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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Navy **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604112N I (U) <i>Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	46.308	98.105	70.528	-	70.528	96.339	83.499	43.653	26.693	Continuing	Continuing
2208: <i>CVN 21</i>	0.000	34.992	35.613	32.843	-	32.843	70.383	67.415	43.653	26.693	Continuing	Continuing
4004: <i>EMALS</i>	0.000	11.316	12.492	37.685	-	37.685	25.956	16.084	0.000	0.000	0.000	103.533
9999: <i>Congressional Adds</i>	0.000	0.000	50.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	50.000

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** 223

**A. Mission Description and Budget Item Justification**

This Navy program addresses unique technologies on Ford class carriers. The program includes:

- (2208) - Development of ship hull, mechanical, propulsion, electrical, aviation, and combat support systems, subsystems and components to significantly improve 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 existing and future aircraft carriers.
  
- (4004) - Development of an advanced technology aircraft launch system in support of the CVN 78 Class design and construction schedule. The Electro Magnetic Aircraft Launch System (EMALS) will replace the current steam catapult on CVN 78 Class ships. EMALS provides better control of applied forces, both peak and transient dynamic, improved reliability and maintainability, increased operational availability and reduced operator and maintainer workload.
  
- (C275) - Planning for the Full Ship Shock Trial for the USS Gerald Ford (CVN 78) in accordance with the Acquisition Decision Memorandum (ADM) dated 7 August 2015.

This Program Element (PE) and associated projects represent a continuation of efforts previously funded under PE 0603512N projects 2208 and 4004 in FY 2014 and earlier.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy** **Date:** February 2016

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	43.613	48.105	45.386	-	45.386
Current President's Budget	46.308	98.105	70.528	-	70.528
Total Adjustments	2.695	50.000	25.142	-	25.142
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	50.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.384	0.000			
• SBIR/STTR Transfer	-0.689	0.000			
• Program Adjustments	0.000	0.000	27.000	-	27.000
• Rate/Misc Adjustments	0.000	0.000	-1.858	-	-1.858

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Congressional Adds*

Congressional Add: *CVN-78 Shock Trials*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	FY 2015	FY 2016
	0.000	50.000
	0.000	50.000
	0.000	50.000

**Change Summary Explanation**

PRJ 4004 (EMALS) Cost/Funding

FY 15: Added funding for EMALS land based testing efforts.

FY 17: Added funding to EMALS to support Integrated Test & Evaluation (IT&E) and training development efforts.

PRJ C275 Cost/Funding: Congress added funding in FY 16 to support CVN 78 full ship shock trials testing.

Schedule:

Updated schedule to include EMALS IT&E and adjust for miscellaneous acquisition decisions and the revised test schedule.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 1319 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80				<b>Project (Number/Name)</b> 2208 / CVN 21			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2208: CVN 21	0.000	34.992	35.613	32.843	-	32.843	70.383	67.415	43.653	26.693	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 223												

**A. Mission Description and Budget Item Justification**

This project provides for the development of 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 transitions the most promising technologies from the Navy technology base, other government laboratories, and the private sector into specific advanced development efforts. 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 significantly improve 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 support CVN 78 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, test and evaluation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment (IDE).

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> CVN 78 Class Advanced Technology Design & Development	26.981	10.141	7.455	0.000	7.455
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> CVN 78 Class Advanced Technology Design & Development - Continue development and transition of technologies to support CVN 78 Class Key Performance Parameters (KPPs): maintain sortie generation rate, reductions in manpower, and further recovery of weight and stability service life margins. Continue design activities to integrate the new technologies, such as the new propulsion plant and Electromagnetic Aircraft Launch System into the ship. Complete shock qualification for components of all CVN 78 systems.					
<b>FY 2015 Accomplishments:</b> Continued design, development and transition of key technologies to support CVN 21 (CVN 78 Class) KPPs which included sortie generation rate, reductions in manpower, and further recovery of weight and stability service life margins. Continued design activities to integrate new technologies, such as the new propulsion plant and EMALS into the ship. Continued existing studies and commenced new studies required for integrated					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy			<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 2208 / CVN 21			
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
warfare system and C4I design, integration, test, and validation efforts. Continued to review Pre-Planned Product Improvement (P3I) technical data packages. Continued CVN 78 class engineering and technical support of aircraft launch and recovery systems. Continued shipbuilder system and cost engineering support to assess ship impacts from selected Engineering Change Requests (ECRs) and changes to the GFE / CFE equipment split. Assessed ship impacts and implemented changes to the Class design.					
<b>FY 2016 Plans:</b> Continue transition of key technologies to support CVN 21 (CVN 78 Class) KPPs. Continue design activities to integrate new technologies into the ship. Continue to assess ship impacts and implement changes to the Class design. Continue existing studies and commence new studies required for integrated warfare system and C4I design, integration, test, and validation efforts. Continue review of P3I technical data packages. Continue CVN 78 class engineering and technical support of aircraft launch and recovery systems. Continue shipbuilder system and cost engineering support to assess ship impacts from selected ECRs and changes to the GFE / CFE equipment split. Plan and execute the acceptance and transition of CVN 78 CFE systems to Navy In-Service and Life Cycle Management. Identify and implement cost reduction measures for the CVN 78 Class.					
<b>FY 2017 Base Plans:</b> Complete design activities to integrate new technologies into the ship. Complete existing studies required for integrated warfare system and C4I design, integration, test, and validation efforts. Continue CVN 78 class engineering and technical support of aircraft launch and recovery systems, along with providing support to resolve issues identified during shakedown and Post-Shakedown Availability (PSA) on CVN 78 developmental systems. Conduct cyber-security tasks to include elimination of all Windows XP operating system usage to reduce cyber-security vulnerabilities and the completion of Information Technology system Interim Authority to Operate (IATO) remedial actions in order to achieve full Authority to Operate (ATO) certification and accreditation.					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Title:</b> CVN 21 - Test & Evaluation (T&E)					
<b>Articles:</b>					
	8.011	25.472	25.388	0.000	25.388
	-	-	-	-	-
<b>FY 2015 Accomplishments:</b> Continued to conduct Post Delivery Test and Trials (PDT&T) workshops and to update / refine / maintain the notional PDT&T schedule. Continued the Developmental Test Working Group (DTWG) efforts to collect / analyze DT metrics. Continued the CVN 78 Integrated Test Team (CITT) efforts to coordinate Integrated Testing					

