
B. Accomplishments/Planned Programs (\$ in Millions, Article	Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
The \$1.190M decrease from FY19 to FY20 reflects reduced hards. Change Proposals (ECPs) to enhance capability to the Constructi System (CEMOES) (formerly Electromagnetic Spectrum Operatio and development of the Spectrum Services Framework (SSF).	ve Electromagnetic Operational Environment					
Title: Communication Emitter Sensing and Attacking System (CE	SAS): Test and Evaluation  Articles:	0.000	0.000	0.500 -	0.000	0.500
<b>FY 2019 Plans:</b> N/A						
FY 2020 Base Plans: -Initiate development and delivery of System Engineering artifacts requirements analysis.	s, system design, test plans and reports, and					
FY 2020 OCO Plans: N/A						
FY 2019 to FY 2020 Increase/Decrease Statement: Communication Emitter Sensing and Attacking System (CESAS): initiates development and delivery of System Engineering artifacts requirements analysis.						
Title: *Communication Emitter Sensing and Attacking System (CE	ESAS): Support  Articles:	0.025	0.039	0.075 -	0.000	0.075
FY 2019 Plans: Continue to provide program support for required hardware/softwa CESAS Next Generation advanced digital payload/electronic warf HMMWV PIK to enhance capability via Engineering Change Prop	are technology and hardware modifications to					
FY 2020 Base Plans: Continue to provide program support for required hardware/softwa CESAS Next Generation advanced digital payload/electronic warf Operational Environment System (CEMOES) (formerly Electroma	are modifications to CESAS II/RREMPEAS/ are technology, Constructive Electromagnetic					

**UNCLASSIFIED** 

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Page 18 of 45 R-1 Line #232 Navy

01101110	SIFIED						
Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: Marc	ch 2019			
1319 / 7 PE 02	riation/Budget Activity  R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/ Electronics Warfare Sys		Project (Number/Name) 2272 I Intel Command and Control (C2) S				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each	)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	
Spectrum Services Framework (SSF), and hardware modifications to Platform Integral capability via Engineering Change Proposals (ECPs).	tion Kits (PIKs) to enhance						
FY 2020 OCO Plans: N/A							
FY 2019 to FY 2020 Increase/Decrease Statement: No significant change from FY 2019 to FY 2020.							
Title: *Intelligence Broadcast Receiver (IBR): Product Development	Articles:	0.469	0.476	0.480	0.000	0.480	
<ul> <li>FY 2019 Plans:</li> <li>Continue ENTR system integration and test support, Common Integrated Broadcast optimization support, and CIB operational testing.</li> <li>Continue support of the Networking-On-The-Move (NOTM) integration and Integrate server producer capability.</li> <li>Initiate research and development for transceivers identified in the Joint Tactical Term Requirements Document (JORD).</li> </ul>	d Broadcast System (IBS)						
FY 2020 Base Plans: - Continue ENTR system integration and test support, CIB upgrade and system optim operational testing Continue support of the Networking-On-The-Move (NOTM) integration and Integrate server producer capability Continue research and development for transceivers identified in the Joint Tactical T Requirements Document (JORD).	d Broadcast System (IBS)						
FY 2020 OCO Plans: N/A							
FY 2019 to FY 2020 Increase/Decrease Statement: No significant change from FY 2019 to FY 2020.							
Accomplishments/Pla	nned Programs Subtotals	30.630	31.346	14.974	0.000	14.97	

UNCLASSIFIED
Page 19 of 45

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

R-1 Line #232

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M I USMC Intelligence/ Electronics Warfare Sys	- , (	umber/Name) Il Command and Control (C2) Sys
C. Other Program Funding Summary (\$ in Millions)			

			FY 2020	FY 2020	FY 2020					Cost To	
<u>Line Item</u>	FY 2018	FY 2019	Base	OCO	<u>Total</u>	FY 2021	FY 2022	FY 2023	FY 2024	<b>Complete</b>	<b>Total Cost</b>
<ul> <li>PMC/474703: TCAC</li> </ul>	4.581	6.749	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<ul> <li>PMC/474761: IAS</li> </ul>	13.544	9.570	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<ul> <li>PMC/700000: IAS SPARES</li> </ul>	0.000	0.160	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<ul> <li>PMC/474709: CIHEP</li> </ul>	3.525	6.066	12.974	-	12.974	6.009	6.245	6.322	6.448	Continuing	Continuing
<ul> <li>PMC/474702: TSCS</li> </ul>	2.431	23.173	17.106	-	17.106	16.263	12.717	8.077	8.468	Continuing	Continuing
<ul> <li>PMC/474701: CESAS</li> </ul>	6.744	5.556	5.187	-	5.187	10.217	11.149	14.021	14.301	Continuing	Continuing
<ul> <li>PMC/474700: SCI COMMS</li> </ul>	6.402	7.325	5.114	-	5.114	8.634	0.250	5.375	5.375	Continuing	Continuing
<ul><li>PMC/700003: TRSS SPARES</li></ul>	0.356	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<ul><li>PMC/700005: MSIDS SPARES</li></ul>	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000		Continuing	
<ul> <li>PMC/474752: IBR</li> </ul>	6.040	3.472	3.014	-	3.014	1.494	1.509	1.549		Continuing	
<ul> <li>PMC/474713: TRSS</li> </ul>	2.638	0.000	0.000	-	0.000	0.000	0.000	0.000			Continuing
<ul> <li>PMC/474719: MSIDS</li> </ul>	1.061	0.000	0.000	-	0.000	0.000	0.000	0.000			Continuing
<ul> <li>PMC/4747XX: G-BOSS</li> </ul>	3.274	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<ul> <li>PMC/4747XY: JWICS</li> </ul>	6.498	4.615	6.861	-	6.861	6.802	8.021	7.585	7.737	Continuing	Continuing
<ul><li>PMC/4747TC:</li></ul>	0.000	6.442	6.642	-	6.642	2.448	0.892	2.910	2.968	Continuing	Continuing
TERRESTRIAL COLLECTION											
<ul> <li>PMC/700006: TERRESTRIAL</li> </ul>	0.000	0.261	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

#### Remarks

#### **D. Acquisition Strategy**

**COLLECTION SPARES** 

- (U) SCI COMMS: SCI COMMS leverages SSC-LANT support for Engineering Change Proposal (ECP) support, and existing Army Communication-Electronic Command (CECOM) Small Business Innovation Research (SBIR) and Defense Logistics Agency (DLA) Special Operations Equipment (SOE) contracts for test asset procurements.
- (U) CIHEP: CIHEP makes maximum use of COTS, GOTS and NDI with Firm Fixed Price Production.
- (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.
- (U) CESAS: CESAS II production will consist of COTS and NDI integration into an existing GOTS architecture. Production efforts will be conducted at Naval laboratories.

