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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604503N / <i>SSN-688 & Trident Modernization</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	1,321.787	92.168	93.501	93.435	-	93.435	98.363	98.589	98.461	100.022	Continuing	Continuing
0219: <i>Sub Sonar Improvement (ENG)</i>	1,217.521	61.695	60.372	60.822	-	60.822	63.137	63.347	63.805	64.693	Continuing	Continuing
0775: <i>Submarine Supt Equip Prog</i>	104.266	30.473	33.129	32.613	-	32.613	35.226	35.242	34.656	35.329	Continuing	Continuing

Note

Beginning in FY20, funding for the following projects was realigned from PE 0603503N to PE 0604280N: Project 0742 - Sub Integrated Antenna System and Project 1411 - Sub Tactical Communication System.

A. Mission Description and Budget Item Justification

SSN-688 & Trident Modernization delivers block updates to Submarine Sonar systems and develops improved Submarine Electronic Warfare (EW) systems. These development activities ensure all Submarine Classes maintain clear acoustical, tactical, and operational superiority over Submarines and Surface Combatants in Joint Littoral Warfare, Joint Intelligence Surveillance Reconnaissance (ISR), Indications and Warnings, Information Operations including Cyber, and Special Operations Force (SOF) support. Current developments are focused on supporting Joint Littoral Warfare, Regional Sea Denial, Strike Group Support, Diesel Submarine Detection, Joint Surveillance and Peacetime Engagement, Space and Electronic Warfare, Intelligence Collection, Maritime Protection, and Joint Strike.

FY 2024 funding request reflects a net decrease of \$.066 million from FY 2023 to FY 2024. Funding decrease is associated with APB-23 design, integration, and testing efforts associated with TI-24, which transitions Acoustic Rapid COTS Insertion (A-RCI) to Development, Cyber Security, and Operations (DevSecOps) in the Technical Insertion (TI)/Advanced Processing Build (APB) TI/APB process to better align with software development industry standards and meet fleet demands for rapid capability deliveries and increased focus on machine learning, automation, and behavioral analysis, Light Weight Wide Aperture Array (LwWAA) technology refresh development.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy	Date: March 2023
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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604503N / <i>SSN-688 & Trident Modernization</i>
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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	95.693	93.501	94.308	-	94.308
Current President's Budget	92.168	93.501	93.435	-	93.435
Total Adjustments	-3.525	0.000	-0.873	-	-0.873
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.525	0.000			
• Program Adjustments	0.000	0.000	-1.550	-	-1.550
• Rate/Misc Adjustments	0.000	0.000	0.677	-	0.677

Change Summary Explanation

FY 2024 funding request reflects an increase of \$.450 million from FY 2023 to FY 2024 for Proj: 0219. Funding increase is associated with APB-23 design, integration, and testing efforts associated with TI-24, which transitions Acoustic Rapid COTS Insertion (A-RCI) to Development, Cyber Security, and Operations (DevSecOps) in the Technical Insertion (TI)/Advanced Processing Build (APB) TI/APB process to better align with software development industry standards and meet fleet demands for rapid capability deliveries and increased focus on machine learning, automation, and behavioral analysis, Light Weight Wide Aperture Array (LwWAA) technology refresh development.

FY 2024 funding request also reflects a decrease of \$.516 million from FY 2023 to FY 2024 for Proj: 0775. Funding decrease associated with the completion of TI-22 development.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization				Project (Number/Name) 0219 / Sub Sonar Improvement (ENG)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0219: Sub Sonar Improvement (ENG)	1,217.521	61.695	60.372	60.822	-	60.822	63.137	63.347	63.805	64.693	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The AN/BQQ-10(V) Acoustic Rapid COTS Insertion (A-RCI) submarine SONAR system will continue to add new capabilities via Technical Insertion (TI)/Advanced Processing Build (APB) process while working across Submarine Warfare Federated Tactical System (SWFTS) programs to transition to Development Security Operations (DevSecOps) software processes and migrate to a cloud based architecture. The Navy is pursuing a transformation across SWFTS (PE 0604503N Project 0219, PE 0604562N Project 0236, PE 0604777N Project 0253 and PE 0604503N Project 0775) to maximize cyber-resiliency and the speed of capability delivery.