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**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
(IT) to achieve synergies among DT&E, OT&E, and LFT&E as applicable to optimize CVN 78 test-related costs, schedules and requirements validation; and to maximize the practical use of test results by all participating test communities. Completed DT/IT-3 and commenced DT/IT-4, which included: (1) conducting Combat System Land-based Test events; Dual Band Radar and TPX-42 land-based and shipboard testing; Advanced Weapons Elevator (AWE) Hazards of Electromagnetic Radiation to Ordnance (HERO) / Hazard of Electromagnetic Radiation to Personnel (HERP) / Electromagnetic Interference (EMI); Electromagnetic Aircraft Launch System (EMALS) dead-load testing; Cyber-security Accreditation activities, as well as industrial testing and certifications in support of Crew Move Aboard; and (2) continuing spiral development of the VCVN Model. Commenced Operational Assessment Phase B4 (OT-B4). Obtained Platform (Afloat Site) Interim Authority to Test (IATT).					
<b>FY 2016 Plans:</b> Update the Test and Evaluation Master Plan (TEMP) 1610, Revision C. Continue holding the tri-annual PDT&T workshops and updating / maintaining the notional PDT&T schedule. Continue the DTWG efforts, focusing on the collection / analysis of the DT metrics. Continue CITT efforts to coordinate IT to achieve synergies among DT&E, OT&E, and LFT&E. Continue DT/IT-4. Complete OT-B4.					
<b>FY 2017 Base Plans:</b> Complete PSA and achieve Initial Operational Capability (IOC). Continue PDT&T, DTWG and CITT efforts in support of DT/IT-4 completion and post-PSA DT/IT-5 integration testing and preparations of Initial Operational Test and Evaluation (IOT&E). DT/IT-5 events include: (1) obtaining post-PSA Platform (Afloat Site) IATO / ATO and post-PSA flight deck certification; (2) conducting Combat Systems Shipboard Developmental Testing (CS SBDT); Radar Cross Section and Infrared measurements; degaussing and de-perming; cyber-security inspections; and aircraft compatibility testing; and (3) continuing spiral development of the VCVN Model and data collection in support of model validation.					
<b>FY 2017 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	34.992	35.613	32.843	0.000	32.843

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

<b>Line Item</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RD TEN / 0604567N: Project Units 3108, 3179, 4007	21.890	18.595	50.920	-	50.920	53.660	50.678	46.807	45.486	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford Cl Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 2208 / CVN 21

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

Line Item	FY 2015	FY 2016	FY 2017	FY 2017	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Cost To	
			Base	OCO	Total					Complete	Total Cost
• SCN / 2001: Carrier Replacement Program	1,219.425	2,431.929	2,662.567	-	2,662.567	4,361.180	1,650.189	1,734.546	3,095.202	Continuing	Continuing
• SCN / 5300: Completion of Prior Year Shipbuilding Programs	663.000	123.760	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1,374.860
• RDTEN / 0603570N: Propulsion Plant Development (PU 2692)	60.459	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1,526.813
• OMN / 1B2B: CVN 78 Ford Class Training (12BJ0)	4.788	38.389	14.111	-	14.111	4.844	3.844	3.918	4.001	Continuing	Continuing
• OPN /5664: Surface Training Equipment	0.000	0.000	4.733	-	4.733	4.010	0.000	0.000	0.000	0.000	8.743

**Remarks**

**D. Acquisition Strategy**

The CVN 78 is 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, EMALS, advanced arresting gear (AAG) 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. Performance Metrics**

