Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced

PE 0603595N I (U)Ohio Replacement

Component Development & Prototypes (ACD&P)

| COST (\$ in Millions) | Prior Years | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO [#] | FY 2015 Total | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Cost To Complete | Total Cost |
|---|----------------|---------|---------|-----------------|-----------------------------|------------------|---------|---------|---------|---------|---------------------|---------------|
| Total Program Element | 0.000 | - | - | 849.277 | - | 849.277 | 994.926 | 696.281 | 709.471 | 394.450 | Continuing | Continuing |
| 3220: SBSD Advanced Submarine System Development | 0.000 | - | - | 812.807 | - | 812.807 | 994.926 | 696.281 | 709.471 | 394.450 | Continuing | Continuing |
| 3237: Launch Test Facility | 0.000 | - | - | 36.470 | - | 36.470 | - | - | - | - | - | 36.470 |

MDAP/MAIS Code: P444

A. Mission Description and Budget Item Justification

This program element supports innovative research and development in submarine Hull, Mechanical and Electrical (HM&E) and combat systems technologies and the subsequent evaluation, demonstration, and validation for submarine platforms. It will increase the submarine technology base and provide subsystem design options not currently feasible. The program element also supports programs transitioning from Science and Technology (S&T), Defense Advanced Research Projects Agency (DARPA), Independent Research and Development, and Small Business Innovation Research (SBIR) projects.

Project Unit 3220:

The objective of the Sea Based Strategic Deterrent (SBSD) Advanced Submarine System Development project is to design and prepare for construction of the replacement of the OHIO Class SSBN.

Project Unit 3237:

The Launch Test Facility project constructs the Launch Test Facility at Naval Air Warfare Center, China Lake, CA to enable Full Scale Surface Launch Testing and evaluation / qualification of the TRIDENT II D5LE SWS missile launcher subsystem for the OHIO Replacement Submarine. The project construction will be authorized by 10 U.S.C. Section 2353, funded from Research, Development, Test, and Evaluation (RDT&E) appropriations, and will have no general utility and will be utilized solely to meet RDT&E contractual requirements.

PE 0603595N: (U)Ohio Replacement

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[#] The FY 2015 OCO Request will be submitted at a later date.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy

Appropriation/Budget Activity

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 Program Element (Number/Name)

Date: March 2014

PE 0603595N I (U)Ohio Replacement

| B. Program Change Summary (\$ in Millions) | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO | FY 2015 Total |
|---|---------|---------|---------------------|-------------|---------------|
| Previous President's Budget | _ | - | - | - | - |
| Current President's Budget | - | - | 849.277 | - | 849.277 |
| Total Adjustments | - | - | 849.277 | - | 849.277 |
| Congressional General Reductions | - | - | | | |
| Congressional Directed Reductions | - | - | | | |
| Congressional Rescissions | - | - | | | |
| Congressional Adds | - | - | | | |
| Congressional Directed Transfers | - | - | | | |
| Reprogrammings | - | - | | | |
| SBIR/STTR Transfer | - | - | | | |
| Program Adjustments | - | - | 864.269 | - | 864.269 |
| Rate/Misc Adjustments | - | - | -14.992 | - | -14.992 |

Change Summary Explanation

Note: Beginning in 2015, there is an administrative change that shifts efforts funded from PE 0603561N (Advanced Submarine System Development) / Project 3220 to PE 0603595N (Ohio Replacement) / Project 3220. This shift is consistent with Congressional intent identified in HR 933 (FY13).

Reduced FY 15 funding due to the Department's decision to reduce contracted services.

PE 0603595N: (U)Ohio Replacement Navy

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| Exhibit R-2A, RDT&E Project Ju | Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy Date: March 2014 | | | | | | | | | | | | |
|---|---|---------|---------|-----------------|------------------|------------------|---------|---------|---------|---------|--|---------------|--|
| Appropriation/Budget Activity 1319 / 4 | | | | | | , , , , , | | | | | Imber/Name) D Advanced Submarine System nt | | |
| COST (\$ in Millions) | Prior Years | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO # | FY 2015 Total | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Cost To Complete | Total Cost | |
| 3220: SBSD Advanced Submarine System Development | - | - | - | 812.807 | - | 812.807 | 994.926 | 696.281 | 709.471 | 394.450 | Continuing | Continuing | |
| Quantity of RDT&E Articles | 0.000 | - | - | - | - | - | - | - | - | - | | | |

^{*} The FY 2015 OCO Request will be submitted at a later date.

