CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: **February 2004**	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5**					R-1 ITEM NOMENCLATURE 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)			
COST ($ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		**60.138**	**42.237**	**48.154**	**12.544**	**0.000**	**0.000**	**0.000**
0166/SPS Improvement		**4.210**	**1.875**	**2.955**	**1.953**	**0.000**	**0.000**	**0.000**
2178/QRCC		**51.480**	**36.162**	**45.199**	**10.591**	**0.000**	**0.000**	**0.000**
9394/Integrated Radar Optical Surveillance (IROS3)*		**0.000**	**4.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
2649/IRST		**4.448**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

*Project Unit 9394 is an FY04 Congressional Add

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program element consolidates currently ongoing and planned programmatic efforts related to Detect & Control aspects of Ship Self Defense (SSD) to facilitate effective planning and management of these efforts and to exploit the synergistic relationship inherent in each. Analysis and demonstration have established that surface SSD based on single-sensor detection point-to-point control architecture performs marginally against current and projected Anti-Ship Cruise Missile (ASCM) threats. The supersonic seaskimming ASCM reduces the effective battle space to the horizon and the available reaction time-line to less than 30 seconds from first opportunity to detect until the ASCM impacts its target ship. Against such a threat, multi-sensor integration is required for effective detection, and parallel processing is essential to reduce reaction time to acceptable levels and to provide vital coordination/integration of hardkill and softkill assets.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5**	R-1 ITEM NOMENCLATURE 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)

These SSD projects address and coordinate the detect and control functions necessary to meet the rigorous SSD requirements within a development structure dedicated to systems engineering.

DETECTION: Improved coordinated sensor performance to increase the probability of detecting low altitude, low observable targets is to be achieved through the synergism gained from the integration of dissimilar sensor sources. Multi-sensor integration is being addressed through the efforts of Quick Reaction Combat Capability (QRCC) (2178), while sensor improvements are addressed through the SPS Improvements (0166) and Infrared Search and Track (2649). These provide improvements to both active and passive detection.

CONTROL: Multi-sensor integration, parallel processing and the coordination of hardkill/softkill capabilities in an automated response to the ASCM threat are the cornerstones of Ship Self Defense System (SSDS) being developed through QRCC (2178) efforts. In addition, that project provides for the central system engineering management of SSD developments, including efforts required to integrate SSDS with the Advanced Combat Direction System (CDS) for those ships having a CDS.

R-1 SHOPPING LIST - Item No. 127

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N/BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)			PROJECT NUMBER AND NAME 0166 SPS Improvement Program			
COST ($ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	**4.210**	**1.875**	**2.955**	**1.953**	**0.000**	**0.000**	**0.000**
RDT&E Articles Qty							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project provides funding for the SPS Improvement Program:

AN/SPQ-9B: This program develops and tests performance and reliability upgrades for search radar equipment to meet the evolving threat. The AN/SPQ-9 radar supports surface engagement capability to effectively detect and track sea-skimming, low radar cross-section, high-speed targets in heavy clutter environments. The radar interfaces with ship combat systems via either the MK-86 GFCS, Ship Self Defense System (SSDS), or Cooperative Engagement Capability (CEC) on CG47, CV/CVN, LHD, LPD 17 and DDG 51 class ships. The AN/SPQ-9B uses a high resolution, track-while-scan, X-Band, pulse Doppler radar to provide real time acquisition and automatic tracking of multiple targets. A lightweight antenna assembly has also been furnished as an engineering change.

Shipboard Protection System: Shipboard Protection System delivers an integrated, shipboard, family of systems designed to detect, classify, and engage asymmetric threats. Capabilities include: Integrated Radar Optical Sighting and Surveillance System (IROS3). IROS3 integrates EO/IR sensors, radar, and stabilized guns into a common tactical scene. Swimmer Detection Sonar (SDS). SDS will be a COTS system to detect, classify and track swimmers, divers and SDVs. Non-lethal weapons: NLW assist in determining intent and in target discrimination.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	0166 SPS Improvement Program

B. Accomplishments/Planned Program

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	1.426	1.875	0.000
RDT&E Articles Quantity			

AN/SPQ-9B Integration into AEGIS Baseline 7 Phase 1/MK 160 Gun Computer System.
.

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.784	0.000	0.000
RDT&E Articles Quantity			

AN/SPQ-9B Developmental Testing on Lightweight Antenna configuration changes/Operational Test and Evaluation.

