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**Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy** **Date:** May 2021

<b>Appropriation/Budget Activity</b> 1319: Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / Surface Combatant Cmbt Sys Eng
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	4,488.876	361.311	357.530	371.575	-	371.575	-	-	-	-	-	-
1447: Surf Combatant Combat System Imp	4,436.934	351.628	348.863	364.557	-	364.557	-	-	-	-	-	-
3357: Aegis Training Improvement Program	51.942	9.683	8.667	7.018	-	7.018	-	-	-	-	-	-

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** 180

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

The FY 2022 funding request was reduced by \$.900M to account for the availability of prior year execution balances.

This project delivers Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrates new capabilities to rapidly enhance the combat capabilities of the AEGIS Fleet in order to confront an increasing array of strategic, operational, and tactical challenges.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>
Previous President's Budget	375.681	403.712	369.567	-	369.567
Current President's Budget	361.311	357.530	371.575	-	371.575
Total Adjustments	-14.370	-46.182	2.008	-	2.008
• Congressional General Reductions	-	-1.803			
• Congressional Directed Reductions	-	-44.379			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-14.370	0.000			
• Program Adjustments	0.000	0.000	17.300	-	17.300
• Rate/Misc Adjustments	0.000	0.000	-15.292	-	-15.292

**Change Summary Explanation**

The Total K1447 Control Adjustments from FY 2021 to PB 2022 are as follows:

FY 2021 funding request was reduced by \$31.534M by Congress - AEGIS Capability Build 2023-1 excess to need (69650)

FY 2021 funding request was reduced by \$12.845M by Congress - AEGIS Development Support excessive growth (69618)

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<p>FY 2021 funding request was reduced by \$1.764M by Congress - Undistributed reduction - excess to need (69618)  FY 2022 funding request was reduced by \$3.395M for various adjustments (65526, 65674, 69923, 71338, 72559, 71643, and 71659)  FY 2022 funding request was reduced by \$5.598M for Total Force Manpower Savings (22116)  FY 2022 funding request was reduced by \$6.136M for Inflation for Non-Pay (66071)  FY 2022 increase of \$18.200M development of the Prototype Integrated Combat System (ICS) Computing Infrastructure (CI) (19013)</p> <p>K1447 FY 2021 to PB 2022 Planned Program Increases: \$75.002M  FY 2022 increase of \$2.200M associated with CAPABILITY PACKAGE 2022 is due to profile phasing of the effort with an increase amount of testing time required to validate code developed and support shipboard planning as we shift from Phase 2 of development to Phase 3  FY 2022 increase of \$29.808M associated with CAPABILITY PACKAGE 2023 in support of continued capability delivery to AEGIS Fleet as we shift from Phase 1 of development to Phase 2.  FY 2022 increase of \$9.600M associated with CAPABILITY PACKAGE 2024 in support of continued capability delivery to AEGIS Fleet as we shift into Phase 1 of development.  FY 2022 increase of \$5.000M associated with SEWIP BLK III INTEGRATION in support of continued capability delivery to AEGIS Fleet.  FY 2022 increase of \$9.914M associated with AEGIS FLT III DESTROYER BL 10 UPGRADES is due to profile phasing of the effort with an increase amount required to support Land Based Test Site efforts to AEGIS Combat System and SPY-6 Radar.  FY 2022 Increase of \$0.280M associated with TFCA based on Inflation.  FY 2022 increase of \$18.200M development of the Prototype Integrated Combat System (ICS) Computing Infrastructure (CI).</p> <p>K1447 FY 2021 to PB 2022 Planned Program Decreases: \$59.308M  FY 2022 increase of \$0.844M associated with AEGIS Development Support reduced site usage projections.  FY 2022 decrease of \$5.300M associated with BASELINE 9 DDG UPGRADES is due to project schedule.  FY 2022 decrease of \$24.300M associated with BASELINE 9 CG UPGRADES is due project completion.  FY 2022 decrease of \$18.173M associated with AEGIS BL 5 DDG UPGRADES is due to project schedule.  FY 2022 decrease of \$8.854M associated with AEGIS IFF UPDATES is due to project completion.  FY 2022 decrease of \$1.837M associated with COMBAT SYSTEM TEST BED is due to project schedule.</p> <p>The Total K3357 Control Adjustments from FY 2021 to PB 20222 are as follows:  FY 2021 funding request was reduced by \$0.039M by Congress - Undistributed reduction - excess to need (69618)  FY 2022 funding request was reduced by \$0.070M for various adjustments (65526, 65674, 69923, 71338, 72559, 71643, and 71659)  FY 2022 funding request was reduced by \$0.078M for Total Force Manpower Savings (22116)  FY 2022 funding request was reduced by \$0.015M for Inflation for Non-Pay (66071)  FY 2022 funding request was reduced by \$0.900M for DON22 RDTEN Under Execution Review (64452)</p>		

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K3357 FY 2021 to PB 2022 Planned Program Decreases: \$1.694M FY 2022 decrease of \$1.694M AEGIS Training Development (3357) is due to project schedule.		

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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
1447: <i>Surf Combatant Combat System Imp</i>	4,436.934	351.628	348.863	364.557	-	364.557	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Project MDAP/MAIS Code:** 180

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

AEGIS BL 10 2024 will provide critical warfighter improvements to the AEGIS FLT III Destroyers. AEGIS BL 10 2024 combat system development efforts include integration of the Air and Missile Defense Radar (AMDR) SPY-6 while building upon AEGIS BL 9 to form the foundation for the AEGIS Flight III DDG Combat System. Delivers subset of previous BL 9 CSL capabilities plus Air and Missile Defense Radar (AMDR) SPY-6; Mk 160 Gun Combat System (GCS) concurrent engagements; Close in Weapon System (CIWS) sensor integration; Tactical Data Link (TDL) J3.4 message; and BMD 6.0. Fields to new construction Flt III DDG beginning FY24 in support of Air and Missile Defense Coordinator fleet requirement.

AEGIS BL 9 2020 delivers previous Common Source Library (CSL) capabilities plus Surface Electronic Warfare Improvement Program (SEWIP) Blk II integration (early Hard Kill / Soft Kill (HK/SK) coordination, Advanced Off-Board Electronics Warfare (AOEW) communication, & radar-cued engagement); Evolved Sea Sparrow Missile (ESSM) Blk 2 functional capability; Identify Friend or Foe (IFF) Modes 5 (objective design, S, & SIM); NIFC 2019; NIFC Collateral III; Agile Thunder; TACAIR Phase 1; and BMD 5.1.3 (MDA-developed - SBT Inc 2 CU, Space Domain Awareness, Designated Engagement, Hypersonic Vehicle ICP mitigation, Mid-term discrimination, LRBM acceleration, and BMD engagement control). Fields to 3 DDG's and 8 CG's by FY23.

AEGIS BL 9 2021 delivers previous CSL capabilities plus SEWIP Blk II integration (auto association); MH-60R integration; Advanced Training Doman; Boundary Defense Capability; IAMD mission planner; Above Water Sensor Coordinator; Agile Moondog, Sirocco, Sundog part 1, Silent Squall part 1, & Vortex; Advanced Calibration Experiment; Cyber enhancements (cyber resource services, boundary proxy service, SIEM, network device integrity, update manager); and BMD 5.1.3.1 (MDA-developed - Missile Power Application Non-launch Phase 1 & SCUS update). Fields to 16 DDGs and 8 CGs by FY24.

AEGIS Capability Package 2022 delivers previous CSL capabilities plus MMSP-Restoration (AMOD DDG only); ALPS; HELIOS; SM-2 Blk IIIC initial capability; Agile Firestorm; Mk 38 Mod 4 EOSS integration; and BMD 5.1.4 (MDA-developed - expanded threat space w/ SM-3 Blk IIA, hypersonic tracking, MPAN phase 2). Fields to 7 DDG, 1 CG, and Aegis Ashore by FY24.

AEGIS Capability Package 2023 captures additional warfighting improvements to include NGSSR Integration, ERACE integration, Urgent Fleet Needs (CPCR Updated), and integration of SBT Inc 3, Expanded Hypersonic Track and Report, Expanded AEGIS BMD Threat Space and Warfighter enhancements. Fields on 17 ships by 2026.

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AEGIS Capability Package 2024 captures additional warfighting improvements to include Hardkill/Softkill coordination, HyDRA to deliver improved capability to counter hypersonic threats using existing AAW weapons, urgent fleet needs, and the following BMD capabilities; integration of Expanded AEGIS BMD Threat Space, Expanded Active Bias, Expanded Boost Phase Communications, and Warfighter enhancements. Fields on 35 Ships by FY26.

SEWIP BLK III Integration brings non-kinetic electronic attack capability into the AEGIS Weapons Systems inventory expanding the number of threats the to the AEGIS Fleet can to counter. Electronic attack is a cornerstone capability that will meet the urgent operational needs of the Fleet as the pace and complexity of emerging threats continues to escalate.

TASK FORCE CYBER AWAKENING effort assesses and delivers design improvements to AEGIS Combat System Computer Program and Hardware configurations to counter emerging cyber threats. These improvements are implemented within AEGIS Combat Systems configurations currently fielded and under development and include updates to Boundary Defense Components (BDC) and other Cyber Capability.

AEGIS BL 5 2020 combines AEGIS BL 5 and BMD 4.1 into single AEGIS Computer Program enabling near simultaneous shift between AAW and BMD operations for the AEGIS Flight I/II DDGs (65-35 cost share MDA-Navy). Delivers SBT Inc 1 (SM-6); Agile Thunder, Sundowner, Prism, & Storm; NCC1; AAW Relaunch; AMIIP updates; Digital Air Control; IFF Mode 5/S; Advanced Calibration Experiment; and BMD 4.1.2 (MDA-developed). Fields to 21 DDG and 2 CG by FY23.

AEGIS BL 5 2023 includes refurbishment of the SPY-1D radar arrays with Low Noise Amplifiers (LNA) to improve radar sensitivity against emerging Threats through the end of the Flight I/II DDG service life (50-50 cost share with MDA). Delivers NGSSR integration; GPNTS; Agile Sundog, Sirocco, Silent Squall, & Vortex; C2P tech refresh; and BMD 4.2 (MDA-developed - SBT Inc 2 CU, performance against hypersonic threats, increases BMD raid capacity, expands BMD threat set and ship operating areas, improves electronic attack mitigation techniques, and track support to downrange SBT engagements). Required to support first install planned in FY22.

COMBAT SYSTEMS TEST BED (CSTB) will address the current limitations in AEGIS Modeling & Simulation highlighted by DOT&E in previous AEGIS baselines. Combat Systems Test Bed will provide M&S during program test and evaluation to represent conceptual systems that do not exist and existing systems which cannot be subjected to actual environments due to safety requirements or resource limitations. The CSTB supports DT and OT runs-for-record for AEGIS BL 9, DDG Flt III IOC and Frigate BL 10 IOC.