Note

Navy

Beginning in 2015, there is an administrative change that will shift efforts funded from PE 0603561N (Advanced Submarine System Development) / Project 3220 to PE 0603595N (Ohio Replacement) / Project 3220. This shift is consistent with Congressional intent identified in HR 933 (FY13).

A. Mission Description and Budget Item Justification

The Sea Based Strategic Deterrent (SBSD) Advanced Submarine System Development project supports the OHIO Replacement (OR) program. The funding applies to the design, systems engineering, prototyping, and vendor qualification activities needed to execute the schedule for Common Missile Compartment (CMC) design, whole ship design, and component technologies development for the next generation U.S. ballistic missile submarine. This RDT&E program supports cooperation with the United Kingdom (UK) to maintain strategic deterrence, based on a single effort to develop a CMC as agreed by the UK Secretary of State for Defence and the U.S. Secretary of Defense in 2009.

The OHIO Replacement program strategy is to maximize the re-use of existing OHIO systems and new designs from the SEAWOLF and VIRGINIA Classes (as applicable), focus on Life Cycle Total Ownership Cost (TOC) affordability, and meet the military requirements established for this SSBN to achieve mission success in a challenging environment. The requested funding levels support the Technology Development, Design, and Engineering Integration efforts to support the OHIO Replacement SSBN lead ship construction start in FY 2021.

The following key activities support a ship acquisition program to replace the OHIO Class SSBNs:

- 1. Design and development of a missile compartment, launch system, and strategic support systems to meet U.S. strategic requirements while cooperating with the UK on modernizing its strategic deterrent in accordance with Presidential direction (December 2006).
- 2. Concept and System Definition for remaining portions of the ship will be accomplished by the Design/Build/Sustain approach modeled after the VIRGINIA Class program.
- 3. Development of advanced submarine platform technologies to provide capabilities needed to enhance platform operational effectiveness and minimize life cycle cost. OR Concept and System Definition Prototyping, and Technology Development Efforts

The OR program supports design, systems engineering, prototyping and vendor qualification activities needed to develop CMC design, the OHIO Replacement whole ship design, and component development. The OR design timelines are based on the approach proven on VIRGINIA Class Program, adjusted for the additional complexity of a missile compartment and Strategic Weapons Systems (SWS). Planned technical studies and prototyping are necessary to reduce risks associated with updating SSBN system designs for current technical standards and demonstrating design feasibility of developmental technology to inform the establishment of detailed requirements.

PE 0603595N: (U)Ohio Replacement

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| Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy | | | Date: March 2014 |
|--|---|--------------|--|
| Appropriation/Budget Activity 1319 / 4 | R-1 Program Element (Number/Name) PE 0603595N I (U)Ohio Replacement | • • | umber/Name) SD Advanced Submarine System ent |
| The Navy continues investing in program funded affordability initiatives sim | lar to those employed successfully for VIRGINIA | Class, but t | ailored to the unique SSBN |

The Navy continues investing in program funded affordability initiatives similar to those employed successfully for VIRGINIA Class, but tailored to the unique SSBN mission and operational tempo of OHIO Replacement to drive down overall program costs. Efforts will focus on reducing ship construction costs through implementing more effective design features to produce a more affordable/producible class. As part of this effort, alternative contracting strategies will be examined to include multiclass multiyear procurement (MYP) and economic order quantity (EOQ).

Activities planned for FY 2015 are required to maintain the first article prototype of the CMC to support the UK SUCCESSOR programme. The CMC program will mature required technologies and re-host the TRIDENT II D5 SWS (Launcher, Fire Control and Navigation) while ensuring no degradation to D5 security, safety and performance. In addition, whole ship design efforts are focused on technologies requiring significant development times and those technologies that are required to support ship design and construction schedules such as the propulsor, maneuvering/ship control and signatures. These technologies are critical for stealth capability for a ship class that will be in service until the 2080s. Ship concept design efforts include important pre-construction activities such as finalizing ship requirements, risk characterization of developmental technology, improvement and validation of performance prediction tools and improvement of design tools. Technology development will address maturation of technologies.

