Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604280N *I JT TACTICAL RADIO SYSTEM (JTRS)*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	691.600	332.855	451.397	330.559	-	330.559	162.168	165.238	159.748	184.574	Continuing	Continuing
0725: *Communication Automation*	18.412	22.405	29.643	16.265	-	16.265	12.182	4.120	4.204	4.293	Continuing	Continuing
0728: *Navy Multiband Terminal (NMT)*	24.938	29.600	47.629	28.317	-	28.317	7.479	7.768	9.821	9.986	Continuing	Continuing
0729: *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*	47.590	73.767	107.680	100.029	-	100.029	5.886	2.193	1.015	1.035	Continuing	Continuing
0742: *Sub Integrated Ant System*	46.485	27.623	17.473	25.468	-	25.468	28.945	36.805	34.140	31.831	Continuing	Continuing
0921: *NAVSTAR GPS Equipment*	120.575	33.798	37.581	62.705	-	62.705	14.811	23.050	21.247	21.693	Continuing	Continuing
1411: *Sub Tact Comm System*	39.981	14.274	17.043	16.218	-	16.218	15.822	14.931	15.232	15.550	Continuing	Continuing
2126: *ATDLS Integration*	61.057	29.365	31.874	26.375	-	26.375	23.650	23.642	23.719	24.227	Continuing	Continuing
3020: *MIDS/JTRS*	182.383	80.056	149.068	40.195	-	40.195	39.218	37.191	35.611	60.883	Continuing	Continuing
3078: *Digital Modular Radio*	52.190	5.932	7.115	6.629	-	6.629	6.691	6.822	6.961	7.110	Continuing	Continuing
3341: *Network Tactical Common Data Link*	90.436	8.005	3.017	5.344	-	5.344	4.403	5.585	4.603	4.702	Continuing	Continuing
4011: *Naval Coastal Warfare Surv and C4I Sys*	7.553	3.203	3.274	3.014	-	3.014	3.081	3.131	3.195	3.264	Continuing	Continuing
9999: *Congressional Adds*	0.000	4.827	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.827

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 290, 554

A. Mission Description and Budget Item Justification

Programs will implement digital system-of-systems engineering by using tools such as Model Based System Engineering (MBSE) and Digital Twins to create adaptable digital models to optimize system engineering from design, development and testing to operations and sustainment. Programs will use Development, Security and Operations (DevSecOps) processes for continuous development, integration, testing and deployment, along with common platform services such as Agile Core Services (ACS), for faster fielding of capability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604280N *I JT TACTICAL RADIO SYSTEM (JTRS)*

(0725) The details of Program Element 0604280N, Project 0725 for BFTN/BRSE are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

(0728) The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

(0728) Navy Global Broadcast System (GBS) is a member of the larger Joint C4I program, providing high speed (up to 45 Mbps per transponder)/large volume information/data delivery to forces afloat, ashore, and Naval Special Warfare Command. Leveraging the NMT antenna, GBS provides a one-way broadcast to Naval maritime forces across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence in support of RC3. GBS Transmission Security (TRANSEC) is an operational requirement from the Joint GBS ORD and provides robust datalink protection of both uplink and downlink for the GBS broadcast. GBS is evaluating PTW solutions to meet the TRANSEC mandate. The Air Force & Army Anti-Jam Modem (A3M) and the WAMS are PTW solutions that are under consideration. Navy GBS will require extensive development activities for the new PTW modem solution and must conduct a FOT&E with Joint Services. Overall program efforts include technology insertion studies required to support satellite communications.

(0729) Satellite Communications: The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

(0742) Submarine Integrated Antenna System: The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

(0921) Navigation Satellite Timing & Ranging (NAVSTAR) Global Positioning System (GPS) project (0921) encompasses the Navy's efforts to pace the growing threat to GPS Navigation through the fielding of new GPS receivers, Anti-Jam (AJ) Antennas, and Assured-Positioning Navigation and Timing (A-PNT) technologies across all Navy platform types. NAVSTAR GPS is a group of A-PNT systems that provides authorized users with secure, worldwide, all weather, three dimensional position, velocity, and precise time data. NAVSTAR GPS provides A-PNT capability to Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) and combat systems in standalone and networked architectures throughout air and maritime domains. This project is comprised of four distinct efforts: Sea Navigation Warfare (NAVWAR), GPS-based Positioning, Navigation, and Timing (PNT) Service (GPNTS), Air Navigation Warfare (NAVWAR) and GPS Modernization. Sea NAVWAR provides AJ antennas to surface and subsurface platforms; GPNTS provides GPS receivers and A-PNT technology to surface platforms; Air NAVWAR provides AJ antennas, and GPS Modernization provides GPS receivers to air platforms. Research, Development, Testing and Evaluation (RDT&E) funds are used to perform all the non-recurring GPS Surface Ship, and Aircraft Development, Integration, and Testing efforts in support of NAVSTAR GPS.

FY2025 request will fund the following GPS Surface Ship, Submarine and Aircraft Development, Integration and Test efforts in support of NAVSTAR GPS: continue investigation of enhanced Anti-Jam (AJ) capabilities for integration into existing Sea NAVWAR antenna systems, continue efforts to develop and test a GPNTS system capable of hosting the Automated Celestial Navigation Systems (ACNS) below deck hardware, complete ground and flight testing of the Multi-Platform Anti-Jam

Global Positioning System Navigation H-Antenna Integration (MAGNA-I) on the AH-1Z/UH-1Y helicopters, and integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System/Inertial Navigation System (GPS/INS) (EGI); ANAV-3M and LN-251M, due to delays in development of M-Code capable Embedded GPS/INS (EGI-M).

(1411) Submarine Tactical Communications System: The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

(2126) Tactical Data Link (TDL) systems includes the Advanced Tactical Data Link Systems (ATDLS) integration programs, specifically Link 16 Network, Command and Control Processor (C2P) and Link Monitoring and Management Tool (LMMT).

FY25 JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under operational systems development because it encompasses engineering and manufacturing development for upgrade of existing operational systems.

Link 16 Network Program provides shipboard and shore integrated Link 16 capability through the fielding of Joint Tactical Information Distribution System (JTIDS), Multifunctional Information Distribution System (MIDS) on Ships (MOS) and MOS Modernization (MOS Mod) systems, including transmit and receive antennas. JTIDS utilizes the JTIDS terminal, MOS utilizes either the MIDS-Low Volume Terminal (LVT) or MIDS Joint Tactical Radio System (JTRS) terminal, and MOS Mod utilizes the MIDS JTRS terminals. All Link 16 systems are interfaced to Command and Control Processor (C2P). The JTIDS terminal is no longer in production, but is undergoing JTIDS Product Improvement (JPI) to maintain interoperability and security with MIDS-LVT and MIDS JTRS. As part of the product improvement, all shipboard Link 16 terminals are required to have Dynamic Network Management (DNM), Crypto Modernization (CM) and Frequency Remapping (FR). MIDS Program Office (MPO) is developing additional improvements to the MIDS JTRS terminals. The MIDS-LVT will have Link 16 Enhanced Throughput (ET) and the MIDS JTRS will have the added capability of four networks via Concurrent Multi-Netting (CMN) with Current Contention Receive (CCR) and Tactical Targeting Networking Technology (TTNT).

Command and Control Processor (C2P): The two Research Development Test & Evaluation (RDT&E) initiatives are 1) C2P Technology Refresh (TR) cyber security update and 2) C2P Modernization which now includes Link 22 integration. C2P TR cyber security update is a new initiative driven by recently discovered cyber security risk to the C2P system in
support of the Ballistic Missile Defense (BMD) mission. This update is planned to support acceleration on all AEGIS BMD ships. C2P Modernization funds the transition of the legacy Compiler Monitor System (CMS-2Y) software code to a modern software language. This is required to sustain the system software, to adequately address growing cyber security and
operational availability challenges and to enable more affordable transition to new hardware processing components as a result of commercial off the shelf processor obsolescence.

Link Monitoring and Management Tool (LMMT) is a system delivered on commercial off-the-shelf hardware (HW) providing gateway functions for multiple Tactical Data Link(TDL) interface, routing and display of TDL data to include Link 16, Joint Range Extension (JRE) and Link 22. LMMT is also capable of performing TDL network monitoring and

management, data forwarding between the TDLs and providing tactical data to the Integrated Air and Missile Defense (IAMD), Ballistic Missile Defense (BMD) network, and Global Command and Control System (GCCS) for establishing the common operational picture. LMMT requirements will be incrementally developed and delivered in capability drops via the
Joint Capabilities Integration Development System (JCIDS) IT Box approach.

(3020) The Multifunctional Information Distribution System (MIDS) program office is the Performing Activity for the Navy (Lead Service for Department of Defense (DOD)), Link 16 capability and consists of two (2) product lines, MIDS Low Volume Terminal (LVT) (legacy hardware defined radio) and MIDS Joint Tactical Radio System (JTRS) (software defined radio). MIDS-LVT effort is a cooperative development program between France, Germany, Italy, Spain, and the United States with United States joint service participation (Navy, Army, Air Force), and has provided over 11,000 terminals to 48 Nations providing interoperability with North Atlantic Treaty Organization (NATO) and coalition partners. The Department of Defense (DoD) established the program to design, develop, and deliver low volume, lightweight tactical information system terminals for U.S. and allied fighter aircraft, bombers, helicopters, ships, and ground sites. MIDS-LVT significantly increases force effectiveness and minimizes hostile actions and friend-on-friend engagements. MIDS-LVT Block Upgrade 2 was executed as an Engineering Change Proposal (ECP) and provides the critical upgrades to the MIDS-LVT Terminal to enable U.S., Coalition and International partners' ability to meet the National Security Agency (NSA) mandated timelines for Cryptographic Modernization (CM) and the National Telecommunications and Information Agency (NTIA) and Federal Aviation Agency (FAA) mandated timelines for Frequency Remapping (FR).

Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS), designed as a Pre-Planned Product Improvement (P3I) and executed as an Engineering Change Proposal (ECP) to the production MIDS Low Volume Terminal (LVT) configuration, and is fully compatible with MIDS-LVT. The MIDS JTRS Core Terminal achieved Full Production and Fielding (FP&F) in March 2012. It facilitated the JTRS incremental approach for fielding advanced JTRS transformational networking capability and transformed the MIDS-LVT into a 4-channel, Software Communications Architecture (SCA) compliant, Joint Tactical Radio. A form-fit-function replacement to MIDS-LVT, MIDS JTRS also adds three programmable 2 Megahertz (MHz) to 2 Gigahertz (GHz) channels capable of hosting the JTRS legacy and networking waveforms. In addition to Link 16, Tactical Air Navigation (TACAN), and voice functionality found in MIDS-LVT, MIDS JTRS has four channels and adds capabilities such as Link 16 Enhanced Throughput (ET), Link 16 FR, software programmability, CM, and Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4).

MIDS JTRS Tactical Targeting Network Technology (TTNT), is a block upgrade to the MIDS JTRS CMN-4 Terminal providing an Internet Protocol-based networking capability on tactical aircraft. TTNT is a low latency, high throughput waveform that has the capability to support data exchange between fast-moving tactical aircraft, weapons, and unmanned aircraft, in addition to air, land, and sea-based command and control nodes, in a variety of air-to-air and air-to-ground missions including time sensitive targeting, air warfare, close air support, non-traditional ISR, and anti-surface warfare. TTNT and MIDS JTRS CMN-4 are critical Tactical Data Link capabilities and directly supports Naval Integrated Fire Control (NIFC) capability requirements. These capabilities provide Joint Airborne Network-Tactical Edge functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise.

The FY 2025 Budget completes Mission Optimized Waveform operator interface and moves that capability into qualification and test by incorporating it into an integrated baseline (IB). The IB software qualification/testing and Electromagnetic Compatibility Features (EMCF) testing will begin. The FY 2025 budget also continues funding for the Tactical Airborne Reference Implementation Lab (TACAIR RIL), and TTNT and Link 16 waveform updates.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604280N *I JT TACTICAL RADIO SYSTEM (JTRS)*

(3078) Digital Modular Radio (DMR) with Integrated Waveform (IW) and Mobile User Objective System (MUOS) capable hardware is the Navy's technical solution for the IW/MUOS requirement. The DMR AN/USC-61(C), is the first software defined radio to become a communications system standard for the U.S. Military. The compact, multi-channel DMR provides 3G, Wideband Code Division Multiple Access (WCDMA) technology, for high speed/capacity voice and data satellite communications. DMR radios currently operate aboard U.S. Navy surface and subsurface vessels, fixed-sites and other Department of Defense (DoD) communication platforms using frequencies ranging from 2 MHz to 2 GHz. Certified to pass secure voice and data at Multiple Independent Levels of Security (MILS) over High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF), and Satellite Communications (SATCOM) channels, the DMR system was developed to the U.S. Navy's specifications and meets all the stringent environmental, Electromagnetic Interference (EMI) and performance requirements for use in the U.S. Fleet. This system is formally specified by both Fleet Commanders as a threshold capability, for global maritime command control and communications in a Distributed Maritime Environment, to execute current warfighting plans and is required for National Command and Control capability. This program is for continued development/integration of the IW and MUOS waveforms into the DMR in accordance with Military Standards 188-181,2,3. Additionally, the enhancements of High Frequency Distribution Amplifier Group (HFDAG), HF Automated Link Establishment (ALE) and Second-Generation Anti-Jam Tactical UHF Radio for NATO (SATURN) will also be developed/integrated into the DMR. HFDAG is a follow-on HF solution to fulfill transmit and receive HF communication capability with various modes of operation, such as ALE, for Navy platforms. HFDAG will utilize the existing DMR as the exciter/receiver. Generation 3 (GEN 3) HF ALE/HF wideband provides Navy users with improved HF communications, increased transmission rates from radio to radio, and serves as a supplement to SATCOM when SATCOM networks are overloaded or unavailable. SATURN is the follow-on HAVEQUICK II anti-jamming solution in accordance with NATO Standardization Agreement 4372. SATURN capability will counter adversaries' jamming efforts and ensure Navy's Assured Command and Control UHF communications operational end-to-end capability as well as enhance interoperability within/between DMR users and with Allied/Coalition partners. IW uses a Time Division Multiple Access (TDMA) communication system in an attempt to improve satellite bandwidth utilization over legacy SATCOM waveforms. This enables demand assigned services on UHF SATCOM networks to support new applications that require better performance and higher channel throughput. The MUOS waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems.

FY2025 DMR will continue MUOS 3.2 development integration efforts and continue the development of necessary components to the second generation Anti-jam Tactical UHF Radio for North Atlantic Treaty Organization (NATO) (SATURN) waveform (6.5.7).

(3341) Network Tactical Common Data Link (NTCDL) provides the ability to transmit/receive real-time Intelligence, Surveillance, and Reconnaissance (ISR) data simultaneously from multiple sources (surface, airborne, sub-surface, man-portable), and exchange command and control information (voice, data, imagery, and Full Motion Video) across dissimilar joint, service, coalition, and civil networks. NTCDL provides warfighters with the capability to support multiple, simultaneous, networked operations with currently fielded Common Data Link (CDL)-equipped air platforms (e.g. MH-60R), in addition to next generation manned and unmanned platforms (e.g., P-8, Triton, MQ-25 (Stingray), small tactical unmanned aircraft systems (STUAS) and Fire Scout). NTCDL is an incremental capability (surface, airborne, sub-surface, and man-portable) providing modular, scalable, multiple-link networked communications. NTCDL benefits the fleet by providing a horizon extension for line-of-sight sensor systems for use in time-critical strike missions and supports tasking, collection, processing, exploitation, and dissemination (TCPED) via its ISR networking capability. NTCDL supports Resilient Command and Control (RC2) through its relay capability, and supports TCPED through its ISR networking capability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604280N *I JT TACTICAL RADIO SYSTEM (JTRS)*

FY 2025 request is for NTCDL completion of reporting and close-out of Tech Evaluation and Initial Operational Test & Evaluation and to continue Capability Enhancement Development.

(4011) The Navy Expeditionary C4I project supports the Navy Expeditionary Combat Command (NECC) mission to detect, deter or interdict potential threats to DoN assets using agile, modular and scalable technology. NECC units have a number of current and future Command, Control, Communications, Computers & Intelligence (C4I) technological requirements for Tactical/Command Operations Center, tactical vehicles, combatant craft, and dismounted personnel. NECC operations require units to maintain effective command and control, develop and display a common tactical picture, and share intelligence and current operational information with higher headquarters, subordinate units, joint forces and coalition allies. Small, Medium, and Large Scale Communication Systems (LSCS) are the C4I hub for the NECC; Navy Enterprise Tactical Command and Control (NETC2) is the converged LSCS baseline. Future C4I research and development include enhanced information transport, network cyber security posture, assured communications in denied environments along with agility and mobility. Funding is required for testing and evaluation of cyber security issues associated with obsolescence of network items and if not addressed will impact the ability of the Program Office to maintain system accreditation under Risk Management Framework (RMF) revoking multiple LSCS assets authority to connectivity on the Department of Defense Information Network (DoDIN). Efforts are in alignment with NECC's strategic Expeditionary Warfare Improvement Program (EXWIP) Integrated Priority Capability List (IPCL) priorities and maintain alignment with greater DoD initiatives, such as Joint Information Environment (JIE), Mission Partner Environment (MPE) in order to maintain interoperability and drive down DoN enterprise costs. FY24 funding supports investigation of cloud and containerization technologies, as well as development of Tier 1 capabilities to support multi-cloud environments.

(C887) FY23 Congressional Addition For Integrated Photonics: Provides funding for the development, test and evaluation of enhanced capabilities for Satellite Communications by furthering Science & Technology (S&T) research and transition activities associated with resilient communications capabilities.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	334.787	451.397	385.531	-	385.531
Current President's Budget	332.855	451.397	330.559	-	330.559
Total Adjustments	-1.932	0.000	-54.972	-	-54.972
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	7.363	0.000			
• SBIR/STTR Transfer	-9.294	0.000			
• Program Adjustments	0.000	0.000	-54.765	-	-54.765
• Rate/Misc Adjustments	-0.001	0.000	-0.207	-	-0.207

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604280N *I JT TACTICAL RADIO SYSTEM (JTRS)*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 9999: *Congressional Adds*		
Congressional Add: *Integrated photonic systems*	4.827	0.000
Congressional Add Subtotals for Project: 9999	4.827	0.000
Congressional Add Totals for all Projects	4.827	0.000

Change Summary Explanation

(0725) R-2 Change summary is provided in the classified budget justification books.

(0728) R-2 Change summary is provided in the classified budget justification books.

(0729) R-2 Change summary is provided in the classified budget justification books.

(0742) R-2 Change summary is provided in the classified budget justification books.

(0921) The FY2025 $10.215M increase since previous President's Budget Submission is to support Global Positioning System (GPS) Modernization integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System/Inertial Navigation System (GPS/INS) (EGI); ANAV-3M and LN-251M, due to delays in development of M-Code capable Embedded GPS/INS (EGI-M).

Schedule Changes: CD4 Independent Verification and Validation (IV&V) was updated from FY 2024 to FY 2025 as requirements are continued to be defined, which subsequently shifted CD4 Operational Test Readiness Review (OTRR) from FY 2025 to FY 2026, rephased CD4 Development Testing (DT) from FY 2024 to FY 2025, and postponed CD4 Operational Testing (OT) from FY 2025 to FY 2026.

(3020) The FY 2025 total decrease by $119.782M since the previous President Budget's FY 2024 submission is due to no longer funding the new Advanced Tactical Datalinks (ATDL) waveform for development and integration into the Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) terminal.

(3078) FY 2025 minor program decrease of $0.239M from previous President's Budget has minimal impact to program.

(3341) FY 2025 minor program decrease of $0.145M from previous President's Budget has minimal impact to program.

(4011) FY 2025 minor program decrease of $0.048M from previous President's Budget has minimal impact to program.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0725 / *Communication Automation*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
0725: *Communication Automation*	18.412	22.405	29.643	16.265	-	16.265	12.182	4.120	4.204	4.293	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Battle Force Tactical Network (BFTN)	22.405	29.643	16.265	0.000	16.265
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.					
FY 2025 Base Plans: The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.					
Accomplishments/Planned Programs Subtotals	22.405	29.643	16.265	0.000	16.265

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/3057: *Battle Force Tactical Network (BFTN)*	34.112	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0725 / *Communication Automation*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/2437: *Battle Force Tactical Network (BFTN)*	0.000	74.180	104.119	-	104.119	105.181	104.404	105.848	108.115	Continuing	Continuing

Remarks

OPN LI 3057 is a shared line; funding identified above is for BFTN efforts.
Beginning in FY24, BFTN's OPN funding moved from BLI 3057 to BLI 2437. This budget is classified SECRET//NOFORN and is submitted annually to Congress in the classified budget justification books.

D. Acquisition Strategy

The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0725 / *Communication Automation*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	Various	Not Specified : Not Specified	17.228	20.414	Oct 2022	27.498	Oct 2023	15.816	Oct 2024	-		15.816	Continuing	Continuing	Continuing
		Subtotal	17.228	20.414		27.498		15.816		-		15.816	Continuing	Continuing	N/A

Remarks

The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	Various	Not Specified : Not Specified	1.184	0.934	Nov 2022	0.000		0.000		-		0.000	0.000	2.118	-
		Subtotal	1.184	0.934		0.000		0.000		-		0.000	0.000	2.118	N/A

Remarks

The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	Various	Not Specified : Not Specified	0.000	1.057	Oct 2022	1.485	Oct 2023	0.449	Oct 2024	-		0.449	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	Various	Not Specified : Not Specified	0.000	0.000		0.660	Oct 2023	0.000		-		0.000	0.000	0.660	-
		Subtotal	0.000	1.057		2.145		0.449		-		0.449	Continuing	Continuing	N/A

Remarks

The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

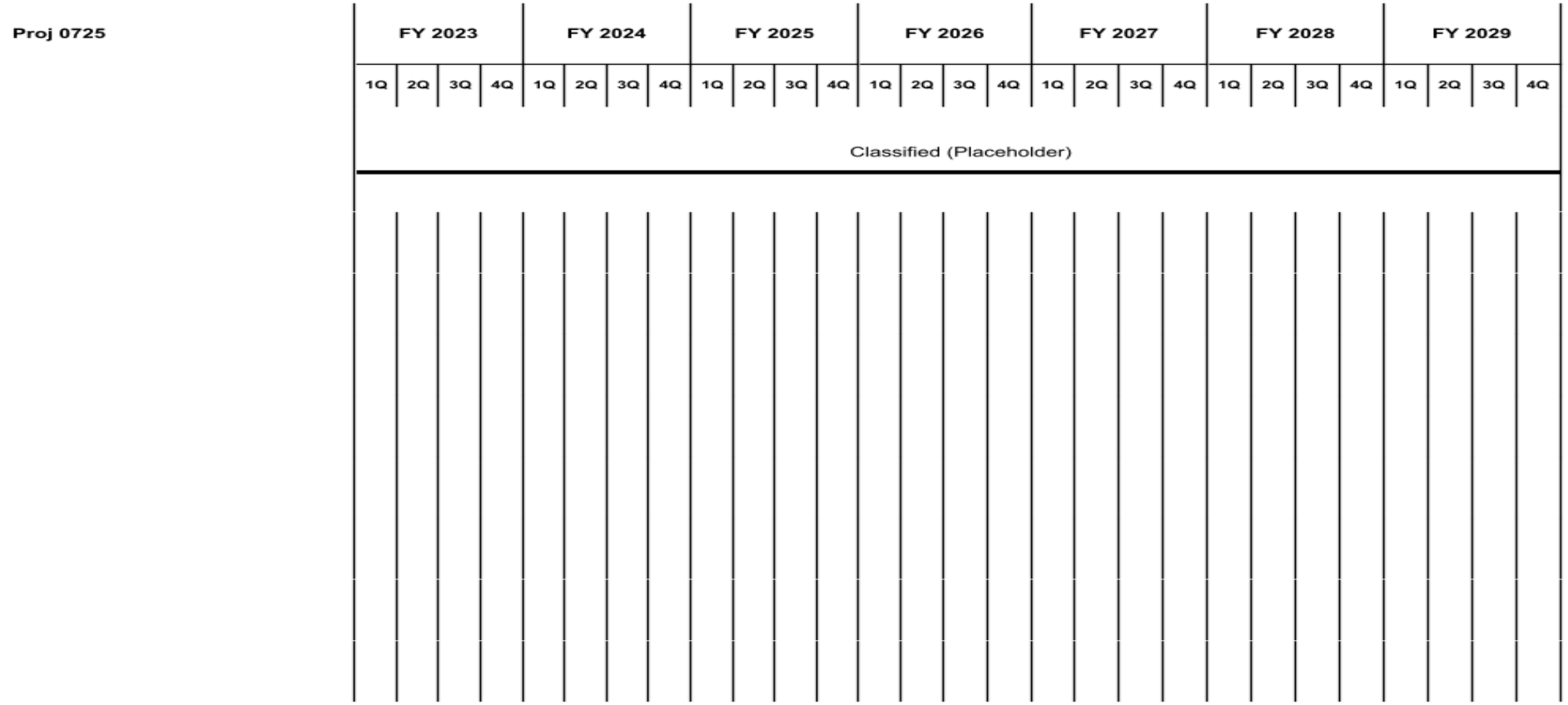
Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0725 / *Communication Automation*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.412	22.405		29.643		16.265		-		16.265	Continuing	Continuing	N/A

Remarks

The details of Program Element 0604280N Project 0725 are classified SECRET//NOFORN and are submitted annually to Congress in the classified budget justification books.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0725 / *Communication Automation*



2025OSD - 0604280N - 0725

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0725 / *Communication Automation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0725				
Classified (Placeholder)	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0728 / *Navy Multiband Terminal (NMT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
0728: *Navy Multiband Terminal (NMT)*	24.938	29.600	47.629	28.317	-	28.317	7.479	7.768	9.821	9.986	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 290

A. Mission Description and Budget Item Justification

The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Navy Global Broadcast System (GBS) is a member of the larger Joint Command, Control, Communications, Computers, and Intelligence (C4I)program, providing high speed (up to 45 Mbps per transponder)/large volume information/data delivery to forces afloat, ashore, and Naval Special Warfare Command. Leveraging the NMT antenna, GBS provides a one-way broadcast to Naval maritime forces across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence in support of RC3. GBS Transmission Security (TRANSEC) is an operational requirement from the Joint GBS ORD and provides robust datalink protection of both uplink and downlink for the GBS broadcast. GBS is evaluating Protected Tactical Waveform (PTW) solutions to meet the TRANSEC mandate. The Air Force & Army Anti-Jam Modem (A3M) and the WAMS are PTW solutions that are under consideration. Navy GBS will require extensive development activities for the new PTW modem solution and must conduct a Follow-On Test & Evaluation (FOT&E) with Joint Services. Overall program efforts include technology insertion studies required to support satellite communications.

