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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>
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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	1,279.257	150.817	153.440	142.552	-	142.552	163.298	162.881	157.809	155.998	Continuing	Continuing
2039: <i>COOP Engagement</i>	1,155.228	81.887	92.802	93.247	-	93.247	74.368	75.080	73.366	69.791	Continuing	Continuing
3240: <i>CEC Increment II</i>	124.029	68.930	60.638	49.305	-	49.305	88.930	87.801	84.443	86.207	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 582

A. Mission Description and Budget Item Justification

Cooperative Engagement Capability (CEC) significantly improves Battle Force Anti-Air Warfare (AAW) capability by coordinating all Battle Force AAW sensors into a single, real-time, composite track picture to support integrated fire control.

CEC distributes sensor data from each USMC Command Control Unit, US Navy Ship, and US Navy Aircraft, or Cooperating Unit (CU), to all other CUs in the battle force through a real-time, line of sight, high data-rate sensor and engagement data distribution network. CEC is highly resistant to jamming and provides accurate gridlocking between CUs. Each CU independently employs high capacity, parallel processing and advanced algorithms to combine all distributed sensor data into a fire control quality track picture which is the same for all CUs. CEC data is presented as a superset of the best AAW sensor capabilities from each CU, all of which are integrated into a single input to each CU's combat weapons system.

CEC significantly improves our Battle Force defense in depth, including both local area and ship defense capabilities against current and future AAW threats. Moreover, CEC provides critical connectivity and integration of over-land air defense systems capable of countering emerging air threats, including land attack cruise missiles, in a complex littoral environment.

The CEC Program Office oversees CEC development for all services with funding provided for their respective combat systems. CEC consists of the Data Distribution System (DDS), the Cooperative Engagement Processor (CEP), and interface with Combat Systems and sensors. The DDS encodes and distributes own-ship sensor and engagement data and is a high capacity, jam resistant, directional system providing high data throughput as well common time and common positional frame of reference. The CEP is a high capacity distributed processor that processes data from all integrated radars. The data is passed to the ship's combat system as a high quality, common, continuous, engageable track.

The Navy implemented a Signal Data Processor (SDP) approach to modify the current equipment to meet reduced size, weight, cost, power and cooling objectives. This SDP approach also supports continuity for interoperability improvements and program protection, as well as supporting open architecture initiatives, and comms independence. The SDP hardware complies with Category 3 Open Architecture Computing Environment (OACE) standards. The SDP-S is being fielded fleet-wide to all US Navy, USMC, and FMS CEC units.

Network Enabled Electronic Defense System (NEEDS) modifies CEC software to add significant Electronic Warfare capability.

UNCLASSIFIED

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CEC operates in increasingly contentious cyber-space. Measures are being taken to robustly mitigate, and where possible completely remediate cyber vulnerabilities.

CEC Capability Development Document (CDD) Increment II evolves Increment I capabilities by enhancing the current naval air defense and sensor network system capabilities through the expansion of network capacity as well as extension into other warfare mission domains. CEC CDD Increment II shall integrate new sensor types and track data sources into the network, such as surface search radars and passive detection sensors, as well as relevant data from other networks. CEC CDD Increment II shall accommodate more CUs and provide a more complete, robust, and resilient situational awareness picture, composite identification, and Integrated Fire Control (IFC), with assured communications for Integrated Air and Missile Defense (IAMD), surface warfare, and electronic mission warfare domains.

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	156.121	153.440	154.438	-	154.438
Current President's Budget	150.817	153.440	142.552	-	142.552
Total Adjustments	-5.304	0.000	-11.886	-	-11.886
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-5.304	0.000			
• Program Adjustments	0.000	0.000	-11.903	-	-11.903
• Rate/Misc Adjustments	0.000	0.000	0.017	-	0.017

Change Summary Explanation

FY 2025 decrease of \$11.886M is attributed to Program Adjustments (\$-11.903M) and Rate/Misc Adjustments (\$.017).

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 2039 / <i>COOP Engagement</i>
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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
2039: <i>COOP Engagement</i>	1,155.228	81.887	92.802	93.247	-	93.247	74.368	75.080	73.366	69.791	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 582

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The CEC Program Office oversees CEC development for all services with funding provided for their respective combat systems. CEC consists of the Data Distribution System (DDS), the Cooperative Engagement Processor (CEP), and interface with Combat Systems and sensors. The DDS encodes and distributes own-ship sensor and engagement data and is a high capacity, jam resistant, directional system providing high data throughput as well common time and common positional frame of reference. The CEP is a high capacity distributed processor that processes data from all integrated radars. The data is passed to the ship's combat system as a high quality, common, continuous, engageable track.

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UNCLASSIFIED

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CEC Capability Development Document (CDD) Increment II evolves Increment I capabilities by enhancing the current naval air defense and sensor network system capabilities through the expansion of network capacity as well as extension into other warfare mission domains. CEC CDD Increment II shall integrate new sensor types and track data sources into the network, such as surface search radars and passive detection sensors, as well as relevant data from other networks. CEC CDD Increment II shall accommodate more CUs and provide a more complete, robust, and resilient situational awareness picture, composite identification, and Integrated Fire Control (IFC), with assured communications for Integrated Air and Missile Defense (IAMD), surface warfare, and electronic mission warfare domains.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p>Title: E-2D</p> <p align="right">Articles:</p> <p>FY 2024 Plans: Continue software development and test for E-2D DSSC 5 CEC software, including interface development and integration of CEC capabilities, and of E-2D CEC networking, sensor, and tracker capability and performance improvements included in DSSC 5 software and associated hardware. Integrate CEC Block II Capability Group 3 with E-2D Sensors and Interfaces. Conduct Laboratory and Developmental Flight Test for CEC with E-2D DSSC 5. Conduct FQT/IV&V for E-2D DSSC 5. Prepare for E-2D DSSC 5 OT. Continue detailed design efforts for E-2D DSSC 6 CEC software including interface development and integration of CEC capabilities, and of E-2D CEC networking, sensor, and tracker capability and performance improvements included in DSSC 6 software and associated hardware.</p> <p>FY 2025 Base Plans: Support E-2D DSSC 5 OT. Complete Fleet Release of E-2D DSSC 5 CEC software. Continue detailed design efforts for E-2D DSSC 6 CEC software including interface development and integration of CEC capabilities, and of E-2D CEC networking, sensor, and tracker capability and performance improvements included in DSSC 6 software and associated hardware.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due to integration of CEC BLK II CG 3 capabilities and E-2D DSSC 6 development efforts.</p>	5.647	5.754	6.830	0.000	6.830
	-	-	-	-	-
<p>Title: B/L 2.1 INTEGRATION AND FOT&E TESTING</p> <p align="right">Articles:</p> <p>FY 2024 Plans:</p>	12.376	15.309	12.137	0.000	12.137
	-	-	-	-	-