INTEGRATED COMBAT SYSTEM COMPUTING INFRASTRUCTURE (ICS CI) delivers Infrastructure-as-a Service (IaaS) in support of all Surface Combatants (LUSV, DDG, FFG-62, and DDG(X)). ICS requirements JROC-validated in the Initial Capabilities Document for the Future Surface Combatant Force. The ICS CI is a foundational element of the surface Navy's Integrated Combat System supporting all future ship classes. IaaS provides hatchable hardware abstracted (separated) from software, enabling upgrade outside modernization periods (agility) to more ships (capacity).

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<b>Title:</b> AEGIS DEVELOPMENT SUPPORT	22.858	42.519	41.675	0.000	41.675
<b>Articles:</b>	-	-	-	-	-

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p><b>Description:</b> AEGIS Development Support includes the following: AEGIS Technical Design Agent (TDA), AEGIS System Engineering, COTS Obsolescence evaluation, AEGIS Development Site Operations and Maintenance, Small Business Innovation Research (SBIR), and Computer Program SW License Procurements.</p> <p><b>FY 2021 Plans:</b> Continue to provide AEGIS System engineering evaluation of AEGIS Combat System performance and development of the AEGIS Capability Phasing Plan to ensure that warfighter improvements are implemented through future Combat System upgrades to meet emerging threats. These efforts are focused on defining future capability upgrades to the AEGIS Combat System. Conducting System Engineering review for Capability Package (CP) 2023/2024/2025 to evaluate current gaps and external weapon element updates available to address and determine most effective way to complete integration.</p> <p>Continue to provide AEGIS COTS Obsolescence to include evaluation of systems currently delivered as well as those under development. These updates are focused on replacing high failure rate components in addition to monitoring and resolving obsolescence issues for all AEGIS hardware configurations. Hardware configurations include: Q-70, TI-12, TI-12H, and TI-16 MOD 0 and TI-16 MOD 1.</p> <p>Continue to provide AEGIS Development Site Operation and Maintenance for the Land Based Test Sites (LBTS) ensures that adequate hours are available to support all planned AEGIS baseline development efforts. The LBTS include: Combat System Engineering Development Site (CSEDS), Program Generation Center (PGC), SPY-1A Test Facility (STF), Naval Systems Computing Center (NSCC), and Surface Combat System Center (SCSC). In FY21, these sites are supporting testing on BL 5 2021/2023, BL 9 2021 (DDG/DG/AA), CP 2022, CP 2023, and BL 10 FLT III DDG.</p> <p>SBIR Withholds to support congressional law.</p> <p><b>FY 2022 Base Plans:</b> Continue to provide AEGIS System engineering evaluation of AEGIS Combat System performance and development of the AEGIS Capability Phasing Plan to ensure that warfighter improvements are implemented through future Combat System upgrades to meet emerging threats. These efforts are focused on defining future capability upgrades to the AEGIS Combat System. Conduct System Engineering review for CP 2024/2025/2026 to evaluate current gaps and external weapon element updates available to address and determine most effective way to complete integration.</p>					

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Continue to provide AEGIS COTS Obsolescence to include evaluation of systems currently delivered as well as those under development. These updates are focused on replacing high failure rate components in addition to monitoring and resolving obsolescence issues for all AEGIS hardware configurations. Hardware configurations include: Q-70, TI-12, TI-12H, and TI-16 MOD 0 and TI-16 MOD 1.					
Continue to provide AEGIS Development Site Operation and Maintenance for the Land Based Test Sites (LBTS) ensures that adequate hours are available to support all planned AEGIS baseline development efforts. The LBTS include: Combat System Engineering Development Site (CSEDS), Program Generation Center (PGC), SPY-1A Test Facility (STF), Naval Systems Computing Center (NSCC), and Surface Combat System Center (SCSC). In FY22, these sites are supporting testing on BL 5 2023, CP 2022, CP 2023, CP 2024, ICS Prototype and BL 10 FLT III DDG and BL 10 SPY-6 Integration Testing.					
Start creating the DevSecOps environment to support Integrated Combat System to include the establishment of the Forge, Cloud computing environment and software licenses required to support Continuous Development and Continuous Integration process.					
SBIR Withholds to support congressional law.					
<b>FY 2022 OCO Plans:</b> N/A					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Decrease is due to reduced amount of hours required to support AEGIS testing schedule at CSEDS in FY22.					
<b>Title:</b> AEGIS CRUISER BL 9 UPGRADES	23.900	24.300	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Develops and delivers AEGIS Cruiser B/L 9 upgrades. The Cruiser configuration of AEGIS BL 9 2020 captures additional warfighting improvements to include ESSM Blk 2 Functional, SEWIP - Early Hard Kill/ Soft Kill Coordination / Advanced Off-board Electronic Warfare communication, NIFC-CA Collateral III, NIFC-CA 2019, and National Technical Means integration with Agile Thunder.					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p><b><i>FY 2021 Plans:</i></b>                      AEGIS BL 9 2020 CSSQT execution for CG 63, 64, and 69: DT/OT execution support and analysis for CG 63 and 64.</p> <p>Support at-sea event preparation, pre-mission analysis, at-sea test event execution, real time trouble shooting and post mission analysis, and post event support efforts required to field AEGIS BL 9 2020 on CGs 63, 64 and 69 to include:                      Installation and checkout of computer program                      Combat System Test Events 1 and 2                      Discrepancy investigation and resolution                      Scenario development</p> <p>Provide System Engineering support to address programmatic and technical issues identified during program execution using the following cross product team and processes:                      Program Management Team (PMT) operations                      System Engineering Cross Product Team (SECPT) support                      Element and Safety review and management                      Configuration Management (CM)                      Test &amp; Evaluation (T&amp;E)                      Software and Hardware Certification                      Subject Matter Experts (SME) to complete analysis                      Execute risk management                      Provide programmatic oversight of product development (Technical and programmatic briefing)                      Execute Mission Readiness Assessments (MRA)                      Execute In Process Reviews (IPR)                      Execute Test Readiness Reviews (TRR)</p> <p><b><i>FY 2022 Base Plans:</i></b>                      N/A</p> <p><b><i>FY 2022 OCO Plans:</i></b>                      N/A</p> <p><b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b></p>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
FY22 decrease is due to the completion of the AEGIS Cruiser development efforts for new functionality. Further updates to CGs will be implemented through Capability Package updates as required to meet Fleet needs.					
<b>Title:</b> AEGIS DESTROYER BL 9 UPGRADES	30.214	24.800	19.500	0.000	19.500
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Develops and delivers AEGIS BL 9 Destroyer upgrades: AEGIS BL 9 2020 includes SEWIP BLK 2 (Phased - including Early Hard Kill/Soft Kill Coordination/Advanced Off-board Electronic Warfare communication/ Radar Cued Engagement), ESSM BLK 2 Functional, NIFC-CA 2019, NIFC Collateral III, ASToC (Agile Thunder), TACAIR Phase 1, and integration of IFF M4/5 SBT Inc II CU, Mid-Term discrimination, 9-State Boost Phase Communication, Space Domain Awareness and Designated Engagement. Computer Program installed on first ship USS HOWARD (DDG 83) in FY19.  AEGIS BL 9 2021 includes SEWIP BLK 2 (Phased - Including Auto Association), Advanced Training Domain, MH-60R Integration, BOC, IAMD Mission Planner, Above Water Sensor Coordinator, Advanced Calibration Experiment (ACE), and ASToCs (Agile Sirocco, Moondog, Sundog Part 1, Silent Squall Part 1, and Vortex) and integration of Missile Power Application Non-Launch Inc I for SM-3 BLK IIA and Initial Active Sensor Bias. Computer Program installed on first ship USS BULKELEY (DDG 84) in FY20.  <b>FY 2021 Plans:</b> AEGIS BL 9 2021 Combat System Certification Panel Q3 FY21.  Development of DDG test plans in support of upcoming At-Sea Events. Support At-Sea Test Event Execution and Post-Event data analysis required to field AEGIS BL 9 2018 on DDG 120; AEGIS BL 9 2020 on DDG 52, 113 and 115; AEGIS BL 9 2021 on DDG 121, 122, and 123.  Support Underway testing including the following: Installation and checkout computer program Support Combat System Test events 1 and 2 Discrepancies investigation and resolution Test scenario development CSSQT planning (DDG 122 and 123) CSSQT post event analysis (DDG 84, 86, and 119) Support Developmental Testing (DT)					

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Provides Engineering assessment of the Computer Program to validate all planned requirements have been properly integrated within the BL 9 2021 program.					
Provide system engineering efforts required to support the following Integrated Product Teams: Program Management Team (PMT) System Engineering Cross Product Team (SECPT) Element and Safety Reviews Configuration Management (CM) Test & Evaluation (T&E) Software and Hardware Certification Subject Matter Experts (SME)					
Support the execution of all Test activities and stimulation capability required to validate system functionality, system interfaces, performance requirements, multiunit interoperability and ensure system stability.					
Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.					
Provide Combat System certification activities required to support planned Certification in FY21.					
Conducts all risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of the BL 2021.					
Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.					
Conducts execution of Combat System Safety Program to address all Weapon System Explosive Safety Review Board (WSES RB) requirements.					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Continue to test, evaluate and make updates to the Computer Program as required to address various hardware configurations, multiple Combat System Elements and address critical issues identified that impact the operational effectiveness of the AEGIS Combat System.</p> <p><b>FY 2022 Base Plans:</b> Continue to support the development and execution of DDG test plan in support of At-Sea Event.</p> <p>Support At-Sea Test Event Execution and Post-Event data analysis required to field AEGIS BL 9 2021 on DDG 51, 53, 57, 116, and 122.</p> <p>Support Underway testing includes the following:                      Installation and checkout computer program                      Support Combat System Test events 1 and 2                      Discrepancies investigation and resolution                      Test scenario development                      CSSQT planning                      CSSQT post event analysis (DDG 122 and 123)                      Support Developmental Testing (DT)</p> <p>Continue to test, evaluate and make updates to the Computer Program as required to address various hardware configurations and address critical issues identified that impact the operational effectiveness of the AEGIS Combat System.</p> <p>Transition to Sustainment.</p> <p><b>FY 2022 OCO Plans:</b> N/A</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Decrease is due to the completion of the development effort in FY21 and reduction in number of ships planned in FY22 for CSSQT data analysis.</p>					
<p><b>Title:</b> AEGIS CAPABILITY PACKAGE 2022</p> <p align="right"><b>Articles:</b></p>	9.175	49.200	51.400	0.000	51.400
	-	-	-	-	-