Technology Insertion, studies and implementation is necessary for military satellite communications systems development to support emerging technologies for Satellite Communications (SATCOM) programs.

Decrease of $19.312M from FY24 to FY25 is due to completion of GBS Transmission Security (TRANSEC) with FY24 budgeted funding. FY25 funding will support Wideband Anti-Jam Modem System (WAMS) development, integration, test, and certification efforts. This provides Resilient Command, Control, and Communications (RC3) and Distributed Maritime Operations (DMO) capability. Overall RDTE efforts are ramping down with production planned in Q4 of FY25.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: NMT Resilient C3 Development	26.839	45.004	28.167	0.000	28.167
Articles:	-	-	-	-	-
Description: The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET// NOFORN and are submitted to Congress in the classified budget justification books.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0728 / *Navy Multiband Terminal (NMT)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
FY 2024 Plans: The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 Base Plans:*** The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: Global Broadcast System (GBS) Transmission Security (TRANSEC) ***Articles:***	2.611 -	2.475 -	0.000 -	0.000 -	0.000 -
Description: Navy GBS is a member of the larger Joint C4I program, providing high speed (up to 45 Mbps per transponder)/large volume information/data delivery to forces afloat, ashore, and Naval Special Warfare Command. Leveraging the NMT antenna, GBS provides a one-way broadcast to Naval maritime forces across the spectrum of mission areas, to include land, air and naval warfare, special operations, strategic nuclear operations, strategic defense, theater missile defense, and space operations and intelligence in support of RC3. GBS Transmission Security (TRANSEC) is an operational requirement from the Joint GBS ORD and provides robust datalink protection of both uplink and downlink for the GBS broadcast. GBS is evaluating Protected Tactical Waveform (PTW) solutions to meet the TRANSEC mandate. The Air Force & Army Anti-Jam Modem (A3M) and the WAMS are PTW solutions that are under consideration. Navy GBS will require extensive development activities for the new PTW modem solution and must conduct a FOT&E with Joint Services. Overall program efforts include technology insertion studies required to support satellite communications. ***FY 2024 Plans:*** Continue sub-surface development and TRANSEC integration activities as submarine platforms will require significant increase in engineering design changes compared to surface platforms. Participate in GBS joint operational testing & evaluation for Protected Waveform (PTW). ***FY 2025 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0728 / *Navy Multiband Terminal (NMT)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
GBS TRANSEC RDTE efforts conclude in FY25 with FY24 budgeted funding. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Decrease of $2.475M is due to GBS TRANSEC efforts concluding in FY25 with FY24 Budgeted funding.					
Title: Technology Insertion ***Articles:*** ***Description:*** Overall program efforts include technology insertion studies required to support satellite communications. ***FY 2024 Plans:*** Continuing to maintain alignment with the Navy's RC3 strategy and approach, Satellite Communications (SATCOM) programs transitioned from exercising an initial RC3 modem capability to utilizing the Wideband Anti-Jam Modem System (WAMS), which provides protected wideband SATCOM capability to the Fleet. Funds are being utilized to perform studies on how to integrate WAMS into the Satellite Communication (SATCOM) architecture. ***FY 2025 Base Plans:*** Continue to maintain alignment with the Navy's RC3 strategy and approach, Satellite Communications (SATCOM) programs transitioned from exercising an initial RC3 modem capability to utilizing the Wideband Anti-Jam Modem System (WAMS), which provides protected wideband SATCOM capability to the Fleet. Funds required to perform studies on how to integrate WAMS into the Satellite Communication (SATCOM) architecture. ***FY 2025 OCO Plans:*** N/A	0.150 -	0.150 -	0.150 -	0.000 -	0.150 -
Accomplishments/Planned Programs Subtotals	29.600	47.629	28.317	0.000	28.317

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/3216: *NAVY MULTIBAND TERMINAL (NMT)*	24.586	37.921	163.071	-	163.071	269.299	240.393	98.144	100.668	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0728 / *Navy Multiband Terminal (NMT)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost

Remarks

The Other Appropriation represents remaining procurement and installation of NMT production units for Afloat and Shore requirements to reach Full Operational Capability. Funding also includes the procurement and installation of WAMS & AC2 modems as well as the installation of Advanced Time Division Multiple Access (TDMA) Interface Processors (ATIPs), X/KA Back-Fits, and Ashore Antennas.

D. Acquisition Strategy

The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0728 / *Navy Multiband Terminal (NMT)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	C/CPFF	Not Specified : Not Specified	15.635	19.467	Jan 2023	36.690	Jan 2024	22.338	Jan 2025	-		22.338	Continuing	Continuing	Continuing
TRANSEC Development	SS/CPIF	L3 : San Diego, CA	0.750	1.161	Feb 2023	0.975	Feb 2024	0.000		-		0.000	0.000	2.886	-
		Subtotal	16.385	20.628		37.665		22.338		-		22.338	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	WR	Not Specified : Not Specified	3.902	3.310	Nov 2022	3.685	Nov 2023	2.350	Nov 2024	-		2.350	Continuing	Continuing	Continuing
GBS TRANSEC Engineering Support	WR	NIWC PAC : San Diego, CA	0.429	0.600	Jan 2023	0.300	Jan 2024	0.000		-		0.000	0.000	1.329	-
GBS TRANSEC Engineering Support	WR	NIWC LANT : Charleston, SC	0.219	0.300	Jan 2023	0.200	Jan 2024	0.000		-		0.000	0.000	0.719	-
GBS TRANSEC Engineering Support	WR	NUWC : Newport, RI	0.286	0.400	Jan 2023	0.500	Jan 2024	0.000		-		0.000	0.000	1.186	-
		Subtotal	4.836	4.610		4.685		2.350		-		2.350	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	Classified : Classified	2.217	2.541	Nov 2022	3.050	Nov 2023	1.900	Nov 2024	-		1.900	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NIWC PAC : San Diego, CA	0.094	0.150	Jan 2023	0.000	Jan 2024	0.000		-		0.000	0.000	0.244	-
Operational Test & Evaluation (OT&E)	WR	NIWC PAC : San Diego, CA	0.000	0.000		0.500	Jan 2024	0.000		-		0.000	0.000	0.500	-
		Subtotal	2.311	2.691		3.550		1.900		-		1.900	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0728 / *Navy Multiband Terminal (NMT)*	

Management Services ($ in Millions)

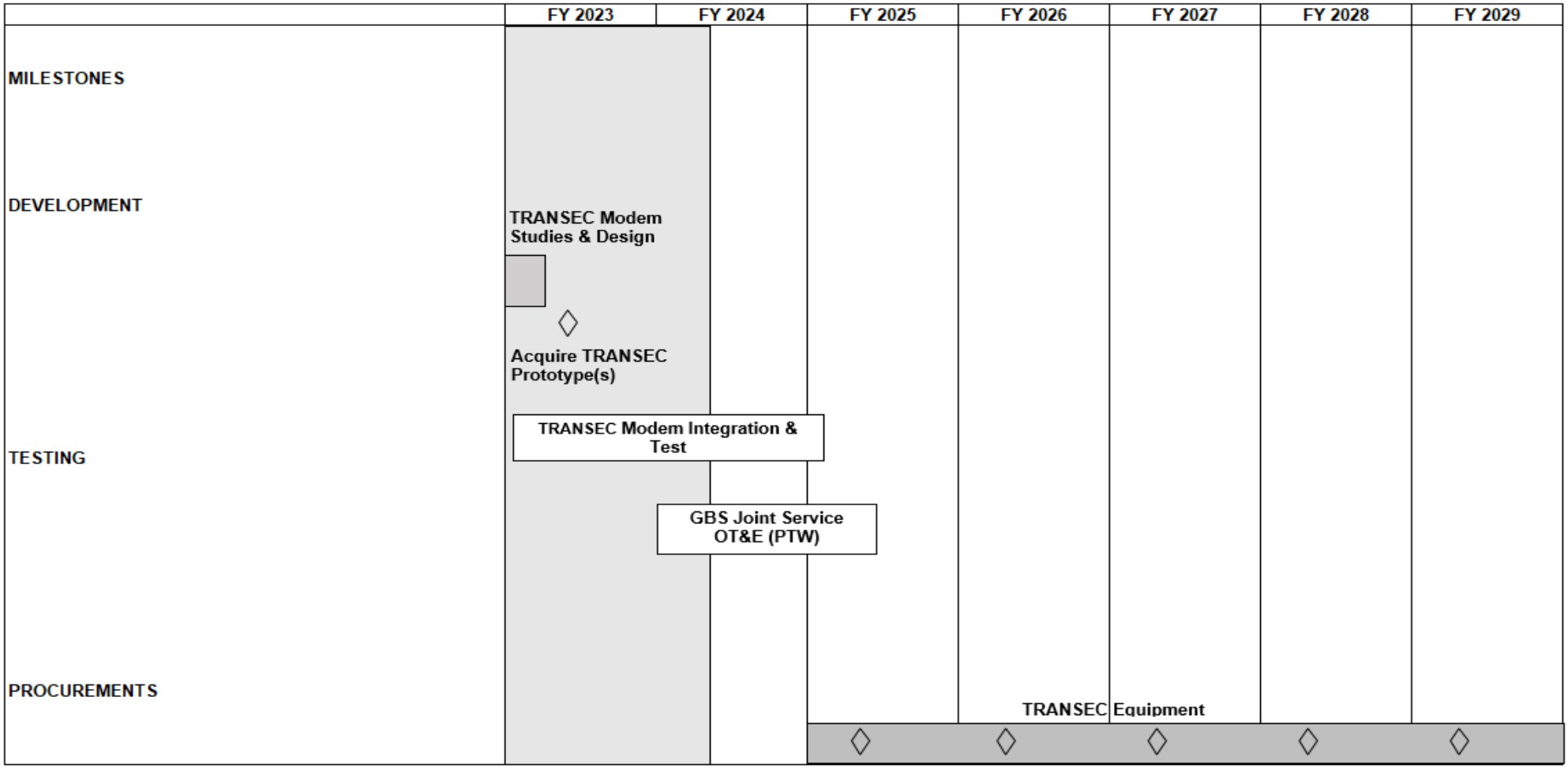
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	C/CPFF	Not Specified : Not Specified	1.406	1.671	Nov 2022	1.729	Nov 2023	1.729	Nov 2024	-		1.729	Continuing	Continuing	Continuing
		Subtotal	1.406	1.671		1.729		1.729		-		1.729	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.938	29.600		47.629		28.317		-		28.317	Continuing	Continuing	N/A

Remarks

The details of Program Element 0604280N, Project 0728 for NMT are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0728 / *Navy Multiband Terminal (NMT)*



Notes:

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0728 / *Navy Multiband Terminal (NMT)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0728				
Classified (Place Holder)	1	2023	4	2028
Global Broadcast System(GBS) TRANSEC: Transec Modem Studies & Design	1	2023	1	2023
Global Broadcast System(GBS) TRANSEC: Transec Prototype	2	2023	2	2023
Global Broadcast System(GBS) TRANSEC: Transec Integration & Test	1	2023	1	2025
Global Broadcast System(GBS) TRANSEC: GBS Joint Service OT&E Protective Waveform (PTW)	1	2024	2	2025
Global Broadcast System(GBS) TRANSEC: TRANSEC Equipment FY25	2	2025	2	2025
Global Broadcast System(GBS) TRANSEC: TRANSEC Equipment FY26	2	2026	2	2026
Global Broadcast System(GBS) TRANSEC: TRANSEC Equipment FY27	2	2027	2	2027
Global Broadcast System(GBS) TRANSEC: TRANSEC Equipment FY28	2	2028	2	2028

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0729 / *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
0729: *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*	47.590	73.767	107.680	100.029	-	100.029	5.886	2.193	1.015	1.035	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 290

A. Mission Description and Budget Item Justification

The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)	73.767	107.680	100.029	0.000	100.029
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 Base Plans: The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Accomplishments/Planned Programs Subtotals	73.767	107.680	100.029	0.000	100.029

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0729 / *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*

D. Acquisition Strategy

The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0729 / *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	34.713	65.717	Jan 2023	95.580	Jan 2024	87.829	Jan 2025	-		87.829	Continuing	Continuing	Continuing
		Subtotal	34.713	65.717		95.580		87.829		-		87.829	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	10.106	6.350	Nov 2022	9.300	Nov 2023	7.200	Nov 2024	-		7.200	Continuing	Continuing	Continuing
		Subtotal	10.106	6.350		9.300		7.200		-		7.200	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	TBD	Not Specified : Not Specified	0.000	0.500	Nov 2022	1.300	Nov 2023	3.000	Nov 2024	-		3.000	Continuing	Continuing	Continuing
		Subtotal	0.000	0.500		1.300		3.000		-		3.000	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	2.771	1.200	Nov 2022	1.500	Nov 2023	2.000	Nov 2024	-		2.000	Continuing	Continuing	Continuing
		Subtotal	2.771	1.200		1.500		2.000		-		2.000	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0729 / *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	47.590	73.767		107.680		100.029		-		100.029	Continuing	Continuing	N/A

Remarks

The details of Program Element 0604280N, Project 0729 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0729 / *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*

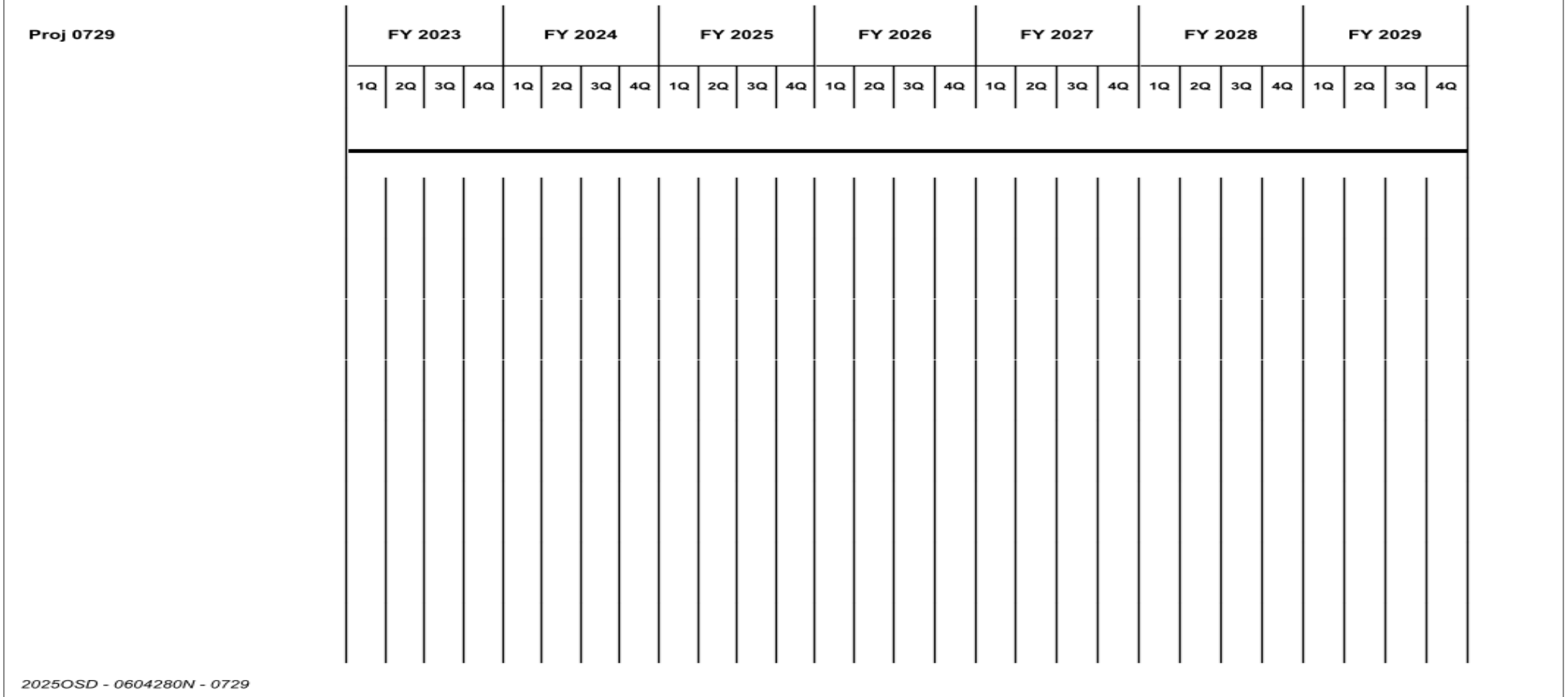


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0729 / *Mobile Advanced Extremely High Frequency (AEHF) Terminal (MAT)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0729				
Classified (Place Holder)	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0742 / *Sub Integrated Ant System*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
0742: *Sub Integrated Ant System*	46.485	27.623	17.473	25.468	-	25.468	28.945	36.805	34.140	31.831	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Advanced High Data Rate (AdvHDR)	18.334	9.443	12.089	0.000	12.089
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 Base Plans: The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: Towed Buoy Antenna (AN/BRR-6/6B)	4.441	3.188	3.839	0.000	3.839
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0742 / *Sub Integrated Ant System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: Antenna Improvements	4.159	4.302	3.533	0.000	3.533
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books ***FY 2025 Base Plans:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: OE-538/BRC Antenna Group (OE-538)	0.000	0.000	2.720	0.000	2.720
Articles:	-	-	-	-	-
FY 2024 Plans: N/A ***FY 2025 Base Plans:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0742 / *Sub Integrated Ant System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: Submarine Communication Transmitter Buoy (SECT)(AN/BST-1) ***Articles:*** ***FY 2024 Plans:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 Base Plans:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.	0.689 -	0.540 -	0.179 -	0.000 -	0.179 -
Title: UC Communications Network (TIMEly) ***Articles:*** ***FY 2024 Plans:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 Base Plans:*** The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:***	0.000 -	0.000 -	3.108 -	0.000 -	3.108 -

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0742 / *Sub Integrated Ant System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Accomplishments/Planned Programs Subtotals	27.623	17.473	25.468	0.000	25.468

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/3130: *Submarine Communication Equipment*	74.569	83.178	68.334	-	68.334	83.344	81.452	93.881	94.863	Continuing	Continuing

Remarks

D. Acquisition Strategy

The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0742 / *Sub Integrated Ant System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	30.895	23.184	Oct 2022	13.550	Oct 2023	21.563	Oct 2024	-		21.563	Continuing	Continuing	Continuing
		Subtotal	30.895	23.184		13.550		21.563		-		21.563	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	2.476	0.643	Oct 2022	1.122	Oct 2023	1.213	Oct 2024	-		1.213	Continuing	Continuing	Continuing
		Subtotal	2.476	0.643		1.122		1.213		-		1.213	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	TBD	Not Specified : Not Specified	9.664	3.160	Oct 2022	2.269	Oct 2023	2.125	Oct 2024	-		2.125	Continuing	Continuing	Continuing
		Subtotal	9.664	3.160		2.269		2.125		-		2.125	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	3.450	0.636	Feb 2023	0.532	Feb 2024	0.567	Feb 2025	-		0.567	Continuing	Continuing	Continuing
		Subtotal	3.450	0.636		0.532		0.567		-		0.567	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0742 / *Sub Integrated Ant System*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	46.485	27.623		17.473		25.468		-		25.468	Continuing	Continuing	N/A

Remarks

- Prior Year cost data is provided under PE 0604503N, Project 0742
- The details of Program Element 0604280N, Project 0742 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0742 / *Sub Integrated Ant System*

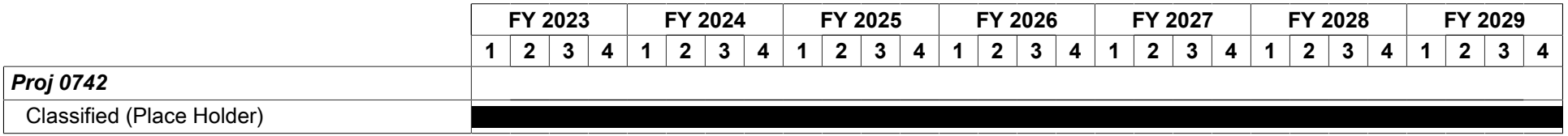


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0742 / *Sub Integrated Ant System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0742				
Classified (Place Holder)	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 0921 / *NAVSTAR GPS Equipment*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
0921: *NAVSTAR GPS Equipment*	120.575	33.798	37.581	62.705	-	62.705	14.811	23.050	21.247	21.693	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The FY 2025 funding request was increased by $25.124M to support integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System / Inertial Navigation System (GPS/INS) (EGI); ANAV-3M and LN-251M, due to delays in development of M-Code capable Embedded GPS/INS (EGI-M).

Navigation Satellite Timing & Ranging (NAVSTAR) GPS project (0921) encompasses the Navy's efforts to pace the growing threat to GPS Navigation through the fielding of new GPS receivers, Anti-Jam (AJ) Antennas, and Assured Positioning Navigation and Timing (A-PNT) technologies across all Navy platform types. NAVSTAR GPS is a group of A-PNT systems that provides authorized users with secure, worldwide, all weather, three dimensional position, velocity, and precise time data. NAVSTAR GPS provides A-PNT capability to Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) and combat systems in standalone and networked architectures throughout air and maritime domains. This project is comprised of four distinct efforts: Sea Navigation Warfare (NAVWAR), GPNTS, Air NAVWAR and GPS Modernization. Sea NAVWAR provides AJ antennas and Global Positioning System (GPS) - Based Positioning, Navigation and Timing (PNT) Service (GPNTS) provides GPS Receivers and A-PNT technology to surface platforms, and Air NAVWAR provides AJ antennas and GPS Modernization provides GPS receivers to air platforms. Research, Development, Testing and Evaluation (RDT&E) funding is used to perform all the non-recurring GPS related development, integration, and testing efforts for surface ships and aircraft in support of NAVSTAR GPS.

The Air and Sea NAVWAR programs provide continued access to GPS information in a denied or impeded electronic environment. Development efforts for both programs provide improvements to various platform type antennas and ensure compatibility with the new GPS M-Code signal. The Air NAVWAR program continues integration efforts using GPS Antenna System (GAS-1), Advanced Digital Antenna Production (ADAP), and other AJ antennas on air platforms while investigating smaller AJ antennas for space constrained platforms and aircraft with unique requirements. The Sea NAVWAR program integrates AJ antennas onto surface and subsurface platforms. The Sea NAVWAR program will continue to research the viability and development of enhanced AJ techniques and technologies.