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.000	2.955
RDT&E Articles Quantity			

Shipboard Protection System - System integration, test and analysis of t est results

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000
RDT&E Articles Quantity			

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	0166 SPS Improvement Program

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget:	3.886	1.944	0.000
President's Budget (PB 05 Controls)	4.210	1.875	2.955
Total Adjustments	0.324	-0.069	2.955
Summary of Adjustments			
SBIR	-0.103		
BSO Adjustment	0.427		
Economic Assumptions		-0.069	-0.002
Ship ARPDD			2.000
Ship ARPDD			-2.000
Inflation			-0.016
NWCF Rates			-0.027
Shipboard Protection System			3.000
Subtotal	0.324	-0.069	2.955

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST-Item No. 127

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	0166 SPS Improvement Program

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
OPN LINE 511000 (AN/SPQ-9B)	32.049								
OPN LINE 202600 (AN/SPQ-9B)		19.295	3.584	1.737	0.000	14.495	15.204	CONT.	CONT.
OPN LINE 812800 (Physical Security Equipment)	17.574	0.468	18.685	51.939	53.457	70.219	35.781	CONT.	CONT.

E. ACQUISITION STRATEGY:

AN/SPQ-9B Radar is a directed sole source contract to Northrop Grumman Norden Systems for LRIP, and upon successful completion of TECHEVAL/OPEVAL, entering into Full Rate Production. Lockheed Martin will develop AN/SPQ 9B integration into AEGIS Baseline 7 Phase 1/MK 160 Gun Computer System.

F. MAJOR PERFORMERS:

NORTHROP GRUMMAN CORP.
NORDEN SYSTEMS
MELVILLE, N.Y. 11747
PRIME CONTRACTOR

LOCKHEED MARTIN CORP
NE&SS-SURFACE SYSTEMS
MOORESTOWN, N.J.
SPQ-9B/AEGIS INTEGRATION

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2004**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)				PROJECT NUMBER AND NAME 0166 SPS Improvement Program						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	CPAF/DA	NGNS, Melville NY	40.308	1.426	03/02				03/04		41.734	41.734
Ancillary Hardware Development	FFP	*ITT/G Van Nuys, CA	7.000								7.000	7.000
Aircraft Integration												
Ship Integration	CPAF	LM, Moorestown, NJ	2.000	2.784	10/02	1.875	10/03				6.659	6.728
Ship Suitability												
Systems Engineering	FF	SAIC						1.477	12/04	CONT	CONT	N/A
	WR/WX	NSWC						1.478	10/04	CONT	CONT	N/A
Training Development												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			49.308	4.210		1.875		2.955		CONT	CONT	N/A
Remarks: *Development cost of AN/SPS-48 Transmitter.												
Development Support Equipment												
Software Development	WR	PHD, NSWC,CA	5.985								5.985	5.985
Training Development		Various	2.112								2.112	2.112
Integrated Logistics Support	WR	Various	2.112								2.112	2.112
Configuration Management	PD/WR	Various	6.580								6.580	6.580
Technical Data	WR	Various	3.170								3.170	3.170
Design Development	WR	NRL, WASH,DC	0.000									
Subtotal Support			19.959	0.000		0.000		0.000		0.000	19.959	19.959
Remarks: Various Activities includes PHD, NSWC, NRL, NSWC/CD, and APL												

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2) | DATE: **February 2004**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-5**

PROGRAM ELEMENT: 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)

PROJECT NUMBER AND NAME: 0166 SPS Improvement Program

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
DT&E	WR/RC	PHD NSWC, CA	1.665								1.665	1.665
DT&E	WR	NRL, Washington DC	1.933								1.933	1.933
DT&E	WR	PT. MAGU, CA	0.300								0.300	0.300
OT&E	WR/RC	PHD NSWC, CA	0.560								0.560	0.560
OT&E	WR	NRL, Washington DC	0.410								0.410	0.410
OT&E	WR	OPTEVFOR, NORFOLK	0.792								0.792	0.792
OT&E	IPR	NASA, MOFFET FIELD	0.104								0.104	0.104
Subtotal T&E			5.764	0.000		0.000		0.000		0.000	5.764	5.764

Remarks:

Cost Categories												
MANAGEMENT												
Miscellaneous	Various	Various	2.559								2.559	2.559
SBIR			0.129								0.129	0.129
Subtotal Management			2.688	0.000		0.000		0.000		0.000	2.688	2.688