**UNCLASSIFIED** Page 20 of 45

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy	Date: March 2019		
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M I USMC Intelligence/ Electronics Warfare Sys	- ,	lumber/Name) el 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) JWICS: JWICS makes maximum use of COTS, GOTS and NDI with Firm Fixed Price Production.
- (U) Terrestrial Collection: Tech refresh for sustainability to ensure operational readiness of the G-BOSS 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.

# **E. Performance Metrics**

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 7

PE 0206625M / USMC Intelligence/

Electronics Warfare Sys

2272 I Intel Command and Control (C2) Sys

Date: March 2019

Product Developme	nt (\$ in M	illions)		FY 2	2018	FY 2	2019		2020 ise	FY 2		FY 2020 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	Total Cost	Target Value of Contract
CESAS	WR	SPAWAR : CHARLESTON, SC	3.471	3.776	Dec 2017	4.383	Dec 2018	3.693	Dec 2019	-		3.693	Continuing	Continuing	Continuin
CESAS	WR	PT MUGU : PT MUGU, CA	0.000	0.000		2.000	Jan 2019	1.500	Jan 2020	-		1.500	0.000	3.500	-
IBR	Various	VARIOUS : VARIOUS	0.210	0.469	Dec 2017	0.476	Dec 2018	0.480	Dec 2019	-		0.480	Continuing	Continuing	Continuin
IAS	WR	SPAWAR : CHARLESTON, SC	2.926	0.988	Nov 2017	0.000		0.000		-		0.000	0.000	3.914	-
IAS	C/CPFF	SPAWAR A3 : CHARLESTON, SC	1.528	1.942	Feb 2018	3.905	Feb 2019	0.000		-		0.000	Continuing	Continuing	Continuin
SCI COMMS	C/FFP	CECOM: ABERDEEN, MD	0.090	0.016	Aug 2019	0.114	May 2019	0.000		-		0.000	Continuing	Continuing	Continuing
SCI COMMS	C/IDIQ	DLA-1 : PHILADELPHIA, PA	0.000	0.131	Mar 2018	0.081	Feb 2019	0.312	Mar 2020	-		0.312	0.000	0.524	-
SCI COMMS	C/IDIQ	DLA-2 : PHILADELPHIA, PA	0.000	0.147	May 2018	0.149	May 2019	0.147	May 2020	-		0.147	0.000	0.443	-
SCI COMMS	C/IDIQ	DLA-3 : PHILADELPHIA, PA	0.000	0.076	Jun 2018	0.195	Aug 2019	0.000		-		0.000	0.000	0.271	-
TENCAP	C/IDIQ	NSMA : BOLLING AFB	0.098	0.000		0.000		0.000		-		0.000	0.000	0.098	-
TENCAP	C/IDIQ	SPAWAR-2 : CHARLESTON, SC	0.092	0.000		0.000		0.000		-		0.000	0.000	0.092	-
TENCAP	C/CPFF	DTIC-1 : FT. BELVOIR	12.633	0.000		0.000		0.000		-		0.000	0.000	12.633	-
TENCAP	WR	SPAWAR : CHARLESTON, SC	1.990	0.450	Oct 2017	0.000		0.000		-		0.000	0.000	2.440	-
TENCAP	C/CPFF	DTIC-2 : FT. BELVOIR	2.641	8.843	Oct 2017	0.000		0.000		-		0.000	0.000	11.484	-
CIHEP	WR	SPAWAR3 : CHARLESTON, SC	0.300	0.000		0.000		0.000		-		0.000	0.000	0.300	-
TCAC	C/CPFF	SPAWAR2 : Charleston, SC	1.914	0.228	Jan 2018	0.800	Jan 2019	0.000		-		0.000	Continuing	Continuing	Continuin

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

**UNCLASSIFIED** Page 22 of 45

R-1 Line #232

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 7

PE 0206625M / USMC Intelligence/ Electronics Warfare Sys

2272 I Intel Command and Control (C2) Sys

Date: March 2019

Product Developme	nt (\$ in M	illions)		FY 2	2018	FY 2	2019	FY 2 Ba	2020 ise	FY 2		FY 2020 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	Total Cost	Target Value of Contract
TCAC	WR	SPAWAR8 : San Diego, CA	11.121	2.809	Jan 2018	2.715	Jan 2019	0.000		-		0.000	Continuing	Continuing	Continuing
JWICS	C/CPFF	DTIC-2 : FT. BELVOIR	2.800	0.000		1.714	Sep 2019	0.000		-		0.000	Continuing	Continuing	Continuing
TRSS	WR	SPAWAR-A2 : CHARLESTON, SC	0.293	1.118	May 2018	0.000		0.000		-		0.000	0.000	1.411	-
Terrestrial Collection	WR	SPAWARTC : CHARLESTON, SC	0.000	0.000		1.088	Jan 2019	1.071	Nov 2019	-		1.071	Continuing	Continuing	Continuing
TSCS	WR	SPAWAR : CHARLESTON, SC	8.262	1.005	Mar 2018	4.695	Mar 2019	5.170	Mar 2020	-		5.170	Continuing	Continuing	Continuing
TSCS	C/IDIQ	NSMA : BOLLING AFB	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
TSCS	C/FFP	DTIC : FT BELVOIR, VA	0.000	0.294	Apr 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
TSCS	FFRDC	MITRE : STAFFORD, VA	0.000	0.000		0.350	Dec 2018	0.350	Dec 2019	-		0.350	0.000	0.700	-
Prior Years Cumulative Funding	Various	Various : Various	29.929	0.000		0.000		0.000		-		0.000	0.000	29.929	-
		Subtotal	80.298	22.292		22.665		12.723		-		12.723	Continuing	Continuing	N/A

Support (\$ in Millions	s)			FY 2	2018	FY 2	2019	FY 2 Ba	2020 ise		2020 CO	FY 2020 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
CESAS	Various	MCSC9 : QUANTICO, VA	0.798	0.025	Sep 2018	0.039	Sep 2019	0.000		-		0.000	Continuing	Continuing	Continuing
CESAS	MIPR	NSWC DAHLGREN : DAHLGREN, VA	0.000	0.000		0.000		0.075	Nov 2019	-		0.075	0.000	0.075	-
IAS	C/CPFF	DTIC : Fort Belvoir, VA	2.039	0.662	Apr 2018	0.000		0.000		-		0.000	0.000	2.701	-
IAS	C/FFP	CECOM : FT. BELVOIR, VA	0.891	0.304	Oct 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 7