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p><b>Description:</b> AEGIS Capability Package 2022 captures additional warfighting improvements to include Multi-Mission Signal Processor Restoration, SM2-IIIC Functional Capability, integration of the AEGIS Linear Processor System (ALPS), ASToCs (Agile Sundog Part 2 and Silent Squall Part 2), and integration of MK 38 MOD 6 Gun Weapon System (GWS) Initial Capability, High Energy Laser with Optical-Dazzler and Surveillance (HELIOS), Expanded AEGIS BMD Threat Space, Hypersonic TADIL Upgrades, Electronic Attach / Electronic Protection Inc 1, MPAN Inc 2, AEGIS Ashore TI-12H Integration, and BMD Warfighter Improvements. Computer Program development is required to support AEGIS Light Off (ALO) on first ship installation on DDG 87 in the 2nd QTR FY21.</p> <p><b>FY 2021 Plans:</b>                      AEGIS CP 2022 In-Progress Review #3 Q2 FY21                      AEGIS CP 2022 In-Progress Review #4 Q4 FY21</p> <p>Continue to support the incremental design, development and integration of Capability Package 2022, entering the Capability Package Phase 2 Code Development and Integration and supporting early Level 1-2 Testing requirements.</p> <p>Continue to support incremental design, development and integration of AEGIS code for the following capabilities:                      Multi-Mission Signal Processor Restoration                      SM2-IIIC Functional Capability                      AEGIS Linear Processor System (ALPS)                      ASToCs (Agile Sundog Part 2 and Silent Squall Part 2)</p> <p>Continue to support the integration of the following capabilities:                      MK 38 MOD 6 Gun Weapon System (GWS) Initial Capability                      HELIOS USS PREBLE (DDG 88)                      Expanded AEGIS BMD Threat Space                      Hypersonic TADIL Upgrades                      Electronic Attach / Electronic Protection Inc 1                      MPAN Inc 2</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>AEGIS Ashore TI-12H Integration BMD Warfighter Improvements</p> <p>Continue systems engineering, software engineering and program management tasks to include develop and review specifications, code development, component level testing, element verification, and early system level integration.</p> <p>Conduct weapon system and subsystem integration and test and combat system test events to include test planning and analysis.</p> <p>Conduct integration events, maintainability events, and stability events.</p> <p>Update Training curriculum and documentation to reflect new capabilities.</p> <p>Continue to test, evaluate, and make updates to the Computer Program as required to address various hardware configurations and address critical issues identified that impact the operational effectiveness of the AEGIS Combat System.</p> <p>Execute all testing efforts and make computer program updates to address various hardware configurations and Combat System Elements.</p> <p>Start the development of DDG at-sea test plans in support of at-sea test event execution and post event support efforts executed to field AEGIS CP 2022 on DDG 85 and 87 to include: Installation and checkout of computer program Combat System Test events 1 and 2 Discrepancy investigation and resolution Scenario development CSSQT planning for DDG 87</p> <p>Provide system engineering efforts required to support: Integrated Product Teams Program Management Team (PMT) System Engineering Cross Product Team (SECPT)</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Element and Safety Reviews Configuration Management (CM) Test &amp; Evaluation (T&amp;E) Software and Hardware Certification Subject Matter Experts (SME)</p> <p>Participate in and evaluate remaining AEGIS CP 2022 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Execution of all Test activities and stimulation capability required to validate system functionality, system interfaces, performance requirements, multi-unit interoperability and ensure system stability.</p> <p>Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.</p> <p>Conduct Combat System certification activities required to support planned FY22 Certification.</p> <p>Execute and maintain all risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of CP 2022.</p> <p>Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), Software Increment Reviews (SWIR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.</p> <p>Conduct Combat System Safety Program to address all Weapon System Explosive Safety Review Board (WSESRB) requirements.</p> <p><b>FY 2022 Base Plans:</b> AEGIS CP 2022 Combat System Certification Panel (CSCP) Q2 FY22</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Continue to support the incremental design, development and integration of Capability Package 2022, entering the Capability Package Phase 3 Combat System and Weapon Element Integration and continuing Level 3-5 Testing</p> <p>Continue to support incremental design, development and integration of AEGIS code for the following capabilities:                      Multi-Mission Signal Processor Restoration                      SM2-IIIC Functional Capability                      AEGIS Linear Processor System (ALPS)                      AStoCs (Agile Sundog Part 2 and Silent Squall Part 2)</p> <p>Continue to support the integration of the following capabilities:                      MK 38 MOD 6 Gun Weapon System (GWS) Initial Capability                      HELIOS                      Expanded AEGIS BMD Threat Space                      Hypersonic TADIL Upgrades                      Electronic Attach / Electronic Protection Inc 1                      MPAN Inc 2                      AEGIS Ashore TI-12H Integration                      BMD Warfighter Improvements</p> <p>Continue weapon system and subsystem integration and combat system test events to include test planning and analysis.</p> <p>Continue executing integration events, maintainability events, and stability events.</p> <p>Finalize training curriculum and documentation updates to reflect new capabilities. Continue to test and make computer program updates to address various hardware configurations and Weapon System Elements.</p> <p>Continue the development of DDG at-sea test plans in support of at-sea test event execution and post event support efforts executed to field AEGIS CP 2022 on DDG 81, 85, 88 and 127 includes:                      Installation and checkout of computer program                      Combat System Test events 1 and 2</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Discrepancy investigation and resolution Scenario development CSSQT planning DDG's 81, 85, 87 and 88</p> <p>Continue to develop and execute CG test plans in support of at-sea events. Support at-sea test event execution and post event data analysis required to field CP 2022 on CG 71.</p> <p>Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate remaining AEGIS CP 2022 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Execute all Test activities and stimulation capability required to validate system functionality system interfaces, performance requirements, multi-unit interoperability and ensure system stability.</p> <p>Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.</p> <p>Conduct Combat System certification activities required to support planned FY22 Certification.</p> <p>Conduct and maintain all risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of CP 2022.</p> <p>Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), Program Reviews, and Test Readiness Reviews (TRRs) as required to support the requirements of each milestone to ensure program success.</p> <p>Execute Combat System Safety Program to address all Weapon System Explosive Safety Review Board (WSESRB) requirements. Provide programmatic and technical leadership in a collaborative Navy and industry environment.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Identify, test and fix critical issues identified that impact the operational effectiveness of the AEGIS Combat System.  <b>FY 2022 OCO Plans:</b> NA  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 increase is due to the increased number of ships configurations (Modernization, New Construction and Cruisers).					
<b>Title:</b> AEGIS CAPABILITY PACKAGE 2023  <b>Description:</b> AEGIS Capability Package 2023 captures additional warfighting improvements to include NGSSR Integration, ERACE integration, Urgent Fleet Needs (CPCR Updated), and integration of SBT Inc 3, Expanded Hypersonic Track and Report, Expanded AEGIS BMD Threat Space and Warfighter enhancements. Computer program needed to support Aegis Light Off (ALO) on first ship installation (DDG 91) in FY23.  <b>FY 2021 Plans:</b> AEGIS CP 2023 In-Progress Review #1 Q4 FY21  Starting Capability Package Phase 1 Combat System Requirements definition and Specification Development  Support incremental design, development and integration of AEGIS code for the following capabilities: NGSSR Integration ERACE integration Urgent Fleet Needs (CPCR Updated)  Support the integration of following capabilities: SBT Inc 3 Expanded Hypersonic Track and Report Expanded AEGIS BMD Threat Space and Warfighter enhancements	0.000	7.411	37.219	0.000	37.219
<b>Articles:</b>	-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Conduct systems engineering, software engineering and program management tasks to include develop and review specifications, interface definition, code development, component level testing, element verification, and early system level integration.</p> <p>Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate AEGIS CP 2023 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Provide support for technical and programmatic meetings in support of In Process Reviews (IPR), Software Increment Reviews (SWIR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.</p> <p><b>FY 2022 Base Plans:</b>                      AEGIS CP 2023 In-Progress Review #2 Q2 FY22                      AEGIS CP 2023 In-Progress Review #3 Q4 FY22</p> <p>Continue to support the incremental design, development and integration of Capability Package 2023, entering the Capability Package Phase 2 Code Development and Integration and supporting early Level 1-2 Testing requirements.</p> <p>Continue to support incremental design, development and integration of AEGIS code for the following capabilities:                      NGSSR Integration                      ERACE integration                      Urgent Fleet Needs (CPCR Updated)</p> <p>Continue to support the integration of following capabilities:                      SBT Inc 3                      Expanded Hypersonic Track and Report                      Expanded AEGIS BMD Threat Space and Warfighter enhancements</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>Conduct weapon system and subsystem integration and test and combat system test events to include test planning and analysis.</p> <p>Conduct integration events, maintainability events, and stability events.</p> <p>Update Training curriculum and documentation to reflect new capabilities.</p> <p>Continue to test and make computer program updates to address various hardware configurations and Combat System Elements.</p> <p>DDG at-sea event preparation, at-sea test event execution and post event support efforts executed to field AEGIS CP 2023 on DDG 82 to include:                      Installation and checkout of computer program                      Combat System Test events 1 and 2                      Discrepancy investigation and resolution                      Scenario development                      CSSQT planning for DDG 82</p> <p>Provide system engineering efforts required to support the Integrated Product Teams, Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate remaining AEGIS CP 2022/23 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Execution of all Test activities and stimulation capability required to validate system functionality, system interfaces, performance requirements, multi-unit interoperability and ensure system stability.</p> <p>Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Support Combat System certification activities required to support planned FY23 Certification. <b>FY 2022 OCO Plans:</b> N/A <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Increase is due to the program entering Phase II of development which includes support the incremental design, development and integration of Capability Package 2023 in support multiple AEGIS Configurations including CG, DDG and AEGIS Ashore.					
<b>Title:</b> AEGIS CAPABILITY PACKAGE 2024  <b>Description:</b> AEGIS Capability Package 2024 captures additional warfighting improvements to include Hardkill/Softkill coordination which combines electronic countermeasure capability with organic hard kill to exponentially expand battle force defensive capabilities, HyDRA to deliver improved capability to counter hypersonic threats using existing AAW weapons, urgent fleet needs (software updates), and the following BMD capabilities; integration of Expanded AEGIS BMD Threat Space, Expanded Active Bias, Expanded Boost Phase Communications, and Warfighter enhancements. Fields on 35 Ships by FY26.  <b>FY 2021 Plans:</b> NA <b>FY 2022 Base Plans:</b> AEGIS CP 2024 In-Progress Review #1 Q2 FY22 AEGIS CP 2024 In-Progress Review #2 Q4 FY22  Start to support the incremental design, development and integration of AEGIS code for the following capabilities:  Starting Capability Package Phase 1 Combat System Requirements definition and Specification Development  Support incremental design, development and integration of AEGIS code for the following capabilities: HK/SK Coordination HyDRA Urgent fleet needs (Software Updates)	0.000 -	0.000 -	9.600 -	0.000 -	9.600 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>Support the integration of following BMD capabilities:                      Expanded AEGIS BMD Threat Space,                      Expanded Active Bias                      Expanded Boost Phase Communications                      Expanded AEGIS BMD Threat Space and Warfighter enhancements</p> <p>Conduct systems engineering, software engineering and program management tasks to include develop and review specifications, interface definition, code development, component level testing, element verification, and early system level integration.</p> <p>Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate AEGIS CP 2024 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Provide support for technical and programmatic meetings in support of In Process Reviews (IPR), Software Increment Reviews (SWIR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.</p> <p>Provide programmatic and technical leadership in a collaborative Navy and industry environment.</p> <p><b>FY 2022 OCO Plans:</b> NA</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Increase required to continues to develop and integrate new functionality to address warfighter gaps in the AEGIS BL 9 and 10 configurations.</p>					
<b>Title:</b> SEWIP BLK III INTEGRATION	0.000	0.000	5.138	0.000	5.138
<b>Articles:</b>	-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p><b>Description:</b> SEWIP BLK III Integration brings non-kinetic electronic attack options to The AEGIS Fleet to counter threats. Electronic attack is a cornerstone capability that will meet the urgent operational needs of the Fleet as the pace and complexity of emerging threats continues to escalate.</p> <p><b>FY 2021 Plans:</b> NA</p> <p><b>FY 2022 Base Plans:</b> SEWIP BLK III integration In-Progress Review #1 Q4 FY22</p> <p>Starting SEWIP BLK III Combat System Requirements definition and Specification Development</p> <p>Start to support the incremental design, development and integration of AEGIS code to support SEWIP BLK III Integration</p> <p>Conduct systems engineering, software engineering and program management tasks to include develop and review specifications, interface definition, code development, component level testing, element verification, and early system level integration.</p> <p>Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Provide support for technical and programmatic meetings in support of In Process Reviews (IPR), Software Increment Reviews (SWIR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.</p> <p><b>FY 2022 OCO Plans:</b> NA</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
FY22 Increase required start SEWIP BLK III integration to support SEWIP BLK III Initial Operational Capability (IOC).					
<p><b>Title:</b> AEGIS FLT III DESTROYER BL 10 UPGRADES</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Develops and delivers AEGIS FLT III Destroyer BL 10 upgrades. AEGIS BL 10 2023 includes the following warfighting improvements; SPY-6 (AMDR), BMD 6.0, Close in Weapons System (CIWS) point defense sensor integration, TDL J3.4 Message, and MK 160 Gun Computing System (GCS) improvements. Computer Program development is required to support AEGIS Light Off (ALO) on the first ship installation on DDG 125 in the 2nd QTR FY22.</p> <p><b>FY 2021 Plans:</b> AEGIS BL 10 2023 In-Progress Review #6 Q3 FY21</p> <p>Continue to support incremental design, development and integration of AEGIS code and integration for the following capabilities: SPY-6 (AMDR) BMD 6.0 MK 160 GCS improvements TDL J3.4 message updates CIWS sensor data integration.</p> <p>Continued Site Activation efforts required to support AEGIS BL 10 2023 Development and Integration Testing. SPY-6 Radar Integration within the AEGIS Combat System. Continue to support the integration of SPY-6 Radar and BMD 6.0 functionality including: Development and review of specifications Code development, Component level testing, Element verification, Early system level integration, weapon system and subsystem integration.</p> <p>Conduct all working groups to ensure design, code development and testing maintains schedule required to support ship installation in FY23.</p>	168.717	129.402	139.178	0.000	139.178
	-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Continues integration of SPY-6 to include code updates as required to address communication issues between the elements. Conduct integration events, maintainability events, and stability events.</p> <p>Develop Training curriculum and documentation updates to reflect new capabilities.</p> <p>Evaluate and map all Flight III DDG requirements to support future integration and delivery to the first Flight III DDG.</p> <p>Programmatic and technical leadership in a collaborative Navy and industry environment. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SMEs). Participate in and evaluate AEGIS BL 10 2023 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Execute Test Execution activities and stimulation capability.</p> <p>Execute risk management.</p> <p>Develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRAs), In Process Reviews (IPRs), Program Reviews, and Test Readiness Reviews (TRRs).</p> <p>Execute Combat System Safety Program to include Weapon System Explosive Safety Review Board (WSESRB).</p> <p>Execute all Test and Evaluation efforts being conducted at Land Based Test Sites to validate Computer Program development and integration efforts as required to meet the delivery to the first Flight III DDG.</p> <p>Integrating Modeling and Simulation products to improve requirements test coverage and reduce future test requirements.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Continued Site Activation efforts required to support AEGIS BL 10 2023 Development and Integration Testing. SPY-6 Radar Integration within the AEGIS Combat System and initial testing is planned to be completed at CSEDS starting in FY21.					
Support early Test and Evaluation efforts being conducted at Land Based Test Sites to validate Computer Program development and integration efforts as required to meet the delivery to the first Flight III DDG.					
Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test & Evaluation (T&E), Certification, and Subject Matter Experts (SME). Participate in and evaluate remaining AEGIS BL 10 2023 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).					
Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.					
Support Combat System certification activities required to support planned FY23 Certification.					
Support all risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of BL 10 2023.					
Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), and Software Increment Reviews (SWIR) Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.					
Continue to evaluate and monitor DDG 125 schedule to ensure all required products are delivered to the ship to support AEGIS Light-Off as planned.					
Support integrating Modeling and Simulation products to improve requirements test coverage.					
<b>FY 2022 Base Plans:</b> AEGIS BL 10 2023 Engineering Assessment #1 Q1 FY22					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>AEGIS BL 10 2023 In-Progress Review #7 Q3 FY22 AEGIS BL 10 2023 Engineering Assessment #2 Q4 FY22</p> <p>Continue to support incremental design, development and integration of AEGIS code and integration for the following capabilities: SPY-6 (AMDR) BMD 6.0 MK 160 GCS improvements TDL J3.4 message updates CIWS sensor data integration.</p> <p>Continued Site Activation efforts required to support AEGIS BL 10 2023 Development and Integration Testing. SPY-6 Radar Integration within the AEGIS Combat System.</p> <p>Continue to support the integration of SPY-6 Radar and BMD 6.0 functionality including: Development and review of specifications, Code development, Component level testing, Element verification, Early system level integration, weapon system and subsystem integration.</p> <p>Conduct integration events, maintainability events, and stability events.</p> <p>Update training curriculum and documentation to reflect new capabilities.</p> <p>Support increased Land Based testing at CSEDS to validate code development and reduce risk to Shipboard testing programs planned to start in FY22. Support AEGIS Light-Off of DDG 125.</p> <p>Support FLT III DDG test plan development to include the following: AEGIS Light off of DDG 125 in second QTR FY22 Initial shipboard checkout and subsequent at-sea event preparation</p> <p>Support the installation of AEGIS BL 10 2023 on DDG 125 to include the following: Installation and checkout of computer program Combat System Test events 1 and 2 (ALPHA and BRAVO Trials)</p>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>Discrepancy investigation and resolution Scenario development</p> <p>Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate remaining AEGIS BL 10 2023 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Execution of all Test activities and stimulation capability required to validate system functionality, system interfaces, performance requirements, multi-unit interoperability and ensure system stability.</p> <p>Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.</p> <p>Conduct Combat System certification activities required to support planned FY23 Certification.</p> <p>Develop and maintain risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of BL 10 2023.</p> <p>Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.</p> <p>Conduct Combat System Safety Program to address all Weapon System Explosive Safety Review Board (WSESRB) requirements. Provide programmatic and technical leadership in a collaborative Navy and industry environment.</p> <p>Continue to evaluate and monitor DDG 125 schedule to ensure all required products are delivered to the ship to support AEGIS Light-Off as planned.</p>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Identify, test and fix critical issues identified that impact the operational effectiveness of the AEGIS Combat System.  <b>FY 2022 OCO Plans:</b> N/A  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 increase is related to testing of SPY-6 with the AEGIS Weapon System and LBTS and support Shipboard testing starting in the 2nd QTR of FY22. This testing will identify integration issues with operating and maintaining the SPY-6 radar that will drive code changes to ensure critical integration issues are resolved prior to shipboard testing.					
<b>Title:</b> AEGIS: FIX IFF MODE 4 / ACCELERATE MODE 5  <b>Articles:</b>  <b>Description:</b> This program addresses an immediate operational issue to fix Identification Friend or Foe (IFF) mode 4 as well as accelerate integration of IFF mode 5 and bring all AEGIS Cruisers and Destroyers into IFF mode 5 compliance by 2020 in accordance with the JROC mandate to sunset IFF mode 4.  <b>FY 2021 Plans:</b> Complete all Ship board deliveries planned in FY21. Support Computer Program update if required to address code correction.  <b>FY 2022 Base Plans:</b> N/A  <b>FY 2022 OCO Plans:</b> N/A  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Effort Completed in FY21	21.470	8.854	0.000	0.000	0.000
	-	-	-	-	-
<b>Title:</b> AEGIS DESTROYER BL 5 UPGRADES  <b>Articles:</b>  <b>Description:</b> AEGIS BL 5 2020 combines AEGIS BL 5 and BMD 4.1 into single AEGIS Computer Program enabling near simultaneous shift between AAW and BMD operations for the AEGIS Flight I/II DDGs as well as a combined Air and Ballistic Missile Defense capability. Additional capabilities delivered with AEGIS BL 5	46.905	29.173	11.000	0.000	11.000
	-	-	-	-	-

