

| EXHIBIT R-2, RDT&E Budget Item Justification   |           |           |         |   | DATE:<br>February 2006 |         |         |
|--|-----------|-----------|---------|---|------------------------|---------|---------|
| APPROPRIATION/BUDGET ACTIVITY<br>RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5   |           |           |         | R-1 ITEM NOMENCLATURE<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                        |         |         |
| COST (\$ in Millions)  | FY 2005   | FY 2006   | FY 2007 | FY 2008   | FY 2009                | FY 2010 | FY 2011 |
| Total PE Cost  | 1,130.307 | 1,139.993 | 817.528 | 656.837   | 697.041                | 885.407 | 851.458 |
| 2464 / DD(X) System Design, Development and Int  | 924.109   | 1,012.194 | 741.779 | 422.802   | 320.706                | 366.114 | 392.191 |
| 2466 / Multi-Function Radar  | 12.054    | 0.000     | 0.000   | 0.000   | 0.000                  | 0.000   | 0.000   |
| 2735 / Volume Search Radar   | 59.850    | 9.931     | 5.076   | 0.000   | 0.000                  | 0.000   | 0.000   |
| 3105 / BLK II Seeker Technology Dev.   | 0.000     | 0.000     | 0.000   | 45.940  | 76.531                 | 88.887  | 76.699  |
| 3106 / Combat Systems Integration  | 0.000     | 0.000     | 14.370  | 37.704  | 64.095                 | 126.391 | 92.554  |
| 3107 / CG (X) Development  | 0.000     | 29.658    | 9.282   | 102.577   | 187.069                | 254.605 | 239.731 |
| 4009 / Advanced Gun System (AGS)   | 61.528    | 46.110    | 47.021  | 47.814  | 48.640                 | 49.410  | 50.283  |
| 4010 / Integrated Power System (IPS)*  | 62.679    | 0.000     | 0.000   | 0.000   | 0.000                  | 0.000   | 0.000   |
| 9376 / Alternative Engine  | 9.124     | 0.000     | 0.000   | 0.000   | 0.000                  | 0.000   | 0.000   |
| 9554 / Naval Smartship   | 0.963     | 0.000     | 0.000   | 0.000   | 0.000                  | 0.000   | 0.000   |
| 9999/ Undistributed RDTE,N Congressional Adds  | 0.000     | 42.100    | 0.000   | 0.000   | 0.000                  | 0.000   | 0.000   |
| <b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b><br>This Program Element (PE) provides funds for development of the DD(X) Class of U. S. Navy surface combatants and CG(X) future cruiser development. The mission of the DD(X) class is to provide affordable and credible independent forward presence/deterrence and operate as an integral part of Naval, Joint or Combined Maritime Forces. DD(X) will provide advanced land attack capability in support of the ground campaign and contribute to Naval, Joint or Combined battlespace dominance in littoral operations. DD(X) will establish and maintain surface and sub-surface superiority, provide local air defense, and incorporate signature reduction to operate in all threat environments. DD(X) will have seamless Joint Interoperability to integrate all source information for battlespace awareness and weapons direction. CG(X) development efforts will mature the CG(X) design through Milestone B.<br><br><b>The following Congressional adds are contained in this Program Element:</b><br><b>FY05 Congressional Adds:</b><br><b>-Alternative Engine.</b> Provides a system alternative for the lead ship power solution and will further enhance the GE engine design.<br><b>-Naval Smartship.</b> Funds development of a synthetic environment to simulate the effects of insertion of technology and/or new business processes where the crew is removed from a ship.<br><b>FY06 Congressional Adds:</b><br><b>-Project 9999-Congressional Adds:</b> \$42.100- This project consists of the following FY 06 Congressional adds:Naval smartships, Wireless maritime inspection system, Floating area network, Permanent magnet motor, and CG(X) System Concept and design.<br><br><b>*FY05 Supplemental funding: \$5M provided for Permanent Magnet Motor</b> |           |           |         |   |                        |         |         |

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| EXHIBIT R-2a, RDT&E Project Justification  |   |                  |                |                |  | DATE:<br><b>February 2006</b> |                |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                  |                |                | PROJECT NUMBER AND NAME<br>2464 - DD(X) System Design, Development & Integration |                               |                |
| COST (\$ in Millions)  | FY 2005   | FY 2006          | FY 2007        | FY 2008        | FY 2009  | FY 2010                       | FY 2011        |
| Project Cost   | <b>924.109</b>  | <b>1,012.194</b> | <b>741.779</b> | <b>422.802</b> | <b>320.706</b>   | <b>366.114</b>                | <b>392.191</b> |
| RDT&E Articles Qty   |   |                  |                |                |  |                               |                |
| <p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>This project encompasses DD(X) Phase IV development efforts required to deliver the Flight I DD(X) Class Ships. Major efforts include software requirements analysis, architectural and design code and unit testing, integration, qualification testing, and Independent Verification and Validation (IV&amp;V) for software releases 4-6; continued hullform testing at NSWC-CD; conducting testing communication and sensor aperature cosite and electromagnetic interference risk reductions testing for critical arrays; planning for IPS and ship control system testing and integration and tomahawk restrained firing test.</p> |   |                  |                |                |  |                               |                |

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2)

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| EXHIBIT R-2a, RDT&E Project Justification                   |   | DATE:<br><b>February 2006</b>  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>2464 - DD(X) System Design, Development & Integration |

**B. Accomplishments/Planned Program**

|                                      | FY 05   | FY 06  | FY 07 |
|--------------------------------------|---------|--------|-------|
| Accomplishments/Effort/Subtotal Cost | 841.314 | 81.400 | 0.000 |
| RDT&E Articles Quantity              |         |        |       |

In FY05, efforts included construction and testing of the following Engineering Development Models (EDMs): hullform, Infrared mock-up, integrated deckhouse and apertures, total ship computing environment, integrated undersea warfare system, peripheral vertical launching system, automatic fire suppression system, the development and certification of software releases 2 and 3; a program level Critical Design Review (CDR); and preparation for a Milestone B decision. In FY06, conduct MFR at-sea testing and continue S-Band Radar development, integration and testing.

|                                      | FY 05 | FY 06   | FY 07   |
|--------------------------------------|-------|---------|---------|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 721.733 | 604.896 |
| RDT&E Articles Quantity              |       |         |         |

Development of the DD(X) Flight I software, COTS/GOTS software acquisition, code and unit testing, integration, qualification testing, and Independent Verification and Validation (IV&V). Development of a total system software architecture that defines the relationships and interfaces among the software segments, elements, components, and/or configuration items. Conduct the following events for the remaining software releases: Software Specification Review (S-SSR), Software Preliminary Design Review (S-PDR), Software Critical Design Review (S-CDR), Software Integration Readiness Review (SIRR), Test Readiness Review (TRR) and Software Certification Panel (SCP). Conduct all developmental software test planning, conduct, test data analysis and reporting in accordance with the DD(X) TEMP. Perform total ship system design analysis. Perform systems engineering, develop, and fully integrate into the DD(X) System an ES system for DD(X). Develop, implement, and qualify a system to provide missile inertial mid-course guidance using Pre-Planned Product Improvement (P3I) uplink and terminal missile guidance using Interrupted Continuous Wave Illumination (ICWI). Systems engineering and development of an Anti-Tamper (AT) protection plan for DD(X).

|                                      | FY 05 | FY 06   | FY 07   |
|--------------------------------------|-------|---------|---------|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 209.061 | 136.883 |
| RDT&E Articles Quantity              |       |         |         |

Completion and testing of ship and warfare system engineering development models. Complete hullform testing at NSWC-Carderock. Planning for IPS and ship control system (SCS) testing and integration at NSWC-Philadelphia. Conduct communication and sense aperture cosite and electromagnetic interference risk reduction testing for critical arrays at the Wallops Island Test Facility. Conduct Tomahawk restrained firing test to verify Advanced Vertical Launching System (AVLS) protection measures. Conduct developmental testing and operation evaluation in accordance with TEMP. Conduct Live Fire Testing & vulnerability analysis in accordance with TEMP.

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| EXHIBIT R-2a, RDT&E Project Justification   |   | DATE:<br><b>February 2006</b>  |       |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>2464 - DD(X) System Design, Development & Integration |       |
| <b>B. Accomplishments/Planned Program (Cont.)</b>   |   |  |       |
|   | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 10.436  | 0.000  | 0.000 |
| RDT&E Articles Quantity   |   |  |       |
| <p>Continued identification and risk mitigation efforts in high risk areas such as Manning, Life Cycle Engineering and Support (LCE&amp;S), and Total Ship Computing. Continued Manning/Human Systems Integration (HSI) and LCE&amp;S Integrated Product Teams (IPTs) to address the impact to the future Navy support infrastructure in these functional areas. Monitored the industry-developed risk watch list and evaluated as a mechanism for reporting risk metrics in DD(X) Aquisition reporting documentation. Reviewed and developed proposed policy changes as a result of how DD(X) will impact Navy manning and life cycle support structure. Established Executive Steering Groups to review/ monitor specific Phase III technology development focus areas: Integrated Power System (IPS) and propulsion, Radar Suite and Software.</p> |   |  |       |
|   | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 54.934  | 0.000  | 0.000 |
| RDT&E Articles Quantity   |   |  |       |
| <p>Continued support of the DD(X) Technical Team. The Technical Team provides the expertise to evaluate / support the DD(X) industry design in the areas of Combat Systems; Hull, Mechanical and Electrical; Command, Control, Communication and Computers; Modeling and Simulation; Total Ship Computing, and Test and Evaluation. Team reviewed and certified the DD(X) Design Agent software development. This task concluded with contract Phase III in FY05.</p>   |   |  |       |
|   | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 17.425  | 0.000  | 0.000 |
| RDT&E Articles Quantity   |   |  |       |
| <p>The DD(X) LFT&amp;E Program focused on the following areas: Mission Recoverability, Magazine Protection, Damaged Seaway Survival, Selected Equipment Vulnerability, and Advanced Weapons Threat Effects. These areas addressed critical elements of DD(X) System survivability as defined in the Test and Evaluation Master Plan (TEMP) 1560, the LFT&amp;E Management Plan, and the Operational Requirements Document (ORD). In FY05, Completed the Vulnerability Assessment Report (VAR) for the DD(X) Phase III prior to the DD(X) CDR.</p>   |   |  |       |

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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| EXHIBIT R-2a, RDT&E Project Justification |  | DATE: <b>February 2006</b>                            |         |
| APPROPRIATION/BUDGET ACTIVITY             | PROGRAM ELEMENT NUMBER AND NAME                    | PROJECT NUMBER AND NAME                               |         |
| <b>RDT&amp;E, N / BA-5</b>                | PE 0604300N - DD(X) Total Ship Systems Engineering | 2464 - DD(X) System Design, Development & Integration |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>         |  |   |         |
| Funding:                                  | FY 2005  | FY 2006   | FY 2007 |
| FY 2006 President's Budget:               | 978.846  | 1,027.787   | 741.974 |
| FY 2007 President's Budget:               | 924.109  | 1,012.194   | 741.779 |
| Total Adjustments                         | -54.737  | -15.593   | -0.195  |
| Summary of Adjustments                    |  |   |         |
| Rescissions                               |  | -10.746   |         |
| Inflation                                 |  |   | 3.294   |
| Other General Provisions                  | -24.486  | -4.847  | -3.110  |
| Warfare Center Rates                      |  |   | -0.436  |
| Fuel Rates                                |  |   | 0.057   |
| Programmatic Changes                      | -30.251  |   |         |
| Subtotal                                  | -54.737  | -15.593   | -0.195  |
| Schedule:                                 |  |   |         |
| Not Applicable                            |  |   |         |
| Technical:                                |  |   |         |
| Not Applicable                            |  |   |         |

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| EXHIBIT R-2a, RDT&E Project Justification                   |  |  |   |  |  |  | DATE: <b>February 2006</b> |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |  |  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |  |  | PROJECT NUMBER AND NAME<br>2464 - DD(X) System Design, Development & Integration |                            |  |  |

**D. OTHER PROGRAM FUNDING SUMMARY:**

| <u>Line Item No. &amp; Name</u>           | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>To<br/>Complete</u> | <u>Total<br/>Cost</u> |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|-----------------------|
| PE 0603513N / Shipboard Sys Component Dev | 44.282         | 50.918         | 14.135         | 16.686         | 16.828         | 16.983         | 17.161         | CONT                   | CONT                  |
| BLI 211900 / SCN                          | 304.048        | 706.086        | 2,568.111      | 3,054.938      | 2,607.342      | 2,701.352      | 2,308.481      | CONT                   | CONT                  |

**E. ACQUISITION STRATEGY:**

DD(X) Phase IV includes the continuation of warfare system development, integration and testing from Phase III, as well as ship detail design and construction. The Navy intends to award contracts to BIW and NGSS for detail design and construction of a lead ship at each yard. It is planned that the Phase IV detail design will be contracted for on a Cost Plus Award Fee (CPAF) basis, and that ship construction efforts for the lead ships will be on a Cost Plus Incentive Fee (CPIF) basis with additional performance incentives. The Acquisition Strategy Report (ASR) reflecting the dual lead ship strategy was approved at the DD(X) Milestone B decision in November 2005.