PE 0206625M / USMC Intelligence/

2272 I Intel Command and Control (C2) Sys

Date: March 2019

•
---

Support (\$ in Million	ıs)			FY 2	2018	FY 2	2019		2020 ise		2020 CO	FY 2020 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	Total Cost	Target Value of Contract
IAS	C/CPFF	SPAWAR : Charleston, SC	0.000	0.000		0.567	Feb 2019	0.000		-		0.000	0.000	0.567	-
SCI COMMS	WR	SPAWAR : Charleston, SC	0.172	0.000		0.106	Mar 2019	0.113	Feb 2020	-		0.113	Continuing	Continuing	Continuinç
TCAC	MIPR	DTIC : FT Belvoir, VA	1.967	0.300	Apr 2018	0.000		0.000		-		0.000	0.000	2.267	-
TCAC	WR	SPAWAR-P : San Diego, CA	3.568	0.000		0.276	Apr 2019	0.000		-		0.000	Continuing	Continuing	Continuinç
TCAC	Various	MCSC26 : QUANTICO, VA	0.043	0.015	Sep 2018	0.015	Sep 2019	0.000		-		0.000	Continuing	Continuing	Continuinç
Terrestrial Collection	WR	NSWC CRANE : Crane, IN	0.000	0.000		1.000	Apr 2019	0.000		-		0.000	Continuing	Continuing	Continuinç
TSCS	Various	MCSC20 : QUANTICO, VA	0.158	0.035	Aug 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuinç
Prior Years Cumulative Funding	Various	Not Specified : Not Specified	2.687	0.000		0.000		0.000		-		0.000	0.000	2.687	-
		Subtotal	12.323	1.341		2.003		0.188		-		0.188	Continuing	Continuing	N/A

Test and Evaluation	(\$ in Milli	ons)		FY 2	2018	FY 2	2019	FY 2 Ba	2020 ise	FY 2	2020 CO	FY 2020 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	Total Cost	Target Value of Contract
CESAS	WR	SPAWAR : CHARLESTON, SC	0.000	0.000		0.000		0.500	Dec 2019	-		0.500	0.000	0.500	-
SCI COMMS	C/CPIF	MCSC : QUANTICO, VA	0.050	0.000		0.000		0.148	Mar 2020	-		0.148	Continuing	Continuing	Continuing
SCI COMMS	C/FFP	CECOM: ABERDEEN, MD	0.000	0.000		0.005	Feb 2019	0.000		-		0.000	0.000	0.005	-
SCI COMMS	C/IDIQ	DLA : PHILADELPHIA, PA	0.000	0.000		0.056	May 2019	0.000		-		0.000	0.000	0.056	-
IAS	C/FFP	DTIC : FT. BELVOIR, VA	0.299	0.500	Apr 2018	0.000		0.000		-		0.000	0.000	0.799	-

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... Navy

**UNCLASSIFIED** Page 24 of 45

R-1 Line #232

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

Appropriation/Budget Activity

1319*1* 7

R-1 Program Element (Number/Name)

PE 0206625M / USMC Intelligence/

Electronics Warfare Sys

Date: March 2019

Project (Number/Name)

2272 I Intel Command and Control (C2) Sys

Test and Evaluation	(\$ in Milli	ions)		FY 2	2018	FY 2	2019		2020 ise	FY 2		FY 2020 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	Total Cost	Target Value of Contract
IAS	WR	SPAWAR : CHARLESTON, SC	0.000	0.461	Nov 2017	1.700	Feb 2019	0.000		-		0.000	Continuing	Continuing	Continuin
TCAC	C/CPFF	SPAWAR8 : CHARLESTON, SC	1.131	0.586	Feb 2018	0.971	Feb 2019	0.000		-		0.000	Continuing	Continuing	Continuin
TCAC	C/CPFF	SPAWAR9 : SAN DIEGO, CA	1.461	1.054	Jan 2018	1.563	Jan 2019	0.000		-		0.000	Continuing	Continuing	Continuin
CIHEP	WR	SPAWAR-A4 : CHARLESTON, SC	0.875	0.107	Nov 2017	0.332	Nov 2018	0.113	Nov 2019	-		0.113	Continuing	Continuing	Continuin
CIHEP	WR	NSWC-DNA : VIRGINIA BEACH, VA	0.000	0.575	Nov 2017	0.000	Nov 2018	0.225	Nov 2019	-		0.225	0.000	0.800	-
G-BOSS	WR	NSWC CRANE : CRANE, IN	0.000	1.782	Feb 2019	0.000		0.000		-		0.000	0.000	1.782	-
MSIDS	WR	SPAWAR : CHARLESTON, SC	0.000	0.169	Apr 2018	0.000		0.000		-		0.000	0.000	0.169	-
TRSS	WR	SPAWAR-A1: CHARLESTON, SC	0.000	0.474	Feb 2019	0.000		0.000		-		0.000	0.000	0.474	-
Terrestrial Collection	WR	SPAWAR : CHARLESTON, SC	0.000	0.000		0.174	Feb 2019	0.000		-		0.000	Continuing	Continuing	Continuin
Terrestrial Collection	C/CPFF	NSWC CRANETC : CRANE, IN	0.000	0.000		1.227	Aug 2019	0.000		-		0.000	Continuing	Continuing	Continuin
TSCS	WR	SPAWAR : CHARLESTON, SC	2.676	1.289	Dec 2017	0.650	Dec 2018	1.077	Dec 2019	-		1.077	Continuing	Continuing	Continuin
TSCS	C/IDIQ	NSMA : BOLLING AFB	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
TSCS	C/FFP	DTIC : FT BELVOIR, VA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Prior Years Cumulative Funding	Various	Various : Various	8.033	0.000		0.000		0.000		-		0.000	0.000	8.033	-
		Subtotal	14.525	6.997		6.678		2.063		-		2.063	Continuing	Continuing	N/A

Date: March 2019

Appropriation/Budget Activity 1319 / 7				PE 020	6625M /	<b>lement (N</b> USMC Int fare Sys		,	- ,	(Numbei ntel Comi	r/ <b>Name)</b> mand and	Control (	C2) Sys
	Prior Years	FY 20	18	FY 2	019	FY 2	2020 Ise		2020 CO	FY 2020 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	107.146	30.630		31.346		14.974		-		14.974	Continuing	Continuing	N/A

#### Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

Funding reduction from FY 19 to FY20 reflects the realignment of Intelligence Analysis System (IAS) and Technical Control Analysis Center (TCAC) resources PE 0206625M project 2272 to PE 0305208M project 2268, Distributed Common Ground/Surface Systems. Transition into the DCGS portfolio is necessary to concentrate investments in an integrated architecture thereby improving DCGS Enterprise alignment and more effectively leveraging the rapid integration of new technology.