Remarks:

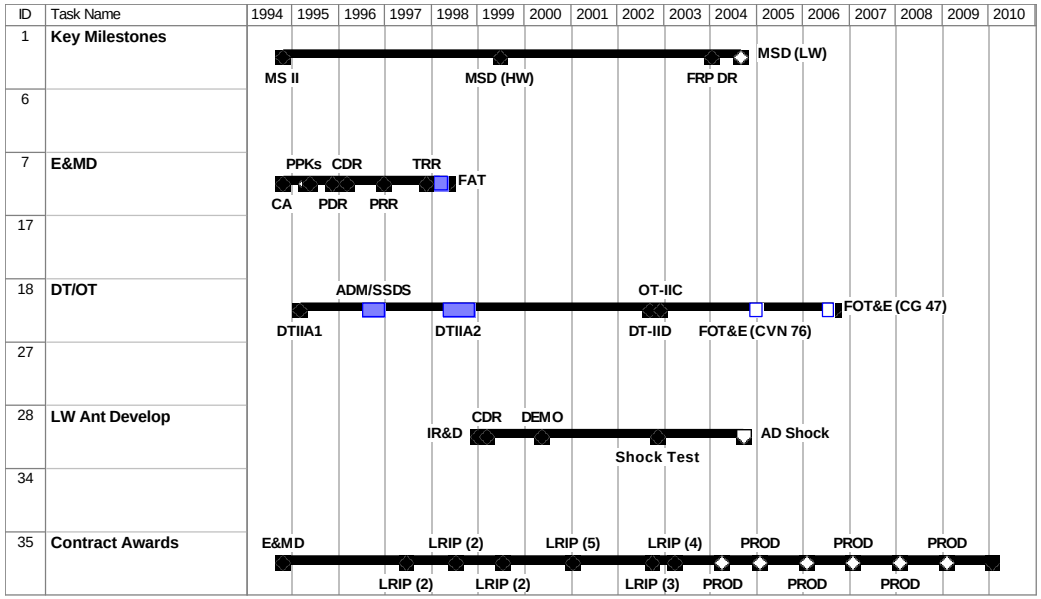
Total Cost			77.719	4.210		1.875		2.955		CONT	CONT	

Remarks:

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER	PROJECT NAME AND NUMBER
RDT&E, N/BA5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	0166 SPS Improvement Program (AN/SPQ-9B)



R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2004**			
APPROPRIATION/BUDGET ACTIVITY **RDT&BA-5**	PROGRAM ELEMENT 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)				PROJECT NUMBER AND NAME 0166 SPS Improvement Program (AN/SPQ-9B)			
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Developmental Testing								
Operational Testing		1Q						
Technical Evaluation (TECHEVAL)								
Operational Evaluation (OPEVAL)		1Q						
Full Rate Production (FRP) Decision			2Q					
Full Rate Production Start			3Q					

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NAME AND NUMBER 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	PROJECT NAME AND NUMBER 0166 SPS Improvement Program (Shipboard Protection System)

D. (U) Schedule Profile:

	FY02				FY03				FY04				FY05			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Shipboard Protection System Improvement Program																
Development of Components																
Development of System																
Land Based Testing																
Pier Side Evaluation																
Sea Testing - USS Ramage																
USS Ramage Deploys																
USS Ramage Data Evaluation																
Update Upgrades to SPS Baseline													△			

FY 02 THROUGH FY 04 EFFORTS FUNDED WITH FY 02 DERF FUNDING

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **Feburary 2004**		
APPROPRIATION/BUDGET ACTIVITY **RDT& BA-5**	PROGRAM ELEMENT 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)				PROJECT NUMBER AND NAME 0166 SPS Improvement Program (Shipboard Protection System)			
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Update Upgrades to SPS Baseline				1Q				

