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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	1,001.051	129.578	162.676	156.121	-	156.121	175.794	172.696	163.794	165.554	Continuing	Continuing
2039: <i>COOP Engagement</i>	983.345	91.836	91.299	84.368	-	84.368	103.265	127.025	126.118	127.568	Continuing	Continuing
3240: <i>CEC Increment II</i>	17.706	37.742	71.377	71.753	-	71.753	72.529	45.671	37.676	37.986	Continuing	Continuing

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

**Note**

The FY 2023 funding request was reduced by \$12.000 million to account for the availability of prior year execution balances.

**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

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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, US Army, and FMS CEC units.

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

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

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Previous President's Budget	133.962	176.486	0.000	-	0.000
Current President's Budget	129.578	162.676	156.121	-	156.121
Total Adjustments	-4.384	-13.810	156.121	-	156.121
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-13.810			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-4.384	0.000			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	156.121	-	156.121

**Change Summary Explanation**

FY 2021 decrease of \$4.384M is due to SBIR/STTR Reductions.

FY 2021 funding shown in the R-2 includes \$7.002 million rescinded by the Department of Defense Appropriations Act, 2022.

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FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>				<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2039: <i>COOP Engagement</i>	983.345	91.836	91.299	84.368	-	84.368	103.265	127.025	126.118	127.568	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 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, US Army, and FMS CEC units.

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

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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<p><b>Title:</b> E-2D</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> Complete software development and test for E-2D DSSC 4 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 4 software and associated hardware. Conduct E-2D DSSC 4 CEC software delta FQT. Support E-2D DSSC 4 DT and prepare for conduct of E-2D DSSC 4 OT. Begin detailed design efforts 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.</p> <p><b>FY 2023 Base Plans:</b> Support OT of E-2D DSSC 4 and DSSC 4 Fleet Release. Complete 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. Conduct PCP for CEC S/W with E-2D DSSC 5. Support E-2D DSSC 5 DT and prepare for conduct of E-2D DSSC 5 OT. Begin 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><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase is due to concurrent DSSC 4, DSSC 5, and DSSC 6 development and test efforts in FY23.</p>	4.134	4.534	5.818	0.000	5.818
<p><b>Title:</b> B/L 2.1 INTEGRATION AND FOT&amp;E TESTING</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> Conduct CEC Developmental Test (DT-Dx) of AN/USG-2B with SSDS BL12 CP3. Complete CEC Operational Test (OT-D3) of AN/USG-2B with DDG 1000 combat system onboard USS ZUMWALT (DDG 1000). Conduct CSSQT aboard USS HOWARD (DDG 83), USS RALPH JOHNSON (DDG 114), USS PAUL IGNATIUS</p>	11.659	12.789	12.751	0.000	12.751

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
DDG117, USS BENFOLD (DDG 65) and USS ROOSEVELT (DDG 80). Continue planning for FFG(X) Developmental Test (DT) events. Conduct planning for CEC Block II testing.  <b>FY 2023 Base Plans:</b> Conduct CEC Developmental Test (DT) of AN/USG-3B with E-2D DSSC 5. Conduct CEC Operational Test (OT) IIIF Supersonic Tracking Exercise (TRACKEX). Continue OT-D2 of AN/USG-2B with CVN 78. Conduct OT-D4 with Aegis Weapon System (AWS) 9.2.1/9.2.2. Continue DT of AN/USG-2B with AWS CP23-1 and begin DT of AN/USG-2B with AWS CP24-1. Continue CEC DT of AN/USG-2B with AWS Baseline 10. Continue DT of AN/USG-2B with SSDS Baseline 12 CP3. Continue planning for FFG(X) DT events. Conduct planning for LUSV DT events. Continue planning for CEC Block II testing.  <b>FY 2023 OCO Plans:</b> N/A  <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease is due to minor pricing differences.					
<b>Title:</b> SYSTEM IMPROVEMENTS  <b>FY 2022 Plans:</b> Conduct PRP in support of AEGIS CP 22-1 CSSQT in FY22 and FQT/IV&V to support PCP and CSCP for AEGIS CP 22-1 in FY22. Support multiple CSSQT events for CP 22-1 platforms in FY22. Continue development of CEC S/W in support of AEGIS CP 23-1 - conduct two SBRs, support three Integration Events at Land Based Test Sites, a PRP to support ALO for CP 23-1 platforms, and FQT/IV&V to support PCP and CSCP planned in FY23. Commence development of CEC S/W to support AEGIS CP 24-1. Commence requirements development for the modernization of the CEC Power Distribution Media Converter (PDMC). Commence development of CEC requirements to support the Integrated Combat System for the DDG(X) program. Conduct FQT/IV&V of CEC S/W (CLIN0001 Completion Task on current CEC Design Agent/Engineering Services contract) to support a PRP for ALO for DDG 125 with AEGIS B/L 10.0. Close out and complete CLIN0001 Completion Task activities for AEGIS BL 10.0. Continue development CEC S/W to support AEGIS B/L 10.0 integration and test activities to prepare for underway Sea Trials in DDG 125 in FY22 and FY23. Commence CEC S/W development to support the AEGIS B/L 10.1 development, including coordination of this development for the Frigate Weapon System onboard the FFG-62 class. Continue robust systems engineering in conjunction with shipboard, airborne, and land-based combat systems to integrate Communications as a Service (CaaS) in CEC. Continue development and modifications to CEC Special Test Equipment (STE) in support of testing the	19.577	25.784	32.132	0.000	32.132
<b>Articles:</b>	-	-	-	-	-