PE 0206625M: USMC Intelligence/Electronics Warfare Sy... UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity
1319 / 7

R-1 Program Element (Number/Name)
PE 0206625M / USMC Intelligence/
Electronics Warfare Sys

Date: March 2019

Project (Number/Name)
2272 / Intel Command and Control (C2) Sys

# **TCAC Program Schedule**

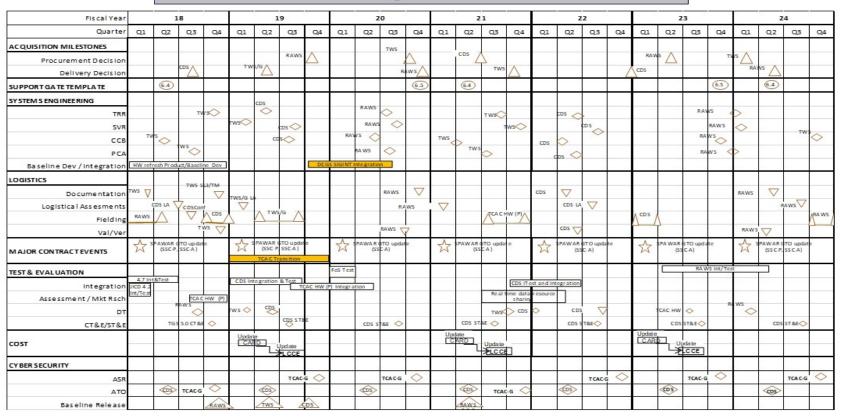


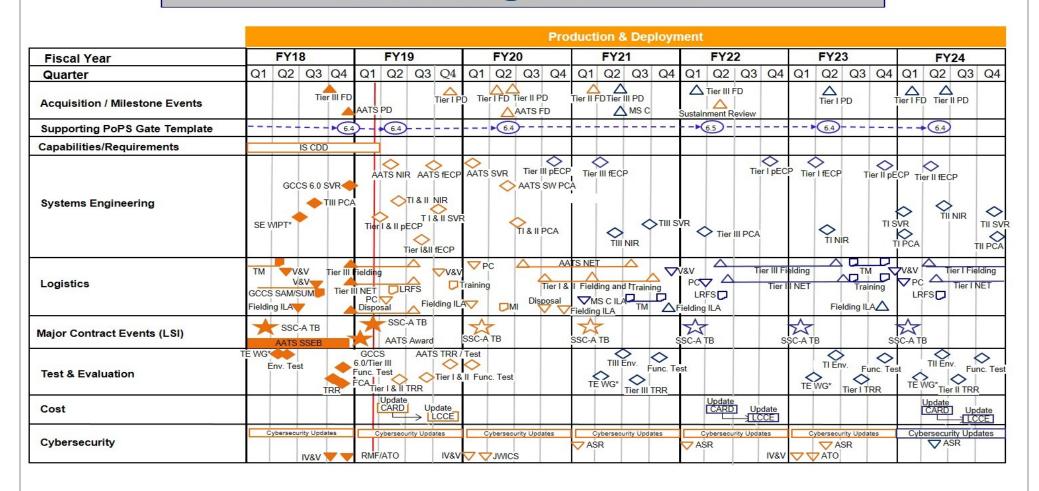
Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name)

1319 / 7 PE 0206625M / USMC Intelligence/ 2272 / Intel Command and Control (C2) Sys

Electronics Warfare Sys

# IAS FoS Program Schedule



Date: March 2019 Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) PE 0206625M / USMC Intelligence/ 1319 / 7 2272 I Intel Command and Control (C2) Sys Electronics Warfare Sys SCI Comms FoS Program Schedule **SCIK Operations & Support HBSI-PT Production & Deployment HBSI-PT Operations & Support** FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 FY 2024 Q1 Q2 Q3 Q4 △CN ImpD Win10 ImpD ∧ Modem PD △M&C PD Modem ImpD ∧M&C ImpD  $\triangle$ CN PD △M&C ImpD Acquisition / Win10 BTR ∧M&C PD NP PD △NP ImpD ∧ RF PD △SpecA PD ∧ NP PD △SpecA ImpD ∧ NP PD Milestone Events △NP ImpD NP ImpD / △ MP ImpD ∧ MP PD NP ImpD \_\_ NP PD 🛆 ∧ Modem PD Antenna PD Antenna ImpD ∧Modem ImpD I MEF NP Fielding M&C Fielding III MEF & MARCENT NP Fielding AAO IMEF Fielding M&C Fielding SpecA Fielding MP Fielding II MEF NP Fielding CN Fielding **Fielding** Modem Fielding NP Fielding Antenna Fielding MEF NP Fielding Modem Fielding NP Fielding III MEF NP Fielding CCI Fielding AAO II MEF Fielding II MEF NP Fielding CN Test DO CN DO Modem DO NP Test DO NP DO ☆cci do Modem Test DO CCI DO HBSI-PT ☆ MP Test DO MP Prod DO ☆NP Test DO ☆NP DO **Major Contract** NP Test DO M&C Test DO NP Test DO **☆NP DO** M&C Test DO **☆**M&C DO RF Test DO ☆ RF DO **Events** NP DO M&C DO ☆HBSI-PT **☆ HBSI-PT** SpecA Test DO Antenna Test DO 🛣 Antenna DO SpecA DO Modem Test DO☆ Modem DO ☆ Modem DO INP DT M&C DT Antenna DT **Test & Evaluation** SpecA DT CN DT NP DT MP DT NP DT SCIK RF DT M&C DT INP DT CCI DT Modem DT Legend **SCIK Events HBSI-PT Events** Coalition Network Events Manpack NP: Network Package CN: Coalition Network CCI: Control Cryptographic Item SPecA: Spectrum Analyzer M&C: Monitor & Control Device