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: **February 2004**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)			PROJECT NUMBER AND NAME 2178/Quick Reaction Combat Capability			
COST ($ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	**51.480**	**36.162**	**45.199**	**10.591**	**0.000**	**0.000**	**0.000**
RDT&E Articles Qty							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Quick Reaction Combat Capability (QRCC) project implements an evolutionary acquisition of improved ship self defense capabilities against Anti-Ship Cruise Missiles (ASCMs) for selected ships. The Ship Self Defense System (SSDS) is the integrating element of QRCC. The design integrates several existing stand-alone Anti-Air Warfare (AAW) systems that do not individually provide the complete detection, control, and engagement capabilities needed against low flying, high speed ASCMs with low radar cross sections. The SSDS integration concept fulfills the need for an automated detection, quick reaction and multi-target engagement capability emphasizing performance in the littoral environment. SSDS replaces manual control of several self-defense systems with a single integrated capability under the computer-aided control of ship operators. System design emphasizes use of non-developmental items, commercial standards, Next Generation Computer Resources, computer program reuse and open architecture. SSDS is a physically distributed, open architecture computer network consisting of commercially available or previously developed hardware. It includes a command table that uses components of the Navy's AN/UYQ-70 standard display for human-machine interface, commercially available local area network access units and circuit cards, and commercially available fiberoptic cabling.

SSDS MK1 integrates the SPS-49A(V)1 radar, SPS-67(V)1 radar, AN/SLQ-32A electronic countermeasures system, Combat Identification, Friend or Foe-Self Defense (CIFF-SD), Rolling Airframe Missile and Phalanx Close-In Weapon System and is installed on LSD41/49 class ships. SSDS MK1 successfully completed Operational Evaluation in June 1997. SSDS received Milestone III Approval for Full Rate Production (Mar 98) and authority to to integrate with ACDS and Cooperative Engagement Capability (CEC) on CV(N), LPD-17, LHD and LHA ship classes.

SSDS MK2 facilitates the incremental evolution and implementation of follow-on modifications. Development of SSDS MK2 consists of leveraging critical experiments and re-use of technology and software from SSDS MK1. SSDS MK2 is in development and will integrate other ship self defense elements, such as the AN/SPQ-9B radar, and NATO Sea-sparrow missile system with the CEC to improve joint interoperability. SSDS MK2 provides enhanced capabilities for Force Protection against air, and surface threats using both ownship and remote data in support of the AAW Capstone Requirements. SSDS MK2 becomes the integrated, coherent real time Command and Control System for Aircraft Carriers and Amphibious ships. It will increase operational capabilities; improve combat readiness and Battle Group Interoperability; and promote standardization. It will also introduce new shipboard tactical displays and support equipment.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL	2178/Quick Reaction Combat Capability

B. Accomplishments/Planned Program

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	30.394	22.935	30.039
RDT&E Articles Quantity			

Develop and deliver the computer program products for each of the SSDS MK 2 ship class variants (Mod 1 for Carriers and Mod 2 for LPDs). Conduct reviews of computer program systems engineering products to assess the computer program development and integration progress. Code each new or modified unit as specified in the detailed design, revise and compile the code until it compiles without errors. Conduct a unit test for all new and modified software units, identify and document test cases describing their purpose, the functions being tested, the test environment, and the test results. Evaluate the test results and correct the code and retest, if necessary. Conduct a Formal Qualifications Test (FQT) before delivery to test certification facilities and continue to support testing efforts through computer program corrections and retest.

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	5.486	2.087	0.000
RDT&E Articles Quantity			

Conduct systems requirements and identify necessary functionality changes to adapt to the LHD class in-service ships.

	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	15.600	11.140	15.160
RDT&E Articles Quantity			

Conduct comprehensive combat system tests on SSDS MK 2 MOD 1 (CVN 76) at Wallops Island, including development tests, data collection, data extraction, data analysis and identifying computer program corrections. Conduct at-sea DT/OT and FOT&E events onboard USS Reagan in FY03, FY04, and FY05. Complete all test preparations and documentation for LPD 17 configuration testing efforts planned in FY05. Conduct land based and at-sea DT events for SSDS MK2 Mod 2 (LPD 17) in FY04 and FY05.

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	2178/Quick Reaction Combat Capability

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget: (FY 04 Pres Controls)	47.597	36.572	25.633
Current President's Budget: (FY05 PB Controls)	51.480	36.162	45.199
Total Adjustments	3.883	-0.410	19.566
Summary of Adjustments			
BSO Adjustments	0.739		
Program Adjustments	0.132	-0.410	21.376
Reprogrammings	3.999		
SBIR/STTR Transfer	-0.987		
NWCF Rates			-0.241
C-3 SIAP	0.000		-1.569
Subtotal	3.883	-0.410	19.566

Schedule:

PB05 FY05/FY06 controls support FOT&E test events.