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

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<p>CaaS capability. Continue robust systems engineering in conjunction with navigation systems and shipboard, airborne, and land-based combat systems to integrate Non-GPS Aided Positioning, Navigation, and Timing [PNT] for Surface Ships (NoGAPSS) technology in CEC in support of Assured PNT capability deployment in FY24.</p> <p><b>FY 2023 Base Plans:</b>                      Conduct PCP for CEC S/W to support E-2D DSSC 5, CV 78, CP23-1, and SSDS B/L 12. Support DDG 82 ALO. Support CSCP for SSDS B/L 12 and AWS 23-1. Support E-2D DSSC 5 DT and CVN 71 CSSQT. Continue CEC S/W development in support of SSDS BL 12 CP3 and CP4. Conduct SBR 22.3/4 and SBR 23.1/2 SETR events for CEC SSDS SW software development. Conduct PRP for S/W releases to support CSLO on LHA 8 and CVN 79. Complete FQT in support of SSDS BL 12 CP3 and CP4. Complete CSIT events with SSDS BL 12 S/W. Complete CEC S/W development in support of AWS B/L 10.0. Support DDG 125 sea trials with CEC engineering release S/W. Conduct FQT/IV&amp;V with AWS B/L 10.0. Conduct PCP for CEC S/W to DDG 125 MRA 3 and DDG 126 ALO. Support CEC S/W safety assessment with AWS B/L 10.0. Continue CEC S/W development in support of FQT/IV&amp;V and complete FQT/IV&amp;V with AWS CP24-1. Support ALO on DDG 78 and DDG 90. Continue CEC S/W development in support of FQT/IV&amp;V with AWS CP25-1 and E-2D DSSC 6 in FY24. Continue development of CEC requirements to support the Integrated Combat System for the DDG(X) program. Continue PDMC model development, Technical Data Package (TDP), and qualification. Continue development of CEC Signal Data Processor (SDP)-Next Engineering Development Model (EDM). Develop SDP-Next TDP. Complete SDP-Next CDR. Support NSA Certification process for SDP-Next. Continue CEC S/W development for LUSV. Support LUSV IPR #8 and IPR #9. Support LUSV CIG3 and CIG4 Integration and Test events. Continue CEC S/W development and coordination with AEGIS B/L 10.1 development for the Frigate Weapon System onboard the FFG-62 class. Conduct SBR 22.3/4 and SBR 23.1/2 SETR events for CEC FFG software development. Support FFG CIG2 and CIG3 Integration and Test events. 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. Continue development and modifications to CEC Special Test Equipment (STE) in support of testing the CaaS capability. Continue robust systems engineering in conjunction with navigation systems and shipboard, airborne, and land-based combat systems to integrate Non-GPS Aided Positioning, Navigation, and Timing [PNT] for Surface Ships (NoGAPSS) technology in CEC in support of Assured PNT capability deployment in FY24.</p> <p><b>FY 2023 OCO Plans:</b></p>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
N/A					
<p><b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Increase is due to increased concurrent development of system improvements for in-service Aegis and SSDS baselines, increased integration and certification planning of new CEC Blk II capabilities, as well as continued development of CEC capabilities for new platforms including Large Unmanned Surface Vessel (LUSV) and FFG-62 Class.</p> <p><b><i>Title:</i></b> NETWORK ENABLED ELECTRONIC DEFENSE SYSTEM (NEEDS)</p> <p align="right"><b><i>Articles:</i></b></p> <p><b><i>FY 2022 Plans:</i></b> Perform fixes for residual software problems.</p> <p><b><i>FY 2023 Base Plans:</i></b> Perform fixes for residual software problems.</p> <p><b><i>FY 2023 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Increase from FY22 to FY23 due to minor pricing differences.</p>	1.087	0.516	0.534	0.000	0.534
	-	-	-	-	-
<p><b><i>Title:</i></b> FIELD ACTIVITIES</p> <p align="right"><b><i>Articles:</i></b></p> <p><b><i>FY 2022 Plans:</i></b> 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.</p> <p><b><i>FY 2023 Base Plans:</i></b> 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.</p> <p><b><i>FY 2023 OCO Plans:</i></b></p>	9.645	10.579	10.943	0.000	10.943
	-	-	-	-	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
N/A					
<b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Increase from FY22 to FY23 due to minor pricing differences.					
<b><i>Title:</i></b> NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR (NIFC-CA)	3.497	7.755	8.022	0.000	8.022
<b><i>Articles:</i></b>	-	-	-	-	-
<b><i>FY 2022 Plans:</i></b> Support NIFC At-Sea and Live Fire test events. Address issues discovered during NIFC Increment 2 Improvements testing. 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. Continue requirement discussions with USMC.					
<b><i>FY 2023 Base Plans:</i></b> 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. Continue requirement discussions with USMC.					
<b><i>FY 2023 OCO Plans:</i></b> N/A					
<b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Increase from FY22 to FY23 due to minor pricing differences.					
<b><i>Title:</i></b> FIRE CONTROL LOOP IMPROVEMENT INITIATIVE (FCLIP) PHASE 2	1.501	0.000	0.000	0.000	0.000
<b><i>Articles:</i></b>	-	-	-	-	-
<b><i>FY 2022 Plans:</i></b> N/A					
<b><i>FY 2023 Base Plans:</i></b> N/A					
<b><i>FY 2023 OCO Plans:</i></b> N/A					
<b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b>					