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
Complete CEC TEMP Rev 6 Ch 1 approval. Support multiple Combat System Shipboard Qualification Tests (CSSQT) for Aegis and SSDS platforms. Commence DT/OT of CEC Increment II Block 2 Capability Group 3. Continue OT-D2 of AN/USG-2B with CVN 78. Continue OT-D4 of AN/USG-2B with Aegis Weapon System (AWS) 9.2.1/9.2.2/9.2.3. Begin OT-D3 of CEC AN/USG-2B on DDG 1000. Continue planning for FFG 62 DT events. Continue planning for LUSV DT events.					
FY 2025 Base Plans: Support multiple Combat System Shipboard Qualification Tests (CSSQT) for Aegis and SSDS platforms. Continue DT/OT of CEC Increment II Block 2 Capability Group 3. Complete OT-D2 of AN/USG-2B with CVN 78. Continue planning for FFG 62 DT events. Continue planning for LUSV DT events.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease is due to reduced number of simultaneous DT/OT efforts.					
Title: SYSTEM IMPROVEMENTS					
Articles:					
	31.187	7.561	12.696	0.000	12.696
	-	-	-	-	-
FY 2024 Plans: Complete CEC Software Baseline Review (SBR) Systems Engineering Technical Review (SETR) events. Complete software development for CEC SW Versions 2.1.11.16 and 2.1.11.20. Complete multiple CEC software Final Qualification Testing (FQT)/Independent Verification & Validation (IV&V) events for CEC Aegis, SSDS, DDG-1000, and E-2D configurations. Complete multiple Software Releases in support of Aegis, SSDS, DDG-1000, and E-2D platform events. Complete multiple CEC Product Release Panels (PRP) and Product Certification Panels (PCP) in support of CEC deliveries to Aegis, SSDS, DDG-1000, and E-2D platforms. Complete multiple CEC S/W safety assessments for Aegis, SSDS, DDG-1000, and E-2D configurations. Complete SDP-Next demonstration, qualification testing and TDP. Support NSA Certification process for SDP-Next. Continue CEC S/W development for LUSV. Continue CEC S/W development and coordination with AEGIS B/L 10.1 development for the Frigate Weapon System onboard the FFG-62 class. Support CEC Blk II S/W development and test for Capability Groups 3 & 4. Continue robust systems engineering in conjunction with shipboard, airborne, and land-based combat systems to integrate Communications as a Service (CaaS) in CEC.					
FY 2025 Base Plans:					

UNCLASSIFIED

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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
<p>Complete CEC Software Baseline Review (SBR) Systems Engineering Technical Review (SETR) events. Complete multiple CEC software Final Qualification Testing (FQT)/Independent Verification & Validation (IV&V) events for CEC Aegis, SSDS, DDG-1000, and E-2D configurations. Complete multiple Software Releases in support of Aegis, SSDS, DDG-1000, and E-2D platform events. Complete multiple CEC Product Release Panels (PRP) and Product Certification Panels (PCP) in support of CEC deliveries to Aegis, SSDS, DDG-1000, and E-2D platforms. Complete multiple CEC S/W safety assessments for Aegis, SSDS, DDG-1000, and E-2D configurations. Complete SDP-Next qualification testing and TDP. Support NSA Certification process for SDP-Next. Continue CEC S/W development for LUSV. Continue CEC S/W development and coordination with AEGIS B/L 10.1 development for the Frigate Weapon System onboard the FFG 62 class. Support CEC Blk II S/W development and test for Capability Groups. Continue robust systems engineering in conjunction with shipboard, airborne, and land-based combat systems to integrate Communications as a Service (CaaS) in CEC. Begin Systems Engineering efforts to integrate Joint Track Management Capability (JTMC) into CEC. Prepare for SRR/SFR for JTMC-CEC integration.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due to start of efforts to integrate JTMC into CEC.</p>					
<p>Title: NETWORK ENABLED ELECTRONIC DEFENSE SYSTEM (NEEDS)</p> <p align="right">Articles:</p> <p>FY 2024 Plans: N/A</p> <p>FY 2025 Base Plans: N/A</p> <p>FY 2025 OCO Plans: N/A</p>	0.519	0.000	0.000	0.000	0.000
	-	-	-	-	-
<p>Title: FIELD ACTIVITIES</p> <p align="right">Articles:</p> <p>FY 2024 Plans:</p>	10.621	10.822	10.979	0.000	10.979
	-	-	-	-	-

UNCLASSIFIED

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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 field activity support of CEC development and fielding efforts (including Software Engineering / Integration Agent (SE/IA), Technical Direction Agent, In-Service Engineering Agent, Integrated Logistics Support planning) and program management support. Facilitate fielding of systems improvements and maintenance efforts.					
FY 2025 Base Plans: Continue field activity support of CEC development and fielding efforts (including Software Engineering / Integration Agent (SE/IA), Technical Direction Agent, In-Service Engineering Agent, Integrated Logistics Support planning) and program management support. Facilitate fielding of systems improvements and maintenance efforts.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due minor pricing differences.					
Title: NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR (NIFC-CA)					
	7.786	7.934	8.049	0.000	8.049
Articles:	-	-	-	-	-
FY 2024 Plans: Support NIFC At-Sea and Live Fire test events. Continue robust systems engineering for NIFC Increment 3 in close coordination with other NIFC pillars. Support NIFC Increment 3 interface and integration design document development and test support and testing.					
FY 2025 Base Plans: Support NIFC At-Sea and Live Fire test events. Continue robust systems engineering for NIFC Increment 3 in close coordination with other NIFC pillars. Support NIFC Increment 3 interface and integration design document development and test support and testing.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due to minor pricing differences.					
Title: PROGRAM PROTECTION					
	12.132	12.361	12.542	0.000	12.542
Articles:	-	-	-	-	-

UNCLASSIFIED

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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
<p><i>FY 2024 Plans:</i> Provide CEC Program Protection support to manage risks from foreign intelligence collection threats to CEC hardware, software, or supply chain exploitation. CEC critical program information (CPI) is required to be protected with anti-tamper. The effort will further the use of anti-tamper protection within the program. CEC will work closely with the Cyber Assessment Agency and Defense Assessment Management Office to access impacts to the program from exploitation. The effort will further maintain the Program Protection Plan (PPP) and updates to the program Security Classification Guide (SCG).</p> <p><i>FY 2025 Base Plans:</i> Provide CEC Program Protection support to manage risks from foreign intelligence collection threats to CEC hardware, software, or supply chain exploitation. CEC critical program information (CPI) is required to be protected with anti-tamper. The effort will further the use of anti-tamper protection within the program. CEC will work closely with the Cyber Assessment Agency and Defense Assessment Management Office to access impacts to the program from exploitation. The effort will further maintain the Program Protection Plan (PPP) and updates to the program Security Classification Guide (SCG).</p> <p><i>FY 2025 OCO Plans:</i> N/A</p> <p><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Increase is due to minor pricing differences.</p>					
<p><i>Title:</i> ENTERPRISE AIR SURVEILLANCE RADAR (EASR)</p> <p align="right"><i>Articles:</i></p>	0.785	6.598	5.032	0.000	5.032
<p><i>FY 2024 Plans:</i> Continue CEC Baseline 11 Integration and Test with SSDS Baseline 12 and EASR in support LHA 8 CSLO. Support integration of CEC Increment II Blk 2 Capability Group 3 with SSDS Baseline 12 and EASR baselines.</p> <p><i>FY 2025 Base Plans:</i> Continue CEC Baseline 11 Integration and Test with SSDS Baseline 12 and EASR. Support integration of CEC Increment II Blk 2 Capability Group 3 with SSDS Baseline 12 and EASR baselines.</p> <p><i>FY 2025 OCO Plans:</i> N/A</p> <p><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></p>	-	-	-	-	-

UNCLASSIFIED

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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
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Decrease is due to rephasing of FY23 efforts to FY24 and beyond.

