Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy											Date: February 2015	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604558N *I New Design SSN*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	2,243.504	60.843	87.695	122.556	-	122.556	115.333	175.820	90.632	87.429	Continuing	Continuing
1947: *New Design SSN HM&E*	1,419.380	29.003	51.011	83.498	-	83.498	82.407	133.037	52.353	48.359	Continuing	Continuing
1950: *New Design SSN Combat Sys Dev*	797.169	29.067	34.114	31.508	-	31.508	30.320	40.153	35.595	36.330	Continuing	Continuing
3062: *Submarine Multi-Mission Team Trainer*	26.955	2.773	2.570	7.550	-	7.550	2.606	2.630	2.684	2.740	Continuing	Continuing
Program MDAP/MAIS Code: 516												

A. Mission Description and Budget Item Justification

The U.S. Navy must maintain a submarine fleet that is of sufficient capability and numbers to defend American interests. The VIRGINIA Class Submarine, formerly the New Attack Submarine (New SSN), is being designed to fulfill this need. It will counter the potential threats of the next century in a multi- mission capable submarine that has the ability to provide covert, sustained combat presence in denied waters. The primary goal of the program is to develop an affordable yet capable submarine by evaluating a broad range of system and technology alternatives, and pursuing cost reduction, producibility improvement, and technical risk management. This Program Element (PE) provides the technology, prototype components, and systems engineering needed to design and construct the VIRGINIA Class Submarine and build its Command, Control, Communications, and Intelligence (C3I) System. This PE directly supports the following VIRGINIA Class Submarine missions: (1) covert strike warfare; (2) anti-submarine warfare; (3) covert intelligence collection/surveillance, indication and warning, and electronic warfare; (4) anti-surface ship warfare; (5) special warfare; (6) mine warfare; and (7) battle group support.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	62.446	72.695	92.810	-	92.810
Current President's Budget	60.843	87.695	122.556	-	122.556
Total Adjustments	-1.603	15.000	29.746	-	29.746
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	15.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.029	-			
• SBIR/STTR Transfer	-1.575	-			
• Program Adjustments	-	-	32.300	-	32.300
• Rate/Misc Adjustments	0.001	-	-2.554	-	-2.554

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy	Date: February 2015
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604558N *I New Design SSN*

Change Summary Explanation

The FY 2016 funding request was reduced by $1.800 million to account for the availability of prior year execution balances.

Note: Beginning in 2015, there is an administrative change that will shift efforts funded from PE 0604558N (New Design SSN) / Project 4500 to PE 0604580N (VIRGINIA Payload Module) / Project 4500. This shift is consistent with Congressional intent identified in the FY14 Appropriations Act Committee Report.
Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*				Project (Number/Name) 1947 / *New Design SSN HM&E*			
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
1947: *New Design SSN HM&E*	1,419.380	29.003	51.011	83.498	-	83.498	82.407	133.037	52.353	48.359	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project encompasses all the ship system development efforts for the VIRGINIA Class Submarine and the Technology Insertion Program for reducing cost and upgrading performance of future hulls by virtue of improvements in ship systems. Technology development implementation and logistics for developmental items, and VIRGINIA Class test & evaluation are included. This project is essential for pursuit of high priority Design For Affordability (DFA) and Reduced Total Ownership Cost (RTOC) initiatives while achieving platform requirements and providing mission capability and flexibility. The thrust of these efforts will be to develop and apply multiple advanced system technologies which are integrated into the design of the VIRGINIA Class Submarine. Technologies developed in this program will be considered for applicability to the Ohio Replacement Program (ORP) for commonality opportunities. New technologies are being transitioned from industry and government research and development programs where doing so offers substantial performance improvement and/or affordability payoffs. Transition opportunities include those from the Defense Advanced Research Projects Agency (DARPA) Sensors & Payloads program and Office of Naval Research (ONR) Future Naval Capabilities Program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Title: New Design SSN HM&E	12.880	19.335	61.179	-	61.179
Articles:	-	-	-	-	-

FY 2014 Accomplishments:

Completed block upgrades of Ship Control algorithms and software for Block III. Completed software development for Advanced Electromagnetic silencing capability for Block III. Continued development of concepts and technologies for Block IV Reduced Total Ownership Cost (RTOC) and integrated into Block IV design/ build contract. Addressed emergent reliability issues associated with HM&E components. Continued HM&E obsolescence redesign for Block IV. Continued transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Initiated development of acoustic performance improvements for full scale demonstration on SSN 790 during Post Shakedown Availability (PSA) and refine design requirements for future Virginia blocks.

FY 2015 Plans:

Continue development of concepts and technologies for Reduced Total Ownership Cost (RTOC) and integration into and Block V technical baseline. Continue to address emergent reliability issues associated with HM&E components. Continue HM&E obsolescence redesign for Block IV and Block V. Continue transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Initiate the transition of products from the Office of Naval Research (ONR) Future Naval Capability (FNC) Program. Continue development of acoustic performance improvements for full scale demonstration and refine design requirements