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N/A					
<p><b>Title:</b> PROGRAM PROTECTION</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> 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><b>FY 2023 Base Plans:</b> 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><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase is due to continued integration phase, sustainment management, and increased development efforts to meet export requirements.</p>	11.029	12.084	12.500	0.000	12.500
	-	-	-	-	-
<p><b>Title:</b> CEC INCREMENT 2</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> CEC Increment 2 refers to initial efforts to expand CEC tracking capabilities to include surface tracking and other experimental / proof of concept efforts. CEC Increment 2 does not cover efforts associated with CEC Increment II. CEC Increment II is covered under PE 0607658N / (U)Cooperative Engagement Capability Project 3240 / CEC Increment II starting in FY20.</p> <p><b>FY 2022 Plans:</b></p>	1.164	0.929	0.000	0.000	0.000
	-	-	-	-	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
Continue ABMA experimentation and risk reduction efforts for ABMA. Complete transition of CRFEW algorithms for integration into CEC BLK II.					
<b>FY 2023 Base Plans:</b> N/A					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease in funding due to completion of algorithm maturation efforts in FY22 and focus on transition of algorithms for integration in CEC BLK II.					
<b>Title:</b> ENTERPRISE AIR SURVEILLANCE RADAR (EASR)					
<b>Articles:</b>					
	6.402	7.334	0.809	0.000	0.809
	-	-	-	-	-
<b>FY 2022 Plans:</b> Continue CEC Baseline 11 Integration and Test with SSDS Baseline 12 and EASR. Commence Formal Developmental Testing. Conduct Formal Qualification Testing (FQT) and Independent Verification and Validation (IV&V) testing in support of final certification of software to support fielding. Prepare for conduct of E-2D DSSC 4 OT. Prepare for conduct of SSDS BL 12 combat systems integration events.					
<b>FY 2023 Base Plans:</b> Majority of EASR integration and test efforts deferred to FY24 - FY25. Continue Baseline 11 Integration and Test in support of CVN 79 and LHA 8 CSLO.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease is due to rephasing efforts to FY24 and beyond.					
<b>Title:</b> DIGITAL WARFARE TACTICAL NETWORKING INITIATIVE IMPLEMENTATION					
<b>Articles:</b>					
	9.656	0.000	0.000	0.000	0.000
	-	-	-	-	-
<b>FY 2022 Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / Cooperative Engagement Capability	<b>Project (Number/Name)</b> 2039 / COOP Engagement

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<p>Digital Warfare Tactical Networking Initiative efforts transition to PE 0607658N / Cooperative Engagement Capability Project 3240 / CEC Increment II in FY22. FY22 Plans are identified under PE 0607658N / Cooperative Engagement Capability Project 3240 / CEC Increment II.</p> <p><b>FY 2023 Base Plans:</b> Digital Warfare Tactical Networking Initiative efforts transition to PE 0607658N / Cooperative Engagement Capability Project 3240 / CEC Increment II in FY22. FY23 Base Plans are identified under PE 0607658N / Cooperative Engagement Capability Project 3240 / CEC Increment II.</p> <p><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> N/A</p>					
<p><b>Title:</b> ANTENNA DEVELOPMENT</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> Complete trade studies, technology surveys, and documentation for prototype development of future improved, scalable CEC antenna.</p> <p><b>FY 2023 Base Plans:</b> N/A</p> <p><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> N/A</p>	6.811 -	0.938 -	0.000 -	0.000 -	0.000 -
<p><b>Title:</b> CEC CYBER RESILIENCY</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> Continue implementation of CEC CTT findings, cross domain interface solutions, and various other CEC cybersecurity enhancement capabilities (most classified) in CEC 10.x and 11.x software baselines, Gold disk releases, and hardware upgrades. Ensure cybersecurity requirements are fully considered and implemented in SDP Next development efforts. Review results of the NCDSO analysis conducted in FY20/FY21 and translate</p>	5.674 -	8.057 -	0.859 -	0.000 -	0.859 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<p>those findings into CEC cybersecurity risk reduction requirements, design enhancements, and executable cybersecurity system upgrades. Define and support conduct of IA testing of CEC software baselines, Gold Disk releases, and hardware upgrades underway in FY22. Participate in CEC Block II development efforts to ensure cybersecurity requirements are defined, considered, and implemented. Ensure Web Services capability implementation in CEC combat system integration efforts meets required cybersecurity standards. 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><b>FY 2023 Base Plans:</b> Majority of CEC Cyber Resiliency efforts deferred to FY24 - FY25. 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 FY23. Participate in CEC Block II 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.</p> <p><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease is due to rephasing efforts to FY24 and beyond.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	91.836	91.299	84.368	0.000	84.368

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• SCN: Navy, SCN	33.372	12.507	42.981	-	42.981	26.827	41.825	27.911	21.280	232.834	910.811
• APN/0204152N: Navy, APN	17.982	18.341	18.708	-	18.708	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPN/2606: CEC	26.006	24.641	34.500	-	34.500	34.114	26.818	32.458	33.089	Continuing	Continuing
• RDT&E/0206313M: USMC	1.603	1.651	1.701	-	1.701	1.752	1.804	1.858	0.000	Continuing	Continuing
• O&M,N/0206626M: USMC	2.212	2.278	2.347	-	2.347	2.417	2.490	2.564	0.000	Continuing	Continuing
• PMC/0206313M: USMC	1.252	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	14.078
• OPN/0960: CG MOD	0.300	1.400	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3,461.635

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>

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

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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**Remarks**

**D. Acquisition Strategy**

Full Rate Production for CEC AN/USG-3B variant approved April 2014. Latest revision of CEC Acquisition Strategy (AS) approved by ASN (RDA) on 29 June 2020. Latest revision of CEC Acquisition Plan (AP) approved Q2 FY 2021.