The GPNTS system is the primary and modernized A-PNT system for the surface Navy to ensure reliable PNT capability and interoperability insertion into GPS receivers and associated C4ISR and Combat Systems in a denied environment. GPNTS pairs with AJ antennas and provides precise A-PNT data required for combat, weapons, command, control, communications, navigation, and other systems, as well as providing the time synchronization critical for network environments. GPNTS will back fit current GPS/PNT systems as well as serve as a forward fit for new platforms. GPNTS is an Open Architecture (OA) development, enabling rapid software and hardware based capability improvements to be inserted without a requirement for single-source contracting. GPNTS will host the United States Space Force (USSF) GPS Directorate-developed Military GPS User Equipment (MGUE) card, allowing access to the new GPS M-Code signal. GPNTS will provide more robust and secure GPS/PNT capabilities than is currently in the Fleet. The system will provide the capability to migrate non-real time GPS data toward a Common Computing Environment (CCE) and provide a path for the integration of advanced navigation systems and sensors. GPNTS provides A-PNT capability to C4ISR and Combat Systems in standalone and networked architectures throughout maritime domains.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

Global Position System (GPS) Modernization integrates and tests the Military GPS User Equipment (MGUE) being developed by the United States Space Force (USSF) and United States Air Force (USAF) Life Cycle Material Command into Naval aircraft to provide improved access to GPS signals in challenged and jammed environments. This project will provide central coordination and management of priorities and funding of multiple parallel efforts to integrate different MGUE into various type/model/series aircraft across multiple platform program offices. Due to the diversity of Naval aircraft, each platform will require unique platform integration and testing that includes software updates to avionics and mission computers as well as modifications to the airframe based on Size, Weight, Power and Cost (SWaP-C) requirements. GPS Modernization delivers increased GPS Anti-Jam (AJ) protection through modernized GPS receivers that will utilize the new Military Code (M-Code) GPS Signal in Space, incorporate enhanced cryptology, enable blue force GPS electronic attack, deliver greater position and time accuracy, and provide improved protection against signal spoofing as compared to legacy receivers. This effort supports Navy compliance with Public Law 111-383 which prohibits using funds after FY2017 to purchase GPS User Equipment unless it is capable of receiving the GPS M-Code signal.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Sea Navigation Warfare (NAVWAR)	1.105	1.100	1.101	0.000	1.101
Articles:	-	-	-	-	-
Description: Sea NAVWAR provides the Warfighter continued access to GPS through the use of AJ Antenna Systems designed to counter GPS Electronic Warfare threats due to intentional and unintentional interference on surface and subsurface platforms through the continued development of AJ antennas. Program currently supports Increment 2 Advanced Digital Antenna Production (ADAP) antenna for surface platforms. Increment 2 ADAP continues to research the viability and development of smaller AJ antennas for surface platforms with SWaP-C restrictions and will ensure compatibility with the Military Code (M-Code) signal. Increment 2 ADAP received acquisition authority (November 2018) to add a small antenna variant to the program baseline.					
FY 2024 Plans: Increment 2 Advanced Digital Antenna Production (ADAP) antenna: Continue government oversight, system engineering, logistics, contracts, and programmatic management efforts for Increment 2 Advanced Digital Antenna Production (ADAP) to include assessment of new Anti-Jam (AJ) capabilities and technologies. Continue investigation of enhanced AJ capabilities for integration into existing Sea Naval Warfare (NAVWAR) antenna systems. Continue technology developmental efforts with industry to mature technical base for next-generation AJ antenna.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Complete integration of MAGNA with Mounted Assured PNT System (MAPS) and Dismounted Assured PNT System (DAPS) units to support fleet experimentation to demonstrate MAPS/DAPS as a potential replacement to the Defense Advanced GPS Receiver (DAGR). ***FY 2025 Base Plans:*** Increment 2 Advanced Digital Antenna Production (ADAP) antenna: Continue government oversight, system engineering, logistics, contracts, and programmatic management efforts for Increment 2 Advanced Digital Antenna Production (ADAP) to include assessment of new Anti-Jam (AJ) capabilities and technologies. Continue investigation of enhanced AJ capabilities for integration into existing Sea Navigation Warfare (NAVWAR) antenna systems. Continue technology developmental efforts with industry to mature technical base for next-generation AJ antenna. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** No significant change from FY 2024 to FY 2025.					
Title: Global Positioning System (GPS) - Based Positioning, Navigation and Timing (PNT) Service (GPNTS) ***Articles:*** ***Description:*** The GPNTS system is being developed to serve as the primary Assured Positioning Navigation and Timing (A-PNT) system for the surface Navy to ensure reliable PNT capability and interoperability insertion into GPS receivers and associated Command, Control, Communications, Computers (C4) Intelligence, Surveillance and Reconnaissance (ISR) and Combat Systems in a denied environment. GPNTS pairs with AJ antennas and provides precise A-PNT data required for combat, weapons, command, control, communications, navigation, and other systems, as well as providing the time synchronization critical for network environments. GPNTS will back fit current PNT/GPS systems as well as serve as a forward fit for new platforms. GPNTS provides a robust, secure, integrated and interoperable network-centric PNT capability to include: Selective Availability Anti-Spoofing Security Module (SAASM) GPS security architecture; migration path to modernized signal-in-space (M-Code); open architecture approach allowing for the integration of alternate PNT sources;	2.933 -	1.707 -	1.199 -	0.000 -	1.199 -

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
scalable solution that consolidates platform receivers, improved anti-jam and anti-spoof mechanisms; and extended timing holdover in a Global Positioning System (GPS) denied environment. As fielding of the GPS - Based Positioning, Navigation and Timing (PNT) Service (GPNTS) system continues, RDTEN will support product improvements such as the integration of the Office of Naval Research (ONR) developed assured-PNT Future Naval Capability (FNC), Non-GPS Aided Positioning for Surface Ships (NoGAPSS) as well as software enhancements for Assured-PNT sensor suite integration to include Celestial Navigation and Enhanced Assurance Timing (EAT). ***FY 2024 Plans:*** Continue efforts to develop and test a GPNTS system capable of hosting the Automated Celestial Navigation System (ACNS) below deck hardware. Effort is in direct support of the NoGAPSS FNC. Conduct and complete Environmental Qualification Testing (EQT) of a GPNTS system hosting Automated Celestial Navigation System (ACNS) below-deck hardware in support of NoGAPSS FNC. Commence and complete Aegis Integration Event (AIE) for GPNTS software 2.0.076 to achieve Combat Systems certification in support of NoGAPSS FNC. Conduct and complete NoGAPSS Technical Evaluation. Complete platform integration and development to support GPNTS on both Littoral Combat Ships (LCS) variants as directed by the Navy to provide common Assured Positioning Navigation and Timing (A-PNT) capabilities and Navigation Warfare (NAVWAR) compliance on LCS. Integration efforts require identifying interface requirements and analysis that utilizes existing variants of GPNTS. Complete NoGAPSS Model Based System Engineering (MBSE) implementation as directed by the Navy to provide a navigation system-of-systems architecture to integrate all sources of Position, Velocity, Attitude and Timing (PVAT) data and the NoGAPSS capability. Continue software defect resolution with software vendor in support of Full Operational Capability (FOC). ***FY 2025 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Continue efforts to develop and test a GPNTS system capable of hosting the Automated Celestial Navigation System (ACNS) below deck hardware. Effort is in direct support of the NoGAPSS FNC. Continue software defect resolution with software vendor in support of Full Operational Capability (FOC). Conduct and complete the required Follow-on Operational Test and Evaluation (FOT&E) in support of a fielding decision for the NoGAPSS capability. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decrease of $.508M from FY2024 to FY2025 due to completion of Environmental Qualification Testing (EQT) of a GPNTS system hosting Automated Celestial Navigation System (ACNS) below-deck hardware in support of NoGAPSS FNC.					
Title: Air Navigation Warfare (NAVWAR) ***Articles:*** ***Description:*** Air Navigation Warfare (NAVWAR) provides the Warfighter continued access to Global Positioning System (GPS) through the use of Anti-Jam (AJ) Antenna Systems designed to counter GPS Electronic Warfare threats due to intentional and unintentional interference. Air NAVWAR efforts include investigation and testing of emerging technologies to improve AJ capability and technologies such as development of miniaturized very small antenna systems to allow for the capability on small variant aircraft. Efforts will also include development to ensure antennas can accept the new Military Code (M-Code) signal. ***FY 2024 Plans:*** Continue to support Assured-Positioning Navigation and Timing (A-PNT) efforts by working with Navy Air platforms on navigation requirements and coordinating with surface Navy platforms to leverage synergies. Complete Global Positioning System (GPS) Demonstrations and laboratory testing of GPS receivers with associated antennas at Facilities for Antenna and Radar Cross Section (RCS) Measurements (FARM), to include continued anti-jam comparison tests, including comparing legacy anti-jam and modernized antennas to address obsolescence issues.	3.670 -	3.595 -	3.597 -	0.000 -	3.597 -

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Continue to provide subject matter expertise to various platforms (including MQ-4C, MQ-25, RQ-21, F/A-18C/D) as they consider various AJ solutions. Complete ground and flight testing of MAGNA-I on AH-1Z and UH-1Y helicopters. ***FY 2025 Base Plans:*** Continue to support Assured-Positioning Navigation and Timing (A-PNT) efforts by working with Navy Air platforms on navigation requirements and coordinating with surface Navy platforms to leverage synergies. Continue to provide subject matter expertise to various platforms (including MQ-4C, MQ-25, RQ-21, F/A-18C/D) as they consider various AJ solutions. Fleet Release for the MAGNA-I on AH-1Z and UH-1Y helicopters. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** No significant change from FY 2024 to FY 2025.					
Title: Global Positioning System (GPS) Modernization	26.090	31.179	56.808	0.000	56.808
Articles:	20	-	28	-	28
Description: GPS Modernization delivers increased GPS AJ protection through modernized GPS receivers that will utilize the new Military Code (M-Code) GPS Signal in Space, incorporate enhanced cryptology, enable blue force GPS electronic attack, deliver greater position and time accuracy, and provide improved protection against signal spoofing as compared to legacy receivers. This effort supports Navy's compliance with Public Law 111-383, which requires that all GPS user equipment be capable of receiving the new GPS M-Code signal after FY 2017. To meet the Navy's fielding timeline, system engineering and requirement development efforts must begin before actual delivery of Military GPS User Equipment (MGUE). The integration timeline of modernized GPS receivers is 5+ years from planning to test and is dependent on platform. Each type/model/series aircraft uses a unique GPS receiver and GPS system configuration, which requires separate parallel platform integration and testing efforts to include: software updates to avionics and mission computers; modifications to the airframe based on Size, Weight, Power and Cost (SWaP-C) requirements; coordination with each Program Management Air (PMA)					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
organization; management, oversight and support of each effort; and contracting and working with each platform integrator for the respective platform. Project currently consists of eleven (11) parallel efforts that integrate five (5) different Military Code (M-Code) Global Positioning System (GPS) receivers into different type model series aircraft. The M-Code receivers are being developed under two (2) Air Force programs, Miniaturized Airborne GPS Receiver 2000-Modernization (MAGR2K-M) and Embedded GPS/Inertial Navigation System (EGI-M). The EGI-M program includes the LN-351, LN-300, Accurate Navigation System - Modernization (ANAV-M) and H-764-M. CMV-22B/MV-22B and E-6B will integrate the MAGR2K-M. F/A-18E/F and EA-18G will integrate the ANAV-M. E-2D, CH-53K, P-8A, MQ-4C, and MQ-8C will integrate the LN-351. MH-60 R/S will integrate the LN-300. Additionally, project will integrate Military Code (M-Code) receivers into existing Embedded Global Positioning System/Inertial Navigation System (GPS/INS) (EGI) to support the following aviation platforms: F/A-18 E/F, EA-18G, E-2D, P-8A, CH-53K, MH-60R/S, AH-1Z and UH-1Y, due to delays in development of M-Code capable Embedded GPS/INS (EGI-M). ***FY 2024 Plans:*** Continue efforts for MH-60 R/S missionization to develop missionized MH-60 R/S specific requirements for LN-300 integration that will leverage Positioning, Navigation, and Timing (PNT) program office contracts. Continue Military Code (M-Code) integration efforts to include but not limited to Systems Requirement Review (SRR), structural analysis, electrical power load analysis, human engineering, product support analysis for P-8A. Continue to support platform integration on two (2) air platforms: CMV-22B and MV-22B. Complete platform integration on the E-6B platform. Continue CH-53K missionization to develop missionized CH-53K specific requirements for LN-351 integration. Continue Military Code (M-Code) integration efforts to include PIDS review, Environmental Qualification Assessment, Structural Strength Analysis, Electrical Power Load Analysis for E-2D and CH-53K.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Continue providing overarching management, central coordination, government oversight and guidance, shared expertise, and engineering during Military Code (M-Code) receiver development to review M-Code receiver requirements and ensure these requirements support aircraft performance and integration for CMV-22B, MV-22B, E-6B, F/A-18E/F, EA-18G, E-2D, MH-60 R/S, CH-53K, P-8A, MQ-4C, and UH-1Y/AH-1Z. Continue to support United States Space Force (USSF) Miniaturized Airborne Global Positioning System (GPS) receiver 2000-Modernization (MAGR2K-M) & Embedded GPS/Inertial Navigation System (EGI-M) GPS receiver development, performance, and certification testing. Continue to support USSF MAGR2K-M & EGI-M GPS receiver program events to include but not limited to Systems Engineering and Technical Reviews (SETR), Integrated Baseline Reviews, Preliminary Design Reviews (PDR) and Critical Design Review (CDR). Continue teaming with the United States Air Force (USAF) to determine the feasibility of using a Janus Software Design Receiver (SDR) as a GPS Receiver Card and continue to study opportunities to incorporate improvements into GPS receivers. Commence Military Code (M-Code) Platform Integration on the following air platform: MQ-4C. Commence Developmental Test (DT)/Operational Test (OT) of MAGR2K-M on E-6B. Continue Military Code (M-Code) integration efforts to develop integration requirements on the following platforms: CH-53K, MH-60R/S, UH-1Y/AH-1Z, and P-8A. Conduct Preliminary Design Review (PDR) for CMV-22B and MV-22B MAGR2K-M. Complete early integration efforts with Engineering and Manufacturing (EMD) units for E-2D platforms. Complete Requirements Generation/Development for F/A-18E/F, E-2D, EA-18G, and MQ-4C.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Commence integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System/ Inertial Navigation System (GPS/INS) (EGI); ANAV-3M and LN-251M.					
FY 2025 Base Plans: Continue integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System/ Inertial Navigation System (GPS/INS) (EGI); ANAV-3 and LN-251M. Procure LN-300 test article receivers to provide production representative M-Code receivers to support integration and testing for MH-60R/S. Continue efforts for MH-60 R/S missionization to develop missionized MH-60 R/S specific requirements for LN-300 integration that will leverage Positioning, Navigation, and Timing (PNT) program office contracts. Continue Military Code (M-Code) integration efforts to include but not limited to Systems Requirement Review (SRR), structural analysis, electrical power load analysis, human engineering, product support analysis for P-8A. Continue to support platform integration on the following air platforms: CMV-22B, MV-22B and MQ-4C. Complete CH-53K missionization to develop missionized CH-53K specific requirements for LN-351 integration. Complete Military Code (M-Code) integration efforts to include PIDS review, Environmental Qualification Assessment, Structural Strength Analysis, Electrical Power Load Analysis for CH-53K. Continue providing overarching management, central coordination, government oversight and guidance, shared expertise, and engineering during Military Code (M-Code) receiver development to review M-Code receiver requirements and ensure these requirements support aircraft performance and integration for CMV-22B, MV-22B, E-6B, F/A-18E/F, EA-18G, E-2D, MH-60 R/S, CH-53K, P-8A, MQ-4C, and UH-1Y/AH-1Z. Continue to support United States Space Force (USSF) Miniaturized Airborne Global Positioning System (GPS) receiver 2000-Modernization (MAGR2K-M) & Embedded GPS/Inertial Navigation System (EGI-M) GPS receiver development, performance, and certification testing.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Continue to support USSF MAGR2K-M & EGI-M GPS receiver program events to include but not limited to Systems Engineering and Technical Reviews (SETR), Integrated Baseline Reviews, Preliminary Design Reviews (PDR) and Critical Design Review (CDR). Continue teaming with the United States Air Force (USAF) to determine the feasibility of using a Janus Software Design Receiver (SDR) as a GPS Receiver Card and continue to study opportunities to incorporate improvements into GPS receivers. Complete Developmental Test (DT)/Operational Test (OT) for E-6B MAGR2K-M. Conduct Critical Design Review (CDR) for CMV-22B/MV-22B MAGR2K-M platform. Continue Military Code (M-Code) integration efforts to develop integration requirements on the UH-1Y/AH-1Z. Commence platform integration on the following air platforms: F/A-18E/F, EA-18G, and E-2D. Commence Developmental Test (DT)/Operational Test (OT) of MAGR2K-M GPS Receivers on two (2) air platforms: CMV-22B and MV-22B. Conduct Preliminary Design Review (PDR) for MQ-4C LN-351. Complete Requirements Generation/Development for CH-53K LN-351. Continue Requirements Generation/Development for the following air platforms: MH-60R and P-8A. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding increase of $25.629M from FY 2024 to FY 2025 to support integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System/Inertial Navigation System (GPS/INS) (EGI); ANAV-3M and LN-251M, due to delays in development of M-Code capable Embedded GPS/INS (EGI-M).					
Accomplishments/Planned Programs Subtotals	33.798	37.581	62.705	0.000	62.705

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/2657: *NAVSTAR GPS Receivers (Space)*	30.439	37.319	41.458	-	41.458	42.369	43.141	44.114	45.009	Continuing	Continuing
• APN/0577: *Common Avionics Changes*	128.072	136.199	139.113	-	139.113	187.648	228.499	280.020	339.134	2,244.761	6,804.340

Remarks

D. Acquisition Strategy

Both the Navigation Warfare (NAVWAR) Air and Sea programs will continue to integrate improved Anti-Jam (AJ) capability onto air and sea platforms and ensure compatibility with new Military Code (M-Code) signal.

Global Positioning System (GPS) - based Positioning, Navigation, and Timing (PNT) Service (GPNTS) program will develop, acquire, and field GPNTS, a scalable Selective Availability/Anti- Spoofing Module (SAASM) GPS-based service-oriented architecture PNT system that will provide an open, extensible, modernized replacement for the current fleet PNT systems. GPNTS will also integrate Military GPS User Equipment (MGUE) and the Office of Naval Research (ONR) developed Non-GPS Aided Positioning for Surface Ships (NoGAPSS) capabilities. A firm fixed price contract was awarded March 2018 to procure Low Rate Initial Production (LRIP) and Full Rate Production (FRP) systems. A firm fixed price Multi-Agency Contract (MAC) was awarded September 2021 to procure follow-on FRP systems.

GPS Modernization will manage the non-recurring engineering required to conduct systems engineering, integration and test of modernized GPS receivers and utilize United States Space Force (USSF) hardware contracts, and Navy air platform integration contracts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development Prior Years	Various	Various : Various	11.566	0.000		0.000		0.000		-		0.000	0.000	11.566	-
Air NAVWAR MAGNA-I Integration	C/CPIF	Bell Helicopter : Fort Worth, TX	4.241	0.588	Jan 2023	0.000		1.325	Jan 2025	-		1.325	Continuing	Continuing	Continuing
Air NAVWAR Govt Eng Support	WR	NAWC : Pax River, MD	4.008	0.986	Dec 2022	1.102	Dec 2023	1.000	Dec 2024	-		1.000	Continuing	Continuing	Continuing
Sea NAVWAR Development Support	WR	SSC PAC, NUWC : San Diego, Newport	1.227	0.655	Dec 2022	0.396	Dec 2023	0.397	Dec 2024	-		0.397	Continuing	Continuing	Continuing
Sea NAVWAR Govt Eng Support	WR	NIWC PAC, NUWC : San Diego, Newport	0.000	0.000		0.244	Dec 2023	0.244	Dec 2024	-		0.244	Continuing	Continuing	Continuing
GPNTS SW / NoGAPSS Development	C/CPFF	Raytheon : San Diego, CA	12.310	1.250	Jan 2023	0.620	Jan 2024	0.507	Jan 2025	-		0.507	Continuing	Continuing	Continuing
GPNTS Govt Eng Support	WR	NIWC PAC : San Diego, CA	3.201	1.055	Dec 2022	0.885	Dec 2023	0.485	Dec 2024	-		0.485	Continuing	Continuing	Continuing
GPS Mod Development ANAV-M Integration F/18 E/F & EA-18G	C/CPIF	Boeing : St Louis, MO	0.164	0.000		0.991	Jan 2024	5.089	Jan 2025	-		5.089	Continuing	Continuing	Continuing
GPS Mod Development LN-351 Integration E-2D	C/CPIF	Northup Grumman : Melbourne, FLA	0.000	1.214	Jan 2023	2.204	Jan 2024	3.423	Jan 2025	-		3.423	Continuing	Continuing	Continuing
GPS Mod Development MAGR2K-M MV-22B,CMV-22B	C/CPIF	Bell Boeing : Amarillo, TX	8.053	5.221	Feb 2023	4.854	Feb 2024	4.724	Feb 2025	-		4.724	Continuing	Continuing	Continuing
GPS Mod Development LN-351 Integration CH-53K	C/CPIF	Sikorsky : Stratford, CT	0.000	1.256	Jan 2023	1.558	Jan 2024	1.575	Jan 2025	-		1.575	Continuing	Continuing	Continuing
GPS Mod Development - Missionization	C/CPFF	Northrup Grumman : Los Angeles, CA	4.071	3.480	Jan 2023	0.000		0.000		-		0.000	0.000	7.551	-
GPS Mod Development LN-351 Hardware	C/IDIQ	Northup Grumman : Warner Robbins, GA	4.305	4.474	Jan 2023	0.000		0.000		-		0.000	0.000	8.779	-
GPS Mod Development MH-60	C/CPIF	Lockheed Martin : Owego, NY	1.068	0.000		0.000		7.214	Feb 2025	-		7.214	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GPS Mod Product Development ANAV-M Hardware	C/IDIQ	Honeywell : Clearwater, FL	0.000	2.832	Jan 2023	0.000		0.000		-		0.000	0.000	2.832	-
GPS Mod Development - Studies	MIPR	MITRE : Bedford, MA	2.237	1.127	Nov 2022	2.616	Nov 2023	2.485	Nov 2024	-		2.485	Continuing	Continuing	Continuing
GPS Mod Govt Eng Support	WR	NIWC PAC, NAWC : San Diego, Pax River	24.343	2.712	Nov 2022	2.412	Jan 2024	0.000		-		0.000	0.000	29.467	-
GPS Mod Product Development	WR	GPS Directorate : Los Angeles, CA	1.399	0.000		0.393	Dec 2023	0.496	Dec 2024	-		0.496	Continuing	Continuing	Continuing
GPS Mod Development ANAV-3M Development	C/IDIQ	Honeywell : Clearwater, FL	0.000	0.000		3.820	Mar 2024	8.546	Mar 2025	-		8.546	Continuing	Continuing	Continuing
GPS Mod Development LN-300 Hardware	C/IDDQ	Northrup Grumman : Warner Robbins, GA	0.000	0.000		0.000		6.734	Mar 2025	-		6.734	Continuing	Continuing	Continuing
GPS Mod Development - LN-251M Development	C/IDIQ	Northup Grumman : Warner Robbins, GA	0.000	0.000		3.820	Mar 2024	8.746	Mar 2025	-		8.746	Continuing	Continuing	Continuing
		Subtotal	82.193	26.850		25.915		52.990		-		52.990	Continuing	Continuing	N/A

Remarks

Funding increase of $27.075M from FY2024 to FY2025 to support integration of Military Code (M-Code) receivers into existing Embedded Global Positioning System/Inertial Navigation System (GPS/INS) (EGI); ANAV-3M and LN-251M, due to delays in development of M-Code capable Embedded GPS/INS (EGI-M).

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Engineering Services	C/CPAF	BAH : San Diego, Pax River, China Lake	2.673	0.205	Nov 2022	0.653	Nov 2023	1.684	Nov 2024	-		1.684	Continuing	Continuing	Continuing
Enginering Services	WR	NIWC PAC, NAWC : San Diego, Pax River	4.662	1.548	Nov 2022	1.537	Nov 2023	3.619	Nov 2024	-		3.619	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NIWC PAC, NAWC : San Diego, Pax River	4.034	0.482	Dec 2022	0.657	Dec 2023	1.354	Dec 2024	-		1.354	Continuing	Continuing	Continuing
Software Contract Support	C/CPFF	Raytheon : San Diego	9.068	0.445	Nov 2022	0.000		0.000		-		0.000	0.000	9.513	-
		Subtotal	20.437	2.680		2.847		6.657		-		6.657	Continuing	Continuing	N/A

Remarks

Funding increase of $3.810M from FY2024 to FY2025 to support the Global Positioning System (GPS) Modernization integration of Military- Code (M-Code) on the following air platforms: F/A-18 E/F, EA-18G, E-2D, P-8A, CH-53K, MH-60R/S, AH-1Z and UH-1Y.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NAWC : Pax River	2.788	0.809	Nov 2022	1.207	Nov 2023	0.000		-		0.000	0.000	4.804	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NIWC PAC, NUWC : San Diego, Newport	3.443	0.000		0.000		0.000		-		0.000	0.000	3.443	-
Operational Test & Evaluation (OT&E)	WR	NIWC PAC : San Diego	1.725	0.183	Nov 2022	0.202	Nov 2023	0.205	Nov 2024	-		0.205	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	NIWC PAC, NAWC PAX : San Diego, Pax River	0.000	0.000		4.477	Nov 2023	0.458	Dec 2024	-		0.458	Continuing	Continuing	Continuing
		Subtotal	7.956	0.992		5.886		0.663		-		0.663	Continuing	Continuing	N/A

Remarks

Funding decrease of $5.223M from 2024 to 2025 due to completion of MAGNA-1 Ground and Flight Testing on UH-1Y/AH-1Z helicopters.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	BAH : San Diego, Pax River, China Lake	9.989	3.276	Nov 2022	2.933	Nov 2023	2.395	Nov 2024	-		2.395	Continuing	Continuing	Continuing
		Subtotal	9.989	3.276		2.933		2.395		-		2.395	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	120.575	33.798		37.581		62.705		-		62.705	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
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SEA NAVWAR