**F. MAJOR PERFORMERS:**

**Major Contractors** - Raytheon, Lockheed Martin, BAE, Northrop Grumman Ship Systems, BIW  
**Government Field Activities** - NSWC Carderock, NSWC Dahlgren, NSWC Port Hueneme  
**Universities** - John Hopkins University, Applied Physics Lab (APL/JHU)

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| Exhibit R-3 Cost Analysis (page 1)   |                        |                                |  |            |                      |   |                      | DATE: February 2006 |                      |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY  |                        |                                | PROGRAM ELEMENT                                    |            |                      | PROJECT NUMBER AND NAME                               |                      |                     |                      |                  |            |                          |
| RDT&E, N / BA-5  |                        |                                | PE 0604300N - DD(X) Total Ship Systems Engineering |            |                      | 2464 - DD(X) System Design, Development & Integration |                      |                     |                      |                  |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location | Total PY s Cost                                    | FY 05 Cost | FY 05 Award Date (1) | FY 06 Cost  | FY 06 Award Date (1) | FY 07 Cost          | FY 07 Award Date (1) | Cost to Complete | Total Cost | Target Value of Contract |
| Initial System Concepts - Phase I  | OTA                    | DD(X) Industry Team            | 54.800   | 0.000      | N/A                  | 0.000   | N/A                  | 0.000               | N/A                  | 0.000            | 54.800     | 54.800                   |
| Initial System Design - Phase II   | OTA                    | DD(X) Industry Team            | 139.919  | 0.000      | N/A                  | 0.000   | N/A                  | 0.000               | N/A                  | 0.000            | 139.919    | 139.919                  |
| Primary H/W Development- Phase III   | CPAF                   | DD(X) Design Agent (NGSS)      | 1,305.071  | 822.623    | N/A                  | 123.700   | 1QFY06               | 0.000               | N/A                  | 0.000            | 2,251.394  | 2,251.394                |
| Ship Integration Development Phase IV  | CPAF                   | DD(X) Dev & Test (Raytheon)    |  |            |                      | 670.000   | 1QFY06               | 665.000             | 1QFY07               | CONT.            | CONT.      |                          |
| Ship Suitability   |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Systems Engineering  |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Training Development   |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Licenses   |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Tooling  |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| GFE  |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Award Fees   |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Subtotal Product Development   |                        |                                | 1,499.790  | 822.623    |                      | 793.700   |                      | 665.000             |                      | CONT.            | CONT.      | 2,446.113                |
| Remarks: (1) The Navy awarded letter contracts to Raytheon on 25 May 05 and UDLP 23 May 05 to continue DD(X) development in accordance with the Acquisition Decision Memorandum signed on 20 April 05. |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
|  |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |
| Development Support  |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Software Development   |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Training Development   |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Integrated Logistics Support   |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Configuration Management   |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Technical Data   |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| GFE  |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Award Fees   |                        |                                |  |            |                      |   |                      |                     |                      |                  | 0.000      |                          |
| Subtotal Support   |                        |                                | 0.000  | 0.000      |                      | 0.000   |                      | 0.000               |                      | 0.000            | 0.000      |                          |
| Remarks: Support costs are included in the Development contract costs.   |                        |                                |  |            |                      |   |                      |                     |                      |                  |            |                          |

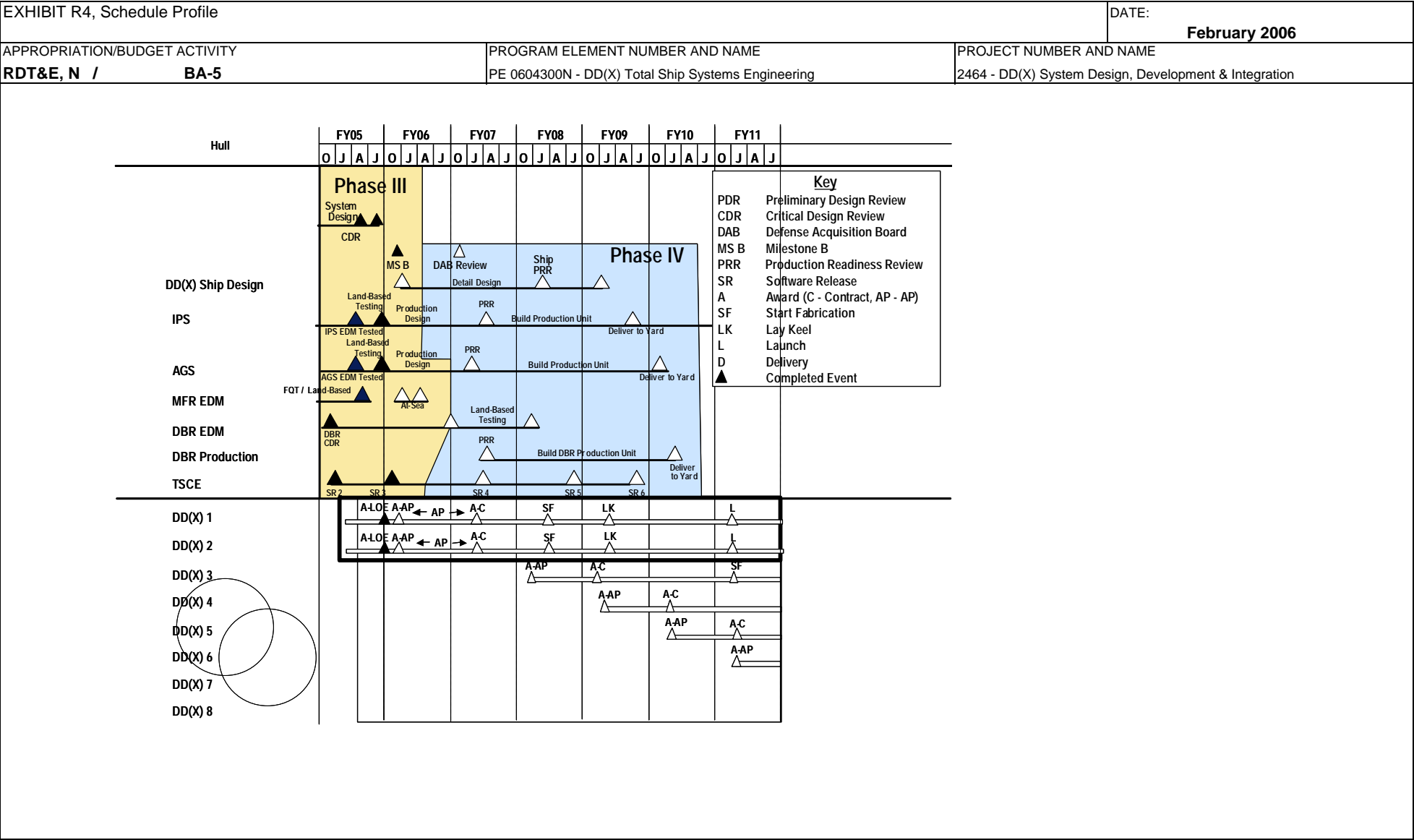
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| Exhibit R-3 Cost Analysis (page 2) |                        |                                |  |            |                  |   |                  | DATE: February 2006 |                  |                  |            |                          |
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| APPROPRIATION/BUDGET ACTIVITY      |                        |                                | PROGRAM ELEMENT                                    |            |                  | PROJECT NUMBER AND NAME                               |                  |                     |                  |                  |            |                          |
| RDT&E, N / BA-5                    |                        |                                | PE 0604300N - DD(X) Total Ship Systems Engineering |            |                  | 2464 - DD(X) System Design, Development & Integration |                  |                     |                  |                  |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location | Total PY s Cost                                    | FY 05 Cost | FY 05 Award Date | FY 06 Cost  | FY 06 Award Date | FY 07 Cost          | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Live Fire Test & Evaluation        | OTA                    | DD(X) Industry Teams           | 4.875  | 0.000      | N/A              | 0.000   | N/A              | 0.000               | N/A              | 0.000            | 4.875      | 4.875                    |
| Live Fire Test & Evaluation        | CPAF                   | DD(X) Design Agent             | 4.100  | 41.700     | 1QFY05           | 0.000   | N/A              | 0.000               | N/A              | 0.000            | 45.800     | 45.800                   |
| Live Fire Test & Evaluation        | CPAF                   | Raytheon                       | 0.000  | 0.000      | N/A              | 27.100  | 1QFY06           | 41.000              | 1QFY07           | CONT             | CONT       |                          |
| Live Fire Test & Evaluation        | WR                     | NSWC CD Bethesda MD            | 22.733   | 0.000      | N/A              | 0.000   | N/A              | 0.000               | N/A              | 0.000            | 22.733     |                          |
| Live Fire Test & Evaluation        | WR                     | NSWC DD Dahlgren VA            | 3.400  | 0.000      | N/A              | 0.000   | N/A              | 0.000               | N/A              | 0.000            | 3.400      |                          |
| Live Fire Test & Evaluation        | Various                | Various                        | 16.176   | 4.200      | 1QFY05           | 12.000  | 1QFY06           | 0.000               | N/A              | CONT             | CONT       |                          |
| GFE                                |                        |                                |  |            |                  |   |                  |                     |                  |                  |            |                          |
| Award Fees                         |                        |                                |  |            |                  |   |                  |                     |                  |                  |            |                          |
| Subtotal T&E                       |                        |                                | 51.284   | 45.900     |                  | 39.100  |                  | 41.000              |                  | CONT             | CONT       | 50.675                   |
| Remarks:                           |                        |                                |  |            |                  |   |                  |                     |                  |                  |            |                          |
| Contractor Engineering Support     | GSA/FFP                | Anteon Arlington VA            | 25.397   | 0.000      | N/A              | 0.000   | N/A              | 0.000               | N/A              | 0.000            | 25.397     |                          |
|                                    | GSA                    | GRCl, Falls Church VA          | 8.361  | 0.000      | N/A              | 0.000   | N/A              | 0.000               | N/A              | 0.000            | 8.361      |                          |
|                                    | CPAF                   | Seaport, NAVSEA                | 0.000  | 7.080      | 1QFY05           | 18.500  | 1QFY06           | 3.000               | 1QFY07           | CONT             | CONT       |                          |
|                                    | Misc                   | Various                        | 9.999  | 2.565      | 1QFY05           | 10.400  | 1QFY06           | 0.000               | 1QFY07           | CONT             | CONT       |                          |
| Government Engineering Support     | WR                     | NSWC DD Dahlgren VA            | 65.374   | 12.076     | 1QFY05           | 28.600  | 1QFY06           | 10.200              | 1QFY07           | CONT             | CONT       |                          |
|                                    | WR                     | NSWC CD Bethesda MD            | 36.848   | 13.247     | 1QFY05           | 25.000  | 1QFY06           | 8.100               | 1QFY07           | CONT             | CONT       |                          |
|                                    | WR                     | NSWC CR Crane IN               | 5.325  | 0.576      | 1QFY05           | 7.650   | 1QFY06           | 3.000               | 1QFY07           | CONT             | CONT       |                          |
|                                    | WR                     | NSWC PHD Pt Hueneme CA         | 9.096  | 1.349      | 1QFY05           | 18.650  | 1QFY06           | 4.000               | 1QFY07           | CONT             | CONT       |                          |
|                                    | WR                     | SSCSD Dan Diego CA             | 8.257  | 1.185      | 1QFY05           | 8.690   | 1QFY06           | 1.500               | 1QFY07           | CONT             | CONT       |                          |
|                                    | WR                     | NUWC/N Newport RI              | 5.525  | 1.025      | 1QFY05           | 9.500   | 1QFY06           | 1.000               | 1QFY07           | CONT             | CONT       |                          |
|                                    | WR                     | NSWC/PC Panama City, FL        | 2.132  | 0.895      | 1QFY05           | 10.600  | 1QFY06           | 0.000               | 1QFY07           | CONT             | CONT       |                          |
|                                    | Various                | Other Govt Activities          | 13.842   | 5.019      | 1QFY05           | 20.000  | 1QFY06           | 0.000               | 1QFY07           | CONT             | CONT       |                          |
| Program Management Support         | Various                | Various                        | 15.488   | 3.154      | 1QFY05           | 10.107  | 1QFY06           | 0.000               | 1QFY07           | CONT             | CONT       |                          |
| Travel                             | Various                | Various                        | 3.112  | 0.800      | Various          | 1.500   | 1QFY06           | 0.779               | 1QFY07           | CONT             | CONT       |                          |
| Labor (Research Personnel)         | CPFF                   | APL/JHU Laurel MD              | 18.514   | 6.615      | 1QFY05           | 10.197  | 1QFY06           | 4.200               | 1QFY07           | CONT             | CONT       |                          |
| SBIR Assessment                    | Various                | Various                        |  |            |                  |   |                  |                     |                  |                  |            |                          |
| Subtotal Management                |                        |                                | 227.270  | 55.586     |                  | 179.394   |                  | 35.779              |                  | CONT             | CONT       |                          |
| Remarks:                           |                        |                                |  |            |                  |   |                  |                     |                  |                  |            |                          |
| Total Cost                         |                        |                                | 1,778.344  | 924.109    |                  | 1,012.194   |                  | 741.779             |                  | CONT.            | CONT.      | 2,496.788                |
| Remarks:                           |                        |                                |  |            |                  |   |                  |                     |                  |                  |            |                          |



CLASSIFICATION:



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R-1 SHOPPING LIST - Item No.