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | FY 2013 | FY 2014 | FY 2015 |
|---|---------|---------|--------------|
| Title: CMC Design and Prototyping Articles: | | | 324.376 - |
| FY 2013 Accomplishments: N/A | | | |
| FY 2014 Plans: N/A | | | |
| FY 2015 Plans: Commence development of first article missile tubes. Complete missile tube confirmation model. Continue efforts for the design and development of the CMC to include: drawings of the first article missile tube quad pack, and CMC system diagrams. Continue development of CMC arrangements. Continue validation of missile tube to missile tube quad pack production techniques. Continue design and prototype efforts and manufacturing of additional fixtures. Continue design for the missile compartment. Finalize, first article prototype, quad pack design. | | | |
| Title: Ship Study and Design Articles: | | | 100.668 |
| FY 2013 Accomplishments: N/A | | | |
| FY 2014 Plans: N/A | | | |
| FY 2015 Plans: | | | |

PE 0603595N: (U)Ohio Replacement

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| Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy | | | Date: N | larch 2014 | | | |
|--|---|-----------------------------|---|------------|-------------|--|--|
| Appropriation/Budget Activity 1319 / 4 | R-1 Program Element (Number/Name) PE 0603595N I (U)Ohio Replacement | 3220 <i>I</i> | Project (Number/Name) 3220 / SBSD Advanced Submarine Sy Development | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions, Article | Quantities in Each) | | FY 2013 | FY 2014 | FY 2015 | | |
| Continue design of forward and aft ends of OHIO Replacement Cl integration, component design, system diagrams, ship arrangeme Continue CMC interface with Rest of Ship. Begin ship integration | ents, construction drawings, control surface design, and stu | | | | | | |
| Title: NAVSEA R&D and Prototyping | A | rticles: | - | - | 148.60 - | | |
| FY 2013 Accomplishments: N/A | | | | | | | |
| FY 2014 Plans: N/A | | | | | | | |
| FY 2015 Plans: Test Generation 1 Propulsor models on the large scale vehicle. B of full scale prototype quick disconnect hardware. Initial full scale Conduct high Reynolds number testing for control surface design. low voltage anode testing. Begin Phase II of the Concept of Oper Compensation Control System (HMCCS) and Ship Control Design stern design. Continue component development to support ship reGFI for NPES. | bearing test rig evaluation of prototype OR bearing design. Conduct final CMC pressure hull model testing. Completations Experiment (COOPEX) to support Hovering and Mins. Conduct full scale at-sea test on surrogate platform to | n. te ssile inform | | | | | |
| Title: Systems Engineering/Program Management | A | rticles: | | - | 86.56 - | | |
| FY 2013 Accomplishments: N/A | | | | | | | |
| FY 2014 Plans: N/A | | | | | | | |
| FY 2015 Plans: Continue to provide technical oversight including Program Office relaboratories for review, analysis and modeling. Continue maintent the OHIO Replacement Service Capabilities Development Docum Oversight Counsel (JROC). Continue to identify and assess issue as their impact on program costs. Refine OR T&E requirements a organizations. After approval of the JROC CDD, obtain TEMP and | ance planning and design for sustainment activities. Comp nent (CDD) and receive approval from the Joint Requireme es with the platform, shore facilities, and infrastructure as v and continue coordination interface with OSD T&E oversigl | nts vell nt | | | | | |

PE 0603595N: (U)Ohio Replacement

| | | | | UNCLAS | SIFIED | | | | | | | | |
|---|--|---|---|---|--|--|--|---|----------|-----------------------------------|--------------------------|--|--|
| Exhibit R-2A, RDT&E Project Just | ification: PB | 2015 Navy | | - | | | | | Date: Ma | arch 2014 | | | |
| Appropriation/Budget Activity 1319 / 4 | | | | | | nent (Numb I)Ohio Repla | | Project (Number/Name) 3220 / SBSD Advanced Submarine Syst Development | | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | | | | | | | | | | FY 2014 | FY 2015 | | |
| System Level (FUSL) testing. Conti Specific initiatives include robotic we material reuse. Continue program a Economic Order Quantity (EOQ) pro equipment mix for potential efficience production runs. Continue efforts for | elding, Integra affordability effocurements accies, and poten | ted Product forts targeted cross subma ntial savings | Developmed to achieving classes associated | nt Environment grotential solutions, investigation with continuous | ent (IPDE) p avings asso g the gover ous missile t | rocess develociated with nonent vs. colube and/or la | lopment, and nulti-year and ontractor furnis | /or | | | | | |
| Title: Strategic Weapons Systems I | ntegration | | | | | | | ticles: | - | - | 152.588 | | |
| FY 2013 Accomplishments: N/A | | | | | | | Ai | tioles. | | | | | |
| FY 2014 Plans: N/A | | | | | | | | | | | | | |
| FY 2015 Plans: Continue system engineering efforts Replacement submarine including re SWS equipment within the CMC and and Hardware and Software require berth / facility modifications and dev capability/requirements development for the development of a missile lau launch system prototype efforts and SWS Navigation. Continue systems procurement of a prototype guidance | eview and mo d Missile Cont ments develo relopment of s at. Complete I nch tube test d evaluation / o s engineering | dification of crol Center Mannert. Con pecial test votiled and decapability and design effort | SWS Coord Module (MCC tinue SWS t ehicles. SW liver Fire Co d test stand program. (| ination, Inter CM), SWS sy est systems S Ashore tes introl Engined including ref Continue des | face and Ari stem and su material pro t capability of ering Test S furbishment ign and dev | rangement Dubsystem preduction and an architecture and ar | prawings for eliminary design and builds, test t. SWS traininatinue design icle to supportorts for shipbor | ng efforts t oard | | | | | |
| | | | | Accon | nplishment | s/Planned P | rograms Sul | ototals | - | - | 812.807 | | |
| C. Other Program Funding Summ | ary (\$ in Milli | ons) | | | | | | | | | | | |
| Line Item • RDTEN/3219: SBSD Nuclear Technology Development • SCN/1045: OHIO | FY 2013 73.714 | FY 2014 296.050 | FY 2015 Base 369.964 | FY 2015 OCO - | FY 2015 Total 369.964 | FY 2016 422.661 13.200 | FY 2017 411.598 777.793 | FY 2018 401.698 791.793 | 291.302 | Cost To Complete Continuing | Total Cost Continuing | | |
| Replacement Submarine | | | | | | | | | , | | | | |

