

CLASSIFICATION:**UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION**DATE
May 2009

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

RD TEN/BA 5**0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E**

COST (In Millions)	FY 2008	FY 2009	FY 2010				
Total PE Cost	61.528	80.869	89.988				
1803 / SHIP CONTRACT DESIGN	4.619	4.749	8.398				
2465 / DC/Survivability	5.756	2.397	6.303				
3133 / Sea Base to Shore Connectors (Contract Des)	14.199	26.083	35.475				
3179 / CVN-79 Total Ship Integration	26.198	37.385	37.436				
4007 / CVN 21 LFT&E	3.104	2.062	2.376				
4008 / CVN 78 Total Ship Integration	6.689	0.000	0.000				
9999 / Congressional Add	0.963	8.193	0.000				

A. MISSION DESCRIPTION:

This Program Element (PE) directly supports the Navy's Shipbuilding Plan by providing for the development of engineering, programmatic and acquisition documentation including ship specifications (including performance specifications) and contractual documentation associated with acquisition of Navy ships. This PE also supports the Congressionally mandated Live Fire Test and Evaluation (LFT&E) program for new ship designs.

Contract Design has traditionally been the engineering development of the technical and contractual definition of the ship design (including ship specifications and drawings) to a level of detail sufficient for shipbuilders to make a sound estimate of the construction cost and schedule. Additionally, the contract design package developed under this PE has provided the technical baseline from which the Navy selects the shipbuilder who then develops the detail design package required to support the construction and eventual delivery of the ship. This PE also supports the development of design methodologies/tools which facilitate and optimize the transition from ship design documents to efficient production of new ships and ship conversions, and supports engineering planning and ship affordability studies.

Under Acquisition Reform for new design ships, traditional distinct phasing of the design process has been replaced with a continuous concurrent engineering Integrated Product and Process Development (IPPD) process extending through and after contract award. This serves to maintain the focus of multi-discipline teams consisting of the government, shipbuilder, system programs, and suppliers. Government/Industry Integrated Product Team(s) (IPTs) will utilize the IPPD process to develop the design in an Integrated Product and Data Environment (IPDE). The design approach is part of an acquisition strategy that is based on commercial practices and incorporates a phased technical definition.

CLASSIFICATION:**UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION)**

DATE

May 2009

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 5

R-1 ITEM NOMENCLATURE

0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E**B. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2008	FY 2009	FY 2010
FY09 President's Budget	62.068	72.932	63.830
FY10 President's Budget	61.528	80.869	89.988
Total Adjustments	-0.540	7.937	26.158
(U) Summary of Adjustments			
Congressional Rescissions	0.000	0.000	0.000
Congressional Adjustments	0.000	-0.220	0.000
SBIR/STTR/FTT Assessment	-0.540	0.000	0.000
Program Adjustments	0.000	8.189	27.453
Rate/Misc Adjustments	0.000	-0.032	-1.295
Total	-0.540	7.937	26.158

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 1803/SHIP CONTRACT DESIGN		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	4.619	4.749	8.398				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>This project supports development of all technical, programmatic and contractual documentation required for the acquisition of various ships in the Navy's Shipbuilding Program. The major effort is the engineering development of the technical and contractual definition of the ship's design (e.g. ship specifications and drawings), with sufficient details for the prospective shipbuilder to make a sound estimate of construction cost and schedule. It also serves as the technical definition from which the shipbuilder develops the shipbuilding detailed design and testing package required to build and test the ship. This funding also provides for Navy retention of unique ship design knowledge. It provides the Navy with a digital, ship design knowledge base, including lessons learned, required to ensure that a proper development, analysis and evaluation can be conducted of any current or future planned Navy ship. This data base will serve as the basis to evaluate and qualify any future ship design. Another area this project funds is the development of specific Navy ship criteria and standards for newly developed technologies. Additionally, as new laws are passed, new safety regulations and environmental criteria are developed and other legal/Congressional requirements identified, this project funds the translation into Navy ship design criteria and standards. This project also funds the translation of the traditional Ship Specifications into performance-based criteria, which will serve for the future acquisition of Navy Ship and supports the development of design methodologies/tools which facilitate and optimize the transition from ship design documents to efficient production of new ships and ship conversions. This project also funds the research, development, test, and evaluation of shipyard workload and resource management tools. The funding in this project unit supports Cruiser Modernization Program. The DDG Modernization Program efforts begin in FY10.</p>							