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<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>2020 include SM-6 integration, as well as capabilities developed to address Fleet Urgent Operational Needs (UONs). This includes Digital Air Control Updates, Raid Improvements with Agile Storm and Prism, Expanded National Technical Means Function (NTF) with Thunder, and Low Slow Flyer improvements with Sundowner, Maintenance Updates, and Interop Improvements. Support installation on DDG 68 in FY20.</p> <p>AEGIS BL 5 2021 build is an emergent update to BL 5.4 2020 that includes critical updates to address Computer Program discrepancies identified during the installation and checkout on USS Fitzgerald.</p> <p>AEGIS BL 5 2023 includes refurbishment of the SPY-1D radar arrays with installation of Low Noise Amplifiers (LNA) to improve radar sensitivity against emerging threats through the end of the Flight I/II DDG service life. Additional capabilities delivered with AEGIS BL 2023 includes BMD 4.2 operations, and Computer Program maintenance. Targeting delivery on 12 Ships starting in FY23.</p> <p><b>FY 2021 Plans:</b> AEGIS BL 5 2021 Combat System Certification Panel 3Q FY21.</p> <p>AEGIS BL 5 2023 Critical Design Review (CDR) Q1 FY21. AEGIS BL 5 2023 In-Progress Review #2 Q1 FY21. AEGIS BL 5 2023 In-Progress Review #3 Q3 FY21.</p> <p>Continue to execute Code development, integration and testing to address emergent build in support of USS Fitzgerald BL 5 2021 Certification. Continue to support AEGIS BL 5 2020/2021 at-sea installations and testing to validate the operational effectiveness of the upgrade Code. Continued AEGIS BL 5 2023 code development, integration, and testing.</p> <p>Support Land Based Test Site upgrade at Surface Combat System Center required to validate Computer Program and Hardware changes prior to shipboard installation. Support all Land Based testing requirements to validate both hardware and software changes required as part of BL 5 2023.</p> <p>Start development and execution of DDG test plan in support of at-sea event.</p> <p>Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management</p>					