Increases in FY03 commenced LHD ship class systems engineering and development.
Decrease in FY04 precluded software changes to low priority items found during land based tests.
Increase of $19.6M in FY05 is IAW with SSDS MK 2 DT/OT/FOT&E TEMP requirements. The decrease of $1.6M in FY05 was to realign the SIAP funding into the 0603879N Program

Technical:

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL	2178/Quick Reaction Combat Capability	

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
Ship Self Defense System OPN / 523900 , 523905 , 523906	45.338	57.658	42.130	15.617	7.362	8.065	23.743	308.840	684.053
SCN CV(N) / CVN 77/70	58.791	50.275	0.000	0.000	0.000	0.000	0.000	0.000	109.066
SCN LPD ship class	20.205	40.410	0.000	0.000	20.205	20.205	20.205	40.410	161.640

Related RDT&E: PE 0603658N (Cooperative Engagement Capability CEC)

E. ACQUISITION STRATEGY:

LSD class procurements and installations are complete. These systems were procured under a Firm Fix Price (FFP) Contract. The FY00 requirements also include CVN 68 and 1 shore based trainer. The first SSDS MK 2 system procurements took place under a Cost Plus Award Fee contract in FY99 for the CVN 76, LPD 17, LPD 18 and CVN 69. Follow-on procurements for additional ships of the CV(N), LPD and LHD classes will be made using FFP contracts with the exception of those ships that would be receiving initial COTS tech Refresh hardware suites; then a CPAF type contract is necessary.
A new development contract is planned in FY 05 to support future SSDS MK 2 modifications.

F. MAJOR PERFORMERS:

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2004**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)			PROJECT NUMBER AND NAME 2178/Quick Reaction Combat Capability							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAVSEA/DD-Dahlgren, VA	19.983	2.785	10/02	4.210	10/03	2.224	10/04	0.500	29.702	N/A
Systems Engineering	SS/FP	JHU/APL-Laurel, MD	30.045	2.500	11/02	1.280	11/03	2.779	11/04	0.500	37.104	N/A
Systems Engineering	WR	NAVSEA/PHD-Pt Hueneme,CA	9.273	4.760	10/02	1.657	10/03	0.300	10/04	0.000	15.990	N/A
Systems Engineering	WR	NAVSEA/Dam Neck-Dam Neck,	1.940	1.840	10/02	1.225	10/03	0.954	10/04	0.000	5.959	N/A
Systems Engineering	SS/CPAF	RSC(5108)-San Diego, CA	72.788	20.531	10/02	0.000	10/03	0.000	N/A	0.000	93.319	189.400
Systems Engineering	SS/CPAF	RSC(5466)- San Diego, CA	20.353	0.000	N/A	0.000	N/A	0.000	N/A	0.000	20.353	20.353
Systems Engineering	SS/CPFF	RSC(5104)-San Diego, CA	0.800	6.416	10/02	17.511	10/03	23.732	10/04	5.874	54.333	85.000
Systems Engineering	SS/CPAF	RSC (TBD Note (1))-San Diego,	0.000	0.000	N/A	0.000	N/A	0.000	10/04	0.000	0.000	TBD
Award Fees	SS/CPAF	RSC (TBD Note (1))-San Diego,	0.000	0.000	N/A	0.000	N/A	0.000	10/04	0.000	0.000	TBD
Award Fees	SS/CPAF	RSC(5108)-San Diego, CA	7.525	1.886	10/02	0.000	N/A	0.000	N/A	0.000	9.411	12.704
Award Fees	SS/CPAF	RSC(5466)- San Diego, CA	2.163	0.000	N/A	0.000	N/A	0.000	N/A	0.000	2.163	2.163
Risk Reduction / EMD	Various	Various	76.366	0.000	N/A	0.000	N/A	0.000	N/A	0.000	76.366	76.366
Misc.	Various	Various	0.175	0.144	N/A	0.225	N/A	0.225	N/A	0.000	0.769	N/A
Subtotal Product Development			241.411	40.862		26.108		30.214		6.874	345.469	N/A

Remarks:
Note (1) New contract to perform future MK 2 modifications implemented in the Combat System such as ESSM Phase I development, integration, and test of Mod 1. .