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009							
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E	PROJECT NUMBER AND NAME 1803/SHIP CONTRACT DESIGN								
B. ACCOMPLISHMENTS/PLANNED PROGRAM:										
	FY 2008	FY 2009	FY 2010							
Accomplishments/Effort/Subtotal Cost	4.619	4.749	8.398							
RDT&E Articles Quantity	0	0	0							
<p>-FY08-Continued CG Modernization design and engineering efforts, including, but not limited to: Planning Yard Corrosion Reduction Studies, Brass Model Studies, Fuel Oil Tank and superstructure cracking studies, Integrated Recoverability Model studies, Air Warfare Soft Kill Analyses, White Sands Missile Range MK 99 Fire Control System (FCS) development, AN/SQQ-89 (V) Engineering Change Proposal development for Mod 4A/6 to MK 116 Mod 7 upgrade, and PNCC Risk Mitigation studies.</p> <p>-FY09-Continued CG Modernization design and engineering efforts, the completion of Engineering Change Proposal development for AN/SQQ-89 (V) Mod 4A/6 to MK 116 Mod 7 upgrade, and the continuation of, but not limited to: Primary Damage Modeling Studies, Planning Yard Corrosion Reduction Studies, Brass Model Studies, and PNCC Risk Mitigation studies.</p> <p>FY 10-For Cruisers, specific efforts include, but are not limited to Technical Data Package development, Detailed Design Products, Engineering Analysis, feasibility studies, and topside analysis, related to the next generation Advanced Capability Baseline (ACB-12). For DDGs, specific efforts are related to Gun Computing System (GCS) development for the MK 45 interface to a digital MK 116 Gun Computing System.</p>										
C. OTHER PROGRAM FUNDING SUMMARY:										
Line Item No. and Name	FY 2008	FY 2009	FY 2010							Total Cost
OPN 090000/05 DDG Modernization	52.694	165.008	142.262							359.964
OPN 096000 CG Modernization	216.031	165.165	315.323							696.519
WPN 422300 CG Modernization	23.402	30.023	51.227							104.652
D. ACQUISITION STRATEGY: N/A										
E. MAJOR PERFORMERS: N/A										

CLASSIFICATION:		UNCLASSIFIED										
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE May 2009			
APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E				PROJECT NUMBER AND NAME 1803/SHIP CONTRACT DESIGN						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)			FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date		Total Cost (\$000)	Target Value of Contract
CG Mod Electronics Systems Eng	C/CPAF	Lockheed Martin, Moorestown, NJ	10.266			0.000		0.000			10.266	0.000
Subtotal Product Development			10.266			0.000		0.000			10.266	0.000
Remarks:												
CGM Program / Engineering Spt	MISC	NSWC/DD	2.206			0.645	Nov-09	0.635	Nov-09		3.906	0.000
CGM Program / Engineering Spt	MAC	CSC/BAE	3.253			0.791	Nov-09	0.779	Nov-09		5.580	0.000
CGM Program / Engineering Spt	MISC	SPAWARSYSCEN	0.330			0.030	Nov-09	0.030	Nov-09		0.690	0.000
CGM Program / Engineering Spt	MISC	NRL	0.250			0.025	Nov-09	0.025	Nov-09		0.550	0.000
CGM Program / Engineering Spt	MAC	JJMA/ALION	0.968			0.675	Nov-09	0.665	Nov-09		3.215	0.000
CGM Program / Engineering Spt	MISC	NSWC/PHD	1.831			0.000	Nov-09	0.000	Nov-09		2.475	0.000
CGM Program / Engineering Spt	MISC	NSWC/BETHESDA	0.315			0.450	Nov-09	0.443	Nov-09		2.223	0.000
CGM Program / Engineering Spt	MISC	SUPSHIP/PASCAGOULA	1.010			0.939	Nov-09	0.925	Nov-09		3.170	0.000
CGM Program / Engineering Spt	MISC	COMOPTEVFOR	0.030			0.000	Nov-09	0.000	Nov-09		0.060	0.000
CGM Program / Engineering Spt	MISC	NSWC/SSSES	1.480			0.769	Nov-09	0.758	Nov-09		3.007	0.000
CGM Program / Engineering Spt	MAC	L3	0.000			0.425	Nov-09	0.419	Nov-09		0.844	0.000
DDGM Program / Engineering Spt	MISC	NSWC Dahlgren	0.000			0.000	Nov-09	3.719	Nov-09		3.719	0.000
Subtotal Support Costs			11.673			4.749	Nov-09	8.398	Nov-09		29.439	0.000
Remarks:												
Total Cost			21.939	4.619		4.749		8.398			39.705	0.000

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-4a, SCHEDULE DETAIL						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 1803/SHIP CONTRACT DESIGN		
Schedule Profile		FY 2008	FY 2009	FY 2010			
CONTINUE CGM BASELINE 2 ENGINEERING		1Q-4Q	1Q-2Q				
CONTINUE CGM BASELINE 3 ENGINEERING		1Q-4Q	1Q-4Q	1Q-4Q			
DDGM ENGINEERING				1Q-4Q			
CGM PROCUREMENT AWARD		1Q	1Q	1Q			
DDGM PROCUREMENT AWARD				1Q			

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 2465/DC/Survivability		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	5.756	2.397	6.303				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>This project provides the contract design, development and testing efforts for the Amphibious Assault Ship Replacement Program LHA(R), a ship construction program designed to: provide a functional replacement for the LHA 1 Class ships which will reach the end of their extended service lives after FY10; be a key platform in the Expeditionary Strike Group (ESG) of the future and provide for an affordable and sustainable amphibious ship development program. LHA(R) ships will provide forward presence and power projection as an integral part of Joint, inter agency, and multi-national maritime expeditionary forces. Additionally, LHA(R) will be designed to operate for sustained periods in transit to and operations in an Amphibious Objective Area to include the embarkation, deployment, and landing of a Marine Landing Force in an assault by helicopters (MV-22) and tilt rotors supported by Joint Strike Fighters (F-35B).</p>							