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<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>(CM), Test &amp; Evaluation (T&amp;E), Certification, and Subject Matter Experts (SME). Participate in and evaluate remaining AEGIS BL 5 2021/2023 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).</p> <p>Execute all Test activities and stimulation capability required to validate system functionality, system interfaces, performance requirements, multi-unit interoperability and ensure system stability.</p> <p>Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.</p> <p>Conduct Combat System certification activities required to support planned FY 21 and FY23 Certification.</p> <p>Conduct and Maintain all risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of BL 5 2021/2023.</p> <p>Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.</p> <p>Conduct Combat System Safety Program to address all Weapon System Explosive Safety Review Board (WSESRB) requirements.</p> <p>Support installation of BL 5.4 2020/2021 on 8 DDG's and 1 CG in FY21.</p> <p><b>FY 2022 Base Plans:</b>                      AEGIS BL 5 2023 In-Progress Review #4 Q1 FY22.                      AEGIS BL 5 2023 In-Progress Review #5 Q1 FY22.                      AEGIS BL 5 2023 At-Sea Event Q4 FY22.</p> <p>Continued AEGIS BL 5 2023 code development, integration, and testing to support the Linear Noise Amplifier upgrades planned for all remaining BL 5 DDG's to improve the operational effectiveness of the SPY radar and continues to pace the threat.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Continue to support AEGIS BL 5 2020/2021 at-sea installations and testing to validate the operational effectiveness of the upgrade Code.					
Continue development and execution of DDG test plan in support of at-sea event. Support sea test event execution required to field AEGIS BL 5 2023 on DDG 54. Support the installation and checkout of computer program, Flight Test Mission - 37 planning, and scenario development.					
Provide system engineering efforts required to support the Integrated Product Teams. Program Management Team (PMT), System Engineering Cross Product Team (SECPT), Element, Safety, Configuration Management (CM), Test & Evaluation (T&E), Certification, and Subject Matter Experts (SME). Participate in and evaluate remaining AEGIS BL 5 2023 design decisions, Engineering Technical Reviews (ETR), Specification Change, Review, Implementation, and baseline governance boards and Navy Review Team (NRT).					
Execute all Test activities and stimulation capability required to validate system functionality, system interfaces, performance requirements, multi-unit interoperability and ensure system stability.					
Support Change Review Boards (CRB) to review computer program defects, characterize risk to system performance, and identify defect corrections.					
Conduct Combat System certification activities required to support planned FY23 Certification.					
Conduct and Maintain all risk management activities required to identify, mitigate and resolve critical risk that would impact the fielding of BL 5 2023.					
Continue to develop briefs for technical and programmatic meetings in support of Mission Readiness Assessments (MRA), In Process Reviews (IPR), Program Reviews, and Test Readiness Reviews (TRR) as required to support the requirements of each milestone to ensure program success.					
Execute Combat System Safety Program to address all Weapon System Explosive Safety Review Board (WSESRB) requirements.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Support installation of BL 5.4 2021 on 6 DDG's in FY21. <b>FY 2022 OCO Plans:</b> NA <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Decrease based on the Phasing of the planned efforts.					
<b>Title:</b> COMBAT SYSTEMS TEST BED (CSTB)  <b>Description:</b> Combat Systems Test Bed (CSTB) is an AEGIS Modeling and Simulation (M&S) tool built to address limitations in AEGIS Developmental Test (DT) and Operational Test (OT) that DOT&E highlighted in previous AEGIS baselines. CSTB models AEGIS Combat System (ACS) performance against adversary threats through the use of high-fidelity M&S, generating Objective Quality Evidence (OQE) that directly supports DOT&E evaluations of new AEGIS baselines. CSTB reduces Navy OT costs by enabling portions of AEGIS operational testing to be conducted via M&S increasing requirements coverage and avoiding the costs of targets and weapons that would ordinarily be required to conduct OT solely via live fire events. In letters dated August 9, 2013 and June 9, 2014, DOT&E has established the requirement that Navy use tactical code-based M&S (CSTB) in conjunction with live tests for AEGIS OT. IWS1 and Commander Operational Test and Evaluation Force will continue to use CSTB for AEGIS Baseline 9 and Baseline 10 Critical Operational Issue evaluations in 2022 and beyond.  CSTB has also been used extensively to develop pre-flight performance predictions and post-flight performance reconstructions for every AEGIS Baseline 9 live fire test since January 2015. During this time, CSTB has established a track record of accurate predictions over 145,000 missile scenarios - identifying mission-critical software defects that led directly to \$584M in cost avoidance and precluded numerous flight test failures.  In addition to its support for AEGIS BL9/10 OT and flight test predictions, CSTB is also critical to Frigate (FFG) Combat System development. CSTB Builds 1 thru 3 are complete, and there are ten (10) more builds planned to provide additional functionality in support of BL9, BL10, and FFG Combat System OT requirements.  <b>FY 2021 Plans:</b> Support Code Development, integration and testing efforts required to complete BL 2020 Runs for the record. Provide a Verification, Validation & Accreditation reviews to support this event.	15.710	18.484	16.647	0.000	16.647
<b>Articles:</b>	-	-	-	-	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>BL 9 2020 DT Runs for Record (RFR) 1Q FY21. Computer Program Delivery #4 1Q FY21.</p> <p>Commence Build 5 SE Cycle (Design, Development, Integration, and Test) and complete In-Progress Review's. Support Federation Validation testing (Reconstruction of at-sea events CG 53/55/56).</p> <p>Support Code Development, integration and testing effort required to complete BL 9.2.2 Runs for the record. Provide a Verification, Validation &amp; Accreditation Review to support this event.</p> <p>Start Build 5 Federate Integration Testing to validate new functionality being implemented within the CSTB model required to support BL 9.2.2 DT RFR's.</p> <p>Support BL 2021 Federation Validation (Reconstruction of at-sea events DDG 84/86) and continue to complete In-Progress Review's as required to support program management efforts.</p> <p>Start Development and integration of CSTB Build 5 expanding on the capabilities delivered in CSTB Build 4, including the following efforts:                      - Federate design and development of ESSM Block 2, NULKA decoy, SLQ-32(V)6, Interactive Threat models, and BMD Debris models.                      - Federate integration of SPY-6, and SM-3 Blk IIA models.                      - Verification and Validation (V&amp;V) of AWS, SPQ-9B, VLS, SM-2 Block IIIA/IIIB, and SM-6 Block I model capabilities.</p> <p><b>FY 2022 Base Plans:</b>                      Support Code development, integration and testing efforts required to complete Build 5 Federation Verification testing Computer Program Delivery #5 1Q FY22.</p> <p>BL 9.2.2 DT Runs for the Record (RFR) 2Q FY22                      CP 2022 DT RFR #1 2Q FY22                      CP 2022 DT RFR #2 4Q FY22</p> <p>Support BL 9 2020 reconstruction of CG 63 at-sea event</p>					

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Commence Build 6 SE Cycle (Design, Development, Integration, and Test) and complete In-Progress Reviews as required to support program management efforts.					
Support BL 9 2020 and BL 9 2021 reconstruction of CG 63 OT/ DDG 121 DT at-sea events. Support Federate Integration Testing.					
Start Development and integration of CSTB Build 6 expanding on the capabilities delivered in CSTB Build 5, including the following efforts: - Federate integration of ESSM Block 2, SM-3 Blk IB TU TR, SLQ 32(V) 6, SKCS, NULKA decoy, Interactive Threat models, and BMD Debris models. - Verification and Validation (V&V) of SPY-6, SM-3 Blk IIA, ESSM Block 2, SM-3 Blk IB TU TR, NULKA decoy, Interactive Threat models, and AAW/BMD Debris model capabilities					
Support code development, integration, and testing effort required to support CP 22-1. Support CP 22-1 Federation Validation testing (Reconstruction of at-sea events DDG 85/87 DT).					
Support code development, integration, and testing effort required to support BL 5.4.1. Support BL 5.4.1 Federation Verification and Validation testing.					
<b>FY 2022 OCO Plans:</b> NA					
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Decrease based on the Phasing of the planned efforts.					
<b>Title:</b> TASK FORCE CYBER AWAKENING (TFCA)	12.679	14.720	15.000	0.000	15.000
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Provides solutions to address AEGIS Cyber deficiencies and vulnerabilities. Solutions include the AEGIS Cyber security toolkit, file integrity checker, anti-malware, USB media detection, boundary proxy service, system incident and event manager, common user interface, network device integrity, identification					

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>management, certificate management, secure boot, application whitelisting, sandbox, cross domain and daily report capabilities. These solutions will be delivered as part of planned AEGIS BL 9 and 10 updates.</p> <p><b>FY 2021 Plans:</b>                      In-Progress Review #10 2Q FY21                      In-Progress Review #11 4Q FY21</p> <p>Continues to support Software Increment Review (SWIR) to ensure all Cyber Code development efforts were completed as planned to support. Support Baseline and Capability package milestones to assess Cyber status within each product and adjust Cyber tasks accordingly.</p> <p>Continue to evaluate emerging threats, develop mitigations to address the vulnerabilities identified during the Section 1647 assessment.</p> <p>Continue supporting integration efforts related to fielding Cyber capabilities within the AEGIS Common Source Library (CSL).</p> <p>Continue to collaborate on common cyber solutions with programs including B/L Aegis, USGC, SSDS, HDR, and LCS. Support the fielding of cyber capabilities on AEGIS baselines to achieve compliance with TFCA initiatives and mandates as directed to support CFOM.</p> <p><b>FY 2022 Base Plans:</b>                      In-Progress Review #12 2Q FY22.                      In-Progress Review #13 4Q FY22.</p> <p>Continue to implement the AEGIS Cyber Roadmap which will introduce enterprise grade cyber security protection to the AEGIS Weapon System. Support the transition into DevSecOps model. Support the evaluation of the AEGIS pipeline from developer to ship to ensure all Cyber requirements are adequately addressed.</p> <p><b>FY 2022 OCO Plans:</b>                      NA</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b></p>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
FY22 Decrease based on the Phasing of the planned efforts.					
<b>Title:</b> INTEGRATED COMBAT SYSTEM COMPUTING INFRASTRUCTURE (ICS CI) <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Integrated Combat System Computing Infrastructure (ICS CI) acceleration delivers the Prototype Integrated Combat System (ICS) Computing Infrastructure (CI). The ICS CI is a foundational element of the surface Navy's Future Integrated Combat System supporting all future ship classes. ICS CI replaces legacy Combat System hardware configurations enabling continuous hardware upgrades to deliver improved capability to the Fleet faster.</p> <p><b>FY 2021 Plans:</b> N/A</p> <p><b>FY 2022 Base Plans:</b> In Progress Review #1 Q2 FY22</p> <p>Deliver the final prototypes of ICS consoles and displays.</p> <p>Finalize detailed Ship Integration Government Furnished Information (GFI) to support just in time GFI artifacts (mounting drawings, cabinet information, cable routing data etc.) to support Computing Infrastructure delivery for AEGIS Modernization and new construction DDGs.</p> <p>Complete Environmental Qualification Testing (EQT) on the ICS CI cabinets and complete development of the ICS CI Engineering Development Model (EDM).</p> <p>Complete development of the ICS CI supporting documentation.</p> <p><b>FY 2022 OCO Plans:</b> NA</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY22 Increase to support new start program to development prototype Integrated Combat System (ICS) Computing Infrastructure (CI) hardware.</p>	0.000	0.000	18.200	0.000	18.200
	-	-	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>	351.628	348.863	364.557	0.000	364.557