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1947 / *New Design SSN HM&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
for future blocks with regard to updated threats. Develop full schedule for material procurements for prototypes and installation on SSN790 during a planned availability. ***FY 2016 Base Plans:*** Continue development of concepts and technologies for Reduced Total Ownership Cost (RTOC) and integration into and Block V technical baseline. Continue to address emergent reliability issues associated with HM&E components. Continue HM&E obsolescence redesign for Block IV and Block V. Continue transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Continue the transition of products from the Office of Naval Research (ONR) Future Naval Capability (FNC) Program. Continue development of acoustic performance improvements for full scale demonstration and refine design requirements for future blocks with regard to updated threats. Execute rapid material procurement and fabrication of prototype systems for planned installation on SSN790 during upcoming availability. These include components for a Large Vertical Array and enhanced treatments. Oversee expanded design/build efforts between shipbuilder and qualified vendors for material design acceptance, fabrication and qualification. Integrate quality control solutions into component design/build process. Begin full scale modeling and simulation of acoustic improvements. Transition development efforts for the Integrated Advanced Hybrid (IAH) propulsor for planned full scale demonstration, requiring material qualification prior to deployment. Initiate planning for full scale testing of improvements in-situ during post availability period. ***FY 2016 OCO Plans:*** N/A					
Title: C229-CONGRESSIONAL ADD	-	15.000	-	-	-
Articles:	-	-	-	-	-
FY 2014 Accomplishments: N/A ***FY 2015 Plans:*** CONGRESSIONAL ADD The FY15 RDT&E Congressional add for small business technology insertion will be applied to existing small business contracts to continue VA Class combat systems development in the areas of sonar, electronic warfare, weapons systems launch, information assurance, and advanced submarine control systems. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1947 / *New Design SSN HM&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Title: TEST AND EVALUATION	16.123	16.676	22.319	-	22.319
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continue responding to SSN774 OPEVAL, Arctic, TI-08/APB-09, and DDS FOT&E deficiencies identified by COTF and support OPNAV in adjudication of DOT&E recommendations, as well as prepare for future FOT&E events. Conduct DOTS FOT&E testing, verification and reporting. Finalize detailed plan to test a VIRGINIA Class in a Low Frequency Active (LFA) environment and execute LFA FOT&E testing, analysis and reporting. Finalize detailed developmental test plans/procedures to test the first Block III ships. Plan for conduct of Information Awareness (IA) Vulnerability/Penetration testing FOT&E. Develop a detailed plan and conduct an operational assessment of VIRGINIA Class during CCSM Off-Hull Assembly & Test Site (COATS).					
FY 2015 Plans: Continue responding to SSN774 OPEVAL, Arctic, TI-08/APB-09, and DDS FOT&E deficiencies identified by COTF and support OPNAV in adjudication of DOT&E recommendations. Make preparations to conduct the Block III FDT&E and FOT&E testing consisting of the Accreditation of Modeling & Simulation (M&S) required for post-test analysis and reporting. Plan for FOT&E test events (Strike Warfare, Anti-Submarine Warfare in Open Ocean and Littorals; High Density Contact Mgmt; Surface Warfare TrackEx and TorpEx and IA Vulnerability/Penetration Testing) scheduled to conduct in FY2016.					
FY 2016 Base Plans: Continue responding to SSN774 OPEVAL, Arctic, TI-08/APB-09, and DDS FOT&E deficiencies identified by COTF and support OPNAV in adjudication of DOT&E recommendations. Conduct, perform post-test analysis and report results of Block III FDT&E and FOT&E test events (Strike Warfare, Anti-Submarine Warfare in Open Ocean and Littorals; High Density Contact Mgmt; Surface Warfare TrackEx and TorpEx, and IA Vulnerability/Penetration Testing).					
FY 2016 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	29.003	51.011	83.498	-	83.498

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1947 / *New Design SSN HM&E*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• SCN/2013: *VA CL*	6,462.316	5,832.079	5,340.110	-	5,340.110	5,184.120	5,023.887	6,691.774	6,768.232	-	90,040.091
• O&M,N/0204283N: *Sub Ops & Safety*	38.776	33.938	31.355	-	31.355	28.028	29.238	30.175	30.770	Continuing	Continuing
• OPN/0942: *VA CL Support Equipment*	69.341	70.689	35.747	-	35.747	56.262	49.263	49.672	50.743	Continuing	Continuing
• RDT&E/0604580N: *VIRGINIA Payload Module*	57.282	120.602	167.719	-	167.719	100.234	68.989	-	-	-	514.826

Remarks

D. Acquisition Strategy

The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing and has reduced the number of changes typically encountered during construction of the lead and early follow-on ships. In September 1997, Congress passed a law allowing Electric Boat (EB) and Northrop Grumman Newport News (NGNN), now Huntington Ingalls Industries (HII), to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, EB remained the design yard for the VIRGINIA Class Submarine and HII became a part of the IPPD process. The Program Office is managing three Multi-Year Procurement (MYP) contracts. The first and second contracts are for the Block II (FY04-08) and Block III (FY09-13) ships. The third contract is for Block IV (FY14-18) ships awarded April 2014. All Block I & II ships (SSNs 774-783) have been delivered. The lead Block III ship, SSN 784, delivered in August 2014 with the remaining 7 ships awarded and under construction.