Successfully complete development of TEMP 1610, Rev C and route for signature. Successfully complete all PEO C4I TIF testing. Successfully execute SGRA 12 and SGRA 13. Gain acceptance of the FSST Alternative Process as a technically-feasible and cost-effective alternative to the traditional FSST. Successfully complete the NAVAIR PIF testing and the Consolidated Afloat Networks and Enterprise Services (CANES) testing. Successfully conduct and support feasibility and tradeoff studies and data packages on new and modified shipboard systems, technologies and proposed modification. Data packages shall include information to support program decisions to integrate these efforts into the whole ship design efforts. Successfully conduct IDC shock testing and reporting in order to finalize IDC R&D efforts. Successfully complete Advanced Weapons Elevator Shock and Electromagnetic Interference (EMI) Test qualifications. Successfully complete Plasma Arc Waste Destruction System (PAWDS) Land-Based Test. Successfully create and deliver 21 Decision Memorandums (DM) for Bents/Bays 1-21 on the 03 Level (Gallery Deck) with Layer 31 information. Successfully develop the baseline Technical Data Packages for 39 systems and mature packages in preparation for final GFI arrival.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
1319 / 4				PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80						2208 / CVN 21					
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Design & Development	C/CPAF	HII : VA	0.000	3.446	Nov 2014	3.028	Nov 2015	1.821	Nov 2016	-		1.821	Continuing	Continuing	Continuing
Advanced Design & Development	WR	NSWC CARDEROCK : MD	0.000	1.813	Oct 2014	1.400	Nov 2015	1.109	Oct 2016	-		1.109	Continuing	Continuing	Continuing
Advanced Design & Development	WR	NAWCAD PATUXENT RIVER : MD	0.000	2.002	Oct 2014	1.500	Nov 2015	1.188	Oct 2016	-		1.188	Continuing	Continuing	Continuing
Advanced Design & Development	WR	NSWC DAHLGREN : VA	0.000	2.563	Oct 2014	0.650	Nov 2015	0.515	Nov 2016	-		0.515	Continuing	Continuing	Continuing
Advanced Design & Development	C/CPAF	RAYTHEON : VA	0.000	2.753	Dec 2014	1.500	Dec 2015	1.188	Dec 2016	-		1.188	Continuing	Continuing	Continuing
Advanced Design & Development	C/CPFF	NAVSEA SEAPORT : DC	0.000	5.240	Dec 2014	1.750	Dec 2015	1.386	Dec 2016	-		1.386	Continuing	Continuing	Continuing
Advanced Design & Development	Various	MISCELLANEOUS : VARIOUS	0.000	1.236	Nov 2014	0.313	Nov 2015	0.248	Nov 2016	-		0.248	Continuing	Continuing	Continuing
Advanced Design & Development	WR	NAVSSS PHILADELPHIA : PA	0.000	6.527	Nov 2014	0.000		0.000		-		0.000	0.000	6.527	-
Advanced Design & Development	WR	SPAWAR : CA	0.000	0.661	Nov 2014	0.000		0.000		-		0.000	0.000	0.661	-
Advanced Design & Development	WR	NSWC CORONA : CA	0.000	0.740	Nov 2014	0.000		0.000		-		0.000	0.000	0.740	-
<b>Subtotal</b>			0.000	26.981		10.141		7.455		-		7.455	-	-	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	C/CPAF	HII : VA	0.000	2.197	Nov 2014	2.797	Nov 2015	0.842	Nov 2016	-		0.842	Continuing	Continuing	Continuing
Development Test & Evaluation	WR	NAWCAD PATUXENT RIVER : MD	0.000	1.070	Nov 2014	3.819	Nov 2015	3.878	Oct 2016	-		3.878	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 2208 / CVN 21
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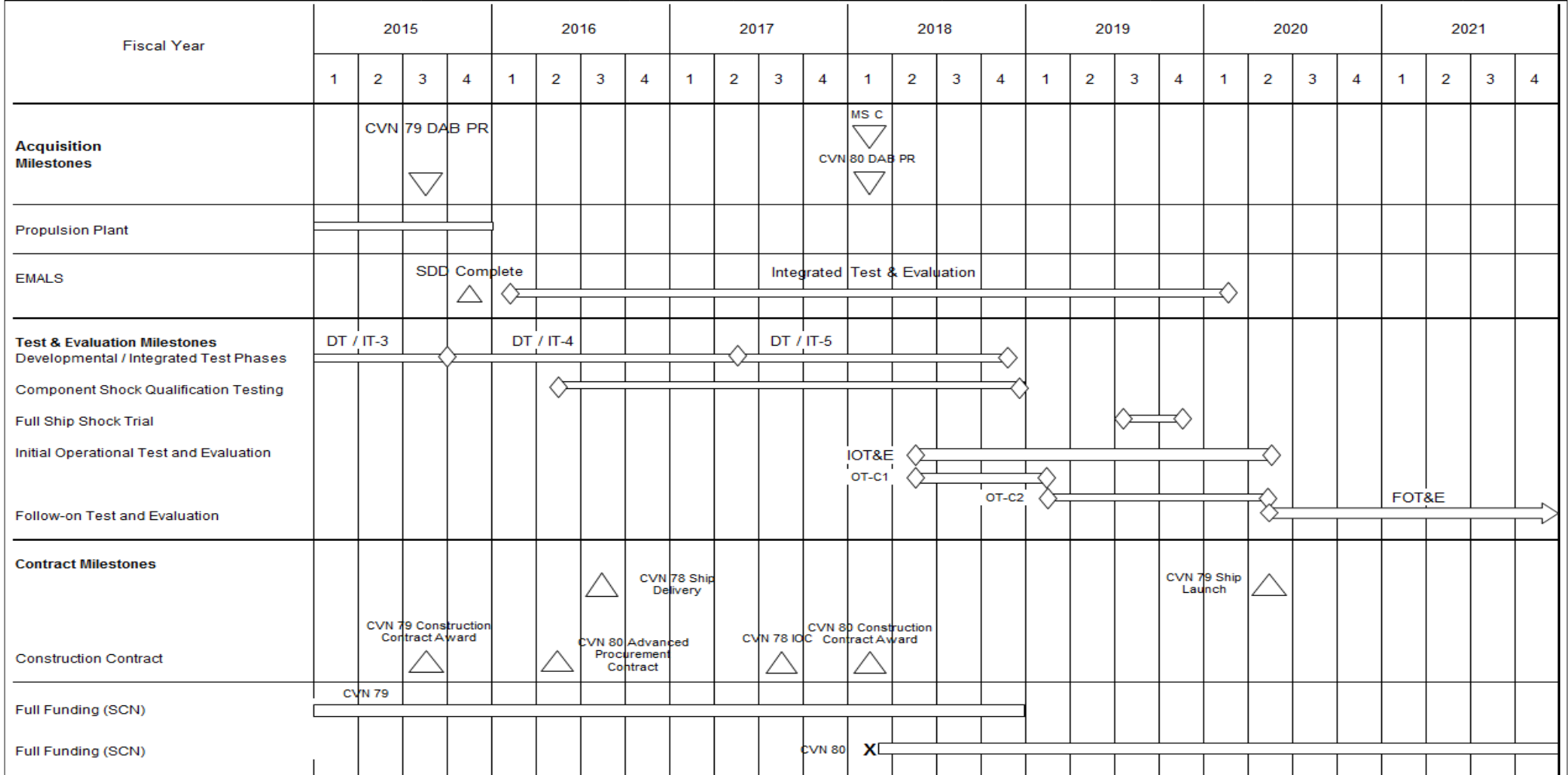
<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Test & Evaluation	WR	NSWC DAHLGREN : VA	0.000	2.340	Oct 2014	3.467	Nov 2015	3.911	Oct 2016	-		3.911	Continuing	Continuing	Continuing
Development Test & Evaluation	WR	NSWC CARDEROCK : MD	0.000	0.000		0.749	Nov 2015	0.597	Oct 2016	-		0.597	Continuing	Continuing	Continuing
Development Test & Evaluation	WR	SPAWAR : CA	0.000	0.000		0.874	Nov 2015	0.696	Nov 2016	-		0.696	Continuing	Continuing	Continuing
Development Test & Evaluation	C/CPAF	RAYTHEON : VA	0.000	0.525	Jan 2015	3.096	Dec 2015	1.716	Dec 2016	-		1.716	Continuing	Continuing	Continuing
Development Test & Evaluation	WR	SSC ATLANTIC : SC	0.000	0.025	Dec 2014	0.229	Nov 2015	0.832	Nov 2016	-		0.832	Continuing	Continuing	Continuing
Development Test & Evaluation	Various	MISCELLANEOUS : VARIOUS	0.000	0.145	Jan 2015	5.641	Dec 2015	0.346	Dec 2016	-		0.346	Continuing	Continuing	Continuing
Development Test & Evaluation	C/CPFF	NAVSEA SEAPORT : DC	0.000	0.255	Dec 2015	0.433	Dec 2015	0.000		-		0.000	0.000	0.688	-
Development Test & Evaluation	C/BA	NSWC PORT HUENEME : CA	0.000	0.000		0.000		0.590	Dec 2016	-		0.590	Continuing	Continuing	Continuing
Development Test & Evaluation	C/BA	NSWC CORONA : CA	0.000	0.000		0.000		1.436	Dec 2016	-		1.436	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	COMOPTEVFOR : VA	0.000	1.454	Nov 2014	4.367	Dec 2015	10.544	Dec 2016	-		10.544	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	8.011		25.472		25.388		-		25.388	-	-	-
<b>Project Cost Totals</b>			0.000	34.992		35.613		32.843		-		32.843	-	-	-