PE 0603595N: (U)Ohio Replacement

| Exhibit R-2A, RDT&E Project Just | stification: PB | 2015 Navy | | | | | | | Date: Ma | rch 2014 | |
|--|-------------------|-----------|-----------------------------------|---------|---|---------|---------|---------|----------|----------------|-------------------|
| Appropriation/Budget Activity 1319 / 4 | | • | nent (Numb I)Ohio Repla | • | Project (Number/Name) 3220 I SBSD Advanced Submarine Syst Development | | | | | | |
| C. Other Program Funding Sumr | nary (\$ in Milli | ons) | | | | | | | | | |
| | | | FY 2015 | FY 2015 | FY 2015 | | | | | Cost To | |
| Line Item | FY 2013 | FY 2014 | Base | OCO | <u>Total</u> | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Complete | Total Cost |
| RDTEN/3220: Advanced | 784.823 | - | - | - | - | - | - | - | - | - | 1,216.684 |

Submarine System Development

Remarks

D. Acquisition Strategy

The common missile compartment will be designed and developed to support the U.S. and UK in development of the OHIO Replacement and SUCCESSOR SSBN programs enabling a common U.S.-UK CMC and maximizing the benefit of the ongoing U.S.-UK partnership in strategic deterrence. The OHIO Replacement R&D efforts will incentivize cost reduction initiatives in the design, construction and operations & support portions of the program. R&D efforts will be performed by Navy laboratories, shipyards, private industry, and University Affiliated Research Centers.

E. Performance Metrics

The common missile compartment will be designed and developed to support the U.S. and UK in development of the OHIO Replacement and SUCCESSOR SSBN programs enabling a common U.S.-UK CMC and maximizing the benefit of the ongoing U.S.-UK partnership in strategic deterrence. The OHIO Replacement R&D efforts will incentivize cost reduction initiatives in the design, construction and operations & support portions of the program. R&D efforts will be performed by Navy laboratories, shipyards, private industry, and University Affiliated Research Centers.

PE 0603595N: (U)Ohio Replacement

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Navy

Appropriation/Budget Activity R-1 Program Element (Number/Name)