FY 2024 funding request reflects a net increase of \$.873 million from FY 2023 to FY 2024. Funding increase is associated with APB-23 design, integration, and testing efforts associated with TI-24, which transitions Acoustic Rapid COTS Insertion (A-RCI) to Development, Cyber Security, and Operations (DevSecOps) in the TI/APB process to better align with software development industry standards and meet fleet demands for rapid capability deliveries as well as increased focus on machine learning, automation, and behavioral analysis. Increase also associated with design, integration, and testing efforts associated with the Light Weight Wide Aperture Array (LwWAA) technical refresh for Block I/II VIRGINIA Class Submarines.

This program delivers block updates to Sonar Systems installed on SSN 688, 688I, SSN 21, VIRGINIA, SSBN, and SSGN Class Submarines to maintain clear acoustical, tactical, and operational superiority over Submarines and Surface Combatants in all scenarios through detection, classification, localization, and contact following.

Acoustics Rapid COTS Insertion (A-RCI) provides multi-phased evolutionary development geared toward addressing acoustic superiority issues through the rapid introduction of interim development products applicable to all Classes of Submarines.

- A-RCI Phase I and II introduced Towed Array processing improvements
- Phase III introduced Spherical Array processing improvements
- Phase IV provided High Frequency (HF) Array processing improvements for SSN 688I, SSGN, SSBN, VIRGINIA, and SSN 21 Class Submarines.

As part of the Navy's plan to maintain acoustic superiority for in-service submarines, a joint cooperative effort was established to deliver bi-annual Advanced Processing Builds (APBs) to prevent obsolescence and deliver ongoing capability improvements.

- Capabilities in the APBs will be integrated as part of A-RCI certified systems.

Sensor Efforts provide increased operational capabilities for littoral operations, situational awareness, and reliability improvements.

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Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0219 / Sub Sonar Improvement (ENG)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Title: APB Productionization</p> <p align="right">Articles:</p> <p>Description: APB Productionization provides for the transition of APB capability improvements to the Fleet for integration, testing and formal certification.</p> <p>FY 2023 Plans: -Continue Advanced Processing Build (APB) development and transition of APB software from development to A-RCI for integration, testing, and formal certification for SEAWOLF, 688/688I, OHIO, VIRGINIA, and COLUMBIA Class submarines. -Ensure continued transition of the SSBN legacy sonar system to the TI/APB model.</p> <p>FY 2024 Base Plans: -Continue Advanced Processing Build (APB) development and transition of APB software from development to A-RCI for integration, testing, and formal certification. -Ensure continued transition of the SSBN legacy sonar system to the TI/APB model. -Transition development of in-board signal processing associated with the Large Vertical Array (LVA) to VIRGINIA Class modernization.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Decrease is associated with the transition of APB capability improvements to the Fleet for integration, testing and formal certification.</p>	15.046	16.868	16.143	0.000	16.143
	-	-	-	-	-
<p>Title: Integration and Testing</p> <p align="right">Articles:</p> <p>Description: Integration and Testing provides support to integrate and test APBs into all Submarine Classes containing multiple sensor systems.</p> <p>FY 2023 Plans: -Continue support of Advanced Processing Builds installed on SSN688I, SSN 21, SSBN, SSGN, and VA Class Submarines.</p>	42.771	39.548	40.644	0.000	40.644
	-	-	-	-	-