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity

1319 *l* 7

R-1 Program Element (Number/Name)
PE 0206625M / USMC Intelligence/

Electronics Warfare Sys

Project (Number/Name)
2272 I Intel Command and Control (C2) Sys

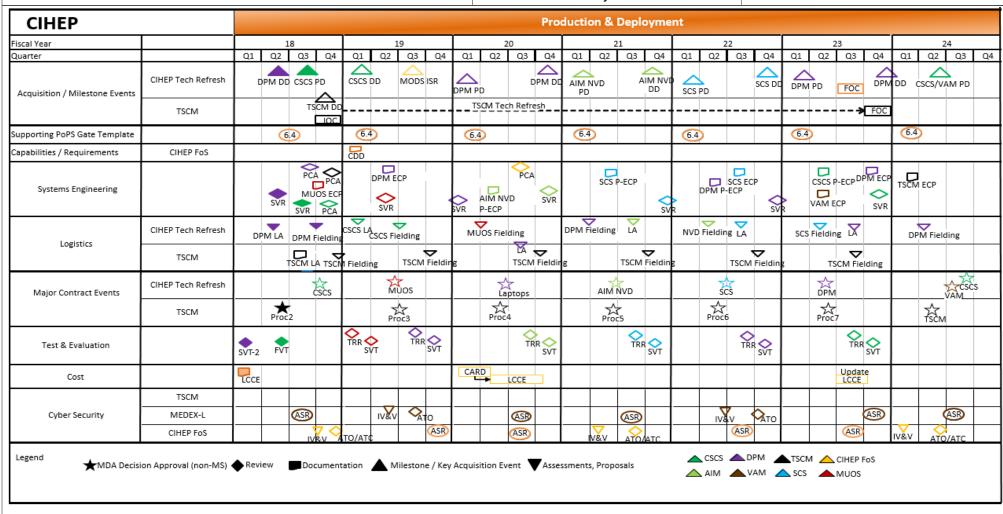


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity

1319 *l* 7

R-1 Program Element (Number/Name)

Project (Number/Name)

PE 0206625M / USMC Intelligence/

Electronics Warfare Sys

2272 I Intel Command and Control (C2) Sys

Date: March 2019

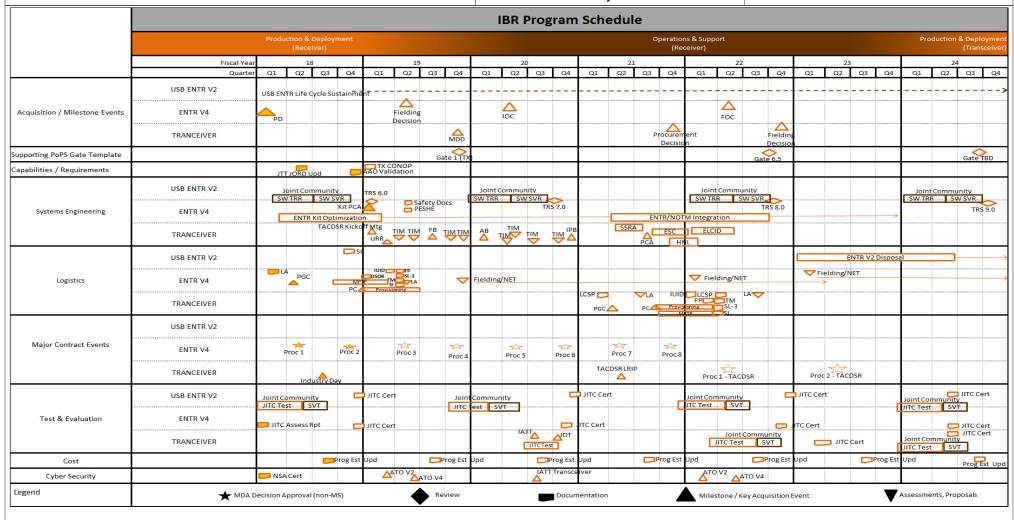


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

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

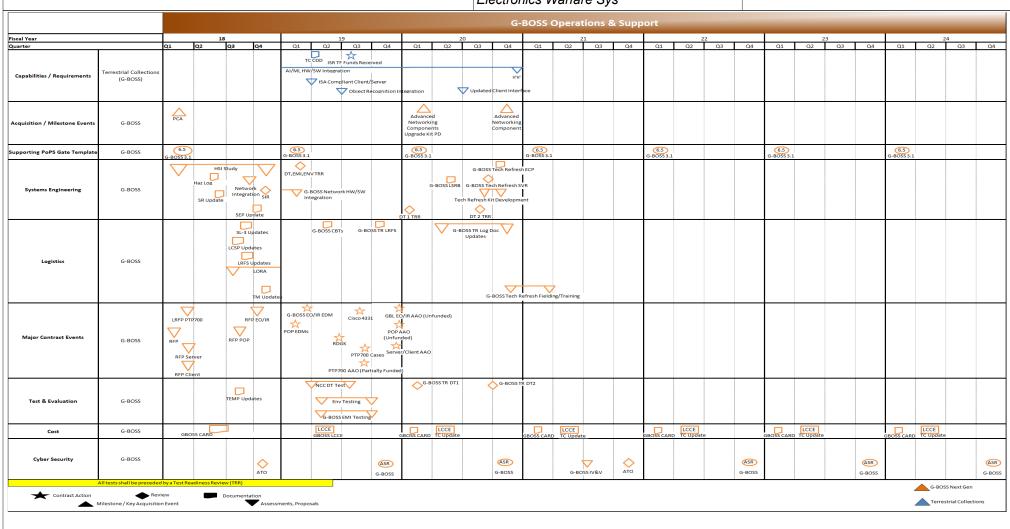


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

R-1 Program Element (Number/Name)

Date: March 2019

Appropriation/Budget Activity 1319 / 7

PE 0206625M / USMC Intelligence/

Project (Number/Name)

