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

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</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	941.369	152.186	158.426	170.080	-	170.080	167.042	157.070	148.203	151.104	Continuing	Continuing
2178: <i>QRCC</i>	857.115	139.010	146.699	154.184	-	154.184	151.788	144.084	135.674	138.327	Continuing	Continuing
3172: <i>Joint Non-Lethal Weapons</i>	28.672	3.790	3.580	3.131	-	3.131	3.171	3.227	3.286	3.354	Continuing	Continuing
3358: <i>SSDS Training Improvement Program</i>	55.582	9.386	8.147	12.765	-	12.765	12.083	9.759	9.243	9.423	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

A. Mission Description and Budget Item Justification

This program element provides Aircraft Carriers and Amphibious Class ships Ship Self Defense System (SSDS) MK 2 Combat System upgrades and integrates new equipment and systems to pace the threat and capture advances in technology. Examples of captured advanced technologies are: advanced information assurance and cyber defense; Fire Control Loop Improvement Project (FCLIP); Identification Friend or Foe (IFF) Mode 5 to include Far-Term Interoperability Improvement Project (FTIIP); and other command and control systems, advanced sensors, and weapon integration, all of which require corresponding SSDS MK 2 changes. The program element also includes the SSDS integrated Combat System project for embedded shipboard training, Common Aviation Command and Control System Afloat (CAC2S Afloat) integration, and the Non-Lethal weapons project in support of anti- terrorism/force protection missions.

Quick Reaction Combat Capability (QRCC) project (PU 2178) - implements an evolutionary acquisition of improved ship self-defense capabilities against Anti-Ship Cruise Missiles (ASCMs) and improved multi-warfare capabilities for Aircraft carriers and Amphibious Class ships. SSDS MK 2 integrates a diverse set of fire control loop sensors and weapons (SPY-6(V)2, SPY-6(V)3, SLQ-32(V)6 SEWIP, RAM Block 2A/2B, ESSM Block 2, CIWS) and C4I systems (CANES) for each ship class (CVN68/78, LHA6, LHD1, LPD17, and LSD 41/49). SSDS MK 2 provides combat direction, and joint interoperability via the Cooperative Engagement Capability (CEC) Increment 1 and 2 and Tactical Digital Information Link (TADIL)-J/Link 16. System design emphasizes commonality and a single source software library that are major mechanisms for cost control and avoidances. SSDS uses a physically distributed, open system architecture computer network consisting of common hardware such as the Common Processor System (CPS), the Common Display System (CDS) and the common Computing Infrastructure configuration. SSDS MK 2 integrates new combat system war-fighting capabilities and improvements, as well as DoD and Navy-mandated enhanced cybersecurity capabilities via incremental capability packages and computing infrastructure (previously Technology Insertion (TI)) improvement deliveries. Capabilities beyond SSDS Build 12 will begin to transition to development to by third party software developers and a common Software construct. PU 2178 efforts are divided into two major functional areas: SSDS Product Development/Combat Systems Integration, and Test and Evaluation/Certification.

Joint Non-Lethal Weapons (PU 3172) - provides a long range laser warning and dazzle system, maritime vessel stopper (MVS) system, and combined effects (light, laser, and sound) system for use in the maritime environment. Optical warning and distraction has been identified by the services as a possible technology solution to mitigate and/or address several known joint nonlethal capability gaps.

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Visual Augmentation Systems (VAS) supports research, development, and testing of material solutions for VAS capability gaps encountered during missions in combat zones. Expeditionary force lacks the ability to detect and recognize potential threat craft at the maximum possible range and at the earliest time in all-weather environments during day and night. In addition, the warfighter needs the ability to record both audio/video encounters and incidents for after action reporting

SSDS Training Improvement Program (PU 3358) - provides enhancements and upgrades to the SSDS Total Ship Training Capability (TSTC) components within the combat system, combat system elements, Battle-Force Tactical Training (BFTT), and Advanced Training Domain (ATD), to address needs for increased training capability and functionality in conjunction with SSDS MK 2 capability improvements, IFF Mode 5 (to include FTIIP), Task Force Cyber Awakening (TFCA) Boundary Defense Capability (BDC), and Technical Insertion efforts under PU 2178 (QRCC). These enhancements will address current and future training requirements by implementing new functionality to enable the individual warfighter, through distributed battle group events, to engage in more complex training scenarios to support fleet required training certification events. Capability Development and integration are related to Self Defense, Underwater, Surface, and other warfare areas. Capability enhancements and upgrades include development of re-useable common components that can be leveraged by other combat systems, and/or integration of re-usable common components developed by the TSTC/BFTT Program and AEGIS Advanced Training Domain (ATD)/Total Ship Training Capability (TSTC) projects to meet AEGIS combat system training requirements. TSTC continues to integrate and update, as new tactical capabilities are being introduced, to enable crew operator proficiency training for basic and sustainment level training events, through distributed strike group certification, fleet synthetic training (FST) events, and including COMPTUEX FST at sea integration into a Live, Virtual and Constructive (LVC) environment. Continued development is required to integrate new capabilities and interfaces to provide training for SSDS combat system capability upgrades, and to address the Fleet's LVC Fleet Training Wholeness initiative. Additionally, modernization is needed to support the DoD Training Transformation Plan, the Chief of Naval Operations Fleet Response Plan and Commander United States Fleet Forces Command Fleet Readiness Training Plan.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	156.426	158.426	154.086	-	154.086
Current President's Budget	152.186	158.426	170.080	-	170.080
Total Adjustments	-4.240	0.000	15.994	-	15.994
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.002	0.000			
• SBIR/STTR Transfer	-4.238	0.000			
• Program Adjustments	0.000	0.000	15.705	-	15.705
• Rate/Misc Adjustments	0.000	0.000	0.289	-	0.289

**Change Summary Explanation**

FY2024 to FY2025 Funding Changes by PU:

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

**Appropriation/Budget Activity**  
1319: *Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)*

**R-1 Program Element (Number/Name)**  
PE 0604755N / *Ship Self Def (Detect & Cntrl)*

PU 2178: Increase of +7.485M from FY2024 to FY2025 provides for the ramped up and increased efforts associated with transition to Common Computing infrastructure and Common Software construct development efforts and Self Defense Test Ship (SDTS) for Test and Evaluation Master Plan (TEIN 1910) efforts in support of SSDS Baseline 12 Platforms. As well as the CAC2S Afloat design, development, integration, test, and certification efforts for the Shipboard C5I efforts

PU 3172: FY2025 Decrease of \$0.449M due to reduction of test and evaluation efforts associated with LROI production. Scheduled completion of MVS Deployment and Synthetic Material packaging delayed one year due to the increased time required to produce synthetic slime required for developmental testing.

PU 3358: Increase of 4.618M from FY24 to FY25 to develop and integrate LVC capabilities, required for crew and strike group training deployment certifications. Development of the SSDS variant of the Surface Combat System Training Environment (SCSTE) to enable rapid delivery of SSDS training capabilities to the training centers.

The FY 2024/2025 PU 2178 and PU 3358 Program Schedule R4 changes reflect the completion of SSDS Build Testing for SSDS MK2 Build 12-CP3, EPIC Development, SSDS MK2 IPR 9-11, PI 9-12, SSDS MK2 Build Test CP2 FSIT & FQT, Cyber Security Testing CTT #2. It reflects CP4 schedule being extended due to development delays and identification of additional TRs that need to be fixed. This also delayed the CP5 and CP6 development schedules and the test events.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>				<b>Project (Number/Name)</b> 2178 / QRCC			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2178: QRCC	857.115	139.010	146.699	154.184	-	154.184	151.788	144.084	135.674	138.327	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

A. Mission Description and Budget Item Justification

The QRCC project (PU 2178) implements an evolutionary acquisition of improved ship self-defense capabilities against Anti-Ship Cruise Missiles (ASCMs), and improved multi-warfare capabilities, for Aircraft Carriers and Amphibious Class ships. SSDS MK 2 integrates a diverse set of fire control loop sensors and weapons and C4I systems for each ship class (CVN68/78, LHA6, LHD1, LPD17, and LSD41/49). SSDS MK 2 provides combat direction, and joint interoperability via the Cooperative Engagement Capability (CEC) and Tactical Digital Information Link (TADIL)-J/Link 16. System design emphasizes commonality and a single source software library that are major mechanisms for cost control and avoidances. SSDS uses a physically distributed, open system architecture computer network consisting of common hardware such as the CPS/CDS and common Computing Infrastructure. SSDS MK 2 integrates new combat system war-fighting capabilities and improvements via incremental capability packages and computing infrastructure (previously Technology Insertion) improvement deliveries. PU 2178 efforts are divided into two major functional areas: SSDS Product Development/Combat Systems Integration, and Test and Evaluation/Certification.

SSDS Product Development encompasses systems engineering efforts, technology and capability insertion/integration, and cyber-security, including the development and integration of SSDS Build 10 with the required Technology Insertion TI12/12H computing and display configuration and the development and integration of SSDS Build 12 with the required TI16 computing and display configuration. SSDS Product Development will provide warfighter upgrades including implementation of common software components for System Track Management; integration of CPS and CDS; expansion of SSDS MK 2 Local Area Network (LAN) to a Combat System LAN; integration of new Combat System/C4I elements (SPY-6(V)2, SPY-6(V)3, SLQ-32(V)6 SEWIP, RAM Block 2A/2B, ESSM Block 2, CIWS, and CANES); implementation of shared, inheritable CS-level cybersecurity capabilities and Total Ship Training Capability. Capabilities beyond SSDS Build 12 will begin to transition to development by third party software developers and a Common Software construct.