Title: ANTENNA DEVELOPMENT	0.000	19.109	18.954	0.000	18.954
Articles:	-	-	-	-	-
FY 2024 Plans: Support development of prototype antenna waveform and communications technologies and architectures to be incorporated into a future replacement for the Planar Array Antenna Assembly (PAAA) antenna.					
FY 2025 Base Plans: Support development of prototype antenna waveform and communications technologies and architectures to be incorporated into a future replacement for the Planar Array Antenna Assembly (PAAA) antenna.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease is due to minor pricing differences.					

Title: CEC CYBER RESILIENCY	0.834	7.354	6.028	0.000	6.028
Articles:	-	-	-	-	-
FY 2024 Plans: Continue implementation of CEC CTT findings, cross domain interface solutions, and various other CEC cybersecurity enhancement capabilities (most classified) in CEC 11.x software baselines, Gold disk releases, and hardware upgrades. Ensure cybersecurity requirements are fully considered and implemented in SDP Next development efforts. Define and support conduct of IA testing of CEC software baselines, Gold Disk releases, and hardware upgrades underway in FY24. Participate in CEC Increment II Block 2 development efforts to ensure cybersecurity requirements are defined, considered, and implemented. Ensure ATO and other cybersecurity compliance requirements are met, and support PEO IWS, SEA 03, and platform combat system cybersecurity data calls. Support combat system and CEC cybersecurity interface and hardware/software design requirement definition, development, and implementation.					
FY 2025 Base Plans: Continue implementation of CEC CTT findings, cross domain interface solutions, and various other CEC cybersecurity enhancement capabilities (most classified) in CEC 11.x software baselines, Gold disk releases, and hardware upgrades. Ensure cybersecurity requirements are fully considered and implemented in SDP					

UNCLASSIFIED

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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
<p>Next development efforts. Define and support conduct of IA testing of CEC software baselines, Gold Disk releases, and hardware upgrades underway in FY25. Participate in CEC Increment II Block 2 development efforts to ensure cybersecurity requirements are defined, considered, and implemented. Ensure ATO and other cybersecurity compliance requirements are met, and support PEO IWS, SEA 03, and platform combat system cybersecurity data calls. Support combat system and CEC cybersecurity interface and hardware/software design requirement definition, development, and implementation.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Decrease is due to minor pricing differences.</p>					
Accomplishments/Planned Programs Subtotals	81.887	92.802	93.247	0.000	93.247

C. Other Program Funding Summary (\$ in Millions)	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
<ul style="list-style-type: none"> • SCN: Navy, SCN • APN/0204152N: Navy, APN • OPN/2606: CEC • RDT&E/0206313M: USMC • O&M,N/0206626M: USMC • PMC: Marine Corps Comms Systems 	45.400	28.600	30.300	-	30.300	29.800	30.100	52.700	31.600	232.834	1,004.487
	17.200	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
	33.198	37.677	26.644	-	26.644	32.258	32.922	33.627	34.350	Continuing	Continuing
	119.982	192.625	145.343	-	145.343	147.074	135.238	122.559	126.006	Continuing	Continuing
	2.000	2.100	2.100	-	2.100	2.200	2.300	2.300	2.400	Continuing	Continuing
	5.500	15.400	12.900	-	12.900	4.500	4.600	4.200	2.900	Continuing	Continuing

Remarks

D. Acquisition Strategy
 Full Rate Production for CEC AN/USG-3B variant approved April 2014. Current version of CEC Acquisition Strategy (AS) approved by ASN (RDA) on 17 March 2023. Current version of CEC Acquisition Plan (AP) approved 03 May 2023.

Contracts:
 CEC DA/ES contract competitively awarded Q3 FY 2019. For DA, the contractor will maintain the CEC hardware and software development environment and testing infrastructure including; Systems and Software Laboratories, the external RF Range, the Compact Antenna Range, and the CEC Classified Development LAN.