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101

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

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CLASSIFICATION:

|   |         |   |         |         |  |                               |         |
|---|---------|---|---------|---------|--|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |  | DATE:<br><b>February 2006</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |         |         | PROJECT NUMBER AND NAME<br>2466 - Multi-Function Radar (MFR) |                               |         |
| COST (\$ in Millions)                                       | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009  | FY 2010                       | FY 2011 |
| Project Cost  | 12.054  | 0.000   | 0.000   | 0.000   | 0.000  | 0.000                         | 0.000   |
| RDT&E Articles Qty  |         |   |         |         |  |                               |         |

## A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project provides funds for the development of the Multi-Function Radar (MFR) in association with DD(X) . This provides DD(X) and other applicable surface ships with an affordable, high performance radar for ship defense well into the next century. This system is based on solid state, active array radar technology and will provide search, detect, track, and weapon control functions while dramatically reducing manning and life-cycle costs associated with multiple systems that perform these functions today. The MFR will achieve a level of force protection that greatly enhances ship defense capability against all threats envisioned in the littoral environment. A Test Article was delivered to Wallops Island in FY 03 to support Developmental Test/Operational Assessment (DT/OA) land-based and at-sea testing.

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|--|---|--|-------|
| EXHIBIT R-2a, RDT&E Project Justification  |   | DATE:<br><b>February 2006</b>                                |       |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>2466 - Multi-Function Radar (MFR) |       |
| <b>B. Accomplishments/Planned Program</b>  |   |  |       |
|  | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost   | 7.588   | 0.000  | 0.000 |
| RDT&E Articles Quantity  |   |  |       |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Government Engineering Services and Program Management support for Engineering &amp; Manufacturing Development (E&amp;MD). Perform oversight and assessment of MFR E&amp;MD efforts including factory and land-based Test and Evaluation. Begin transition to production, including the development, fabrication, documentation and engineering support associated with the following efforts: (1) high speed automated manufacturing equipment, (2) test equipment and associated test program sets, (3) systems engineering and test engineering support and (4) failure analysis, parts engineering and configuration management. Provide support for integration of MFR into the DD(X) radar suite and overall ship systems. Provide engineering support for transition of MFR EDM to the MFR production system for DD(X).</div> |   |  |       |
|  | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost   | 2.936   | 0.000  | 0.000 |
| RDT&E Articles Quantity  |   |  |       |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Evaluation, planning, documentation, scheduling and conducting of Developmental Test / Operational Assessment. Hardware / Software updates resulting from DT/OA. Complete Navy Land Based Testing.</div>   |   |  |       |
|  | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost   | 1.530   | 0.000  | 0.000 |
| RDT&E Articles Quantity  |   |  |       |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Provide Program Management in support of the above milestones.</div>   |   |  |       |

R-1 SHOPPING LIST - Item No.

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2)

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## CLASSIFICATION:

|  |   |  |         |
|--|---|--|---------|
| EXHIBIT R-2a, RDT&E Project Justification                    |   | DATE:<br><b>February 2006</b>                                |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDTE&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>2466 - Multi-Function Radar (MFR) |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>                            |   |  |         |
| Funding:   | FY 2005   | FY 2006  | FY 2007 |
| FY 2006 President's Budget:                                  | 12.164  | 0.000  | 0.000   |
| FY 2007 President's Budget:                                  | 12.054  | 0.000  | 0.000   |
| Total Adjustments  | -0.110  | 0.000  | 0.000   |
| Summary of Adjustments                                       |   |  |         |
| Other General Provisions                                     | -0.110  |  |         |
| Subtotal   | -0.110  | 0.000  | 0.000   |
| Schedule:  |   |  |         |
| Not Applicable   |   |  |         |
| Technical:   |   |  |         |
| Not Applicable   |   |  |         |

R-1 SHOPPING LIST - Item No. 101

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Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2)

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## CLASSIFICATION:

|   |  |  |   |  |  |  |  |                            |  |
|---|--|--|---|--|--|--|--|----------------------------|--|
| EXHIBIT R-2a, RDT&E Project Justification                   |  |  |   |  |  |  |  | DATE: <b>February 2006</b> |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |  |  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |  |  | PROJECT NUMBER AND NAME<br>2466 - Multi-Function Radar (MFR) |  |                            |  |

**D. OTHER PROGRAM FUNDING SUMMARY:**

| <u>Line Item No. &amp; Name</u>           | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>To<br/>Complete</u> | <u>Total<br/>Cost</u> |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|-----------------------|
| PE 0603513N / Shipboard Sys Component Dev | 44.282         | 50.918         | 14.135         | 16.686         | 16.828         | 16.983         | 17.161         | CONT                   | CONT                  |
| BLI 211900 / SCN                          | 304.048        | 706.086        | 2,568.111      | 3,054.938      | 2,607.342      | 2,701.352      | 2,308.481      | CONT                   | CONT                  |

**E. ACQUISITION STRATEGY:**

DD(X) Phase IV includes the continuation of warfare system development, integration and testing from Phase III, as well as ship detail design and construction. The Navy intends to award contracts to BIW and NGSS for detail design and construction of a lead ship at each yard. It is planned that the Phase IV detail design will be contracted for on a Cost Plus Award Fee (CPAF) basis, and that ship construction efforts for the lead ships will be on a Cost Plus Incentive Fee (CPIF) basis with additional performance incentives. The Acquisition Strategy Report (ASR) reflecting the dual lead ship strategy was approved at the DD(X) Milestone B decision in November 2005.

**F. MAJOR PERFORMERS:**

**DD(X) Design Agent** - Northrop Grumman Ship Systems  
**Major Subcontractors** - Raytheon  
**Government Field Activities** -  
**Universities** -

R-1 SHOPPING LIST - Item No. 101

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Exhibit R-2, RDTE Budget Item Justification  
(Exhibit R-2)

# UNCLASSIFIED

## CLASSIFICATION:

| Exhibit R-3 Cost Analysis (page 1)                          |                        |                                |   |            |                      |            |  | DATE:<br><b>February 2006</b> |                      |                  |            |                          |
|---|------------------------|--------------------------------|---|------------|----------------------|------------|--|-------------------------------|----------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |            |                      |            | PROJECT NUMBER AND NAME<br>2466 - Multi-Function Radar (MFR) |                               |                      |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost   | FY 05 Cost | FY 05 Award Date (1) | FY 06 Cost | FY 06 Award Date (1)   | FY 07 Cost                    | FY 07 Award Date (1) | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development                                | CPAF/IF                | Prime E&MD (Raytheon)          | 197.153   | 0.000      | N/A                  | 0.000      | N/A  | 0.000                         | N/A                  | 0.000            | 197.153    | 197.153                  |
|   | CPAF                   | DD(X) Design Agent             | 24.579  | 0.000      | N/A                  | 0.000      | N/A  | 0.000                         | N/A                  | 0.000            | 24.579     | 24.579                   |
|   | CP                     | Various                        | 12.414  | 0.000      | N/A                  | 0.000      | N/A  | 0.000                         | N/A                  | 0.000            | 12.414     |                          |
| Ship Integration  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Ship Suitability  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Systems Engineering   |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Training Development  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Licenses  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Tooling   |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| GFE   |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Award Fees  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Subtotal Product Development                                |                        |                                | 234.146   | 0.000      |                      | 0.000      |  | 0.000                         |                      | 0.000            | 234.146    | 234.146                  |
|   |                        |                                |   |            |                      |            |  |                               |                      |                  |            |                          |
| Development Support   |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Software Development  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Training Development  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Integrated Logistics Support                                |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Configuration Management                                    |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Technical Data  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| GFE   |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Award Fees  |                        |                                |   |            |                      |            |  |                               |                      |                  | 0.000      |                          |
| Subtotal Support  |                        |                                | 0.000   | 0.000      |                      | 0.000      |  | 0.000                         |                      | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |   |            |                      |            |  |                               |                      |                  |            |                          |

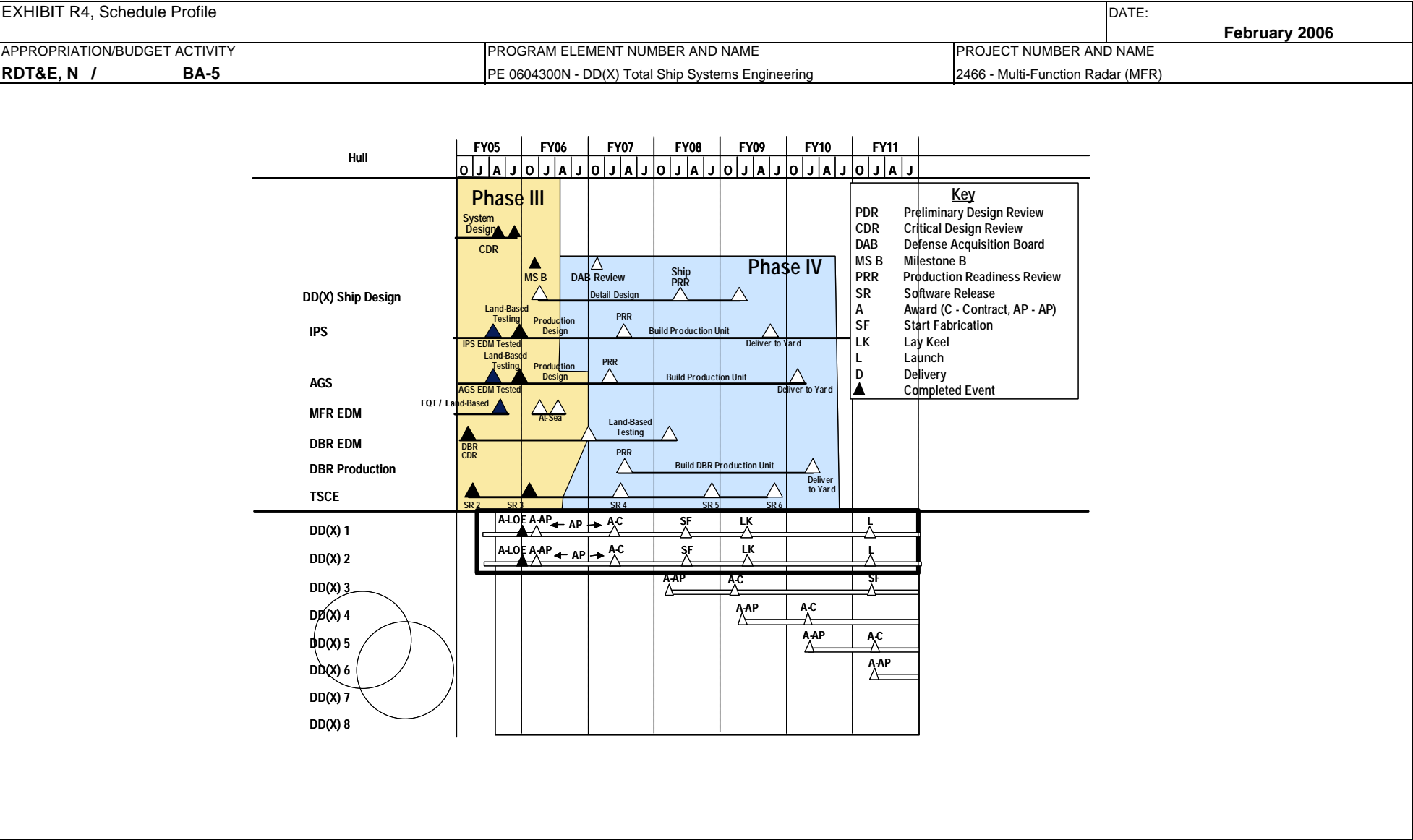
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## CLASSIFICATION:

| Exhibit R-3 Cost Analysis (page 2)                          |                        |                                |   |            |                  |            |  | DATE:<br><b>February 2006</b> |                  |                  |            |                          |
|---|------------------------|--------------------------------|---|------------|------------------|------------|--|-------------------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |            |                  |            | PROJECT NUMBER AND NAME<br>2466 - Multi-Function Radar (MFR) |                               |                  |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost   | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date   | FY 07 Cost                    | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation                             | Various                | Various                        | 11.661  | 0.000      | N/A              | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 11.661     |                          |
|   | CPAF                   | SCSC Wallops Island VA         | 3.544   | 1.375      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 4.919      | 4.919                    |
|   | SS/CPFF                | JHU/APL Laurel MD              | 3.006   | 0.080      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 3.086      |                          |
|   | WX                     | NSWC PHD Pt Hueneme CA         | 3.100   | 0.976      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 4.076      |                          |
|   | WX                     | NSWC DD Dahlgren VA            | 2.941   | 0.434      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 3.375      |                          |
|   | WR/RC                  | NAWC Pt Mugu CA                | 1.921   | 0.000      | N/A              | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 1.921      |                          |
|   | WX/RX                  | NWSC Corona CA                 |   | 0.080      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 0.080      |                          |
| Subtotal T&E  |                        |                                | 26.173  | 2.945      |                  | 0.000      |  | 0.000                         |                  | 0.000            | 29.118     | 4.919                    |
| Remarks:  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Contractor Engineering Support                              |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Government Engineering Support                              | WR                     | NSWC DD Dahlgren VA            | 7.077   | 2.206      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 9.283      |                          |
|   | WR                     | NSWC PHD Pt Hueneme CA         | 4.164   | 1.169      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 5.333      |                          |
|   | SS/CPFF                | APL/JHU Laurel MD              | 3.672   | 1.680      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 5.352      |                          |
|   | WR                     | Various                        | 10.907  | 2.524      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 13.431     |                          |
| Program Management Support                                  | C/CPFF                 | Various                        | 6.906   | 1.530      | 11/04            | 0.000      | N/A  | 0.000                         | N/A              | 0.000            | 8.436      |                          |
| Travel  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Labor (Research Personnel)                                  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| SBIR Assessment   |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Subtotal Management   |                        |                                | 32.726  | 9.109      |                  | 0.000      |  | 0.000                         |                  | 0.000            | 41.835     |                          |
| Remarks:  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Total Cost  |                        |                                | 293.045   | 12.054     |                  | 0.000      |  | 0.000                         |                  | 0.000            | 305.099    | 239.065                  |
| Remarks:  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |



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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

R-1 SHOPPING LIST - Item No. 101

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CLASSIFICATION:

|   |   |         |         |         |   |                               |         |
|---|---|---------|---------|---------|---|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |   |         |         |         |   | DATE:<br><b>February 2006</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |         |         |         | PROJECT NUMBER AND NAME<br>2735 - Volume Search Radar (VSR) |                               |         |
| COST (\$ in Millions)                                       | FY 2005   | FY 2006 | FY 2007 | FY 2008 | FY 2009   | FY 2010                       | FY 2011 |
| Project Cost  | 59.850  | 9.931   | 5.076   | 0.000   | 0.000   | 0.000                         | 0.000   |
| RDT&E Articles Qty  |   | 1       |         |         |   |                               |         |

## A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project provides funds for the development of the S-Band Volume Search Radar (VSR) in association with DD(X). This provides DD(X) and other applicable surface ships with an affordable, high performance air search radar. This system is based on solid state, active array radar technology and will provide search, detect, and tracking abilities, while dramatically reducing manning and life-cycle costs associated with multiple systems that perform these functions today. VSR provides long range above-the-horizon surveillance and timely cueing to Multi-Function Radar (MFR). A Test Article will be available in FY 06 to support Developmental Test/Operational Assessment (DT/OA) land-based and at-sea testing.