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Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0219 / Sub Sonar Improvement (ENG)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue integration and testing associated with signal processing in support of Large Vertical Array (LVA) on SSBN and VA Class submarines.</p> <p>-Transition A-RCI APB content delivery to SWFTS Continuous Capability Insertion Model through implementation of Development, Cyber Security, and Operations (DevSecOps) and Agile development for flexible APB content releases to fleet platforms. These efforts increase focus on machine learning, automation, and behavioral analysis.</p> <p>FY 2024 Base Plans:</p> <p>-Continue support of Advanced Processing Builds installed on SSN688I, SSN 21, SSBN, SSGN, and VA Class Submarines.</p> <p>-Continue integration and testing associated with signal processing in support of Large Vertical Array (LVA) on SSBN and VA Class submarines.</p> <p>-Transition A-RCI APB content delivery to SWFTS Continuous Capability Insertion Model through implementation of Development, Cyber Security, and Operations (DevSecOps) and Agile development for flexible APB content releases to fleet platforms. These efforts increase focus on machine learning, automation, and behavioral analysis.</p> <p>FY 2024 OCO Plans:</p> <p>N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p> <p>Increase is associated with support to integrate and test APBs into all Submarine Classes containing multiple sensor systems.</p>					
<p>Title: A-RCI Acoustic Superiority Integration</p> <p align="right">Articles:</p>	3.878	3.956	4.035	0.000	4.035
<p>Description: Maintain Acoustic Superiority for In-service Submarines to deliver bi-annual Advance Processing Builds (APBs) to prevent obsolescence and deliver emerging capability improvements for current and future threats.</p> <p>FY 2023 Plans:</p>	-	-	-	-	-

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Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0219 / Sub Sonar Improvement (ENG)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue development of emerging capability improvements for current and future threats by supporting development, integration, and testing of emerging capability improvements in passive long range detection/wide area search for current and future threats in support of Navy SSN/SSBN Acoustic Superiority initiatives.</p> <p>FY 2024 Base Plans: -Continue development of emerging capability improvements for current and future threats by supporting development, integration, and testing of emerging capability improvements in passive long range detection/wide area search for current and future threats in support of Navy SSN/SSBN Acoustic Superiority initiatives.</p> <p>FY 2024 OCO Plans: -Continue development of emerging capability improvements for current and future threats by supporting development, integration, and testing of emerging capability improvements in passive long range detection/wide area search for current and future threats in support of Navy SSN/SSBN Acoustic Superiority initiatives.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase is associated with emerging capability improvements for current and future threats.</p>					
Accomplishments/Planned Programs Subtotals	61.695	60.372	60.822	0.000	60.822

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

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• OPN/2150: SSN Acoustic Equipment	379.492	446.653	463.577	-	463.577	463.967	452.440	461.424	475.872	Continuing	Continuing

Remarks

D. Acquisition Strategy

Acoustic Systems:
 -A-RCI utilizes an open architecture and Commercial Off-the-Shelf (COTS) products in support of new and upgraded sonar systems.
 -Program Reviews with the Milestone Decision Authority (MDA) are conducted in conjunction with approval for contract production options.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
1319 / 5				PE 0604503N / SSN-688 & Trident Modernization						0219 / Sub Sonar Improvement (ENG)					
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Primary Hardware Development	SS/CPPIF	LMC : Manassas, VA	437.391	21.489	Dec 2021	19.369	Dec 2022	19.003	Dec 2023	-		19.003	Continuing	Continuing	Continuing
Ancillary Hardware Development	SS/CPFF	ARL University of Texas : Austin, TX	53.267	3.202	Mar 2022	3.266	Mar 2023	3.331	Mar 2024	-		3.331	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	Johns Hopkins APL : Baltimore, MD	55.468	3.319	Dec 2021	3.385	Dec 2022	3.452	Dec 2023	-		3.452	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	LMC : VA - Keyport	53.190	3.413	Jan 2022	3.481	Jan 2023	3.550	Jan 2024	-		3.550	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPPIF	Progeny Systems : Manassas, VA	96.269	6.618	Jan 2022	6.750	Jan 2023	6.885	Jan 2024	-		6.885	Continuing	Continuing	Continuing
Systems Engineering	WR	NUWC : Newport, RI	208.146	10.096	Dec 2021	10.297	Dec 2022	10.503	Dec 2023	-		10.503	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC : Carderock, MD	40.736	2.972	Dec 2021	3.031	Dec 2022	3.091	Dec 2023	-		3.091	Continuing	Continuing	Continuing
Subtotal			944.467	51.109		49.579		49.815		-		49.815	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Primary Software Development	C/CPPIF	General Dynamics, AIS : Fairfax, VA	184.929	5.333	Dec 2021	5.439	Dec 2022	5.547	Dec 2023	-		5.547	Continuing	Continuing	Continuing
Primary Software Development	C/CPFF	Sedna Digital, : Manassas, VA	55.595	4.034	Dec 2021	4.114	Dec 2022	4.196	Dec 2023	-		4.196	Continuing	Continuing	Continuing
Subtotal			240.524	9.367		9.553		9.743		-		9.743	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Operational Test & Evaluation (OT&E)	WR	OPTEVFOR : Norfolk, VA	12.627	0.499	Dec 2021	0.508	Dec 2022	0.518	Dec 2023	-		0.518	Continuing	Continuing	Continuing
Subtotal			12.627	0.499		0.508		0.518		-		0.518	Continuing	Continuing	N/A