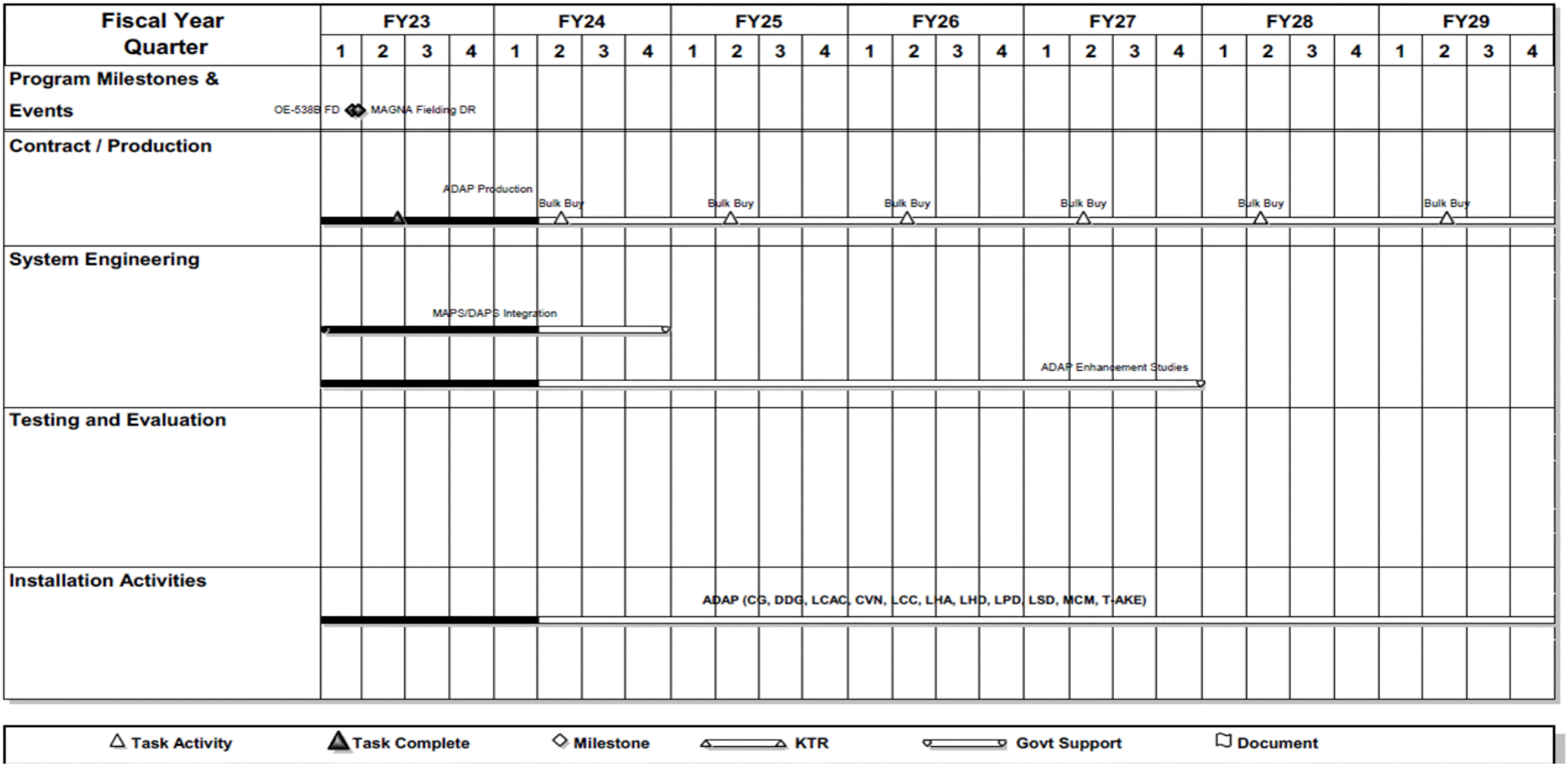

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

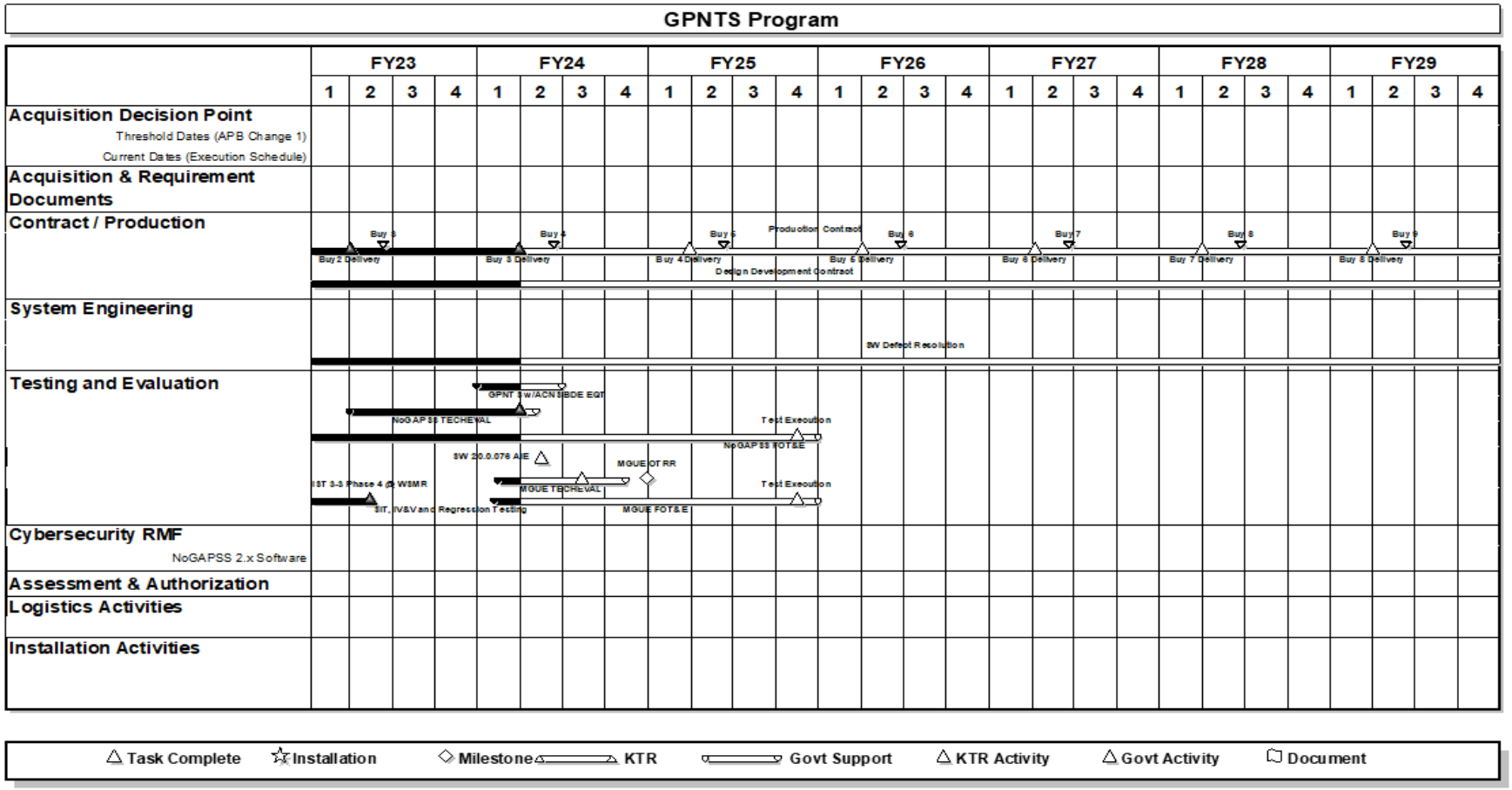

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

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Air Navigation

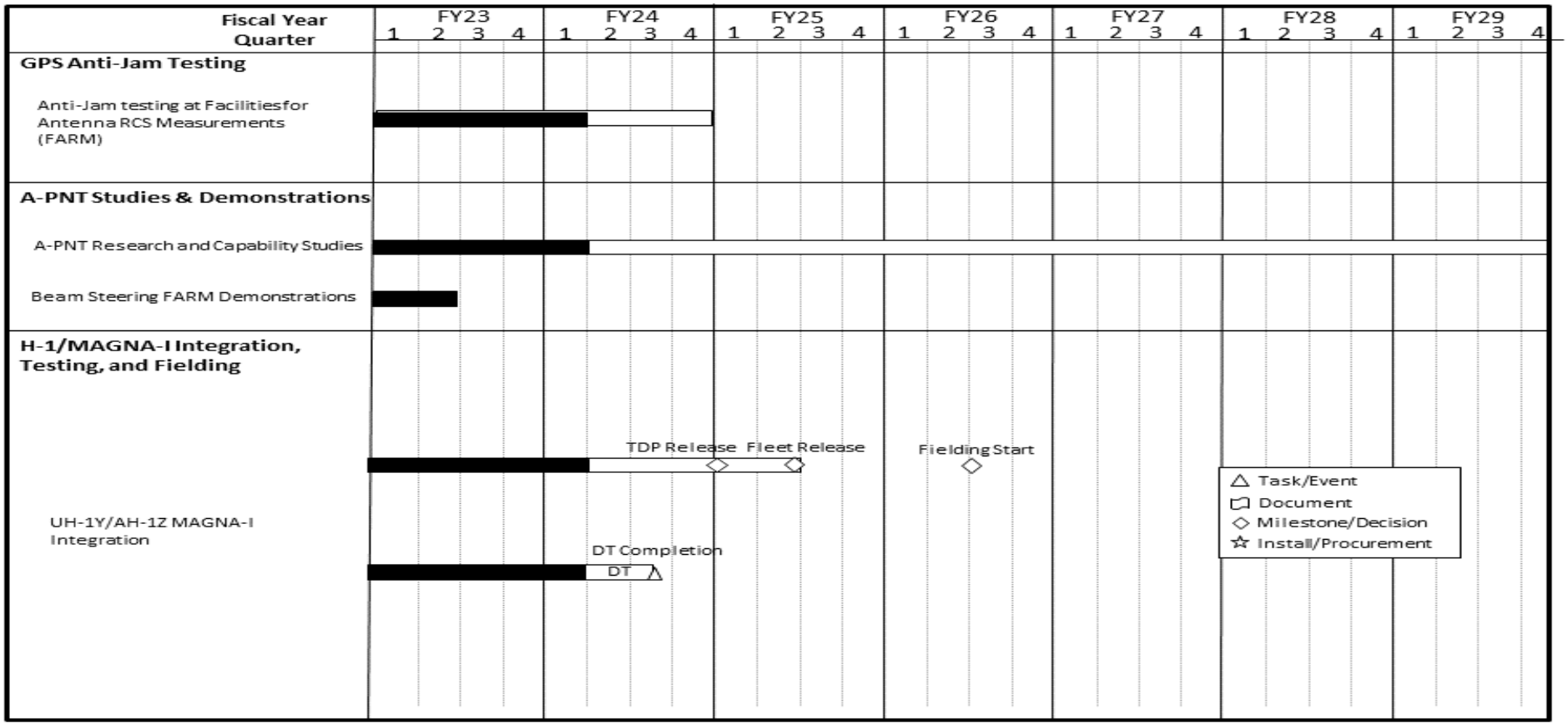

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
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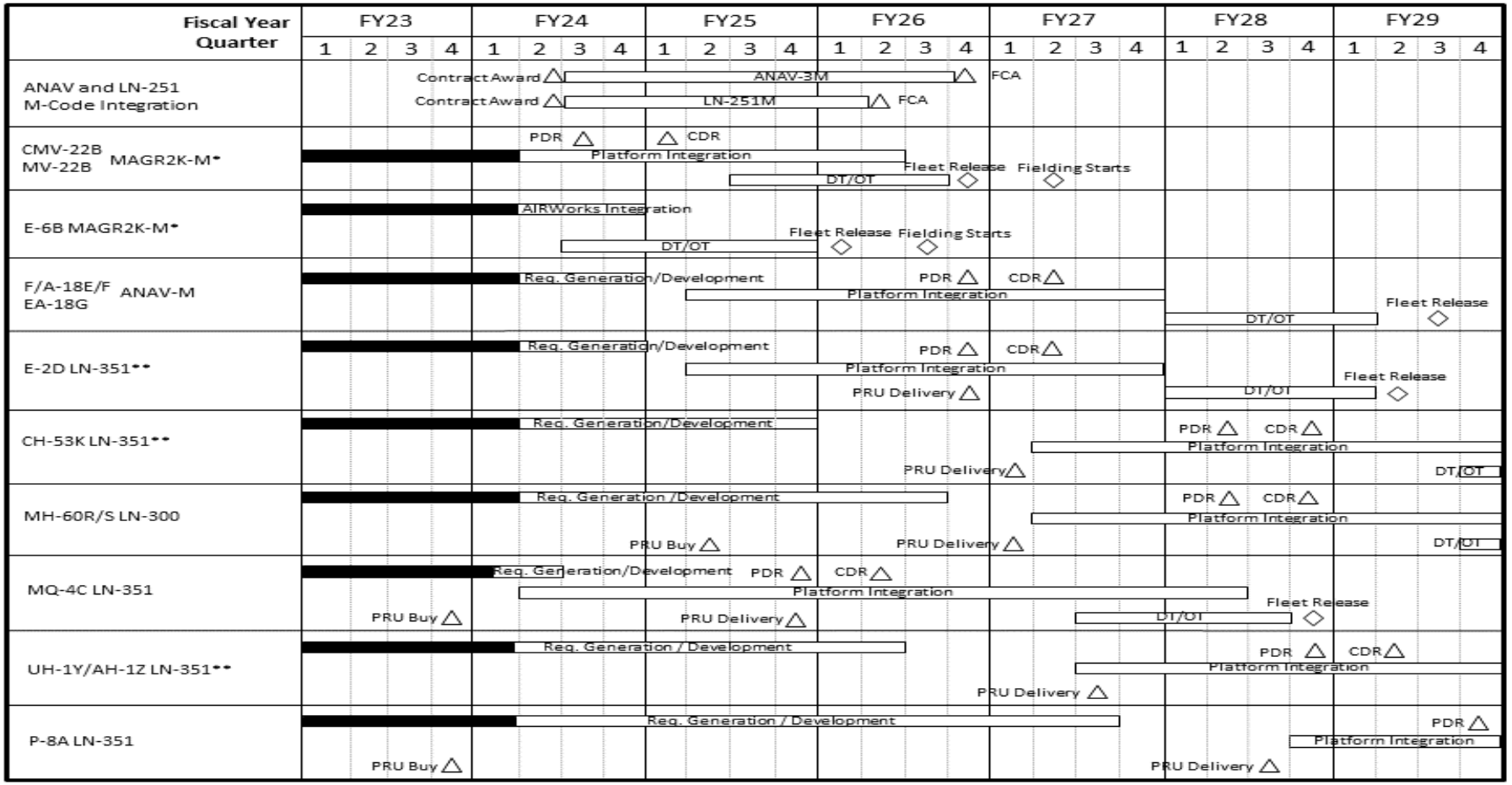
GPS Modernization



* MAGR-2K-M PRUs were bought in FY17/**10 LN-351 PRUs bought in FY19 and 20 in FY23

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0921				
Sea NAVWAR: Sea Navigation MAGNA Fielding Decision Review	1	2023	1	2023
Sea NAVWAR: Sea Navigation OE-538B Fielding Decision	1	2023	1	2023
Sea NAVWAR: Sea Navigation ADAP 10 Year Production Contract	1	2023	4	2028
Sea NAVWAR: Sea Navigation ADAP Production Contract	1	2029	4	2029
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY23)	2	2023	2	2023
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY24)	2	2024	2	2024
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY25)	2	2025	2	2025
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY26)	2	2026	2	2026
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY27)	2	2027	2	2027
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY28)	2	2028	2	2028
Sea NAVWAR: Sea Navigation ADAP Production Contract Award (FY29)	2	2029	2	2029
Sea NAVWAR: Sea Navigation MAPS/DAPS Integration	1	2023	4	2024
Sea NAVWAR: Sea Navigation ADAP Enhancement Studies	1	2023	4	2027
Sea NAVWAR: Sea Navigation ADAP Installations	1	2023	4	2029
GPS-based PNT Service (GPNTS): GPNTS Buy 3 (FRP)	2	2023	2	2023
GPS-based PNT Service (GPNTS): GPNTS Buy 4 (FRP)	2	2024	2	2024
GPS-based PNT Service (GPNTS): GPNTS Buy 5 (FRP)	2	2025	2	2025
GPS-based PNT Service (GPNTS): GPNTS Buy 6 (FRP)	2	2026	2	2026
GPS-based PNT Service (GPNTS): GPNTS Buy 7 (FRP)	2	2027	2	2027
GPS-based PNT Service (GPNTS): GPNTS Buy 8 (FRP)	2	2028	2	2028
GPS-based PNT Service (GPNTS): GPNTS Buy 9 (FRP)	2	2029	2	2029

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
GPS-based PNT Service (GPNTS): GPNTS Design Development Contract	1	2023	4	2029
GPS-based PNT Service (GPNTS): GPNTS SW Defect Resolution	1	2023	4	2029
GPS-based PNT Service (GPNTS): GPNTS w/ ACNS BOE EQT	1	2024	2	2024
GPS-based PNT Service (GPNTS): GPNTS NoGAPPS TECH EVAL	2	2023	2	2024
GPS-based PNT Service (GPNTS): GPNTS NoGAPPS FOT&E	1	2023	4	2025
GPS-based PNT Service (GPNTS): GPNTS SW 2.0.0.076 AIE	2	2024	2	2024
GPS-based PNT Service (GPNTS): GPNTS MGUE TECH EVAL	1	2024	4	2024
GPS-based PNT Service (GPNTS): GPNTS MGUE OTRR	4	2024	4	2024
GPS-based PNT Service (GPNTS): GPNTS MGUE IST 3-3 Phase 4 @ WSMR	2	2023	2	2023
GPS-based PNT Service (GPNTS): GPNTS MGUE SIT, IV&V and Regression Testing	1	2023	2	2023
GPS-based PNT Service (GPNTS): GPNTS MGUE FOT&E	1	2024	4	2025
Air NAVWAR: Air Navigation GPS Anti-Jam Testing at Facilities for Antenna RCS Measurements (FARM)	1	2023	4	2024
Air NAVWAR: Air Navigation Aviation A-PNT Research and Capability Studies	1	2023	4	2029
Air NAVWAR: Air Navigation Beam Steering FARM Demonstrations	1	2023	2	2023
Air NAVWAR: Air Navigation UH-1Y/AH-1Z MAGNA-I Integration	1	2023	2	2025
Air NAVWAR: Air Navigation UH-1Y/AH-1Z MAGNA-I Integration TDP Release	1	2025	1	2025
Air NAVWAR: Air Navigation UH-1Y/AH-1Z MAGNA I Fleet Release	2	2025	2	2025
Air NAVWAR: Air Navigation UH-1Y/AH-1Z MAGNA-I Fielding Start	3	2026	3	2026
Air NAVWAR: Air Navigation UH-1Y/AH-1Z MAGNA-I DT/OT	1	2023	3	2024
GPS Modernization: GPS Modernization ANAV-3M Contract Award	2	2024	2	2024
GPS Modernization: GPS Modernization ANAV-3M Integration	3	2024	4	2026
GPS Modernization: GPS Modernization ANAV-3M Functional Configuration Audit	4	2026	4	2026
GPS Modernization: GPS Modernization LN-251M Contract Award	2	2024	2	2024
GPS Modernization: GPS Modernization LN-251M Integration	3	2024	2	2026
GPS Modernization: GPS Modernization LN-251M Functional Configuration Audit	2	2026	2	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
GPS Modernization: GPS Modernization CMV-22B/MV-22B MAGR2K-M Platform Integration	1	2023	2	2026
GPS Modernization: GPS Modernization CMV-22B/MV-22B MAGR2K-M Preliminary Design Review (PDR)	3	2024	3	2024
GPS Modernization: GPS Modernization CMV-22B/MV-22B MAGR2K-M Critical Design Review (CDR)	1	2025	1	2025
GPS Modernization: GPS Modernization CMV-2B/MV-22B MAGR2K-M DT/OT	3	2025	3	2026
GPS Modernization: GPS Modernization CMV-22B/MV-22B MAGR2K-M Fleet Release	4	2026	4	2026
GPS Modernization: GPS Modernization CMV-22B/MV-22B MAGR2K-M Fielding Starts	2	2027	2	2027
GPS Modernization: GPS Modernization E-6B MAGR2K-M AIRWorks Integration	1	2023	4	2024
GPS Modernization: GPS Modernization E-6B MAGR2K-M DT/OT	3	2024	4	2025
GPS Modernization: GPS Modernization E-6B MAGR2K-M Fleet Release	1	2026	1	2026
GPS Modernization: GPS Modernization E-6B MAGR2K-M Fielding Starts	3	2026	3	2026
GPS Modernization: GPS Modernization F/A-18E/F EA-18G ANAV-M Requirements Generation/Development	1	2023	4	2024
GPS Modernization: GPS Modernization F/A-18E/F EA-18G ANAV-M Platform Integration	2	2025	4	2027
GPS Modernization: GPS Modernization F/A-18E/F EA-18G ANAV-M PDR	4	2026	4	2026
GPS Modernization: GPS Modernization F/A-18E/F EA-18G ANAV-M CDR	2	2027	2	2027
GPS Modernization: GPS Modernization F/A-18 E/F EA-18G ANAV-M DT/OT	1	2028	1	2029
GPS Modernization: GPS Modernization F/A-18 E/F EA-18G Fleet Release	3	2029	3	2029
GPS Modernization: GPS Modernization E-2D LN-351 Requirements Generation/ Development	1	2023	4	2024
GPS Modernization: GPS Modernization E-2D LN-351 Platform Integration	2	2025	4	2027
GPS Modernization: GPS Modernization E-2D LN-351 PRU Delivery	4	2026	4	2026
GPS Modernization: GPS Modernization E-2D LN-351 PDR	4	2026	4	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
GPS Modernization: GPS Modernization E-2D LN-351 CDR	2	2027	2	2027
GPS Modernization: GPS Modernization E-2D LN-351 DT/OT	1	2028	1	2029
GPS Modernization: GPS Modernization E-2D LN-351 Fleet Release	2	2029	2	2029
GPS Modernization: GPS Modernization CH-53K LN-351 Requirements Generation/ Development	1	2023	4	2025
GPS Modernization: GPS Modernization CH-53K LN-351 Platform Integration	2	2027	4	2029
GPS Modernization: GPS Modernization CH-53K LN-351 PRU Delivery	1	2027	1	2027
GPS Modernization: GPS Modernization CH-53K LN-351 PDR	2	2028	2	2028
GPS Modernization: GPS Modernization CH-53K LN-351 CDR	4	2028	4	2028
GPS Modernization: GPS Modernization CH-53K LN-351 DT/OT	4	2029	4	2029
GPS Modernization: GPS Modernization MN-60R/S LN-300 Requirements Generation/ Development	1	2023	3	2026
GPS Modernization: GPS Modernization MH-60R/S LN-300 PRU Buy	2	2025	2	2025
GPS Modernization: GPS Modernization MH-60R/S LN-300 Platform Integration	2	2027	4	2029
GPS Modernization: GPS Modernization MH-60R/S LN-300 PRU Delivery	1	2027	1	2027
GPS Modernization: GPS Modernization MH-60R/S LN-300 PDR	2	2028	2	2028
GPS Modernization: GPS Modernization MH-60R/S LN-300 CDR	4	2028	4	2028
GPS Modernization: GPS Modernization MH-60R/S LN-300 DT/OT	4	2029	4	2029
GPS Modernization: GPS Modernization MQ-4C LN-351 Requirements Generation/ Development	1	2023	2	2024
GPS Modernization: GPS Modernization MQ-4C LN-351 PR Buy	4	2023	4	2023
GPS Modernization: GPS Modernization MQ-4C LN-351 Platform Integration	2	2024	2	2028
GPS Modernization: GPS Modernization MQ-4C LN-351 PDR	4	2025	4	2025
GPS Modernization: GPS Modernization MQ-4C LN-351 PRU Delivery	4	2025	4	2025
GPS Modernization: GPS Modernization MQ-4C LN-351 CDR	2	2026	2	2026
GPS Modernization: GPS Modernization MQ-4C LN-351 DT/OT	3	2027	3	2028

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 0921 / *NAVSTAR GPS Equipment*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
GPS Modernization: GPS Modernization MQ-4C LN-351 Fleet Release	4	2028	4	2028
GPS Modernization: GPS Modernization UH-1Y/AH-1Z LN-351 Requirements Generation/Development	1	2023	2	2026
GPS Modernization: GPS Modernization UH-1Y/AH-1Z LN-351 Platform Integration	3	2027	4	2029
GPS Modernization: GPS Modernization UH-1Y/AH-1Z LN-351 PRU Delivery	3	2027	3	2027
GPS Modernization: GPS Modernization UH-1Y/AH-1Z LN-351 PDR	4	2028	4	2028
GPS Modernization: GPS Modernization UH-1Y/AH-1Z LN-351 CDR	2	2029	2	2029
GPS Modernization: GPS Modernization P-8A LN-351 Requirements Generation/ Development	1	2023	3	2027
GPS Modernization: GPS Modernization P-8A LN-351 PRU Buy	4	2023	4	2023
GPS Modernization: GPS Modernization P-8A LN-351 PRU Delivery	3	2028	3	2028
GPS Modernization: GPS Modernization P-8A LN-351 Platform Integration	4	2028	4	2029
GPS Modernization: GPS Modernization P-8A LN-351 PDR	4	2029	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 1411 / *Sub Tact Comm System*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
1411: *Sub Tact Comm System*	39.981	14.274	17.043	16.218	-	16.218	15.822	14.931	15.232	15.550	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. The details of S3S within project 1411 are classified.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Common Submarine Radio Room (CSRR)	10.743	13.963	13.108	0.000	13.108
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 Base Plans: The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: Link 16	3.223	3.080	3.110	0.000	3.110
Articles:	-	-	-	-	-
FY 2024 Plans: The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
FY 2025 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 1411 / *Sub Tact Comm System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.					
Title: S3S	0.308	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: Detailed information available at a higher classification. ***FY 2024 Plans:*** N/A ***FY 2025 Base Plans:*** N/A ***FY 2025 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	14.274	17.043	16.218	0.000	16.218

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/3130: *Submarine Communication Equipment*	74.569	83.178	68.334	-	68.334	83.344	81.452	93.881	94.863	Continuing	Continuing

Remarks

D. Acquisition Strategy

The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 1411 / *Sub Tact Comm System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	29.171	9.844	Dec 2022	11.787	Dec 2023	11.672	Dec 2024	-		11.672	Continuing	Continuing	Continuing
S3S Platform Integration	MIPR	Army/TSMO : Redstone Arsenal, AL	1.713	0.308	Mar 2023	0.000		0.000		-		0.000	0.000	2.021	-
		Subtotal	30.884	10.152		11.787		11.672		-		11.672	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	5.734	1.858	Nov 2022	3.017	Dec 2023	2.494	Dec 2024	-		2.494	Continuing	Continuing	Continuing
		Subtotal	5.734	1.858		3.017		2.494		-		2.494	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	TBD	Not Specified : Not Specified	0.549	1.118	Nov 2022	1.197	Nov 2023	1.292	Nov 2024	-		1.292	Continuing	Continuing	Continuing
		Subtotal	0.549	1.118		1.197		1.292		-		1.292	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Classified	TBD	Not Specified : Not Specified	2.814	1.146	Nov 2022	1.042	Nov 2023	0.760	Nov 2024	-		0.760	Continuing	Continuing	Continuing
		Subtotal	2.814	1.146		1.042		0.760		-		0.760	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 1411 / *Sub Tact Comm System*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	39.981	14.274		17.043		16.218		-		16.218	Continuing	Continuing	N/A

Remarks

- The details of Program Element 0604280N, Project 1411 are classified SECRET//NOFORN and are submitted to Congress in the classified budget justification books.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 1411 / *Sub Tact Comm System*

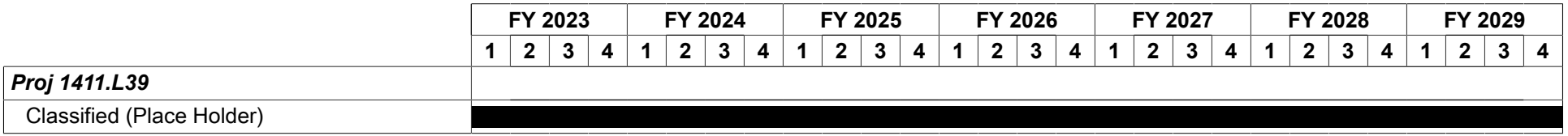


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 1411 / *Sub Tact Comm System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1411.L39				
Classified (Place Holder)	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*				Project (Number/Name) 2126 / *ATDLS Integration*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
2126: *ATDLS Integration*	61.057	29.365	31.874	26.375	-	26.375	23.650	23.642	23.719	24.227	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops and improves the Navy's Tactical Data Link (TDL) systems. It includes the Advanced Tactical Data Link Systems (ATDLS) Integration Programs, specifically Link 16 Network, Command and Control Processor (C2P) and Link Monitoring and Management Tool (LMMT).