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

Line Item	FY 2020	FY 2021	FY 2022	FY 2022	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Cost To	
			Base	OCO	Total					Complete	Total Cost
• R&D 0604501N: <i>Multi Mission Signal Processor</i>	2.567	2.856	0.000	-	0.000	-	-	-	-	-	-
• SCN 2122: <i>DDG 51</i>	5,809.323	3,079.201	1,898.006	-	1,898.006	-	-	-	-	-	-
• OPN 0900: <i>DDG Modernization</i>	564.966	547.569	703.820	-	703.820	-	-	-	-	-	-
• R&D 0604378N PU 3159: <i>NIFC-CA</i>	25.767	25.694	0.000	-	0.000	-	-	-	-	-	-
• OPN 5231: <i>Ship Missile Support Equipment (AEGIS Support Equipment)</i>	25.767	25.694	0.000	-	0.000	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

Combat system improvements are implemented in capability packages as described in the project mission statement. After the combat system is completed and tested, the computer program and associated equipment are delivered to the new construction shipbuilders and modernization shipyards where the computer program and equipment are installed and tested along with all other elements of the shipboard combat system and associated combat support systems. The computer program is a Government Furnished Computer Program (GFCP) deliverable to the Production Test Center for equipment test and check out. Future Combat System deliveries will be provided using the Combat System Engineering Agent (CSEA) contract. Additional modifications to the existing contracts will address any war fighting improvements as directed by OPNAV. Currently PEO IWS 1.0 has existing contracts or pending contract actions supporting all efforts defined within the Budget Exhibit. A summary of contracts and contractual actions are captured below.

AEGIS is transitioning to Capability Packages that will be completed in a 4 phased approach as outlined below.

- Phase 1 Combat System Requirements definition and Specification Development
- Phase 2 Code Development and Integration and supporting early Level 1-2 Testing requirements
- Phase 3 Combat System and Weapon Element Integration and continuing Level 3-5 Testing
- Phase 4 Combat System Shipboard Testing, Final Certification and fielding

Active Major Contracts:

- N00024-13-C-5116: Competitive award to support AEGIS BL 9 2018 and follow on efforts - Period of Performance FY13-FY23
- N00024-16-C-5102: Sole source follow on to complete AEGIS BL 9 2018 for DDG 118-119 - Period of Performance FY16-FY21
- N00024-13-C-5103: Sole source follow on to support NJ Sites - Period of Performance FY18-FY23
- N00024-17-C-5109: Life cycle logistics support - Period of Performance FY17-FY21
- N00024-14-C-5104: Sole source to support ship installation and test - Period of Performance FY14-FY22

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>
N00024-15-C-5151: AEGIS ship integration and test - Period of Performance FY15-FY25 N00024-20-R-5604: Automated Test and Analysis - Period of Performance FY21-26		
Contract Amendments: N00024-13-C-5116: Sole Source extension to complete BL 9 and BL 10 efforts FY22-FY25		
Pending New Contracts: N00024-19-R-2126: Surface Combatant Software Factory - Planned Award Date MAY 2021 N00024-20-R-5102: Surface Combatant System Engineering and Software Integration - Planned Award Date JUN 2021		
In addition, PEO IWS 1.0 leverages contracts maintained by other organizations in support AEGIS Development. These include: MDA - LM BMD Contract (AEGIS BL 5 2020/2023 DEV) NAVSEA - JHU APL, SAIC, BAH, Strategic Insight, Tech Marine Business and Engility (ENG/PSS/ESS) NSWC DD - Lead System Engineer NSWC PHD - Life cycle logistics support		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy** **Date:** May 2021

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i> <i>ys Eng</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 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>			
Systems Engineering	C/CPIF	Lockheed Martin : Moorestown, NJ	3,170.104	255.646	Oct 2019	235.877	Oct 2020	241.662	Oct 2021	-		241.662	-	-	-
Systems Engineering	SS/CPFF	APL : Baltimore, MD	140.224	21.334	Oct 2019	18.524	Oct 2020	18.632	Oct 2021	-		18.632	-	-	-
Systems Engineering	WR	NSWC : Dahlgren, VA	541.933	31.571	Oct 2019	37.557	Oct 2020	37.540	Oct 2021	-		37.540	-	-	-
Systems Engineering	SS/CPAF	BAE Systems : Rockville, MD	72.974	5.521	Oct 2019	6.587	Oct 2020	7.610	Oct 2021	-		7.610	-	-	-
Systems Engineering	C/CPIF	Raytheon : St. Petersburg, FL	1.400	3.512	Oct 2019	7.630	Oct 2020	8.510	Oct 2021	-		8.510	-	-	-
Systems Engineering	WR	NSWC : Port Hueneme, CA	99.953	6.895	Oct 2019	5.368	Oct 2020	5.013	Oct 2021	-		5.013	-	-	-
Systems Engineering	WR	NWAS : Corona, CA	45.986	4.152	Oct 2019	3.587	Oct 2020	3.684	Oct 2021	-		3.684	-	-	-
Systems Engineering	WR	SPAWAR : San Diego, CA	14.845	1.098	Oct 2019	1.897	Oct 2020	1.254	Oct 2021	-		1.254	-	-	-
Systems Engineering	WR	Various : Various	204.522	12.204	Oct 2019	21.865	Oct 2020	22.440	Oct 2021	-		22.440	-	-	-
Award fees	WR	Various : Various	10.477	0.458	Oct 2019	0.000	Oct 2020	0.000	Oct 2021	-		0.000	-	-	-
Systems Engineering	C/CPIF	Technology Service Corporation : Silver Spring , MD	0.432	0.463	Oct 2019	0.852	Oct 2020	8.900	Oct 2021	-		8.900	-	-	-
<b>Subtotal</b>			4,302.850	342.854		339.744		355.245		-		355.245	-	-	N/A

**Remarks**  
 Various Performing Activities consist of multiple performing activities with funding for each no greater than \$1 million per year. These larger performing activities include CDSA Dam Neck and NSWC/Crane.

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2020</b>		<b>FY 2021</b>		<b>FY 2022 Base</b>		<b>FY 2022 OCO</b>		<b>FY 2022 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>			
Test and Evaluation	WR	Department of Interior : Boise, Idaho	45.817	1.124	Oct 2019	1.201	Oct 2020	1.250	Oct 2021	-		1.250	-	-	-



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

RDT&E,N/BA-5	0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING												1447/Surface Combatant Combat System Implementation
Fiscal Year	2020				2021				2022				TBD
	1	2	3	4	1	2	3	4	1	2	3	4	
AEGIS CRUISER BL 9 UPGRADES													

BL 9 2020  
CSCP

System Test an  
Integration

Underway Testing

- **FY 2021 to FY 2022 Change Summary:**
- BL 9 2020 CSCP was delayed to resolve emergent Issues from 3 QTR FY20 to 4 QTR FY20

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i> <i>ys Eng</i>

<small>RDT&amp;E.N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>												<small>1447/Surface Combatant Combat System Implementation</small>							
<b>Fiscal Year</b>	<b>2020</b>				<b>2021</b>				<b>2022</b>				<b>TBD</b>							
	1	2	3	4	1	2	3	4	1	2	3	4								
<b>AEGIS DESTROYER BL 9 UPDGRADES</b>				BL 9 2020 CSCP																
	Underway Testing																			
						BL 9 2021 CSCP														
	System Test and Integration								Underway Testing											

- **FY 2021 to FY 2022 Change Summary:**
- BL 9 2020 CSCP was delayed to resolve emergent Issues from 3 QTR FY20 to 4 QTR FY20
- BL 9 2021 CSCP was delayed to collect all emergent corrections made to BL 9 2020 builds from 1 QTR to 3 QTR FY21

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

RDT&E/N/BA-5	0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING	1447/Surface Combatant Combat System Implementation				
Fiscal Year	2020	2021	2022	TBD		
	1 2 3 4	1 2 3 4	1 2 3 4			
CAPABILITY PACKAGE 2022	IPR #1	IPR #2	IPR #3		IPR #4	BL 9 2022 CSCP
	Code Develop		System Test and Integration		Under way Testing	

- FY 2021 to FY 2022 Change Summary:
- No Changes

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E,N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>		
<b>Fiscal Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>TBD</b>
	1 2 3 4	1 2 3 4	1 2 3 4	
CAPBILITY PACKAGE 2023				
		IPR #1	IPR #2 IPR #3	
		Code Develop		
		System Test and Integration		

- **FY 2021 to FY 2022 Change Summary:**
- CP 2023 IPR's 1,2,3 were delayed 9 months due to FY21 Congressional Reduction from 2 QTR 2021 to 1 QTR 2022.
- CP 2023 IPR #4 Eliminated due to reduced scope caused by FY21 Congressional reduction.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E,N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>											
Fiscal Year	2020				2021				2022				TBD
	1	2	3	4	1	2	3	4	1	2	3	4	
CAPABILITY PACKAGE 2024													
									IPR #1	IPR #2			
								Code Develop					

- FY 2021 to FY 2022 Change Summary:
- New start in FY22

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E,N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>																																			
<b>Fiscal Year</b>	<table border="1"> <tr> <th colspan="4">2020</th> <th colspan="4">2021</th> <th colspan="4">2022</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> <th>1</th><th>2</th><th>3</th><th>4</th> </tr> </table>	2020				2021				2022				1	2	3	4	1	2	3	4	1	2	3	4	<b>TBD</b>											
2020				2021				2022																													
1	2	3	4	1	2	3	4	1	2	3	4																										
AEGIS BL 10 (FLT III DESTROYER)	<table border="1"> <tr> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> </tr> <tr> <td align="center">▲ IPR #4</td><td></td><td></td><td align="center">▲ IPR #5</td> <td></td><td></td><td align="center">▲ IPR #6</td><td></td> <td align="center">▲ EA #1</td><td align="center">▲ IPR #7</td><td></td><td align="center">▲ EA #2</td> </tr> <tr> <td align="center" colspan="4">Code Development</td> <td align="center" colspan="4">System Test and Integration</td> <td colspan="4"></td> </tr> </table>													▲ IPR #4			▲ IPR #5			▲ IPR #6		▲ EA #1	▲ IPR #7		▲ EA #2	Code Development				System Test and Integration							
▲ IPR #4			▲ IPR #5			▲ IPR #6		▲ EA #1	▲ IPR #7		▲ EA #2																										
Code Development				System Test and Integration																																	

- **FY 2021 to FY 2022 Change Summary:**
- AEGIS BL 10 IPR 7 and 8 added to monitor project progress based on SPY-6 Integration delays.
- AEGIS BL 10 EA #2 to monitor project progress based on SPY-6 Integration delays.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