SSDS Build 10 is fielded on CVN 78, CVN 72, LHD 2, LSD 46 and LHD 6. To improve efficiency and reduce SW build proliferation, the SSDS design is migrating an initial release of Build 12 with Advanced Training Domain capability to the TI-16 hardware configuration for initial installation on the CVN 73. SSDS Build 12 development will continue with additional releases to implement SSDS improvements to integrate the SPY-6 variants, ESSM Block 2, SEWIP Softkill Coordination Subsystem (SKCS) and Global Positioning System (GPS) based Positioning, Navigation, and Timing Service (GPNTS) and includes system engineering, critical experiments, software development, operating environment, cyber-security software, hardware/software integration, factory qualification testing, land-based engineering testing, system/software Test, Analyze, and Fix (TAAF) effort in support of CS, logistics products and ashore training course development. FY 2023/2024 includes continuing ongoing transition to production for the next SSDS hardware configuration, establishing a Common Computing Infrastructure allowing for targeted obsolescence and computing scaling upgrades vice wholesale modernization for ships so equipped. Capability development beyond SSDS Build 12 begins to explore utilization of a Common Software construct for development activities and scales with development capacity availability.

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<p>Cybersecurity, initiatives under PU 2178 will provide the SSDS MK 2 Combat System (CS) layered protect and detect functionality and will introduce critical response functionality to respond to and recover from cyber-attacks. SSDS Cybersecurity is a phased multi-year effort to define, develop, and integrate DoD and Navy mandated enterprise Combat System cybersecurity solutions. Continuing ongoing efforts in FY 2024, SSDS is collaborating to establish enterprise cyber accreditation processes for continuous and persistent certifications of hardware and software developed within a common software development environment. These solutions enhance the cybersecurity framework pillars of Identify, Protect, React, and Restore and expand force level cyber defense capabilities for the Carrier and Amphibious Fleet against actions by sophisticated adversaries.</p> <p>System engineering efforts for Joint Strike Fighter (JSF) F35B&amp;C integration Onboard LHA, LHD and CVN Class ships will provide improved F35 interoperability via Link 16 and integration of the Target Package Generator (TPG), a NAVAIR application. Systems engineering efforts will also provide improved land domain command and control for the Amphibious Readiness Group/Marine Air Ground Task Force (ARG/MAGTF) commanders and staffs through integration of USMC Common Aviation Command and Control System (CAC2S) program of record with LHA/LHD CEC and C5I systems. CAC2S Afloat also provides access to Variable Message Format (VMF) communications network and provides both Maritime and Land Situational Awareness for the ARG/MAGTF commanders and Ship Self Defense System operators.</p> <p>Combat System Integration under PU 2178 encompasses Combat System (CS) System-of-Systems modeling and simulation, system analysis/engineering (including Model-Based System Engineering), and system/software development for integration of sensors, weapons and C4I systems with SSDS MK 2 in Aircraft Carrier and Amphibious Class Ships. It also provides the system of systems engineering and development/integration of continued fire control loop improvements beyond FCLIP Phase 2 for tracking, weapon scheduling and engagement control with ESSM Block 2 missile; SEWIP Block 2 Soft kill Coordination Subsystem (SKCS), along with additional capability integration for GPNTS, and RAM Block 2B. (Integration of SEWIP Block 3 Electronic Attack has been deferred due to deferral of SEWIP Block 3 fielding to CVNs.)</p> <p>FTIIP is the second phase of the corrective action plan for the resolution of the strike group interoperability issues. FTIIP includes implementation of Tactical Data Link (TADIL) IFF Mode 5 identification capabilities, F/A-18 Digital Air Control (Phase 1) in support of F/A-18 and F-35 Joint Strike Fighter initial deployment, integration of the Shipboard Gridlock System/ Automatic Correlation (SGS/AC) system into the SSDS MK2 TI-16 configuration, and implementation of other high priority software.</p> <p>CAC2S Afloat-CEC integration provides capability to directly network with F-35, F/A-18 E/F, E/A-18G (and other joint tactical aircraft) and to downlink aircraft track and target data for enhanced command and control and force mission execution. It also provides a means to provide realtime aircraft mission status (weapons deployment, battle damage assessment, mission status, flight data and activity, communication channels, fuel state, time on station) and execution information at multiple locations onboard all networked ships and shore sites for force coordination of mission activity and coordination of remote fires for over the horizon (OTH) weapons. Ultimately, this integration effort will enable the ARG/MAGTF the ability to properly execute expeditionary advanced base operation and operate in a contested littoral environment. CAC2S Afloat integration encompasses system analysis/engineering, and system/software development for integration of multiple shipboard C5I system interfaces to include interfaces to GCCS-M, DCGS-N, JADOCs, TBMCS, SSDS, CEC, Minotaur FoS/MTC-A, and the OTH Missile Launching System (OTH MLS).</p> <p>Test and Evaluation/Certification under PU 2178 encompasses SSDS MK 2 Developmental Test and Evaluation (DT&amp;E) providing for comprehensive testing and certification of the integrated CS for the CVN 68, CVN 78, LPD 17, LHD1, LHA 6 and LSD41/49 ship classes. This includes Land-Based testing at Wallops Island and At-Sea testing for the lead ships for the new CS configurations, and Live Fire testing on the Self-Defense Test Ship (SDTS) and land-based and shipboard cyber testing.</p>		

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The DT&E encompasses test planning, preparation, test conduct, data collection and analysis, and resolution and verification of deficiency corrections. The SSDS MK 2 T&E/Certification supports Combat System certification, the SSDS Test and Evaluation Master Plan (TEMP) execution and the Air Warfare Ship Self Defense CAPSTONE Enterprise TEMP execution which includes continuation of DT and FOT&E events for the CVN 78 SSDS MK 2 Mod 6C configuration with the DBR, SEWIP Block 2 ES, ESSM Block 1 with JUWL up-link, and RAM Block 2.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p><b>Title:</b> SSDS MK2 Product Development/Combat Systems Integration</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2024 Plans:</b> For Build 12+</p> <ul style="list-style-type: none"> <li>- Continue systems engineering, design, and qualification of common computing infrastructure components/ designs supporting SSDS platforms.</li> <li>- Continue systems engineering efforts for the following capability insertions, to include requirements development/updates, use cases, trade studies and conduct SETR events as required:                             <ul style="list-style-type: none"> <li>+ CEC Increment 2</li> <li>+ Electrical Optical/Infrared generic (EO/IR) sensor adapter/interface</li> <li>+ Netted Track Source adapter/interface</li> <li>+RAM Block 2B</li> <li>+Integration of applicable common software including Battle Decision Aids</li> </ul> </li> <li>- Continue engineering efforts for the following capability insertions, to include requirements development/ updates, use cases, trade studies and conduct SETR events as required:                             <ul style="list-style-type: none"> <li>+Common Display Architecture</li> </ul> </li>   <li>-Continue CAC2S Afloat design, development, integration, test, and certification efforts for the Shipboard C5I interfaces in support of Long-Range Surface Warfare (LRSUW) including OTH MLS/NMESIS, IBS, Minotaur/ MTC-A (two-way interface), DCGS-N, TBMCS-R, JADOCs Next, CEC and AN/PRC-158 direct VMF interface.</li>   <li>-Continue integration/lifecycle engineering efforts in support of the following capability insertions:                             <ul style="list-style-type: none"> <li>+ AN/SPY-6(V)2/3 integration, including CVN 74</li> <li>+ AN/SLQ-32(V)7 (Electronic Warfare Improvement)</li> <li>+ GPNTS/GEDMS</li> </ul> </li> </ul>	115.609	123.111	110.733	0.000	110.733
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
<p>+SSDS containerization</p> <p>-Continue Build 12 Integrated Combat System integration engineering activities.</p> <p>-Provide required Build 12 CP3 and CP 4 TAAF to support CVN 79, CVN 74, LHA 8, LHD 3, LHD 4, LHD 5 and LPD 29, LPD 30, LPD 31 ship installation, test and certification events.</p> <p>-Continue designing, developing and implementing Cybersecurity capability improvements to secure the combat system enclave.</p> <p><b><i>FY 2025 Base Plans:</i></b></p> <p>For Build 12+</p> <ul style="list-style-type: none"> <li>- Continue and fully ramp up efforts for systems engineering, design, and qualification of common computing infrastructure components/designs supporting SSDS platforms.</li> <li>- Continue and fully ramp up systems engineering efforts for the following capability insertions, to include requirements development/updates, use cases, trade studies and conduct SETR events as required:</li> <li>+ CEC Increment 2</li> <li>+ Electrical Optical/Infrared generic (EO/IR) sensor adapter/interface</li> <li>+ Netted Track Source adapter/interface</li> <li>+RAM Block 2B</li> <li>+Integration of applicable common software including Battle Decision Aids</li> <li>- Complete engineering efforts for the following capability insertions, to include requirements development/updates, use cases, trade studies and conduct SETR events as required:</li> <li>+Common Display Architecture</li> </ul> <p>-Continue and fully ramp up CAC2S Afloat design, development, integration, test, and certification efforts for the Shipboard C51 interfaces in support of Long Range Surface Warfare (LRSUW) including OTH MLS/NMESIS, IBS, Minotaur/MTC-A (two-way interface), DCGS-N, TBMCS-R, JADOCs Next, CEC and AN/PRC-158 direct VMF interface.</p> <p>-Continue and fully ramp up integration/lifecycle engineering efforts in support of the following capability insertions:</p> <ul style="list-style-type: none"> <li>+ AN/SPY-6(V) integration</li> </ul>					