ATDLS Integration Program develops new and improved capabilities for Navy TDL users. The ATDLS Integration Programs perform technical analyses and engineering efforts associated with implementation of new technology to enable rapid introduction of new products and technology, prevent obsolescence, and end of support issues. The programs insert new technology enhancements via incremental software & hardware upgrades and deliver as annual build release. The Navy Link 16 Network Increment II requires Enhanced Throughput (ET), concurrent multi-netting (CMN), current contention receive (CCR), and tactical targeting networking technology (TTNT), and tech refresh with Block Upgrade 3 (BU3). C2P is a critical component of the shipboard combat system enabling tactical data link integration with the combat systems. C2P is a critical component of the Aegis Ballistic Missile Defense (BMD) architecture. C2P Technology Refresh (TR) will modernize obsolete C2P system hardware components and improve C2P system cyber security posture. C2P Modernization (MOD) is a service life extension effort required to sustain C2P system viability and significantly improve its cyber resiliency. C2P MOD modernizes the legacy C2P system software to enable improved cyber resiliency, improved system operational availability and the ability to run in multiple hardware environments. Link 22 development and integration into the C2P allows for improved maritime tactical data link operations with coalition forces. LMMT will upgrade commercial off-the-shelf hardware and modernize software operating systems. LMMT will perform monitoring and management of all TDL and provide information in support of the Integrated Air & Missile Defense (IAMD) and Ballistic Missile Defense (BMD) missions.

Link 16 Network Increment II: These Link 16 efforts are in support of Joint Chiefs of Staff Joint Requirements Oversight Council Memorandum (JROCM) 075-17 for installation and integration of Multifunctional Information Distribution System (MIDS) Joint Tactical Information Distribution Systems (JTRS) terminals into the Navy shipboard environment. These include: (1) the modification the Multifunctional Information Distribution System (MIDS) on Ship (MOS) cabinet as a MOS MIDS JTRS Engineering Charge Proposal (MMJE), and via the MOS Modernization (MOS Mod) cabinet systems for ships with the legacy JTIDS systems; (2) JROCM 097-20 and the JROC-validated MIDS JTRS Capability Production Document (CPD) 10 February 2011 which provided direction for Crypto Modernization (CM), Frequency Remapping (FR), Enhanced Throughput (ET), concurrent multi-netting (CMN), current contention receive (CCR). These systems provide connectivity to shore sites and ships via Next Generation Command and Control Processor, (NGC2P), and to the combat systems via Integrated Shipboard Network Systems (ISNS) for Tactical Targeting Networking Technology (TTNT) control; (3) Developmental Testing (DT)/Operational Testing (OT) of Navy platform JTRS modifications and the integration of TTNT; (4) provide product improvement for continued production capability MOS and MOS Mod, with extensibility of new Tactical Data Link capabilities of shipboard Link 16 terminals; and (5) the development and qualification to replace shipboard Link 16 4400 antenna with the 4557 antenna.

FY2025 Justification (Link 16): Integration of the MIDS Program Office (MPO) developed A(v)6 (inclusive of the latest Link 16 baselined unit (BU3), TTNT Transceiver and external power amplifier) into the MOS and MOS-Mod shipboard cabinet assemblies.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

Command and Control Processor (C2P): The two Research Development Test & Evaluation (RDT&E) initiatives are 1) C2P Technology Refresh (TR) cyber security update and 2) C2P Modernization which now includes Link 22 integration. C2P TR cyber security update is a new initiative driven by recently discovered cyber security risk to the C2P system in support of the BMD mission. The C2P TR Cyber security update is planned to support acceleration on all AEGIS BMD ships. C2P Modernization funds the transition of the C2Ps legacy Compiler Monitor System (CMS-2Y) software code (old Navy unique computer programming language from the 1980s) to a modern software language. Transition to a modern software language is required to sustain the system software, to adequately address growing cybersecurity and operational availability challenges, and to enable more affordable transition to new hardware processing components as a result of commercial off the shelf processor obsolescence. Link 22, which was previously planned for fielding in the C2P TR architecture, has been delayed until the fielding of C2P Modernization. This was based on prioritizing existing resources to address the emergent cyber security risk that has resulted in the C2P TR cybersecurity update plan. Link 22 is a modernized replacement for Link 11, providing beyond line of site (BLOS) tactical data communications using high frequency (HF) radios.

FY2025 Justification (C2P): Implementing the development initiatives above will improve C2P cybersecurity hygiene, provide more reliable hardware, and create an architecture that is more cost effective for future upgrades and corrections to latent defects. Complete C2P Mod IV&V and commence C2P MOD combat system integration testing. Continue C2P MOD P3I design and development.

Link Monitoring and Management Tool (LMMT) is a system delivered on commercial off-the-shelf hardware (HW) providing gateway functions for multiple Tactical Data Link (TDL) interface, routing and display of TDL data to include Link 16, Joint Range Extension (JRE) and Link 22. LMMT is also capable of performing TDL network monitoring and management, data forwarding between the TDLs and providing tactical data to the Integrated Air & Missile Defense (IAMD), Ballistic Missile Defense (BMD) network, and Global Command and Control System (GCCS) for establishing the common operational picture. LMMT requirements will be incrementally developed and delivered in capability drops via the Joint Capabilities Integration Development System (JCIDS) IT Box approach.

FY2025 Justification (LMMT): Development and testing required to implement TTNT and Link 16 Concurrent Multi-Netting (CMN-4) into LMMT for Capability Drop (CD) 4 capabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Link 16 Network Increment II - Cryptographic Modernization (CM) / Frequency Remapping (FR)	10.082	8.516	5.241	0.000	5.241
Articles:	-	-	-	-	-
FY 2024 Plans: Continue MIDS Program Office (MPO) contract for qualification of MIDS Joint Tactical Radio System (JTRS) BU3 ((Concurrent Multi-Netting (CMN)) terminal with 1553 Platform M (Ship) interface. Evaluate options for higher throughput in the MIDS JTRS to C2P interface. Continue Government development and qualification efforts of A(v)6 (BU3, TTNT, TEPA) into the Link 16 MOS SCAs. Continue Government development of TTNT Terminal Controller SW coding within C2P.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Continue Industry development and qualification efforts of A(v)6 (BU3, TTNT, TEPA) into the Link 16 MOS Mod ECA. ***FY 2025 Base Plans:*** Complete MPO contract for qualification of MIDS J BU3 (CMN) terminal with 1553 Platform M (Ship) interface. Continue MOS and MOS Mod terminal controller updates to support integration of MIDS J BU3/TTNT Terminal Controller. Conduct government integration testing of MIDS JTRS, BU3, and TTNT Terminal Controller. Commence at Sea testing of A(v)6 capability in the shipboard environment. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** $3.275M decrease from FY24 to FY25 is due to the Link 16 Program anticipating to down-select to a single vendor performing A(v)6 integration into a MOS Mod cabinet.					
Title: Command and Control Processor (C2P)	17.171	21.358	17.604	0.000	17.604
Articles:	-	-	-	-	-
FY 2024 Plans: Continues C2P Modernization Development, Integration and Systems Engineering. Complete SW Drop C and commence software Drop C IV&V. ***FY 2025 Base Plans:*** Will Continue C2P Mod development, integration and engineering activity. Complete C2P MOD Drop C IV&V. Initiate and complete C2P Mod SW Drop D and will commence Software drop D combat system integration testing. Continue C2P Pre-Planned Product Improvement Program (P3I) to incorporate additional capability to the C2P Mod SW baseline. Conduct a P3I Integrated Baseline Review (IBR). ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
The $3.754M decrease in funding from FY24 to FY25 reflects a reduction in software development scope associated with C2P MOD software Drop D and the elimination of one of two combat system certification events in FY25 for software Drop C.					
Title: Link Monitoring and Management Tool (LMMT)	2.112	2.000	3.530	0.000	3.530
Articles:	-	-	-	-	-
FY 2024 Plans: Complete Fielding Decision Review (FDR) (Q1 FY24) Commence fielding of CD3/Link 22 Commence development of CD4					
FY 2025 Base Plans: Further development and testing required to implement TTNT and Link 16 Concurrent Multi-Netting (CMN-4) into LMMT for CD4 capabilities.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: $1.53M increase to LMMT from FY24 to FY25 as the program ramps up CD4 development and testing.					
Accomplishments/Planned Programs Subtotals	29.365	31.874	26.375	0.000	26.375

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/2614: *Adv Tact Data Link Sys (ATDLS)*	70.873	50.148	68.458	-	68.458	69.447	65.279	72.768	74.331	Continuing	Continuing

Remarks

D. Acquisition Strategy

To address the WIN 11 implementation for the MOS and MOS Mod system, a new MOS Terminal Controller hardware and software is being developed, as required. MOS and MOS Mod integrates the MIDS JTRS terminal developed by the MIDS Program Office PMA-101. The MIDS JTRS BU2 terminal is being updated to BU3. In conjunction with the BU3 development, the TTNT capability is also under development and will field with the BU3 and associated Tactical Targeting Networking Technology External Power Amplifier (TEPA) [designated as A(v)6] for shipboard application. The Link 16 program will perform environmental qualification testing (EQT),

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

to include electro-magnetic interference/compatibility (EMI/EMC) in the MOS and MOS Mod cabinets. The program is letting a contract integrating the A(v)6 into a MOS Mod cabinet, to include host-interface updates and integration efforts for shipboard application. The program office is using an organic government organization to integrate the A(v)6 into the MOS cabinet.

The C2P Technology Refresh (TR) configuration will be replaced by C2P Modernization (MOD). C2P Mod will leverage existing commercial-off-the-shelf (COTS) hardware and be a complete modernization of the C2P software architecture significantly improving system cybersecurity. C2P Mod capabilities are implemented in software and will be developed in capability drops (CDs). C2P Mod development and support will be managed by Naval Information Warfare Center Pacific (NIWC PAC).

The Link Monitoring and Management Tool (LMMT) capability will replace previously-fielded Air Defense Systems Integrator (ADSI) systems. LMMT will leverage existing government-off-the-shelf (GOTS) software and commercial-off-the-shelf (COTS) hardware. LMMT capabilities are implemented primarily in software and will be developed in Capability Drops (CDs). Existing GOTS software will be updated to incorporate network performance monitoring and management capabilities by Naval Information Warfare Center Pacific (NIWC PAC).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 2126 / *ATDLS Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Link 16 Network Technical Design Agents	C/CPFF	SeaPort- Various : San Diego, CA	0.784	0.525	Apr 2023	1.650	Oct 2023	0.000		-		0.000	0.000	2.959	-
Link 16 Network Systems Engineering	WR	NIWC PAC : San Diego, CA	2.079	2.133	Nov 2022	2.750	Nov 2023	0.000		-		0.000	0.000	6.962	-
Link 16 Network MIDS J Development and Qualification; TTNT GFE & Software	WR	PMA 101 : San Diego, CA	1.000	2.000	Jan 2023	0.000		0.000		-		0.000	0.000	3.000	-
Link 16 Network JTIDS Development and Qualification	C/CPIF	DLS (BAE/Collins) : Wayne, NJ	0.383	0.000		0.000		0.000		-		0.000	0.000	0.383	-
Link 16 Network ECA/ Shipboard Cabinet Development and Qualification	C/CPFF	DLS (BAE/Collins); DRS : Wayne, NJ; Burnsville, MN	0.000	2.384	Sep 2023	2.616	Sep 2024	0.000		-		0.000	0.000	5.000	-
C2P Systems Engineering	WR	NIWC PAC : San Diego, CA	9.500	2.970	Oct 2022	3.286	Oct 2023	1.997	Oct 2024	-		1.997	Continuing	Continuing	Continuing
C2P IV&V	WR	NIWC PAC : San Diego, CA	0.936	0.613	Oct 2022	1.950	Oct 2023	0.508	Oct 2024	-		0.508	Continuing	Continuing	Continuing
C2P Development & Integration	WR	NIWC PAC : San Diego, CA	32.257	11.986	Oct 2022	14.146	Oct 2023	12.124	Oct 2024	-		12.124	Continuing	Continuing	Continuing
LMMT Development	WR	NIWC PAC : San Diego, CA	1.701	0.450	Oct 2022	0.600	Oct 2023	1.600	Oct 2024	-		1.600	Continuing	Continuing	Continuing
LMMT Systems Engineering	WR	NIWC PAC : San Diego, CA	1.616	0.550	Oct 2022	0.450	Oct 2023	0.450	Oct 2024	-		0.450	Continuing	Continuing	Continuing
LMMT IV&V	WR	NIWC PAC : San Diego, CA	0.975	0.352	Oct 2022	0.600	Oct 2023	1.130	Oct 2024	-		1.130	Continuing	Continuing	Continuing
		Subtotal	51.231	23.963		28.048		17.809		-		17.809	Continuing	Continuing	N/A

Remarks

The FY25 decrease of $10.239M in Product Development efforts is the result of a $4.753M decrease in C2P as software (SW) Drop B has completed all development and Independent Verification and Validation (IV&V) milestones and the development staff is reduced for the Pre-Planned Product Improvement Program (P3I) tasks to incorporate additional capability to the C2P Mod SW baseline; a $7.016M decrease in Link 16 due to the program moving into the testing/evaluation phase in FY25; and a $1.530M increase in LMMT as the program ramps up IV&V of Capability Drop (CD4) in FY25.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NIWC PAC : San Diego, CA	3.543	3.040	Jan 2023	2.076	Oct 2023	6.601	Oct 2024	-		6.601	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	OPTEV 4 : Norfolk, VA	0.282	0.250	Oct 2022	0.000		0.000	Oct 2024	-		0.000	Continuing	Continuing	Continuing
		Subtotal	3.825	3.290		2.076		6.601		-		6.601	Continuing	Continuing	N/A

Remarks

The FY25 increase of $4.525M in Test and Evaluation efforts is comprised of: The increase of $4.525M in Development Test and Evaluation (DT&E) initiatives that resulted from a $3.210M increase in Link 16, as program completed product development phase events and shifted towards IV&V and test and evaluation efforts and a $1.315M increase in C2P, as the planning ramps up within the Priority Material Office (PMO) and Naval Command Operational Test and Evaluation Force (COTF) for the FY26 DT&E event and continues to fund C2P Mod cybersecurity testing to detect any technical vulnerabilities that may affect functional mission execution and operational resilience.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Link 16 Network Program Management Support	C/CPFF	SeaPort- Various : San Diego, CA	0.139	0.000		0.000		0.531	Dec 2024	-		0.531	Continuing	Continuing	Continuing
C2P Program Management Support	C/CPFF	SeaPort- Various : San Diego, CA	2.277	0.801	Oct 2022	0.825	Oct 2023	0.650	Dec 2024	-		0.650	Continuing	Continuing	Continuing
C2P Systems Engineering Support	C/CPFF	SeaPort- Various : San Diego, CA	2.277	0.801	Oct 2022	0.825	Oct 2023	0.684	Dec 2024	-		0.684	Continuing	Continuing	Continuing
LMMT Program Management	C/CPFF	SeaPort- Various : San Diego, CA	1.308	0.510	Oct 2022	0.100	Oct 2023	0.100	Oct 2024	-		0.100	Continuing	Continuing	Continuing
		Subtotal	6.001	2.112		1.750		1.965		-		1.965	Continuing	Continuing	N/A

Remarks

The FY25 increase of $.215M in Management Services is the result of a $.531M increase in Link 16, as A(v)6 R&D efforts will be at a point in the process where Personal Support Specialist (PSS) support will be required to document the effort and prepare for the exit criteria and a $.316M decrease in C2P that reflect Mod development scope reductions as it transitions to Pre-Planned Product Improvement (P3I) tasking.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 2126 / *ATDLS Integration*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	61.057	29.365		31.874		26.375		-		26.375	Continuing	Continuing	N/A

Remarks

The FY25 decrease of $5.499M in R-3 Total Area is the result of a $3.754M total decrease in Product Development, Test and Evaluation, Management Services efforts for C2P; a $3.275M total decrease in Product Development, Test and Evaluation, and Management Services efforts for Link 16; and a $1.530M increase in Product Development, Test and Evaluation efforts and Management Services efforts for LMMT.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

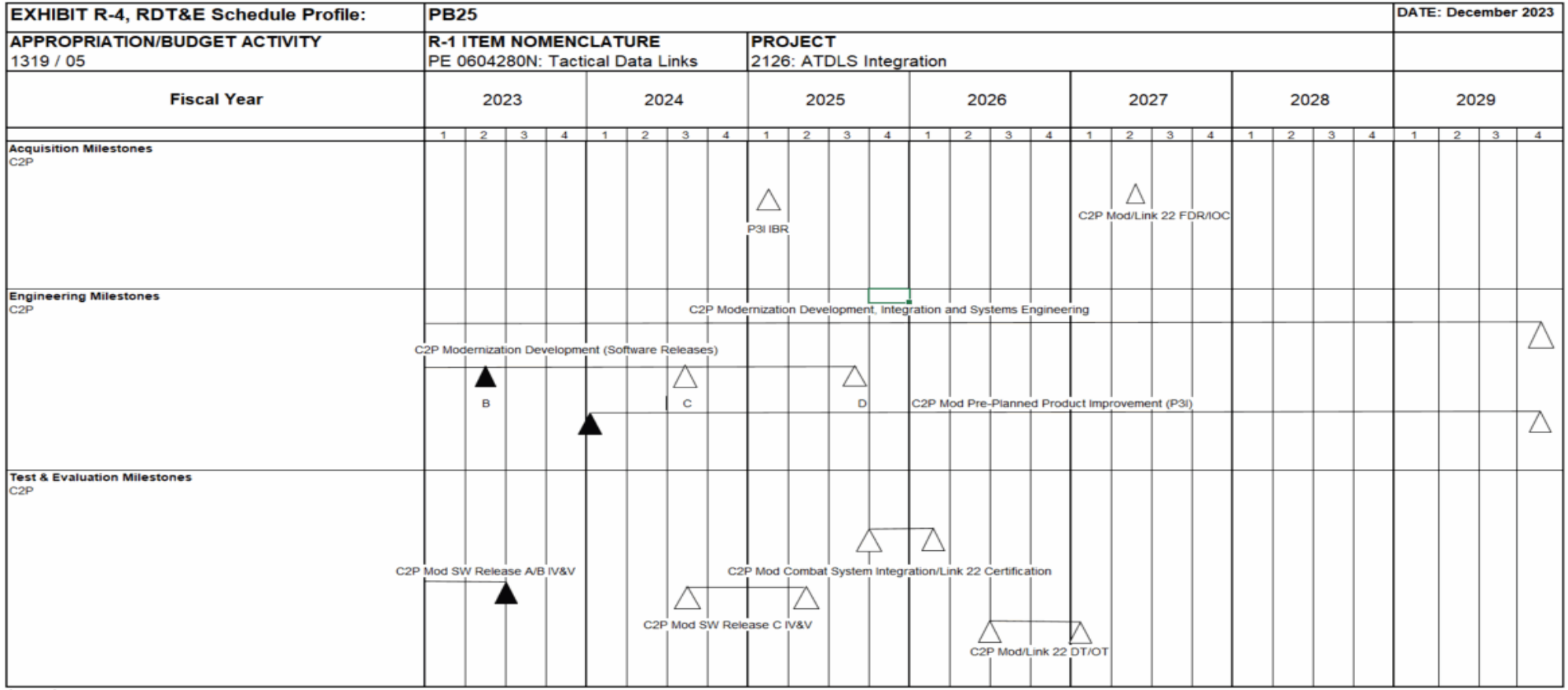
EXHIBIT R-4, RDT&E Schedule Profile:	PB25																								DATE: December 2023			
APPROPRIATION/BUDGET ACTIVITY 1319 / 05	R-1 ITEM NOMENCLATURE PE 0604280N: Tactical Data Links												PROJECT 2126: ATDLS Integration															
Fiscal Year	2023				2024				2025				2026				2027				2028				2029			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones Link 16 Network															A(v)6 IOC													
														MOS MIDS JTRS A(v)6 FDR														
																MOS MOD A(v)6 FDR												
Engineering Milestones Link 16 Network																												
			MIDS J BU3 Qual																									
				MOS A(v)6 Dev & Qual																								
					MOS Mod A(v)6 Dev & Qual																								
Test & Evaluation Milestones Link 16 Network																												
											MOS A(v)6 Integration Testing																		
															MOS Mod A(v)6 Integration Testing													
																A(v)6 DT												

Legend:

CM - Cryptographic Modernization
DT- Developmental Test
FDR - Fielding Decision Review
FR - Frequency Remapping
IOC - Initial Operating Capability
IT - Integrated Test
MOS - MIDS On Ship
TTNT - Tactical Targeting Networking Technology
V6A - BU3, TTNT, TEPA

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

EXHIBIT R-4, RDT&E Schedule Profile:	PB25		DATE: December 2023
APPROPRIATION/BUDGET ACTIVITY 1319 / 05	**R-1 ITEM NOMENCLATURE** PE 0604280N: Tactical Data Links	**PROJECT** 2126: ATDLS Integration	



Legend:

C2P - Command and Control Processor
DT - Developmental Test
FDR - Fielding Decision Review
IOC - Initial Operating Capability
IV&V - Independent Verification and Validation
OT - Operational Test
P3I - Pre-Planned Product Improvement

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

EXHIBIT R-4, RDT&E Schedule Profile:	PB25																												DATE: December 2023
APPROPRIATION/BUDGET ACTIVITY 1319 / 05	R-1 ITEM NOMENCLATURE PE 0604280N: Tactical Data Links								PROJECT 2126: ATDLS Integration																				
Fiscal Year	2023				2024				2025				2026				2027				2028				2029				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Acquisition Milestones LMMT					CD3 FDR CD3 ACT			CD4 BD						CD4 OTRR			CD4 ACT	CD4 FDR											
Engineering Milestones LMMT	CD3 Production Release		CD3 FTR								CD4 IV&V		CD4 Production Release		CD4 FTR														
Test & Evaluation Milestones LMMT												CD4 DT				CD4 OT													

Legend:

ACT - Acquisition Coordination Team
CD - Capability Drop
DT - Developmental Test
FDR - Fielding Decision Review
FTR - Fielding Technical Review
OT - Operational Test
OTRR - Operational Test Readiness Review

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Link 16				
Acquistion Milestones: Link 16 MOS MIDS JTRS A(v)6 FDR	1	2026	1	2026
Acquistion Milestones: Link 16 A(v)6 IOC	3	2026	3	2026
Acquistion Milestones: Link 16 MOS MOD A(v)6 FDR	3	2026	3	2026
Engineering Milestones: Link 16 MIDS J BU3 Qual	1	2023	1	2025
Engineering Milestones: Link 16 MOS A(v)6 Dev & Qual	1	2023	4	2024
Engineering Milestones: Link 16 MOS Mod A(v)6 Dev & Qual	4	2023	1	2025
Test and Evaluation Milestones: Link 16 MOS A(v)6 Integration Testing	1	2025	3	2025
Test and Evaluation Milestones: Link 16 MOS Mod A(v)6 Integration Testing	2	2025	4	2025
Test and Evaluation Milestones: Link 16 A(v)6 DT	2	2025	4	2025
C2P				
Acquistion Milestones: C2P P3I IBR	1	2025	1	2025
Acquistion Milestones: C2P Mod/Link 22 FDR/IOC	2	2027	2	2027
Engineering Milestones: C2P Modernization Development, Integration and Systems Engineering	1	2023	4	2029
Engineering Milestones: C2P Mod Software Release B	2	2023	2	2023
Engineering Milestones: C2P Mod Software Release C	3	2024	3	2024
Engineering Milestones: C2P Mod Software Release D	3	2025	3	2025
Engineering Milestones: C2P Mod P3I	1	2024	4	2029
Test and Evaluation Milestones: C2P Mod SW Release A/B IV&V	1	2023	2	2023
Test and Evaluation Milestones: C2P Mod SW Release C IV&V	3	2024	2	2025
Test and Evaluation Milestones: C2P Mod Combat Systems Integration/Link 22 Certification	4	2025	1	2026

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 2126 / *ATDLS Integration*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test and Evaluation Milestones: C2P Mod/Link 22 DT/OT	3	2026	1	2027
LMMT				
Acquistion Milestones: LMMT CD3 FDR	1	2024	1	2024
Acquistion Milestones: LMMT CD3 ACT	1	2024	1	2024
Acquistion Milestones: LMMT CD4 BD	4	2024	4	2024
Acquistion Milestones: LMMT CD4 OTRR	2	2026	2	2026
Acquistion Milestones: LMMT CD4 ACT	1	2027	1	2027
Acquistion Milestones: LMMT CD4 FDR	2	2027	2	2027
Engineering Milestones: LMMT CD3 Production Release	1	2023	1	2023
Engineering Milestones: LMMT CD3 FTR	3	2023	3	2023
Engineering Milestones: LMMT CD4 IV&V	3	2025	3	2025
Engineering Milestones: LMMT CD4 Production Release	1	2026	1	2026
Engineering Milestones: LMMT CD4 FTR	3	2026	3	2026
Test and Evaluation Milestones: LMMT CD4 DT	4	2025	4	2025
Test and Evaluation Milestones: LMMT CD4 OT	3	2026	3	2026

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*				Project (Number/Name) 3020 / *MIDS/JTRS*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
3020: *MIDS/JTRS*	182.383	80.056	149.068	40.195	-	40.195	39.218	37.191	35.611	60.883	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 554

A. Mission Description and Budget Item Justification

The Multifunctional Information Distribution System (MIDS) program office is the Performing Activity in the Navy (Lead Service for Department of Defense (DOD)) Link 16 capability and consists of two (2) product lines, MIDS Low Volume Terminal (LVT) (legacy hardware defined radio) and MIDS Joint Tactical Radio System (JTRS) (software (SW) defined radio). MIDS-LVT effort is a cooperative development program between France, Germany, Italy, Spain, and the United States with United States joint service participation (Navy, Army, Air Force), and has provided over 11,000 terminals to 48 Nations providing interoperability with North Atlantic Treaty Organization (NATO) and coalition partners. The Department of Defense (DoD) established the program to design, develop, and deliver low volume, lightweight tactical information system terminals for U.S. and allied fighter aircraft, bombers, helicopters, ships, and ground sites. MIDS-LVT significantly increases force effectiveness and minimizes hostile actions and friend-on-friend engagements. MIDS-LVT Block Upgrade 2 was executed as an Engineering Change Proposal (ECP) and provides the critical upgrades to the MIDS-LVT Terminal to enable U.S., Coalition and International partners' ability to meet the National Security Agency (NSA) mandated timelines for Cryptographic Modernization (CM) and the National Telecommunications and Information Agency (NTIA) and Federal Aviation Agency (FAA) mandated timelines for Frequency Remapping (FR).