QA/RMA	WR	NWAS Corona	8.640	0.000	N/A	0.310	N/A	0.310	N/A	0.150	9.410	
Subtotal Support			8.640	0.000	N/A	0.310	N/A	0.310	N/A	0.150	9.410	

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)					DATE: **February 2004**							
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)			PROJECT NUMBER AND NAME 2178/Quick Reaction Combat Capability						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAVSEA/PHD-Pt Hueneme,CA	23.993	4.912	10/02	4.833	10/03	5.000	10/04	2.000	40.738	N/A
Developmental Test & Evaluation	WR	NAVSEA/DD,Dahlgren, VA	1.105	0.000	10/02	0.340	10/03	0.500	10/04	0.500	2.445	N/A
Developmental Test & Evaluation	WR	NAVSEA DD, Wallops Island	14.836	3.092	10/02	2.260	10/03	5.115	10/04	0.500	25.803	N/A
Developmental Test & Evaluation	SS/FP	JHU/APL- Laurel, MD	3.410	0.973	N/A	0.900	N/A	2.135	N/A	0.492	7.910	N/A
Developmental Test & Evaluation	WR	NAVSEA/CORONA, Corona CA	0.998	0.000	10/02	0.000	10/03	0.000	10/04	0.000	0.998	N/A
Developmental Test & Evaluation	WR	OPTEVFOR	0.863	0.185	10/02	0.265	10/03	0.300	10/04	0.075	1.688	N/A
Misc.	Various	Various	3.314	0.610	N/A	0.385	N/A	0.825	N/A	0.000	5.134	N/A
Subtotal T&E			48.519	9.772		8.983		13.875		3.567	84.716	N/A
Remarks:												
Program Management Support			7.661	0.846	N/A	0.761	N/A	0.800	N/A	0.000	10.068	N/A
											0.000	N/A
Subtotal Management			7.661	0.846		0.761		0.800		0.000	10.068	N/A
Remarks:												
Total Cost			306.231	51.480	N/A	36.162	N/A	45.199	N/A	10.591	449.663	N/A
Remarks:												

R-1 SHOPPING LIST - Item No. 127

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2004**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N BA-5**	PROGRAM ELEMENT 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)				PROJECT NUMBER AND NAME 2178/Quick Reaction Combat Capability			
Schedule Profile		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
SSDS MK 2 MOD 0 (CVN 68)								
CSIT TESTING								
DEVELOPMENTAL TESTING AT WALLOPS		1Q						
TEST READINESS REVIEW (TRR)								
CSSQT								
ONBOARD TEST EVENTS		1Q						
SSDS MK 2 MOD 1 (CV/CVNs)								
SYSTEM DEVELOPMENT								
INTEGRATION TESTING		1Q						
FORMAL QUALIFICATION TEST (FQT)		1Q-2Q						
INTEGRATION/DEVELOPMENTAL TESTS / Phase I		2Q-4Q	1Q-2Q					
TEST READINESS REVIEW (TRR)		3Q	2Q/3Q					
CSIT TESTING		3Q-4Q	1Q-3Q					
ONBOARD TEST EVENTS / Phase II			2Q-4Q	1Q				
CSSQT			4Q	1Q				
SSDS MK 2 MOD 2 (LPDs)								
SYSTEM DEVELOPMENT		1Q-3Q						
INTEGRATION TESTING		3Q-4Q	1Q-2Q					
FORMAL QUALIFICATION TEST (FQT)			2Q-3Q					
LPD-17 (SCN) DIT		1Q						
INTEGRATION/DEVELOPMENTAL TESTS / Phase I		2Q-4Q	1Q-2Q					
TEST READINESS REVIEW (TRR)			1Q	2Q				
CSIT TESTING			3Q-4Q	1Q				
ONBOARD TEST EVENTS / Phase II			2Q	1Q-3Q				
CSSQT				3Q				
SSDS MK 2 MOD 3A (LHDs) LHD 8 - Lead Ship (SCN)								
SYS ENGINEERING/SYSTEM DEVELOPMENT		1Q-4Q	1Q-3Q	1Q-4Q	1Q-4Q			
INTEGRATION TESTING			3Q-4Q	2Q-4Q	1Q	1Q-4Q		
FORMAL QUALIFICATION TEST (FQT)				2Q-3Q		1Q-2Q		
INTEGRATION/DEVELOPMENTAL TESTS / Phase I				1Q-4Q		3Q-4Q	1Q-4Q	
TEST READINESS REVIEW (TRR)				2Q		3Q		
CSIT TESTING				3Q-4Q	1Q-3Q	3Q-4Q	1Q-4Q	
ONBOARD TEST EVENTS /Phase II (LHD 8 Unique)					1Q-4Q		1Q-4Q	
CSSQT LHD 8								