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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
+ AN/SLQ-32(V)7 (Electronic Warfare Improvement) + GPNTS/GEDMS +SSDS containerization - Continue and fully ramp up Build 12 Integrated Combat System integration engineering activities. -Provide required Build 12 CP4 and CP5 TAAF to support CVN 74, LHA 8, LHD 3, LHD 4, LHD 5 and LPD 30, LPD 31 ship installation, test and certification events.  -Complete designing, developing and implementing Cybersecurity capability improvements to secure the combat system enclave  <b>FY 2025 OCO Plans:</b> N/A  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding decrease of (-12.378M) from FY2024 to FY2025 will delay key capabilities planned for insertion into CP5 operational software build such as Fire Control Loop Modernization (FCLM), ESSM Block 2 Optimized, SPY-6 improve fire control loop (FCL) and Cyber capabilities.					
<b>Title:</b> SSDS MK2 Development Test & Evaluation  <div style="text-align: right;"><b>Articles:</b></div>	23.401 -	23.588 -	43.451 -	0.000 -	43.451 -
<b>FY 2024 Plans:</b> Continue CSIT, LBDT and begin Sea Based Developmental Test (SBDT) for Test and Evaluation Master Plan (TEIN 1910) in support of SSDS Baseline 12 Platforms. -Conduct BL 12 CP 3 SIEs for LPD 29, CVN 79 and LHA 8 -Conduct BL 12 CP 3 Factory System Integration Test (FSIT) and conduct Formal Qualification Test (FQT) -Conduct BL 12 CP 3 SBDT for LPD 29 -Conduct BL 12 CP 4 SIE for LPD 30, LPD 31, CVN 74, CVN 79, LHD 4 and LHD 5. Cyber T&E in support of SSDS BL 12 Platform -Conduct CVI for BL 12 CP 3 & CP 4 Continue testing for Objective Quality Evidence for SSDS BL 6, SSDS BL 9 and BL 10 CS configurations - Conduct BL 10 CSIT - Conduct BL 9 CSIT					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
-Provide test execution support for CVN 78 Enterprise Lead Ship testing (TEMP 1714 Enterprise Test Event 10) <b><i>FY 2025 Base Plans:</i></b> Continue CSIT and LBDT for Test and Evaluation Master Plan (TEIN 1910) in support of SSDS Baseline 12 Platforms. - Conduct Combat System Integration Testing (CSIT) for LHD 3, LHA 8, CVN 74, LPD 25, LPD 19, LPD 31, LPD 29, and CVN 79 - Land Based Developmental Testing (LBDT) for CVN 79 Cyber T&E in support of SSDS BL 12 Platform - Conduct Adversarial Cybersecurity DT&E (ACD) for BL 12 CP 3 & CP 4 Continue testing for Objective Quality Evidence for SSDS BL 6, SSDS BL 9 and BL 10 CS configurations - Conduct BL 10 CSIT - Conduct BL 9 CSIT Self Defense Test Ship (SDTS) testing for Test and Evaluation Master Plan (TEIN 1910) in support of SSDS Baseline 12 Platforms - Conduct BL 12 CP 3 SBDT for LPD 29 - Conduct Qty 3 BL 12 CP 4 SBDTs for CVN 79 - qty 2 SDTS DT events in CVN 79 configuration - qty 1 SDTS DT event in LPD 29 configuration - qty 1 SDTS DT event in LHA 8 configuration - Sea Based DT (SBDT) on CVN 79 and LPD 29 <b><i>FY 2025 OCO Plans:</i></b> N/A <b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b> The FY2024 to FY2025 increase +19.863 to T&E requirements supports efforts that provide Ship Based Development Test (SBDT) and Self Defense Test Ship (SDTS) Development Test for SSDS BL12. Required for platform level Enterprise T&E SDTS Operational Test Campaign ISO TEMP 1910 per Enterprise T&E NCB of July 2021.					
<b>Accomplishments/Planned Programs Subtotals</b>	139.010	146.699	154.184	0.000	154.184

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPN/ BLI 5231 (SSDS): <i>SSDS</i>	88.299	102.729	104.207	-	104.207	100.866	105.050	107.502	109.617	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

D. Acquisition Strategy  
A sole source follow-on Cost Plus Incentive Fee (CPIF) Level of Effort (LOE) contract, N00024-14-C-5128, was awarded 18 December 2013 with a Period of Performance (PoP) from FY14-FY17 for the development, test, certification of SSDS MK2 (ACB 12/TI-12) for CVN78, CVN72, LHD2, and the software migration of ACB 12 to TI-12H/TI-16 for CVN 68, LHD 1, LPD 17 ship classes. This contract was extended to June 2020 and an additional extension to Q2 FY21 is planned to provide continued support of the SSDS MK 2 to complete the contract scope requirements for CVN and Amphibious ship Modernization ACB 12 on TI-12 and TI-12H (SSDS Software Build 10).

The competitive contract for the SSDS Combat System Engineering Agent (CSEA)/Software Design Agent (SDA) was awarded in FY 2019 with a ten (10)-year PoP from FY19-FY29. This contract provides support for the Aircraft Carrier and Amphibious Ship Class SSDS Combat System (CS) element development of SSDS Software Build 12 and follow-on technology upgrades based on the evolution of the SSDS MK 2 Combat Systems Build 10 (ACB 12/TI-12/TI-12H). The current requirements include systems and software engineering support, development of engineering products to support combat system integration, configuration control, developmental test/operational test (DT/OT) support, training and logistics support, and field technical support for the SSDS ICS.