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|---|---|---|-------|
| EXHIBIT R-2a, RDT&E Project Justification   |   | DATE:<br><b>February 2006</b>                               |       |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>2735 - Volume Search Radar (VSR) |       |
| <b>B. Accomplishments/Planned Program</b>   |   |   |       |
|   | FY 05   | FY 06   | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 57.715  | 6.300   | 1.818 |
| RDT&E Articles Quantity   |   |   |       |
| <p>In Phase III, DD(X) Design Agent finalized S-Band VSR design and procurement Engineering Development Model (EDM) hardware and began fabrication. Also began test and evaluation planning. In FY06, delivery of EDM to Wallops to conduct VSR Factory Qualification Testing and prepare for Land Based Testing in FY07.</p> |   |   |       |
|   |   |   |       |
|   | FY 05   | FY 06   | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 2.135   | 3.631   | 2.658 |
| RDT&E Articles Quantity   |   |   |       |
| <p>Government Engineering Services and Program Management support for Engineering and Manufacturing Development (E&amp;MD). Perform oversight and assessment of VSR E&amp;MD efforts including Test and Evaluation. Support VSR Land Based Testing.</p>   |   |   |       |
|   |   |   |       |
|   | FY 05   | FY 06   | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 0.000   | 0.600 |
| RDT&E Articles Quantity   |   |   |       |
| <p>Provide Program Management in support of the above milestones.</p>   |   |   |       |

R-1 SHOPPING LIST - Item No.

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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|---|--|----------------------------------|
| EXHIBIT R-2a, RDT&E Project Justification |  | DATE:                            |
|   |  | <b>February 2006</b>             |
| APPROPRIATION/BUDGET ACTIVITY             | PROGRAM ELEMENT NUMBER AND NAME                    | PROJECT NUMBER AND NAME          |
| <b>RDTE, N / BA-5</b>                     | PE 0604300N - DD(X) Total Ship Systems Engineering | 2735 - Volume Search Radar (VSR) |

**C. PROGRAM CHANGE SUMMARY:**

|                             |         |         |         |
|-----------------------------|---------|---------|---------|
| Funding:                    | FY 2005 | FY 2006 | FY 2007 |
| FY 2006 President's Budget: | 57.118  | 10.082  | 5.071   |
| FY 2007 President's Budget: | 59.850  | 9.931   | 5.076   |
| Total Adjustments           | 2.732   | -0.151  | 0.005   |
| Summary of Adjustments      |         |         |         |
| Rescission                  |         | -0.105  |         |
| Inflation                   |         |         | 0.023   |
| Other General Provisions    | -1.436  | -0.046  | -0.018  |
| Programmatic Changes        | 4.168   | 0.000   |         |
| Subtotal                    | 2.732   | -0.151  | 0.005   |

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 101

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

CLASSIFICATION:

|  |         |  |           |           |                                  |           |                     |             |            |
|--|---------|--|-----------|-----------|----------------------------------|-----------|---------------------|-------------|------------|
| EXHIBIT R-2a, RDT&E Project Justification  |         |  |           |           |                                  |           | DATE: February 2006 |             |            |
| APPROPRIATION/BUDGET ACTIVITY  |         | PROGRAM ELEMENT NUMBER AND NAME                    |           |           | PROJECT NUMBER AND NAME          |           |                     |             |            |
| RDT&E, N / BA-5  |         | PE 0604300N - DD(X) Total Ship Systems Engineering |           |           | 2735 - Volume Search Radar (VSR) |           |                     |             |            |
| D. OTHER PROGRAM FUNDING SUMMARY:  |         |  |           |           |                                  |           |                     |             |            |
| Line Item No. & Name   | FY 2005 | FY 2006  | FY 2007   | FY 2008   | FY 2009                          | FY 2010   | FY 2011             | To Complete | Total Cost |
| PE 0603513N / Shipboard Sys Component Dev  | 44.282  | 50.918   | 14.135    | 16.686    | 16.828                           | 16.983    | 17.161              | CONT        | CONT       |
| BLI 211900 / SCN   | 304.048 | 706.086  | 2,568.111 | 3,054.938 | 2,607.342                        | 2,701.352 | 2,308.481           | CONT        | CONT       |
| E. ACQUISITION STRATEGY:   |         |  |           |           |                                  |           |                     |             |            |
| <p>DD(X) Phase IV includes the continuation of warfare system development, integration and testing from Phase III, as well as ship detail design and construction. The Navy intends to award contracts to BIW and NGSS for detail design and construction of a lead ship at each yard. It is planned that the Phase IV detail design will be contracted for on a Cost Plus Award Fee (CPAF) basis, and that ship construction efforts for the lead ships will be on a Cost Plus Incentive Fee (CPIF) basis with additional performance incentives. The Acquisition Strategy Report (ASR) reflecting the dual lead ship strategy was approved at the DD(X) Milestone B decision in November 2005.</p> |         |  |           |           |                                  |           |                     |             |            |
| F. MAJOR PERFORMERS:   |         |  |           |           |                                  |           |                     |             |            |
| <p><b>DD(X) Design Agent</b> - Northrop Grumman Ship Systems<br/><b>Major Subcontractors</b> - Raytheon, Lockheed Martin<br/><b>Government Field Activities</b> - NAWC China Lake, NAWC Pt Mugu, NAWC TSD, NSWC Carderock, NSWC Crane, NSWC Dahlgren, NSWC Newport, NSWC Panama City, NSWC Port Hueneme, Naval Research Laboratory, SPAWAR Systems Center<br/><b>Universities</b> - John Hopkins University / Applied Physics Laboratory, Applied Research Labs at University of Texas, University of Washington and Penn State University, Georgia Tech Research Institute</p>  |         |  |           |           |                                  |           |                     |             |            |

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## CLASSIFICATION:

| Exhibit R-3 Cost Analysis (page 1) |                        |                                       |  |            |                      |            |                      | DATE: <b>February 2006</b>       |                      |                  |            |                          |
|------------------------------------|------------------------|---------------------------------------|--|------------|----------------------|------------|----------------------|----------------------------------|----------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY      |                        |                                       | PROGRAM ELEMENT                                    |            |                      |            |                      | PROJECT NUMBER AND NAME          |                      |                  |            |                          |
| RDT&E, N / BA-5                    |                        |                                       | PE 0604300N - DD(X) Total Ship Systems Engineering |            |                      |            |                      | 2735 - Volume Search Radar (VSR) |                      |                  |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location        | Total PY s Cost                                    | FY 05 Cost | FY 05 Award Date (1) | FY 06 Cost | FY 06 Award Date (1) | FY 07 Cost                       | FY 07 Award Date (1) | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development       | OTA                    | DD(X) Industry Team                   | 50.000   | 0.000      | N/A                  | 0.000      | N/A                  | 0.000                            | N/A                  | 0.000            | 50.000     | 50.000                   |
|                                    | CPAF                   | DD(X) Design Agent (NGSS)             | 118.071  | 57.715     | 1QFY05               | 6.300      | 1QFY06               | 0.000                            | N/A                  | 0.000            | 182.086    | 182.064                  |
|                                    | CPAF                   | Raytheon (Bridge)                     | 0.000  | 0.000      | N/A                  | 0.000      | N/A                  | 1.800                            | 1QFY07               | 0.000            | 1.800      | 1.800                    |
|                                    | CPAF                   | Lockheed Martin SBAR N00024-02-C-5321 | 6.000  | 0.000      | N/A                  | 0.000      | N/A                  | 0.000                            | N/A                  | 0.000            | 6.000      | 6.000                    |
| Ship Integration                   |                        |                                       |  |            |                      |            |                      |                                  |                      |                  |            |                          |
| Ship Suitability                   |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Systems Engineering                |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Training Development               |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Licenses                           |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Tooling                            |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| GFE                                |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Award Fees                         |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Subtotal Product Development       |                        |                                       | 174.071  | 57.715     |                      | 6.300      |                      | 1.800                            |                      | 0.000            | 239.886    | 239.886                  |
|                                    |                        |                                       |  |            |                      |            |                      |                                  |                      |                  |            |                          |
| Development Support                |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Software Development               |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Training Development               |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Integrated Logistics Support       |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Configuration Management           |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Technical Data                     |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| GFE                                |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Award Fees                         |                        |                                       |  |            |                      |            |                      |                                  |                      |                  | 0.000      |                          |
| Subtotal Support                   |                        |                                       | 0.000  | 0.000      |                      | 0.000      |                      | 0.000                            |                      | 0.000            | 0.000      |                          |
| Remarks:                           |                        |                                       |  |            |                      |            |                      |                                  |                      |                  |            |                          |

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## CLASSIFICATION:

|   |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
|---|------------------------|--------------------------------|---|------------|------------------|---|------------------|----------------------------|------------------|------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 2)                          |                        |                                |   |            |                  |   |                  | DATE: <b>February 2006</b> |                  |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |            |                  | PROJECT NUMBER AND NAME<br>2735 - Volume Search Radar (VSR) |                  |                            |                  |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost   | FY 05 Cost | FY 05 Award Date | FY 06 Cost  | FY 06 Award Date | FY 07 Cost                 | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test Evaluation                               | CPAF                   | SCSC Wallops Island VA         | 0.600   | 0.000      | N/A              | 0.000   | N/A              | 0.000                      | N/A              | 0.000            | 0.600      | 0.600                    |
|   | Various                | Various                        | 0.497   | 0.000      | N/A              | 0.000   | N/A              | 0.000                      | N/A              | 0.000            | 0.497      |                          |
|   |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| Subtotal T&E  |                        |                                | 1.097   | 0.000      |                  | 0.000   |                  | 0.000                      |                  | 0.000            | 1.097      | 0.600                    |
| Remarks:  |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| Contractor Engineering Support                              |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| Government Engineering Support                              | WX                     | NSWC DD Dahlgren VA            | 3.706   | 0.000      | N/A              | 0.800   | N/A              | 0.818                      | 11/06            | 0.000            | 5.324      |                          |
|   | WX                     | NSWC PHD Pt Hueneme CA         | 1.630   | 0.000      | N/A              | 0.300   | N/A              | 0.300                      | 11/06            | 0.000            | 2.230      |                          |
|   | WX                     | Various                        | 13.107  | 2.135      | 11/04            | 1.931   | N/A              | 1.558                      | 11/06            | 0.000            | 18.731     |                          |
| Program Management Support                                  | CPFF                   | Various                        | 2.873   | 0.000      | N/A              | 0.600   | N/A              | 0.600                      | 11/06            | 0.000            | 4.073      |                          |
| Travel  |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| Labor (Research Personnel)                                  |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| SBIR Assessment   |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| Subtotal Management   |                        |                                | 21.316  | 2.135      |                  | 3.631   |                  | 3.276                      |                  | 0.000            | 30.358     |                          |
| Remarks:  |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |
| Total Cost  |                        |                                | 196.484   | 59.850     |                  | 9.931   |                  | 5.076                      |                  | 0.000            | 271.341    | 240.486                  |
| Remarks:  |                        |                                |   |            |                  |   |                  |                            |                  |                  |            |                          |