Contracts:  
 Common Array Block (CAB) antenna - contract competitively awarded Q4 FY 2013.  
 CEC Design Agent/Engineering Services (DA/ES) follow-on sole source contract awarded Q4 FY 2013. A sole source 15 month CEC DA/ES contract extension awarded Q4 FY 2018.  
 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. For ES, the contractor will develop software implementing CEC capability improvements; support advance studies and integration; and perform CEC software sustainment and support.  
 CEC Production - Contract competitively awarded in Q2 FY 2015.  
 CEC SDP-S Production - Contract competitively awarded in Q4 FY 2017.  
 CEC PAAA Competitive - Contract competitively awarded in Q3 FY 2020.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy												Date: April 2022			
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 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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	169.064	12.628	Oct 2020	14.837	Oct 2021	17.264	Oct 2022	-		17.264	Continuing	Continuing	Continuing
TDA	C/CPFF	JHU/APL : Laurel, MD	119.385	12.179	Oct 2020	14.311	Oct 2021	15.549	Oct 2022	-		15.549	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	60.995	3.497	Oct 2020	7.755	Oct 2021	8.022	Oct 2022	-		8.022	Continuing	Continuing	Continuing
In-Service Engineering Activity	WR	NSWC : Port Hueneme, CA	14.787	1.299	Oct 2020	2.578	Oct 2021	3.607	Oct 2022	-		3.607	Continuing	Continuing	Continuing
Software Support Activity/ SEIA	WR	NSWC : Dahlgren, VA	28.011	1.260	Oct 2020	2.645	Oct 2021	3.267	Oct 2022	-		3.267	Continuing	Continuing	Continuing
Production Engineering Activity	WR	NSWC : Crane, IN	7.382	0.656	Oct 2020	0.742	Oct 2021	1.238	Oct 2022	-		1.238	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	9.495	0.600	Oct 2020	0.650	Oct 2021	1.250	Oct 2022	-		1.250	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy												Date: April 2022			
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 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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	9.083	0.600	Oct 2020	0.600	Oct 2021	0.900	Oct 2022	-		0.900	Continuing	Continuing	Continuing
E-2D Integration	Various	Various : Various	61.514	4.134	Oct 2020	4.534	Oct 2021	5.818	Oct 2022	-		5.818	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	48.532	1.087	Oct 2020	0.516	Oct 2021	0.534	Oct 2022	-		0.534	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	36.276	1.501	Oct 2020	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
CEC Increment 2	Various	Various : Various	6.608	1.164	Oct 2020	0.929	Oct 2021	0.000		-		0.000	Continuing	Continuing	Continuing
Program Protection	C/BA	NSMA : Washington, DC	29.595	11.029	Oct 2020	12.084	Oct 2021	12.500	Oct 2022	-		12.500	Continuing	Continuing	Continuing
EASR	Various	Various : Various	14.890	6.402	Oct 2020	7.334	Oct 2021	0.809	Oct 2022	-		0.809	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	40.850	9.656	Oct 2020	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	5.850	5.674	Oct 2020	8.057	Oct 2021	0.859	Oct 2022	-		0.859	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	0.000	6.811	Oct 2020	0.938	Oct 2021	0.000		-		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			862.208	80.177		78.510		71.617		-		71.617	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy												Date: April 2022			
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 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
Test/ACB Support	C/CPFF	Raytheon : St. Petersburg, FL	9.970	1.430	Oct 2020	1.795	Oct 2021	1.931	Oct 2022	-		1.931	Continuing	Continuing	Continuing
Test/ACB Support	C/CPFF	JHU/APL : Laurel, MD	8.997	1.943	Oct 2020	2.033	Oct 2021	2.022	Oct 2022	-		2.022	Continuing	Continuing	Continuing
Test Support	WR	NRL : Washington, DC	0.313	0.000		0.000		0.000		-		0.000	0.000	0.313	-
Test/ACB Support	WR	NSWC : Port Hueneme, CA	32.031	2.190	Oct 2020	2.281	Oct 2021	2.246	Oct 2022	-		2.246	Continuing	Continuing	Continuing
Air Operations Test Support	WR	NAVAIR (PMA207) : Patuxent River, MD	14.737	1.296	Oct 2020	1.500	Oct 2021	1.468	Oct 2022	-		1.468	Continuing	Continuing	Continuing
Test Data Reduction Analysis	WR	NSWC : Corona, CA	23.768	1.689	Oct 2020	1.931	Oct 2021	1.899	Oct 2022	-		1.899	Continuing	Continuing	Continuing
Test Support	WR	COMOPTEVFOR : Norfolk, VA	17.732	1.500	Oct 2020	1.796	Oct 2021	1.764	Oct 2022	-		1.764	Continuing	Continuing	Continuing
Test/ACB Support	WR	NSWC : Dahlgren, VA	8.159	1.611	Oct 2020	1.453	Oct 2021	1.421	Oct 2022	-		1.421	Continuing	Continuing	Continuing
<b>Subtotal</b>			115.707	11.659		12.789		12.751		-		12.751	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 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
Program Management Support	C/FFP	Booz Allen & Hamilton : Washington, DC	5.070	0.000		0.000		0.000		-		0.000	0.000	5.070	-
Program Management Support	C/FFP	Tech Marine : Washington, DC	0.360	0.000		0.000		0.000		-		0.000	0.000	0.360	-
<b>Subtotal</b>			5.430	0.000		0.000		0.000		-		0.000	0.000	5.430	N/A



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**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy** **Date: April 2022**