UNCLASSIFIED

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<p>For ES, the contractor will develop software implementing CEC capability improvements; support advance studies and integration; and perform CEC software sustainment and support.</p> <p>CEC PAAA Competitive - Contract competitively awarded in Q3 FY 2020.</p> <p>CEC Production & Repair - Contract competitively awarded in Q4 FY 2022</p> <p>CEC PAAA-A Development - Contract competitively awarded in Q3 FY 2022</p> <p>CEC PAAA-D Development - Contract competitively awarded in Q1 FY 2023</p>		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity 1319 / 7				R-1 Program Element (Number/Name) PE 0607658N / Cooperative Engagement Capability						Project (Number/Name) 2039 / COOP Engagement					
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/USG-2/3 Design Agent/Engineering Services	C/CPFF	Raytheon : St. Petersburg, FL	194.429	16.830	Oct 2022	5.799	Oct 2023	7.245	Oct 2024	-		7.245	Continuing	Continuing	Continuing
TDA	C/CPFF	JHU/APL : Laurel, MD	143.773	15.116	Oct 2022	5.810	Oct 2023	7.321	Oct 2024	-		7.321	Continuing	Continuing	Continuing
SI/DA	C/CPAF	General Dynamics : Fairfax, VA	23.979	0.000		0.000		0.000		-		0.000	0.000	23.979	-
SI/DA	C/CPAF	Award Fees : Not Specified	2.903	0.000		0.000		0.000		-		0.000	0.000	2.903	-
DDG 1000	C/CPAF	Raytheon : Massachusetts	10.983	0.000		0.000		0.000		-		0.000	0.000	10.983	-
DDG 1000	C/CPAF	Award Fees : Not Specified	0.447	0.000		0.000		0.000		-		0.000	0.000	0.447	-
NIFC-CA Integration	Various	Various : Various	71.291	7.786	Oct 2022	7.934	Oct 2023	8.049	Oct 2024	-		8.049	Continuing	Continuing	Continuing
In-Service Engineering Activity	WR	NSWC : Port Hueneme, CA	18.564	3.407	Oct 2022	2.247	Oct 2023	3.047	Oct 2024	-		3.047	Continuing	Continuing	Continuing
Software Support Activity/ SEIA	WR	NSWC : Dahlgren, VA	31.816	3.067	Oct 2022	2.189	Oct 2023	2.847	Oct 2024	-		2.847	Continuing	Continuing	Continuing
Production Engineering Activity	WR	NSWC : Crane, IN	8.750	1.238	Oct 2022	0.838	Oct 2023	1.193	Oct 2024	-		1.193	Continuing	Continuing	Continuing
JTRS	Various	Various : Various	8.500	0.000		0.000		0.000		-		0.000	0.000	8.500	-
Various	WR	Various : Various	31.873	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
NAVSSI	WR	NIWC : San Diego, CA	0.368	0.000		0.000		0.000		-		0.000	0.000	0.368	-
Certification	MIPR	NSA : Fort Meade, MD	1.200	0.000		0.000		0.000		-		0.000	0.000	1.200	-
Certification	WR	NIWC : Charleston, SC	0.930	0.000		0.000		0.000		-		0.000	0.000	0.930	-
Joint Exercises	WR	Various : Various	3.744	0.000		0.000		0.000		-		0.000	0.000	3.744	-
LBTS Testing	WR	CDSA Dam Neck : Virginia Beach, VA	10.695	1.250	Oct 2022	0.700	Oct 2023	0.897	Oct 2024	-		0.897	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity 1319 / 7				R-1 Program Element (Number/Name) PE 0607658N / Cooperative Engagement Capability				Project (Number/Name) 2039 / COOP Engagement							
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LBTS Testing	WR	SCSC : Wallops Island, VA	10.283	0.900	Oct 2022	0.800	Oct 2023	1.125	Oct 2024	-		1.125	Continuing	Continuing	Continuing
E-2D Integration	Various	Various : Various	69.623	5.647	Oct 2022	5.754	Oct 2023	6.830	Oct 2024	-		6.830	Continuing	Continuing	Continuing
MSI/NCCT	MIPR	Wright Patterson AFB : Dayton, OH	1.228	0.000		0.000		0.000		-		0.000	0.000	1.228	-
Common Array Block Development	C/CPFF	Raytheon : St. Petersburg, FL	82.856	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
NEEDS	Various	Various : Various	50.072	0.519	Oct 2022	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
AMDR	Various	Various : Various	17.308	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
JTMC	C/CPFF	Raytheon : St. Petersburg, FL	1.000	0.000		0.000		0.000		-		0.000	0.000	1.000	-
FCLIP	Various	Various : Various	37.777	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
CEC Increment 2	Various	Various : Various	8.587	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Protection	C/BA	NSMA : Washington, DC	51.219	12.132	Oct 2022	12.361	Oct 2023	12.542	Oct 2024	-		12.542	Continuing	Continuing	Continuing
EASR	Various	Various : Various	27.722	0.785	Oct 2022	6.598	Oct 2023	5.032	Oct 2024	-		5.032	Continuing	Continuing	Continuing
Crypto Modernization	Various	Various : Various	4.552	0.000		0.000		0.000		-		0.000	0.000	4.552	-
Digital Warfare Tactical Networking Initiative Implementation	Various	Various : Various	50.506	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
FTIIP	Various	Various : Various	6.500	0.000		0.000		0.000		-		0.000	0.000	6.500	-
Cyber Resiliency	Various	Various : Various	18.588	0.834	Oct 2022	7.354	Oct 2023	6.028	Oct 2024	-		6.028	Continuing	Continuing	Continuing
ELEKTRA	Various	Various : Various	1.520	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
ANTENNA DEVELOPMENT	Various	Various : Various	7.633	0.000		19.109	Oct 2023	18.954	Oct 2024	-		18.954	Continuing	Continuing	Continuing
Subtotal			1,011.219	69.511		77.493		81.110		-		81.110	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity 1319 / 7				R-1 Program Element (Number/Name) PE 0607658N / Cooperative Engagement Capability				Project (Number/Name) 2039 / COOP Engagement							
Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	C/CPFF	Raytheon : St. Petersburg, FL	12.970	1.831	Oct 2022	2.312	Oct 2023	1.778	Oct 2024	-		1.778	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPFF	JHU/APL : Laurel, MD	12.763	1.922	Oct 2022	2.444	Oct 2023	1.892	Oct 2024	-		1.892	Continuing	Continuing	Continuing
Prior Year Operational Test & Evaluation Not Funded FYDP (PYOT&E)	WR	NRL : Washington, DC	0.313	0.000		0.000		0.000		-		0.000	0.000	0.313	-
Developmental Test & Evaluation (DT&E)	WR	NSWC : Port Hueneme, CA	34.968	1.023	Oct 2022	1.214	Oct 2023	0.971	Oct 2024	-		0.971	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NAVAIR (PMA207) : Patuxent River, MD	16.941	0.986	Oct 2022	1.173	Oct 2023	0.928	Oct 2024	-		0.928	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NSWC : Corona, CA	25.957	0.798	Oct 2022	0.988	Oct 2023	0.791	Oct 2024	-		0.791	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	COMOPTEVFOR : Norfolk, VA	20.806	1.599	Oct 2022	1.994	Oct 2023	1.595	Oct 2024	-		1.595	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NSWC : Dahlgren, VA	10.570	0.986	Oct 2022	1.178	Oct 2023	0.941	Oct 2024	-		0.941	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	NSWC : Port Hueneme, CA	1.231	1.215	Oct 2022	1.414	Oct 2023	1.140	Oct 2024	-		1.140	0.000	5.000	-
Operational Test & Evaluation (OT&E)	WR	NAVAIR (PMA207) : Patuxent River, MD	0.400	0.478	Oct 2022	0.676	Oct 2023	0.545	Oct 2024	-		0.545	0.000	2.099	-
Operational Test & Evaluation (OT&E)	WR	NSWC : Corona, CA	1.195	1.103	Oct 2022	1.292	Oct 2023	1.049	Oct 2024	-		1.049	0.000	4.639	-
Operational Test & Evaluation (OT&E)	WR	NSWC : Dahlgren, VA	0.465	0.435	Oct 2022	0.624	Oct 2023	0.507	Oct 2024	-		0.507	0.000	2.031	-
Subtotal			138.579	12.376		15.309		12.137		-		12.137	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy

Date: March 2024

Appropriation/Budget Activity
1319 / 7

R-1 Program Element (Number/Name)
PE 0607658N / *Cooperative Engagement Capability*

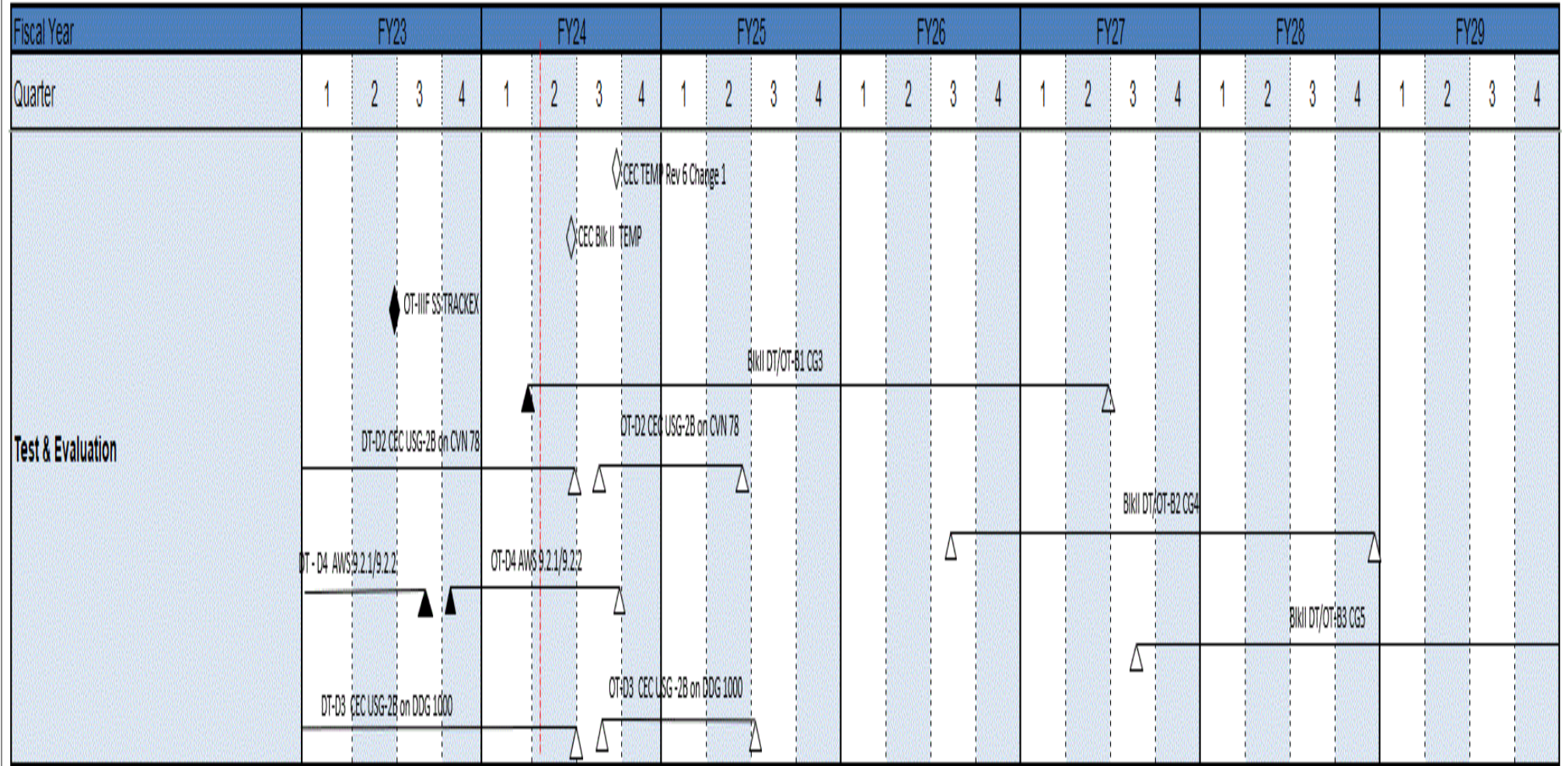
Project (Number/Name)
2039 / *COOP Engagement*