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 2208 / CVN 21
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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2017 Navy</b>		<b>Date: February 2016</b>
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 2208 / CVN 21

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2208</b>				
CVN 79 DAB PR	3	2015	3	2015
CVN 80 DAB PR	1	2018	1	2018
Milestone C	1	2018	1	2018
Propulsion Plant	1	2015	4	2015
EMALS SDD Complete	4	2015	4	2015
EMALS Integrated Test & Evaluation (IT&E)	1	2016	1	2020
DT/IT -3- Developmental Test / Integrated Test Phase 3	1	2015	3	2015
DT/IT -4- Developmental Test / Integrated Test Phase 4	4	2015	2	2017
DT/IT -5- Developmental Test / Integrated Test Phase 5	2	2017	4	2018
Component Shock Qualification Testing	2	2016	4	2018
Full Ship Shock Trial	3	2019	4	2019
Initial Operational Test & Evaluation	2	2018	2	2020
OT -C1 - Initial Operational Test & Evaluation - Phase C1	2	2018	1	2019
OT -C2 - Initial Operational Test & Evaluation - Phase C2	1	2019	2	2020
FOT&E - Follow-On Test & Evaluation	2	2020	4	2021
CVN 78 Ship Delivery	3	2016	3	2016
CVN 78 Initial Operational Capability (IOC)	3	2017	3	2017
CVN 79 Construction Contract Award	3	2015	3	2015
CVN 80 Advanced Procurement Contract Award	2	2016	2	2016
CVN 80 Construction Contract Award	1	2018	1	2018
CVN 79 SCN Full Funding	1	2015	4	2018

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**Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 2208 / CVN 21
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CVN 79 Ship Launch	2	2020	2	2020
CVN 80 SCN Full Funding	1	2018	4	2021

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**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Navy **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
4004: EMALS	0.000	11.316	12.492	37.685	-	37.685	25.956	16.084	0.000	0.000	0.000	103.533
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Project MDAP/MAIS Code:** 223

**A. Mission Description and Budget Item Justification**

The increase from FY 16 to FY 17 is due to the Department adding funding for EMALS integrated test and evaluation and to develop and provide interim training for personnel.