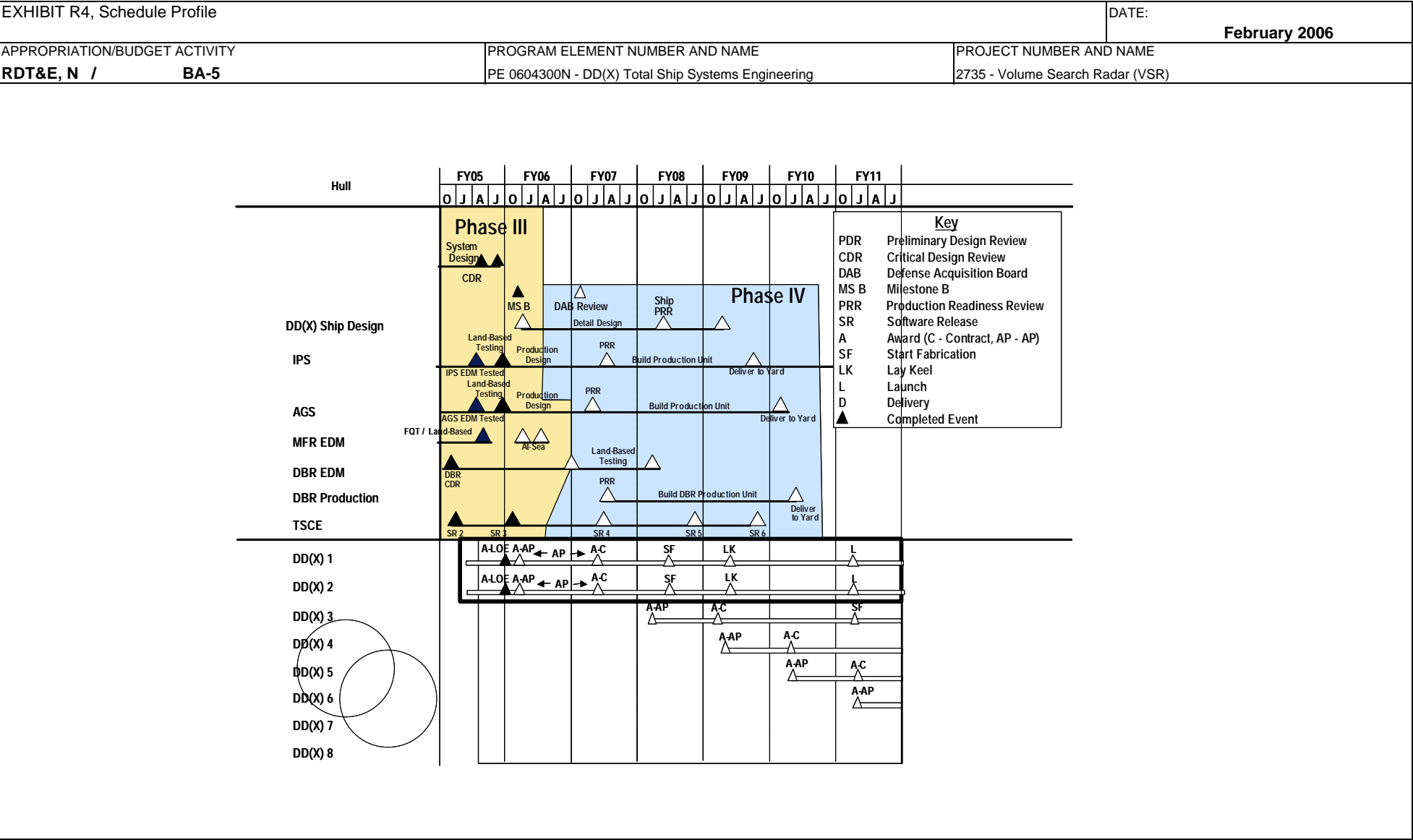
R-1 SHOPPING LIST - Item No. 101

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)



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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

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|   |         |   |         |         |  |                               |         |
|---|---------|---|---------|---------|--|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |  | DATE:<br><b>February 2006</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |         |         | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |                               |         |
| COST (\$ in Millions)                                       | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009  | FY 2010                       | FY 2011 |
| Project Cost  | 0.000   | 0.000   | 14.370  | 37.704  | 64.095   | 126.391                       | 92.554  |
| RDT&E Articles Qty  |         |   |         |         |  |                               |         |

## A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

CG(X), the future cruiser, will focus on providing the Air and Missile Defense capabilities as part of the 21st Century family of surface combatants. CG(X) will replace the aging CG-47 class as they reach the end of their 35 year service life.

This project encompasses efforts for the integration of communications, electronics, command and control, weapons, surveillance and shipboard systems and combat system computer programs into the CG(X) class combat system. These integration efforts include systems engineering, analysis, computer program development/modification, interface design, technical documentation, combat system test site development and system testing to ensure fully functional combat systems integration.

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|---|---|--|-------|
| EXHIBIT R-2a, RDT&E Project Justification   |   | DATE:<br><b>February 2006</b>                                |       |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |       |
| <b>B. Accomplishments/Planned Program</b>   |   |  |       |
|   | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 0.000  | 8.650 |
| RDT&E Articles Quantity   |   |  |       |
| FY07: Commence system integration requirements studies and assess DD(X) combat system component applicability to CG(X). |   |  |       |
|   | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 0.000  | 1.440 |
| RDT&E Articles Quantity   |   |  |       |
| FY07: Establish Technical Team responsible for participation, oversight and monitoring of system integration effort.    |   |  |       |
|   | FY 05   | FY 06  | FY 07 |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 0.000  | 4.280 |
| RDT&E Articles Quantity   |   |  |       |
| FY07: Conduct Milestone A preparations, to include contract solicitation development for systems integration efforts.   |   |  |       |

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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|   |   |  |
|---|---|--|
| EXHIBIT R-2a, RDT&E Project Justification                   |   | DATE:<br><b>February 2006</b>                                |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |

**C. PROGRAM CHANGE SUMMARY:**

| Funding:                    | FY 2005 | FY 2006 | FY 2007 |
|-----------------------------|---------|---------|---------|
| FY 2006 President's Budget: | 0.000   | 0.000   | 50.349  |
| FY 2007 President's Budget: | 0.000   | 0.000   | 14.370  |
| Total Adjustments           | 0.000   | 0.000   | -35.979 |

|                          |       |       |         |
|--------------------------|-------|-------|---------|
| Summary of Adjustments   |       |       |         |
| Inflation                |       |       | 0.167   |
| Other General Provisions |       |       | -2.487  |
| Warfare Center Rates     |       |       | -0.001  |
| Programmatic Changes     |       |       | -33.658 |
| Subtotal                 | 0.000 | 0.000 | -35.979 |

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 101

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2)

CLASSIFICATION:

|  |                |                |                |   |                |                |  |                               |                   |
|--|----------------|----------------|----------------|---|----------------|----------------|--|-------------------------------|-------------------|
| EXHIBIT R-2a, RDT&E Project Justification  |                |                |                |   |                |                |  | DATE:<br><b>February 2006</b> |                   |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>                      |                |                |                | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                |                | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |                               |                   |
| <b>D. OTHER PROGRAM FUNDING SUMMARY:</b>   |                |                |                |   |                |                |  |                               |                   |
| <u>Line Item No. &amp; Name</u>  | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u>  | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u>   | <u>To Complete</u>            | <u>Total Cost</u> |
| BLI 211400 / SCN   | 0.000          | 0.000          | 0.000          | 0.000   | 0.000          | 0.000          | 3,234.957  | CONT                          | CONT              |
| <br><b>E. ACQUISITION STRATEGY:</b>  |                |                |                |   |                |                |  |                               |                   |
| TBD  |                |                |                |   |                |                |  |                               |                   |
| <br><b>F. MAJOR PERFORMERS:</b>  |                |                |                |   |                |                |  |                               |                   |
| Contractors - TBD  |                |                |                |   |                |                |  |                               |                   |
| Field Activities - NSWC Dahlgren, NSWC Port Hueneme, NSWC Corona, NSWC Carderock |                |                |                |   |                |                |  |                               |                   |
| Universities - JHU/APL   |                |                |                |   |                |                |  |                               |                   |

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## CLASSIFICATION:

| Exhibit R-3 Cost Analysis (page 1)                          |                        |                                |                 |            |                      |            |  | DATE:<br><b>February 2006</b> |                  |                  |            |                          |  |
|---|------------------------|--------------------------------|-----------------|------------|----------------------|------------|--|-------------------------------|------------------|------------------|------------|--------------------------|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                |                 |            |                      |            | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |                               |                  |                  |            |                          |  |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date (1) | FY 06 Cost | FY 06 Award Date (1)   | FY 07 Cost                    | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |  |
| Primary Hardware Development                                |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
|   |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Ship Integration  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Ship Suitability  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Systems Engineering   |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Training Development  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Licenses  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Tooling   |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| GFE   |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Award Fees  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Subtotal Product Development                                |                        |                                | 0.000           | 0.000      |                      | 0.000      |  | 0.000                         |                  | 0.000            | 0.000      |                          |  |
| Remarks:  |                        |                                |                 |            |                      |            |  |                               |                  |                  |            |                          |  |
| Development Support   |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Software Development  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Training Development  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Integrated Logistics Support                                |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Configuration Management                                    |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Technical Data  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| GFE   |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Award Fees  |                        |                                |                 |            |                      |            |  |                               |                  |                  | 0.000      |                          |  |
| Subtotal Support  |                        |                                | 0.000           | 0.000      |                      | 0.000      |  | 0.000                         |                  | 0.000            | 0.000      |                          |  |
| Remarks:  |                        |                                |                 |            |                      |            |  |                               |                  |                  |            |                          |  |

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| Exhibit R-3 Cost Analysis (page 2)               |                        |                                |                 |            |                  |            |  | DATE:<br>February 2006 |                  |                  |            |                          |
|--|------------------------|--------------------------------|-----------------|------------|------------------|------------|--|------------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY<br>RDT&E, N / BA-5 |                        |                                |                 |            |                  |            | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |                        |                  |                  |            |                          |
| Cost Categories                                  | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date   | FY 07 Cost             | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test Evaluation                    |                        |                                |                 |            |                  |            |  |                        |                  |                  | 0.000      |                          |
|  |                        |                                |                 |            |                  |            |  |                        |                  |                  | 0.000      |                          |
|  |                        |                                |                 |            |                  |            |  |                        |                  |                  | 0.000      |                          |
| Subtotal T&E                                     |                        |                                | 0.000           | 0.000      |                  | 0.000      |  | 0.000                  |                  | 0.000            | 0.000      |                          |
| Remarks:   |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |
| Contractor Engineering Support                   | TBD                    | TBD                            |                 |            |                  |            |  | 3.592                  | 1QFY07           | CONT             | CONT       |                          |
|  |                        |                                |                 |            |                  |            |  |                        |                  | CONT             | CONT       |                          |
| Government Engineering Support                   | TBD                    | TBD                            |                 |            |                  |            |  | 10.778                 | 1QFY07           | CONT             | CONT       |                          |
|  |                        |                                |                 |            |                  |            |  |                        |                  | CONT             | CONT       |                          |
|  |                        |                                |                 |            |                  |            |  |                        |                  | CONT             | CONT       |                          |
| Program Management Support                       |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |
| Travel   |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |
| Labor (Research Personnel)                       |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |
| SBIR Assessment                                  |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |
| Subtotal Management                              |                        |                                | 0.000           | 0.000      |                  | 0.000      |  | 14.370                 |                  | CONT             | CONT       |                          |
| Remarks:   |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |
| Total Cost                                       |                        |                                | 0.000           | 0.000      |                  | 0.000      |  | 14.370                 |                  | CONT             | CONT       |                          |
| Remarks:   |                        |                                |                 |            |                  |            |  |                        |                  |                  |            |                          |

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| EXHIBIT R4, Schedule Profile   |   | DATE:<br><b>February 2006</b>                                |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDTE&amp;E, N / BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>3106 - Combat Systems Integration |
| <div><div>CG(X)</div><div><div>FY2005</div><div>2006</div><div>2007</div><div>2008</div><div>2009</div><div>2010</div><div>2011</div></div><div><div>Concept</div><div>Design</div><div>System</div><div>Design</div></div><div><div>MS A</div><div>PDR</div><div>MS B</div></div></div> |   |  |
| R-1 SHOPPING LIST - Item No. 101   |   |  |

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

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|---|---------|---|---------|---------|--|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |  | DATE:<br><b>February 2006</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |         |         | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |                               |         |
| COST (\$ in Millions)                                       | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009  | FY 2010                       | FY 2011 |
| Project Cost  | 0.000   | 29.658  | 9.282   | 102.577 | 187.069  | 254.605                       | 239.731 |
| RDT&E Articles Qty  |         |   |         |         |  |                               |         |

## A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

CG(X), the future cruiser, will focus on providing the Air and Missile Defense capabilities as part of the 21st Century family of surface combatants. CG(X) will replace the aging CG-47 class as they reach the end of their 35 year service life.

This project encompasses efforts for total ship system development and integration of Hull, Mechanical and Electrical (HM&E) and shipboard systems into the CG(X) class. These engineering development and integration efforts include systems engineering, analysis, computer program development, interface design, Engineering Development Models (EDMs), technical documentation and system testing to ensure a fully functional CG(X) system design. This project will mature the CG(X) design through several ship design cycles and baselines. Preparation and execution of a program level Preliminary Design Review (PDR) and Critical Design Reveiw (CDR) will occur through these efforts.