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E	PROJECT NUMBER AND NAME 2465/DC/Survivability	
B. ACCOMPLISHMENTS/PLANNED PROGRAM:			
	FY 2008	FY 2009	FY 2010
LHA(R)	5.756	2.397	6.303
RDT&E Articles Quantity	0	0	0
<p>FY08 Accomplishments</p> <p>Revised the Vulnerability Assessment Report (VAR).</p> <p>Continued LFT&E Surrogate Testing.</p> <p>Continued evaluating interoperability data supporting Key Performance Parameters (KPP).</p> <p>Plans</p> <p>FY09: Deliver the Survivability Assessment Report (SAR) to OSD.</p> <p>Finalize updates to the TEMP and submit to OSD.</p> <p>Finalize updates to the LFT&E Management Plan to OSD.</p> <p>Continue revising the Vulnerability Assessment Report (VAR).</p> <p>Complete LFT&E surrogate testing.</p> <p>Continue evaluating the interoperability data supporting Key Performance Parameters (KPP).</p> <p>Continue developing LHA 7 contract technical package; anticipate 4th quarter FY09 RFP.</p> <p>Continue LHA 8 Concept studies.</p> <p>FY10 Submit LHA 6 VAR</p> <p>Continue evaluating the interoperability data supporting Key Performance Parameters (KPP). Continue preparation</p> <p>Continue LHA 8 Concept studies.</p> <p>Continue OPEVAL and TECHEVAL Development preparations for LHA 6</p>			

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)	DATE May 2009
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APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E	PROJECT NUMBER AND NAME 2465/DC/Survivability
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C. OTHER PROGRAM FUNDING SUMMARY:

SCN funding provides functional replacement ships for the LHA 1 Class which will reach the end of their extended service lives after FY10. In addition, Advanced Procurement for the LHA 7 is provided with SCN funds in FY09. The RD TEN 9D88A transfer from NDSF develops the LHA 7 contract technical package incorporating Fact of Life changes from the LHA 6; anticipate 1st quarter FY 10 RFP Release for Advance Procurement LLTM.

Line Item No. and Name	FY 2008	FY 2009	FY 2010						Total Cost
SCN 3041 LHA(R) Ships	1,365.785	0.000	0.000						1,365.785
SCN Advanced Procurement - LHA 7	0.000	177.767	0.000						177.767
Programs - LHA 6	0.000	14.310	0.000						14.310
RD TEN 9D88A/Transfer LHA(R) from NDSF	0.000	5.400	0.000						5.400

D. ACQUISITION STRATEGY:

Acquisition strategy signed February 7, 2005 approved strategy for sole source to Northrop Grumman Ship Systems (NGSS) to incorporate previous LHD engineering, design and producibility lessons-learned into LHA(R). Advanced Procurement contract for Long Lead-Time Material (LLTM) procurement and engineering support awarded July 05 with continuation of these efforts in FY06 prior to award of Detail Design and Construction (DD&C) contract on 1 June 2007. The Advance Procurement contract was subsumed by the FPI DD&C contract. Acquisition strategy for LHA 7 is being developed.

E. MAJOR PERFORMERS:

NGSB - Funds have been provided for preliminary and contract design including ship design management, design integration, hull systems engineering, machinery control, human system integration, mission systems and total ship survivability analysis for preliminary and contract design.

CSC Corp. - Funds have been provided for preliminary and contract design. Specific efforts include ship design management, design integration, hull systems engineering, machinery control, human system integration, mission systems and total ship survivability analysis for preliminary and contract design.

NSWC, Carderock (Bethesda, MD) - Funds have been provided for preliminary and contract design. Specific efforts include ship design management, design integration, hull systems engineering, machinery control, human system integration, mission systems and total ship survivability analysis for preliminary and contract design. Additionally, the activity will function as Live Fire Test and Evaluation (LFT&E) manager, perform/conduct surrogate tests and develop survivability analysis.

CLASSIFICATION:		UNCLASSIFIED										
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS										DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E					PROJECT NUMBER AND NAME 2465/DC/Survivability					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)			FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date		Total Cost (\$000)	Target Value of Contract
Ship Design	Various	Various	86.559			0.000		1.317			87.876	0.000
Subtotal Product Development			86.559			0.000		1.317			87.876	0.000
Remarks:												
Subtotal Support Costs			0.000			0.000		0.000			0.000	0.000
Remarks:												
Developmental Test & Evaluation	Reimb	Various	2.103			0.400	OCT-08	0.400			2.903	0.000
Operational Test & Evaluation	Reimb	COMOPTEVOR	3.153			0.648	OCT-08	1.454			5.255	0.000
Live Fire Test & Evaluation	Reimb	Various	37.163			1.300	OCT-08	2.900			41.363	0.000
Subtotal Test and Evaluation			42.419			2.348		4.754			49.521	0.000
Remarks:												
Program Management			0.000			0.049		0.232			0.281	0.000
Subtotal Management Services			0.000			0.049		0.232			0.281	0.000
Remarks:												
Total Cost			128.978			2.397		6.303			137.678	0.000

CLASSIFICATION:

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EXHIBIT R-4, SCHEDULE PROFILE

DATE
May 2009

APPROPRIATION/BUDGET ACTIVITY
RD TEN/BA 5

PROGRAM ELEMENT NUMBER AND NAME
0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E

PROJECT NUMBER AND NAME
2465/DC/Survivability

Fiscal Year	2008				2009				2010			
	1	2	3	4	1	2	3	4	1	2	3	4
Milestones												
Developmental Testing												
Operational Testing												
Vulnerability Assessment Report (VAR)												△
Contract Design				△								
Survivability Assessment Record (SAR)				△								
Surrogate Testing				△								
TEMP Update				△								
LFT&E Management Plan				△	Update							
LHA 7 RFP												△
LHA 7 DD&C Award												