Fiscal Year	2020				2021				2022				2023				2024				2025				2026							
	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>AEGIS BL 5 UPGRADES</b> BL 5.4 Phase 1 (BL 5 2020)  BL 5.4 Emergent Build (BL 5 2021)  BL 5.4 Phase 2 (BL 5 2023)	BL 5.4 2020 CSCP *																<b>TBD</b>														
BL 5.4 2021 CSCP *																																
SRR, IPR #1, CDR, IPR #2, IPR #3, IPR #4, IPR #5, At-Sea Event																																

- **FY 2021 to FY 2022 Change Summary:**
- Added Emergent Build to address Computer Program issues identified during testing including major milestone BL 5.4 2021 CSCP 3 QTR FY21
- Removed Preliminary Design Review in 3 QTR FY 20 and replaced with In-Progress Review #1
- Removed Critical Design Review in 3 QTR FY 20 and replaced with In-Progress Review #2 in 1 QTR FY21
- Land Based Test Site Upgrade delayed from 1 QTR FY21 to 2 QTR FY21
- Added IPR's 3 through 5

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E/N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>											
Fiscal Year	2020				2021				2022				TBD
	1	2	3	4	1	2	3	4	1	2	3	4	
AEGIS; FIX MODE 4 / ACCELERATE 4			BL 5 2020 CSCP										
AEGIS BL 5 2018/2020	Underway Testing												
AEGIS BL 7 2019	Underway Testing												
AEGIS BL 9 2020			BL 9 2020 CSCP										
	Underway Testing												

- FY 2021 to FY 2022 Change Summary:
- No Change

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E/N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>												<small>1447/Surface Combatant Combat System Implementation</small>
Fiscal Year	2020				2021				2022				<b>TBD</b>
	1	2	3	4	1	2	3	4	1	2	3	4	
COMBAT SYSTEM TEST BED (CSTB)	CP DEL #3				CP DEL #4				BL 9 2021 DT RFR				
						BL 9 2020 DT RFR			CP DEL #5	CP 2022 DT RFR #2			
									CP 2022 DT RFR #1				

- **FY 2021 to FY 2022 Change Summary:**
- Changed CP Delivery #2 to #3 / #3 to #4 / #4 to #5 / #5 to #6.
- Eliminated BL 9.2.2. ACRED from the schedule in 1 QTR FY21.
- Added BL 9 2020 DT Run for the Record (RFR) in 4 QTR FY21.
- Added BL 9 2021 DT Run for the Record (RFR) in 2 QTR FY22.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E,N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>								
<b>Fiscal Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>TBD</b>						
	1	2	3		4	1	2	3	4	
AEGIS CYBER AWAKENING TASK FORCE	IPR #8	IPR #9	IPR #10		IPR #11	IPR #12	IPR #13			
	▲	▲	▲		▲	▲	▲			

- FY 2021 to FY 2022 Change Summary:
- No Change

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt S</i> <i>ys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i> <i>ys Eng</i>

<small>RDT&amp;E,N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>		
<b>Fiscal Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>TBD</b>
	1 2 3 4	1 2 3 4	1 2 3 4	
<b>Integrated Combat System Computing Infrastructure (ICS CI)</b>			IPR #1	

- FY 2021 to FY 2022 Change Summary:
- New Task Starting in FY22

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<small>RDT&amp;E,N/BA-5</small>	<small>0604307N/SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</small>	<small>1447/Surface Combatant Combat System Implementation</small>			
<b>Fiscal Year</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>TBD</b>	
	1 2 3 4	1 2 3 4	1 2 3 4		
SEWIP BLK III INTEGRATION					

IPR #1  
S

- **FY 2021 to FY 2022 Change Summary:**
- New start in FY22

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 1447</b>				
AEGIS CRUISER BL 9 UPGRADES: COMPUTER PROGRAM CERTIFICATION PANEL BL 9 2020	4	2020	4	2020
AEGIS DESTROYER BL 9 UPGRADES: BL 9 2020 COMBAT SYSTEM CERTIFICATION PANEL	4	2020	4	2020
AEGIS DESTROYER BL 9 UPGRADES: BL 9 2021 COMBAT SYSTEM CERTIFICATION PANEL	3	2021	3	2021
CAPABILITY PACKAGE 2022: CP 2022 IN-PROGRESS REVIEW (IPR) #1	2	2020	2	2020
CAPABILITY PACKAGE 2022: CP 2022 IN-PROGRESS REVIEW (IPR) #2	4	2020	4	2020
CAPABILITY PACKAGE 2022: CP 2022 IN-PROGRESS REVIEW (IPR) #3	2	2021	2	2021
CAPABILITY PACKAGE 2022: CP 2022 IN-PROGRESS REVIEW (IPR) #4	4	2021	4	2021
CAPABILITY PACKAGE 2022: CP 2022 COMBAT SYSTEM CERTIFICATION PANEL	2	2022	2	2022
CAPABILITY PACKAGE 2023: CP 2023 IN-PROGRESS REVIEW (IPR) #1	4	2021	4	2021
CAPABILITY PACKAGE 2023: CP 2023 IN-PROGRESS REVIEW (IPR) #2	2	2021	2	2021
CAPABILITY PACKAGE 2023: CP 2023 IN-PROGRESS REVIEW (IPR) #3	4	2022	4	2022
CAPABILITY PACKAGE 2024: CP 2024 IN-PROGRESS REVIEW (IPR) #1	2	2022	2	2022
CAPABILITY PACKAGE 2024: CP 2024 IN-PROGRESS REVIEW (IPR) #2	4	2022	4	2022
AEGIS FLT III DESTROYER BL 10 UPGRADES: BL 10 2023 IN-PROGRESS REVIEW (IPR) #4	1	2020	1	2020
AEGIS FLT III DESTROYER BL 10 UPGRADES: BL 10 2023 IN-PROGRESS REVIEW (IPR) #5	4	2020	4	2020
AEGIS FLT III DESTROYER BL 10 UPGRADES: BL 10 2023 IN-PROGRESS REVIEW (IPR) #6	3	2021	3	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy			Date: May 2021	
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)		
1319 / 5	PE 0604307N / Surface Combatant Cmbt Sys Eng	1447 / Surf Combatant Combat System Imp		
Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
AEGIS FLT III DESTROYER BL 10 UPGRADES: BL 10 2023 ENGINEERING ASSESSMENT (EA) #1	1	2022	1	2022
AEGIS FLT III DESTROYER BL 10 UPGRADES: BL 10 2023 IN-PROGRESS REVIEW (IPR) #7	3	2022	3	2022
AEGIS FLT III DESTROYER BL 10 UPGRADES: BL 10 2023 ENGINEERING ASSESSMENT (EA) #2	4	2022	4	2022
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2020 COMBAT SYSTEM CERTIFICATION PANEL (CSCP)	3	2020	3	2020
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2021 COMBAT SYSTEM CERTIFICATION PANEL (CSCP)	3	2021	3	2021
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 SYSTEM REQUIREMENTS REVIEW (SRR)	2	2020	2	2020
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 IN-PROGRESS REVIEW (IPR) #1	3	2020	3	2020
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 CRITICAL DESIGN REVIEW (SRR)	1	2021	1	2021
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 IN-PROGRESS REVIEW (IPR) #2	1	2021	1	2021
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 IN-PROGRESS REVIEW (IPR) #3	3	2021	3	2021
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 IN-PROGRESS REVIEW (IPR) #4	1	2022	1	2022
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 IN-PROGRESS REVIEW (IPR) #5	2	2022	2	2022
AEGIS DESTROYER BL 5 UPGRADES: AEGIS BL 5 2023 AT-SEA EVENT	4	2022	4	2022
AEGIS IFF MODE 4/5 Integration: AEGIS BL 5 2020 COMBAT SYSTEM CERTIFICATION PANEL	3	2020	3	2020
AEGIS IFF MODE 4/5 Integration: AEGIS BL 9 2020 COMBAT SYSTEM CERTIFICATION PANEL	4	2020	4	2020

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 1447 / <i>Surf Combatant Combat System Imp</i>

<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
COMBAT SYSTEM TEST BED (CTSB): CTSB BUILD #3	1	2020	1	2020
COMBAT SYSTEM TEST BED (CTSB): CTSB BUILD #4	1	2021	1	2021
COMBAT SYSTEM TEST BED (CTSB): CTSB BL 2020 DT RFR	4	2021	4	2021
COMBAT SYSTEM TEST BED (CTSB): CTSB BUILD #5	1	2022	1	2022
COMBAT SYSTEM TEST BED (CTSB): CTSB BL 2021 DT RFR	2	2022	2	2022
COMBAT SYSTEM TEST BED (CTSB): CTSB CP 2022 DT RFR #1	2	2022	2	2022
COMBAT SYSTEM TEST BED (CTSB): CTSB CP 2022 DT RFR #2	4	2022	4	2022
TASK FORCE CYBER AWAKENING (TFCA): TFCA IN-PROGRESS REVIEW #8	2	2020	2	2020
TASK FORCE CYBER AWAKENING (TFCA): TFCA IN-PROGRESS REVIEW #9	4	2020	4	2020
TASK FORCE CYBER AWAKENING (TFCA): TFCA IN-PROGRESS REVIEW #10	2	2021	2	2021
TASK FORCE CYBER AWAKENING (TFCA): TFCA IN-PROGRESS REVIEW #11	4	2021	4	2021
TASK FORCE CYBER AWAKENING (TFCA): TFCA IN-PROGRESS REVIEW #12	2	2022	2	2022
TASK FORCE CYBER AWAKENING (TFCA): TFCA IN-PROGRESS REVIEW #13	4	2022	4	2022
INTEGRATION COMBAT SYSTEM (ISC) COMPUTING INFRASTRUCTURE: IN-PROGRESS REVIEW #1	2	2022	2	2022
SEWIP BLK III INTEGRATION: SEWIP BLK III IN-PROGRESS REVIEW #1	4	2022	4	2022

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>				<b>Project (Number/Name)</b> 3357 / <i>Aegis Training Improvement Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>3357: Aegis Training Improvement Program</i>	51.942	9.683	8.667	7.018	-	7.018	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

The AEGIS Training Improvement project provides enhancements and upgrades to the Total Ship Training Capability (TSTC) training components within the combat system to address needs for increased training capability and functionality in conjunction with AEGIS Capability Packages. 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 Integrated Air and Missile 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 Battle Force Tactical Trainer (BFTT) Program and Ship Self Defense System (SSDS) MK2 TSTC Training Improvement programs to meet AEGIS combat system training requirements. 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 Fleet Synthetic Trainers (FSTs). 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.

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 11.xAF. ATD is being hosted along with the AEGIS and SSDS combat system on TI-16AF 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.

The 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.

Develop and integrate MH-60R simulator to enable embedded shipboard training in support of basic and sustainment training, as well as establishes the pathway to support pier-side Fleet Synthetic Training (FST) events.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2022 Navy **Date:** May 2021

<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 3357 / <i>Aegis Training Improvement Program</i>
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Develop and Integrate Cooperative Engagement Capability (CEC) Enhanced Training (CET) to support basic and sustainment level training, as well as provide ability to distribute and establish CEC data link during pier-side fleet synthetic training exercises. CET is an enabler for proficiency training of NIFC-CA capability.