E. Performance Metrics

Successful completion of Milestone III Review. Successful completion of Final Operational Test and Evaluation (FOT&E) for Technology Insertion (TI)-08 and Block III.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 1947 / *New Design SSN HM&E*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Development	WR	NSWC : Carderock, MD	234.672	2.750	Nov 2013	3.250	Nov 2014	12.162	Nov 2015	-		12.162	Continuing	Continuing	Continuing
Component Development	WR	NUWC : Newport, RI	108.732	1.250	Nov 2013	1.250	Nov 2014	3.793	Nov 2015	-		3.793	Continuing	Continuing	Continuing
Component Development	WR	NRL : Washington, DC	6.318	0.350	Nov 2013	0.350	Feb 2015	1.282	Nov 2015	-		1.282	Continuing	Continuing	Continuing
Component Development	C/CPFF	Electric Boat : Groton, CT	604.984	6.117	Nov 2013	9.635	Nov 2014	34.223	Nov 2015	-		34.223	Continuing	Continuing	Continuing
Component Development	C/CPFF	Electric Boat : Groton, CT	22.964	-		-		-		-		-	Continuing	Continuing	Continuing
Component Development	C/CPFF	Electric Boat : Groton, CT	39.819	-		-		-		-		-	Continuing	Continuing	Continuing
Component Development	PO	SUPSHIP : Groton, CT	66.390	0.600	Dec 2013	1.200	Jan 2015	2.681	Dec 2015	-		2.681	Continuing	Continuing	Continuing
Component Development	SS/CPFF	Lockheed Martin : Not Specified	16.524	-		-		-		-		-	Continuing	Continuing	Continuing
Component Development	SS/CPFF	Lockheed Martin : Not Specified	2.070	-		-		-		-		-	Continuing	Continuing	Continuing
Component Development	SS/CPFF	Applied Research Laboratory : Penn State University	22.371	0.200	Dec 2013	0.500	Feb 2015	1.117	Dec 2015	-		1.117	Continuing	Continuing	Continuing
Component Development	SS/FP	National Shipbuilding Research Program : Not Specified	3.245	0.200	Mar 2014	0.400	Mar 2015	0.894	Mar 2016	-		0.894	Continuing	Continuing	Continuing
Component Development	Various	Micellaneous : Not Specified	15.761	0.913	Dec 2014	2.250	Feb 2015	5.027	Dec 2015	-		5.027	Continuing	Continuing	Continuing
		Subtotal	1,143.850	12.380		18.835		61.179		-		61.179	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	TBD	TBD : TBD	0.000	-		15.000	Mar 2015	-		-		-	-	15.000	-
		Subtotal	0.000	-		15.000		-		-		-	-	15.000	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 1947 / *New Design SSN HM&E*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation - DT&E	WR	NSWC : Carderock, MD	91.311	0.849	Nov 2013	0.488	Nov 2014	0.995	Nov 2015	-		0.995	Continuing	Continuing	Continuing
Test and Evaluation - LFT&E	WR	NSWC : Carderock, MD	1.587	0.730	Nov 2013	0.730	Nov 2014	0.730	Nov 2015	-		0.730	Continuing	Continuing	Continuing
Test and Evaluation - DT&E	WR	NSWC : Dahlgren, VA	0.315	-		-		-		-		-	Continuing	Continuing	Continuing
Test and Evaluation - DT&E	WR	NUWC : Newport, RI	106.099	11.492	Nov 2013	12.594	Nov 2014	15.961	Nov 2015	-		15.961	Continuing	Continuing	Continuing
Test and Evaluation - OT&E	PO	COMOPTEVFOR : Norfolk, VA	14.913	1.000	Nov 2013	0.900	Feb 2015	2.100	Nov 2015	-		2.100	Continuing	Continuing	Continuing
Test and Evaluation - LFT&E	C/CPFF	Electric Boat : Groton, CT	1.415	0.105	Dec 2013	0.225	Feb 2015	0.300	Dec 2015	-		0.300	Continuing	Continuing	Continuing
Test and Evaluation - DT&E	C/CPAF	SEAPORT : Rockville, MD	20.187	0.800	Nov 2013	0.700	Feb 2015	0.700	Nov 2015	-		0.700	Continuing	Continuing	Continuing
Test and Evaluation - DT&E	C/CPFF	Progeny : Manassas, VA	5.230	1.147	Dec 2013	0.999	Feb 2015	1.033	Dec 2015	-		1.033	Continuing	Continuing	Continuing
Test and Evaluation - DT&E	Various	Micellaneous : Not Specified	11.932	-		0.040	Feb 2015	-		-		-	Continuing	Continuing	Continuing
		Subtotal	252.989	16.123		16.676		21.819		-		21.819	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPAF	SEAPORT : Rockville, MD	20.025	0.500	Nov 2013	0.500	Feb 2015	0.500	Nov 2015	-		0.500	Continuing	Continuing	Continuing
Travel	PO	Not Specified : Not Specified	1.919	-		-		-		-		-	Continuing	Continuing	Continuing
DAWDF	Various	Not Specified : Not Specified	0.597	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	22.541	0.500		0.500		0.500		-		0.500	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 1947 / *New Design SSN HM&E*	

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,419.380	29.003		51.011		83.498		-		83.498	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1947 / *New Design SSN HM&E*