This project provides for the development of an advanced technology aircraft launch system in support of the CVN 78 design and construction schedule, as well as Engineering and Life Cycle System (E&LCS) design. The Electromagnetic Aircraft Launch System (EMALS) will be the aircraft catapult for CVN 78 Class ships. EMALS provides better control of applied forces, both peak and transient dynamic, improved reliability and maintainability, increased operational availability, and reduced operator and maintainer workload.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<b>Title:</b> EMALS	11.316	12.492	37.685	0.000	37.685
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> EMALS					
<b>FY 2015 Accomplishments:</b>					
(1) EMALS System Development and Demonstration (SDD) - Continued land-based testing at the System Functional Demonstration (SFD) site. Completed engineering / test support in preparation for F/A-18 aircraft testing, planned component Environmental Qualification Testing (EQT) and contract closeout actions required for transition to the Integrated Test & Evaluation (IT&E) phase. Maintained shore-based test capability to prevent iterative fixes from delaying shipboard operations, verification of logistics products and to conduct interim CVN 78 Pre-Commissioning Unit (PCU) training.					
(2) EMALS Basic Ordering Agreement (BOA) ILS Order - Continued the execution of the EMALS ILS Development Program. Conducted annual logistics reviews, training in-process review (IPR) and Organizational and Intermediate (O&I) level Technical Manual (TM) IPRs. Based on the development and availability of engineering source data for each of the six (6) EMALS subsystems and allocated resources, updated Failure Mode Effectiveness and Criticality Analyses (FMECAs), the Logistics Management Information (LMI) database,					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<p>Calibration/Measurements Requirements Summary / Instrument Calibration Procedures (CMRS / ICPs), Interactive Electronic Technical Manuals (IETMs), manpower analyses, O&amp;I maintenance plans, provisioning documentation, Post Production Support Planning / Diminishing Manufacturing Sources &amp; Material Shortages (PPSP / DMSMS) screening and analyses, and supported equipment identification and technical data. Continued development of training documents and the Navy Formal Training Course in accordance with NAWCTSD simulation solution. Conducted PCU and Maintenance Demonstration (M-Demo) training at the SFD facility. Completed the Shipboard Facility Requirements Document (FRD) and the Training FRD. Completed all phases of the Reliability Centered Maintenance (RCM) philosophy.</p> <p><b>FY 2016 Plans:</b>                      (1) EMALS BOA ILS Order - Continue the execution of the EMALS ILS Development Program. Conduct annual logistics reviews, training IPR and O &amp; I level Interactive Electronic Technical Manual (IETM) final system level IPR. Deliver the final EMALS O &amp; I level IETM. Procure and deliver remaining quantity of Portable Electronic Maintenance Aids (PEMAs) to the CVN 78 for IETM use. Complete the Reliability Centered Maintenance (RCM) process and the development of Maintenance Requirement Cards (MRCs) and Quality Assurance (QA) cards.                      (2) EMALS BOA Integrated Test &amp; Evaluation (IT&amp;E) Order - Maintain EMALS shore-based test site to support engineering investigations, software integration, deficiency resolution, component obsolescence, and cyber security vulnerability. Conduct EMALS land-based testing using deadloads and aircraft for the correction of deficiencies, critical reliability growth to achieve fleet operational requirements and to maintain test unit cycles above shipboard cycles. Conduct Environmental Qualification Testing (EQT) for Launch Control Subsystem (LCS) components deferred from SDD.</p> <p><b>FY 2017 Base Plans:</b>                      Conduct EMALS Integrated Test &amp; Evaluation (IT&amp;E) land-based testing using deadloads and aircraft for the correction of deficiencies, critical reliability growth to achieve fleet operational requirements and to maintain test unit cycles above shipboard cycles. Conduct Environmental Qualification Testing (EQT) for Launch Control Subsystem (LCS) components deferred from System Development &amp; Demonstration (SDD) and shock testing. Maintain EMALS shore-based test site to support: engineering investigations, software integration, deficiency</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
resolution, component obsolescence regression test, and cyber security assessment/mitigation. Continue developing formal curriculum for fleet operations and maintenance training and schoolhouse training systems for future Ford class carrier crews. Provide interim training for crews until formal curriculum is completed and approved.  <i><b>FY 2017 OCO Plans:</b></i> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	11.316	12.492	37.685	0.000	37.685

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

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• RD TEN / 0604567N: <i>Project Units 3108, 3179, 4007</i>	21.890	18.595	50.920	-	50.920	53.660	50.678	46.807	45.486	Continuing	Continuing
• RD TEN / 0603570N: <i>Propulsion Plant Development (PU 2692)</i>	60.459	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1,526.813
• SCN / 2001: <i>Carrier Replacement Program</i>	1,219.425	2,431.929	2,662.567	-	2,662.567	4,361.180	1,650.189	1,734.546	3,095.202	Continuing	Continuing
• SCN / 5300: <i>Completion of Prior Year Shipbuilding Programs</i>	663.000	123.760	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1,374.860
• OMN / 1B2B: <i>CVN 78 Ford Class Training (12BJ0)</i>	4.788	38.389	14.111	-	14.111	4.844	3.844	3.918	4.001	Continuing	Continuing
• OPN / 0204112N: <i>BLI 0981 / LT324 CVN 78 Installation &amp; Training Equipment</i>	0.000	0.000	4.733	-	4.733	4.010	0.000	0.000	0.000	0.000	8.743

**Remarks**

**D. Acquisition Strategy**

The CVN 78 is 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 (EMALS), advanced arresting gear (AAG) 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

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy		<b>Date:</b> February 2016
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS
sortie generation rate, improved ship self-defense capability, increased launch and recovery capability/flexibility, increased operational availability, and increased flexibility to support future upgrades.		
<b>E. Performance Metrics</b> Successfully complete System Functional Demonstration (SFD) testing. Successfully complete Environmental Qualification Testing (EQT). Successfully complete Shipset Controls Lab testing. Successfully complete Integrated Test and Evaluation (IT&E) including Environmental Qualification Testing (EQT), correction of deficiencies, reliability growth and shock testing.		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS
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<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Aircraft Launch, Recovery & Support	C/CPAF	General Atomics (SDD) : CA	0.000	1.500	Jun 2015	0.000		0.000		-		0.000	0.000	1.500	-
Aircraft Launch, Recovery & Support	C/CPFF	General Atomics (ILS BOA) : CA	0.000	6.472	Oct 2014	2.492	Nov 2015	0.000		-		0.000	0.000	8.964	-
Aircraft Launch, Recovery & Support	C/CPFF	General Atomics (IT&E BOA) : CA	0.000	0.000		5.703	Nov 2015	0.000		-		0.000	0.000	5.703	-
Primary HW Development	WR	NAWCAD Lakehurst : NJ	0.000	0.000		0.000		23.568	Nov 2016	-		23.568	30.515	54.083	-
Training Development	WR	NAWCTSD Orlando : FL	0.000	0.000		0.000		9.200	Nov 2016	-		9.200	7.500	16.700	-
<b>Subtotal</b>			0.000	7.972		8.195		32.768		-		32.768	38.015	86.950	-