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| EXHIBIT R-2a, RDT&E Project Justification   |   | DATE:<br><b>February 2006</b>                        |       |       |       |       |                                      |       |        |       |                         |  |  |  |
|---|---|--|-------|-------|-------|-------|--------------------------------------|-------|--------|-------|-------------------------|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <b>B. Accomplishments/Planned Program</b>   |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">14.500</td><td style="text-align: center;">2.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table> |   |  |       | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 0.000 | 14.500 | 2.000 | RDT&E Articles Quantity |  |  |  |
|   | FY 05   | FY 06  | FY 07 |       |       |       |                                      |       |        |       |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 14.500   | 2.000 |       |       |       |                                      |       |        |       |                         |  |  |  |
| RDT&E Articles Quantity   |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <div style="border: 1px solid black; min-height: 80px; margin-top: 10px;"></div>  |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">6.500</td><td style="text-align: center;">1.500</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table>  |   |  |       | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 0.000 | 6.500  | 1.500 | RDT&E Articles Quantity |  |  |  |
|   | FY 05   | FY 06  | FY 07 |       |       |       |                                      |       |        |       |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 6.500  | 1.500 |       |       |       |                                      |       |        |       |                         |  |  |  |
| RDT&E Articles Quantity   |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <div style="border: 1px solid black; min-height: 80px; margin-top: 10px;"></div>  |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">8.658</td><td style="text-align: center;">5.782</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table>  |   |  |       | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 0.000 | 8.658  | 5.782 | RDT&E Articles Quantity |  |  |  |
|   | FY 05   | FY 06  | FY 07 |       |       |       |                                      |       |        |       |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 8.658  | 5.782 |       |       |       |                                      |       |        |       |                         |  |  |  |
| RDT&E Articles Quantity   |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |
| <div style="border: 1px solid black; min-height: 80px; margin-top: 10px;"></div>  |   |  |       |       |       |       |                                      |       |        |       |                         |  |  |  |

R-1 SHOPPING LIST - Item No.

101

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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CLASSIFICATION:

|   |   |  |         |
|---|---|--|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |   | DATE:<br><b>February 2006</b>                        |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>                           |   |  |         |
| Funding:  | FY 2005   | FY 2006  | FY 2007 |
| FY 2006 President's Budget:                                 | 0.000   | 30.110   | 60.035  |
| FY 2007 President's Budget:                                 | 0.000   | 29.658   | 9.282   |
| Total Adjustments   | 0.000   | -0.452   | -50.753 |
| Summary of Adjustments                                      |   |  |         |
| Rescission  |   | -0.315   |         |
| Inflation   |   |  | 0.156   |
| Other General Provisions                                    |   | -0.137   | -3.948  |
| Programmatic Changes  |   | 0.000  | -46.961 |
| Subtotal  | 0.000   | -0.452   | -50.753 |
| Schedule:   |   |  |         |
| Not Applicable  |   |  |         |
| Technical:  |   |  |         |
| Not Applicable  |   |  |         |

R-1 SHOPPING LIST - Item No. 101

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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|  |                |                |   |                |                |  |                               |                    |                   |
|--|----------------|----------------|---|----------------|----------------|--|-------------------------------|--------------------|-------------------|
| EXHIBIT R-2a, RDT&E Project Justification  |                |                |   |                |                |  | DATE:<br><b>February 2006</b> |                    |                   |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>                      |                |                | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                |                | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |                               |                    |                   |
| <b>D. OTHER PROGRAM FUNDING SUMMARY:</b>   |                |                |   |                |                |  |                               |                    |                   |
| <u>Line Item No. &amp; Name</u>  | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u>  | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u>                                       | <u>FY 2011</u>                | <u>To Complete</u> | <u>Total Cost</u> |
| BLI 211400 / SCN   | 0.000          | 0.000          | 0.000   | 0.000          | 0.000          | 0.000  | 3,234.957                     | CONT               | CONT              |
| <br><b>E. ACQUISITION STRATEGY:</b>  |                |                |   |                |                |  |                               |                    |                   |
| TBD  |                |                |   |                |                |  |                               |                    |                   |
| <br><b>F. MAJOR PERFORMERS:</b>  |                |                |   |                |                |  |                               |                    |                   |
| Contractors - TBD  |                |                |   |                |                |  |                               |                    |                   |
| Field Activities - NSWC Dahlgren, NSWC Port Hueneme, NSWC Corona, NSWC Carderock |                |                |   |                |                |  |                               |                    |                   |
| Universities - JHU/APL   |                |                |   |                |                |  |                               |                    |                   |

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|---|------------------------|--------------------------------|-----------------|---|------------------|------------|------------------|--|------------------|------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 1)                          |                        |                                |                 |   |                  |            |                  | DATE:<br><b>February 2006</b>                        |                  |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                |                 | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                  |            |                  | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |                  |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost  | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost   | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development                                |                        |                                |                 |   |                  |            |                  |  |                  |                  | CONT       |                          |
|   |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Ship Integration  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Ship Suitability  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Systems Engineering   |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Training Development  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Licenses  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Tooling   |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| GFE   |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Award Fees  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Subtotal Product Development                                |                        |                                | 0.000           | 0.000   |                  | 0.000      |                  | 0.000  |                  | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |                 |   |                  |            |                  |  |                  |                  |            |                          |
| Development Support   |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Software Development  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Training Development  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Integrated Logistics Support                                |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Configuration Management                                    |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Technical Data  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| GFE   |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Award Fees  |                        |                                |                 |   |                  |            |                  |  |                  |                  | 0.000      |                          |
| Subtotal Support  |                        |                                | 0.000           | 0.000   |                  | 0.000      |                  | 0.000  |                  | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |                 |   |                  |            |                  |  |                  |                  |            |                          |

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|---|------------------------|--------------------------------|---|------------|------------------|------------|--|-------------------------------|------------------|------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 2)                          |                        |                                |   |            |                  |            |  | DATE:<br><b>February 2006</b> |                  |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |            |                  |            | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |                               |                  |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost   | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date                                     | FY 07 Cost                    | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test Evaluation                               |                        |                                |   |            |                  |            |  |                               |                  |                  | 0.000      |                          |
|   |                        |                                |   |            |                  |            |  |                               |                  |                  | 0.000      |                          |
|   |                        |                                |   |            |                  |            |  |                               |                  |                  | 0.000      |                          |
| Subtotal T&E  |                        |                                | 0.000   | 0.000      |                  | 0.000      |  | 0.000                         |                  | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Contractor Engineering Support                              |                        | TBD                            |   |            |                  | 7.415      | 2QFY06   | 2.321                         | 1QFY07           | CONT             | CONT       |                          |
|   |                        |                                |   |            |                  |            |  |                               |                  | CONT             | CONT       |                          |
| Government Engineering Support                              |                        | TBD                            |   |            |                  | 22.244     | 2QFY06   | 6.962                         | 1QFY07           | CONT             | CONT       |                          |
|   |                        |                                |   |            |                  |            |  |                               |                  | CONT             | CONT       |                          |
|   |                        |                                |   |            |                  |            |  |                               |                  | CONT             | CONT       |                          |
| Program Management Support                                  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Travel  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Labor (Research Personnel)                                  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| SBIR Assessment   |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Subtotal Management   |                        |                                | 0.000   | 0.000      |                  | 29.658     |  | 9.282                         |                  | CONT             | CONT       |                          |
| Remarks:  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |
| Total Cost  |                        |                                | 0.000   | 0.000      |                  | 29.658     |  | 9.282                         |                  | CONT             | CONT       |                          |
| Remarks:  |                        |                                |   |            |                  |            |  |                               |                  |                  |            |                          |

R-1 SHOPPING LIST - Item No. 101

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)



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|  |   |  |
|--|---|--|
| EXHIBIT R4, Schedule Profile   |   | DATE:<br><b>February 2006</b>                        |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RD&amp;E, N / BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>3107 - CG (X) Development |
| <div><div>CG(X)</div><div><div>FY2005</div><div>2006</div><div>2007</div><div>2008</div><div>2009</div><div>2010</div><div>2011</div></div><div><div>Concept</div><div>Design</div><div>System</div><div>Design</div></div><div><div>MS A</div><div>PDR</div><div>MS B</div></div></div> |   |  |

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R-1 SHOPPING LIST - Item No.

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

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|   |   |         |         |         |   |                               |         |
|---|---|---------|---------|---------|---|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |   |         |         |         |   | DATE:<br><b>February 2006</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering |         |         |         | PROJECT NUMBER AND NAME<br>4009 - Advanced Gun System (AGS) |                               |         |
| COST (\$ in Millions)                                       | FY 2005   | FY 2006 | FY 2007 | FY 2008 | FY 2009   | FY 2010                       | FY 2011 |
| Project Cost  | 61.528  | 46.110  | 47.021  | 47.814  | 48.640  | 49.410                        | 50.283  |
| RDT&E Articles Qty  |   |         |         |         |   |                               |         |

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

These funds provide for the development of the Advanced Gun System (AGS) and the development and qualification of the Long Range Attack Projectile (LRLAP) associated with the development of DD(X). The AGS will consist of a major caliber gun, an automated ammunition handling system, and a family of munitions/propelling charges. The AGS will, at a minimum, meet the Land Attack and Surface Dominance Missions assigned to the gun system. The system will provide a high rate of fire (approximately 10 rounds per minute) with a magazine capacity sufficient in size for meeting USMC operational requirements. LRLAP will be stored throughout its life cycle in an 8 round pallet which is handled by the AGS magazine. By palletizing the munition, AGS is able to significantly reduce manning and improve munition reliability, safety and resupply. The LRLAP EDM guided flight tests began in Dec 2004 and will be followed by final System Design and Development and qualification testing through 2010. The Long Range Land Attack Projectile (LRLAP) fired from AGS has a range of approximately 83 nautical miles and will deliver a high explosive unitary payload with GPS accuracy.

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|---|---|---|-------|--|-------|-------|-------|--------------------------------------|--------|-------|-------|-------------------------|--|--|--|
| EXHIBIT R-2a, RDT&E Project Justification   |   | DATE:<br><b>February 2006</b>                               |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>4009 - Advanced Gun System (AGS) |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| <b>B. Accomplishments/Planned Program</b>   |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%; text-align: center;">FY 05</td><td style="width: 15%; text-align: center;">FY 06</td><td style="width: 15%; text-align: center;">FY 07</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">20.365</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table> |   |   |       |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 20.365 | 0.000 | 0.000 | RDT&E Articles Quantity |  |  |  |
|   | FY 05   | FY 06   | FY 07 |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 20.365  | 0.000   | 0.000 |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| RDT&E Articles Quantity   |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| Continued LRLAP EDM development and testing.  |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%; text-align: center;">FY 05</td><td style="width: 15%; text-align: center;">FY 06</td><td style="width: 15%; text-align: center;">FY 07</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">12.334</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table> |   |   |       |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 12.334 | 0.000 | 0.000 | RDT&E Articles Quantity |  |  |  |
|   | FY 05   | FY 06   | FY 07 |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 12.334  | 0.000   | 0.000 |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| RDT&E Articles Quantity   |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| Commenced Land Based testing of AGS EDM.  |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%; text-align: center;">FY 05</td><td style="width: 15%; text-align: center;">FY 06</td><td style="width: 15%; text-align: center;">FY 07</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">23.639</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table> |   |   |       |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 23.639 | 0.000 | 0.000 | RDT&E Articles Quantity |  |  |  |
|   | FY 05   | FY 06   | FY 07 |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 23.639  | 0.000   | 0.000 |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| RDT&E Articles Quantity   |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |
| Commenced integration of Gun, Magazine, ISC EDMs.   |   |   |       |  |       |       |       |                                      |        |       |       |                         |  |  |  |

R-1 SHOPPING LIST - Item No.

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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|--|---|---|--------|--|-------|-------|-------|--------------------------------------|-------|--------|--------|-------------------------|--|--|--|
| EXHIBIT R-2a, RDT&E Project Justification  |   | DATE:<br><b>February 2006</b>                               |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>4009 - Advanced Gun System (AGS) |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| <b>B. Accomplishments/Planned Program</b>  |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%;">FY 05</td><td style="width: 15%;">FY 06</td><td style="width: 15%;">FY 07</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">1.037</td><td style="text-align: center;">2.388</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table>   |   |   |        |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 0.000 | 1.037  | 2.388  | RDT&E Articles Quantity |  |  |  |
|  | FY 05   | FY 06   | FY 07  |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 0.000   | 1.037   | 2.388  |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| RDT&E Articles Quantity  |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| AGS Qualification  |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%;">FY 05</td><td style="width: 15%;">FY 06</td><td style="width: 15%;">FY 07</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">5.190</td><td style="text-align: center;">40.410</td><td style="text-align: center;">35.764</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table> |   |   |        |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 5.190 | 40.410 | 35.764 | RDT&E Articles Quantity |  |  |  |
|  | FY 05   | FY 06   | FY 07  |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 5.190   | 40.410  | 35.764 |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| RDT&E Articles Quantity  |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| LRLAP System Design and Development.   |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%;">FY 05</td><td style="width: 15%;">FY 06</td><td style="width: 15%;">FY 07</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">4.663</td><td style="text-align: center;">8.869</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table>   |   |   |        |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 0.000 | 4.663  | 8.869  | RDT&E Articles Quantity |  |  |  |
|  | FY 05   | FY 06   | FY 07  |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 0.000   | 4.663   | 8.869  |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| RDT&E Articles Quantity  |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |
| LRLAP Qualification and Development testing.   |   |   |        |  |       |       |       |                                      |       |        |        |                         |  |  |  |

R-1 SHOPPING LIST - Item No.