Electronics Warfare Sys

2272 I Intel Command and Control (C2) Sys

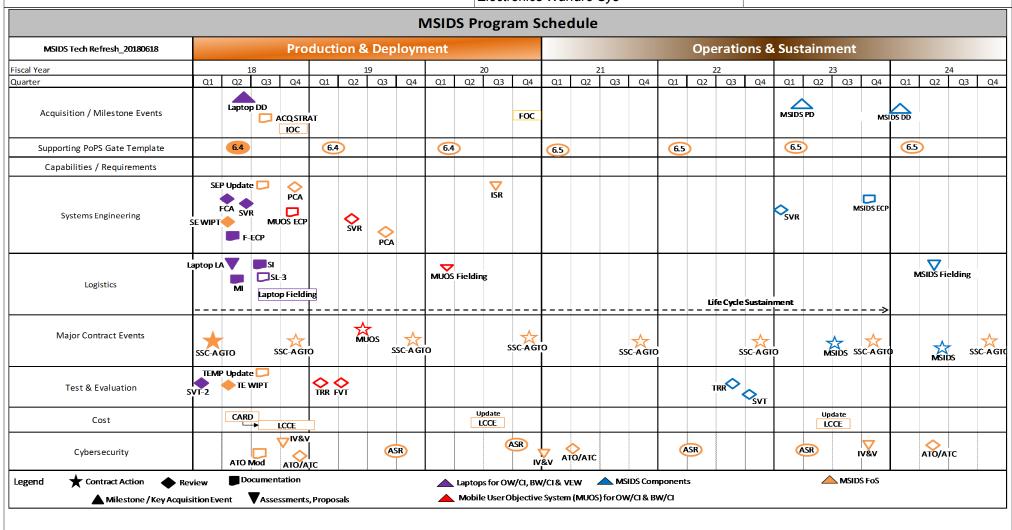


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Date: March 2019

Appropriation/Budget Activity

1319 / 7

R-1 Program Element (Number/Name)
PE 0206625M / USMC Intelligence/

Electronics Warfare Sys

Project (Number/Name)

2272 I Intel Command and Control (C2) Sys

						TRSS	SoS	Pro	gran	Sch	edu	le														
TRSS SoS_1.85_2018-11-20 Constrained					Prod	uction	n & De	ploy	ment						T	erre	strial	Coll	ectio	ns O	pera	tions	& Su	stain	men	t
Fiscal Year		FY2018			FY201	19		F	Y2020			FY2	021			FY2	022			FY2	2023			FY20	)24	
Quarter	Q1	Q2 C	Q3 Q4	Q1			Q4 Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	04	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Acquisition / Milestone Events			SMG/SM			ColorCam	🔼 SIÞR PD			OR DD							△SM	/IG PD			Δτ	RSS NG			Δπ	RSS N
Supporting PoPS Gate							6.5	TRSS	6.1																	
Capabilities / Requirements																										
Systems Engineering			◆ Lapto		♦ннр	♦ HHI PM/CSR N	PM/CSR S		SDR PCA								▽	SoS ILA								
Logistics	Log D	oc Update		SDR Pro	reries M Prov/Do /Doc Updat	tes Sot	- 1																			
Major Contract Events	★ssc	-A GTO	1	SSC-A	GTO HHP SDR	MX Y	SSC-AG	то		<b>☆</b> S€E-AGT	) )	<del></del> /	₹ <b>Tak</b> ss	C-A GT	ı		S	☆ SC-AG	О		9	\$ SSC-A GT	0		SSC	-AGI
Test & Evaluation		aptop SVT-2 aptop TRR VL			ration Test	t HHPM SV	<sup>1</sup> ∇	Product	Develop	ment	<b>V</b> apt	op Test	& Evalua	tion	<b>V</b> Pro	oduct De	evelopn	nent∨	<b>▼</b> Pro	oduct De	evelopn	nent	<b>▼</b> Pro	oduct Dev	relopm	ent <b>\</b>
Cost		CARD	LCCE						Update							_	Update LCCE								Jpdate LCCE	
Cybersecurity			IV&V ATO	O/ATC(RM	(AS	Ð			<b>ASR</b>	)			V IV&V AT	O/ATC	Ø	(SR)			0	ISR)			(	ASR)		
Legend   MDA Decision Approval (non-MS)  Milestone / Key Acquisition Even		Review	_	Documer osals	ntation	4	TRSS S TRSS 6 Laptop	.1		4	<b>H</b> an	d-Held F	nsor Rad Programr ata Recor	ner-Mo	nitor, V			1) 🚄	Shor				Color Ca	ameras (S	SR Colo	r Cam

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity

1319 / 7

R-1 Program Element (Number/Name)