For SSDS MK2 TI-12H/TI-16 hardware, the SSDS program uses competitive build-to-specification production contracts, and leverages common enterprise COTS products for computing, storage, display, network, conversion, and cyber security. SSDS Common Computing Infrastructure will utilize an Other Transaction Agreement vehicle to prototype and transition to production equipment for ship installations.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0604755N / Ship Self Def (Detect & Cntrl)				2178 / QRCC							
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
PD - Build 12//TI-16 - SW Dev CSEA	C/CPIF	CSEA Contract : Moorestown, NJ	48.002	21.535	Dec 2022	30.313	Dec 2023	29.899	Dec 2024	-		29.899	0.000	129.749	-
PD - Build 12//TI-16 - SE Spt	C/CPFF	JHU/APL : Laurel, MD	7.132	1.831	Dec 2022	2.302	Dec 2023	1.822	Dec 2024	-		1.822	Continuing	Continuing	Continuing
PD - Build 12//TI-16/Trng Course/Dev	WR	NSWC PHD : Pt Hueneme, CA	2.482	0.253	Nov 2022	0.318	Nov 2023	0.320	Nov 2024	-		0.320	Continuing	Continuing	Continuing
PD - Build 12//TI-16/ Metrics/On Site spt	WR	NSWC Corona : Corona, CA	1.089	0.282	Nov 2022	0.354	Nov 2023	0.356	Nov 2024	-		0.356	Continuing	Continuing	Continuing
PD - Build 12//TI-16 - SE spt	WR	NSWC DD : Dahlgren, VA	8.632	2.254	Nov 2022	2.834	Nov 2023	2.148	Nov 2024	-		2.148	Continuing	Continuing	Continuing
PD - Build 12//TI-16-SE spt	C/CPFF	Gryphon : Washington, DC	2.700	0.704	Nov 2022	0.885	Nov 2023	0.889	Nov 2024	-		0.889	Continuing	Continuing	Continuing
PD - Cyber Resiliency / BDC REQT & ENG	SS/CPFF	JHU/APL : Laurel, MD	15.657	1.972	Nov 2022	2.479	Nov 2023	1.890	Nov 2024	-		1.890	Continuing	Continuing	Continuing
PD - Cyber Resiliency / BDC HW EDM	WR	CDSA DN : Dam Neck, VA	2.182	0.423	Oct 2022	0.532	Oct 2023	0.535	Oct 2024	-		0.535	Continuing	Continuing	Continuing
PD - Cyber Resiliency / BDC ILS	WR	NSWC PHD : Port Hueneme, CA	1.845	0.127	Oct 2022	0.160	Oct 2023	0.161	Oct 2024	-		0.161	Continuing	Continuing	Continuing
PD - Cyber Resiliency / BDC SEIT	C/CPIF	Gryphon/DELTA : Washington DC	3.632	0.563	Nov 2022	0.708	Nov 2023	0.712	Nov 2024	-		0.712	Continuing	Continuing	Continuing
PD - Cyber Resiliency / BDC CSEA	C/CPIF	CSEA Contract : Moorestown NJ	45.525	4.817	Oct 2022	6.055	Oct 2023	4.420	Oct 2024	-		4.420	Continuing	Continuing	Continuing
PD - Cyber Resiliency / BDC CSTK DEVT	C/CPIF	Progeny Systems Corp : Manassas, VA	10.425	0.620	Oct 2022	0.779	Oct 2023	0.783	Oct 2024	-		0.783	Continuing	Continuing	Continuing
PD-Cyber Resiliency / BDC SE	WR	NSWC - DD : Dahlgren, VA	7.888	0.811	Oct 2022	1.020	Oct 2023	1.025	Oct 2024	-		1.025	Continuing	Continuing	Continuing
PD - TI-16TR/TI22 - HW Engineering	C/CPFF	Gryphon : Washington DC	3.782	0.887	Nov 2022	1.115	Nov 2023	1.121	Nov 2024	-		1.121	Continuing	Continuing	Continuing
PD - TI-16TR/TI22 -HW Engineering	WR	NSWC-DD : Dahlgren, VA	30.128	4.084	Nov 2022	5.134	Nov 2023	3.160	Nov 2024	-		3.160	Continuing	Continuing	Continuing
PD - HQ Travel	Various	PEO IWS : Washington DC	1.223	0.113	Nov 2022	0.142	Nov 2023	0.143	Nov 2024	-		0.143	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
1319 / 5				PE 0604755N / Ship Self Def (Detect & Cntrl)						2178 / QRCC					
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
PD - F35B Integration / LHA / LHD	C/CPFF	JHU/APL : Laurel, MD	11.773	0.000	Nov 2022	1.350	Nov 2023	2.357	Nov 2024	-		2.357	Continuing	Continuing	Continuing
PD - F35B Integration / LHA / LHD	WR	NSWC DD : Dahlgren, VA	14.202	0.000	Nov 2022	2.289	Nov 2023	2.525	Nov 2024	-		2.525	Continuing	Continuing	Continuing
PD - F35B Integration / LHA / LHD	C/CPIF	SEI&T : Washington DC	4.596	0.360	Nov 2022	0.453	Nov 2023	3.570	Nov 2024	-		3.570	Continuing	Continuing	Continuing
PD - F35B/C - ICS Link 16 Integration	C/CPFF	JHU/APL : Laurel, MD	4.234	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
PD - F35B Integration / LHA / LHD	TBD	PEO LS : Quantico, VA	13.632	0.914	Nov 2022	2.395	Nov 2023	2.407	Nov 2024	-		2.407	Continuing	Continuing	Continuing
PD - F35B/C - ICS Link 16 Integration	WR	NSWC DD : Dahlgren, VA	5.372	0.704	Nov 2022	0.885	Nov 2023	1.000	Nov 2024	-		1.000	Continuing	Continuing	Continuing
PD - F35B Integration / LHA / LHD	C/CPIF	CSEA : Moorestown NJ	12.017	1.627	Nov 2022	2.045	Nov 2023	2.055	Nov 2024	-		2.055	Continuing	Continuing	Continuing
PD - F35B/C - ICS Link 16 Integration	C/CPIF	SEI&T : Washington DC	1.867	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
PD - F35B Integration / LHA / LHD	TBD	PEO C4I : San Diego, CA	4.685	1.159	Nov 2022	1.457	Nov 2023	2.190	Nov 2024	-		2.190	Continuing	Continuing	Continuing
PD - PM Prod Development	C/CPIF	various : various	48.923	1.859	Nov 2022	2.337	Nov 2023	1.850	Nov 2024	-		1.850	Continuing	Continuing	Continuing
CSI - Build 12 (Less SPY-6 Var) - SE	WR	NSWC DD : Dahlgren, VA	20.895	1.690	Nov 2022	2.124	Nov 2023	2.135	Nov 2024	-		2.135	Continuing	Continuing	Continuing
CSI - Build 12 (Less EASR) - SEI&T	C/CPFF	Gryphon : Washington DC	8.203	0.282	Nov 2022	0.354	Nov 2023	0.356	Nov 2024	-		0.356	Continuing	Continuing	Continuing
CSI - Build 12 (Less SPY-6 Var) - SE	SS/CPFF	JHU/APL : Laurel, MD	18.746	1.830	Nov 2022	2.300	Nov 2023	2.312	Nov 2024	-		2.312	Continuing	Continuing	Continuing
CSI - Build 12 (Less SPY-6 Var) - SE	C/CPIF	CSEA Contract : Moorestown NJ	24.045	2.455	Nov 2022	3.086	Nov 2023	2.300	Nov 2024	-		2.300	Continuing	Continuing	Continuing
CSI - FTIIP - SE	WR	NSWC-DD : Dahlgren, VA	11.574	0.845	Nov 2022	1.062	Nov 2023	0.850	Nov 2024	-		0.850	Continuing	Continuing	Continuing
CSI - FTIIP - SE	WR	CDSA DN : Dam Neck, VA	1.729	0.282	Nov 2022	0.354	Nov 2023	0.356	Nov 2024	-		0.356	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0604755N / Ship Self Def (Detect & Cntrl)				2178 / QRCC							
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
CSI - FTIIP - SE	WR	NSWC PHD : Port Hueneme, CA	2.696	0.563	Nov 2022	0.708	Nov 2023	0.712	Nov 2024	-		0.712	Continuing	Continuing	Continuing
CSI - FTIIP - SEI&T	C/CPFF	Gryphon : Washington DC	7.312	1.049	Nov 2022	1.319	Nov 2023	1.326	Nov 2024	-		1.326	Continuing	Continuing	Continuing
CSI - ICS SE - SEI&T	C/CPFF	Gryphon : Washington DC	10.748	0.704	Nov 2022	0.885	Nov 2023	0.889	Nov 2024	-		0.889	Continuing	Continuing	Continuing
CSI - ICS SE	SS/CPFF	JHU/APL : Laurel, MD	11.503	0.845	Nov 2022	1.062	Nov 2023	0.900	Nov 2024	-		0.900	Continuing	Continuing	Continuing
CSI - SPY-6 Var / ERS SE	C/CPFF	CSEA Contract : Moorestown NJ	20.551	2.983	Nov 2022	3.750	Nov 2023	2.750	Nov 2024	-		2.750	Continuing	Continuing	Continuing
CSI - SPY-6 Var / ERS SE	WR	NSWC PHD : Port Huneme, CA	1.624	0.191	Nov 2022	0.241	Nov 2023	0.242	Nov 2024	-		0.242	Continuing	Continuing	Continuing
CSI - SPY-6 Var / ESS SE	SS/CPFF	JHU/APL : Laurel, MD	8.490	0.320	Nov 2022	0.403	Nov 2023	0.405	Nov 2024	-		0.405	Continuing	Continuing	Continuing
CSI - SPY-6 Var / ESS SE	WR	NSWC DD : Dahlgren, VA	12.657	1.032	Nov 2022	1.297	Nov 2023	1.103	Nov 2024	-		1.103	Continuing	Continuing	Continuing
CSI - SPY-6 Var / ESS / SEI&T	C/CPFF	Gryphon : Washington DC	10.674	0.901	Nov 2022	1.132	Nov 2023	0.900	Nov 2024	-		0.900	0.000	13.607	-
PD - ACB12/TI-16/TI12H - Navy Link Cert/Cross-Domain Sprt	WR	SPAWAR : San Diego, CA	0.711	0.351	Nov 2022	0.441	Nov 2023	0.443	Nov 2024	-		0.443	0.000	1.946	-
PD - F35B/C - ICS LINK 16 Integration	C/CPFF	NAWC China Lake : Ridgecrest, CA	0.000	0.221	Nov 2022	0.278	Nov 2023	0.279	Nov 2024	-		0.279	0.000	0.778	-
CSI - FTIIP - SE	WR	NAWC China Lake : Ridgecrest, CA	0.000	0.138	Oct 2022	0.173	Oct 2023	0.174	Oct 2024	-		0.174	0.000	0.485	-
PD - ICS Development / SW	TBD	TBD Contractor : TBD	0.000	16.560	Nov 2022	10.969	Nov 2023	7.580	Nov 2024	-		7.580	0.000	35.109	-
PD - ICS Development / SW	WR	NSWC DD : Dahlgren, VA	0.000	6.095	Nov 2022	4.038	Nov 2023	3.058	Nov 2024	-		3.058	0.000	13.191	-
PD - ICS Development / SE Spt / MBSE	WR	NSWC DD : Dahlgren, VA	0.000	8.078	Nov 2022	5.351	Nov 2023	4.278	Nov 2024	-		4.278	0.000	17.707	-

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntrl)	<b>Project (Number/Name)</b> 2178 / QRCC
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<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</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>			
PD - ICS Development / SW Ecosystem	WR	NSWC DD : Dahlgren, VA	0.000	8.078	Nov 2022	5.351	Nov 2023	4.278	Nov 2024	-		4.278	0.000	17.707	-
PD - ICS Development & SE Spt	C/CPFF	TBD Contract : TBD	0.000	1.123	Nov 2022	0.744	Nov 2023	0.748	Nov 2024	-		0.748	0.000	2.615	-
PD-Cyber Resiliency (ICS) / SW	TBD	TBD Contract : TBD	0.000	5.520	Nov 2022	3.656	Nov 2023	2.339	Nov 2024	-		2.339	0.000	11.515	-
PD-Cyber Resiliency (ICS) / SW	WR	NSWC DD : Dahlgren, VA	0.000	0.000	Nov 2022	0.000		0.000		-		0.000	0.000	0.000	-
PD-Cyber Resiliency / SE Spt / MBSE	WR	NSWC DD : Dahlgren, VA	0.000	2.787	Nov 2022	1.846	Nov 2023	1.342	Nov 2024	-		1.342	0.000	5.975	-
PD-Cyber Resiliency / SF Ecosystem	WR	NSWC DD : Dahlgren, VA	0.000	2.787	Nov 2022	1.846	Nov 2023	1.340	Nov 2024	-		1.340	0.000	5.973	-
<b>Subtotal</b>			485.783	115.609		123.111		110.733		-		110.733	Continuing	Continuing	N/A

**Remarks**  
Funding decrease of (-12.378M) from FY2024 to FY2025 due to requirements shifting to the out years.

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</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>			
Developmental Test & Evaluation (DT&E)	WR	NSWC PHD : Port Hueneme, CA	132.071	4.081	Nov 2022	4.114	Nov 2023	10.711	Nov 2024	-		10.711	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	SCSC-WI : Wallops Is, VA	106.825	7.858	Nov 2022	7.921	Nov 2023	9.505	Nov 2024	-		9.505	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	SS/CPFF	JHU/APL : Laurel, MD	38.189	1.572	Nov 2022	1.585	Nov 2023	4.902	Nov 2024	-		4.902	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	NSWC Corona : Corona, CA	25.391	1.521	Nov 2022	1.533	Nov 2023	1.840	Nov 2024	-		1.840	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NSWC DD : Dahlgren, VA	52.686	4.567	Nov 2022	4.603	Nov 2023	5.524	Nov 2024	-		5.524	Continuing	Continuing	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2025 Navy</b>											<b>Date: March 2024</b>				
<b>Appropriation/Budget Activity</b> 1319 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntr /)					<b>Project (Number/Name)</b> 2178 / QRCC				

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</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>			
Operational Test & Evaluation (OT&E)	WR	OPTEVFOR : Norfolk, VA	10.538	0.760	Nov 2022	0.766	Nov 2023	0.919	Nov 2024	-		0.919	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPIF	SAIC : Reston, VA	2.950	1.521	Nov 2022	1.533	Nov 2023	1.249	Nov 2024	-		1.249	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPFF	CSEA : Moorestown, NJ	1.500	1.521	Dec 2022	1.533	Dec 2023	1.248	Dec 2024	-		1.248	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NRL : Washington, DC	1.182	0.000		0.000		0.713	Nov 2024	-		0.713	0.000	1.895	-
Developmental Test & Evaluation (DT&E)	WR	Pt Mugu : Pt Mugu, CA	0.000	0.000		0.000		6.840	Nov 2024	-		6.840	0.000	6.840	-
<b>Subtotal</b>			371.332	23.401		23.588		43.451		-		43.451	Continuing	Continuing	N/A

**Remarks**  
 The FY2024 to FY2025 increase (+19.863M) to T&E requirements supports POM approved efforts that provide Ship Based Development Test (SBDT) and Self Defense Test Ship (SDTS) Development Test for SSDS BL12. Required for platform level Enterprise T&E SDTS Operational Test Campaign ISO TEMP 1910 per Enterprise T&E NCB of July 2021.