VAR #1

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APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 2465/DC/Survivability		
Schedule Profile		FY 2008	FY 2009	FY 2010			
Developmental Testing		1Q-4Q	1Q-4Q	1Q-4Q			
Contract Design			1Q-4Q	1Q-4Q			
Operational Testing		1Q-4Q	1Q-4Q	1Q-4Q			
Vulnerability Assessment Report (VAR)		1Q-4Q	1Q-4Q	1Q-4Q			
Survivability Assessment Report (SAR)		1Q-4Q					
Surrogate Testing		1Q-4Q					
TEMP Update		1Q-4Q					
LFT&E Update to Management Plan		1Q-4Q					
LHA 7 RFP for Advanced Procurement		1Q-4Q	1Q-4Q	1Q			
LHA 7 DD&C Award		1Q-4Q	1Q-4Q	1Q-4Q			

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APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 3133/Sea Base to Shore Connectors (Contract Des)		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	14.199	26.083	35.475				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>(3133) Sea Base to Shore Connector- This program will meet the requirements of the Navy's Sea Base to Shore Connector initiatives and will provide an Over-the-Horizon, ship to objective amphibious lift capability as well as the capability to move across the beach. This project provides for the Systems Development and Demonstration package required for the solicitation for detail design/construction and test of the initial article. Test and evaluation of components and systems will also be completed under this project.</p>							

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APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 3133/Sea Base to Shore Connectors (Contract Des)		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:							
		FY 2008		FY 2009		FY 2010	
Accomplishments/Effort/Subtotal Cost		14.199		26.083		35.475	
RDT&E Articles Quantity		0		0		0	
<p>(FY08) - Efforts included a Milestone A Review, preparation of Capability Development Document (CDD) and initiated Preliminary Design efforts for the lead craft which will be procured with RDT&E. Also includes continuation of the SSC Class Test and Evaluation Program.</p> <p>(FY09-10) - Continue Preliminary Design efforts and conduct set-based design and follow-on integrated design studies. Milestone A DAB Review will be conducted after completion of Preliminary Design Review planned for Apr 09. Develop prototyping plans with attention to weight in the design. Complete development and implementation of initiatives in preparation for the award of the Detail Design and Construction Contract. Also includes continuation of Class Test and Evaluation program.</p>							
C. OTHER PROGRAM FUNDING SUMMARY:							
Line Item No. and Name		FY 2008	FY 2009	FY 2010			Total Cost
RDT&EN PE 0603564N (3217) / Ship Preliminary Design		12.792	0.000	0.000			12.792
D. ACQUISITION STRATEGY:							
The lead craft will be procured and constructed with RDT&E funds. The lead craft Detail Design contract will include an option for construction.							
E. MAJOR PERFORMERS:							
Field Activities & Locations - Work Performed							
NSWC Carderock, Bethesda, MD							
Systems Engineering							
NSWC Panama City, FL							
Systems Engineering							
Contractors & Locations - Work Performed							
TBD							
Universities & Locations - Work Performed							
TBD							

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EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE May 2009			
APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E				PROJECT NUMBER AND NAME 3133/Sea Base to Shore Connectors (Contract Des)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)			FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date		Total Cost (\$000)	Target Value of Contract
Ship Design	CPFF	Various	1.785			3.702	JAN-09	3.886	OCT-09		9.373	0.000
Systems Engineering	CPFF	Various	1.900			3.200	JAN-09	3.225	OCT-09		8.325	0.000
Preliminary/Contract Design	VAR	Various	4.391			10.458	VAR	17.928	VAR		32.777	0.000
Subtotal Product Development			8.076			17.360		25.039			50.475	0.000
Remarks:												
Developmental Support	WX	Various	1.300			1.450	VAR	1.494	VAR		4.244	0.000
Software Development	CPFF	Various	0.700			1.000	VAR	1.000	VAR		2.700	0.000
Integrated Logistics Support	CPFF	Various	0.275			0.500	VAR	0.515	VAR		1.290	0.000
Studies & Analyses	FFP	Various	0.769			0.800	VAR	0.824	VAR		2.393	0.000
Subtotal Support Costs			3.044			3.750		3.833			10.627	0.000
Remarks:												
Developmental Test & Evaluation	CPFF	Various	0.000			0.000		0.049	OCT-09		0.049	0.000
Operational Test & Evaluation	CPFF	Various	0.165			0.453	VAR	0.555	OCT-09		1.173	0.000
Live Fire Teat & Evaluation	CPFF	Various	0.155			0.477	VAR	1.352	OCT-09		1.984	0.000
Subtotal Test and Evaluation			0.320			0.930		1.956			3.206	0.000
Remarks:												
Contractor Engineering Support	CPFF	Various	1.109			1.412	JAN-09	1.725	OCT-09		4.246	0.000
Gov't Engineering Support	WX	NSWC	0.900			1.250	VAR	1.400	VAR		3.550	0.000
Program Management Support	CPFF	Various	0.750			1.281	JAN-09	1.422	OCT-09		3.453	0.000
Travel	TO	NAVSEA Travel	0.000			0.100	VAR	0.100	VAR		0.200	0.000
Subtotal Management Services			2.759			4.043		4.647			11.449	0.000
Remarks:												
Total Cost			14.199			26.083		35.475			75.757	0.000