Fiscal Year	FY23				FY24				FY25				FY26				FY27				FY28				FY29			
Quarter	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		◆ CSB/Gate 6 FY23			◆ PDMC/Mod TDP	◇ CSB/Gate 6 FY24			◇ CSB/Gate 6 FY25				◇ CSB/Gate 6 FY26				◇ CSB/Gate 6 FY27				◇ CSB/Gate 6 FY28				◇ CSB/Gate 6 FY29			
Program Milestones - CEC		◆ Incr 22.3/4 SETR			◇ Incr 23.1-4 SETR	◇ Incr 24.1/2 SETR			◇ Incr 24.3/4 SETR	◇ Incr 25.1/2 SETR			◇ Incr 25.3/4 SETR	◇ Incr 26.1/2 SETR			◇ Incr 26.3/4 SETR	◇ Incr 27.1/2 SETR			◇ Incr 27.3/4 SETR	◇ Incr 28.1/2 SETR			◇ Incr 28.3/4 SETR	◇ Incr 29.1/2 SETR		
CEC System Improvements																												
CEC Aegis Weapon System (AWS) BL 10.0								△ 11.14 FQT/IV&V																				
CEC SSDS BL 12		▲ 10.52 FQT/IV&V			▲ 11.10 FQT/IV&V																							
CEC Sustainment	◆ SSWG FY23	◆ PSWG FY23			◆ SSWG FY24	◇ PSWG FY24			◇ SSWG FY25	◇ PSWG FY25			◇ SSWG FY26	◇ PSWG FY26			◇ SSWG FY27	◇ PSWG FY27			◇ SSWG FY28	◇ PSWG FY28			◇ SSWG FY29	◇ PSWG FY29		
CEC Cyber	◆ Incr 22.3/4 SETR				◇ Incr 23.1-4 SETR	◇ Incr 24.1/2 SETR			◇ Incr 24.3/4 SETR	◇ Incr 25.1/2 SETR			◇ Incr 25.3/4 SETR	◇ Incr 26.1/2 SETR			◇ Incr 26.3/4 SETR	◇ Incr 27.1/2 SETR			◇ Incr 27.3/4 SETR	◇ Incr 28.1/2 SETR			◇ Incr 28.3/4 SETR	◇ Incr 29.1/2 SETR		
CEC JTMC Capability Maturation									◇ SRR	Systems Engineering & SW Development						◇	Test, Certification, and Fielding						◇					
Contracts																												
CEC Competitive Production (Previous)				▲																								
CEC Future Competitive Production (Current)																△												
CEC SDP-S Competitive Production	▲																											
CEC DA/ES Follow-On Competitive								△																				
CEC USG-2/2A/3 Repair				▲																								
Plannar Array Antenna Assembly (PAAA) Production									△																			
PAAA-A Development OTA												△																
PAAA-D Development OTA	▲															△												

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

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / Cooperative Engagement Capability	Project (Number/Name) 2039 / COOP Engagement
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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 2039 / <i>COOP Engagement</i>
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Legend	Acronym List			
Actual Milestone Completion	ACB: Advance Capability Build	FCLIP: Fire Control Loop Improvement Project	OT: Operational Test	TEMP: Test and Evaluation Master Plan
Planned Milestone Completion	AWS: Aegis Weapon System	FNC: Future Naval Capability	OY: Option Year	TIM: Technical Interchange Meeting
Actual Event Start/Completion	AP: Acquisition Plan	FOC: Full Operational Capability	PAAA: Planar Array Antenna Assembly	TRR: Technical Readiness Review
Planned Event Start/Completion	AS: Acquisition Strategy	FQT/IV&V: Full Qualification Testing/Independent Verification And Validation	PDR: Preliminary Design Review	
Current Date	APB: Acquisition Program Baseline	FSBR: Final Software Build Review	PH: Phase	
Delivery Period based on Last Order Date	CAB: Common Array Block	FTIIP: Far Term Interoperability Improvement Project	PSWG: Product Support Working Group	
	Common Array Block - Shipboard	FY: Fiscal Year	RFP: Request For Proposal	
	CDD: Capability Development Document	HS: Hypersonic	SBR: Software Build Review	
	CEC: Cooperative Engagement Capability	ILA: Independent Logistics Assessment	SBT: Sea Based Terminal	
	CEN: CEC Enhanced Network	IPR: Internal Program Review	SDP-S: Signal Data Processor - Sierra	
	CSSQT: Combat System Shipboard Qualification Trials	LFT: Live Fire Test	SFR: System Functional Review	
	CTT: CEC Technical Training	NIFC: Naval Integrated Fire Control	SRR: System Requirements Review	
	DA/ES: Design Agent/Engineering Services	NIFC-P: Naval Integrated Fire Control Passive	SSDS: Ship Self Defense System	
	DT: Developmental Test	NIFC-CA: Naval Integrated Fire Control - Counter Air	SS TRACKEX: Supersonic Tracking Exercise	
	DWO: Digital Warfare Office	NoGAPSS: Non-GPS Aided PNT (Position, Navigation and Timing) for Surface and Subsurface	SSWG: Supply Support Working Group	
	ERS - Enterprise Radar Suite		SWBLR: Software Baseline Review	