	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	857.115	139.010	146.699	154.184	-	154.184	Continuing	Continuing	N/A

**Remarks**

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

Date: March 2024

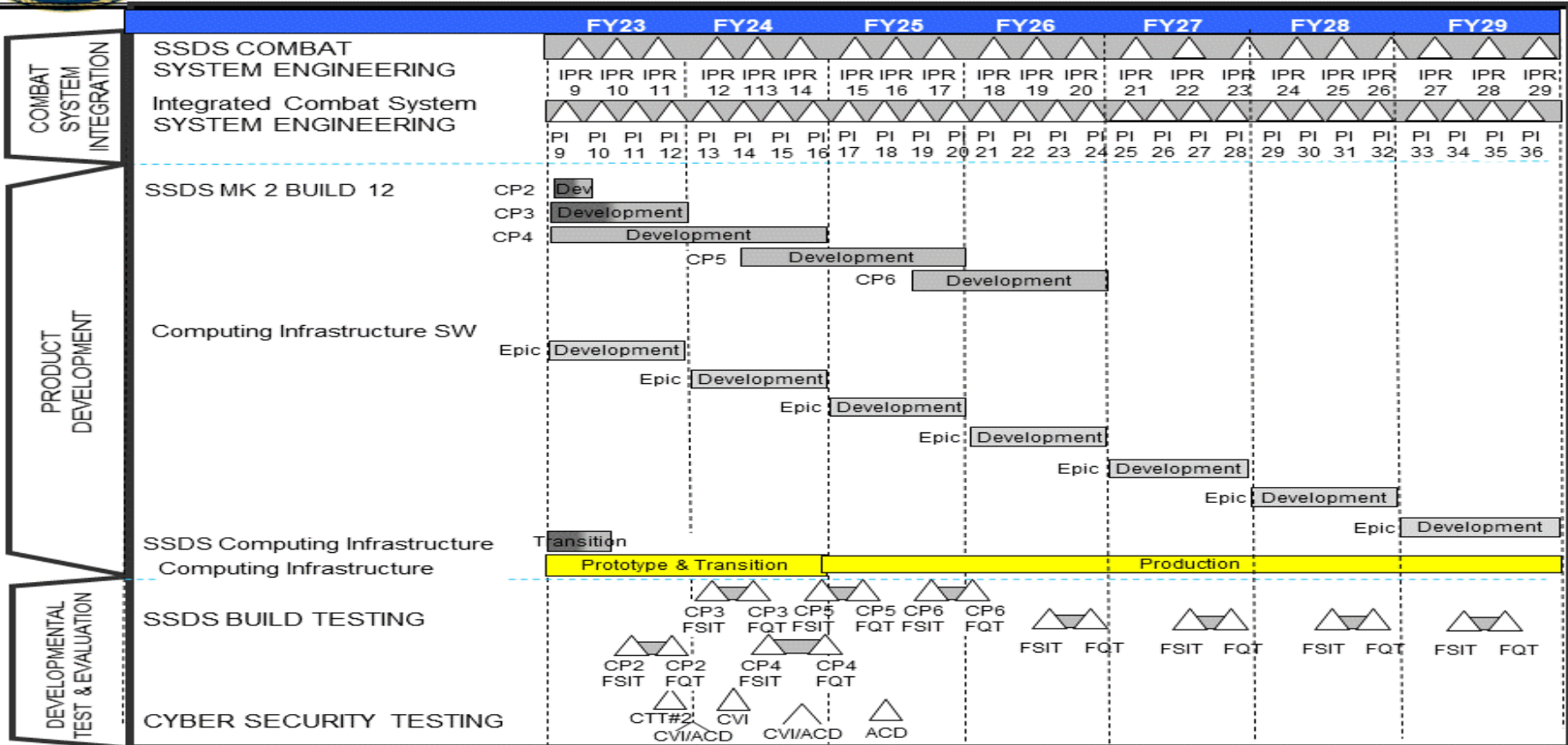
Appropriation/Budget Activity  
1319 / 5

R-1 Program Element (Number/Name)  
PE 0604755N / Ship Self Def (Detect & Cntr  
/)

Project (Number/Name)  
2178 / QRCC



# Ship Self Defense System Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2025 Navy</b>		<b>Date: March 2024</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 2178 / QRCC

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2178</b>				
SSDS MK 2 BUILD 12 - CP 3	1	2023	4	2023
SSDS MK 2 BUILD 12 - CP 4	1	2023	4	2024
COMPUTING INFRASTRUCTURE	1	2023	4	2029
SSDS MK 2 BUILD 12 - CP 5	2	2024	4	2025
* EPIC Development	1	2023	4	2023
SSDS MK 2 - IPR 10	3	2023	3	2023
SSDS MK 2 - IPR 11	4	2023	4	2023
PI 10	2	2023	2	2023
PI 11	3	2023	3	2023
PI 12	4	2023	4	2023
SSDS MK 2 BUILD 12 - CP 6	3	2025	4	2026
SSDS MK 2 BUILD TEST - CP 3 FSIT	1	2024	1	2024
SSDS MK 2 BUILD TEST - CP 3 FQT	3	2024	3	2024
SSDS MK 2 BUILD TEST - CP 4 FSIT	2	2024	2	2024
CYBER SECURITY TESTING - # 2	4	2023	4	2023
SSDS MK 2 BUILD TEST - CP 4 FQT	4	2024	4	2024
# EPIC Development	1	2024	4	2024
SSDS MK 2 - IPR 12	1	2024	1	2024
SSDS MK 2 - IPR 13	3	2024	3	2024
SSDS MK 2 - IPR 14	4	2024	4	2024
PI 13	1	2024	1	2024

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 2178 / QRCC
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
PI 14	2	2024	2	2024
PI 15	3	2024	3	2024
PI 16	4	2024	4	2024
SSDS MK 2 BUILD TEST - CP 5 FSIT	1	2025	1	2025
SSDS MK 2 BUILD TEST - CP 5 FQT	2	2025	2	2025
CYBER SECURITY TESTING - CVI	2	2024	2	2024
CYBER SECURITY TETSTING - CVI/ACD	3	2024	3	2024
EPIC Development *	1	2025	4	2025
SSDS MK 2 - IPR 15	1	2025	1	2025
SSDS MK 2 - IPR 16	3	2025	3	2025
SSDS MK 2 - IPR 17	4	2025	4	2025
PI 17	1	2025	1	2025
PI 18	2	2025	2	2025
PI 19	3	2025	3	2025
PI 20	4	2025	4	2025
SSDS MK 2 BUILD TEST - CP 6 FSIT	3	2025	3	2025
SSDS MK 2 BUILD TEST - CP 6 FQT	4	2025	4	2025
EPIC Development @	1	2026	4	2026
SSDS MK 2 - IPR 18	1	2026	1	2026
SSDS MK 2 - IPR 19	3	2026	3	2026
SSDS MK 2 - IPR 20	4	2026	4	2026
PI 21	1	2026	1	2026
PI 22	2	2026	2	2026
PI 23	3	2026	3	2026
PI 24	4	2026	4	2026

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntr l)</i>	<b>Project (Number/Name)</b> 2178 / QRCC
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SSDS MK 2 BUILD TEST - FSIT	3	2026	3	2026
SSDS MK 2 BUILD TEST - FQT	4	2026	4	2026
+ EPIC Development	1	2027	4	2027
SSDS MK 2 - IPR 21	1	2027	1	2027
SSDS MK 2 - IPR 22	3	2027	3	2027
SSDS MK 2 - IPR 23	4	2027	4	2027
PI 25	1	2027	1	2027
PI 26	2	2027	2	2027
PI 27	3	2027	3	2027
PI 28	4	2027	4	2027
#SSDS MK 2 BUILD TEST -- FSIT	3	2027	3	2027
#SSDS MK 2 BUILD TEST -- FQT	4	2027	4	2027
#EPIC Development	1	2028	4	2028
SSDS MK 2 - IPR 24	1	2028	1	2028
SSDS MK 2 - IPR 25	3	2028	3	2028
SSDS MK 2 - IPR 26	4	2028	4	2028
PI 29	1	2028	1	2028
PI 30	2	2028	2	2028
PI 31	3	2028	3	2028
PI 32	4	2028	4	2028
#SSDS MK 2 BUILD TEST -- FSIT FY28	3	2028	3	2028
#SSDS MK 2 BUILD TEST -- FQT FY28	4	2028	4	2028
EPIC Development	1	2029	4	2029
SSDS MK 2 - IPR 27	1	2029	1	2029
SSDS MK 2 - IPR 28	3	2029	3	2029

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 2178 / QRCC
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SSDS MK 2 - IPR 29	4	2029	4	2029
PI 33	1	2029	1	2029
PI 34	2	2029	2	2029
PI 35	3	2029	3	2029
PI 36	4	2029	4	2029
#SSDS MK 2 BUILD TEST -- FSIT FY29	2	2029	2	2029
#SSDS MK 2 BUILD TEST -- FQT FY29	3	2029	3	2029

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntr l)</i>				<b>Project (Number/Name)</b> 3172 / <i>Joint Non-Lethal Weapons</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3172: <i>Joint Non-Lethal Weapons</i>	28.672	3.790	3.580	3.131	-	3.131	3.171	3.227	3.286	3.354	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Navy Non-Lethal Effects (NNLE) program develops non-lethal weapon systems in support of anti-terrorism/force protection missions. Technologies include, but are not limited to: ocular interrupters, vessel propeller occlusion systems, and acoustic hailing devices. Current efforts are focused on the Long-Range Ocular Interrupter (LROI), Maritime Vessel Stopping (MVS) technologies, and Acoustic Hailing Devices (AHD).