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE

May 2009

APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

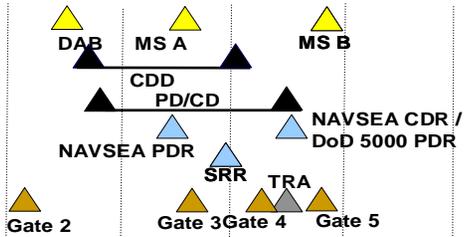
RDTEN/BA 5

0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E

3133/Sea Base to Shore Connectors (Contract Des)

FY08 FY09 FY10

Milestones/
Reviews

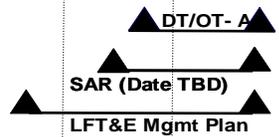


Contracts

T&E Program
Development



DT&E/OT&E/
LFT&E



CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-4a, SCHEDULE DETAIL						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 3133/Sea Base to Shore Connectors (Contract Des)		
Schedule Profile		FY 2008	FY 2009	FY 2010			
Acquisition Milestones (DAB, Milestone A & B)		3Q	3Q	4Q			
Capability Development Document (CDD)		3Q-4Q	1Q-2Q				
Preliminary Design/Contract Design (PD/CD)		3Q-4Q	1Q-----4Q	1Q---3Q			
Preliminary Design Review (PDR)			2Q				
System Readiness Review (SRR)			4Q				
Technology Readiness Assessment (TRA)				2Q			
T&E Program Development		3Q-4Q	1Q-----4Q	1Q---3Q			

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 3179/CVN-79 Total Ship Integration		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	26.198	37.385	37.436				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>Development and related testing of CVN 78 Class aircraft carrier specific technologies, the infusion of the ship technology base into existing and future aircraft carriers, and the potential realization of subsystem design capabilities not currently feasible. This project also funds the Contract Design efforts for the CVN 79. This project transitions the minimum sustaining technologies required to address obsolescence, critical survivability shortfalls as identified in CVN 78 Class testing, future requirements, and technologies which did not mature in time to support the CVN 78. All systems developed in this project have the potential to support emerging requirements and other promising systems technologies for insertion into new aircraft carrier designs. The emphasis is directed toward developing ship hull, mechanical, propulsion, electrical, aviation, warfare systems, and combat support systems, sub-systems and components to maintain aircraft carrier affordability, manpower requirements, survivability, and operational capabilities and to meet the requirements of existing and pending regulations and statutes critical to the operation of future aircraft carriers. This project also encompasses those tasks required to develop the contract data package necessary to support CVN 79 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment.</p>							

CLASSIFICATION:		UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E	PROJECT NUMBER AND NAME 3179/CVN-79 Total Ship Integration	
B. ACCOMPLISHMENTS/PLANNED PROGRAM:			
	FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost	26.198	37.385	37.436
RDT&E Articles Quantity	0	0	0
(U) CVN 78 Class Follow Ship Total Ship Integration:			
<p>The CVN 79 will incorporate advanced technologies to support efforts to address obsolescence, technology refresh, critical survival improvements, as well as continued improvements in manpower reduction and weight savings.</p> <p>CVN 79 Total Ship Integration (TSI) will be accomplished through an IPPD contract with Northrop Grumman Ship Building-Newport News to incorporate technology advancements into the CVN 78 Class baseline design. TSI efforts are focused on continued activities that integrate and optimize systems arrangements and design to maintain the Key Performance Parameters (KPPs) for weight and kg/service life allowance to the ORD threshold values. CVN 79 design efforts will provide required program management and logistics support.</p> <p>(FY08): CVN 79 efforts will continue to reduce the ship acquisition cost through the establishment of the CVN 79 initial cost estimate supported by process initiatives, material selections, and lessons learned from the CVN 78 activities will be studied and analyzed to support the development of the CVN 78 Class planning yard and life cycle support plan. Efforts also encompass those tasks required to support CVN 79 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment (IDE).</p> <p>(FY09): Follow on efforts established under CVN 79 IPPD Contract will transition for further development under the CVN 79 Construction Preparation Contract. CVN 78 Class testing, future requirements and other promising systems which did not mature in time for the CVN 78 will continue to be studied and reviewed. Efforts also encompass those tasks required to support CVN 79 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment (IDE).</p> <p>(FY10) : Continue efforts to identify, develop and implement initiatives to address obsolescence and cost reductions during the CVN 79 Construction Preparation Contract. Efforts also encompass those tasks required to support CVN 79 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment (IDE).</p>			

CLASSIFICATION:**UNCLASSIFIED****EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)**

DATE

May 2009

APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

RD TEN/BA 5**0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E****3179/CVN-79 Total Ship Integration****C. OTHER PROGRAM FUNDING SUMMARY:**

*Note: Only the portion of funding related to the CVN 78 Class Program is included for PE 0603570N (PU 2692).

*Note: Only the portion of funding related to the CVN 78 Class Program is included for PE 0603512N (PU 2208, 4004, 9B57A, 9B58A, 9D24A).