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| EXHIBIT R-2a, RDT&E Project Justification                   |   | DATE:<br><b>February 2006</b>                               |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>4009 - Advanced Gun System (AGS) |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>                           |   |   |         |
| Funding:  | FY 2005   | FY 2006   | FY 2007 |
| FY 2006 President's Budget:                                 | 45.951  | 46.812  | 47.003  |
| FY 2007 President's Budget:                                 | 61.528  | 46.110  | 47.021  |
| Total Adjustments   | 15.577  | -0.702  | 0.018   |
| Summary of Adjustments                                      |   |   |         |
| Rescission  |   | -0.489  |         |
| Inflation   |   |   | 0.209   |
| Other General Provisions                                    | -1.123  | -0.213  | -0.171  |
| Warfare Center Rates  |   |   | -0.020  |
| Programmatic Changes  | 16.700  |   |         |
| Subtotal  | 15.577  | -0.702  | 0.018   |
| Schedule:   |   |   |         |
| Not Applicable  |   |   |         |
| Technical:  |   |   |         |
| Not Applicable  |   |   |         |

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

R-1 SHOPPING LIST - Item No. 101

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| Exhibit R-3 Cost Analysis (page 1)  |                        |                                |                 |   |                      |            |                      | DATE:<br>February 2006                                      |                      |                  |            |                          |
|---|------------------------|--------------------------------|-----------------|---|----------------------|------------|----------------------|---|----------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY<br>RDT&E, N / BA-5                                    |                        |                                |                 | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                      |            |                      | PROJECT NUMBER AND NAME<br>4009 - Advanced Gun System (AGS) |                      |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost  | FY 05 Award Date (1) | FY 06 Cost | FY 06 Award Date (2) | FY 07 Cost  | FY 07 Award Date (2) | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development  | CPAF                   | DD(X) Design Agent             | 201.235         | 41.449  | 1QFY05               | 0.000      | N/A                  | 0.000   | N/A                  | 0.000            | 242.684    | 242.684                  |
|   | 845/804                | DD(X) Industry Teams           | 177.435         | 0.000   | N/A                  | 0.000      | N/A                  | 0.000   | N/A                  | 0.000            | 177.435    | 177.435                  |
|   | CPAF                   | BAE/Lockheed Martin            | 0.000           | 0.000   | N/A                  | 43.498     | 1QFY 06              | 24.400  | 1QFY 07              | CONT             | CONT       |                          |
| Ship Integration  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Ship Suitability  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Systems Engineering   |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Training Development  |                        |                                |                 |   |                      |            |                      |   |                      |                  |            |                          |
| Licenses  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Tooling   |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| GFE   |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Award Fees  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Subtotal Product Development  |                        |                                | 378.670         | 41.449  |                      | 43.498     |                      | 24.400  |                      | CONT             | CONT       | 420.119                  |
| Remarks: The DD(X) Phase IV contract is funded in the 1st Qtr. of each fiscal year. |                        |                                |                 |   |                      |            |                      |   |                      |                  |            |                          |
| Development Support   |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Software Development  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Training Development  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Integrated Logistics Support  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Configuration Management  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Technical Data  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| GFE   |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Award Fees  |                        |                                |                 |   |                      |            |                      |   |                      |                  | 0.000      |                          |
| Subtotal Support  |                        |                                | 0.000           | 0.000   |                      | 0.000      |                      | 0.000   |                      | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |                 |   |                      |            |                      |   |                      |                  |            |                          |

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)



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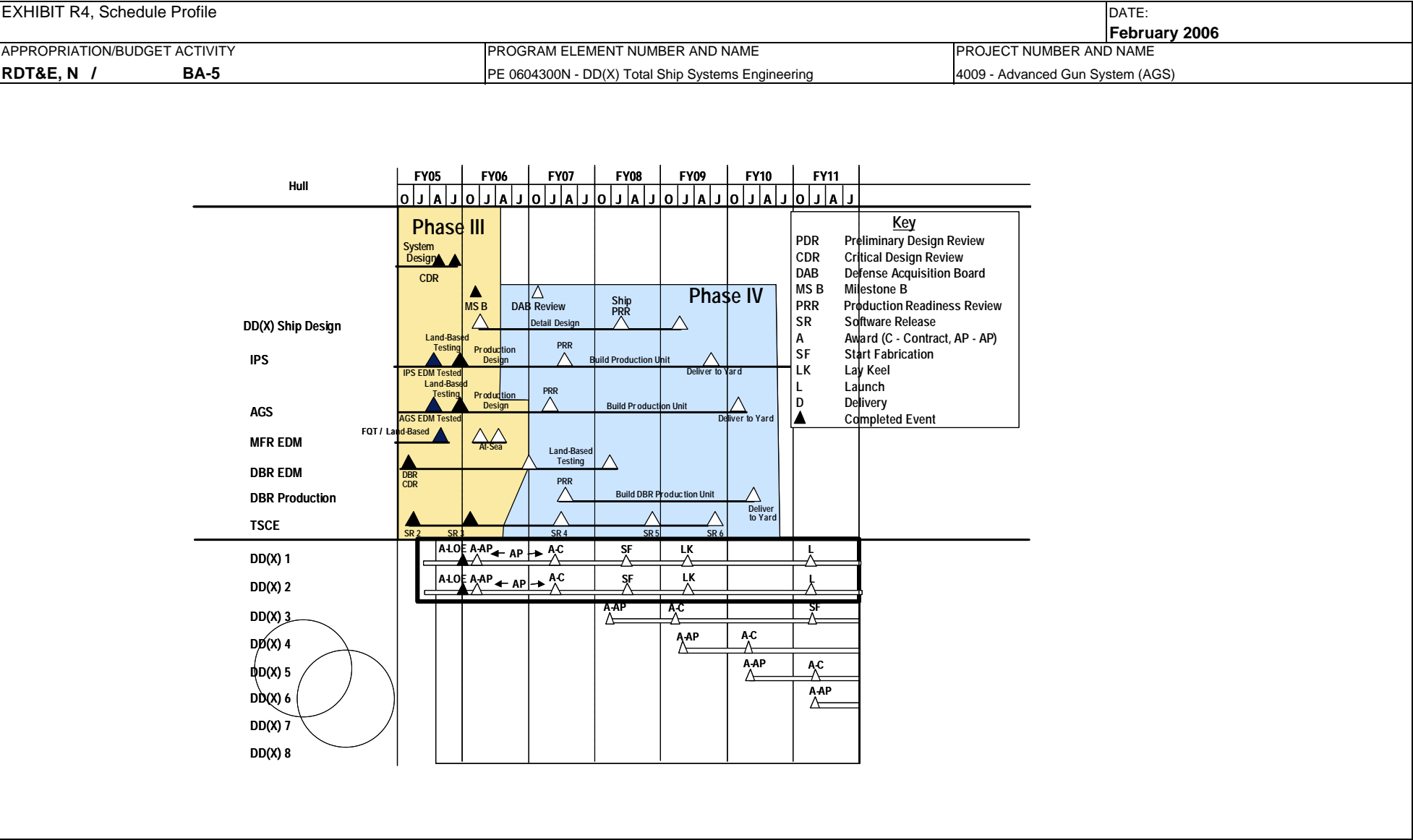
|  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
|--|------------------------|--------------------------------|-----------------|---|------------------|------------|------------------|---|------------------|------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 2)                           |                        |                                |                 |   |                  |            |                  | DATE:<br><b>February 2006</b>                               |                  |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDTE&amp;E, N / BA-5</b> |                        |                                |                 | PROGRAM ELEMENT<br>PE 0604300N - DD(X) Total Ship Systems Engineering |                  |            |                  | PROJECT NUMBER AND NAME<br>4009 - Advanced Gun System (AGS) |                  |                  |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost  | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost  | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test Evaluation                                | CPAF                   | BAE/Lockheed Martin            | 0.000           | 0.000   | N/A              | 0.800      | 1QFY06           | 20.600  | 1QFY07           | 0.000            | 21.400     | 21.400                   |
|  |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
|  |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| Subtotal T&E   |                        |                                | 0.000           | 0.000   |                  | 0.800      |                  | 20.600  |                  | 0.000            | 21.400     | 21.400                   |
| Remarks:   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Contractor Engineering Support                               | GSA/CPFF               | Anteon Arlington VA            | 6.448           | 0.578   | 10/04            | 0.341      | 10/05            | 0.467   | 10/06            | CONT             | CONT       |                          |
|  | Various                | Other Contractors              | 0.000           | 15.577  | Various          | 0.000      | N/A              | 0.000   | N/A              | CONT             | CONT       |                          |
| Government Engineering Support                               | WX                     | NSWC DD Dahlgren VA            | 15.062          | 2.496   | 10/04            | 0.682      | 10/05            | 0.664   | 10/06            | CONT             | CONT       |                          |
|  | WX                     | NSWC PHD Pt Hueneme CA         | 7.842           | 1.103   | 10/04            | 0.639      | 10/05            | 0.722   | 10/06            | CONT             | CONT       |                          |
|  | WX                     | Other Gov't Activities         | 11.211          | 0.325   | Various          | 0.150      | 10/05            | 0.168   | 10/06            | CONT             | CONT       |                          |
| Program Management Support                                   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Travel   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Labor (Research Personnel)                                   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| SBIR Assessment  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Subtotal Management  |                        |                                | 40.563          | 20.079  |                  | 1.812      |                  | 2.021   |                  | CONT             | CONT       |                          |
|  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Total Cost   |                        |                                | 419.233         | 61.528  |                  | 46.110     |                  | 47.021  |                  | CONT             | CONT       | 441.519                  |
| Remarks:   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |

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Exhibit R-2, RDTEEN Budget Item Justification  
(Exhibit R-2)

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**Exhibit R-2, RD TEN Budget Item Justification**  
(Exhibit R-2)

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CLASSIFICATION:

|   |         |   |         |         |   |                               |         |
|---|---------|---|---------|---------|---|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |   | DATE:<br><b>February 2006</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>0604300N/ DD(X) Total Ship Sys Engineering |         |         | PROJECT NUMBER AND NAME<br>4010/Integrated Power Systems on DD(X) |                               |         |
| COST (\$ in Millions)                                       | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009   | FY 2010                       | FY 2011 |
| Project Cost  | 62.679  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000                         | 0.000   |
| RDT&E Articles Qty  | 0       | 0   | 0       | 0       | 0   | 0                             | 0       |

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project provides funds to develop and test integrated power system Engineering Development Modules (EDMs) for DD(X) including Permanent Magnet (PM) motor and motor drive technologies. On 6 January 2000, SECNAV announced Navy intent for DD(X) to be an electric drive ship with integrated power architecture. IPS reduces acquisition and operating costs of naval ships and increases military effectiveness. IPS provides total ship electric power, including electric propulsion, power conversion and distribution, and mission load interfaces to the electric power system. IPS leverages investments in technologies that will be useable by both military and commercial sectors.

- (U) IPS has the potential to revolutionize the design, construction, and operation of U.S. naval ships by using electricity as the primary energy transfer medium aboard ship. The flexibility of electric power transmission allows power generating modules with various power ratings to be connected to propulsion loads and ship service in any arrangement that supports the ship's mission at lowest overall cost. Systems engineering in IPS is focused on increasing the commonality of components used across ship types and in developing modules which will be integral to standardization, zonal system architectures, and generic shipbuilding strategies. The purpose of increased commonality is to reduce the total cost of ship ownership by using common modules composed of standard components and/or standard interfaces.

- (U) IPS addresses ship platform program goals by: reducing ship acquisition cost through integration of propulsion and ship's service prime movers; reducing ship operational costs by creating more flexible operating characteristics and more efficient components; reducing ship construction costs by allowing more extensive modular construction of power generation, distribution, and loads; improving ship survivability and reducing vulnerability through increased arrangement flexibility and improved electrical system survivability; reducing manning by improving power management systems and reducing on-board maintenance requirements; improving ship signature characteristics; improving design adaptability to meet future requirements of multiple ship types or missions; integrating power management and protection by fully utilizing the power electronics in the system to perform fault protection as well as power conversion and load management functions; simplifying technology insertion which allows new technologies to be installed within IPS much less expensively than presently possible; and reducing machinery system acquisition costs by utilizing commercially shared technologies and components.