The LROI is intended to provide the U.S. Navy with the capability to deliver a bright light producing a dazzling or glare effect on a closing target to warn and/or suppress potential threats through increasing levels of visual degradation. LROI will generate a non-lethal, eye safe laser that will provide warning and suppression effects. The extended range capability of LROI will effectively increase tactical decision-making time in support of escalation of force (EoF) tactics, techniques and procedures (TTP) across a broad range of military operations (ROMO). Further, the LROI will enhance Joint Force operations in determining the intent of a potential threat as early as possible.

The MVS technologies are systems designed to temporarily disable, slow, or stop waterborne vessels of varying degrees of size and different propulsion types in order to effectively execute escalation of force and intent determination procedures. The MVS technologies will provide the U.S. Navy with lightweight, compact, and reversible solution which will stop or slow marine platforms by occlusion of any type of marine propeller or propulsion.

Acoustic Hailing Devices project intelligible speech out to extended ranges. In addition to long-range projection of speech for warning or instructional purposes, the devices are also capable of transmitting loud tones that can distract or deter personnel from approaching U.S. positions or vessels.

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
<b>Title:</b> Joint Non-Lethal Weapons Development	3.790	3.580	3.131	0.000	3.131
<b>Articles:</b>	-	-	-	-	-
<b>FY 2024 Plans:</b> The NNLE program will complete engineering changes to the LROI range finder to support component availability for future system procurements. Continued development work will occur for the Maritime Vessel Stopping system, including: studies of industrialization and scalability of synthetic slime manufacturing; identification of deployment methodologies to support CONOPs; and continued at-sea testing. The NNLE programs will participate in RIMPAC FY24 as a demonstration and test event at-sea.					
<b>FY 2025 Base Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntr l)</i>	<b>Project (Number/Name)</b> 3172 / <i>Joint Non-Lethal Weapons</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
The NNLE program will prioritize the development and testing of synthetic materials for Maritime Vessel Stopping. Development focus will include: deployment methodology selection, development, and testing; material packaging to support deployment method; and mission scenario driven at-sea testing. The NNLE programs will participate in demonstration and testing events in FY25.  <b>FY 2025 OCO Plans:</b> N/A  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Decrease due to reduction of test and evaluation efforts associated with LROI production.					
<b>Accomplishments/Planned Programs Subtotals</b>	3.790	3.580	3.131	0.000	3.131

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/ 8128: <i>LROI-COIL</i>	0.000	0.000	0.369	-	0.369	0.396	0.396	0.396	0.396	0.000	1.953

**Remarks**  
LI only reflects NNLE program's procurement profile.

**D. Acquisition Strategy**  
The Navy Non-Lethal Effects (NNLE) Family of Systems (FoS) ACAT IVM Program of Record will complete non-recurring engineering changes to LROI system to facilitate future procurements. Additionally, focus will be on development efforts on the Maritime Vessel Stopping and technical data and acquisition processes.

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntrl)	<b>Project (Number/Name)</b> 3172 / Joint Non-Lethal Weapons
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<b>Product Development (\$ in Millions)</b>				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			
System Engineering NNLE	WR	NSWC Panama City : Panama City, FL	7.792	2.326	Dec 2022	1.981	Dec 2023	1.889	Dec 2024	-		1.889	Continuing	Continuing	Continuing
System Engineering NNLE	WR	NSWC Dahlgren : Dahlgren, VA	18.141	0.240	Dec 2022	0.448	Oct 2023	0.448	Oct 2024	-		0.448	Continuing	Continuing	Continuing
<b>Subtotal</b>			25.933	2.566		2.429		2.337		-		2.337	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				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			
Developmental Test & Evaluation (DT&E)	WR	NSWC Panama City : Panama City, FL	1.061	0.624	Dec 2022	0.551	Dec 2023	0.194	Dec 2024	-		0.194	0.000	2.430	-
Developmental Test & Evaluation (DT&E)	WR	NSWC Crane : Crane, IN	0.800	0.000		0.000		0.000		-		0.000	0.000	0.800	-
<b>Subtotal</b>			1.861	0.624		0.551		0.194		-		0.194	0.000	3.230	N/A

**Remarks**  
Decrease due to FY24 at sea testing leading to reduced FY25 scope.

<b>Management Services (\$ in Millions)</b>				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			
Program Management NNLE	WR	NSWC Panama City : Panama City, FL	0.534	0.600	Dec 2022	0.600	Dec 2023	0.600	Dec 2024	-		0.600	0.000	2.334	-
Program Management VAS	WR	NSWC Crane : Crane, IN	0.344	0.000		0.000		0.000		-		0.000	0.000	0.344	-
<b>Subtotal</b>			0.878	0.600		0.600		0.600		-		0.600	0.000	2.678	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2025 Navy</b>		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntr l)</i>	<b>Project (Number/Name)</b> 3172 / <i>Joint Non-Lethal Weapons</i>

FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<b>Proj 3172</b>	
Acquisition Milestones: Navy Non-Lethal Effects: Maritime Vessel Stopping (MVS) Contract Award	█
System Development: Navy Non-Lethal Effects: System Development: NNLE: MVS Synthetic Material Manufacturing Analysis	████████████████████
System Development: Navy Non-Lethal Effects: Maritime Vessel Stopping (MVS) Issue Request for Proposal	████████████████████
System Development: Navy Non-Lethal Effects: Future Replacement Lazer Dazzling System	████████████████████
System Development: Navy Non-Lethal Effects: System Development : NNLE: MVS Deployment System Development	████████████████████████████████████████
System Development: Navy Non-Lethal Effects: System Development: NNLE: MVS Synthetic Material delivery packaging	████████████████████████████████████████

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntr /)	<b>Project (Number/Name)</b> 3172 / Joint Non-Lethal Weapons

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3172</b>				
Acquisition Milestones: Navy Non-Lethal Effects: Maritime Vessel Stopping (MVS) Contract Award	1	2027	1	2027
System Development: Navy Non-Lethal Effects: System Development: NNLE: MVS Synthetic Material Manufacturing Analysis	3	2023	4	2024
System Development: Navy Non-Lethal Effects: Maritime Vessel Stopping (MVS) Issue Request for Proposal	1	2026	4	2026
System Development: Navy Non-Lethal Effects: Future Replacement Lazer Dazzling System	1	2028	1	2029
System Development: Navy Non-Lethal Effects: System Development : NNLE: MVS Deployment System Development	4	2023	2	2026
System Development: Navy Non-Lethal Effects: System Development: NNLE: MVS Synthetic Material delivery packaging	2	2024	4	2026

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>				<b>Project (Number/Name)</b> 3358 / <i>SSDS Training Improvement Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3358: <i>SSDS Training Improvement Program</i>	55.582	9.386	8.147	12.765	-	12.765	12.083	9.759	9.243	9.423	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

SSDS Training Improvement Program provides enhancements and upgrades to the SSDS Total Ship Training Capability (TSTC) components within the combat system, combat system elements, Battle-Force Tactical Training (BFTT), and Advanced Training Domain (ATD) to address needs for increased training capability and functionality in conjunction with SSDS MK2 incremental capability packages, Far-Term Interoperability Improvement Project (FTIIP), Task Force Cyber Awakening (TFCA) Boundary Defense Capability (BDC), and Technical Insertion efforts under PU 2178 (QRCC). These enhancements will address current and future training requirements by implementing new functionality to enable the individual warfighter through distributed battle group events to engage in more complex training requirements to support fleet required training certification events. Capability Development and integration are related to Self Defense, Underwater, Surface, and other warfare areas. Capability enhancements and upgrades include development of re-useable common components that can be leveraged by SSDS MK2 combat systems, and/or integration of re-usable common components developed by the TSTC/BFTT Program and AEGIS Advanced Training Domain (ATD)/TSTC Total Ship Training Capability (TSTC) projects to meet AEGIS combat system training requirements. TSTC continues to integrate and update, as new tactical capabilities are being introduced, to enable crew operator proficiency training for basic and sustainment level training events, through distributed strike group certification fleet synthetic training (FST) events and including COMPTUEX FST at-Sea integration into Live, Virtual and Constructive (LVC) environment. Continued Development is required to integrate new capabilities and interfaces to provide training for AEGIS and SSDS combat system capability upgrades, and to address the Fleet's Live, Virtual and Constructive (LVC) Fleet Training Wholeness initiative. Additionally, modernization is needed to support the DoD Training Transformation Plan, the Chief of Naval Operations Fleet Response Plan and Commander United States Fleet Forces Command Fleet Readiness Training Plan. Ships Defense Simulator upgrade developments to provide new capability for Operator training.

The Advanced Training Domain (ATD) is being developed to combine BFTT and the AEGIS Combat Training System (ACTS) into a common system that integrates with AEGIS BL 9.2.2AF, and SSDS BL 12xAF. ATD is being hosted along with the AEGIS and SSDS combat system on TI-16 common processing and display hardware. ATD is being designed to be the core of the Total Ship Training Capability, and is projected to be more reliable, simpler to use, and architecturally extensible to meet interoperability and capability enhancement challenges in the future.