Line Item No. and Name	FY 2008	FY 2009	FY 2010						Total Cost
SCN: 200100 Carrier replacement Program	3,145.026	3,915.642	1,223.701						8,284.369
PE 0603512N Carrier System Development	83.238	144.024	152.077						379.339
PE 0603570N Adv. Nuclear Power Systems	111.401	102.855	82.575						296.831

D. ACQUISITION STRATEGY:

The CVN 78 will be the first ship of the CVN 78 Class of aircraft carriers designed to replace USS ENTERPRISE and the ships of the NIMITZ Class. The CVN 78 will feature a new nuclear propulsion and electrical generation/distribution system, new electromagnetic aircraft launching system, advanced arresting gear system, all electric auxiliaries, warfare system improvements, survivability enhancements, improved weapons handling, and improved aircraft servicing. These design features will result in lower manpower and total ownership costs as compared to the NIMITZ Class. Additionally, the following war fighting benefits will be realized: increased sortie generation rate, improved ship self defense capability, increased launch and recovery capability/flexibility, increased operational availability, and increased flexibility to support future upgrades.

E. MAJOR PERFORMERS:

Northrop Grumman Ship Building-Newport News, Newport News, VA, Design / Component Development / Construction

Naval Surface Warfare Center, Carderock, MD, Technology Design & Development

Naval Surface Warfare Center, Dahlgren, Virginia, Technology Design & Development

CLASSIFICATION:		UNCLASSIFIED										
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE May 2009			
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E				PROJECT NUMBER AND NAME 3179/CVN-79 Total Ship Integration						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)			FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date		Total Cost (\$000)	Target Value of Contract
Total Ship Integration	CPAF	NGSB-NN	10.600			17.000	DEC-08	17.000	DEC-09		44.600	0.000
	WR	NSWC Carderock	2.240			7.448	OCT-08	4.868	OCT-09		14.556	0.000
	WR	NSWC Dahlgren	2.510			0.943	OCT-08	2.990	OCT-09		6.443	0.000
	WR	NAWCAD Pax River	1.155			0.377	OCT-08	0.382	OCT-09		1.914	0.000
	WR	SPAWAR	1.525			0.600	OCT-08	0.600	OCT-09		2.725	0.000
	CPFF	NAVSEA SEAPORT	3.910			5.539	DEC-08	5.667	DEC-09		15.116	0.000
	CPAF	RAYTHEON	0.000			0.000		2.263	DEC-09		2.263	0.000
	WR	NAVSEA, PMS 320	1.000			0.500	OCT-08	0.000			1.500	0.000
	WR	SSC, CHARLESTON	0.233			0.000		0.000			0.233	0.000
	CPFF	SAIC	0.000			0.551	DEC-08	0.000			0.551	0.000
	Various	Miscellaneous	3.025			4.037	DEC-08	3.066	DEC-09		CONT	0.000
Developmental Test & Evaluation	WR	NSWC Carderock	0.000			0.390	OCT-08	0.600	OCT-09		0.990	0.000
Subtotal Product Development			26.198			37.385		37.436			CONT	0.000
Remarks:												
Total Cost			26.198			37.385		37.436			CONT	0.000

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-4a, SCHEDULE DETAIL						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 3179/CVN-79 Total Ship Integration		
Schedule Profile		FY 2008	FY 2009	FY 2010			
CVN 78 DAB PR		4Q					
Developmental Tests DT-B1		1-4Q	1-4Q				
Operational Tests OT-B2		1-4Q	2Q				
EMALS TRR 1 (HALT/HCT)		3Q					
AAG TRR 1 (IT)				1Q			
CVN 78 Construction Contract Award		4Q					
CVN 78 SCN Full Funding		1Q					
Developmental Tests DT-B2			4Q	1-4Q			
Operational Tests OT-B3				1-4Q			
EMALS TRR 2 (DT/OA)			3Q				
EMALS LRIP			4Q	1Q			
Operational Tests Readiness Reviews		2Q		1Q			
Operational Assessments			2-3Q				
CVN 79 CP Contract Award			2Q				

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 4007/CVN 21 LFT&E		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	3.104	2.062	2.376				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>This project encompasses Live Fire Test and Evaluation (LFT&E) efforts for the CVN78 Class. Title 10, US Code, Section 2366, CVN 21 Operational Requirements Document (ORD) and the CVN 21 Test and Evaluation Master Plan (TEMP) , prescribe requirements for LFT&E. The purpose of LFT&E is to evaluate weapons and weapons systems in a realistic combat environment and to identify any mission threatening vulnerabilities early in the development process when there is time to take corrective action. The CVN 21 LFT&E Management Plan details the efforts, through testing and engineering analyses, to address potential design vulnerabilities.</p> <p>The unit cost of the CVN 78 Class and its shipboard systems preclude consideration of destructive testing of a full-up CVN 78 Class hull with threats of the type that might be expected in combat. Consequently, the Navy must rely on other means to determine that CVN 78 Class ships will be able to survive and carry out its missions in the face of the threats identified in the CVN 21 System Threat Assessment Report. The Vulnerability Assessment Report (VAR) is the key document that addresses these issues for the CVN 78 LFT&E Program.</p> <p>The LFT&E strategy for the CVN78 Class accounts for the uncertainty in its design features. The strategy assumes that as the program progresses through the stages of ship design, prior to the award of the construction contract, descriptive detail of CVN78 will increase and so will the ability to evaluate its survivability. The VAR 3 was officially completed in the summer of 2007. The VAR 3 update is scheduled to be completed in FY 12 and will incorporate the CVN 78 design drawings.</p>							