1319 / 4 PE 0603595N / (U)Ohio Replacement

Project (Number/Name)
3220 / SBSD Advanced Submarine System

Development

| | | | | | | | | | | | 2010.0 | | | | |
|---------------------|------------------------------------|---|----------------|------|---------------|------|---------------|---------|---------------|------|---------------|------------------|------------|---------------|--------------------------------|
| Product Developme | oduct Development (\$ in Millions) | | /lillions) | | FY 2013 | | 2014 | | 2015 ase | FY 2 | | FY 2015 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 | Total Cost | Target Value of Contract |
| Product Development | SS/CPFF | Ship Design Contractor-EB : Groton, CT | 0.000 | - | | - | | 425.044 | Dec 2014 | - | | 425.044 | Continuing | Continuing | Continuing |
| Product Development | WR | NSWC : Carderock, MD | 0.000 | - | | - | | 161.615 | Oct 2014 | - | | 161.615 | Continuing | Continuing | Continuing |
| Product Development | WR | NUWC : Newport, RI | 0.000 | - | | - | | 14.808 | Oct 2014 | - | | 14.808 | Continuing | Continuing | Continuing |
| Product Development | Various | NAVSEA : Various | 0.000 | - | | - | | 19.921 | Oct 2014 | - | | 19.921 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | ARL Penn State University : State College, PA | 0.000 | - | | - | | 0.377 | Oct 2014 | - | | 0.377 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | NGMS : Sunnyvale, CA | 0.000 | - | | - | | 38.490 | Oct 2014 | - | | 38.490 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | JHU/APL : Laurel, MD | 0.000 | - | | - | | 6.002 | Oct 2014 | - | | 6.002 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | CSDL : Cambridge, MA | 0.000 | - | | - | | 4.368 | Oct 2014 | - | | 4.368 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | LMFS : Mitchel Field, NY | 0.000 | - | | - | | 9.377 | Oct 2014 | - | | 9.377 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | LMMSC : Sunnyvale, CA | 0.000 | - | | - | | 29.495 | Dec 2014 | - | | 29.495 | Continuing | Continuing | Continuing |
| Product Development | C/CPFF | GDAIS : Pittsfield, MA | 0.000 | - | | - | | 20.821 | Nov 2014 | - | | 20.821 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | IEC : Anaheim, CA | 0.000 | - | | - | | 0.734 | Oct 2014 | - | | 0.734 | Continuing | Continuing | Continuing |
| Product Development | WR | NSWC : Dahlgren, VA | 0.000 | - | | - | | 7.500 | Oct 2014 | - | | 7.500 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | BAE : Rockville, MD | 0.000 | - | | - | | 8.134 | Oct 2014 | - | | 8.134 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | BNA : Huntington Beach, CA | 0.000 | - | | - | | 1.454 | Dec 2014 | - | | 1.454 | Continuing | Continuing | Continuing |
| Product Development | WR | NSWC Crane : Crane, IN | 0.000 | - | | - | | 13.666 | Nov 2014 | - | | 13.666 | Continuing | Continuing | Continuing |
| Product Development | SS/CPFF | SPA : Alexandria, VA | 0.000 | | | - | | 3.468 | Oct 2014 | - | | 3.468 | Continuing | Continuing | Continuing |
| Product Development | Various | SSP : Various | 0.000 | - | | - | | 8.702 | Oct 2014 | - | | 8.702 | Continuing | Continuing | Continuing |

PE 0603595N: *(U)Ohio Replacement* Navy

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| Exhibit R-3, RDT&E F | Project C | ost Analysis: PB 2 | 2015 Navy | / | | | | | | | | Date: | March 20 | 014 | |
|---|-----------------------------------|-----------------------------------|----------------|------|---------------|-------------|---------------|---------|---------------|--|---------------|------------------|------------|---------------|--------------------------------|
| 1319 / 4 PE 0603595N / (U)Ohio Replacement 3220 / | | | | | | | | | SBSD Adı | umber/Name) SD Advanced Submarine System ent | | | | | |
| Product Development (\$ in Millions) | | | | FY 2 | 2013 | 2013 FY 201 | | | 2015 ase | | 2015 CO | FY 2015 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 | Total Cost | Target Value of Contract |
| | | Subtotal | 0.000 | - | | - | | 773.976 | | - | | 773.976 | - | - | - |
| Management Service | agement Services (\$ in Millions) | | | FY 2 | 2013 | FY 2014 | | | 2015 ase | FY 2015 OCO | | FY 2015 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 | Total Cost | Target Value of Contract |
| Contractor Management Support | C/CPFF | Various : Multiple Awards | 0.000 | - | | - | | 19.938 | Oct 2014 | - | | 19.938 | Continuing | Continuing | Continuing |
| Government Management Support | WR | Various: NSWC : Carderock, MD | 0.000 | - | | - | | 18.477 | Oct 2014 | - | | 18.477 | Continuing | Continuing | Continuing |
| Travel | WR | NAVSEA HQ : Washington, D.C. | 0.000 | - | | - | | 0.416 | Oct 2014 | - | | 0.416 | Continuing | Continuing | Continuing |
| | | Subtotal | 0.000 | - | | - | | 38.831 | | - | | 38.831 | - | - | - |
| | | | Prior Years | FY 2 | 2013 | FY: | 2014 | | 2015 ase | | 2015 CO | FY 2015 Total | Cost To | Total Cost | Target Value of Contract |
| | | Project Cost Totals | 0.000 | - | | - | | 812.807 | | - | | 812.807 | - | - | - |