**Remarks**  
New Cost Categories added in FY17 to support Electromagnetic Aircraft Launching System (EMALS) Integrated Test & Evaluation and Training Development efforts.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Aircraft Launch, Recovery & Support	WR	NAWC Lakehurst : NJ	0.000	3.344	Feb 2015	4.297	Nov 2015	0.000		-		0.000	0.000	7.641	-
Integrated Test & Evaluation	WR	NAWC Lakehurst : NJ	0.000	0.000		0.000		4.917	Nov 2016	-		4.917	4.025	8.942	-
<b>Subtotal</b>			0.000	3.344		4.297		4.917		-		4.917	4.025	16.583	-

**Remarks**  
New Cost Categories added in FY17 to support Electromagnetic Aircraft Launching System (EMALS) Integrated Test & Evaluation.

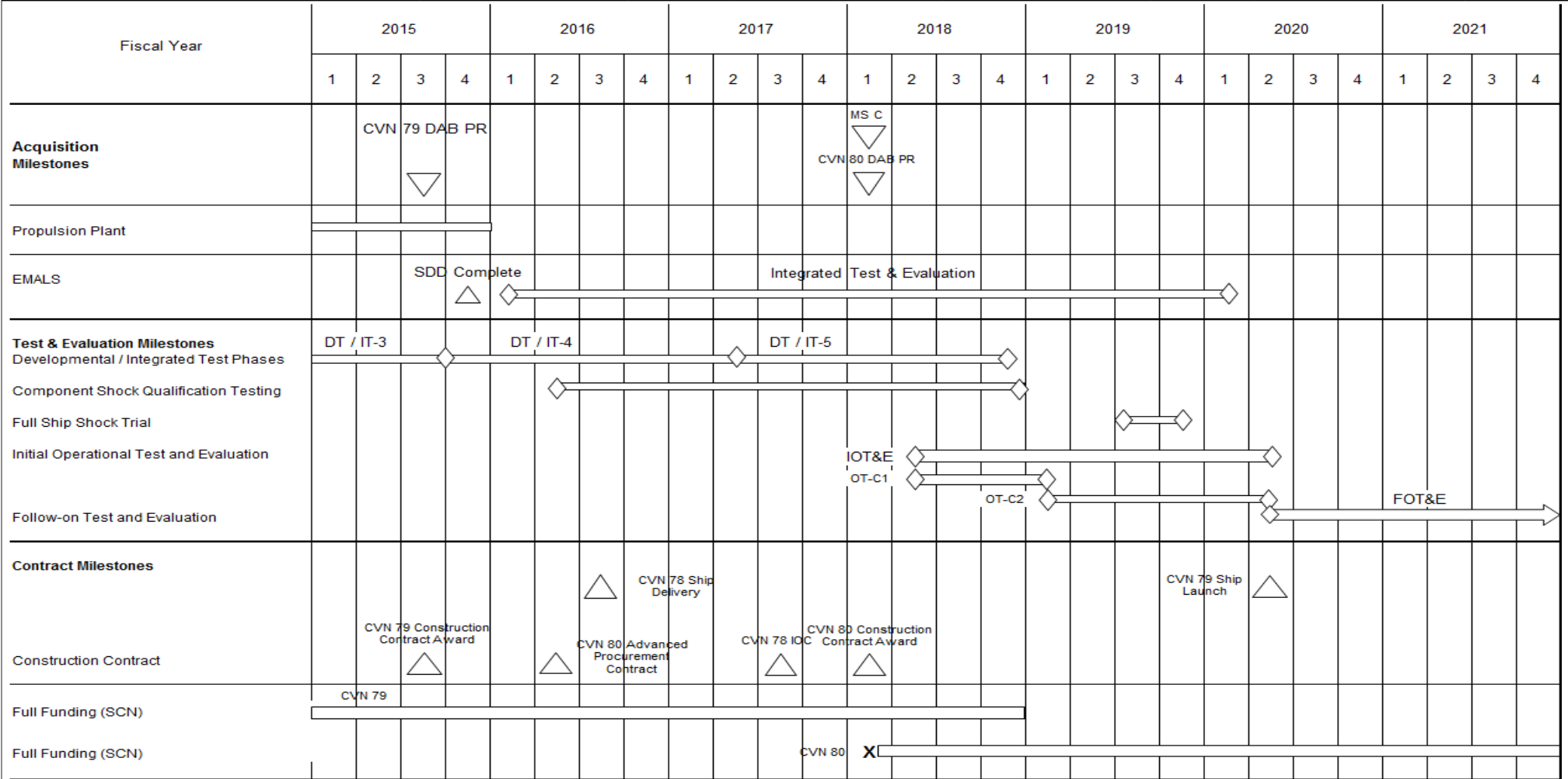
	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	
<b>Project Cost Totals</b>		0.000	11.316	12.492	37.685	-	37.685	42.040	103.533	-