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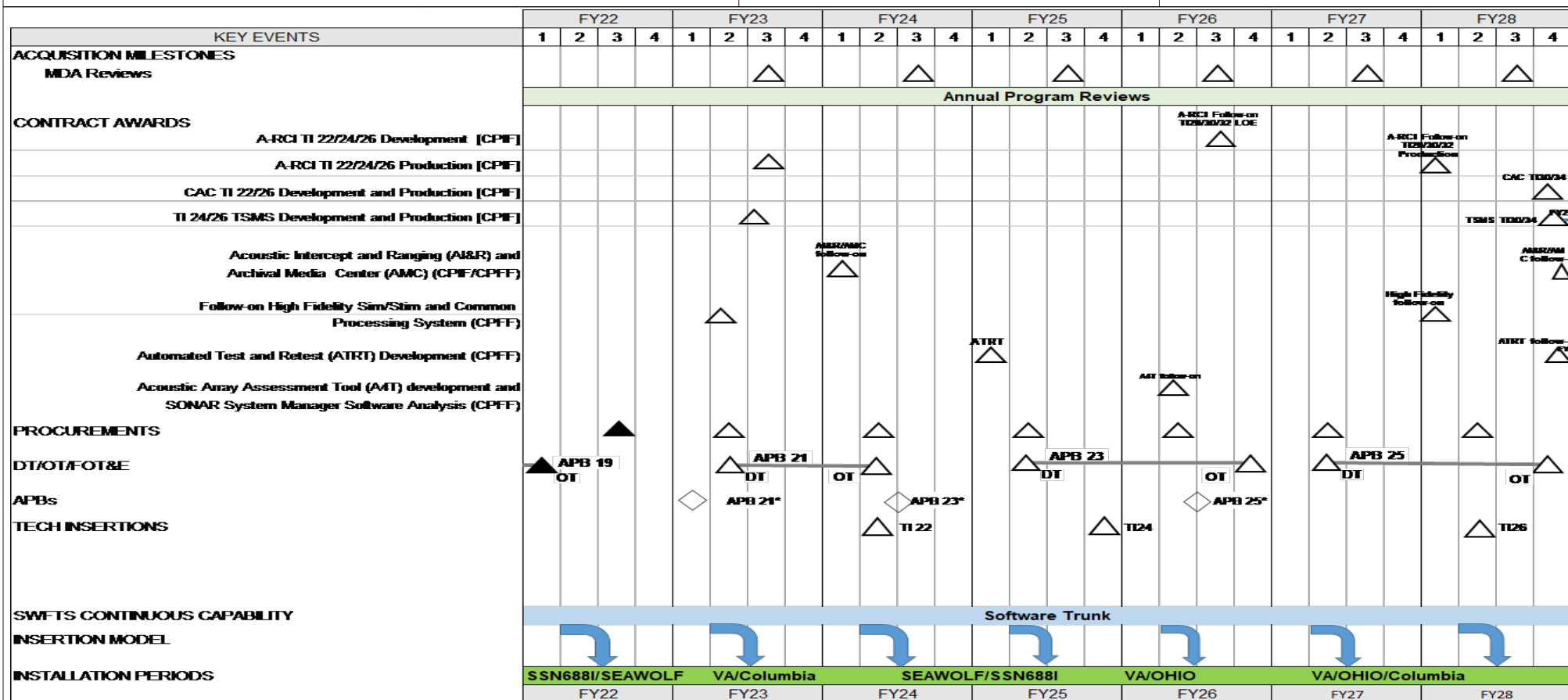
Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy