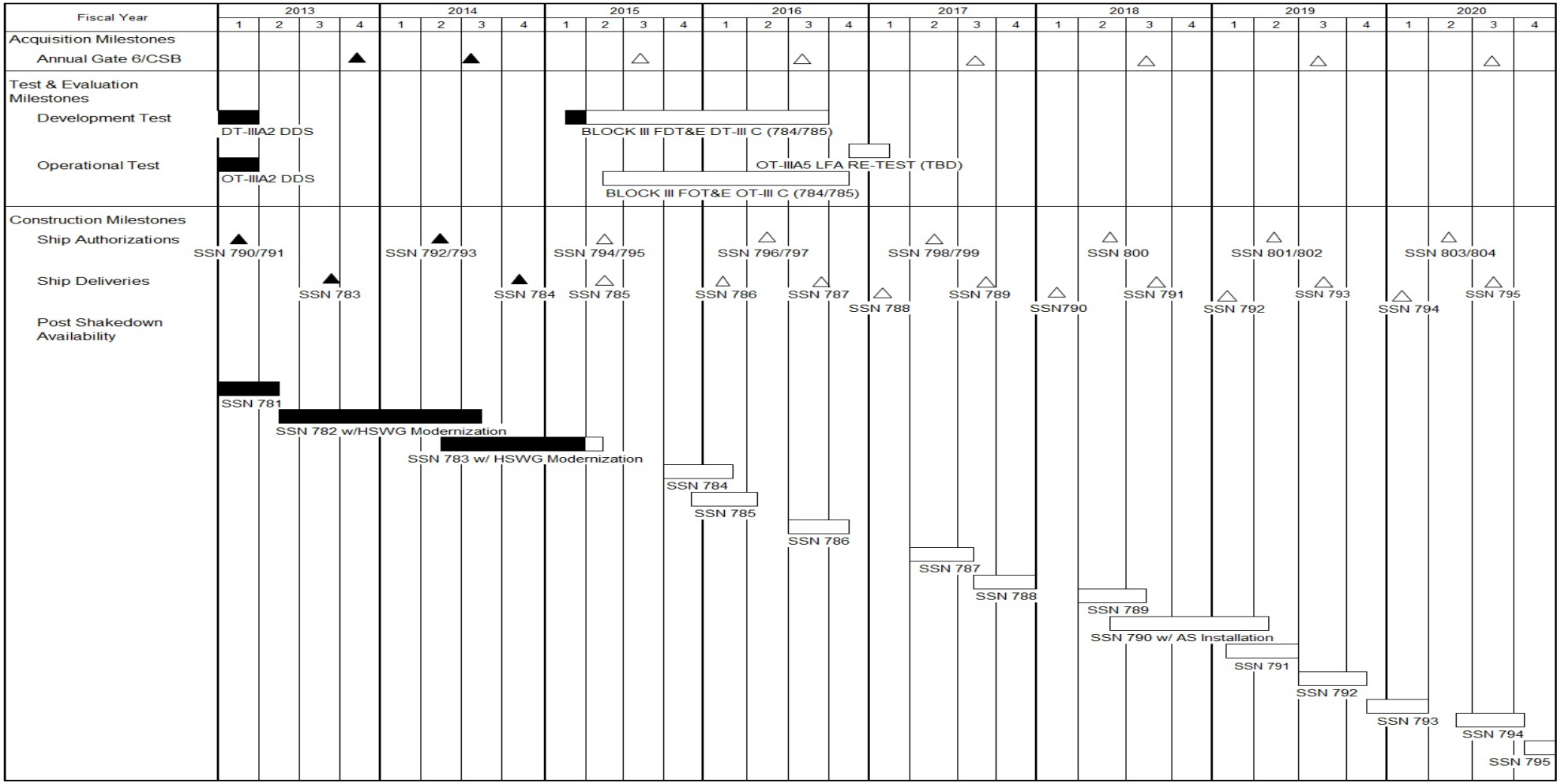

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1947 / *New Design SSN HM&E*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1947				
Post Shakedown Availability with HSWG Modernization (PSA SSN 782)	1	2014	3	2014
Ship Authorization (792/793)	2	2014	2	2014
Post Shakedown Availability with HSWG Modernization (PSA SSN 783)	2	2014	2	2015
FY14 Annual Gate 6/CSB	3	2014	3	2014
Ship Delivery (SSN 784)	4	2014	4	2014
Block III FOT&E DT-III C	1	2015	3	2016
Ship Authorization (794/795)	2	2015	2	2015
Ship Delivery (SSN 785)	2	2015	2	2015
Block III FOT&E OT-III C	2	2015	4	2016
Post Shakedown Availability (PSA SSN 784)	4	2015	1	2016
FY15 Annual Gate 6/CSB	3	2015	3	2015
Post Shakedown Availability (PSA SSN 785)	4	2015	2	2016
Ship Delivery (SSN 786)	1	2016	1	2016
Ship Authorization (796/797)	2	2016	2	2016
Post Shakedown Availability (SSN 786)	3	2016	4	2016
FY16 Annual Gate 6/CSB	3	2016	3	2016
Ship Delivery (SSN 787)	3	2016	3	2016
LFA Re-Test	4	2016	1	2017
Ship Delivery (SSN 788)	1	2017	1	2017
Ship Authorization (SSNs 798/799)	2	2017	2	2017
Post Shakedown Availability (PSA SSN 787)	2	2017	3	2017
Post Shakedown Availability (PSA SSN 788)	2	2017	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1947 / *New Design SSN HM&E*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Ship Delivery (SSN 789)	3	2017	3	2017
FY17 Annual Gate 6/CSB	3	2017	3	2017
Ship Delivery (SSN 790)	1	2018	1	2018
Ship Authorization (SSN 800)	2	2018	2	2018
Post Shakedown Availability (PSA SSN 789)	2	2018	3	2018
Post Shakedown Availability with Acoustic Superiority Installation (SSN 790)	2	2018	2	2018
FY18 Annual Gate 6/CSB	3	2018	3	2018
Ship Delivery (SSN 791)	3	2018	3	2018
Ship Delivery (SSN 792)	1	2019	1	2019
Post Shakedown Availability (PSA SSN 791)	1	2019	2	2019
Ship Authorization (SSNs 801/802)	2	2019	2	2019
Post Shakedown Availability (PSA SSN 792)	2	2019	4	2019
FY19 Gate 6/CSB	3	2019	3	2019
Ship Delivery (SSN 793)	3	2019	3	2019
Post Shakedown Availability (PSA SSN 793)	4	2019	1	2020
Ship Delivery (SSN 794)	1	2020	1	2020
Ship Authorization (803/804)	2	2020	2	2020
Post Shakedown Availability (PSA SSN 794)	2	2020	4	2020
FY20 Annual Gate 6/CSB	3	2020	3	2020
Ship Delivery (SSN 795)	3	2020	3	2020
Post Shakedown Availability (PSA SSN 795)	4	2020	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*				Project (Number/Name) 1950 / *New Design SSN Combat Sys Dev*			
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
1950: *New Design SSN Combat Sys Dev*	797.169	29.067	34.114	31.508	-	31.508	30.320	40.153	35.595	36.330	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project encompasses the top level systems development, test and integration into the ship of the VIRGINIA Class Submarine C3I System, which includes multiple subsystems. The scope of the system is expanded from Sonar and Combat Control subsystems to include AN/BLQ-10 Electronic Support Measures, Exterior Communications, Submarine Regional Warfare System, Navigation, Total Ship Monitoring, Imaging, Tactical Acoustic Communications, Radar, Interior Communications, Tactical Support Devices, Fiber Optic Cable Subsystem, and Special Purpose Subsystems, such as Battle Force Team Trainer and others. VIRGINIA Class Submarine specific development efforts include requirements definition, software, hardware development, software/hardware test, prototype production, and electronic integration as well as physical integration into the platform.