MIDS JTRS, designed as a Pre-Planned Product Improvement (P3I) and executed as an ECP to the production MIDS-LVT configuration, and is fully compatible with MIDS-LVT. The MIDS JTRS Core Terminal achieved Full Production & Fielding (FP&F) in March 2012. It facilitated the JTRS incremental approach for fielding advanced JTRS transformational networking capability and transformed the MIDS-LVT into a 4-channel, SW Communications Architecture (SCA) compliant, Joint Tactical Radio. A form-fit-function replacement to MIDS-LVT, MIDS JTRS also adds three programmable 2 Megahertz (MHz) to 2 Gigahertz (GHz) channels capable of hosting the JTRS legacy and networking waveforms. In addition to Link 16, Tactical Air Navigation (TACAN), and voice functionality found in MIDS-LVT, MIDS JTRS has four channels and adds capabilities such as Link 16 Enhanced Throughput (ET), Link 16 FR, SW programmability, CM, and Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4).

MIDS JTRS Tactical Targeting Network Technology (TTNT), is a block upgrade to the MIDS JTRS CMN-4 Terminal providing an Internet Protocol-based networking capability on tactical aircraft. TTNT is a low latency, high throughput waveform that has the capability to support data exchange between fast-moving tactical aircraft, weapons, and unmanned aircraft, in addition to air, land, and sea-based command and control nodes, in a variety of air-to-air and air-to-ground missions including time sensitive targeting, air warfare, close air support, non-traditional ISR, and anti-surface warfare. TTNT and MIDS JTRS CMN-4 directly supports Naval Integrated Fire Control (NIFC) capability requirements. These capabilities provide Joint Airborne Network-Tactical Edge functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

Currently when updated software or any bug fixes are available, the warfighter must return the terminal to the vendor and pay for the labor to install the latest software push. With the new Field Loadable capability, the vendors will update the terminal's software to allow the warfighter to use the front panel of the terminal to load the latest software build in the field. The Field Loadable capability entails updating and rewriting the specifications documents for the front panel, new software to enable users in the field to push updates and retrofitting government furnished equipment for use in the new testing environments.

The FY 2025 Budget completes Mission Optimized Waveform operator interface and moves that capability into qualification and test by incorporating it into an integrated baseline (IB). The IB software qualification/testing and Electromagnetic Compatibility Features (EMCF) testing will begin. The FY 2025 budget also continues funding for the Tactical Airborne Reference Implementation Lab (TACAIR RIL), and Tactical Targeting Network Technology (TTNT) and Link 16 waveform updates.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: MIDS	80.056	149.068	40.195	0.000	40.195
Articles:	-	-	-	-	-
FY 2024 Plans: Begin testing J-Series Over IP Network (JOIN) and Dynamic Link Exchange Protocol (DLEP) capability with Multifunctional Information Distribution System (MIDS) Modernization hardware and front panel loading capability in the Block Cycle 1 release. Conduct and complete Block Cycle 1 (BC1) (Software Release 1) formal contractor qualification testing. Begin Electromagnetic Compatibility (EMC) Features testing on BC1 for transition of the software to include JOIN and DLEP capability into production and provide software to fielded terminals for front panel upload. Fix any discrepancies found in EMC Features testing to ensure the transition and EMC approval. Continue MIDS Joint Tactical Radio System (JTRS) terminal integration, qualification test and EMC Features test of software integrated builds and hardware configurations. Upgrade EMC Features Acceptance Test Procedures to ensure EMC Features functionality is operating correctly inside the MIDS JTRS terminal and meeting EMC Features specifications. Complete MIDS JTRS Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4) enhancements, machine to machine interface (MMI) software download capability and user authentication to comply with terminal security requirements. Investigate options to update MMI to support mission optimized waveform operator interface and expand scope for TTNT and new capabilities. Continue TTNT waveform changes and capability gap improvements with new Integrated Builds (IB) of Software drops. Continue development of key capability efforts for TTNT with Techniques 1 and 2 and MOW. Continue					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
the risk reduction for the design and development different MOW software, firmware and waveform updates in MIDS JTRS TTNT. Investigate multiple current waveform options for MIDS JTRS TTNT and develop recommendations/report the findings to inform capability decisions for the future of multiple platforms using the MIDS JTRS TTNT. Continue the Tactical Targeting Network Technology (TTNT) System of Systems (SoS) Modeling, Simulation, and Analysis (MS&A) effort by incorporating new TTNT platform simulators, applications, and networks modeling to optimize the TTNT networks for increased warfighter capacity and capability. Continue the Consolidated Automated Support System (CASS) Test Program Sets (TPS) prototype test and regression test for fleet release. Continue to support multiple testing, demonstrations and exercises utilizing TTNT terminals and networks focused on the integration of TTNT terminals into newer, non-Lead Platform programs, including MQ-25, Surface Ships, and various Joint airborne platforms. Continue leading the Tactical Data Dissemination initiative (TDDi) project and coordinate targeted waveform specification updates, develop reference implementation capabilities, and initiate governance and Community of Interest (COI) coordination efforts. Continue the development of the TTNT Fleet Introduction Team (FIT) to support new platform integration and testing efforts at various platform integration sites, laboratory, and T&E facilities. Continue Multifunctional Information Distribution System (MIDS) systems engineering, communication security, Information Assurance (IA) and program management support. Develop and establish Department of Defense (DoD) Tactical Aircraft Reference Implementation Laboratory (TACAIR RIL). The TACAIR RIL will develop a pre-vetted library of Services, Waveform Applications (WFAs) and Non-waveform Applications to enable accelerated delivery of capabilities to the warfighter. Update the Link 16 RIL and develop a TACAIR RIL for compliance, new technology testing and innovation of tactical data links. Develop and leverage Modular Open System Approach (MOSA) based references to assess, develop, integrate, prototype, and test new technologies. Continue Core Waveform, Link 16 Lead Service work in accordance with OSD memorandum dated 29MAR19. Continue System of Systems Analysis of Link 16 networks, waveform Mission Threads/Kill Chains and associated Information Exchange Requirements (IERs) to guide Joint fielding and terminal development					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
recommendations with associated prioritizations. Continue to update the basic digital model to guide Link 16 development strategies. Use the Link 16 reference implementation platform for prototyping and conducting frequency testing and other changes in standards and/or mandated updates. Continue with Link 16 development fixes and updates. ***FY 2025 Base Plans:*** Continue MIDS Joint Tactical Radio System (JTRS) Electromagnetic Compatibility (EMC) Features test of software integrated builds and hardware configurations. Continue upgrading EMC Features Acceptance Test Procedures to ensure Electromagnetic Compatibility (EMC) Features functionality is operating correctly inside the Multifunctional Information Distribution System Joint Tactical Radio System MIDS JTRS terminal and meeting EMC Features specifications. Complete development of the mission-optimized waveform operator interface, conduct prototype demonstration and submit final report. Develop an Integrated Build Request (IBR) to integrate and test new capabilities and critical JTRS Problem Reports (JPRs) into a software integrated build (IB). Execute a Qualification and Test Request (QTR) to perform Contractor First Article Qualification Test (FAQT) and Government FAQT. Conduct EMC Features test and certification and release new capabilities. (Previously called Block Cycle 2, moving away from Block Cycle terminology for Integrated Build and Qualification and Test). Continue Tactical Targeting Network Technology (TTNT) waveform updates and capability gap improvements to be included in the IBR and QTR releases above. Begin integrating and testing various classified capability techniques with MIDS Modernization hardware and front panel loading capability. Continue the TTNT Modeling, Simulation, and Analysis (MS&A) effort by using modeling and simulation scenarios for any proposed or potential new MOW capabilities. Continue to Support multiple testing, demonstrations and exercises utilizing TTNT terminals and networks focused on the integration of TTNT terminals into newer, non-Lead Platform programs, including MQ-25, Surface Ships, and various Joint airborne platforms. Complete the Consolidated Automated Support System (CASS) Test Program Sets (TPS) for fleet release. Complete the Tactical Data Dissemination initiative (TDDi) project and coordinate targeted waveform specification updates, develop reference implementation capabilities, and initiate governance and Community					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
of Interest (COI) coordination efforts. Continue the development of the TTNT Fleet Introduction Team (FIT) training program and subject matter expert (SME) support to support new platform integration and testing efforts at various platform integration sites, laboratory, and Test & Evaluation (T&E) facilities. Continue MIDS systems engineering, communication security, IA and program management support. Continue the development of the Tactical Aircraft Reference Implementation Laboratory (TACAIR RIL). Port the Link 16 waveform to Sensor Open Systems Architecture (SOSA) aligned hardware. Test the SOSA aligned radio for ability to process and communicate from a host radio and to a MIDS JTRS terminal. Continue Core Waveform, Link 16 Lead Service efforts. Analyze Link 16 as an enterprise and conduct trade off studies to evaluate PoR versus Non-Developmental Item (NDI) radios. Develop terminal strategies for Link 16 programs and update the capability developed and fielded. Test Link 16 Non-Developmental Item (NDI) radios and evaluate these Link 16 NDI radios for interoperability and standards compliance. Track and analyze Link 16 Information Exchange Requirements (IERs) for waveform and/or terminal enhancements that can help achieve critical Service/Combatant Command (CCMD) IERs. Link 16 standards and minimum implementation will be updated with development of a new Mil Standard (MIL-STD) for the Link 16 waveform as well as support of existing US and International standards. Update the Link 16 network design tool, Joint Network Design Aid (JNDA) with the newest Link 16 capabilities from software from the latest Multifunctional Information Distribution System Joint Tactical Radio System (MIDS JTRS) Integrated Builds. Once updated, JNDA will be delivered to the four US Network Design Facilities (NDFs) and numerous Foreign Military Sales (FMS) customers to develop modernized Link 16 network design. Aid Space Development Agency (SDA) develop its Link 16 in space capability to ensure interoperability, this includes review of Concept of Operations (CONOPs)/ Concept of Employment (CONEMPs), help develop new Link 16 messages to support space operations, Link 16 experiments/exercises with land-based facilities, and test and evaluation of NDI terminals. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** MIDS RDTE decrease of $108.873M from FY2024 to FY2025 is due to the Advanced Tactical Datalinks (ATDL) waveform development and integration funding reduction.					
Accomplishments/Planned Programs Subtotals	80.056	149.068	40.195	0.000	40.195

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
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C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

MIDS JTRS development was initiated as a major modification to the MIDS Low Volume Terminal (LVT) using an Engineering Change Proposal to the existing production contracts. The U.S. prime contractors from the MIDS-LVT program, Data Link Solutions (DLS) and L3 Technologies (previously ViaSat Inc.), cooperatively designed and developed each of the MIDS JTRS terminal variants and Block Upgrade 2 for MIDS-LVT. The U.S. implemented a continuous competition strategy between DLS and L3 Technologies that will be maintained throughout the MIDS-LVT and MIDS JTRS production phases. This strategy has been successfully used on all MIDS variants.

L3 Technologies acquired the portion of ViaSat pertaining to Multifunctional Information Distribution System (MIDS) products, therefore all ViaSat contracts are now changed to L3 Technologies.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years	Various	Various : Various	91.322	0.000		0.000		0.000		-		0.000	0.000	91.322	91.322
Link 16 Waveform Development	WR	NIWC PAC : San Diego, CA	1.168	0.345	Jan 2023	0.345	Jan 2024	0.200	Jan 2025	-		0.200	Continuing	Continuing	Continuing
TTNT Waveforrm/SW Updates	C/CPFF	DLS : Cedar Rapids, IA	6.371	8.001	Oct 2022	8.501	Dec 2023	1.300	Dec 2024	-		1.300	Continuing	Continuing	Continuing
TTNT Waveforrm/SW Updates	C/CPFF	L3 Technologies : Salt Lake City, UT	2.317	1.033	Nov 2022	4.563	Dec 2023	1.000	Dec 2024	-		1.000	Continuing	Continuing	Continuing
TTNT Post Dev Test/ Problem Report Fixes	C/CPFF	DLS : Cedar Rapids, IA	4.150	5.360	Nov 2022	4.350	Jan 2024	1.300	Jan 2025	-		1.300	Continuing	Continuing	Continuing
TTNT Post Dev Test/ Problem Report Fixes	C/CPFF	L3 Technologies : Salt Lake City, UT	2.398	2.200	Nov 2022	3.950	Jan 2024	1.000	Jan 2025	-		1.000	Continuing	Continuing	Continuing
MIDS EMC Features Updates and Testing	C/CPFF	DLS : Cedar Rapids, IA	6.352	2.212	Nov 2022	3.342	Feb 2024	1.400	Feb 2025	-		1.400	Continuing	Continuing	Continuing
MIDS EMC Features Updates and Testing	C/CPFF	L3 Technologies : Salt Lake City, UT	3.569	1.013	Mar 2023	2.472	Feb 2024	1.000	Feb 2025	-		1.000	Continuing	Continuing	Continuing
MIDS Mod SW/FW Full Development	C/CPFF	DLS : Cedar Rapids, IA	9.122	8.724	Dec 2022	10.968	Jan 2024	0.000		-		0.000	0.000	28.814	28.814
MIDS Mod SW/FW Full Development	C/CPFF	L3 Technologies : Salt Lake City, UT	3.331	3.731	Dec 2022	7.041	Jan 2024	0.000		-		0.000	0.000	14.103	14.103
Modernize Special Test Equipment WIN10	C/CPFF	DLS : Cedar Rapids, IA	4.338	0.312	Mar 2023	0.746	Mar 2024	0.000		-		0.000	0.000	5.396	5.396
Test Equipment for Depot/ lab	C/FFP	DLS : Cedar Rapids, IA	7.427	6.889	Jun 2023	3.817	Mar 2024	0.000		-		0.000	0.000	18.133	18.133
Test Equipment for Depot/ lab	C/FFP	L3 Technologies : Salt Lake City, UT	5.025	1.760	Jun 2023	4.220	Mar 2024	0.000		-		0.000	0.000	11.005	11.005
TTNT Advanced Techniques	C/CPFF	DLS : Cedar Rapids, IA	0.000	5.975	Oct 2022	12.410	Nov 2023	3.900	Nov 2024	-		3.900	Continuing	Continuing	Continuing
TTNT Advanced Techniques	C/CPFF	L3 Technologies : Salt Lake City, UT	0.000	0.800	Apr 2023	10.130	Nov 2023	2.515	Nov 2024	-		2.515	Continuing	Continuing	Continuing
TTNT Enhancements/Tech 1	C/CPFF	MIT LL : Hanscom, MA	0.719	1.100	Nov 2022	2.000	Dec 2023	1.000	Dec 2024	-		1.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS JTRS CMN-4 Software Enhancements/ Acceleration	C/CPFF	DLS : Cedar Rapids, IA	0.532	3.296	Oct 2022	5.415	Apr 2024	3.200	Apr 2025	-		3.200	Continuing	Continuing	Continuing
MIDS JTRS CMN-4 Software Enhancements/ Acceleration	C/CPFF	L3 Technologies : Salt Lake City, UT	0.000	0.740	Oct 2022	3.737	Apr 2024	2.600	Apr 2025	-		2.600	Continuing	Continuing	Continuing
MIDS Mod Enhancements	C/CPFF	BAE : Wayne, NJ	3.750	0.360	Dec 2022	4.000	Dec 2023	0.000		-		0.000	0.000	8.110	8.110
TTNT Advanced Development/ Enhancements	C/CPFF	MITRE : McLean, VA	0.000	1.421	Nov 2022	5.650	Jan 2024	2.500	Jan 2025	-		2.500	Continuing	Continuing	Continuing
SBIR Transition	C/CPFF	ADI : New York, NY	0.050	0.300	Jun 2023	0.200	Mar 2024	0.100	Mar 2025	-		0.100	Continuing	Continuing	Continuing
New Waveform Risk Reduction/Technology Modernization	C/CPFF	DLS : Cedar Rapids, IA	0.000	0.000		9.720	Jan 2024	0.000		-		0.000	0.000	9.720	9.720
New Waveform Risk Reduction/Technology Modernization	C/CPFF	L3 Technologies : Salt Lake City, UT	0.000	0.000		6.340	Jan 2024	0.000		-		0.000	0.000	6.340	6.340
TACAIR RIL	WR	NIWC PAC : San Diego, CA	0.000	0.000		11.000	Nov 2023	5.000	Nov 2024	-		5.000	Continuing	Continuing	Continuing
Application Specific Integrated Circuit (ASIC) Domain	MIPR	BAH : McLean, VA	0.000	0.200	Jul 2023	3.250	Jul 2024	0.000		-		0.000	0.000	3.450	3.450
Link 16 Waveform Development/ Interoperability	C/CPFF	L3 Technologies : Salt Lake City, UT	0.000	2.420	Aug 2023	0.000	Aug 2024	0.000		-		0.000	0.000	2.420	2.420
		Subtotal	151.941	58.192		128.167		28.015		-		28.015	Continuing	Continuing	N/A

Remarks

New Advanced Tactical Datalinks (ATDL) Waveform development and integration no longer funded, significant decrease in Product Development in FY 2025. L3 Technologies acquired the portion of Viasat pertaining to Multifunctional Information Distribution System (MIDS) products, therefore all ViaSat contracts are now changed to L3 Technologies.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 3020 / *MIDS/JTRS*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years	Various	Various : Various	2.266	0.000		0.000		0.000		-		0.000	0.000	2.266	2.266
CASS TPS/Depot Support	WR	NAVAIR : North Island San Diego, CA	0.640	1.828	Nov 2022	1.753	Jan 2024	0.750	Jan 2025	-		0.750	Continuing	Continuing	Continuing
Modeling and Sim Suppt TTNT	WR	NAVAIR : China Lake, CA	1.171	0.321	Dec 2022	0.429	Dec 2023	0.450	Dec 2024	-		0.450	Continuing	Continuing	Continuing
CORE Waveform Support	WR	NIWC PAC : San Diego, CA	4.248	6.512	Oct 2022	5.344	Oct 2023	5.000	Oct 2024	-		5.000	Continuing	Continuing	Continuing
I-Level Support Equipment	C/CPFF	L3 Technologies : Salt Lake City, UT	2.771	0.835	Mar 2023	0.253	Dec 2024	0.000		-		0.000	0.000	3.859	3.859
NSA Certification Support	MIPR	NSA : Fort Meade, MD	0.130	0.200	Apr 2023	0.000		0.000		-		0.000	0.000	0.330	0.330
MIDS Modernization/ Mission Network Support	WR	NAVAIR : China Lake, CA	1.804	0.384	Nov 2022	0.191	Nov 2023	0.200	Nov 2024	-		0.200	Continuing	Continuing	Continuing
IA Cert SUpport	WR	NIWC LANT : Charleston, SC	0.114	0.980	Mar 2023	0.150	Jan 2024	0.150	Jan 2025	-		0.150	Continuing	Continuing	Continuing
MIT LL Modeling and Sm	C/CPFF	MIT LL : Hanscom, AFB	1.500	0.300	Nov 2022	0.400	Dec 2023	0.250	Dec 2024	-		0.250	Continuing	Continuing	Continuing
Demonstration/Exercise Support	MIPR	Lackland AFB : san Antonio, TX	0.000	0.123	Dec 2022	0.200	Feb 2024	0.100	Feb 2025	-		0.100	Continuing	Continuing	Continuing
		Subtotal	14.644	11.483		8.720		6.900		-		6.900	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NIWC PAC : San Diego, CA	5.947	6.446	Nov 2022	6.930	Nov 2023	3.000	Nov 2024	-		3.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	COMOPTEVFOR : Norfolk, VA	0.193	0.000		0.000		0.000		-		0.000	0.000	0.193	0.193
		Subtotal	6.140	6.446		6.930		3.000		-		3.000	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Government lab and flight testing (DT and OT) for Multifunctional Information Distribution System (MIDS) Modernization (Joint Tactical Radio System (JTRS) hardware enhancement) and testing of J-Series Over IP Network (JOIN) and Dynamic Link Exchange Protocol (DLEP) capabilities for Tactical Targeting Network Technology (TTNT) begin in FY 2024 and continue through FY 2025.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years	Various	Various : Various	0.304	0.000		0.000		0.000		-		0.000	0.000	0.304	0.304
Systems Engineering Support	MIPR	MITRE : Bedford, MA	4.107	1.401	Dec 2022	1.800	Dec 2023	0.770	Dec 2024	-		0.770	Continuing	Continuing	Continuing
Government Engineering Support	WR	NIWC PAC : San Diego,CA	2.758	0.750	Oct 2022	1.600	Nov 2023	0.900	Nov 2024	-		0.900	Continuing	Continuing	Continuing
Data Link Analysis	WR	NAVAIR : Pax River, MD	0.441	0.208	Dec 2022	0.253	Dec 2023	0.200	Dec 2024	-		0.200	Continuing	Continuing	Continuing
Engineering Support	C/CPFF	Sentek Global : San Diego, Ca	0.756	0.568	Dec 2022	0.575	Dec 2023	0.000	Dec 2024	-		0.000	Continuing	Continuing	Continuing
Information Assurance, Risk and Program Support	C/CPFF	G2 : San Diego, Ca	0.717	0.250	Jan 2023	0.325	Jan 2024	0.000	Jan 2025	-		0.000	Continuing	Continuing	Continuing
Information Assurance, Risk and Program SupportText	MIPR	AFRL : Rome, NY	0.575	0.375	Dec 2022	0.200	Dec 2023	0.200	Dec 2024	-		0.200	Continuing	Continuing	Continuing
EMCF Analysis	C/CPFF	BAH : McLean, Va	0.000	0.210	Mar 2023	0.210	Mar 2024	0.210	Mar 2025	-		0.210	Continuing	Continuing	Continuing
Contractor Engineering Support	MIPR	NSMA : Washington, DC	0.000	0.173	Oct 2022	0.288	Oct 2023	0.000		-		0.000	0.000	0.461	0.461
		Subtotal	9.658	3.935		5.251		2.280		-		2.280	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	182.383	80.056		149.068		40.195		-		40.195	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
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	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Prior Year cost data is provided under PE 0205604N Project 3020.