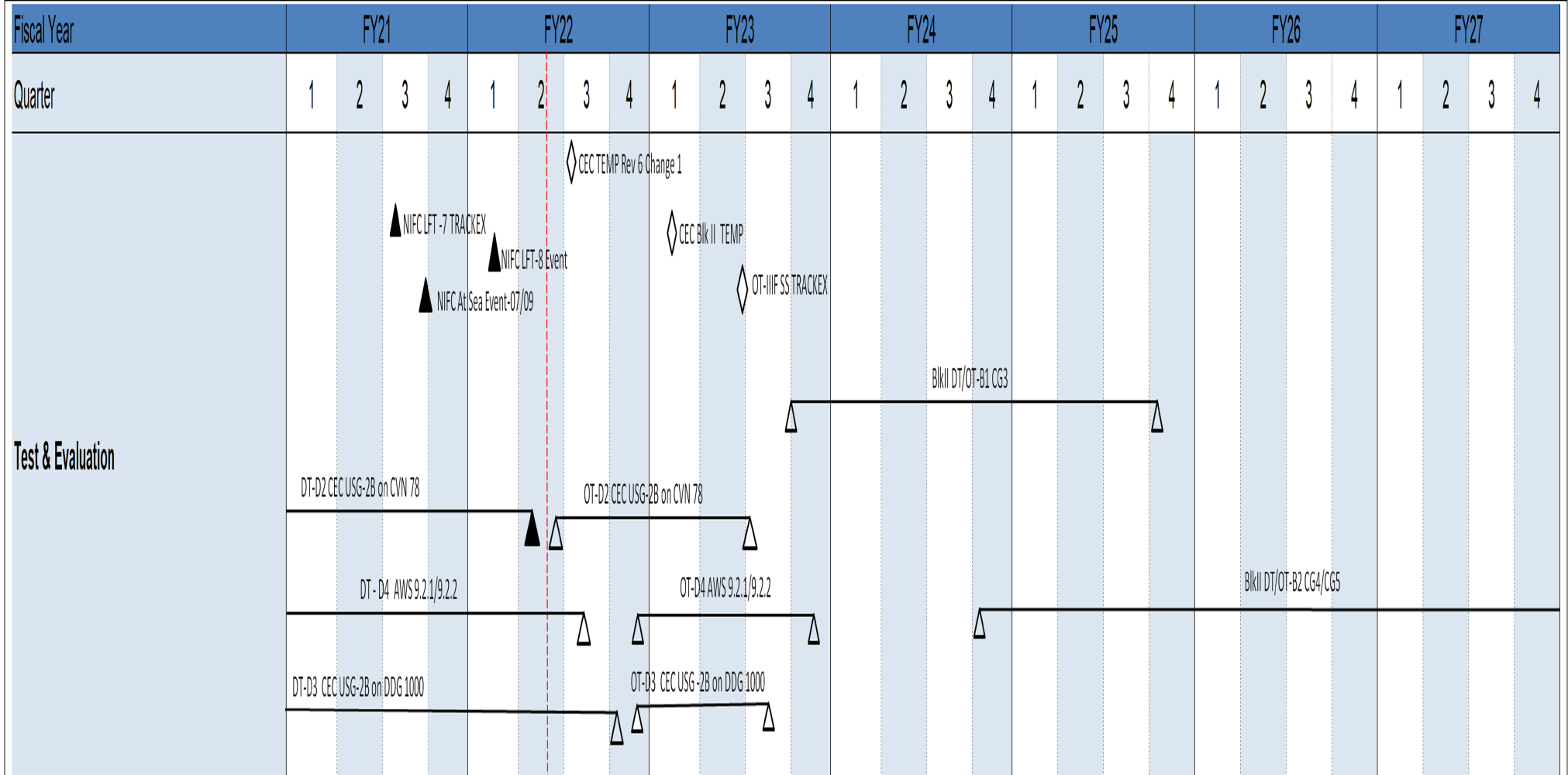
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>
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Fiscal Year	FY21				FY22				FY23				FY24				FY25				FY26				FY27			
	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
<b>Acquisition Milestones</b>		◆ CSB/Gate 6 FY21				◆ CSB/Gate 6/7			◇ CSB/Gate 6 FY23				◇ CSB/Gate 6 FY24				◇ CSB/Gate 6 FY25				◇ CSB/Gate 6 FY26				◇ CSB/Gate 6 FY27			
		◆ CEC AP Production																										
<b>Program Milestones - CEC</b>																												
CEC System Improvements	◆ SBR 20.3		◆ Incr 21.1/2 SETR	◆ Incr 21.3/4 SETR		◇ Incr 22.1/2 SETR			◇ Incr 22.3/4 SETR	◇ Incr 23.1/2 SETR			◇ Incr 23.3/4 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		
CEC Aegis Weapon System (AWS) BL 10.0	◆ SBR 20.3		◆ Incr 21.1/2 SETR	◆ Incr 21.3/4 SETR																								
CEC SSDS BL 12			◆ Incr 21.1/2 SETR	◆ Incr 21.3/4 SETR																								
CEC Sustainment		◆ SSWG FY21	◆ PSWG FY21	◆ SSWG FY22	◇ PSWG FY22	◇ SSWG FY23	◇ PSWG FY23	◇ SSWG FY24	◇ PSWG FY24	◇ SSWG FY25	◇ PSWG FY25	◇ SSWG FY26	◇ PSWG FY26	◇ SSWG FY27	◇ PSWG FY27													
CEC Cyber	◆ SBR 20.3		◆ Incr 21.1/2 SETR	◆ Incr 21.3/4 SETR	◇ Incr 22.1/2 SETR	◇ Incr 22.3/4 SETR	◇ Incr 23.1/2 SETR	◇ Incr 23.3/4 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													
<b>Contracts</b>																												
CEC Competitive Production (Current)																												
CEC Future Competitive Production																												
CEC Signal Data Processor - Sierra (SDP-S) Competitive Production																												
CEC SDP-S Competitive Production																												
CEC DA/ES Follow-On Competitive																												
Plannar Array Antenna Assembly (PAAA) Production																												

