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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604522N I (U)Air and Missile Defense Radar (AMDR) System							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	481.881	49.643	27.008	55.349	-	55.349	78.126	87.932	80.425	79.863	Continuing	Continuing
3186: Air and Missile Defense Radar	481.881	49.643	27.008	55.349	-	55.349	78.126	87.932	80.425	79.863	Continuing	Continuing
Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): P384												
A. Mission Description and Budget Item Justification Air and Missile Defense Radar (AMDR): (NOTE: FY14 and prior year funding is in PE 0604501N) The AMDR suite is being developed to fulfill Integrated Air and Missile Defense requirements for multiple ship classes. This suite consists of an S-Band radar (AMDR-S), an X-band radar and a Radar Suite Controller (RSC). Funding will develop AMDR-S and Radar RSC, and integrate these components with an available X band radar. AMDR will provide multi-mission capabilities, simultaneously supporting both long range, exoatmospheric detection, tracking and discrimination of ballistic missiles, as well as Area and Self Defense against air and surface threats. For the Ballistic Missile Defense (BMD) capability, increased radar sensitivity and bandwidth over current radar systems are needed to detect, track and support engagements of advanced ballistic missile threats at the required ranges, concurrent with Area and Self Defense against Air and Surface threats. For the Area Air Defense and Self Defense capability, increased sensitivity and clutter capability is needed to detect, react to, and engage stressing Very Low Observable/Very Low Flyer (VLO/VLF) threats in the presence of heavy land, sea, and rain clutter. This effort provides for the development of an active phased array radar with the required capabilities to address the evolving threat. The AMDR suite will obtain performance and technology enhancements throughout its service life based upon an approach that includes modularity of hardware and software, a scalable design and Open Architecture (OA) compliance. The FY18 increase is to conduct the Mission Flight retest in Q2FY19. The FY20 and following funds are required to scale AMDR to backfit Active Electronically-Steered Array and digital beamforming technology on a Flight IIA DDG and to complete development of Advanced Distributed Radar (ADR) capability for integration into AMDR. ADR engineering development is funded to start in FY 2020. This capability will enhance BMD detection performance, increase sensitivity at large scan angles, and enable AMDR to operate in receive-only mode in cooperation with another SPY-6(V)1 radar. In addition to the BMD mission, this capability will also improve Anti-Air Warfare (AAW) warfighting capabilities and provide advanced electronic protection techniques. The program is on track to complete developmental testing and deliver to the DDG 51 Flight III.												

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)		PE 0604522N I (U)Air and Missile Defense Radar (AMDR) System			
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	32.090	27.059	26.835	-	26.835
Current President's Budget	49.643	27.008	55.349	-	55.349
Total Adjustments	17.553	-0.051	28.514	-	28.514
• Congressional General Reductions	-	-0.051			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	18.524	0.000			
• SBIR/STTR Transfer	-0.946	0.000			
• Program Adjustments	0.000	0.000	28.515	-	28.515
• Rate/Misc Adjustments	0.000	0.000	-0.001	-	-0.001
• Congressional General Reductions Adjustments	-0.025	-	-	-	-
Change Summary Explanation					
- Increase in FY 2018 is due to the +\$18.524M reprogramming for funding of the Mission Flight Retest.					
- Increase in FY 2020 is due to the \$28.7000M addition of funding for Advanced Distributed Radar (ADR). FY 2020 also includes -\$0.185M for Contractor Services Reform reduction.					

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Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604522N / (U)Air and Missile Defense Radar (AMDR) System				Project (Number/Name) 3186 / Air and Missile Defense Radar			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3186: Air and Missile Defense Radar	481.881	49.643	27.008	55.349	-	55.349	78.126	87.932	80.425	79.863	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: P384												
A. Mission Description and Budget Item Justification												
Air and Missile Defense Radar (AMDR): (NOTE: FY 2014 and prior year funding is in PE 0604501N) The AMDR suite is being developed to fulfill Integrated Air and Missile Defense requirements for multiple ship classes. This suite consists of an S-Band radar (AMDR-S), an X-band radar and a Radar Suite Controller (RSC). Funding will develop AMDR-S and RSC, and integrate these components with an available X band radar. AMDR will provide multi-mission capabilities, simultaneously supporting both long range, exoatmospheric detection, tracking and discrimination of ballistic missiles, as well as Area and Self Defense against air and surface threats. For the Ballistic Missile Defense (BMD) capability, increased radar sensitivity and bandwidth over current radar systems are needed to detect, track and support engagements of advanced ballistic missile threats at the required ranges, concurrent with Area and Self Defense against Air and Surface threats. For the Area Air Defense and Self Defense capability, increased sensitivity and clutter capability is needed to detect, react to, and engage stressing Very Low Observable/Very Low Flyer (VLO/VLF) threats in the presence of heavy land, sea, and rain clutter. This effort provides for the development of an active phased array radar with the required capabilities to address the evolving threat. The AMDR suite will obtain performance and technology enhancements throughout its service life based upon an approach that includes modularity of hardware and software, a scalable design and Open Architecture (OA) compliance. The FY 2018 increase is to conduct the Mission Flight retest in Q2 FY2019. The FY 2020 and following funds are required to scale AMDR to backfit Active Electronically-Steered Array and digital beamforming technology on a Flt IIA DDG and to complete development and integrate Advanced Distributed Radar (ADR) capability into AMDR. ADR will enhance BMD detection performance, increase sensitivity at large scan angles, and insert the core algorithms to enable AMDR to operate in receive-only mode, in cooperation with other radars. In addition to the BMD mission, this capability will also improve Anti-Air Warfare (AAW) warfighting capabilities and provide advanced electronic protection techniques. The program is on track to complete developmental testing and deliver to the DDG 51 Flight III.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: AMDR DESIGN, SUPPORT, INTEGRATION, TEST AND EVALUATION (RAYTHEON)								32.261	16.397	14.317	0.000	14.317
Articles:								-	-	-	-	-
FY 2019 Plans:												
- Provide engineering services support utilizing the Integration & Production Support (I&PS) contract												
- Provide system engineering and Software (SW) support for combat system integration efforts												
- Initiate risk reduction testing at Advanced Radar Development Evaluation Laboratory (ARDEL), including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation),												