BFTT is being updated to maintain integration and capability enhancements developed for the Cooperative Engagement Capability (CEC), Surface Electronic Warfare Improvement Program (SEWIP), and the Carrier Tactical Support Center (CV-TSC), and SSDS Fire Control Loop Improvement Program.

TSTC provides realistic joint warfare training across the spectrum of armed conflict, realistic unit level team training in all warfare areas (e.g. NIFC-CA and BMD missions to support IAMD). TSTC provides ships' Commanding Officers and Battle Group/Battle Force Commanders with the ability to conduct coordinated realistic, high stress, combat system level team training as an integral part of the Afloat Training Organization, the Tactical Training Groups and C2F/C3F FST/LVC events.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy	<b>Date:</b> March 2024
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<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 3358 / <i>SSDS Training Improvement Program</i>
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TSTC integrates ATD or BFTT with combat systems elements such as SSDS, CV-TSC via MH-60R Sim, Surface and Air Search Radars, Electronic Warfare Systems (BEWT/SEWTT), IFF, CEC & Data Link Systems, and Missile/Weapon Systems to provide a multi-warfare integrated training capability used for training and certification of crews and strike groups.

Integrate Navy Continuous Training Environment (NCTE) networking and cyber security upgrades to maintain authorization to participate in distributed shipboard training events.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<b>Title:</b> SSDS Total Ship Training Capability	9.386	8.147	12.765	0.000	12.765
<b>Articles:</b>	-	-	-	-	-
<b>FY 2024 Plans:</b>					
-Complete AN/SPS-73(V)18 and AN/SPS-48G with the Training Sensor Interface LVC sensor improvements for SSDS MK2, allowing for Real vs. Synthetic target discrimination at the sensor level.					
-Continue training integration with AN/SPY-6.					
-Continue integration of Advanced Training Domain (ATD) with SSDS BL12 with TI12, TI12H, and TI16.					
-Complete integration and testing of Strike Group Cooperative Engagement Capability (CEC) Underway capability onto SSDS Combat Systems Baselines.					
-Complete Anti-Submarine Warfare (ASW) Training improvements with CV-TSC FCR 5 to support multi-warfare integrated training on SSDS, including the MH-60R Simulator supporting dual-helo operations and integration with the electronic warfare system, SLQ-32(V)6. Support MH-60R Sim capability enhancements for AOEW when funded.					
-Continue Test LINK 16 TADIL capability for training to allow simulated LINK 16 message transmission between the training domain to the SSDS combat system supporting Digital Air Control and particularly AOEW training simulation.					
-Complete integration of ATD with the SLQ-32(V) 7 training capability.					
-Complete integration of upgrades to ATD to support training for RAM 2B and ESSM Blk 2 with SSDS.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 3358 / <i>SSDS Training Improvement Program</i>

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
-Develop requirements and Concepts of Integration (COI) for potential future training capabilities for Joint Strike Fighter, Naval Strike Missile on SSDS, CAC2S, NightStalker, and CRDC/ARDC Defense capability.					
-Develop requirements and Concepts of Integration (COI) for potential future training capabilities for Joint Strike Fighter, Naval Strike Missile on SSDS, CAC2S, NightStalker, and CRDC/ARDC Defense capability.					
-Update training curriculum as new capability packages are developed.					
-Continue to update/deliver SSDS Tactical Virtualized Operator Trainer (VOT) as new capability packages are developed					
<b><i>FY 2025 Base Plans:</i></b>					
-Continue to develop requirements and Concepts of Integration (COI) for potential future training capabilities for Joint Strike Fighter, Naval Strike Missile on SSDS, CAC2S, NightStalker, and CRDC/ARDC Defense capability.					
- Continue to develop requirements and Concepts of Integration (COI) for potential future training capabilities for Joint Strike Fighter, Naval Strike Missile on SSDS, CAC2S, NightStalker, and CRDC/ARDC Defense capability.					
-Update training curriculum as new capability packages are developed.					
-Continue to update/deliver SSDS Tactical Virtualized Operator Trainer (VOT) as new capability packages are developed					
-Continue Test LINK 16 TADIL capability for training to allow simulated LINK 16 message transmission between the training domain to the SSDS combat system supporting Digital Air Control and particularly AOEW training simulation.					
-Complete training integration with AN/SPY-6.					
-Continue integration of Advanced Training Domain (ATD) with SSDS BL12 with TI12, TI12H, and TI16.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 3358 / <i>SSDS Training Improvement Program</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
-Continue Test LINK 16 TADIL capability for training to allow simulated LINK 16 message transmission between the training domain to the SSDS combat system supporting Digital Air Control and particularly AOEW training simulation.					
-Continue integration of Advanced Training Domain (ATD) with SSDS BL12 with TI12, TI12H, TI16					
-Begin integration of ATD with SSDS on MK6 MODX Platforms which supports Infrastructure-as-a-Service (IaaS)					
-Begin integration Shipboard Panoramic Electro-Optic/Infrared (SPEIR) Training Capability					
-Support Training LVC Efforts under Capability Package 5 (CP5) which includes CSLAN integration of SPS73-(V)18, 48G, 49A which support DDS.					
-Begin CEC Underway training capability for Increment II Capability Group Training Updates					
-Begin development of the SSDS variant of the Surface Combat System Training Environment (SCSTE) to enable rapid delivery of SSDS training capabilities to the training centers.					
<b><i>FY 2025 OCO Plans:</i></b> N/A					
<b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b> Increase of \$4.618M from FY24 to FY25 to develop and integrate LVC capabilities, required for crew and strike group training deployment certifications. Development of the SSDS variant of the Surface Combat System Training Environment (SCSTE) to enable rapid delivery of SSDS training capabilities to the training centers.					
<b>Accomplishments/Planned Programs Subtotals</b>	9.386	8.147	12.765	0.000	12.765

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDTEN/0204571N/1427: <i>Surface Tactical Team Trainer (PU 1427)</i>	13.532	33.057	71.805	-	71.805	44.782	25.577	23.830	24.292	Continuing	Continuing
• RDTEN/0604307N/3357: <i>AEGIS Training Improv. Prog. (PU 3357)</i>	6.317	8.187	10.262	-	10.262	10.050	7.613	7.156	7.293	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntrl)</i>	<b>Project (Number/Name)</b> 3358 / <i>SSDS Training Improvement Program</i>

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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**Remarks**

**D. Acquisition Strategy**

For the SSDS MK2 software development, including the integration of TSTC software improvements and the TI-16 Open Architecture Computing Environment, the acquisition strategy identified for SSDS MK2 for QRCC Project (PU 2178) (R-2A exhibit) applies.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 5				PE 0604755N / Ship Self Def (Detect & Cntrl)				3358 / SSDS Training Improvement Program							
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
TSTC SME Plan & Prep	WR	NSWC CN : Corona, CA	2.053	0.659	Nov 2022	0.000		0.932	Nov 2024	-		0.932	0.000	3.644	-
TSTC Sys Eng	WR	NSWC DD : Dahlgren, VA	5.676	1.106	Nov 2022	1.058	Nov 2023	1.451	Nov 2024	-		1.451	0.000	9.291	-
TSTC Sys Eng	WR	CDSA DN : Dam Neck, VA	2.286	0.000		0.000		0.000		-		0.000	0.000	2.286	-
TSTC BL DEV / CONDUCT	WR	NSWC PHD : Port Hueneme CA	0.000	1.362	Dec 2022	0.000	Dec 2023	1.623	Dec 2024	-		1.623	0.000	2.985	-
TSTC Sys Eng / Integration	C/CPIF	Raytheon (4112) : Suffolk, VA	1.430	0.000		0.000		0.000		-		0.000	0.000	1.430	-
TSTC FTW FCLIP / CSEA	C/CPIF	CSEA contract : Moorestown NJ	10.694	2.200	Dec 2022	0.326	Dec 2023	3.082	Dec 2024	-		3.082	0.000	16.302	-
TSTC TDL Gateway	C/CPIF	SPAWAR PMW 150 : San Diego, CA	0.421	0.000		0.000		0.000		-		0.000	0.000	0.421	-
TSTC Sys Eng / PSEA	SS/CPIF	RSC (5128) : San Diego, CA	5.018	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
TSTC Sys Eng / MH-60R Training Capability	WR	Keyport (NUWC) : Keyport, RI	1.159	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
TSTC Planning Support	C/CPIF	TMB : Washington, DC	0.025	0.000		0.000		0.050	Dec 2024	-		0.050	0.000	0.075	-
TSTC ATD	TBD	IWS 1.0 : Washington, DC	11.514	2.317	Dec 2022	1.953	Dec 2023	1.804	Dec 2024	-		1.804	0.000	17.588	-
TSTC ESSM BLK2/EW Upgrades	TBD	Various : Various	4.050	0.000		0.000		0.000		-		0.000	0.000	4.050	-
TSTC EW	TBD	IWS 2.0 : Washington, DC	1.206	0.000		0.000		0.000		-		0.000	0.000	1.206	-
TSTC NCTE	WR	Corona(NSWC) : Corona, CA	0.405	0.000		0.000		0.000		-		0.000	0.000	0.405	-
TSTC GWS	TBD	IWS 3.0 : Washington, DC	0.041	0.000		0.000		0.000		-		0.000	0.000	0.041	-
TSTC FTW SENSOR	TBD	PEO IWS 2.0 : Washington, DC	4.213	0.000		0.000		0.326	Dec 2024	-		0.326	0.000	4.539	-

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntrl)	<b>Project (Number/Name)</b> 3358 / SSDS Training Improvement Program
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<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</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>			
TSTC FTW / STRIKE CEC	TBD	PEO IWS 6.0 : Washington, DC	3.644	1.041	Dec 2022	0.650	Dec 2023	1.693	Dec 2024	-		1.693	0.000	7.028	-
TSTC FTW ASW	TBD	PEO IWS 5.0 : Washington, DC	1.747	0.701	Dec 2022	0.487	Dec 2023	0.982	Dec 2024	-		0.982	0.000	3.917	-
TSTC Training	C/CPIF	CSEA Contract : Moorestown NJ	0.000	0.000	Dec 2022	2.534	Dec 2023	0.000	Dec 2024	-		0.000	0.000	2.534	-
TSTC Training	WR	NSWC PHD : Port Hueneme, CA	0.000	0.000	Dec 2022	1.139	Dec 2023	0.822	Dec 2024	-		0.822	0.000	1.961	-
<b>Subtotal</b>			55.582	9.386		8.147		12.765		-		12.765	Continuing	Continuing	N/A

**Remarks**  
Increase of 4.618M from FY24 to FY25 to develop and integrate LVC capabilities, required for crew and strike group training deployment certifications. Development of the SSDS variant of the Surface Combat System Training Environment (SCSTE) to enable rapid delivery of SSDS training capabilities to the training centers.