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 2039 / <i>COOP Engagement</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2039				
CSB/Gate 6 FY23	2	2023	2	2023
CSB/Gate 6 FY24	2	2024	2	2024
CSB/Gate 6 FY25	1	2025	1	2025
CSB/Gate 6 FY26	1	2026	1	2026
CSB/Gate 6 FY27	1	2027	1	2027
CSB/Gate 6 FY28	1	2028	1	2028
CSB/Gate 6 FY29	1	2029	1	2029
SI Inc 22.3/4 SETR	2	2023	2	2023
SI Incr 23.1-4	2	2024	2	2024
SI Inc 24.1/2 SETR	3	2024	3	2024
SI Inc 24.3/4 SETR	1	2025	1	2025
SI Inc 25.1/2 SETR	3	2025	3	2025
SI Inc 25.3/4 SETR	1	2026	1	2026
SI Inc 26.1/2 SETR	3	2026	3	2026
SI Inc 26.3/4 SETR	1	2027	1	2027
SI Inc 27.1/2 SETR	3	2027	3	2027
SI Inc 27.3/4 SETR	1	2028	1	2028
SI Inc 28.1/2 SETR	3	2028	3	2028
SI Incr 28.3/4 SETR	1	2029	1	2029
SI Incr 29.1/2 SETR	3	2029	3	2029
SDP-Next Demo	2	2023	2	2023

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

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 2039 / <i>COOP Engagement</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SDP-Next EDM	4	2023	4	2023
SDP-Next Draft TDP	4	2024	4	2024
CEC Aegis BL10 FQT/IV&V	2	2024	3	2024
CEC SSDS BL12 FQT/IV&V	3	2023	4	2023
SSWG FY 23	1	2023	1	2023
PSWG FY 23	3	2023	3	2023
SSWG FY 24	1	2024	1	2024
PSWG FY 24	3	2024	3	2024
SSWG FY 25	1	2025	1	2025
PSWG FY 25	3	2025	3	2025
SSWG FY26	1	2026	1	2026
PSWG FY26	3	2026	3	2026
SSWG FY27	1	2027	1	2027
PSWG FY27	3	2027	3	2027
SSWG FY28	1	2028	1	2028
PSWG FY28	3	2028	3	2028
SSWG FY29	1	2029	1	2029
PSWG FY29	3	2029	3	2029
CEC Cyber Inc 22.3/4	2	2023	2	2023
CEC Cyber Incr 23.1-4	1	2024	1	2024
CEC Cyber Inc 24.1/2	3	2024	3	2024
CEC Cyber Inc 24.3/4	1	2025	1	2025
CEC Cyber Inc 25.1/2	3	2025	3	2025
CEC Cyber Inc 25.3/4	1	2026	1	2026
CEC Cyber Inc 26.1/2	3	2026	3	2026

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

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 2039 / <i>COOP Engagement</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CEC Cyber Inc 26.3/4	1	2027	1	2027
CEC Cyber Inc 27.1/2	3	2027	3	2027
CEC JTMC Capability Maturation System Engineering & SW Development	1	2025	3	2027
CEC JTMC Capability Maturation SRR	3	2025	3	2025
CEC JTMC Capability Maturation Test, Certification & Fielding	2	2027	4	2028
CEC Competitive Production (Previous)	1	2023	4	2023
CEC Future Competitive Production (Current)	1	2023	4	2026
CEC SDP-S Competitive Production	1	2023	1	2023
CEC DA/ES Follow-On Competitive	1	2023	4	2024
CEC USG-2/2A/3 Repair	1	2023	4	2023
Plannar Antenna Array Assembly (PAAA) Production	1	2023	1	2025
PAAA-A Development OTA	1	2023	4	2025
PAAA-D Development OTA	1	2023	4	2026
OT-IIF Supersonic Trackex (SS TRX)	2	2023	2	2023
DT-D2 CEC USG-2B on CVN 78	1	2023	2	2024
OT-D2 CEC USG-2B on CVN 78	3	2024	2	2025
DT-D3-CEC USG-2B on DDG 1000	1	2023	2	2024
OT-D3 USG-2B on DDG 1000	3	2024	3	2025
CEC TEMP Rev 6 Change 1	4	2023	2	2024
CEC BLK II TEMP	1	2024	1	2024
DT-D4 AWS 9.2.1/9.2.2	1	2023	3	2023
OT-D4 AWS 9.2.1/9.2.2	4	2023	3	2024
BLKII DT/OT-B1 CG3	1	2024	2	2027
BLKII DT/OT-B2 CG4	3	2026	4	2028
BLKII DT/OT-B3 CG5	3	2027	4	2029

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>
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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
3240: <i>CEC Increment II</i>	124.029	68.930	60.638	49.305	-	49.305	88.930	87.801	84.443	86.207	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 582