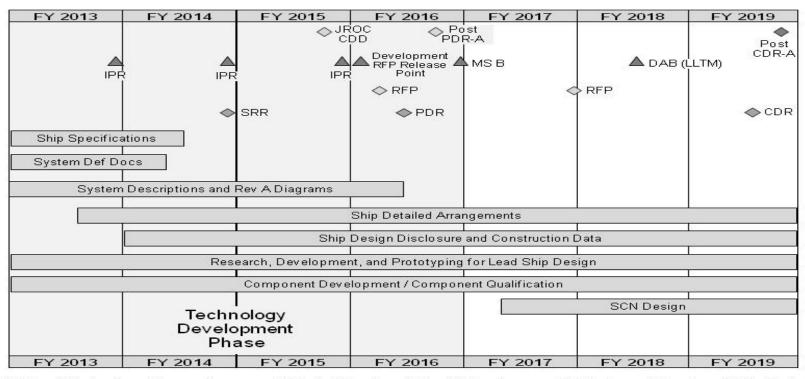
Remarks

Note: Beginning in 2015, there is an administrative change that shifts efforts funded from PE 0603561N (Advanced Submarine System Development) / Project 3220 to PE 0603595N (Ohio Replacement) / Project 3220. This shift is consistent with Congressional intent identified in HR 933 (FY13).

PE 0603595N: (U)Ohio Replacement

Navy

| Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy | | | Date: March 2014 |
|---|---|-----|--|
| | , | -,(| umber/Name) SD Advanced Submarine System ent |



CDD - Capabilities Development Document

CDR - Critical Design Review

DAB - Defense Acquisition Board

IPR - In Progress Review

JROC - Joint Requirements Oversight Council

LLTM - Long Lead Time Material

MS-Milestone

PDR - Preliminary Design Review

RDT&E - Research , Development , Test , & Evaluation

RFP - Request for Proposal

SCN - Shipbuilding and Conversion, Navy

SRR - System Requirements Review

| Exhibit R-4A, RDT&E Schedule Details: PB 2015 Navy | | | Date: March 2014 |
|--|---|-------|--|
| Appropriation/Budget Activity 1319 / 4 | , | - 3 (| umber/Name) SD Advanced Submarine System ent |

Schedule Details

| | Sta | art | End | | |
|---|---------|------|---------|------|--|
| Events by Sub Project | Quarter | Year | Quarter | Year | |
| Notes: * Effort began prior to 1st Quarter FY 2013. ** Effort continues past 4th Quarter FY 2019. | | | | | |
| Ship Specifications* | 1 | 2013 | 2 | 2014 | |
| System Definition Documents* | 1 | 2013 | 2 | 2014 | |
| System Descriptions and REV A Diagrams* | 1 | 2013 | 2 | 2016 | |
| Ship Detailed Arrangements** | 2 | 2013 | 4 | 2019 | |
| Ship Design Disclosure and Construction Data** | 1 | 2014 | 4 | 2019 | |
| Research Development and Prototyping for Lead Ship Design* ** | 1 | 2013 | 4 | 2019 | |
| Component Development/Component Qualification* ** | 1 | 2013 | 4 | 2019 | |
| SCN Design / IPPD** | 2 | 2017 | 4 | 2019 | |

| Exhibit R-2A, RDT&E Project Ju | ustification: | PB 2015 N | lavy | | | | | | | Date: Mare | ch 2014 | |
|--|----------------|-----------|---------|-----------------|-----------------------------|--------------------------|---------|---------|---------|------------|---------------------|---------------|
| Appropriation/Budget Activity 1319 / 4 | | | | | _ | am Elemen 95N / (U)Oh | • | • | | umber/Nar | , | |
| COST (\$ in Millions) | Prior Years | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO [#] | FY 2015 Total | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Cost To Complete | Total Cost |
| 3237: Launch Test Facility | - | - | - | 36.470 | - | 36.470 | - | - | - | - | - | 36.470 |
| Quantity of RDT&E Articles | 0.000 | - | - | - | - | - | - | - | - | - | | |

^{*} The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Project Unit 3237: Project constructs a new Launch Test Facility to support surface launch testing and evaluation of full-scale launch technologies. The project construction is authorized by 10 U.S.C. Section 2353, funded from Research, Development, Test, and Evaluation (RDT&E) appropriations, and will have no general utility and utilized solely to meet RDT&E contractual requirements. This project enables full-scale testing of a Trident II D5LE SWS missile launcher subsystem to collect launch event information for verification and validation of modeling and simulation software, to evaluate and demonstrate launcher subsystem performance, and to qualify the launcher subsystem hardware. This project provides a test facility to conduct qualification testing of full-scale launcher hardware. The project will provide performance and safety data to mitigate the risk of a tactical failure in the fleet.