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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS
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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2017 Navy</b>		<b>Date: February 2016</b>
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 4004</b>				
CVN 79 DAB PR	3	2015	3	2015
CVN 80 DAB PR	1	2018	1	2018
Milestone C	1	2018	1	2018
Propulsion Plant	1	2015	4	2015
EMALS SDD Complete	4	2015	4	2015
EMALS Integrated Test & Evaluation (IT&E)	1	2016	1	2020
DT/IT -3- Developmental Test / Integrated Test Phase 3	1	2015	3	2015
DT/IT -4- Developmental Test / Integrated Test Phase 4	4	2015	2	2017
DT/IT -5- Developmental Test / Integrated Test Phase 5	2	2017	4	2018
Component Shock Qualification Testing	2	2016	4	2018
Full Ship Shock Trial	3	2019	4	2019
Initial Operational Test & Evaluation	2	2018	2	2020
OT -C1 - Initial Operational Test & Evaluation - Phase C1	2	2018	1	2019
OT -C2 - Initial Operational Test & Evaluation - Phase C2	1	2019	2	2020
FOT&E - Follow-On Test & Evaluation	2	2020	4	2021
CVN 78 Ship Delivery	3	2016	3	2016
CVN 78 Initial Operational Capability (IOC)	3	2017	3	2017
CVN 79 Construction Contract Award	3	2015	3	2015
CVN 80 Advanced Procurement Contract Award	2	2016	2	2016
CVN 80 Construction Contract Award	1	2018	1	2018
CVN 79 SCN Full Funding	1	2015	4	2018

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**Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 4004 / EMALS
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CVN 79 Ship Launch	2	2020	2	2020
CVN 80 SCN Full Funding	1	2018	4	2021

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**Exhibit R-2A, RDT&E Project Justification:** PB 2017 Navy **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 9999 / Congressional Adds
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
9999: Congressional Adds	0.000	0.000	50.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	50.000
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Project MDAP/MAIS Code:** 223

**A. Mission Description and Budget Item Justification**

This project provides for planning for the Full Ship Shock Trial for the USS Gerald Ford (CVN 78).

**B. Accomplishments/Planned Programs (\$ in Millions)**

	FY 2015	FY 2016
<b>Congressional Add:</b> CVN-78 Shock Trials	0.000	50.000
<b>FY 2015 Accomplishments:</b> N/A		
<b>FY 2016 Plans:</b> Begin planning for CVN 78 Class Shock Trial on CVN 78 in accordance with the Acquisition Decision Memorandum (ADM) dated 7 August 2015.		
<b>Congressional Adds Subtotals</b>	0.000	50.000

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

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• RD TEN / 0604567N: Project Units 3108, 3179, 4007	21.890	18.595	50.920	-	50.920	53.660	50.678	46.807	45.486	Continuing	Continuing
• SCN / 2001: Carrier Replacement Program	1,219.425	2,431.929	2,662.567	-	2,662.567	4,361.180	1,650.189	1,734.546	3,095.202	Continuing	Continuing
• SCN / 5300: Completion of Prior Year Shipbuilding Programs	663.000	123.760	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1,374.860
• RD TEN / 0603570N: Propulsion Plant Development (PU 2692)	60.459	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1,526.813
• OMN / 1B2B: CVN 78 Ford Class Training (12BJ0)	4.788	38.389	14.111	-	14.111	4.844	3.844	3.918	4.001	Continuing	Continuing
• OPN / 5664: Surface Training Equipment	0.000	0.000	4.733	-	4.733	4.010	0.000	0.000	0.000	0.000	8.743

**Remarks**

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604112N / (U)Gerald R Ford Cl Nuc Aircraft Carrier CVN 78-80	Project (Number/Name) 9999 / Congressional Adds

**D. Acquisition Strategy**

The CVN 78 is 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 (EMALS), advanced arresting gear (AAG) 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. Performance Metrics**