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**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / Cooperative Engagement Capability	<b>Project (Number/Name)</b> 2039 / COOP Engagement
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**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy** **Date:** April 2022

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

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2023 Navy</b>		<b>Date: April 2022</b>
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2039</b>				
CEC AP Production	2	2021	2	2021
CSB/Gate 6 FY21	2	2021	2	2021
CSB/Gate 6/7 FY22	2	2022	2	2022
CSB/Gate 6 FY23	1	2023	1	2023
CSB/Gate 6 FY24	1	2024	1	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
SI SBR 20.3	1	2021	1	2021
SI Inc 21.1/2 SETR	3	2021	3	2021
SI Inc 21.3/4 SETR	1	2022	1	2022
SI Inc 22.1/2 SETR	3	2022	3	2022
SI Inc 22.3/4 SETR	1	2023	1	2023
SI Inc 23.1/2 SETR	3	2023	3	2023
SI Inc 23.3/4 SETR	1	2024	1	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

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**Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SI Inc 27.1/2 SETR	3	2027	3	2027
SDP-Next Prototype	4	2022	4	2022
SDP-Next EDM	4	2023	4	2023
CEC Aegis BL10 SBR 20.3	1	2021	1	2021
CEC Aegis BL10 Inc 21.1/2 SETR	3	2021	3	2021
CEC Aegis BL10 Inc 21.3/4 SETR	1	2022	1	2022
CEC Aegis BL10 FQT/IV&V 1	2	2022	3	2022
CEC Aegis BL10 FQT/IV&V 2	2	2023	3	2023
CEC SSDS BL12 Incr 21.1/2 SETR	3	2021	3	2021
CEC SSDS BL12 Incr 21.3/4 SETR	1	2022	1	2022
CEC SSDS BL12 Incr 22.1/2 SETR	3	2022	3	2022
CEC SSDS BL12 FQT/IV&V 1	3	2022	4	2022
CEC SSDS BL12 FQT/IV&V 2	2	2024	3	2024
SSWG FY 21	1	2021	1	2021
PSWG FY 21	3	2021	3	2021
SSWG FY 22	1	2022	1	2022
PSWG F Y22	3	2022	3	2022
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

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**Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CEC Cyber SBR 20.3	1	2021	1	2021
CEC Cyber Inc 21.1/2	3	2021	3	2021
CEC Cyber Inc 21.3/4	1	2022	1	2022
CEC Cyber Inc 22.1/2	3	2022	3	2022
CEC Cyber Inc 22.3/4	1	2023	1	2023
CEC Cyber Inc 23.1/2	3	2023	3	2023
CEC Cyber Inc 23.3/4	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
CEC Cyber Inc 26.3/4	1	2027	1	2027
CEC Cyber Inc 27.1/2	3	2027	3	2027
CEC Competitive Production (Current)	1	2021	4	2023
RFP Release-CEC Future Competitive Production	3	2021	3	2021
CEC Future Competitive Production	4	2022	1	2026
CEC SDP-S Competitive Production	1	2021	1	2023
CEC DA/ES Follow-On Competitive	1	2021	4	2024
Plannar Antenna Array Assembly (PAAA) Production	1	2021	1	2025
NIFC-CA At Sea Event-7	4	2021	4	2021
NIFC-CA LFT-7 Event	3	2021	3	2021
NIFC-CA LFT-8 Event	1	2022	1	2022
OT-IIF Supersonic Trackex (SS TRX)	3	2023	3	2023
DT-D2 CEC USG-2B on CVN 78	1	2021	2	2022

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**Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 2039 / <i>COOP Engagement</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
DT CEC USG-3B on DSSC 5	3	2023	4	2023
OT-D2 CEC USG-2B on CVN 78	2	2022	3	2023
DT-D3-CEC USG-2B on DDG 1000	1	2021	3	2022
OT-D3 USG-2B on DDG 1000	4	2022	3	2023
CEC TEMP Rev 6 Change 1	3	2022	3	2022
DT-D4 AWS 9.2.1/9.2.2	1	2021	3	2022
OT-D4 AWS 9.2.1/9.2.2	4	2022	4	2023
BLKII DT/OT-B1 CG3	3	2023	4	2025
BLKII DT/OT-B2 CG4/CG5	4	2024	4	2027

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>				<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3240: <i>CEC Increment II</i>	17.706	37.742	71.377	71.753	-	71.753	72.529	45.671	37.676	37.986	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 582												
<b>A. Mission Description and Budget Item Justification</b>												
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>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	
<b>Title:</b> CEC FAR-TERM INTEROPERABILITY IMPROVEMENT PROJECT (FTIIP)							6.408	5.865	0.409	0.000	0.409	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2022 Plans:</b> Continue integration coordination with Aegis, SSDS, E-2D, and USMC CTN programs. Continue software design / development for CEC integration with Mode-S, ADS-B, AIS, and EW Sensors.												
<b>FY 2023 Base Plans:</b> Begin land based testing for Mode-S, ADS-B, AIS and EW Sensors.												
<b>FY 2023 OCO Plans:</b> N/A												
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease is due to transition from tactical software development in FY22 to land based testing in FY23.												
<b>Title:</b> NIFC HYPERSONIC							5.633	6.442	5.308	0.000	5.308	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2022 Plans:</b> 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												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy			<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>			
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
<b>(hypersonics). Validate NIFC Hypersonics system network performance requirements to support system hardware improvements.</b>					
<b><i>FY 2023 Base Plans:</i></b> 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.					
<b><i>FY 2023 OCO Plans:</i></b> N/A					
<b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Decrease is due to completion of systems engineering design and focus on software development efforts in FY 2023.					
<b><i>Title:</i></b> CRYPTO MODERNIZATION					
<b><i>Articles:</i></b>					
	7.112	9.960	10.429	0.000	10.429
	-	-	-	-	-
<b><i>FY 2022 Plans:</i></b> 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.					
<b><i>FY 2023 Base Plans:</i></b> 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.					
<b><i>FY 2023 OCO Plans:</i></b> N/A					
<b><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i></b> Increase from FY22 to FY23 due to minor pricing differences.					
<b><i>Title:</i></b> NIFC Passive					
	13.807	12.482	9.290	0.000	9.290