The VIRGINIA Class Submarine implementation approach is based on Open System, Commercial-off-the-Shelf (COTS) Non-Developmental Items or subsystems. The program leverages on-going subsystems developments or developing new subsystems where needed to satisfy VIRGINIA Class requirements. The recurring cost of VIRGINIA Class Submarine C3I Systems is being reduced to meet the program's affordability goals. Modifications to many subsystems must be developed to: (1) reduce the shipbuilding and construction recurring costs through the use of COTS components; (2) use proven computer technologies to evolve to an Open System design; (3) enhance capabilities to support expanded operational
requirements, reduced manning, and reduced shipboard component footprint.

To meet the collective future threat, the submarine force must operate as effectively in littoral regions as it traditionally has in open ocean. Close coordination with surface battle groups and airborne units is essential to mission accomplishment. To meet the VIRGINIA Class Submarine mission, the following capabilities are provided by the
VIRGINIA Class Submarine C3I System: (1) passive and active detection of multiple contacts, including early warning threat determination through processing and analysis of sensor data; (2) classification of sensor data for the purpose of identifying contacts; (3) localization (tracking) of contacts through target motion analysis; (4) preset, launch, and control of weapons and countermeasures; (5) improved communication and connectivity with other battle group elements, airborne units, and special operations forces; (6) incorporation of vertical launch system to enhance strike warfare; and (7) more effective covert surveillance through video imaging with onboard digital enhancement capabilities, and improved electronic warfare analysis capabilities.

The F1950 project mission includes an ongoing post VIRGINIA Class TECH/OPEVAL RDT&E effort to continue the development of VIRGINIA Unique Combat System Improvements. The VIRGINIA Class C3I will continue to leverage backfit communities' efforts, but even with common systems that the Navy has developed there will continue to be VIRGINIA Unique capability improvements required. The FY09 and out funding identified is for those efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 1950 / *New Design SSN Combat Sys Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Sonar Combat Control and Architecture Subsystems	15.458	20.553	18.914	-	18.914
Articles:	-	-	-	-	-
Description: Continued the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2014 Accomplishments:*** Continued the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2015 Plans:*** Continue the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2016 Base Plans:*** Continue the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2016 OCO Plans:*** N/A					
Title: C3I Systems Engineering	13.609	13.561	12.594	-	12.594
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued the development of System Level and other subsystem Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2015 Plans:*** Continue the development of System Level and other subsystem Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2016 Base Plans:*** Continue the development of System Level and other subsystem Improvements to maintain VIRGINIA Class Commonality to backfit fleet. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	29.067	34.114	31.508	-	31.508

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1950 / *New Design SSN Combat Sys Dev*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• SCN/2013: *VA CL*	6,462.316	5,832.079	5,340.110	-	5,340.110	5,184.120	5,023.887	6,691.774	6,768.232	-	90,040.091
• O&M,N/0204283N: *Sub Ops & Safety*	38.776	33.938	31.355	-	31.355	28.028	29.238	30.175	30.770	Continuing	Continuing
• OPN/0942: *VA CL Support Equipment*	69.341	70.689	35.747	-	35.747	56.262	49.263	49.672	50.743	Continuing	Continuing
• RDT&E/0604580N: *Virginia Payload Module*	57.282	120.602	167.719	-	167.719	100.234	68.989	-	-	-	514.826

Remarks

D. Acquisition Strategy

The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing and has reduced the number of changes typically encountered during construction of the lead and early follow-on ships. In September 1997, Congress passed a law allowing Electric Boat (EB) and Northrop Grumman Newport News (NGNN), now Huntington Ingalls Industries (HII), to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, EB remained the design yard for the VIRGINIA Class Submarine and HII became a part of the IPPD process. The Program Office is managing three Multi-Year Procurement (MYP) contracts. The first and second contracts are for the Block II (FY04-08) and Block III (FY09-13) ships. The third contract is for Block IV (FY14-18) ships awarded April 2014. All Block I & II ships (SSNs 774-783) have been delivered. The lead Block III ship, SSN 784, delivered in August 2014 with the remaining 7 ships awarded and under construction.

E. Performance Metrics

Successful completion of Milestone III Review. Successful completion of Final Operational Test and Evaluation (FOT&E) for Technology Insertion (TI)-08 and Block III. Successful implementation of Reduced Total Ownership Costs (RTOC) initiatives.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 1950 / *New Design SSN Combat Sys Dev*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PTR Corrections	Various	Various : TBD	30.088	-		-		-		-		-	Continuing	Continuing	Continuing
Unique Virginia Class Improvements	Various	Various : TBD	50.455	7.853	Nov 2013	9.889	Feb 2015	10.057	Nov 2015	-		10.057	Continuing	Continuing	Continuing
Advanced Display Sys (AN/UYQ-70)	SS/CPIF	Lockheed Martin : St. Paul, MN	34.287	1.123	Nov 2013	1.179	Feb 2015	1.200	Nov 2015	-		1.200	Continuing	Continuing	Continuing
Photonics	C/CPIF	Kollmorgen : Northampton, MA	55.892	1.624	May 2014	1.753	May 2015	1.782	May 2016	-		1.782	Continuing	Continuing	Continuing
Electronic Support Measures	C/FFP	Lockheed Martin : Syracuse, NY	38.067	-		-		-		-		-	Continuing	Continuing	Continuing
Platform Integration	SS/CPFF	Electric Boat : Groton, CT	48.055	1.299	Nov 2013	1.589	Jan 2015	1.617	Nov 2015	-		1.617	Continuing	Continuing	Continuing
Technology Refreshment	Various	Various : TBD	20.355	-		-		-		-		-	Continuing	Continuing	Continuing
Technical Direction Agent	WR	NUWC : Newport, RI	288.731	7.153	Jan 2014	7.767	Jan 2015	7.900	Jan 2016	-		7.900	Continuing	Continuing	Continuing
Technology Refreshment/ Info. Assurance	C/CPFF	Progeny Systems : Manassas, VA	34.784	1.623	Nov 2013	1.998	Feb 2015	2.030	Nov 2015	-		2.030	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC : Carderock, MD	11.096	0.866	Nov 2013	0.891	Jan 2015	0.906	Nov 2015	-		0.906	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC : Charleston, SC	7.078	0.540	Nov 2013	0.550	Feb 2015	0.559	Nov 2015	-		0.559	Continuing	Continuing	Continuing
Systems Engineering	WR	NUWC : Keyport, WA	10.944	0.244	Nov 2013	0.348	Jan 2015	0.354	Nov 2015	-		0.354	Continuing	Continuing	Continuing
Miscellaneous	Various	Various : TBD	133.794	3.982	Nov 2013	5.310	Feb 2015	2.183	Nov 2015	-		2.183	Continuing	Continuing	Continuing
		Subtotal	763.626	26.307		31.274		28.588		-		28.588	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various : TBD	6.212	-		-		-		-		-	-	6.212	-
		Subtotal	6.212	-		-		-		-		-	-	6.212	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 1950 / *New Design SSN Combat Sys Dev*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support Services/ETS	C/CPAF	URS : Rockville, MD	27.136	2.760	Dec 2013	2.840	Feb 2015	2.920	Dec 2015	-		2.920	Continuing	Continuing	Continuing
DAWDF	Various	Various : Various	0.195	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	27.331	2.760		2.840		2.920		-		2.920	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	797.169	29.067		34.114		31.508		-		31.508	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1950 / *New Design SSN Combat Sys Dev*