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 4007/CVN 21 LFT&E		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:							
		FY 2008		FY 2009		FY 2010	
Accomplishments/Effort/Subtotal Cost		3.104		2.062		2.376	
RDT&E Articles Quantity		0		0		0	
<p>(U) FY 08: Focusing on improving the computer models through the Verification, Validation, and Accreditation (VV&A) process used in survivability assessments of the CVN 78 Class. Continuing the resolve low confidence areas in analytical models for LFT&E concerns. This includes the improvements to the fidelity of the Finite Element Modeling (FEM)/Dynamic System Mechanics Advanced Simulation (DYSMAS) models. Continue analytical bridge work between the scaled model test results and the analytical correlations. Initiated the CVN 21 VAR #3 UPDATE which will include any survivability modeling improvements. Commenced susceptibility modeling to develop prescribed hit points from shot selection list. Developing a multi-year FSST alternative method to replace the FSST shock event.</p> <p>(U) FY 09: Update the CVN 21 Management Plan. Continue VAR #3 UPDATE to include any survivability modeling improvements. Finalize DYSMAS VV&A. Continue preparing susceptibility models for VAR #3 UPDATE. Begin the Damaged Scenario Based Engineering Analyses (DSBEA). Conduct LFT&E surrogate test to any new and emerging threats identified in updates to the Capstone Ship Threat Assessment (CSTA) by Office of Naval Intelligence (ONI). Plan and conduct tasks necessary to fulfill the FSST alternative Memorandum of Agreement (MOA) requirements. Update LFT&E Management Plan to include FSST alternative.</p> <p>(U) FY 10: Continue CVN 21 VAR #3 UPDATE by finalizing the models and continuing the DSBEA. Continue any LFT&E surrogate tests including any new and emerging threats identified in updates to the CSTA by ONI. Plan/conduct VV&A of selected susceptibility codes for VAR #3 UPDATE. Plan and conduct tasks necessary to fulfill the FSST alternative Memorandum of Agreement (MOA) requirements. Commence update of LFT&E Management Plan, from Rev A to Rev B by specifically addressing any changes to strategy for CVN 79/80.</p>							
C. OTHER PROGRAM FUNDING SUMMARY:							
*Note: Only the portion of funding related to the CVN 78 Class Program is included for PE 0603570N (PU 2692).							
*Note: Only the portion of funding related to the CVN 78 Class Program is included for PE 0603512N (PU 2208, 4004, 9B57A, 9B58A, 9D24A).							
Line Item No. and Name	FY 2008	FY 2009	FY 2010				Total Cost
BLI 200100 Carrier Replacement Program	3,145.026	3,915.642	1,223.701				8,284.369
PE 0603512N Carrier System Development	83.238	144.024	152.077				379.339
PE 0603570N Adv. Nuclear Power Systems	111.401	102.855	82.575				296.831
D. ACQUISITION STRATEGY:							
The CVN 78 will be the first ship of the CVN 78 Class of aircraft carriers designed to replace USS ENTERPRISE and the ships of the NIMITZ Class. The CVN 78 will feature a new nuclear propulsion and electrical generation/distribution system, new electromagnetic aircraft launching system, advanced arresting gear system, all electric auxiliaries,							

CLASSIFICATION:		UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E	PROJECT NUMBER AND NAME 4007/CVN 21 LFT&E	
<p>warfare system improvements, survivability enhancements, improved weapons handling, and improved aircraft servicing. These design features will result in lower manpower and total ownership costs as compared to the NIMITZ Class. Additionally, the following war fighting benefits will be realized: increased sortie generation rate, improved ship self defense capability, increased launch and recovery capability/flexibility, increased operational availability, and increased flexibility to support future upgrades.</p> <p>E. MAJOR PERFORMERS: NSWC Carderock Maryland; NSWC Carderock, Philadelphia Pennsylvania; NGSB, Newport News Virginia</p>			

CLASSIFICATION:		UNCLASSIFIED										
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE May 2009			
APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E				PROJECT NUMBER AND NAME 4007/CVN 21 LFT&E						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)			FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date		Total Cost (\$000)	Target Value of Contract
Live Fire Test & Evaluation	WR	NSWC Carderock	37.212			1.214	OCT-08	1.403	OCT-09		CONT	0.000
	CPAF	NGSB-NN	6.521			0.700	NOV-08	0.800	NOV-09		8.021	0.000
	WR	Miscellaneous	0.134			0.148	DEC-08	0.173	DEC-09		0.455	0.000
Subtotal Test and Evaluation			43.867			2.062		2.376			CONT	0.000
Remarks:												
Total Cost			43.867			2.062		2.376			CONT	0.000

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-4a, SCHEDULE DETAIL						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 4007/CVN 21 LFT&E		
Schedule Profile		FY 2008	FY 2009	FY 2010			
CVN 78 DAB PR		4Q					
Developmental Tests DT-B1		1-4Q	1-4Q				
Operational Tests OT-B2		1-4Q	1-2Q				
EMALS TRR 1 (HALT/HCT)		3Q					
AAG TRR 1 (IT)				1Q			
CVN 78 Construction Contract Award		4Q					
CVN 78 SCN Full Funding		1Q					
Developmental Tests DT-B2			4Q	1-4Q			
Operational Tests OT-B3				1-4Q			
EMALS TRR 2 (DT/OA)			3Q				
EMALS LRIP			4Q	1Q			
Operational Test Readiness Reviews		2Q		1Q			
Operational Assessments			2-3Q				
CVN 79 CP Contract Award			2Q				