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> 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><b>FY 2023 Base Plans:</b> 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><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease due to transition from development activities in FY22 to system integration and test activities in FY23.</p>	-	-	-	-	-
<p><b>Title:</b> FIRECAPE</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> PEO IWS 6.0 is the transitioning program office and will begin to transition of machine learning into CEC starting in FY22, with the initial development of interfaces to provide CEC's common track data (number, kinematics, and ID), information on local and remote platform locations and other auxiliary information needed by algorithms.</p> <p><b>FY 2023 Base Plans:</b> Finalize FY22 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> <p><b>FY 2023 OCO Plans:</b></p>	0.000 -	1.836 -	4.422 -	0.000 -	4.422 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy				<b>Date:</b> April 2022	
<b>Appropriation/Budget Activity</b> 1319 / 7		<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>		<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease is due to rephasing of efforts to FY24 - FY25.					
<b>Title:</b> Communications-as-a-Service (CaaS)					
<b>Articles:</b>					
	4.782	19.557	20.424	0.000	20.424
	-	-	-	-	-
<b>FY 2022 Plans:</b> Continue Communications-as-a-Service (CaaS) robust systems engineering in conjunction with shipboard, airborne, and landbased combat systems, as well as Tactical Data Link (TDL) owners. Conduct System Functional Review (SFR). Continue maturation of Model Based System Engineering (MBSE) SysML model and begin implementation of CaaS. Commence Communications-as-a-Service (CaaS) Agile SW development and maturation. Conduct preparations for C2P, Common Data Link (CDL), Tactical Targeting Networking Technology (TTNT), and Cooperative Engagement Capability (CEC) integration testing. Conduct preparations for element certification including cyber certification. Conduct At-Sea Test.					
<b>FY 2023 Base Plans:</b> Continue Communications-as-a-Service (CaaS) robust systems engineering in conjunction with shipboard, airborne, and landbased combat systems, as well as Tactical Data Link (TDL) owners. Continue maturation of Model Based System Engineering (MBSE) SysML model and implementation of CaaS. Continue Communications-as-a-Service (CaaS) Agile SW development and maturation. Continue preparations for C2P, Common Data Link (CDL), Tactical Targeting Networking Technology (TTNT), and Cooperative Engagement Capability (CEC) integration testing. Continue preparations for element certification including cyber certification.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase from FY22 to FY23 due to minor pricing differences.					
<b>Title:</b> DIGITAL WARFARE TACTICAL NETWORKING INITIATIVE IMPLEMENTATION					
<b>Articles:</b>					
	0.000	6.433	3.339	0.000	3.339
	-	-	-	-	-
<b>FY 2022 Plans:</b> Continue leading a Cross Functional Team (CFT) with participation from key naval tactical network organizations and fleet representation to conduct systems engineering and experimentation for improving tactical data					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy				<b>Date:</b> April 2022	
<b>Appropriation/Budget Activity</b> 1319 / 7		<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>		<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
dissemination to support further development of Integrated Fires Control concepts. Continue preparation and execute FY22 Demonstration.					
<b>FY 2023 Base Plans:</b> Continue leading a Cross Functional Team (CFT) with participation from key naval tactical network organizations and fleet representation to conduct systems engineering and experimentation for improving tactical data dissemination to support further development of Integrated Fires Control concepts.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease from FY22 to FY23 is due to completion of FY22 Demonstration.					
<b>Title:</b> ELEKTRA					
<b>Articles:</b>					
	0.000	8.802	18.132	0.000	18.132
	-	-	-	-	-
<b>FY 2022 Plans:</b> 50% of FY22 planned effort deferred to FY23 and beyond. Optimize algorithms across multiple platforms with graceful degradation. Synchronize tactical data from heterogeneous distributed assets that allows for rapid iteration. Develop sensor-effect-target assignment recommendations for all kill chains. Leverage S&T algorithm designs to develop human-machine supervisory control interfaces for conducting integrated air and missile defense (IAMD) in an integrated fires environment.					
<b>FY 2023 Base Plans:</b> Continue to optimize algorithms across multiple platforms with graceful degradation. Synchronize tactical data from heterogeneous distributed assets that allows for rapid iteration. Continue development of sensor-effect-target assignment recommendations for all kill chains. Leverage S&T algorithm designs to develop human-machine supervisory control interfaces for conducting integrated air and missile defense (IAMD) in an integrated fires environment.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase from FY22 to FY23 due to deferral of FY22 plans to FY23 and beyond.					
<b>Accomplishments/Planned Programs Subtotals</b>					
	37.742	71.377	71.753	0.000	71.753

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 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). 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.  
Communications-as-a-Service Maturation - Contract sole source awarded on 4 June 2021