Date: March 2023

Appropriation/Budget Activity
1319 / 5

R-1 Program Element (Number/Name)
PE 0604503N / SSN-688 & Trident Modernization

Project (Number/Name)
0219 / Sub Sonar Improvement (ENG)



- ▲ Completed Milestone
- △ Upcoming Milestone
- ◇ Agile Release Model APB Cycle*

APB: Advanced Processing Builds
A-RCI: Acoustic-Rapid Commercial Off the Shelf (COTS) Insertion
CAC: Common Acoustic Cabinet
TSMS: Total Ship Monitoring System

*APB release cycle dates variable due to sea test availability, content maturity, etc per SWFTS Baseline Agile Release Model

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0219 / Sub Sonar Improvement (ENG)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 0219				
ACOUSTICS	3	2022	4	2028
---Acquisition Milestones - Acoustics	3	2022	3	2028
---Annual Program Reviews - Acoustics	1	2022	4	2028
---Contract Awards - Acoustics	3	2022	1	2028
---Procurements - Acoustics	2	2022	2	2028
---DT/OT/FOT&E Tests	2	2022	2	2028
---APB Deliveries	2	2023	2	2028
---Tech Insertions	1	2022	1	2028
---Installation Periods - Acoustics	1	2022	4	2028

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization				Project (Number/Name) 0775 / Submarine Supt Equip Prog			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0775: Submarine Supt Equip Prog	104.266	30.473	33.129	32.613	-	32.613	35.226	35.242	34.656	35.329	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

AN/BLQ-10 Electronic Warfare (EW) system will continue to add new capabilities via Technical Insertion (TI)/Advanced Processing Build (APB) while working across Submarine Warfare Federated Tactical System (SWFTS) programs to transition to Development Security Operations (DevSecOps) software processes and migrate to a cloud based architecture. The Navy is pursuing a transformation across SWFTS (PE 0604503N Project 0219, PE 0604562N Project 0236, PE 0604777N Project 0253 and PE 0604503N Project 0775) to maximize cyber-resiliency and the speed of capability delivery. Major new capabilities that will continue to be pursued in FY24 include a modern server-based RADAR Wide Band capability, upgraded and new tactical software solutions.

The Submarine Support Equipment Program (SSEP) is responsible for the development and improvement of submarine EW systems in support of effective operations in the following mission areas: Joint Littoral Warfare; Joint Intelligence Surveillance Reconnaissance (ISR), Indications and Warnings; Electronic Warfare; Information Operations including Cyber; and Special Operations Force (SOF) support. The rapid proliferation of complex radar, communications and navigation equipment available to potential adversaries creates an increasingly dense and sophisticated electromagnetic environment. Sustained and significant improvements to submarine EW systems are required to maintain tactical ship safety and operational effectiveness. As such, EW was raised to a submarine primary mission area in FY2012 by Commander Submarine Forces, and EW is listed as a Tier 1 modernization requirement by the Submarine Tactical Requirements Group (STRG).