R-1 SHOPPING LIST - Item No. 127

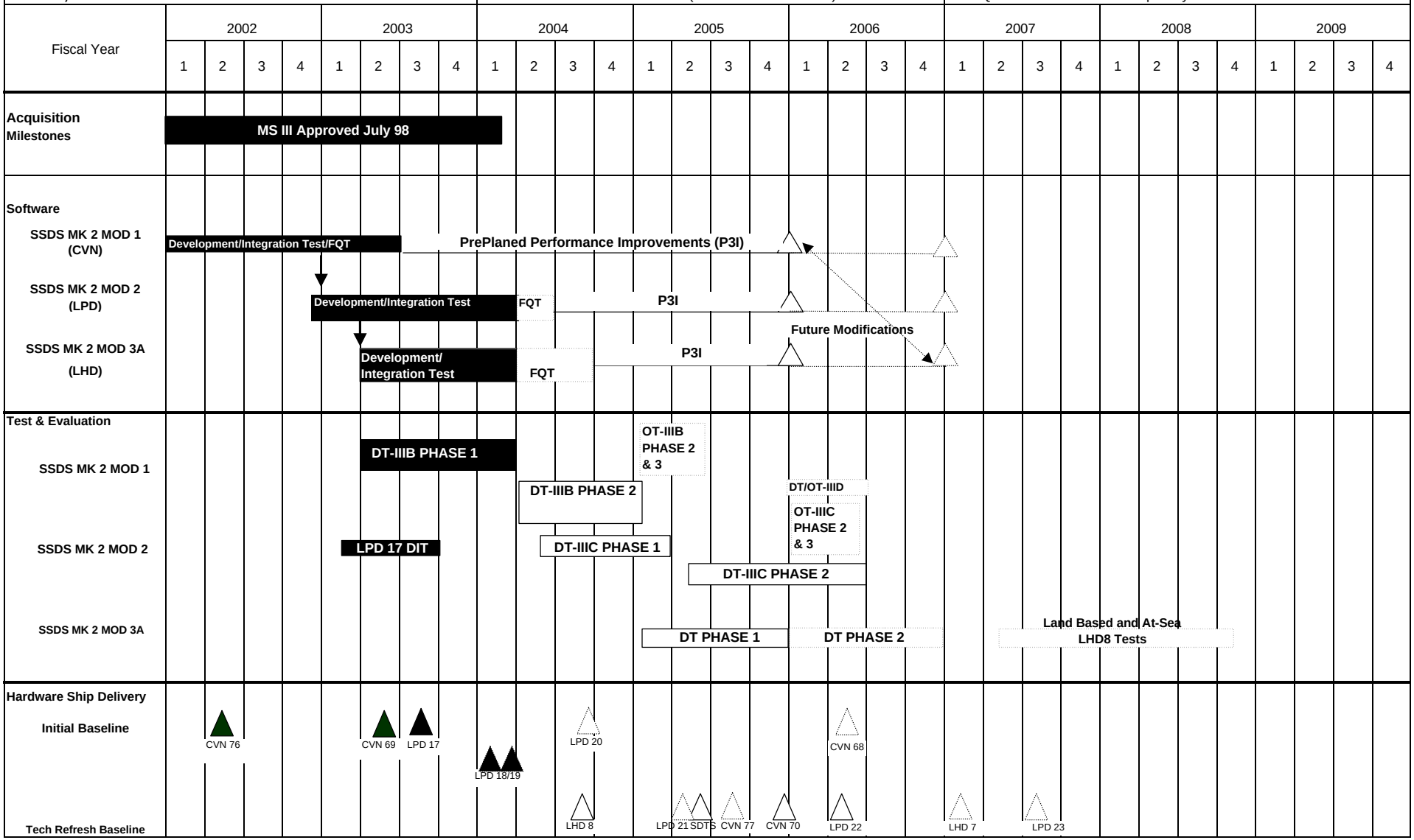
CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2004**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-5**

PROGRAM ELEMENT NUMBER AND NAME: 0604755N SHIP SELF DEFENSE (DETECT & CONTROL)

PROJECT NUMBER AND NAME: 2178/Quick Reaction Combat Capability



R-1 SHOPPING LIST - Item No. 127

* Efforts described with dotted lines in FY 06 support the SCN LHD-8 schedule

Exhibit R-4a, Schedule Detail
(Exhibit R4a, page 20 of 20)