A. Mission Description and Budget Item Justification

CEC Capability Development Document (CDD) Increment II evolves Increment I capabilities by enhancing the current naval air defense and sensor network system capabilities through the expansion of network capacity as well as extension into other warfare mission domains. CEC CDD Increment II shall integrate new sensor types and track data sources into the network, such as surface search radars and passive detection sensors, as well as relevant data from other networks. CEC CDD Increment II shall accommodate more CUs and provide a more complete, robust, and resilient situational awareness picture, composite identification, and Integrated Fire Control (IFC), with assured communications for Integrated Air and Missile Defense (IAMD), surface warfare, and electronic mission warfare domains.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p>Title: CEC FAR-TERM INTEROPERABILITY IMPROVEMENT PROJECT (FTIIP)</p> <p align="right">Articles:</p> <p>FY 2024 Plans: N/A</p> <p>FY 2025 Base Plans: N/A</p> <p>FY 2025 OCO Plans: N/A</p>	0.393	0.000	0.000	0.000	0.000
	-	-	-	-	-
<p>Title: NIFC HYPERSONIC</p> <p align="right">Articles:</p> <p>FY 2024 Plans: Continue CG 4 development. Continue software development efforts to expand CEC speed, acceleration and altitude attributes for inclusion in the CEC Composite Tracking environment to address advanced and more stressing threats (hypersonics). Validate NIFC Hypersonics system network performance requirements to support system hardware improvements.</p> <p>FY 2025 Base Plans:</p>	5.099	4.969	5.523	0.000	5.523
	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p>Complete CG 4 development and begin System Integration Testing (SIT). Continue software development efforts to expand CEC speed, acceleration and altitude attributes for inclusion in the CEC Composite Tracking environment to address advanced and more stressing threats (hypersonics). Validate NIFC Hypersonics system network performance requirements to support system hardware improvements. Start of CG 5 development rephased to FY26.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due to minor pricing differences.</p>					
<p>Title: CRYPTO MODERNIZATION</p> <p align="right">Articles:</p> <p>FY 2024 Plans: Continue CG 4 development. Continue a cryptographic modernization effort for Signal Data Processor (SDP), to include the continued development of a new Programmable Cryptographic Module (PCM), in support of the significant increase in cryptographic performance that is required to enable more resilient networks and add additional protections to the CEC network.</p> <p>FY 2025 Base Plans: Complete CG 4 development and begin System Integration Testing (SIT). Continue a cryptographic modernization effort for Signal Data Processor (SDP), to include the continued development of a new Programmable Cryptographic Module (PCM), in support of the significant increase in cryptographic performance that is required to enable more resilient networks and add additional protections to the CEC network. Start of CG 5 development rephased to FY26.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due to minor pricing differences.</p>	10.018	9.496	10.557	0.000	10.557
	-	-	-	-	-
<p>Title: NIFC Passive</p> <p align="right">Articles:</p> <p>FY 2024 Plans:</p>	8.924	8.184	9.097	0.000	9.097
	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024		
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
<p>Continue CG 4 development. In Close Coordination with PEO IWS 2.0 and PMA-231, continue integration of Electronic Warfare [EW] capabilities in CEC support of developing a SLQ-32(V)6 adaptive layer interface. Continue robust systems engineering efforts for CEP and DDS software development to route EW data via the CEC DDS network, ingest EW data into the CEP track picture, and use EW data to enhance Composite ID recommendations to Combat Systems.</p> <p>FY 2025 Base Plans: Complete CG 4 development and begin System Integration Testing (SIT). In Close Coordination with PEO IWS 2.0 and PMA-231, continue integration of Electronic Warfare [EW] capabilities in CEC support of developing a SLQ-32(V)6 adaptive layer interface. Continue robust systems engineering efforts for CEP and DDS software development to route EW data via the CEC DDS network, ingest EW data into the CEP track picture, and use EW data to enhance Composite ID recommendations to Combat Systems. Start of CG 5 development rephased to FY26.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Increase is due to minor pricing differences.</p>					
Title: FIRECAPE					
Articles:					
	4.248	11.381	8.985	0.000	8.985
	-	-	-	-	-
FY 2024 Plans: Continue CG 4 development. Continue integration and development of 'Patterns of Life' algorithms for inclusion in the CEC track picture to assist with identification of anomalies and events of interest. Continue FY23 efforts for inclusion in CEC tactical code, integrating and fielding algorithms in CEC to provide common threat evaluation and arbitration across the Force, and augmenting CEC Cooperative Engagement Decision Function with algorithms to calculate assignments and recommend actions to the combat system. <p>FY 2025 Base Plans: Complete CG 4 development and begin System Integration Testing (SIT). Continue integration and development of 'Patterns of Life' algorithms for inclusion in the CEC track picture to assist with identification of anomalies and events of interest. Continue FY23 efforts for inclusion in CEC tactical code, integrating and fielding algorithms in CEC to provide common threat evaluation and arbitration across the Force, and augmenting CEC Cooperative</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy				Date: March 2024	
Appropriation/Budget Activity 1319 / 7		R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>		Project (Number/Name) 3240 / <i>CEC Increment II</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
Engagement Decision Function with algorithms to calculate assignments and recommend actions to the combat system. Start of CG 5 development rephased to FY26.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease is due to rephasing of FY25 efforts to FY26 - FY27.					
Title: Communications-as-a-Service (CaaS)					
Articles:					
	9.121	3.702	0.000	0.000	0.000
	-	-	-	-	-
FY 2024 Plans: Continue CG 4 development. Continue integration of CEC with CaaS 2.0. Continue integration of CEC Increment II Block 2 functionality including Distributed Scheduler with CaaS 2.0. Continue integration of CEC with CaaS DLEP interface.					
FY 2025 Base Plans: N/A					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Decease from FY24 to FY25 due to transition from primarily software development to integration and test.					
Title: DIGITAL WARFARE TACTICAL NETWORKING INITIATIVE IMPLEMENTATION					
Articles:					
	3.208	0.000	0.000	0.000	0.000
	-	-	-	-	-
FY 2024 Plans: N/A					
FY 2025 Base Plans: N/A					
FY 2025 OCO Plans: N/A					
Title: ELEKTRA					
Articles:					
	17.419	22.906	15.143	0.000	15.143
	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p><i>FY 2024 Plans:</i> Continue to evolve the CEC hardware technology and network to support optimized algorithms and features across multiple platforms to perform Force level engagement coordination. Synchronize tactical data from heterogeneous distributed assets that allows for rapid iteration. Continue development of CEC support for sensor-effect-target assignment recommendations for all kill chains. Leverage S&T algorithm designs to support human-machine supervisory control interfaces for conducting integrated air and missile defense (IAMD) in an integrated fires environment.</p> <p><i>FY 2025 Base Plans:</i> Continue to evolve the CEC hardware technology and network to support optimized algorithms and features across multiple platforms to perform Force level engagement coordination. Synchronize tactical data from heterogeneous distributed assets that allows for rapid iteration. Continue development of CEC support for sensor-effect-target assignment recommendations for all kill chains. Leverage S&T algorithm designs to support human-machine supervisory control interfaces for conducting integrated air and missile defense (IAMD) in an integrated fires environment.</p> <p><i>FY 2025 OCO Plans:</i> N/A</p> <p><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Decrease is due end of initial Elektra efforts. Related efforts may continue in future CEC BLK III development.</p>					
<p><i>Title:</i> Communications-as-a-Service (CaaS) Cert & Production</p> <p align="right"><i>Articles:</i></p>	10.500 -	0.000 -	0.000 -	0.000 -	0.000 -
<p><i>FY 2024 Plans:</i> FY24 CaaS Certification and Production Transition efforts transferred to NAVWAR PMW160.</p> <p><i>FY 2025 Base Plans:</i> FY25 CaaS Certification and Production Transition efforts transferred to NAVWAR PMW160.</p> <p><i>FY 2025 OCO Plans:</i> N/A</p>					
Accomplishments/Planned Programs Subtotals	68.930	60.638	49.305	0.000	49.305

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy The CEC Increment II Acquisition Strategy (AS) is covered under the Cooperative Engagement Capability / COOP Engagement Project 2039 Acquisition Strategy (AS). Current version of CEC Acquisition Strategy (AS) approved by ASN (RDA) on 17 March 2023. Current version of CEC Acquisition Plan (AP) approved 03 May 2023. CEC Increment II Capability Development Document (CDD) approved 18 March 2020. Contracts: Signal Data Processor (SDP) Next - Contract competitively awarded via Other Transaction Authority (OTA) on 5 May 2021. SDP Next Phase II - Contract competitively awarded via OTA on 30 September 2022 CEC BLK II Capability Group 4 (CG 4) Phase I - Competitively awarded via OTA on 11 August 2023		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>
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Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CRYPTO Modernization	Various	Various : Not Specified	22.205	10.018	Oct 2022	9.496	Oct 2023	10.557	Oct 2024	-		10.557	Continuing	Continuing	Continuing
FTIIP	Various	Various : Not Specified	18.385	0.393	Oct 2022	0.000		0.000		-		0.000	6.400	25.178	-
NIFC Hypersonic	Various	Various : Not Specified	13.379	5.099	Oct 2022	4.969	Oct 2023	5.523	Oct 2024	-		5.523	Continuing	Continuing	Continuing
NIFC Passive	Various	Various : Not Specified	30.084	8.924	Oct 2022	8.184	Oct 2023	9.097	Oct 2024	-		9.097	Continuing	Continuing	Continuing
FIRECAPE	Various	Various : Not Specified	1.764	4.248	Oct 2022	11.381	Oct 2023	8.985	Oct 2024	-		8.985	Continuing	Continuing	Continuing
CaaS	Various	Various : Not Specified	10.981	9.121	Oct 2022	3.702	Oct 2023	0.000		-		0.000	19.700	43.504	-
DWO	Various	Various : Not Specified	6.181	3.208	Oct 2022	0.000		0.000		-		0.000	0.000	9.389	-
ELEKTRA	Various	Various : Not Specified	8.457	17.419	Oct 2022	22.906	Oct 2023	15.143	Oct 2024	-		15.143	0.000	63.925	-
CaaS & CERT & PRODUCTION	Various	Various : Not Specified	12.593	10.500	Oct 2022	0.000		0.000		-		0.000	0.000	23.093	-
Subtotal			124.029	68.930		60.638		49.305		-		49.305	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	124.029	68.930	60.638	49.305	-	49.305	Continuing	Continuing	N/A