	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	55.582	9.386	8.147	12.765	-	12.765	Continuing	Continuing	N/A

**Remarks**  
Increase of 4.618M from FY24 to FY25 to develop and integrate LVC capabilities, required for crew and strike group training deployment certifications. Development of the SSDS variant of the Surface Combat System Training Environment (SCSTE) to enable rapid delivery of SSDS training capabilities to the training centers.

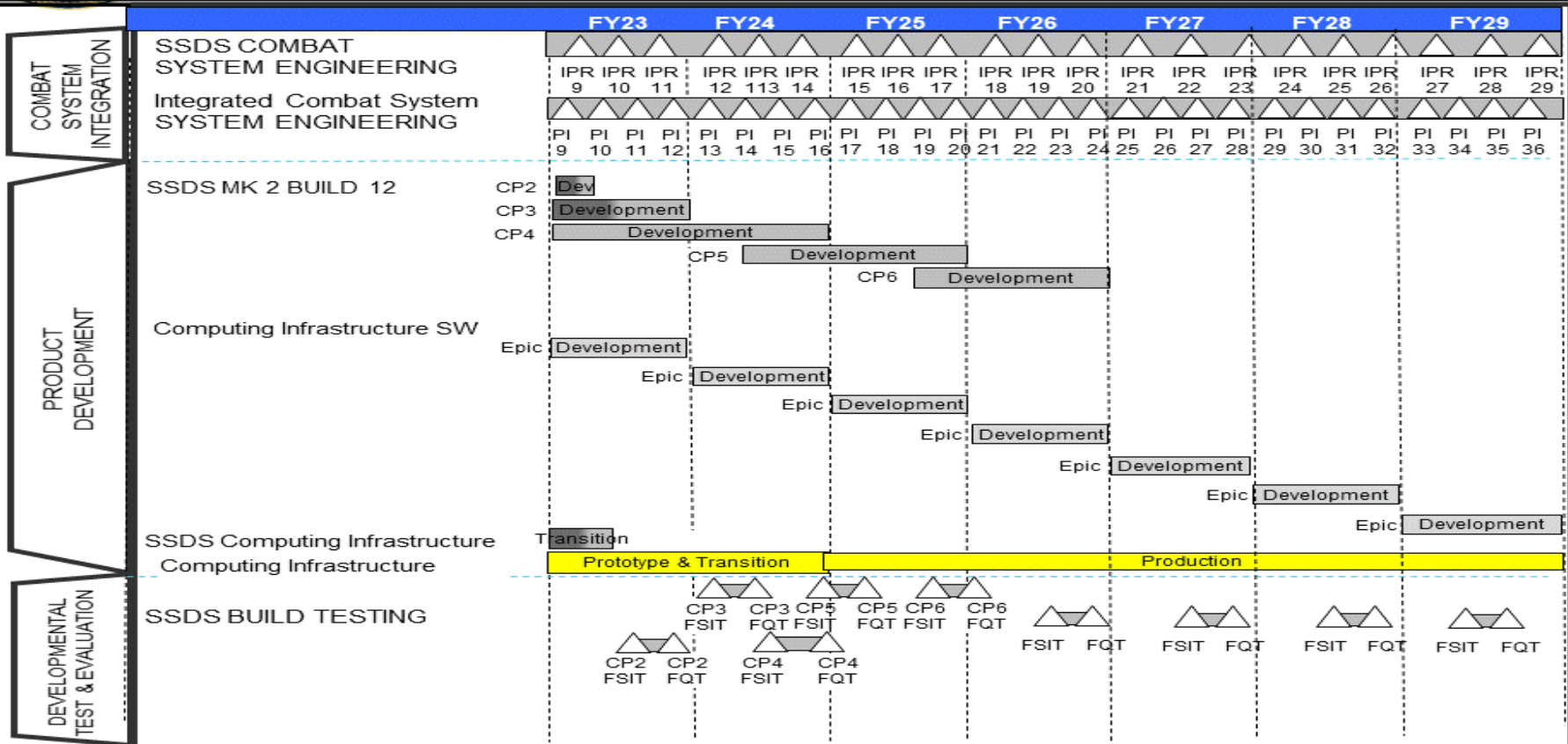
Appropriation/Budget Activity  
1319 / 5

R-1 Program Element (Number/Name)  
PE 0604755N / Ship Self Def (Detect & Cntr  
l)

Project (Number/Name)  
3358 / SSDS Training Improvement  
Program



# Ship Self Defense System Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2025 Navy</b>		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / <i>Ship Self Def (Detect &amp; Cntr l)</i>	<b>Project (Number/Name)</b> 3358 / <i>SSDS Training Improvement Program</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3358</b>				
EPIC Development FY23	1	2023	4	2023
SSDS MK 2 - IPR 10	3	2023	3	2023
SSDS MK 2 - IPR 11	4	2023	4	2023
PI 10	2	2023	2	2023
PI 11	3	2023	3	2023
PI 12	4	2023	4	2023
SSDS MK 2 BUILD 12 - CP 6	3	2025	4	2026
SSDS MK 2 BUILD TEST - CP 3 FSIT	1	2024	1	2024
SSDS MK 2 BUILD TEST - CP 3 FQT	3	2024	3	2024
SSDS MK 2 BUILD TEST - CP 4 FSIT	1	2024	1	2024
SSDS MK 2 BUILD TEST - CP 4 FQT	4	2024	4	2024
EPIC Development FY24	1	2024	4	2024
SSDS MK 2 - IPR 12	1	2024	1	2024
SSDS MK 2 - IPR 13	3	2024	3	2024
SSDS MK 2 - IPR 14	4	2024	4	2024
PI 13	1	2024	1	2024
PI 14	2	2024	2	2024
PI 15	3	2024	3	2024
PI 16	4	2024	4	2024
SSDS MK 2 BUILD TEST - CP 5 FSIT	1	2025	1	2025
SSDS MK 2 BUILD TEST - CP 5 FQT	2	2025	2	2025

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntrl)	<b>Project (Number/Name)</b> 3358 / SSDS Training Improvement Program
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
EPIC Development FY25	1	2025	4	2025
SSDS MK 2 - IPR 15	1	2025	1	2025
SSDS MK 2 - IPR 16	3	2025	3	2025
SSDS MK 2 - IPR 17	4	2025	4	2025
PI 17	1	2025	1	2025
PI 18	2	2025	2	2025
PI 19	3	2025	3	2025
PI 20	4	2025	4	2025
SSDS MK 2 BUILD TEST - CP 6 FSIT	2	2026	2	2026
SSDS MK 2 BUILD TEST - CP 6 FQT	4	2025	4	2025
EPIC Development FY26	1	2026	4	2026
SSDS MK 2 - IPR 18	1	2026	1	2026
SSDS MK 2 - IPR 19	3	2026	3	2026
SSDS MK 2 - IPR 20	4	2026	4	2026
PI 21	1	2026	1	2026
PI 22	2	2026	2	2026
PI 23	3	2026	3	2026
PI 24	4	2026	4	2026
SSDS MK 2 BUILD TEST - FSIT	3	2026	3	2026
SSDS MK 2 BUILD TEST - FQT	4	2026	4	2026
EPIC Development FY27	1	2027	4	2027
SSDS MK 2 - IPR 21	1	2027	1	2027
SSDS MK 2 - IPR 22	3	2027	3	2027
SSDS MK 2 - IPR 23	4	2027	4	2027
PI 25	1	2027	1	2027

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

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604755N / Ship Self Def (Detect & Cntr /)	<b>Project (Number/Name)</b> 3358 / SSDS Training Improvement Program
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
PI 26	2	2027	2	2027
PI 27	3	2027	3	2027
PI 28	4	2027	4	2027
SSDS MK 2 BUILD TEST -- FSIT	3	2027	3	2027
SSDS MK 2 BUILD TEST -- FQT	4	2027	4	2027
#EPIC Development	1	2028	4	2028
SSDS MK 2 - IPR 24	1	2028	1	2028
SSDS MK 2 - IPR 25	3	2028	3	2028
SSDS MK 2 - IPR 26	4	2028	4	2028
PI 29	1	2028	1	2028
PI 30	2	2028	2	2028
PI 31	3	2028	3	2028
PI 32	4	2028	4	2028
#SSDS MK 2 BUILD TEST -- FSIT FY28	3	2028	3	2028
#SSDS MK 2 BUILD TEST -- FQT FY28	4	2028	4	2028
EPIC Development	1	2029	4	2029
SSDS MK 2 - IPR 27	1	2029	1	2029
SSDS MK 2 - IPR 28	3	2029	3	2029
SSDS MK 2 - IPR 29	4	2029	4	2029
PI 33	1	2029	1	2029
PI 34	2	2029	2	2029
PI 35	3	2029	3	2029
PI 36	4	2029	4	2029
#SSDS MK 2 BUILD TEST -- FSIT FY29	2	2029	2	2029
#SSDS MK 2 BUILD TEST -- FQT FY29	3	2029	3	2029