Develop and integrate CEC Interim Training (CIT) capability to support pier-side fleet synthetic training events. This is an interim capability that only supports distributed training until CET is fully deployed. This establishes the communications needed to enable strike group training of advanced capabilities being delivered to AEGIS BL 9AF ships.

Develop and integrate upgrades to Battle-Force Electronic Warfare Trainer (BEWT) to support soft kill training with NULKA.

Develop Identification Friend or Foe (IFF) simulator to enable training of Modes 1, 2, 3A, 4, C, 5 and S on both AEGIS and SSDS ships. Capability will enable training of AEGIS and SSDS IFF Mode 5/S, and address the Mode 4 Inoculation.

Develop and integrate commensurate training improvements to SSDS for Enhanced Sea Sparrow Missile (ESSM) and Electronic Warfare (EW) tactical improvements.

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

TSTC integrated on AEGIS provides the capability to complete system and operational level testing of the combat system.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<b>Title:</b> AEGIS Training Improvement and Integration	7.465	6.837	5.874	0.000	5.874
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> AEGIS Total Ship Training Capability (TSTC) provides enhancements to training components and increase training functionality in conjunction with AEGIS development and integration. These enhancements will address current and future training requirements and implement new functionality to support more complex training requirements related to Underwater, Surface and other warfighter upgrades.					
<b>FY 2021 Plans:</b>					
- Continue development, integration and testing of ATD on Aegis BL 10 2023 and Ship Self Defense System (SSDS) BL 12.					
- Develop changes to BFTT to incorporate ATD Human Machine Interface (HMI) to modernize BFTT on ships without TI 16 computing and display infrastructure.					
<b>FY 2022 Base Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy			<b>Date:</b> May 2021			
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 3357 / <i>Aegis Training Improvement Program</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
<p>- Continue development, integration and testing of ATD on Aegis BL 10 2023 and Ship Self Defense System (SSDS) BL 12.</p> <p>- Develop changes to BFTT to incorporate ATD Human Machine Interface (HMI) to modernize BFTT on ships without TI 16 computing and display infrastructure.</p> <p><b>FY 2022 OCO Plans:</b> N/A</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY21 to FY22 decrease of \$0.963 from \$6.837M to \$5.874 due to contract funding delays causing the effort to be pushed to the right into FY23 and FY24.</p>						
<p><b>Title:</b> Fleet Training Wholeness</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2021 Plans:</b></p> <p>- Continue integration and testing of sim over live training improvements being developed with radars to enable Live, Virtual and Constructive (LVC) Training capability on AEGIS and SSDS.</p> <p>- Continue development of Advanced Training Domain (ATD) for Aegis BL 9 2022 and BL 10 2023.</p> <p>- Begin integration and testing of Strike Group Cooperative Engagement Capability (CEC) Underway Training capability onto AEGIS Combat Systems Baselines.</p> <p><b>FY 2022 Base Plans:</b></p> <p>- Complete integration and testing of FTW LVC products and combat system enhancements.</p> <p>- Begin the transition of LVC products into BFTT / ATD Shipboard Systems.</p> <p>- Continue development of Advanced Training Domain (ATD) for Aegis BL 9 2022 and BL 10 2023.</p> <p>- Continue integration and testing of Strike Group Cooperative Engagement Capability (CEC) Underway capability onto AEGIS Combat Systems Baselines.</p> <p><b>FY 2022 OCO Plans:</b> N/A</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> FY21 to FY22 decrease of \$0.686 from \$1.830M to \$1.144M due to transition of FTW products into BFTT / ATD for Integration resulting in reduction FTW development / testing requirements.</p>		2.218	1.830	1.144	0.000	1.144
		-	-	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>		9.683	8.667	7.018	0.000	7.018

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 3357 / <i>Aegis Training Improvement Program</i>

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

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RD TEN/0204571N/1427: <i>Surface Tactical Team Trainer (STTT)</i>	65.134	43.167	34.744	-	34.744	-	-	-	-	-	-

**Remarks**

**D. Acquisition Strategy**

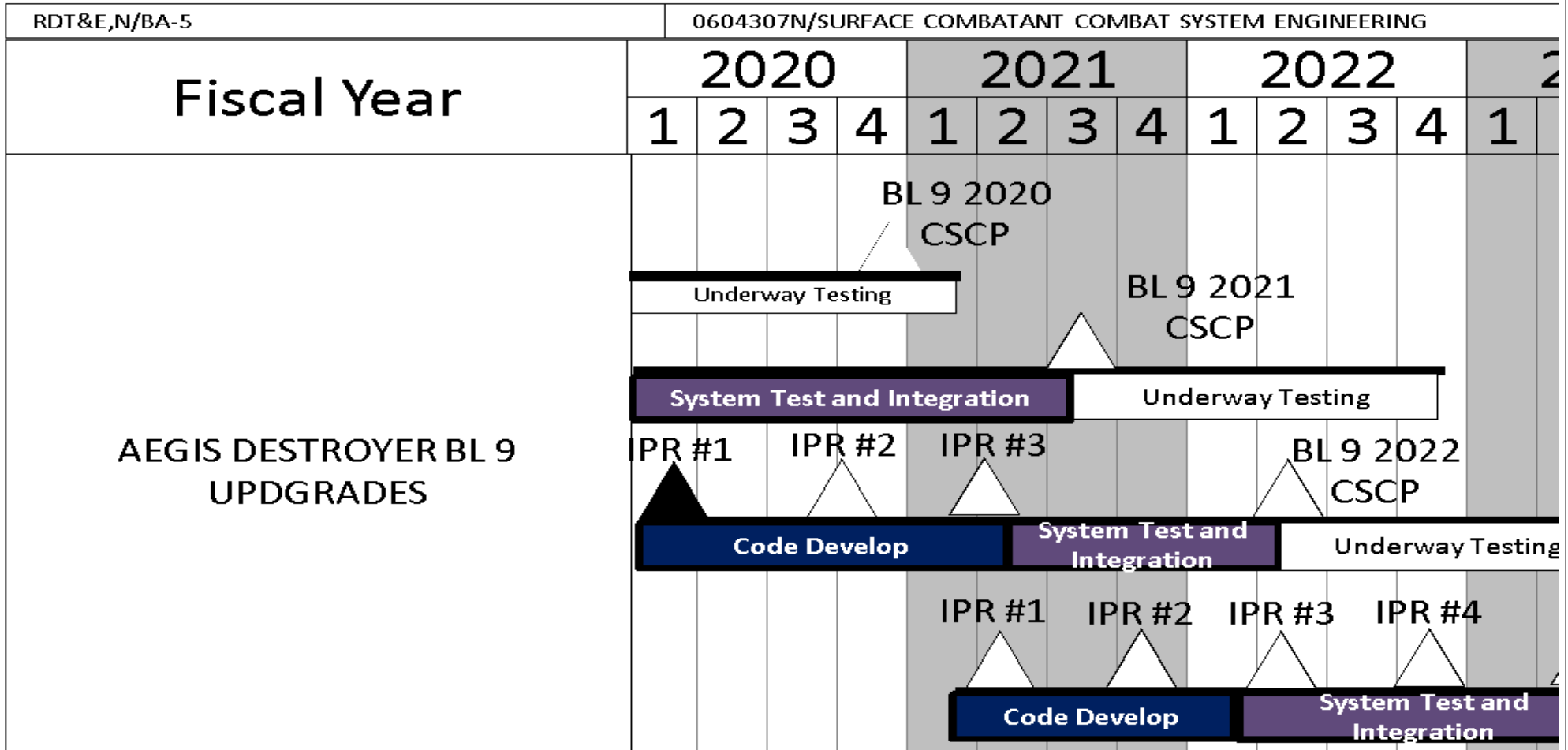
Efforts will be completed on various contracts to support requirements updates to multiple products that will support Training Integration and Implementation within AEGIS development capabilities.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy												Date: May 2021				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
1319 / 5				PE 0604307N / Surface Combatant Cmbt Sys Eng				3357 / Aegis Training Improvement Program								
<b>Product Development (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Product Development	Various	Various : Various	26.556	6.527	Dec 2019	5.585	Dec 2020	4.518	Dec 2021	-		4.518	-	-	-	
<b>Subtotal</b>			26.556	6.527		5.585		4.518		-		4.518	-	-	N/A	
<b>Support (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
System Engineering	Various	Various : Various	22.003	2.478	Dec 2019	2.335	Dec 2020	1.855	Dec 2021	-		1.855	-	-	-	
<b>Subtotal</b>			22.003	2.478		2.335		1.855		-		1.855	-	-	N/A	
<b>Management Services (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Engineering Support	C/CPIF	CACI : Arlington, VA	2.646	0.570	Dec 2019	0.622	Dec 2020	0.550	Dec 2021	-		0.550	-	-	-	
Professional Support	C/CPIF	TMB : Washington DC	0.737	0.108	Dec 2019	0.125	Dec 2020	0.095	Dec 2021	-		0.095	-	-	-	
<b>Subtotal</b>			3.383	0.678		0.747		0.645		-		0.645	-	-	N/A	
<b>Project Cost Totals</b>			51.942	9.683		8.667		7.018		-		7.018	-	-	N/A	
<b>Remarks</b>																

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2022 Navy</b>		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / Surface Combatant Cmbt Sys Eng	<b>Project (Number/Name)</b> 3357 / Aegis Training Improvement Program



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2022 Navy		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604307N / <i>Surface Combatant Cmbt Sys Eng</i>	<b>Project (Number/Name)</b> 3357 / <i>Aegis Training Improvement Program</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3357</b>				
AEGIS DESTROYER BL 9 UPGRADES: 2020 COMBAT SYSTEM CERTIFICATION PANEL	4	2020	4	2020
AEGIS DESTROYER BL 9 UPGRADES: 2021 COMBAT SYSTEM CERTIFICATION PANEL	3	2021	3	2021
AEGIS DESTROYER BL 9 UPGRADES: 2022 IN-PROGRESS REVIEW (IPR) #1	1	2020	1	2020
AEGIS DESTROYER BL 9 UPGRADES: 2022 IN-PROGRESS REVIEW (IPR) #2	4	2020	4	2020
AEGIS DESTROYER BL 9 UPGRADES: 2022 IN-PROGRESS REVIEW (IPR) #3	2	2021	2	2021
AEGIS DESTROYER BL 9 UPGRADES: 2022 COMBAT SYSTEM CERTIFICATION PANEL	2	2022	2	2022
AEGIS DESTROYER BL 9 UPGRADES: 2023 IN-PROGRESS REVIEW (IPR) #1	2	2021	2	2021
AEGIS DESTROYER BL 9 UPGRADES: 2023 IN-PROGRESS REVIEW (IPR) #2	4	2021	4	2021
AEGIS DESTROYER BL 9 UPGRADES: 2023 IN-PROGRESS REVIEW (IPR) #3	2	2022	2	2022
AEGIS DESTROYER BL 9 UPGRADES: 2023 IN-PROGRESS REVIEW (IPR) #4	4	2022	4	2022