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

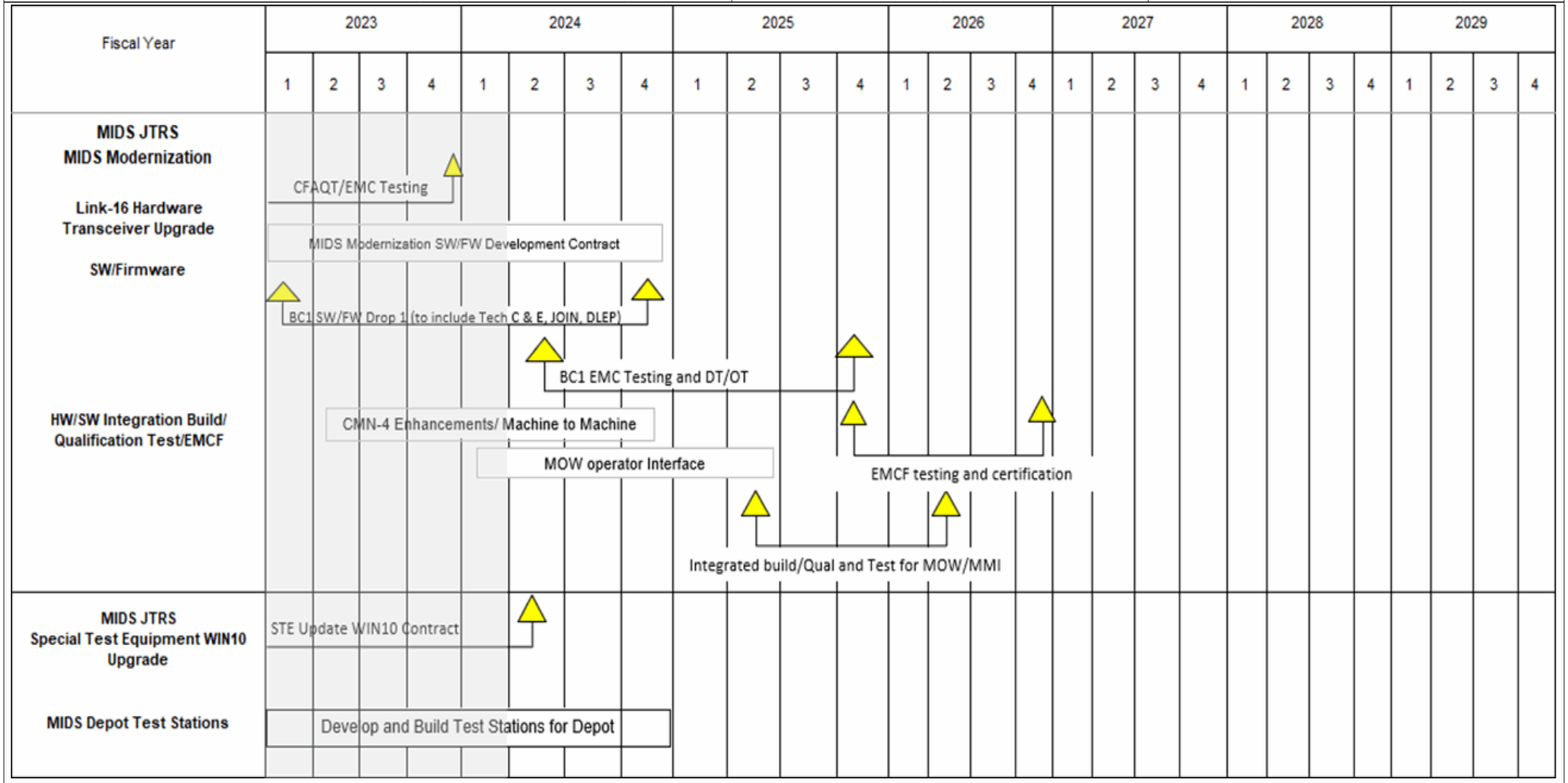


Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

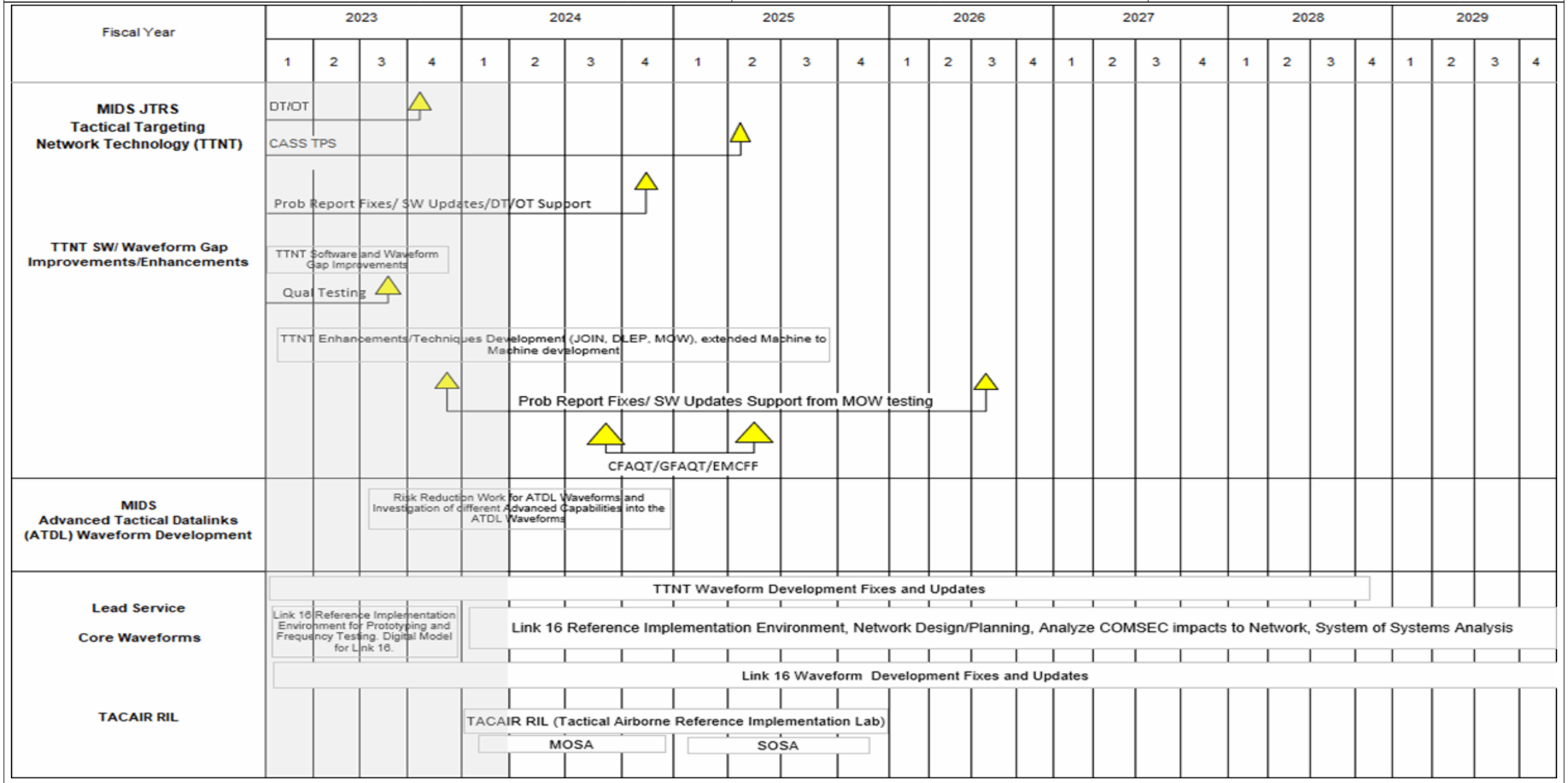


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3020				
MIDS JTRS Modernization Link 16 Hardware Transceiver Upgrade: Contractor First Article Qualification Test (CFAQT)/EMC Testing	1	2023	4	2023
MIDS JTRS Modernization Software/Firmware: MIDS Modernization SW/FW development contract	1	2023	4	2024
MIDS JTRS Modernization Software/Firmware: BC1 SW/FW Drop 1 (to include Tech C & E, JOIN & DLEP)	1	2023	4	2024
MIDS JTRS Modernization Software/Firmware: BC1 EMC Testing and Developmental Test and Operational Test	2	2024	4	2025
MIDS HW/SW Integrated Build/Qualification Test/EMCF: CMN-4 Enhancements/ Machine to Machine	2	2023	4	2024
MIDS HW/SW Integrated Build/Qualification Test/EMCF: MOW Operator Interface	1	2024	2	2025
MIDS HW/SW Integrated Build/Qualification Test/EMCF: Integrated Build/Qual and Test for MOW/MMI	2	2025	2	2026
MIDS HW/SW Integrated Build/Qualification Test/EMCF: EMCF testing and cert	4	2025	4	2026
MIDS JTRS Modernization Special Test Equipment (STE): STE Update WIN10 Contract	1	2023	2	2024
MIDS Depot Test Stations: Test Station	1	2023	4	2024
MIDS JTRS Tactical Targeting Network Technology (TTNT)				
Platform Developmental Test (DT) and Operational Test (OT)	1	2023	4	2023
Consolidated Automated Support System (CASS) Test Program Sets (TPS)	1	2023	2	2025
Problem Report Fixes/SW Updates DT/OT Support	1	2023	4	2024
TTNT Waveform Gap Improvements/Enhancements: TTNT SW/Waveform Gap Improvements	1	2023	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3020 / *MIDS/JTRS*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
TTNT Waveform Gap Improvements/Enhancements: Qual Testing	1	2023	3	2023
TTNT Waveform Gap Improvements/Enhancements: Enhancements/Techniques Contract (JOIN, DLEP, MOW), extended Machine to Machine dev	1	2023	3	2025
TTNT Waveform Gap Improvements/Enhancements: Problem Report Fixes/SW Updates Support (Fixes out of test)	4	2023	3	2026
TTNT Waveform Gap Improvements/Enhancements: CFAQT/GFAQT/EMCF	3	2024	2	2025
MIDS Advanced Tactical Datalinks Waveform Development: Risk Reduction Work for ATDL Waveform and different Advanced Capabilities Analysis	3	2023	4	2024
MIDS Core Waveforms: TTNT Waveform Development Fixes and Updates	1	2023	4	2028
MIDS Core Waveforms: Link 16 Reference Implementation Environment for Prototyping and Frequency Testing	1	2023	4	2023
MIDS Core Waveforms: Link 16 Reference Implementation Environment, Network Design/Planning, Analyze COMSEC impacts to Network, System of Systems Analysis	1	2024	4	2029
MIDS Core Waveforms: Link 16 Waveform Development Fixes and Updates	1	2023	4	2029
Tactical Airborne Reference Implementation Lab: TACAIR RIL	1	2024	4	2025
Tactical Airborne Reference Implementation Lab: MOSA	1	2024	4	2024
Tactical Airborne Reference Implementation Lab: SOSA	1	2025	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 3078 / *Digital Modular Radio*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
3078: *Digital Modular Radio*	52.190	5.932	7.115	6.629	-	6.629	6.691	6.822	6.961	7.110	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Digital Modular Radio (DMR) with Integrated Waveform (IW) and Mobile User Objective System (MUOS) capable hardware is the Navy's technical solution for the IW/ MUOS requirement. The DMR AN/USC-61(C), is the first software defined radio to become a communications system standard for the U.S. Military. The compact, multi-channel DMR provides 3G, Wideband Code Division Multiple Access (WCDMA) technology, for high speed/capacity voice and data satellite communications. DMR radios currently operate aboard U.S. Navy surface and subsurface vessels, fixed-sites and other Department of Defense (DoD) communication platforms using frequencies ranging from 2 MHz to 2 GHz. Certified to pass secure voice and data at Multiple Independent Levels of Security (MILS) over High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF), and Satellite Communications (SATCOM) channels, the DMR system was developed to the U.S. Navy's specifications and meets all the stringent environmental, Electromagnetic Interference (EMI) and performance requirements for use in the U.S. Fleet. This system is formally specified by both Fleet Commanders as a threshold capability, for global maritime command control and communications in a Distributed Maritime Environment, to execute current warfighting plans and is required for National Command and Control capability. This program is for continued development/integration of the IW and MUOS waveforms into the DMR in accordance with Military Standards 188-181,2,3. Additionally, the enhancements of High Frequency Distribution Amplifier Group (HFDAG) and, HF Automated Link Establishment (ALE) and Second-Generation Anti-Jam Tactical UHF Radio for NATO (SATURN) will also be developed/ integrated into the DMR. HFDAG is a follow-on HF solution to fulfill transmit and receive HF communication capability with various modes of operation, such as ALE, for Navy platforms. HFDAG will utilize the existing DMR as the exciter/receiver. Generation 3 (GEN 3) HF ALE/HF wideband provides Navy users with improved HF communications, increased transmission rates from radio to radio, and serves as a supplement to SATCOM when SATCOM networks are overloaded or unavailable. SATURN is the follow-on HAVEQUICK II anti-jamming solution in accordance with NATO Standardization Agreement 4372. SATURN capability will counter adversaries' jamming efforts and ensure Navy's Assured Command and Control UHF communications operational end-to-end capability as well as enhance interoperability within/ between DMR users and with Allied/Coalition partners. IW uses a Time Division Multiple Access (TDMA) communication system in an attempt to improve satellite bandwidth utilization over legacy SATCOM waveforms. This enables demand assigned services on UHF SATCOM networks to support new applications that require better performance and higher channel throughput. The MUOS waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems.

In FY25, DMR will continue MUOS 3.2 development integration efforts and continue the development of necessary components to the second generation Anti-jam Tactical UHF Radio for North Atlantic Treaty Organization (NATO) (SATURN) waveform (6.5.7).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: DMR	5.932	7.115	6.629	0.000	6.629
Articles:	-	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3078 / *Digital Modular Radio*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Description: Overall program efforts include investigation of emerging technologies through study, development and associated testing for feasibility of program insertion. DMR, with IW and MUOS capable hardware, is the Navy's technical solution for the IW/MUOS requirement. As the Navy's primary technical solution, DMR provides the UHF SATCOM IW and MUOS waveform capability to the Fleet. The MUOS waveform enables MUOS satellites to provide worldwide communication satellite coverage for DoD requirements, with functionality comparable to commercial mobile phone systems. ***FY 2024 Plans:*** FY24 DMR will complete Crypto Mod development efforts, continue MUOS waveform 3.2 development integration efforts, and continue of the Second Generation Anti-jam Tactical UHF Radio for North Atlantic Treaty Organization (NATO) (SATURN) waveform development. ***FY 2025 Base Plans:*** DMR will continue MUOS 3.2 development integration efforts and continue the development of necessary components to the second generation Anti-jam Tactical UHF Radio for North Atlantic Treaty Organization (NATO) (SATURN) waveform (6.5.7). ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The $0.486M decrease in funding from FY24 to FY25 is due to completion of Crypto Mod development efforts in FY24 and ramped down SATURN waveform development efforts.					
Accomplishments/Planned Programs Subtotals	5.932	7.115	6.629	0.000	6.629

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/3010: *Shipboard Tactical Comms*	36.941	29.776	24.602	-	24.602	29.363	32.533	32.909	33.242	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3078 / *Digital Modular Radio*

D. Acquisition Strategy

General Dynamics Mission Systems (GDMS), formerly General Dynamics C4 Systems (GDC4S), owns the technical data rights to the Digital Modular Radio (DMR). Due to this fact, they are the only contractor with the unique capabilities and technical know-how to perform the required design work to complete the Integrated Waveform (IW) upgrade, the Mobile User Objective System (MUOS) interoperability efforts, and cryptographic modernization development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3078 / *Digital Modular Radio*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IW/MUOS Development	C/CPFF	GDMS : Scottsdate, AZ	24.671	0.000		0.000		0.250	Jan 2025	-		0.250	Continuing	Continuing	Continuing
AHF Functionality Development	C/CPFF	GDMS : Scottsdale, AZ	12.649	0.000		0.000		0.000		-		0.000	0.000	12.649	-
IW/MUOS Development	WR	NIWC PAC : San Diego, CA	0.600	0.000		0.000		0.968	Jan 2025	-		0.968	Continuing	Continuing	Continuing
AHF Functionality Development	WR	NIWC PAC : San Diego, CA	1.330	0.150	Oct 2022	0.000		0.000		-		0.000	0.000	1.480	-
Cryptographic Modernization Development	C/CPFF	GDMS : Scottsdale, AZ	1.170	0.000		0.000		0.000		-		0.000	0.000	1.170	-
Cryptographic Modernization Development	WR	NIWC PAC : San Diego, CA	0.570	0.300	Dec 2022	0.780	Dec 2023	0.000		-		0.000	0.000	1.650	-
SATURN Development	C/CPFF	GDMS : Scottsdale, AZ	0.000	3.713	Oct 2022	0.786	Oct 2023	2.761	Jan 2025	-		2.761	Continuing	Continuing	Continuing
SATURN Development	WR	NIWC PAC : San Diego, CA	0.000	1.084	Oct 2022	4.776	Oct 2023	0.400	Jan 2025	-		0.400	Continuing	Continuing	Continuing
IW/MUOS Development	C/FFP	L3 Harris : Rochester, NY	0.000	0.000		0.000		1.250	Dec 2024	-		1.250	Continuing	Continuing	Continuing
		Subtotal	40.990	5.247		6.342		5.629		-		5.629	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering Support	C/CPFF	NIWC PAC : San Diego, CA	8.319	0.228	Dec 2022	0.228	Dec 2023	0.600	Dec 2024	-		0.600	Continuing	Continuing	Continuing
		Subtotal	8.319	0.228		0.228		0.600		-		0.600	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 3078 / *Digital Modular Radio*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	C/CPFF	GDMS : San Diego, CA	0.229	0.229	Dec 2022	0.225	Dec 2023	0.000		-		0.000	0.000	0.683	-
Developmental Test & Evaluation (DT&E)	WR	NIWC PAC : San Diego, CA	0.063	0.128	Nov 2022	0.120	Nov 2023	0.100	Nov 2024	-		0.100	Continuing	Continuing	Continuing
		Subtotal	0.292	0.357		0.345		0.100		-		0.100	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	BAH : San Diego, CA	2.589	0.100	Nov 2022	0.200	Nov 2023	0.300	Nov 2024	-		0.300	Continuing	Continuing	Continuing
		Subtotal	2.589	0.100		0.200		0.300		-		0.300	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	52.190	5.932		7.115		6.629		-		6.629	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3078 / *Digital Modular Radio*

DMR

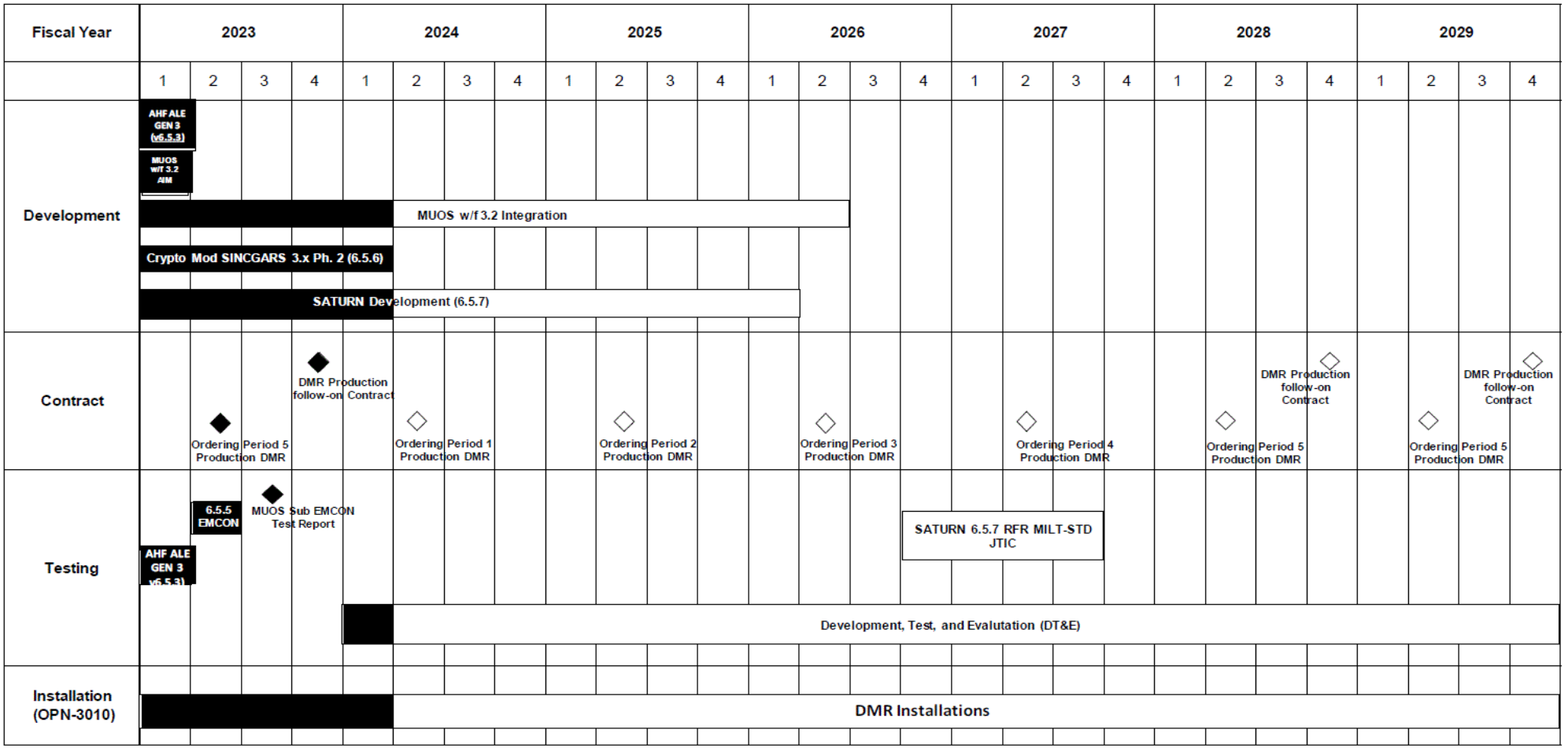


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3078 / *Digital Modular Radio*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3078				
AHF ALE GEN 3 AHF Functionality Development (v6.5.6)	1	2023	2	2023
MUOS w/f 3.2 AIM LP WIMCAT & Porting	1	2023	1	2023
MUOS w/f 3.2 Integration	1	2023	2	2026
Crypto Mod SINCGARS 3.x Ph. 2	1	2023	1	2024
SATURN Development	1	2023	1	2026
Production Deliveries	1	2023	4	2029
AHF ALE GEN 3 Software Development (v6.5.3) Development Test	1	2023	1	2023
6.5.5 Submarine EMCON Testing	2	2023	2	2023
MUOS Sub EMCON Test Report	3	2023	3	2023
Development, Test, and Evaluation (DT&E)	1	2024	4	2029
SATURN 6.5.7 RFR MILT-STD JTIC	4	2026	3	2027
DMR Installations	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 3341 / *Network Tactical Common Data Link*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
3341: *Network Tactical Common Data Link*	90.436	8.005	3.017	5.344	-	5.344	4.403	5.585	4.603	4.702	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Network Tactical Common Data Link (NTCDL) provides the ability to transmit/receive real-time Intelligence, Surveillance, and Reconnaissance (ISR) data simultaneously from multiple sources (surface, airborne, sub-surface, man-portable), and exchange command and control information (voice, data, imagery, and Full Motion Video) across dissimilar joint, service, coalition, and civil networks. NTCDL provides warfighters with the capability to support multiple, simultaneous, networked operations with currently fielded Common Data Link (CDL)-equipped air platforms (e.g. MH-60R), in addition to next generation manned and unmanned platforms (e.g., P-8, Triton, MQ-25 (Stingray), small tactical unmanned aircraft systems (STUAS) and Fire Scout). NTCDL is an incremental capability (surface, airborne, sub-surface, and man-portable) providing modular, scalable, multiple-link networked communications. NTCDL benefits the fleet by providing a horizon extension for line-of-sight sensor systems for use in time-critical strike missions and supports tasking, collection, processing, exploitation, and dissemination (TCPED) via its ISR networking capability. NTCDL supports Resilient Command and Control (RC2) through its relay capability, and supports TCPED through its ISR networking capability.

FY 2025 request is for NTCDL completion of reporting and close-out of Tech Evaluation and Initial Operational Test & Evaluation and to continue Capability Enhancement Development.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Network Tactical Common Data Link (NTCDL)	8.005	3.017	5.344	0.000	5.344
Articles:	-	-	-	-	-
Description: Network Tactical Common Data Link (NTCDL) provides the ability to transmit/receive real-time Intelligence, Surveillance, and Reconnaissance (ISR) data simultaneously from multiple sources (surface, airborne, sub-surface, man-portable), and exchange command and control information (voice, data, imagery, and Full Motion Video) across dissimilar joint, service, coalition, and civil networks. NTCDL provides warfighters with the capability to support multiple, simultaneous, networked operations with currently fielded Common Data Link (CDL)-equipped air platforms (e.g. MH-60R), in addition to next generation manned and unmanned platforms (e.g., P-8, Triton, MQ-25 (Stingray), small tactical unmanned aircraft systems (STUAS) and Fire Scout). NTCDL is an incremental capability (surface, airborne, sub-surface, and man-portable) providing modular, scalable, multiple-link networked communications. NTCDL benefits the fleet by providing a horizon extension for line-of-sight sensor systems for use in time-critical strike missions and supports tasking, collection, processing, exploitation, and dissemination (TCPED) via its ISR networking capability. NTCDL supports Resilient					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Command and Control (RC2) through its relay capability, and supports TCPED through its ISR networking capability. FY 2025 request is for NTCDL completion of reporting and close-out of Tech Evaluation and Initial Operational Test & Evaluation and to continue Capability Enhancement Development. ***FY 2024 Plans:*** FY 2024 plans include the commencing Tech Evaluation and preparation for Initial Operational Test & Evaluation, and continued maturation of software supporting the initial hardware capability and providing continuing maturation of software to provide increased CDL bandwidth, platform communication equipment, and data rates. ***FY 2025 Base Plans:*** FY 2025 plans include completing reporting and close-out of Tech Evaluation and Initial Operational Test & Evaluation and expanding the initial system capability by developing increased CDL bandwidth, platform communication equipment, and data rates. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The FY25 funding increase of $2.327M returns the program to their original RDTE profile to support the completion of IOT&E and funds vendor continuation of critical capability enhancements. FY24 RDTE was decreased due to a realignment to OPN required to fully fund critical NTCDL procurement for fielding on CVN70.					
Accomplishments/Planned Programs Subtotals	8.005	3.017	5.344	0.000	5.344

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• OPN/2950: *Network Tactical Common Data Link (CDL)*	11.792	16.475	24.361	-	24.361	16.890	7.229	13.009	13.283	Continuing	Continuing

Remarks

NTCDL is the follow-on program for the CDLS Tech Refresh.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

D. Acquisition Strategy

NTCDL will utilize the evolutionary acquisition approach for: surface, air, sub-surface, man-portable in a scalable development approach. EDMs and LRIPs provide Ku-band Phased Array Antennas (PAAs) with 4 simultaneous links, with a range of 110-150 nautical miles and speeds of up to 45 Mbps; with the future ability, if funded, to deliver Full Capability which will include 2 additional simultaneous links, increase range up to 240 nautical miles, and increase speeds up to 274 Mbps.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NTCDL Product Development	C/CPIF	BAE Systems, Int : Wayne, NJ	70.006	5.549	Oct 2022	0.000		3.121	Nov 2024	-		3.121	Continuing	Continuing	Continuing
NTCDL Product Development	C/CPIF	TBD : TBD	0.000	0.000		0.633	Jun 2024	0.000		-		0.000	0.000	0.633	-
NTCDL Software Development	WR	NIWC PAC : San Diego, CA	7.674	0.400	Nov 2022	0.456	Nov 2023	0.628	Nov 2024	-		0.628	Continuing	Continuing	Continuing
NTCDL Software Development	C/IDIQ	Technology Unlimited Group : San Diego, CA	2.045	0.255	Feb 2023	0.511	Feb 2024	0.285	Feb 2025	-		0.285	Continuing	Continuing	Continuing
		Subtotal	79.725	6.204		1.600		4.034		-		4.034	Continuing	Continuing	N/A