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2021</b>		<b>FY 2022</b>		<b>FY 2023 Base</b>		<b>FY 2023 OCO</b>		<b>FY 2023 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
CRYPTO Modernization	Various	Various : Not Specified	5.523	7.112	Oct 2020	9.960	Oct 2021	10.429	Oct 2022	-		10.429	Continuing	Continuing	Continuing
FTIIP	Various	Various : Not Specified	6.341	6.408	Oct 2020	5.865	Oct 2021	0.409	Oct 2022	-		0.409	6.400	25.423	-
NIFC Hypersonic	Various	Various : Not Specified	1.557	5.633	Oct 2020	6.442	Oct 2021	5.308	Oct 2022	-		5.308	Continuing	Continuing	Continuing
NIFC Passive	Various	Various : Not Specified	4.285	13.807	Oct 2020	12.482	Oct 2021	9.290	Oct 2022	-		9.290	Continuing	Continuing	Continuing
FIRECAPE	Various	Various : Not Specified	0.000	0.000	Oct 2020	1.836	Oct 2021	4.422	Oct 2022	-		4.422	Continuing	Continuing	Continuing
CaaS	Various	Various : Not Specified	0.000	4.782	Oct 2020	19.557	Oct 2021	20.424	Oct 2022	-		20.424	19.700	64.463	-
DWO	Various	Various : Not Specified	0.000	0.000		6.433	Oct 2021	3.339	Oct 2022	-		3.339	0.000	9.772	-
ELEKTRA	Various	Various : Not Specified	0.000	0.000		8.802	Oct 2021	18.132	Oct 2022	-		18.132	0.000	26.934	-
<b>Subtotal</b>			17.706	37.742		71.377		71.753		-		71.753	Continuing	Continuing	N/A
<b>Project Cost Totals</b>			17.706	37.742		71.377		71.753		-		71.753	Continuing	Continuing	N/A

**Remarks**



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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2023 Navy</b>		<b>Date: April 2022</b>
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3240</b>				
MS C	4	2023	4	2023
SFR	1	2021	1	2021
IOC	4	2024	4	2024
FOC	4	2026	4	2026
CAPABILITY GROUP 3 DEV & TEST 1	1	2022	1	2023
CAPABILITY GROUP 3 DEV & TEST 2	1	2023	1	2024
CEC FTIIP SBR 20.3	1	2021	3	2021
CEC FTIIP Incr 21.1/2 SETR	3	2021	3	2021
CEC FTIIP Incr 21.3/4 SETR	1	2022	1	2022
CEC FTIIP Incr 22.1/2 SETR	3	2022	3	2022
CEC FTIIP Incr 22.3/4 SETR	1	2023	1	2023
CEC FTIIP Incr 23.1/2 SETR	3	2023	3	2023
NIFC Passive SBR 20.3	1	2021	1	2021
NIFC Passive Incr 21.1/2 SETR	3	2021	3	2021
NIFC Passive Incr 21.3/4 SETR	1	2022	1	2022
NIFC Passive Incr 22.1/2 SETR	3	2022	3	2022
NIFC Passive Incr 22.3/4 SETR	1	2023	1	2023
NIFC Passive Incr 23.1/2 SETR	3	2023	3	2023
NIFC Passive Incr 23.3/4 SETR	1	2024	1	2024
NIFC Passive Incr 24.1/2 SETR	3	2024	3	2024
NIFC Passive Incr 24.3/4 SETR	1	2025	1	2025

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
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 SBR 20.3	1	2021	1	2021
CEC NIFC Hypersonic Incr 21.1/2 SETR	3	2021	3	2021
CEC NIFC Hypersonic Incr 21.3/4 SETR	1	2022	1	2022
CEC NIFC Hypersonic Incr 22.1/2 SETR	3	2022	3	2022
CEC NIFC Hypersonic Incr 22.3/4 SETR	1	2023	1	2023
CEC NIFC Hypersonic Incr 23.1/2 SETR	3	2023	3	2023
CEC NIFC Hypersonic Incr 23.3/4 SETR	1	2024	1	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 SBR 21.3	1	2022	1	2022
CEC FIRECAPE Incr 22.1/2 SETR	3	2022	3	2022
CEC FIRECAPE Incr 22.3/4 SETR	1	2023	1	2023
CEC FIRECAPE Incr 23.1/2 SETR	3	2023	3	2023
CEC FIRECAPE Incr 23.3/4 SETR	1	2024	1	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 21.1/2 SETR	3	2021	3	2021
CEC CIIF CaaS FNC Incr 21.3/4 SETR	1	2022	1	2022
CEC CIIF CaaS FNC Incr 22.1/2 SETR	3	2022	3	2022
CEC CIIF CaaS FNC Incr 22.3/4 SETR	1	2023	1	2023

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0607658N / <i>Cooperative Engagement Capability</i>	<b>Project (Number/Name)</b> 3240 / <i>CEC Increment II</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CEC CIIF CaaS FNC Incr 23.1/2 SETR	3	2023	3	2023
CEC CIIF CaaS FNC Incr 23.3/4 SETR	1	2024	1	2024
CEC CIIF CaaS FNC Incr 24.1/2 SETR	3	2024	3	2024
CEC ELEKTRA SRR	3	2022	3	2022
CEC ELEKTRA SFR	2	2023	2	2023
CEC ELEKTRA Incr 23.1/2 SETR	3	2023	3	2023
CEC ELEKTRA Incr 23.3/4 SETR	1	2024	1	2024
CEC ELEKTRA Incr 24.1/2 SETR	3	2024	3	2024
DWO IPR 4	3	2021	3	2021
DWO DEMO	1	2022	1	2022
CEC BLK II TEMP	1	2023	1	2023
CEC Signal Data Processor (SDP) - Next	3	2021	3	2022
CEC Comms and Interoperability for IF (CIIF) Comms as a Service NFC Develop	3	2021	3	2022