TI-24 provides the VA Class a server-based Radar Wide Band capability. Additionally, TI-24 looks to improve the basic cloud based architecture developed during TI-20 and TI-22 as well as integrate new generations of EW Payloads. Funding is critical to developing enabling technologies that will provide maximized electronic spectrum digitization and processing, allowing Submarine EW system to continue to pace the threat.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Submarine Support Equipment Program	30.473	33.129	32.613	0.000	32.613
Articles:	-	-	-	-	-
FY 2023 Plans:					
-- In the SWFTS TI/APB model, complete development and test a CADF capability for incorporation into the AN/BLQ-10 system to enhance the capabilities of the SSN 688 and 21 class ships.					
-- In the SWFTS TI/APB model, commence development of a server-based RADAR wide band capability for incorporation into the AN/BLQ-10 system to enhance the capabilities of the VA class ships.					

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-- Complete TI-22 development, design, integration, configuration, architecture documentation and software design.</p> <p>-- Commence TI-24 development, design, integration, configuration, architecture documentation and software design.</p> <p>-- Continue APB-21 development and integration into TI-20 and TI-22 baselines.</p> <p>-- Update AN/BLQ-10 software baseline changes for SWFTS and NPES, SPR Resolution and Software Enhancement via the APB process to fully utilize the new technology being fielded in TI-22 with broader spectrum digitization.</p> <p>-- Coordinate with ONR and NUWC Newport to develop FNCs to a high technology readiness level and transition to EW systems as appropriate.</p> <p>-- Develop advanced technology demonstrations for feasibility.</p> <p>-- Develop and test a prototype Submarine Simultaneous Transmit and Receive (SubSTAR) capability for backfit and forward fit onto low profile imaging masts.</p> <p>FY 2024 Base Plans:</p> <p>-- In the SWFTS TI/APB model, complete development of a server-based RADAR wide band capability for incorporation into the AN/BLQ-10 system to enhance the capabilities of the VA class ships.</p> <p>-- Continue TI-24 development, design, integration, configuration, architecture documentation, and software design.</p> <p>-- Complete APB-21 development and integration into TI-20 baseline.</p> <p>-- Continue APB-21 development and integration into TI-22 baseline.</p> <p>-- Commence APB-23 development and integration into TI-22 and TI-24 baselines.</p> <p>-- Update AN/BLQ-10 software baseline changes for SWFTS and NPES, SPR Resolution and Software Enhancement via the APB process to fully utilize the new technology being fielded in TI-22 and TI-24 with broader spectrum digitization.</p> <p>-- Coordinate with ONR and NUWC Newport to develop Future Naval Capabilities (FNCs) to a high technology readiness level and transition to EW systems as appropriate.</p> <p>-- Develop advanced technology demonstrations for feasibility.</p> <p>FY 2024 OCO Plans:</p>					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A					
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Funding decreases in FY24 by \$0.516M due to the completion of TI-22 development.					
Accomplishments/Planned Programs Subtotals	30.473	33.129	32.613	0.000	32.613

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/0840: <i>Sub Periscope, Imaging and Supt Equip Prog</i>	209.792	261.011	262.951	-	262.951	289.922	274.693	285.958	290.554	Continuing	Continuing

Remarks

D. Acquisition Strategy
AN/BLQ-10 EW System - Procurements are executed/managed in accordance with Acquisition Plan (Rev 10) for AN/BLQ-10 EW System dtd 02/01/17, Single Acquisition Management Plan dtd 06/12/14, Individual Streamlined Acquisition Plan (Rev 0) for AN/BLQ-10 dtd 04/09/18, and the AN/BLQ-10 Acquisition Strategy dtd 01/28/13.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0775 / Submarine Supt Equip Prog
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Hardware and Software Development	Various	Various : Various	6.544	0.707	Oct 2021	3.877	Oct 2022	3.286	Oct 2023	-		3.286	Continuing	Continuing	Continuing
Hardware and Software Development	WR	NUWC : Newport, RI	21.083	0.812	Oct 2021	1.288	Oct 2022	1.767	Oct 2023	-		1.767	Continuing	Continuing	Continuing
H/W and S/W Development EW TI/APB	C/CPIF	Lockheed Martin : Syracuse, NY	55.916	25.486	Oct 2021	27.162	Oct 2022	26.685	Oct 2023	-		26.685	Continuing	Continuing	Continuing
PATRIOT Phase C Development	C/CPIF	Lockheed Martin : Syracuse, NY	2.600	1.500	Oct 2021	0.000		0.000		-		0.000	0.000	4.100	-
Subtotal			86.143	28.505		32.327		31.738		-		31.738	Continuing	Continuing	N/A