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | FY 2013 | FY 2014 | FY 2015 |
|--|---------|---------|---------|
| Title: OR Launch Test Facility | - | - | 36.470 |
| Articl | es: - | - | - |
| FY 2013 Accomplishments: | | | |
| N/A | | | |
| FY 2014 Plans: | | | |
| N/A | | | |
| FY 2015 Plans: | | | |
| Construct the Launch Test Facility at Naval Air Warfare Center, China Lake, CA to enable Full Scale Launch Testing and | | | |
| evaluation / qualification of the TRIDENT II D5LE missile launcher subsystem for the OHIO Replacement Submarine. Additional datable are contained in the form DD1301 provided as a supplement to the budget meterials. | 1 | | |
| details are contained in the form DD1391 provided as a supplement to the budget materials. | _ | | |
| Accomplishments/Planned Programs Subtot | als - | - | 36.470 |

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

| | | | FY 2015 | FY 2015 | FY 2015 | | | | | Cost 10 | |
|-------------------------|---------|---------|---------|---------|--------------|---------|---------|---------|---------|------------|-------------------|
| <u>Line Item</u> | FY 2013 | FY 2014 | Base | 000 | <u>Total</u> | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Complete | Total Cost |
| • RDTE/PE0603561N/3220: | 431.861 | 784.823 | - | - | - | - | - | - | - | Continuing | Continuing |

Advanced Submarine System Development

PE 0603595N: (U)Ohio Replacement

Navy

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| Exhibit R-2A, RDT&E Project Just | ification: PB | 2015 Navy | | | | | | | Date: Ma | rch 2014 | |
|--|------------------|-----------|---------|---------|---------|---------------------------|---------|---------|----------------------------|------------|-------------------|
| Appropriation/Budget Activity 1319 / 4 | | | | | • | nent (Numb)Ohio Repla | • | | (Number/Na aunch Test F | | |
| C. Other Program Funding Summ | ary (\$ in Milli | ons) | | ' | | | | | | | |
| - | | - | FY 2015 | FY 2015 | FY 2015 | | | | | Cost To | |
| Line Item | FY 2013 | FY 2014 | Base | ОСО | Total | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Complete | Total Cost |
| • SCN/1045: OHIO | _ | - | - | - | | 13.200 | 777.793 | 791.793 | 2,887.937 | Continuing | Continuing |
| Replacement Submarine | | | | | | | | | | • | • |
| RDTEN/3219: SBSD Nuclear | 73.714 | 296.050 | 369.964 | - | 369.964 | 422.661 | 411.598 | 401.698 | 291.302 | Continuing | Continuing |
| Technology Development | | | | | | | | | | J | J |
| Romarks | | | | | | | | | | | |

Remarks

D. Acquisition Strategy

FFP Contract executed through NAVFAC Multiple Award Construction Contract.

NAVFAC has the contractual warrant to buy design services. NAVFAC/Southwest executes the technical administration, planning, and scheduling for the overall design of the Launch Test Facility (LTF) based on the Facility Design Criteria executed by NAVFAC/SW. NAVFAC/SW Construction effort is led by NAVFAC/SW and executed by NAVFAC/SW Facilities Engineering and Acquisition Division (FEAD) for construction, certification and validation of the facility.

The facility will provide the necessary foundations, buildings, cranes, infrastructure, ordnance storage, test vehicle arrestment and other services & amenities needed to conduct full-scale surface launch test, integration testing, arrestment, and recovery/reuse of D5LE SWS test vehicles. Operation of the LTF requires interactions with NAWS & NAWCWD at China Lake, CA and its existing infrastructure, the environment, and operators & maintenance personnel. The facility is being developed to support the Surface Launch Test system capabilities which will provide a full scale, reusable launch test capability to support Launcher Subsystem development, evaluation and qualification, and Trident II D5LE SWS Missile Subsystem risk reduction.

E. Performance Metrics

Authority to Construct (ATC) Authority to Operate (ATO)

PE 0603595N: (U)Ohio Replacement

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Navy | | | Date: March 2014 |
|--|---|-----|----------------------------------|
| Appropriation/Budget Activity 1319 / 4 | , | • (| umber/Name) nch Test Facility |
| | | | |