Remarks

Increase to product development efforts returns the program to their original developmental baseline to continue critical capability enhancements. FY24 RDTE was decreased due to a realignment to OPN required to fully fund critical NTCDL procurement for fielding on CVN70.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NTCDL Systems Engineering	WR	NIWC PAC : San Diego, CA	3.911	0.433	Nov 2022	0.228	Nov 2023	0.699	Nov 2024	-		0.699	Continuing	Continuing	Continuing
NTCDL Logistics Engineering	C/CPFF	CSA : San Diego, CA	0.202	0.000		0.000		0.000		-		0.000	0.000	0.202	-
		Subtotal	4.113	0.433		0.228		0.699		-		0.699	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NIWC PAC : San Diego, CA	4.751	0.700	Nov 2022	0.516	Nov 2023	0.285	Nov 2024	-		0.285	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	MIPR	JITC : Fort Huachuca, AZ	0.061	0.220	Nov 2022	0.150	Nov 2023	0.063	Nov 2024	-		0.063	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	MIPR	COMOPTEVFOR : Norfolk, VA	0.066	0.230	Nov 2022	0.295	Nov 2023	0.136	Nov 2024	-		0.136	Continuing	Continuing	Continuing
		Subtotal	4.878	1.150		0.961		0.484		-		0.484	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NTCDL Program Management Support	C/CPFF	BAH : San Diego, CA	1.720	0.218	Nov 2022	0.228	Nov 2023	0.127	Nov 2024	-		0.127	Continuing	Continuing	Continuing
		Subtotal	1.720	0.218		0.228		0.127		-		0.127	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	90.436	8.005		3.017		5.344		-		5.344	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

NTCDL

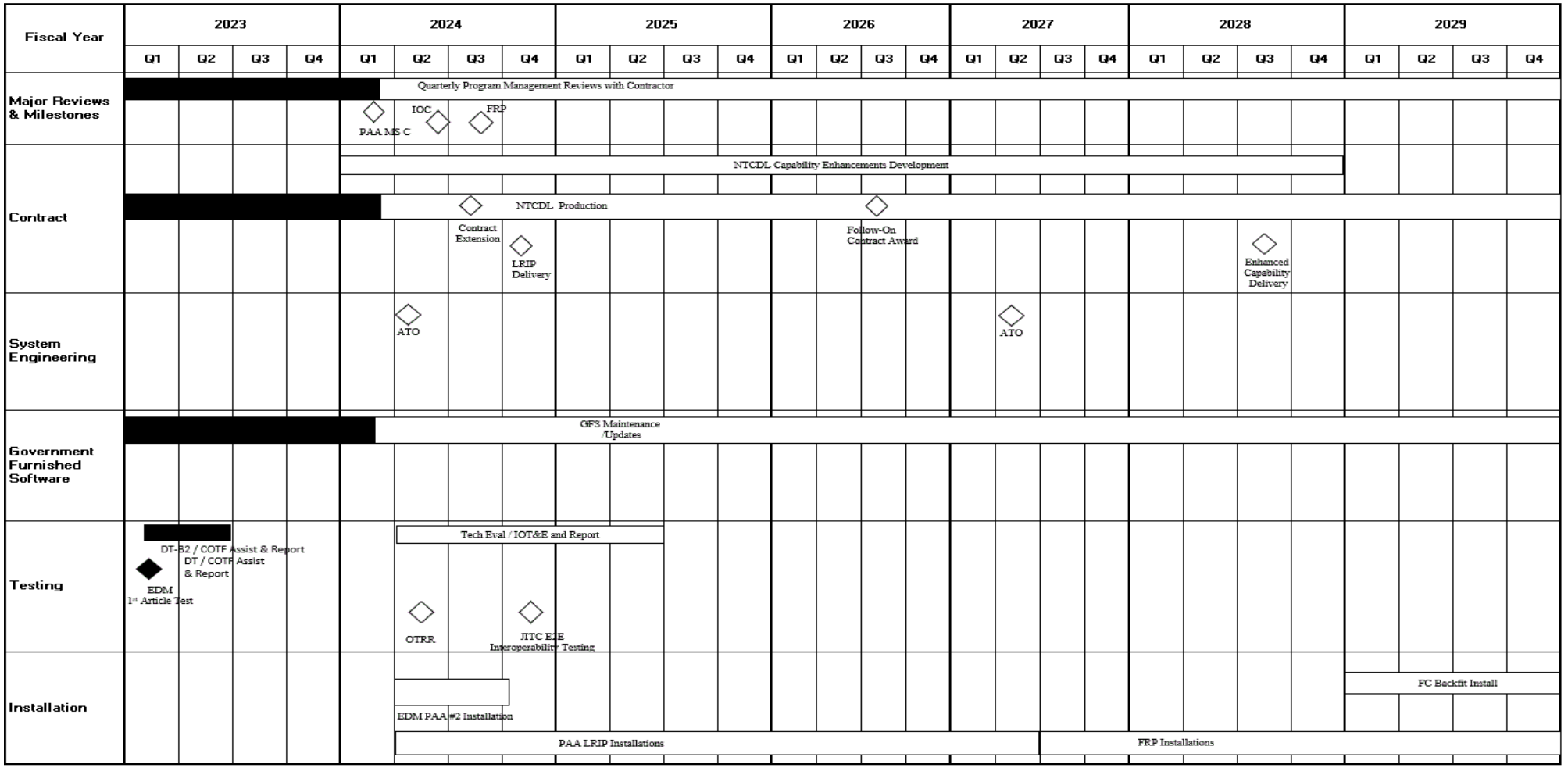


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3341				
Major Reviews & Milestones: Quarterly Program Management Review with Contractor	1	2023	4	2029
Major Reviews & Milestones: PAA Milestone C	1	2024	1	2024
Major Reviews & Milestones: Initial Operational Capability (IOC)	2	2024	2	2024
Major Reviews & Milestones: FRP	3	2024	3	2024
Contract: NTCDL Production Contract	1	2023	4	2029
Contract: NTCDL Capability Enhancements Development	1	2024	4	2028
Contract: Contract Extension	3	2024	3	2024
Contract: LRIP Delivery	4	2024	4	2024
Contract: NTCDL Production Follow On Contract Award	3	2026	3	2026
Contract: Enhanced Capability Delivery	3	2028	3	2028
System Engineering: ATO	2	2024	2	2024
System Engineering: ATO 2	2	2027	2	2027
Government Furnished Software: GFS Maintenance/Updates	1	2023	4	2029
Testing: EDM 1st Article Test	1	2023	1	2023
Testing: DT-B2 / COTF Assist & Report	1	2023	2	2023
Testing: Tech Evaluation / IOT&E and Report	2	2024	2	2025
Testing: Operational Test Readiness Review (OTRR)	2	2024	2	2024
Testing: JITC E2E Interoperability Testing	4	2024	4	2024
Installations: EDM PAA #2 Installation	2	2024	4	2024
Installations: PAA LRIP Installations	2	2024	2	2027
Installations: FRP Installations	3	2027	4	2029

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 3341 / *Network Tactical Common Data Link*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Installations: Full Capability Back-fit Install	1	2029	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 4011 / *Naval Coastal Warfare Surv and C4I Sys*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
4011: *Naval Coastal Warfare Surv and C4I Sys*	7.553	3.203	3.274	3.014	-	3.014	3.081	3.131	3.195	3.264	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Navy Expeditionary C4I project supports the Navy Expeditionary Combat Command (NECC) mission to detect, deter or interdict potential threats to DoN assets using agile, modular and scalable technology. NECC units have a number of current and future Command, Control, Communications, Computers & Intelligence (C4I) technological requirements for
Tactical/Command Operations Center, tactical vehicles, combatant craft, and dismounted personnel. NECC operations require units to maintain effective command and control, develop and display a common tactical picture, and share intelligence and current operational information with higher headquarters, subordinate units, joint forces and coalition allies. Small,
Medium, and Large Scale Communication Systems (LSCS) are the C4I hub for the Navy Expeditionary Combat Force (NECF); Navy Enterprise Tactical Command and Control (NETC2) is the converged LSCS baseline. Future C4I research and development includes implementation of The NETC2(V)3, Rapid Response Kit V3 (RRK(V)3), and Navy Expeditionary Tactical Entry Points (NExTEP) at the Fleet Network Operations Centers (NOC), which supports the NECC Type Commander's (TYCOM) vision of a smaller footprint C2 system with reduced Fleet administration and patching requirements and a single domain and single user identity across all deployed systems. Future C4I research and development will enhance information transport, network cyber security posture, assured communications in denied environments along with agility and mobility. Funding is required for testing and evaluation of cyber security issues associated with obsolescence of network items and if not addressed will impact the ability of the Program Office to maintain system accreditation under Risk Management Framework (RMF) revoking multiple LSCS assets authority to connectivity on the Department of Defense Information Network (DoDIN). Efforts are in alignment with NECC's strategic Expeditionary Warfare Improvement Program (EXWIP) Integrated Priority Capability List (IPCL) priorities and maintain alignment with greater DoD initiatives, such as Joint Information Environment (JIE), Mission Partner Environment (MPE) in order to maintain interoperability and drive down DoN enterprise costs.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: NECC C4ISR Modernization	3.203	3.274	3.014	0.000	3.014
Articles:	-	-	-	-	-
FY 2024 Plans: Continue to evaluate technologies to support migration to Impact Level 7 (IL7) cloud environments. Keep expanding capabilities of common infrastructure to increase speed to capability through containerization technologies and utilization of DevSecOps in order to rapidly deliver mission tailored applications and cloud					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 4011 / *Naval Coastal Warfare Surv and C4I Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
based services. Develop Tier 1 capabilities to support multi-cloud environments. Additionally, C4I Arsenal will participate in military exercises to prove concept and timing requirements can be met. ***FY 2025 Base Plans:*** Develop and evaluate technologies to support migration to Impact Level 7 (IL7) cloud environments. Expanding capabilities of common infrastructure to increase speed to capability through containerization technologies and utilization of DevSecOps to rapidly deliver mission tailored applications and cloud based services. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** No significant changes from FY 2024 to FY 2025.					
Accomplishments/Planned Programs Subtotals	3.203	3.274	3.014	0.000	3.014

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Funding supports an evolutionary acquisition strategy supporting the dynamically evolving rapid action mission of Navy Expeditionary Forces. Small, Medium and Large Scale Communication Systems (LSCS) funding will align LSCS to the Deployable Joint Command and Control (DJC2) product baseline. The project will continuously analyze operational
utilization of the systems and will roll analysis results into periodic system upgrades to address cyber security vulnerabilities, obsolescence, and maximize operational effectiveness. The intent of this strategy is to drive down development, production, and logistics costs, while leveraging technologies developed for other agencies to increase the capabilities of Navy Expeditionary Forces. The baseline configuration for Large Scale Communication Systems (LSCS) is the Navy Enterprise Tactical Command and Control (NETC2), a system scalable to Adaptive Force Package (AFP) levels. Efforts include development of capabilities based on emergent requirements, operational feedback, alignment with Dept. of Defense initiatives such as Joint Information Environment (JIE) / Mission Partner Environment, and identification through strategic Expeditionary and Warfare Improvement Program (EXWIP) Integrated Priority Capability List (IPCL) priorities to include reach back for tactical vehicles and craft, blue force tracking, tactical data link capability, and sensor technologies in support of surveillance and reconnaissance missions.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 4011 / *Naval Coastal Warfare Surv and C4I Sys*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering - Expeditionary	WR	NSWC : PANAMA CITY, FL	2.059	0.865	Nov 2022	0.883	Nov 2023	0.812	Nov 2024	-		0.812	Continuing	Continuing	Continuing
Hardware/Software Development	C/CPAF	GTRI : ATLANTA, GA	3.229	1.377	Nov 2022	1.406	Nov 2023	1.293	Nov 2024	-		1.293	Continuing	Continuing	Continuing
		Subtotal	5.288	2.242		2.289		2.105		-		2.105	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	WR	NSWC : PANAMA CITY, FL	0.682	0.504	Nov 2022	0.512	Nov 2023	0.472	Nov 2024	-		0.472	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NSWC : PANAMA CITY, FL	0.917	0.169	Nov 2022	0.175	Nov 2023	0.167	Nov 2024	-		0.167	Continuing	Continuing	Continuing
		Subtotal	1.599	0.673		0.687		0.639		-		0.639	Continuing	Continuing	N/A

Management Services ($ in Millions)

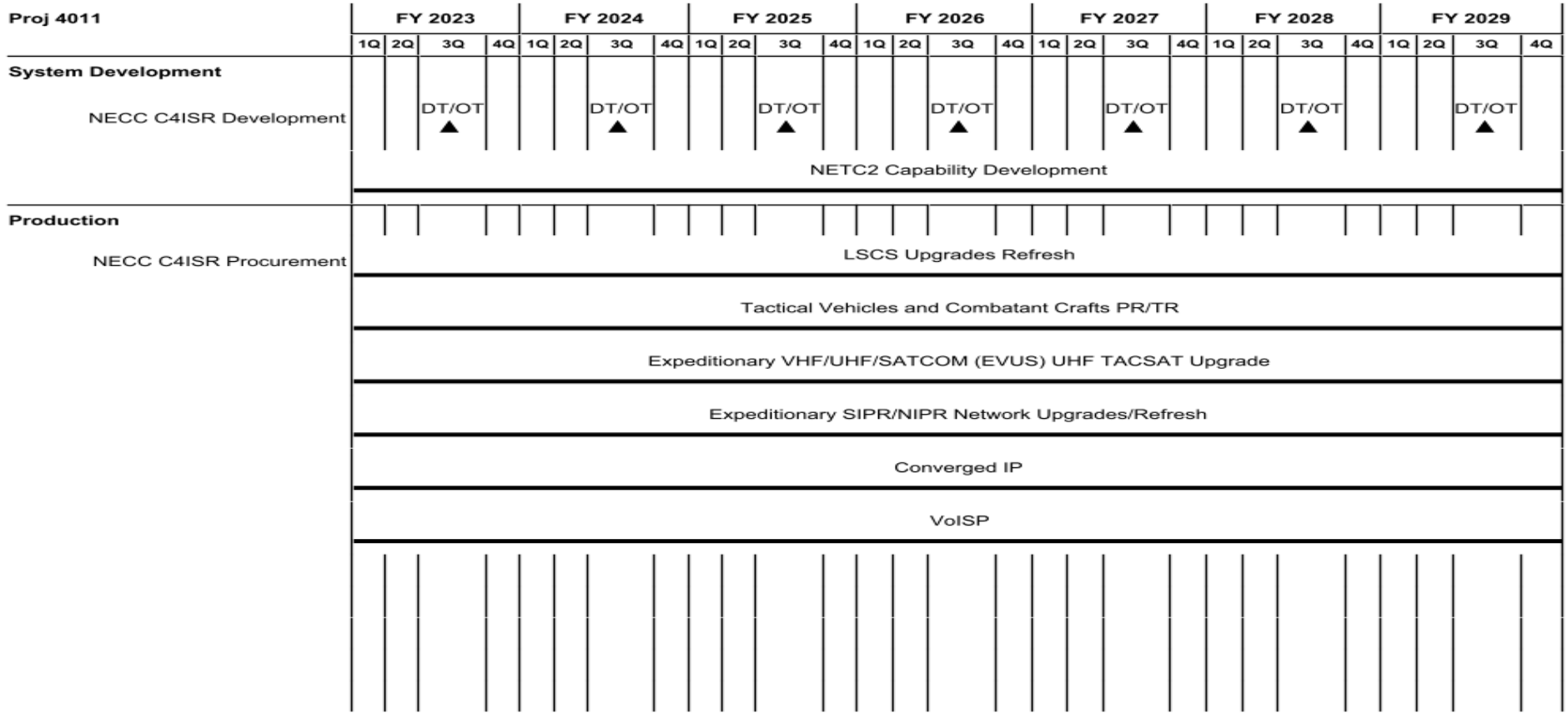
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support - Expeditionary	WR	NIWC PAC : SAN DIEGO, CA	0.666	0.288	Nov 2022	0.298	Nov 2023	0.270	Nov 2024	-		0.270	Continuing	Continuing	Continuing
		Subtotal	0.666	0.288		0.298		0.270		-		0.270	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.553	3.203		3.274		3.014		-		3.014	Continuing	Continuing	N/A

Remarks

Prior Year cost data is provided under PE 0604230N Project 4011

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 4011 / *Naval Coastal Warfare Surv and C4I Sys*



2025DON - 0604280N - 4011

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 4011 / *Naval Coastal Warfare Surv and C4I Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4011				
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY23	3	2023	3	2023
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY24	3	2024	3	2024
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY25	3	2025	3	2025
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY26	3	2026	3	2026
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY27	3	2027	3	2027
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY28	3	2028	3	2028
System Development: NECC C4ISR Development: Navy C4I Test and Certification Events FY29	3	2029	3	2029
System Development: NECC C4ISR Development: NETC2 Capability Development	1	2023	4	2029
Production: NECC C4ISR Procurement: LSCS Upgrades Refresh	1	2023	4	2029
Production: NECC C4ISR Procurement: Tactical Vehicles and Combatant Crafts PR/TR	1	2023	4	2029
Production: NECC C4ISR Procurement: Expeditionary VHF/UHF/SATCOM (EVUS) UHF TACSAT Upgrade	1	2023	4	2029
Production: NECC C4ISR Procurement: Expeditionary SIPR/NIPR Network Upgrades/Refresh	1	2023	4	2029
Production: NECC C4ISR Procurement: Converged IP	1	2023	4	2029
Production: NECC C4ISR Procurement: VoISP	1	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 9999 / *Congressional Adds*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
9999: *Congressional Adds*	0.000	4.827	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.827
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Congressional Add provides for the development, test and evaluation of enhanced capabilities for Satellite Communications by furthering Science & Technology (S&T) research and transition activities associated with resilient communications capabilities. Specifically, this funding will provide for technology development, test, demonstration and validation for a Luneburg Lens antenna system for Low Earth Orbit (LEO) and Medium Earth Orbit (MEO) satellites (e.g., SpaceXs Starlink, OneWeb, Amazons Kuiper, etc.). This antenna system will include the development of a unique and enabling capability to perform direct conversion of Radio Frequency (RF) energies to/from photons, which is required to significantly reduce the complexity of signals routing and size for the Luneburg Lens based solid state phased array antenna system.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
Congressional Add: Integrated photonic systems	4.827	0.000
FY 2023 Accomplishments: Fund Science & Technology (S&T) projects for Satellite Terminal (transportable) Non-Geostationary (STtNG), which are broken in to the following 9 tasks: 1. System-level Study: This study will determine the Luneburg Lens antenna system requirements based on link-budget analyses and constraints set by the Government customer. The identified requirements will translate to a set of technical specifications for each sub-system, which will influence the system architecture design. 2. Luneburg Lens Development: Identify potential external commercial Luneburg lens providers/manufacturers and possible materials for internal/in-house Luneburg lens fabrication. The performer will compare the identified fabrication methods and will decide on the best way forward to build and test prototype lenses with planar or curved probe arrays. 3. Hemispheric Antenna Feed Development: Identify critical antenna feed features and refine the performance specifications. The performer will investigate lens configurations to meet these specifications and design, simulate, fabricate and test feed prototypes. This will result in a build of a full antenna feed array. 4. Rx/Tx/TRx Photonic Integrated Circuits (PICs) Development: Expand the current Phase II Small Business Innovative Research (SBIR) development of silicon PICs on a system-level vice device-level. This task will include the continued heterogeneous integration development as required for implementation of desired TRx		

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 9999 / *Congressional Adds*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
modules, as well as the development of layout designs for a manufacturing run of PICs suitable for integration into the Luneburg lens system. 5. Develop Modulators: Develop Thin-Film Lithium Niobate (TFLN) modulators with high conversion efficiency and large operational bandwidth, as well as suitable packing techniques for hemispherical integration. 6. Develop Photodetectors: Develop photodetectors with high power and high linearity for the Tx and a balanced configuration on the Rx with a very high common-mode-rejection-ratio (CMRR), which is used to mitigate relative intensity noise (RIN). 7. RF/EO TRx Modules: Design, fabricate and test: RF gain and diplexer section, optical/photonic carrier, and ultimately, a full RF/EO module with antenna feed. 8. Build a Multi-Module System: This task will develop the fabrication processes for an increased module count. 9. Develop controls, monitoring and processing software for the Luneburg lens antenna system. ***FY 2024 Plans:*** N/A		
Congressional Adds Subtotals	4.827	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	Project (Number/Name) 9999 / *Congressional Adds*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	C/CPFF	BASCOM : Baton Rouge, LA	0.000	4.227	Aug 2023	0.000		0.000		-		0.000	0.000	4.227	-
		Subtotal	0.000	4.227		0.000		0.000		-		0.000	0.000	4.227	N/A

Remarks

FY23 Funding to provide support for Science and Technology (S&T) Projects in support of Satellite Terminal (transportable) Non-Geostationary (STtNG) efforts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support Services	WR	NIWC PAC : San Diego, CA	0.000	0.400	Apr 2023	0.000		0.000		-		0.000	0.000	0.400	-
Engineering Support Services	WR	NUWC : Newport, RI	0.000	0.200	Apr 2023	0.000		0.000		-		0.000	0.000	0.200	-
		Subtotal	0.000	0.600		0.000		0.000		-		0.000	0.000	0.600	N/A

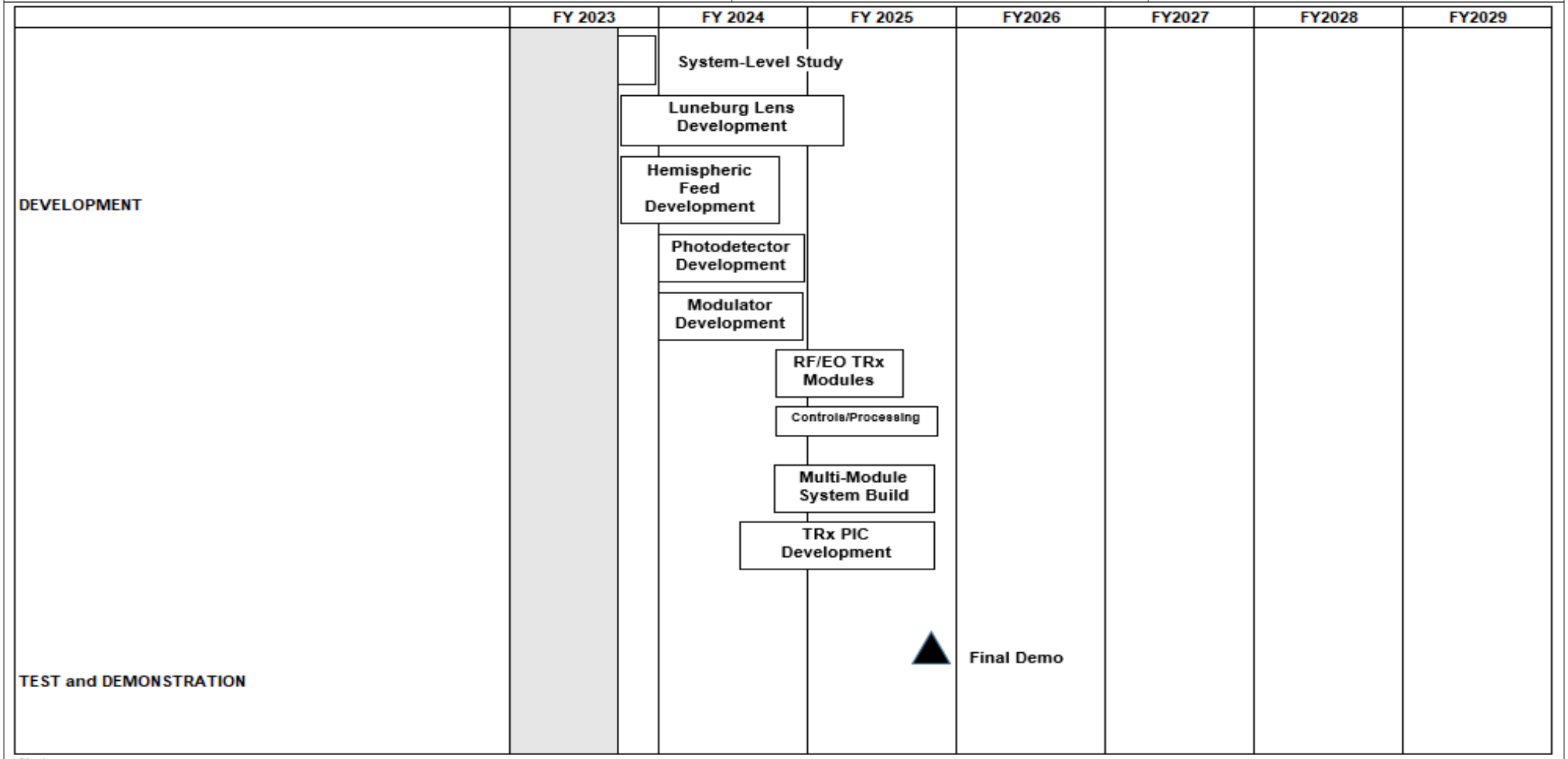
Remarks

FY23 Funding provided Engineering Support Services for Science and Technology (S&T) Projects in support of Satellite Terminal (transportable) Non-Geostationary (STtNG) efforts.

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	4.827		0.000		0.000		-		0.000	0.000	4.827	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 9999 / *Congressional Adds*



Notes:

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604280N / *JT TACTICAL RADIO SYSTEM (JTRS)*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
System Level Study	4	2023	4	2023
Luneburg Lens Development	4	2023	2	2025
Hemisphere Feed Development	4	2023	4	2024
Photodetector Development	1	2024	4	2024
Modulator Development	1	2024	4	2024
RF/EO TRx Modules	4	2024	3	2025
Controls Processing	4	2024	4	2025
Multi-Module System	4	2024	4	2025
TRx PIC Development	3	2024	4	2025
Final Demo	4	2025	4	2025