Successfully accomplish pre-Shock Trial planning and preparations in support of the CVN 78 Class Full Ship Shock Trial in accordance with the Acquisition Decision Memorandum of 7 August 2015.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 9999 / Congressional Adds
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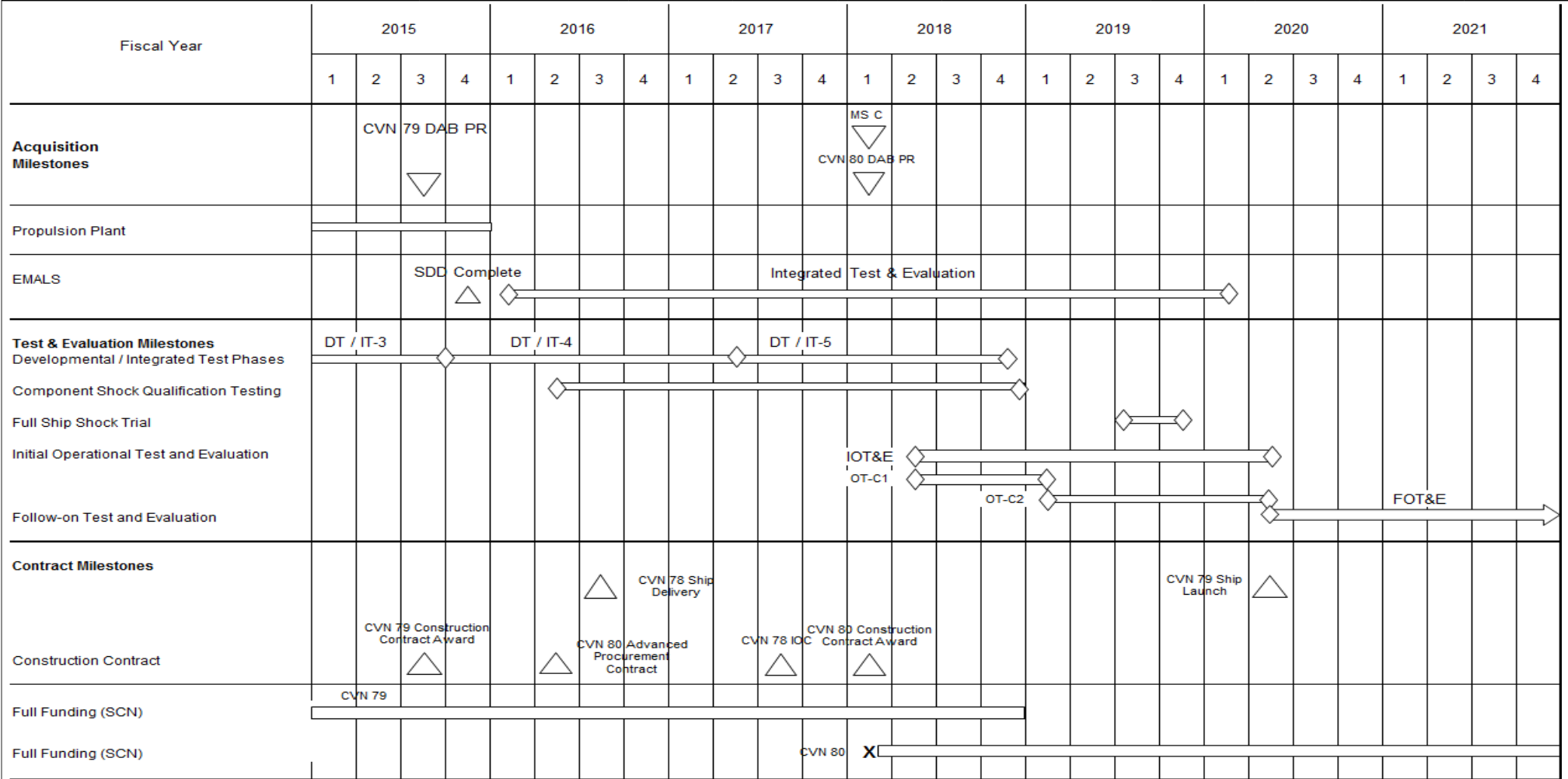
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2015</b>		<b>FY 2016</b>		<b>FY 2017 Base</b>		<b>FY 2017 OCO</b>		<b>FY 2017 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Developmental Test & Evaluation	C/CPAF	HII : VA	0.000	0.000		1.600	Jan 2016	0.000		-		0.000	0.000	1.600	-
Developmental Test & Evaluation	WR	NAWCAD Patuxent River : MD	0.000	0.000		3.500	Jan 2016	0.000		-		0.000	0.000	3.500	-
Developmental Test & Evaluation	WR	NAWCAD Lakehurst : NJ	0.000	0.000		12.300	Jan 2016	0.000		-		0.000	0.000	12.300	-
Developmental Test & Evaluation	WR	NSWC Carderock : MD	0.000	0.000		20.800	Jan 2016	0.000		-		0.000	0.000	20.800	-
Developmental Test & Evaluation	WR	SPAWAR : CA	0.000	0.000		3.900	Jan 2016	0.000		-		0.000	0.000	3.900	-
Developmental Test & Evaluation	C/CPAF	RAYTHEON : VA	0.000	0.000		4.100	Jan 2016	0.000		-		0.000	0.000	4.100	-
Developmental Test & Evaluation	C/T&M	Fleet Logistics Center : VA	0.000	0.000		0.400	Jan 2016	0.000		-		0.000	0.000	0.400	-
Developmental Test & Evaluation	C/CPAF	BOEING : VA	0.000	0.000		0.400	Jan 2016	0.000		-		0.000	0.000	0.400	-
Developmental Test & Evaluation	WR	Miscellaneous : Various	0.000	0.000		3.000	Jan 2016	0.000		-		0.000	0.000	3.000	-
<b>Subtotal</b>			0.000	0.000		50.000		0.000		-		0.000	0.000	50.000	-
<b>Project Cost Totals</b>			0.000	0.000		50.000		0.000		-		0.000	0.000	50.000	-

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 9999 / Congressional Adds
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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2017 Navy</b>		<b>Date: February 2016</b>
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 9999 / Congressional Adds

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 9999</b>				
CVN 79 DAB PR	3	2015	3	2015
CVN 80 DAB PR	1	2018	1	2018
Milestone C	1	2018	1	2018
Propulsion Plant	1	2015	4	2015
EMALS SDD Complete	4	2015	4	2015
EMALS Integrated Test & Evaluation (IT&E)	1	2016	1	2020
DT/IT -3- Developmental Test / Integrated Test Phase 3	1	2015	3	2015
DT/IT -4- Developmental Test / Integrated Test Phase 4	4	2015	2	2017
DT/IT -5- Developmental Test / Integrated Test Phase 5	2	2017	4	2018
Component Shock Qualification Testing	2	2016	4	2018
Full Ship Shock Trial	3	2019	4	2019
Initial Operational Test & Evaluation	2	2018	2	2020
OT -C1 - Initial Operational Test & Evaluation - Phase C1	2	2018	1	2019
OT -C2 - Initial Operational Test & Evaluation - Phase C2	1	2019	2	2020
FOT&E - Follow-On Test & Evaluation	2	2020	4	2021
CVN 78 Ship Delivery	3	2016	3	2016
CVN 78 Initial Operational Capability (IOC)	3	2017	3	2017
CVN 79 Construction Contract Award	3	2015	3	2015
CVN 80 Advanced Procurement Contract Award	2	2016	2	2016
CVN 80 Construction Contract Award	1	2018	1	2018
CVN 79 SCN Full Funding	1	2015	4	2018

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**Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604112N / (U)Gerald R Ford CI Nuc Aircraft Carrier CVN 78-80	<b>Project (Number/Name)</b> 9999 / Congressional Adds
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CVN 79 Ship Launch	2	2020	2	2020
CVN 80 SCN Full Funding	1	2018	4	2021