**FY05 Supplemental funding: \$5M provided for Permanent Magnet Motor**

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| EXHIBIT R-2a, RDT&E Project Justification  |   |   | DATE:<br><b>February 2006</b> |  |       |       |       |                                      |        |       |       |                         |   |   |   |
|--|---|---|-------------------------------|--|-------|-------|-------|--------------------------------------|--------|-------|-------|-------------------------|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>0604300N/ DD(X) Total Ship Sys Engineering | PROJECT NUMBER AND NAME<br>4010/Integrated Power Systems on DD(X) |                               |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| <b>B. Accomplishments/Planned Program</b>  |   |   |                               |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">57.679</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></tbody></table> |   |   |                               |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 57.679 | 0.000 | 0.000 | RDT&E Articles Quantity | 0 | 0 | 0 |
|  | FY 05   | FY 06   | FY 07                         |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| Accomplishments/Effort/Subtotal Cost   | 57.679  | 0.000   | 0.000                         |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| RDT&E Articles Quantity  | 0   | 0   | 0                             |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| <div style="border: 1px solid black; min-height: 100px; margin-top: 10px;"></div>  |   |   |                               |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">5.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr></tbody></table>  |   |   |                               |  | FY 05 | FY 06 | FY 07 | Accomplishments/Effort/Subtotal Cost | 5.000  | 0.000 | 0.000 | RDT&E Articles Quantity | 0 | 0 | 0 |
|  | FY 05   | FY 06   | FY 07                         |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| Accomplishments/Effort/Subtotal Cost   | 5.000   | 0.000   | 0.000                         |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| RDT&E Articles Quantity  | 0   | 0   | 0                             |  |       |       |       |                                      |        |       |       |                         |   |   |   |
| <div style="border: 1px solid black; min-height: 100px; margin-top: 10px;"></div>  |   |   |                               |  |       |       |       |                                      |        |       |       |                         |   |   |   |

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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| EXHIBIT R-2a, RDT&E Project Justification                   |   | DATE:<br><b>February 2006</b>                                     |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>0604300N/ DD(X) Total Ship Sys Engineering | PROJECT NUMBER AND NAME<br>4010/Integrated Power Systems on DD(X) |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>                           |   |   |         |
| Funding:  | FY 2005   | FY 2006   | FY 2007 |
| FY 2006 President's Budget:                                 | 59.495  |   |         |
| FY 2007 President's Budget:                                 | 62.679  |   |         |
| Total Adjustments   | 3.184   | 0.000   | 0.000   |
| Summary of Adjustments                                      |   |   |         |
| Other General Provisions                                    | -1.816  |   |         |
| Programmatic Changes  | 5.000   |   |         |
| Subtotal  | 3.184   | 0.000   | 0.000   |
| Schedule:   |   |   |         |
| Not Applicable  |   |   |         |
| Technical:  |   |   |         |
| Not Applicable  |   |   |         |

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2)

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| EXHIBIT R-2a, RDT&E Project Justification                   |  |  |  |   |  |  | DATE:<br><b>February 2006</b>                                     |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |  |  |  | PROGRAM ELEMENT NUMBER AND NAME<br>0604300N/ DD(X) Total Ship Sys Engineering |  |  | PROJECT NUMBER AND NAME<br>4010/Integrated Power Systems on DD(X) |  |  |

**D. OTHER PROGRAM FUNDING SUMMARY:**

| <u>Line Item No. &amp; Name</u>           | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>To Complete</u> | <u>Total Cost</u> |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|-------------------|
| PE 0603513N / Shipboard Sys Component Dev | 44.282         | 50.918         | 14.135         | 16.686         | 16.828         | 16.983         | 17.161         | CONT               | CONT              |
| BLI 211900 / SCN                          | 304.048        | 706.086        | 2,568.111      | 3,054.938      | 2,607.342      | 2,701.352      | 2,308.481      | CONT               | CONT              |

**E. ACQUISITION STRATEGY:**

DD(X) Phase IV includes the continuation of warfare system development, integration and testing from Phase III, as well as ship detail design and construction. The Navy intends to award contracts to BIW and NGSS for detail design and construction of a lead ship at each yard. It is planned that the Phase IV detail design will be contracted for on a Cost Plus Award Fee (CPAF) basis, and that ship construction efforts for the lead ships will be on a Cost Plus Incentive Fee (CPIF) basis with additional performance incentives. The Acquisition Strategy Report (ASR) reflecting the dual lead ship strategy was approved at the DD(X) Milestone B decision in November 2005.

**F. MAJOR PERFORMERS:**

IPS DD(X) Design Agent, Northrop Grumman Ship Systems

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Exhibit R-2, RD TEN Budget Item Justification  
(Exhibit R-2)

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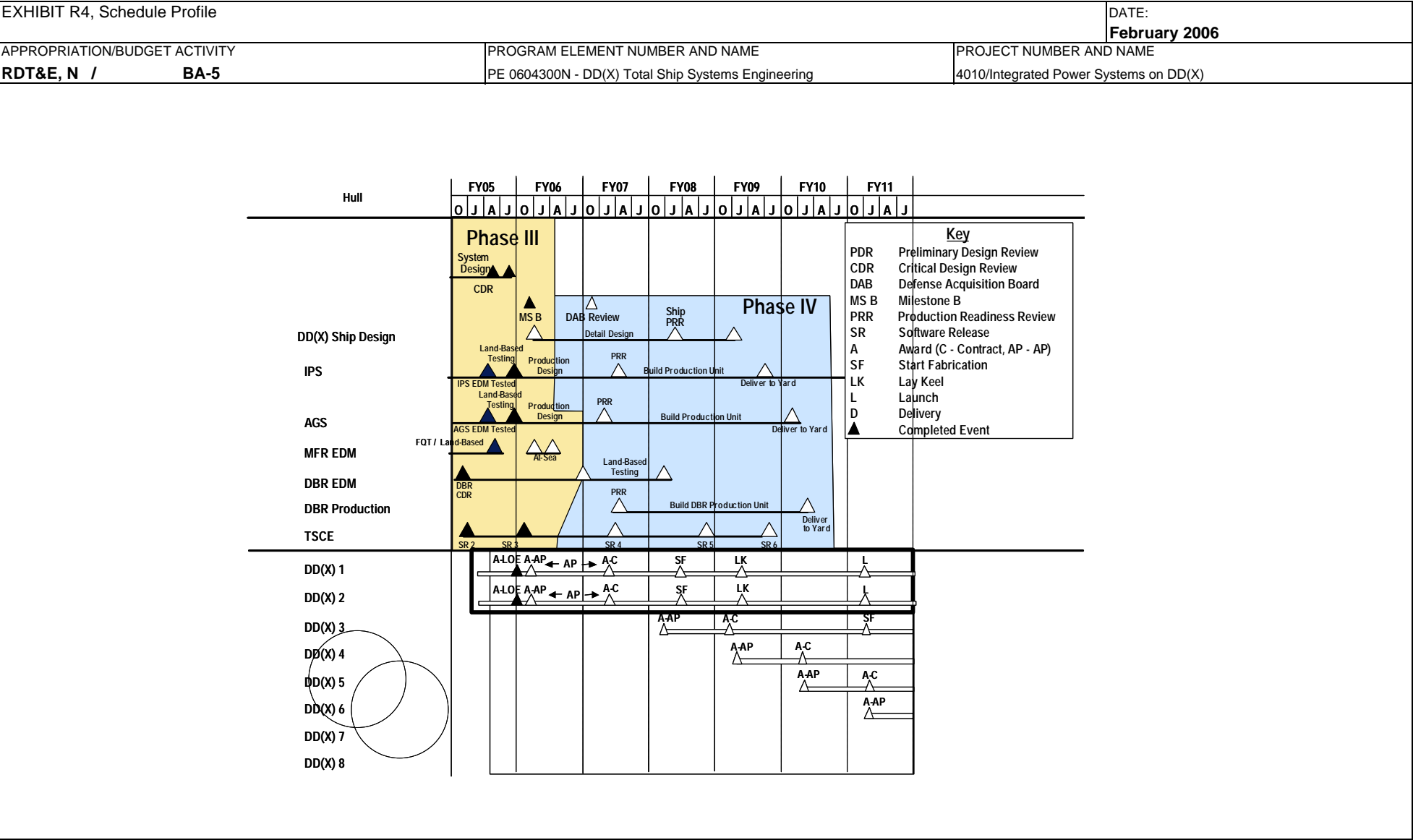
|   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
|---|------------------------|--------------------------------|-----------------|---|------------------|------------|------------------|---|------------------|------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 2)                          |                        |                                |                 |   |                  |            |                  | DATE:<br><b>February 2006</b>                                     |                  |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |                        |                                |                 | PROGRAM ELEMENT<br>0604300N/ DD(X) Total Ship Sys Engineering |                  |            |                  | PROJECT NUMBER AND NAME<br>4010/Integrated Power Systems on DD(X) |                  |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost  | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost  | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation                             |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Operational Test & Evaluation                               |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Test Assets   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Tooling   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| GFE   |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Award Fees  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Subtotal T&E  |                        |                                | 0.000           | 0.000   |                  | 0.000      |                  | 0.000   |                  | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Contractor Engineering Support                              |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| Government Engineering Support                              |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| Program Management Support                                  |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| Travel  |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| Labor (Research Personnel)                                  |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| SBIR Assessment   |                        |                                |                 |   |                  |            |                  |   |                  |                  | 0.000      |                          |
| Subtotal Management   |                        |                                | 0.000           | 0.000   |                  | 0.000      |                  | 0.000   |                  | 0.000            | 0.000      |                          |
| Remarks:  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |
| Total Cost  |                        |                                | 290.275         | 62.679  |                  | 0.000      |                  | 0.000   |                  | 0.000            | 352.954    | 352.954                  |
| Remarks:  |                        |                                |                 |   |                  |            |                  |   |                  |                  |            |                          |

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(Exhibit R-2)

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|   |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
|---|---|--|-------------------------------|--|--|-------|--|--|--|-------|--|--|--|--|---------------------------------|--------|--|--|--|
| EXHIBIT R-2a, RDT&E Project Justification   |   |  | DATE:<br><b>February 2006</b> |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>9999 Congressional Plus-Ups : VARIOUS |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| <b>CONGRESSIONAL PLUS-UPS:</b>  |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 10%; text-align: center;">FY 06</td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 30%;"></td></tr><tr><td>9554C</td><td></td><td></td><td></td><td></td></tr><tr><td>Naval Smartship</td><td style="text-align: center;">1.000</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Funding for FY06 Naval Smartship Congressional Add.</div>                                  |   |  |                               |  |  | FY 06 |  |  |  | 9554C |  |  |  |  | Naval Smartship                 | 1.000  |  |  |  |
|   | FY 06   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| 9554C   |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| Naval Smartship   | 1.000   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 10%; text-align: center;">FY 06</td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 30%;"></td></tr><tr><td>9832N</td><td></td><td></td><td></td><td></td></tr><tr><td>CG(X) System Concept and Design</td><td style="text-align: center;">30.000</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Funding for FY06 CG(X) system Concept and Design Congressional Add.</div> |   |  |                               |  |  | FY 06 |  |  |  | 9832N |  |  |  |  | CG(X) System Concept and Design | 30.000 |  |  |  |
|   | FY 06   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| 9832N   |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| CG(X) System Concept and Design   | 30.000  |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 10%; text-align: center;">FY 06</td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 30%;"></td></tr><tr><td>9833N</td><td></td><td></td><td></td><td></td></tr><tr><td>Floating Area Network</td><td style="text-align: center;">2.000</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Funding for FY06 Floating area network Congressional Add.</div>                      |   |  |                               |  |  | FY 06 |  |  |  | 9833N |  |  |  |  | Floating Area Network           | 2.000  |  |  |  |
|   | FY 06   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| 9833N   |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |
| Floating Area Network   | 2.000   |  |                               |  |  |       |  |  |  |       |  |  |  |  |                                 |        |  |  |  |

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## CLASSIFICATION:

|  |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
|--|---|--|-------------------------------|--|--|-------|--|--|--|-------|--|--|--|--|---|-------|--|--|--|
| EXHIBIT R-2a, RDT&E Project Justification  |   |  | DATE:<br><b>February 2006</b> |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE 0604300N - DD(X) Total Ship Systems Engineering | PROJECT NUMBER AND NAME<br>9999 Congressional Plus-Ups : VARIOUS |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| <b>CONGRESSIONAL PLUS-UPS:</b>   |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 10%; text-align: center;">FY 06</td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 30%;"></td></tr><tr><td>9834N</td><td></td><td></td><td></td><td></td></tr><tr><td>Permanent Magnet Motor</td><td style="text-align: center;">6.600</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Funding for FY06 Permanent Magnet Motor Congressional Add.</div>   |   |  |                               |  |  | FY 06 |  |  |  | 9834N |  |  |  |  | Permanent Magnet Motor                    | 6.600 |  |  |  |
|  | FY 06   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| 9834N  |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| Permanent Magnet Motor   | 6.600   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 10%; text-align: center;">FY 06</td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 30%;"></td></tr><tr><td>9835N</td><td></td><td></td><td></td><td></td></tr><tr><td>Surface Vessel Electric Actuator Tech Dev</td><td style="text-align: center;">1.000</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Funding for FY06 Surface Vessel Electric Actuator Technology Development Congressional Add.</div> |   |  |                               |  |  | FY 06 |  |  |  | 9835N |  |  |  |  | Surface Vessel Electric Actuator Tech Dev | 1.000 |  |  |  |
|  | FY 06   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| 9835N  |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| Surface Vessel Electric Actuator Tech Dev  | 1.000   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 10%; text-align: center;">FY 06</td><td style="width: 15%;"></td><td style="width: 15%;"></td><td style="width: 30%;"></td></tr><tr><td>9836N</td><td></td><td></td><td></td><td></td></tr><tr><td>Wireless Maritime Inspection System</td><td style="text-align: center;">1.500</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Funding for FY06 Wireless Maritime Inspection System Congressional Add.</div>                           |   |  |                               |  |  | FY 06 |  |  |  | 9836N |  |  |  |  | Wireless Maritime Inspection System       | 1.500 |  |  |  |
|  | FY 06   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| 9836N  |   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |
| Wireless Maritime Inspection System  | 1.500   |  |                               |  |  |       |  |  |  |       |  |  |  |  |   |       |  |  |  |

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