Project (Number/Name) PE 0206625M / USMC Intelligence/

Electronics Warfare Sys

2272 I Intel Command and Control (C2) Sys

Date: March 2019

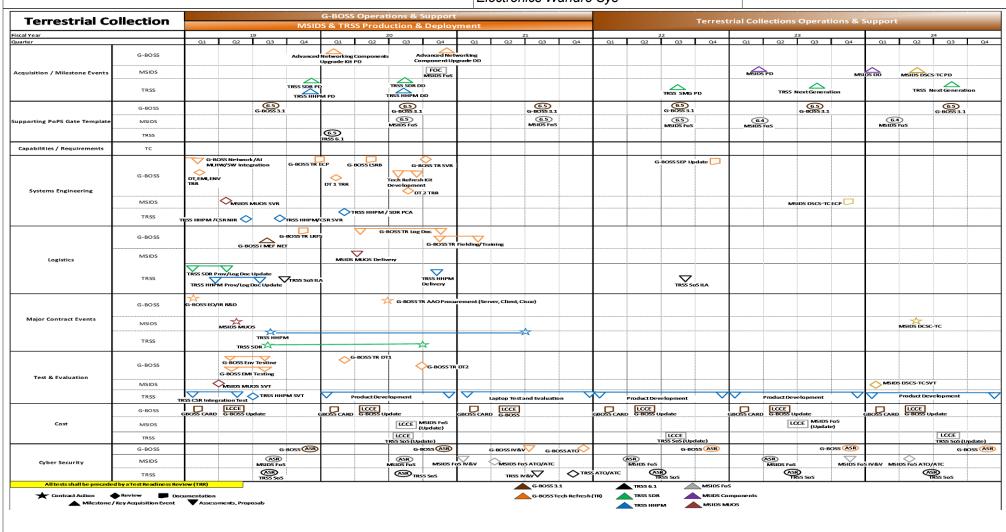


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity

1319 / 7

PE 0206625M / USMC Intelligence/

Date: March 2019

Project (Number/Name)
2272 / Intel Command and Control (C2) Sys

# **CESAS Program Schedule**

Electronics Warfare Sys

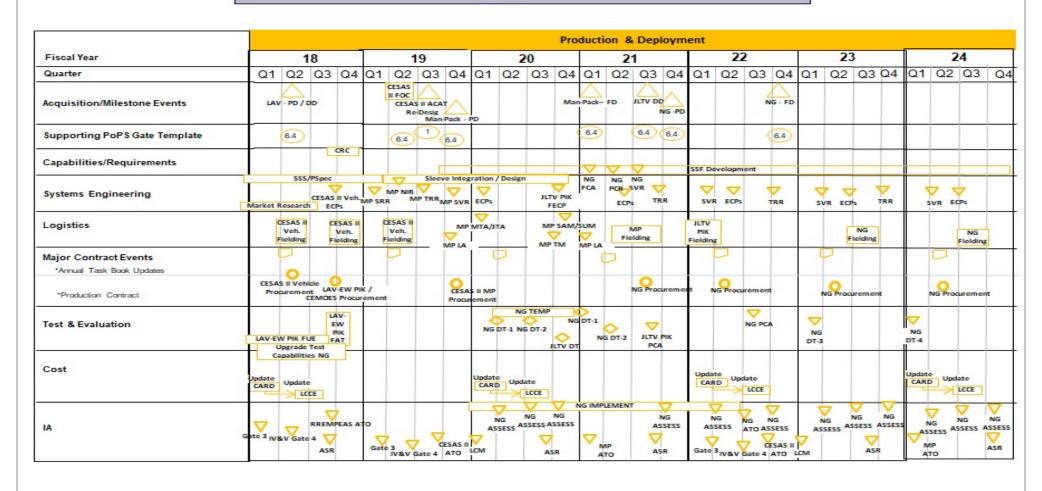


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy Date: March 2019 R-1 Program Element (Number/Name) Project (Number/Name) **Appropriation/Budget Activity** 2272 I Intel Command and Control (C2) Sys PE 0206625M / USMC Intelligence/ 1319 / 7 Electronics Warfare Sys Capabilities/ Req't TSCS FoS Schedule Engineering and Manufacturing Production & Deployment Operations & Support Fiscal Year 18 20 22 23 24 Quarter Q2 Q3 Q4 Q2 Q3 Q4 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q3 Q2 Q3 Q2 MS C/ Increment 1 Increment 2 Inc 2 PD Acquisition/Milestone Events Fielding Decision Increment 3 Inc 3 PD Sustainment
Sustainment Decision 0 Increment 4 nc 4 PD Supporting PoPS Gate (0.1) (0.3) 0.4 0.4 0.4 6.4 Template Capabilities / Requirements SVR **VPCA** Increment 1 Increment 2 ASPNIR Systems Engineering SRR NIR Increment 3 FCA O Increment 4 MS CILAV LRFS SP OF FIElding ILA Increment 1 VILA TM updat ILAV Q<sub>M</sub> Increment 2 Logistics Increment 3 Fleld IM MPTP update Increment 4 Testitem Increment 1 ASP RFI Test Item Mods Case Increment 2 **Major Contract Events** Testitem Increment 3 Procurement Increment 4 Procurement Increment 1 Increment 2  $\nabla$ Test & Evaluation Increment 3 Increment 4 Undate Update Cost LCCE Update Update LCCE Update ATO ATO. Cyber Security MDA Decision Approval (non-MS) Documentation \* LCSP & MPTP will be updated as necessary for Fielding Decisions. Assessments, Proposals Milestone / Key Acquisition Event

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy			Date: March 2019
1319 / 7	,	, ,	umber/Name) I Command and Control (C2) Sys

# Schedule Details

	Sta	art	En	d
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 2272				
TCAC Delivery Decision (TWS)	2	2019	2	2019
TCAC RAWS Procurement Decision	4	2019	4	2019
IAS Tier I Procurement Decision	4	2019	4	2019
SCI COMMS Monitor & Control Device Test Asset Procurement	2	2019	2	2019
SCI COMMS SPEC A Test Asset	3	2019	3	2019
SCI COMMS Monitor & Control Device Procurement	4	2019	4	2019
SCI COMMS SPEC A Procurement	4	2019	4	2019
SCI COMMS Man-Packable Test Asset Procurement	2	2020	2	2020
SCI COMMS HBSI-PT procurement	3	2020	3	2020
SCI COMMS Modem Procurement	3	2020	3	2020
CIHEP Data Processing Module (DPM) Delivery Decision	2	2018	2	2018
CIHEP Commercial Satellite Communications Set (CSCS) Procurement Decision	3	2018	3	2018
CIHEP Technical Surveillance Countermeasures (TSCM) Delivery Decision	4	2018	4	2018
CIHEP Technical Surveillance Countermeasures (TSCM) IOC	4	2018	4	2018
CIHEP Commercial Satellite Communications Set (CSCS) Delivery Decision	1	2019	1	2019
CIHEP Data Processing Module (DPM) Procurement Decision	1	2020	1	2020
CIHEP Data Processing Module Delivery Decision	4	2020	4	2020
IBR Procurement Decision (ENTR)	1	2018	1	2018
IBR Fielding Decision (ENTR)	2	2019	2	2019
IBR Initial Operational Capability (IOC) (ENTR)	2	2020	2	2020
IBR Full Operational Capability (FOC) (ENTR)	2	2022	2	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy

Appropriation/Budget Activity

1319 / 7

R-1 Program Element (Number/Name)
PE 0206625M / USMC Intelligence/
Electronics Warfare Sys

Date: March 2019

Project (Number/Name)
2272 / Intel Command and Control (C2) Sys

	Sta	art	En	nd
Events by Sub Project	Quarter	Year	Quarter	Year
GBOSS Program Change Assessment (PCA)	1	2018	1	2018
MSIDS Delivery Decision (DD)	2	2018	2	2018
MSIDS IOC	4	2018	4	2018
TRSS Delivery Decision SMG/SMG-Lite Components (Laptops)	3	2018	3	2018
TRSS IOC/FOC SMG/SMG-LITE Components (Laptops)	4	2018	4	2018
TRSS Procurement Decision (PD) RR,UGSS,SMG/SMG-Lite Components (Common Sensor Radio- MILWAVE)	4	2018	4	2018
Terrestrial Collection: TRSS Signature Data Recorder (SDR) Procurement Decision	4	2019	4	2019
Terrestrial Collection: TRSS Hand Held Programmable Monitor (HHPM) Procurement Decision	4	2019	4	2019
Terrestrial Collection: G-BOSS Advanced Networking Components Procurement Decision	1	2020	1	2020
Terrestrial Collection: TRSS Hand Held Programmable Monitor (HHPM) Delivery Decision	3	2020	3	2020
Terrestrial Collection: MSIDS FoS FOC	4	2020	4	2020
Terrestrial Collection: GBOSS Advanced Networking Components Delivery Decision	4	2020	4	2020
CESAS LAV-EW PIK Procurement Decision	2	2018	2	2018
CESAS Man-Packable Increment II/Phase I Procurement Decision	4	2019	4	2019
TPCS-MPC Delivery Decision (Tactical Server Sleeve)	2	2019	2	2019
TSCS Procurement Decision (Increment 1)	3	2019	3	2019
TSCS Production Contract Award (Increment 1)	4	2019	4	2019
TSCS Developmental Test (Increment 2)	1	2020	1	2020
TSCS Fielding Decision (Increment 1)	3	2020	3	2020
TSCS Procurement Decision (Increment 2)	3	2020	3	2020
TSCS Production Contract Award (Increment 2)	4	2020	4	2020
TSCS Fielding Decision (Increment 2)	2	2021	2	2021