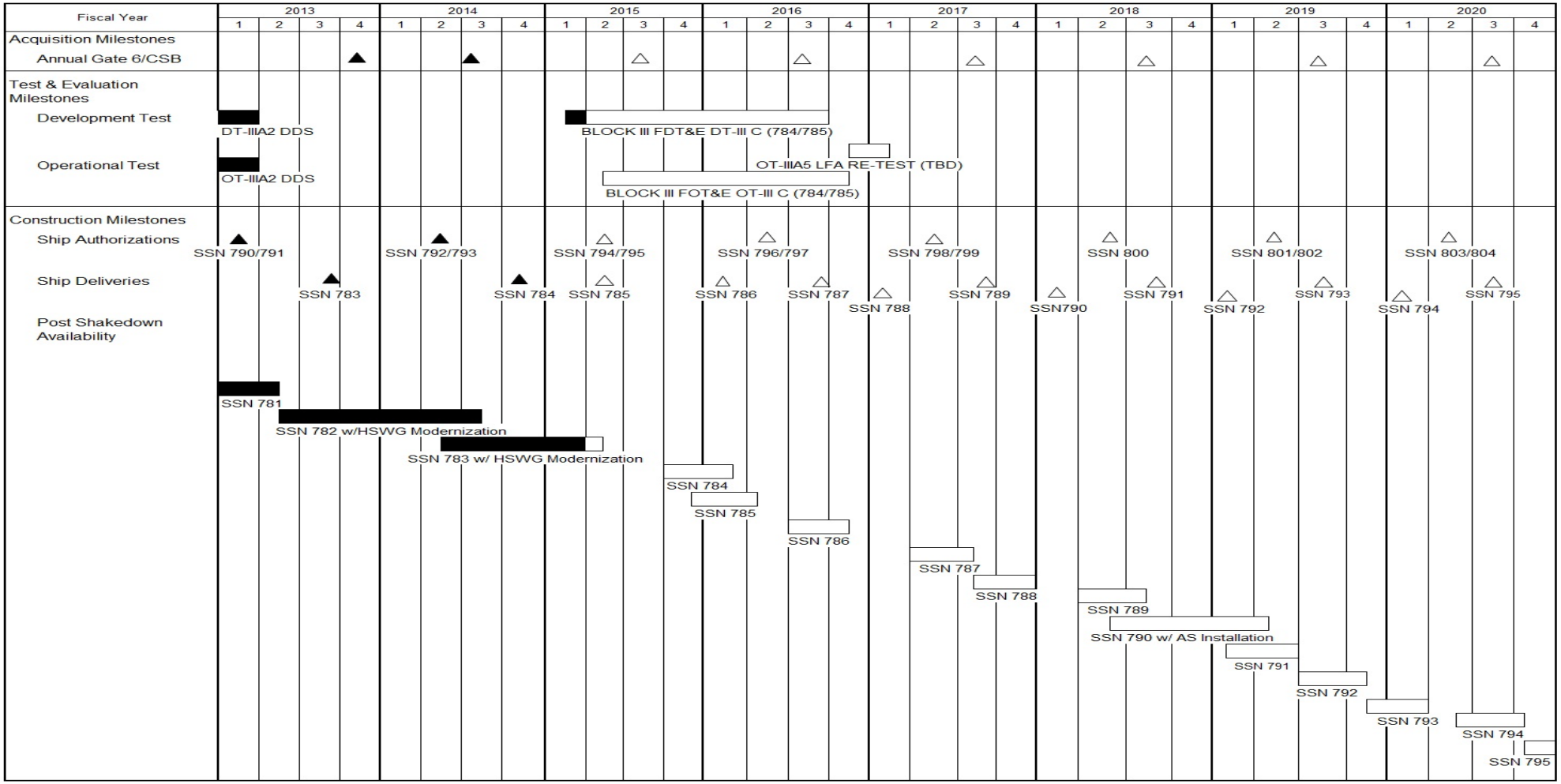

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1950 / *New Design SSN Combat Sys Dev*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1950				
Post Shakedown Availability with HSWG Modernization (PSA SSN 782)	1	2014	3	2014
Ship Authorization (SSN 792/793)	2	2014	2	2014
Post Shakedown Availability with HSWG Modernization (PSA SSN 783)	2	2014	2	2015
FY14 Annual Gate 6/CSB	3	2014	3	2014
Ship Delivery (SSN 784)	4	2014	4	2014
Block III FOT&E DT-III C	1	2015	3	2016
Ship Authorization (SSN 794/795)	2	2015	2	2015
Ship Delivery (SSN 785)	2	2015	2	2015
Block III FOT&E OT-III C	2	2015	4	2016
Post Shakedown Availability (PSA SSN 784)	4	2015	1	2016
FY15 Annual Gate 6/CSB	3	2015	3	2015
Post Shakedown Availability (PSA SSN 785)	4	2015	2	2016
Ship Delivery (SSN 786)	1	2016	1	2016
Ship Authorization (SSN 796/797)	2	2016	2	2016
Post Shakedown Availability (SSN 786)	3	2016	4	2016
FY16 Annual Gate 6/CSB	3	2016	3	2016
Ship Delivery (SSN 787)	3	2016	3	2016
LFA Re-Test	4	2016	1	2017
Ship Delivery (SSN 788)	1	2017	1	2017
Ship Authorization (SSNs 798/799)	2	2017	2	2017
Post Shakedown Availability (SSN 787)	2	2017	3	2017
Post Shakedown Availability (SSN 788)	3	2017	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 1950 / *New Design SSN Combat Sys Dev*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Ship Delivery (SSN 789)	3	2017	3	2017
FY17 Annual Gate 6/CSB	3	2017	3	2017
Ship Delivery (SSN 790)	1	2018	1	2018
Ship Authorization (SSN 800)	2	2018	2	2018
Post Shakedown Availability (SSN 789)	2	2018	3	2018
Post Shakedown Availability with Acoustic Superiority Installation (SSN 790)	2	2018	2	2019
FY18 Annual Gate 6/CSB	3	2018	3	2018
Ship Delivery (SSN 791)	3	2018	3	2018
Ship Delivery (SSN 792)	1	2019	1	2019
Post Shakedown Availability (PSA SSN 791)	1	2019	2	2019
Ship Authorization (SSNs 801/802)	1	2019	1	2019
Post Shakedown Availability (PSA SSN 792)	2	2019	4	2019
FY19 Annual Gate 6/CSB	3	2019	3	2019
Ship Delivery (SSN 793)	3	2019	3	2019
Post Shakedown Availability (PSA SSN 793)	4	2019	1	2020
Ship Delivery (SSN 794)	1	2020	1	2020
Ship Authorization (SSNs 803/804)	2	2020	2	2020
Post Shakedown (PSA SSN 794)	2	2020	4	2020
FY20 Annual Gate 6/CSB	3	2020	3	2020
Ship Delivery (SSN 795)	3	2020	3	2020
Post Shakedown Availability (PSA SSN 795)	4	2020	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604558N / *New Design SSN*	Project (Number/Name) 3062 / *Submarine Multi-Mission Team Trainer*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
3062: *Submarine Multi-Mission Team Trainer*	26.955	2.773	2.570	7.550	-	7.550	2.606	2.630	2.684	2.740	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shore based Combat System Team Trainers capable of training personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment. The Combat Control System (CCS) MK1, CCS MK2, and AN/BYG-1, along with sonar systems AN/BSY-1, AN/BQQ-5, and AN/BQQ-10 are installed on SSN and SSGN class submarines. These tactical systems are planned for future upgrades with the next hardware and software revisions which will provide enhanced War Fighter capabilities. The Tactical Acoustic Rapid COTS (commercial-off-the-shelf) Insertion (ARCI) phased upgrades are also being installed with future revisions. The Advanced Processing Builds (APB) and Technical Insertion (TI) sensors, which feed technology insertion into the CCS/Acoustic development, directly impact the trainers.