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 4008/CVN 78 Total Ship Integration		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	6.689	0.000	0.000				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>This project encompasses CVN 78 Total Ship Integration efforts. The traditional distinct phasing of the design process for aircraft carriers has been replaced with a continuous concurrent engineering regime incorporating the methodology, measurement, and management elements of the Navy's Integrated Product and Process Development (IPPD) process, extending it beyond contract award. The CVN 78 total ship integration effort will be managed within a technology change management process at contract award to allow further system development. This will ensure that the latest technologies are properly incorporated during the 8 year construction period for an aircraft carrier, without costly contract changes. The IPPD process serves to maintain the focus of multi-discipline teams consisting of the government, shipbuilder, aviation programs, and suppliers. This project also encompasses those tasks required to develop the contract data package necessary to support CVN 78 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment (IDE). The CVN 78 Class design approach is part of an acquisition strategy that is based on incorporating best available commercial practices and a phased technical definition.</p> <p>CVN 78 Total Ship Integration, the integration of major systems into ship design, includes redesign and rearrangement of ship components; redesign of hull, mechanical and electrical (HM&E) and auxiliary systems (air-conditioning and ventilation, power distribution and generation, airborne noise management, reduction of steam, environmental safety and health (ESH) and interface control; redesign of water production and tankage; electric loads analysis; redesign of power distribution; analysis and redesign of structure; analysis, tracking and management of changes in weight distribution and stability; analysis and redesign of survivability systems, and analysis and design of all associated ship hull, mechanical, electrical, propulsion, combat/warfare system, survivability and other related components.</p>							

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E			PROJECT NUMBER AND NAME 4008/CVN 78 Total Ship Integration		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:							
		FY 2008		FY 2009		FY 2010	
Accomplishments/Effort/Subtotal Cost		6.689		0.000		0.000	
RDT&E Articles Quantity		0		0		0	
<p>(U) FY08: Continue to resolve CVN 78 whole ship design issues related to aviation systems, combat and integrated warfare systems, auxiliary systems, and HM&E systems. Provide logistics support and program support for the FY08 Construction Contract Award. Closeout the construction preparation contract component development process and continue remaining component development under the CVN-78 Construction Contract.</p>							
C. OTHER PROGRAM FUNDING SUMMARY:							
*Note: Only the portion of funding related to the CVN 78 Class Program is included for PE 0603570N (PU 2692).							
*Note: Only the portion of funding related to the CVN 78 Class Program is included for PE 0603512N (PU 2208, 4004, 9B57A, 9B58A, 9D24A).							
Line Item No. and Name		FY 2008	FY 2009	FY 2010			Total Cost
BLI 200100 Carrier Replacement Program		3,145.026	3,915.642	1,223.701			8,284.369
PE 0603512N Carrier System Development		83.238	144.024	152.077			379.339
PE 0603570N Adv. Nuclear Power Systems		111.401	102.855	82.575			296.831
D. ACQUISITION STRATEGY:							
<p>The CVN 78 will be the first ship of the CVN 78 Class of aircraft carriers designed to replace USS ENTERPRISE and the ships of the NIMITZ Class. The CVN 78 will feature a new nuclear propulsion and electrical generation/distribution system, new electromagnetic aircraft launching system, advanced arresting gear system, all electric auxiliaries, warfare system improvements, survivability enhancements, improved weapons handling, and improved aircraft servicing. These design features will result in lower manpower and total ownership costs as compared to the NIMITZ Class. Additionally, the following war fighting benefits will be realized: increased sortie generation rate, improved ship self defense capability, increased launch and recovery capability/flexibility, increased operational availability, and increased flexibility to support future upgrades.</p>							
E. MAJOR PERFORMERS:							
Northrop Grumman Ship Building - Newport News, Newport News, VA, Design / Component Development / Construction							
Naval Surface Warfare Center, Carderock, MD, Technology Design & Development							
Naval Surface Warfare Center, Dahlgren, Virginia, Technology Design & Development							

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604567N/SHIP CONTRACT DESIGN/ LIVE FIRE T&E	PROJECT NUMBER AND NAME 9999/Congressional Add		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
		FY 2008	FY 2009	FY 2010
9C20A/Automated Fiber Optic Manufacturing Initiative		0.963	2.793	0.000
RDT&E Articles Quantity		0	0	0
Production of a fully automated factory work cell that will function as an assembly center of excellence in support of the aircraft carrier construction/overhaul and Virginia Class Submarine programs. The resulting capabilities will allow the shipbuilding industry to produce factory terminated fiber optic cable assemblies/systems utilizing an efficient cost structure generating millions of dollars in shipbuilding program cost savings. The program will address the issue of field installation, field repair, and maintenance by extracting the technologies of the automated manufacturing line and inserting these technologies and process in small, portable, maintenance equipment that can be used by ship construction and ship's force personnel.				
		FY 2008	FY 2009	FY 2010
9D88A/Transfer LHA(R) from NDSF		0.000	5.400	0.000
RDT&E Articles Quantity		0	0	0
Develop LHA 7 contract technical package incorporating Fact of Life changes from the LHA 6; anticipate 1st quarter FY 10 RFP Release for Advance Procurement LLTM.				