Remarks

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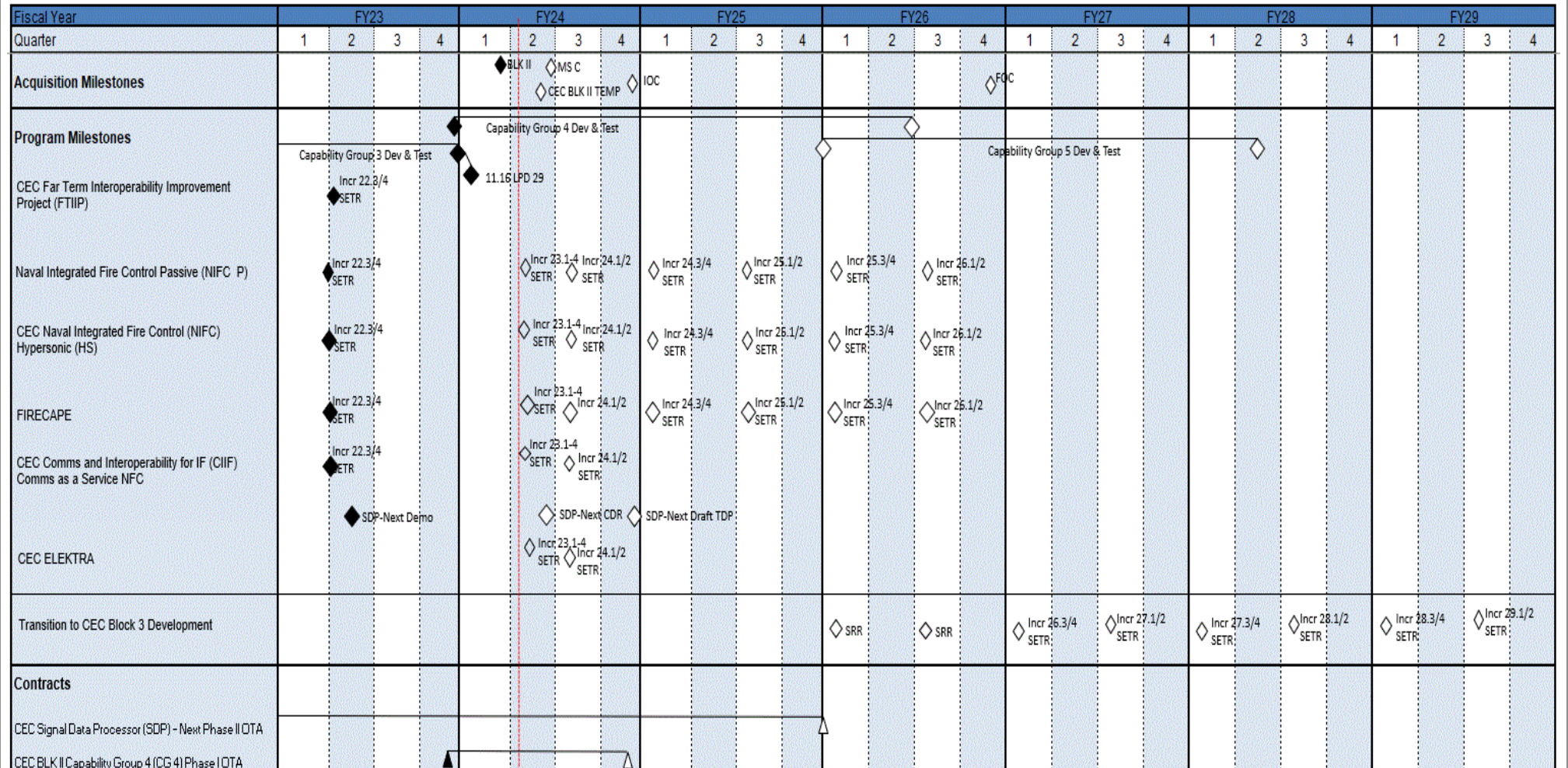
Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy

Date: March 2024

Appropriation/Budget Activity
1319 / 7

R-1 Program Element (Number/Name)
PE 0607658N / *Cooperative Engagement Capability*

Project (Number/Name)
3240 / *CEC Increment II*



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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3240				
MS C	1	2024	1	2024
IOC	4	2024	4	2024
FOC	4	2026	4	2026
CEC BLK II TEMP	2	2024	2	2024
CAPABILITY GROUP 3 DEV & TEST	1	2023	4	2023
CAPABILITY GROUP 4 DEV & TEST	4	2023	2	2026
CAPABILITY GROUP 5 DEV & TEST	1	2026	2	2028
CEC FTIIP Incr 22.3/4 SETR	2	2023	2	2023
NIFC Passive Incr 22.3/4 SETR	2	2023	2	2023
NIFC Passive Incr 23.1-4 SETR	2	2024	2	2024
NIFC Passive Incr 24.1/2 SETR	3	2024	3	2024
NIFC Passive Incr 24.3/4 SETR	1	2025	1	2025
NIFC Passive Incr 25.1/2 SETR	3	2025	3	2025
NIFC Passive Incr 25.3/4 SETR	1	2026	1	2026
NIFC Passive Incr 26.1/2 SETR	3	2026	3	2026
CEC NIFC Hypersonic Incr 22.3/4 SETR	2	2023	2	2023
CEC NIFC Hypersonic Incr 23.1-4 SETR	2	2024	2	2024
CEC NIFC Hypersonic Incr 24.1/2 SETR	3	2024	3	2024
CEC NIFC Hypersonic Incr 24.3/4 SETR	1	2025	1	2025
CEC NIFC Hypersonic Incr 25.1/2 SETR	3	2025	3	2025
CEC FIRECAPE Incr 22.3/4 SETR	2	2023	2	2023

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

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0607658N / <i>Cooperative Engagement Capability</i>	Project (Number/Name) 3240 / <i>CEC Increment II</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CEC FIRECAPE Incr 23.1-4 SETR	2	2024	2	2024
CEC FIRECAPE Incr 24.1/2 SETR	3	2024	3	2024
CEC FIRECAPE Incr 24.3/4 SETR	1	2025	1	2025
CEC FIRECAPE Incr 25.1/2 SETR	3	2025	3	2025
CEC CIIF CaaS FNC Incr 22.3/4 SETR	2	2023	2	2023
CEC CIIF CaaS FNC Incr 23.1-4 SETR	2	2024	2	2024
CEC CIIF CaaS FNC Incr 24.1/2 SETR	3	2024	3	2024
CEC ELEKTRA Incr 23.1-4 SETR	2	2024	2	2024
CEC ELEKTRA Incr 24.1/2 SETR	3	2024	3	2024
CEC Signal Data Processor (SDP) - Next Phase II OTA	1	2023	4	2025
CEC BLK II Capability Group 4 (CG 4) Phase I OTA	4	2023	4	2024
SRR	1	2026	1	2026
SFR	3	2026	3	2026
CEC BLOCK 3 Incr 26.3/4 SETR	1	2027	1	2027
CEC BLOCK 3 Incr 27.1/2 SETR	3	2027	3	2027
CEC BLOCK 3 Incr 27.3/4 SETR	1	2028	1	2028
CEC BLOCK 3 Incr 28.1/2 SETR	3	2028	3	2028
CEC BLOCK 3 Incr 28.3/4 SETR	1	2029	1	2029
CEC BLOCK 3 Incr 29.1/2 SETR	3	2029	3	2029