The Submarine Multi-Mission Team Trainer (SMMTT) supports operator, employment, strike, and Battle Group training for enlisted and officer pipelines. The SMMTT provides operators and combat teams the opportunity to train ashore, prior to, and between deployments. The shore based training provides a means of maintaining team proficiency in stand alone or in combined team mode prior to ship deployment.

FY-16 RDTE,N Line 3062 was increased in support of SSBN Modernization. This funding will be used for the development, test and evaluation of new sensors and stimulation/simulation hardware and software required to integrate with tactical systems to build new SSBN Attack Centers.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Submarine Multi-Mission Team Trainer	2.773	2.570	7.550	-	7.550
Articles:	-	-	-	-	-
Description: To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shore based Combat System Team Trainers capable of training personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment.					
FY 2014 Accomplishments: Developed implementation of latest Advanced Processor Build (APB), Technical Insertion (TI) and associated training displays. This effort includes new sensor developments and simulations to match advancements in					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 3062 / *Submarine Multi-Mission Team Trainer*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
tactical systems supported by SMMTT. This effort also integrates the APB into the SMMTT baseline along with completing and integrating the LCCA sensor. ***FY 2015 Plans:*** Develop implementation of latest Advanced Processor Build (APB), Technical Insertion (TI) and associated training displays. These efforts include new sensor developments and simulations to match advancements in tactical systems supported by SMMTT. These efforts will also integrate the APB into the SMMTT baseline along with completing and integrating the LCCA sensor. ***FY 2016 Base Plans:*** Develop implementation of latest Advanced Processor Build (APB), Technical Insertion (TI) and associated training displays. These efforts include new sensor developments and simulations to match advancements in tactical systems supported by SMMTT. These efforts will also integrate the APB into the SMMTT baseline along with completing and integrating the LCCA sensor. In addition, the 3062 RDTE,N line was increased in support of SSBN Modernization. This funding will be used for the development, test and evaluation of new sensors and stimulation/simulation hardware and software required to integrate with tactical systems to build new SSBN Attack Centers. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	2.773	2.570	7.550	-	7.550

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPN/5661: *Submarine Training Device Mods*	19.599	13.498	31.264	-	31.264	25.126	32.772	36.402	32.950	Continuing	Continuing

Remarks

D. Acquisition Strategy

The SMMTT program software development is accounted for in this RDTE,N line. All production kits are procured in OPN PE 0804731N BLI 566100 and 566200, cost code TD009.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 3062 / *Submarine Multi-Mission Team Trainer*