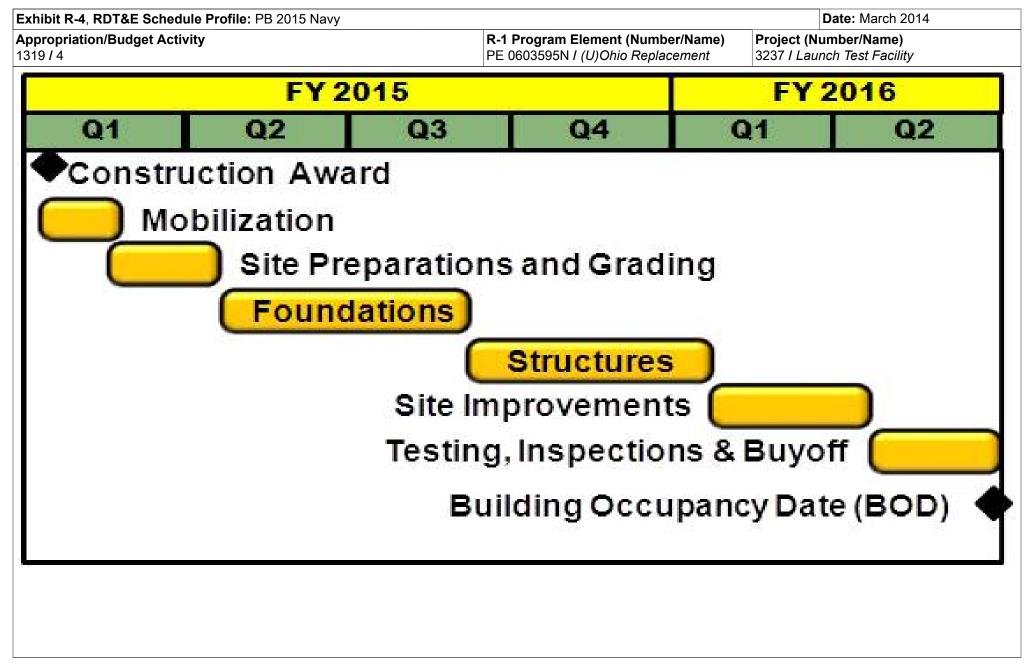
| Product Developmen | nt (\$ in M | illions) | | FY 2 | 2013 | FY 2 | 2014 | FY 2 Ba | | FY 2 | 2015 CO | FY 2015 Total | | | |
|---------------------|------------------------------|-----------------------------------|----------------|------|---------------|------|---------------|------------|---------------|------|---------------|------------------|---------------------|---------------|--------------------------------|
| 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 | WR | NAWC CL : China Lake, CA | 0.000 | - | | - | | 36.470 | Oct 2014 | - | | 36.470 | - | 36.470 | - |
| | | Subtotal | 0.000 | - | | - | | 36.470 | | - | | 36.470 | - | 36.470 | - |
| | | | | | | | | | | | | | | | |

| | Prior Years | FY 201 | 3 FY: | FY 2 2014 Ba | 2015 FY 2015 ise OCO | FY 2015 Total | Cost To | Total Cost | Target Value of Contract |
|---------------------|----------------|--------|-------|-----------------|-------------------------|------------------|---------|---------------|--------------------------------|
| Project Cost Totals | 0.000 | - | - | 36.470 | - | 36.470 | - | 36.470 | - |

Remarks

PE 0603595N: *(U)Ohio Replacement* Navy

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PE 0603595N: *(U)Ohio Replacement* Navy

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| Exhibit R-4A, RDT&E Schedule Details: PB 2015 Navy | | | Date: March 2014 |
|--|-----------------------------------|------------|-------------------|
| · · · · · · · · · · · · · · · · · · · | , , | , , | umber/Name) |
| 1319 / 4 | PE 0603595N I (U)Ohio Replacement | 3237 I Lau | nch Test Facility |

Schedule Details

| | Sta | art | End | | |
|--|---------|------|---------|------|--|
| Events by Sub Project | Quarter | Year | Quarter | Year | |
| Proj 3237 | | | | | |
| Construction Contract Request for Proposal Issued (Estimated) | 4 | 2014 | 4 | 2014 | |
| Construction Contract Awarded | 1 | 2015 | 1 | 2015 | |
| Launch Test Facility Construction | 1 | 2015 | 2 | 2016 | |
| Mobilization | 1 | 2015 | 1 | 2015 | |
| Site Preparations and Grading | 1 | 2015 | 2 | 2015 | |
| Foundations | 2 | 2015 | 3 | 2015 | |
| Structures | 3 | 2015 | 1 | 2016 | |
| Site Improvements | 1 | 2016 | 2 | 2016 | |
| Testings, Inspections and Buyoff | 2 | 2016 | 2 | 2016 | |
| Beneficial Occupancy Date (estimated 18 months after contract award) | 2 | 2016 | 2 | 2016 | |