Remarks
FY24 funding increase in Hardware and Software Development to finalize TI24 development.

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Operational Test & Evaluation (OT&E)	WR	OTF : Norfolk, VA	2.051	0.344	Oct 2021	0.136	Oct 2022	0.173	Oct 2023	-		0.173	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NUWC : Newport, RI	16.072	1.624	Oct 2021	0.666	Oct 2022	0.702	Oct 2023	-		0.702	Continuing	Continuing	Continuing
Subtotal			18.123	1.968		0.802		0.875		-		0.875	Continuing	Continuing	N/A

Remarks
FY24 funding increase in Test Support: Systems Engineering & Test Support to more closely align with FY22 actual costs while also accounting for inflation.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	104.266	30.473	33.129	32.613	-	32.613	Continuing	Continuing	N/A

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0775 / Submarine Supt Equip Prog

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 0775				
Development: Technology Insertions: TI-22	3	2023	3	2023
Development: Technology Insertions: TI-24	3	2025	3	2025
Development: Technology Insertions: TI-26	3	2027	3	2027
Development: PATRIOT Phase C: PATRIOT Phase C	1	2022	1	2022
Development: SubSTAR: SubSTAR	1	2023	4	2023
Development: Submarine Tethered Expendable Buoy: Submarine Tethered Expendable Buoy	1	2025	4	2028
Development: EW TI/APB Development: EW TI/APB Development: TI-22	3	2022	2	2023
Development: EW TI/APB Development: EW TI/APB Development: TI-24	3	2023	2	2025
Development: EW TI/APB Development: EW TI/APB Development: TI-26	3	2025	2	2027
Development: EW TI/APB Development: EW TI/APB Development: TI-28	3	2027	4	2028
Test and Evaluation: EW (TI/APB): TI-18/APB-19: Developmental Testing	1	2022	1	2022
Test and Evaluation: EW (TI/APB): TI-18/APB-19: Operational Testing	2	2022	2	2022
Test and Evaluation: EW (TI/APB): PATRIOT Phase C DT	2	2022	2	2022
Test and Evaluation: EW (TI/APB): TI-20/APB-19: Developmental Testing	4	2022	4	2022
Test and Evaluation: EW (TI/APB): TI-20/APB-19: Operational Testing	1	2023	1	2023
Test and Evaluation: EW (TI/APB): TI-22/APB-21: Developmental Testing	2	2023	2	2023
Test and Evaluation: EW (TI/APB): TI-20/APB-21: Developmental Testing	4	2024	4	2024
Test and Evaluation: EW (TI/APB): TI-20/APB-21: Operational Testing	4	2024	4	2024
Test and Evaluation: EW (TI/APB): TI-22/APB-23: Developmental Testing	4	2025	4	2025
Test and Evaluation: EW (TI/APB): TI-24/APB-23: Developmental Testing	3	2026	3	2026

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604503N / SSN-688 & Trident Modernization	Project (Number/Name) 0775 / Submarine Supt Equip Prog
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Test and Evaluation: EW (TI/APB): TI-24/APB-23: Operational Testing	1	2027	1	2027
Test and Evaluation: EW (TI/APB): TI-24/APB-25: Developmental Testing	3	2027	3	2027
Test and Evaluation: EW (TI/APB): TI-24/APB-25: Operational Testing	2	2028	2	2028