E. Performance Metrics

Within 90 days of introduction to the Fleet, this RDTE,N project shall develop required changes to the Control and Display Documentation and Interface Description Language (IDL) Interfaces for the initial development for new sensors that are required to simulate/stimulate the TI/APB for the AN/BQQ-5 and AN/BYG-1 in the SMMTT Trainer.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 3062 / *Submarine Multi-Mission Team Trainer*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Development	Reqn	NSWC/CD : Bethesda, MD	22.770	1.773	Dec 2013	1.248	Mar 2015	3.990	Dec 2015	-		3.990	Continuing	Continuing	Continuing
Component Development	C/CPFF	ARL : UT Austin	2.185	-	Jan 2014	0.250	Apr 2015	0.310	Jan 2016	-		0.310	Continuing	Continuing	Continuing
Component Development	Reqn	NSWC/NPT : Newport, RI	2.000	1.000	Dec 2013	1.072	Jan 2015	3.250	Dec 2015	-		3.250	-	7.322	-
		Subtotal	26.955	2.773		2.570		7.550		-		7.550	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.955	2.773		2.570		7.550		-		7.550	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 3062 / *Submarine Multi-Mission Team Trainer*

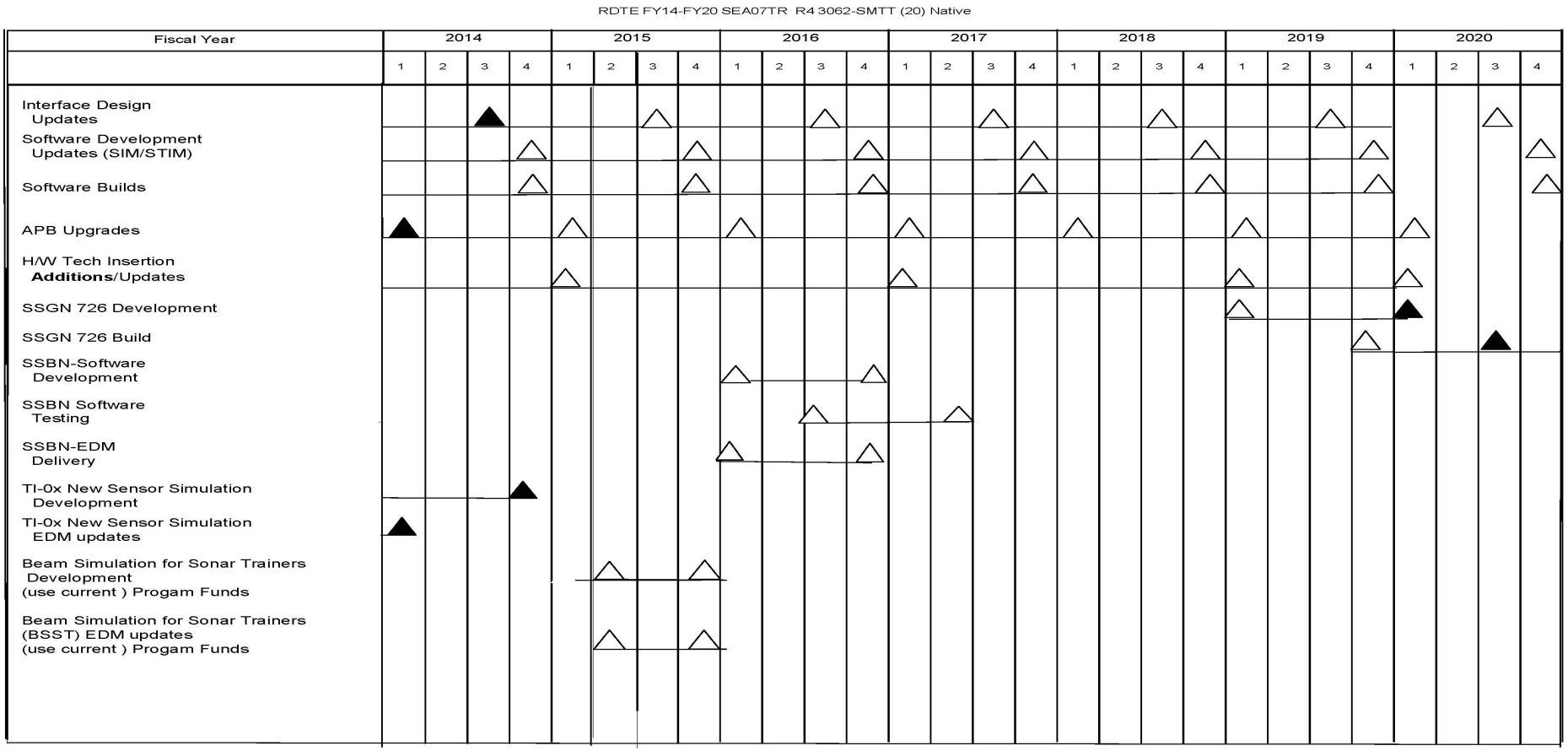

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604558N / *New Design SSN*	**Project (Number/Name)** 3062 / *Submarine Multi-Mission Team Trainer*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3062				
Interface deisgn updates: Interface Design Updates	1	2014	4	2017
Software Development Updates: Software Development Updates (SIM/STIM)	1	2014	4	2017
Software Builds: Software Builds	1	2014	4	2017
Advanced Processing Build(APB) Upgrades: Advanced Processing Build (APB) Upgrades	1	2014	1	2017
Hard Ware Tech Insertion Updates: Hard Ware Tech Insertion Updates	1	2014	1	2017
SSN 21 Software Develpment: SSN 21 Software Development	1	2014	1	2014
TI-Ox New Sensor Simulation Development: TI-0x New Sensor Simulation Development	1	2014	4	2014
TI-Ox New Sensor Simulation EDM Updates: TI-0x New Sensor Simulation EDM Updates	1	2014	2	2014
Beam Simulation for Sonar Trainers: Beam Simulation for Sonar Trainers	2	2015	4	2015
Beam Simulation for Sonar Trainers BSST EDM Updates: Schedule Detail	2	2015	4	2015