Exhibit R-2A, RDT&E Project Ju	stification:	PB 2020 N	lavy							Date: Marc	ch 2019	
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206625M / USMC Intelligence/ Electronics Warfare Sys  Project (Number/Name) 3771 / Tactical Exploitation Capabilities (TENCAP)							ional				
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3771: Tactical Exploitation of National Capabilities (TENCAP)	0.000	0.000	6.475	6.484	-	6.484	6.594	6.731	6.869	7.006	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

#### Note

Beginning in FY 2019, TENCAP funding has been realigned from project 2272 to 3771, Tactical Exploitation of National Capabilities. Realignment of efforts to new BLIs in FY 2019 and beyond reflects USMC Program Management Office (PMO) reorganization to improve support of USMC OPFOR.

#### 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 2020	FY 2020
	FY 2018	FY 2019	Base	OCO	Total
Title: Tactical Exploitation of National Capabilities (TENCAP): Product Development & Technical Assessments	0.000	6.475	6.484	0.000	6.484
Articles:	-	-	_	-	-
FY 2019 Plans:					
- Initiate development, integration, and FUE of innovative national data receipts and dissemination capabilities					
from insertion into MCISRE.					
- Continue to conduct research and development, advanced technology demonstrations, and integration of					
emerging technologies into the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise					
(MCISRE).					
- 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 Science and Technology (S&T)/R&D efforts to bring					
evolutionary intelligence capabilities to the operating forces.					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy				Date: Marc	ch 2019				
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/I PE 0206625M / USMC Intelligence Electronics Warfare Sys		Project (Number/Name) 3771 I Tactical Exploitation of National Capabilities (TENCAP)						
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantit	ies in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total			
<ul> <li>Continue to provide technical assessments and field utility evaluations for emerging intelligence capabilities into the tactical decision making process</li> <li>Continue to support operational planning and enhance operating force cand development of advanced technologies for the MCISRE architecture.</li> <li>Continue training and education efforts by providing the operating forces visualization, and improved mission planning capabilities.</li> <li>Continue efforts to provide transition support to Rapid Reliable Targeting</li> </ul>	with supported simulation,								
FY 2020 Base Plans:  - Continue to conduct research and development, advanced technology demerging technologies into the Marine Corps Intelligence, Surveillance, and (MCISRE).  - Continue to support the Congressionally mandated TENCAP office and a to include the coordination with national agencies, the intelligence communindustry, and academia, for exploration of collaborative Science and Technevolutionary intelligence capabilities to the operating forces.  - Continue to provide technical assessments and field utility evaluations for emerging intelligence capabilities into the tactical decision making process.  - Continue to support operational planning and enhance operating force cand development of advanced technologies for the MCISRE architecture.  - Continue training and education efforts by providing the operating forces visualization, and improved mission planning capabilities.  - Continue efforts to provide transition support to Rapid Reliable Targeting.  - Continue development, integration, and FUE of innovative national data from insertion into MCISRE.	all associated ongoing activities, nity, research laboratories, private hology (S&T)/R&D efforts to bring or the integration of current and sepabilities through the identification with supported simulation, (RRT).								
FY 2020 OCO Plans: N/A									
FY 2019 to FY 2020 Increase/Decrease Statement: There is no significant increase from FY19 to FY20.									
Accomplisi	nments/Planned Programs Subtotals	0.000	6.475	6.484	0.000	6.48			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity	, ,	- , (	umber/Name)
1319 / 7	PE 0206625M / USMC Intelligence/	3771 <i>I Tact</i>	tical Exploitation of National
	Electronics Warfare Sys	Capabilities	s (TENCAP)

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

N/A

#### 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 theintegration of emerging technologies into the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISR-E).

# **E. Performance Metrics**

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity	3	- 3 (	umber/Name)
1319 / 7	PE 0206625M / USMC Intelligence/	3771 <i>I Tac</i>	tical Exploitation of National
	Electronics Warfare Sys	Capabilitie	s (TENCAP)

Product Developme	nt (\$ in M	illions)		FY 2	2018	FY 2	2019	FY 2 Ba	2020 ise	FY 2	2020 CO	FY 2020 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	Total Cost	Target Value of Contract
TENCAP	C/CPFF	DTIC : FT BELVOIR, VA	0.000	0.000		6.025	Nov 2018	6.019	Nov 2019	-		6.019	Continuing	Continuing	Continuing
TENCAP	WR	SSCLANT : CHARLESTON, SC	0.000	0.000		0.450	Oct 2018	0.465	Oct 2019	-		0.465	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		6.475		6.484		-		6.484	Continuing	Continuing	N/A
															Target

	Prior Years	FY 2	2018	FY 2	2019	FY 2 Ba	020 se		2020 CO	FY 2020 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		6.475		6.484		-		6.484	Continuing	Continuing	N/A

Remarks

						O.	10L	700		<b>'</b>												
xhibit R-4, RDT&E Schedule Pr	ofile: PB	2020 N	lavy														D	ate: N	larch	2019	9	
ppropriation/Budget Activity 319 / 7		R-1 Program Element (Number/N PE 0206625M / USMC Intelligence, Electronics Warfare Sys					nce/ 3771 / 7			71 <i>I Ta</i>	ct (Number/Name)   Tactical Exploitation of Nation   Dilities (TENCAP)				f Natio	nal						
Proj 3771	FY	2018		FY 201	9	F	2020	0	F	Y 2021		F	Y 20	22		FY 20	23		FY	2024	4	
	1Q 20	3Q	4Q 1Q	2Q 30	40	1Q 2	Q 3Q	4Q	1Q 2	Q 3Q	4Q 1	Q 2	2Q 3	Q 4Q	1Q	2Q :	3Q	4Q 10	20	30	4Q	
								TEN	CAP F	roduct	Develo	pme	nt									
		1 1	ı	1 1	I	l I	ı			ı	I I	ı	ı	ı			ı	ı	ı	ı		
2020OSD - 0206625M - 3771			·							·		·	·	·			·	·				

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
1319 / 7	PE 0206625M / USMC Intelligence/	3771 I Tactical Exploitation of National
	Electronics Warfare Sys	Capabilities (TENCAP)

# Schedule Details

	Sta	art	E	nd
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 3771				
Continued RDTEN of new and emerging tech into MCISRE	1	2018	4	2024