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity. - Complete Mission Flight Retest. FY 2020 Base Plans: - Provide engineering services support utilizing the I&PS contract - Provide system engineering and SW support for combat system integration efforts - Continue risk reduction testing at ARDEL, including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity. FY 2020 OCO Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: Decrease from FY19 to FY20 is due to reduced test activities at PMRF.						
Title: DESIGN, SUPPORT, INTEGRATION, TEST AND EVALUATION (GOVERNMENT) Articles:		4.792 -	7.392 -	8.247 -	0.000 -	8.247 -
FY 2019 Plans: - Support combat system integration and DDG 51 FLT III integration, including preparing for ACB 20 IPR - Continue risk reduction testing at ARDEL, including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continued data collection on ballistic missile defense targets of opportunity. - Complete Mission Flight Retest. FY 2020 Base Plans: - Assist in cost, schedule, and performance management, contract management and oversight, earned value assessment, and risk identification and mitigation - Direct and lead independent technical assessments - Maintain PMRF test site - Provide PMRF range services in support of risk reduction testing at ARDEL - Provide engineering services in support of risk reduction testing at ARDEL FY 2020 OCO Plans:						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
N/A								
FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY19 to FY20 is due to minor program adjustments.								
Title: TEST AND EVALUATION ASSETS AND FACILITIES Articles:				12.259 -	2.819 -	3.650 -	0.000 -	3.650 -
FY 2019 Plans: - Maintain PMRF test site - Provide PMRF range services in support of risk reduction testing at ARDEL - Provide engineering services in support of risk reduction and deficiency correction testing at ARDEL								
FY 2020 Base Plans: - Maintain PMRF test site - Provide PMRF range services in support of risk reduction testing at ARDEL - Provide engineering services in support of risk reduction a testing at ARDEL								
FY 2020 OCO Plans: N/A								
FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY19 to FY20 is due to the decision to keep the EDM array at ARDEL, which necessitated required maintenance and upkeep of the ARDEL test infrastructure.								
Title: ENGINEERING CHANGES/CAPABILITY ENHANCEMENTS Articles:				0.000 -	0.000 -	28.700 -	0.000 -	28.700 -
FY 2019 Plans: N/A								
FY 2020 Base Plans: - Develop Advanced Distributed Radar (ADR) program requirements - Commence ADR software development, integration, testing, evaluation, and combat system integration - Develop ADR specific systems engineering documents - Support ADR program reviews, technical design reviews and Technical Interchange Meetings (TIMs) - Form, direct, and facilitate IPTs and WGs required to support ADR integration and testing								
FY 2020 OCO Plans:								

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total			
N/A											
FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY19 to FY20 is due to the addition of funding for the ADR program.											
Title: PROGRAM MANAGEMENT				0.331	0.400	0.435	0.000	0.435			
Articles:				-	-	-	-	-			
FY 2019 Plans: - Provide support to combat system integration efforts - Analyze and assess contractor deliverables - Assist in cost, schedule, and performance management, contract management and oversight, earned value assessment and risk identification and mitigation - Provide support to IPTs and WGs - Award and support I&PS contract											
FY 2020 Base Plans: - Analyze and assess contractor deliverables - Assist in cost, schedule, and performance management, contract management and oversight, earned value assessment and risk identification and mitigation - Provide support to IPTs and WGs required to support I&PS contract - Provide support to combat system integration efforts - Support award of follow on competitive production contract											
FY 2020 OCO Plans: N/A											
FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY19 to FY20 is due to minor program adjustments.											
Accomplishments/Planned Programs Subtotals				49.643	27.008	55.349	0.000	55.349			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• SCN/2122: DDG51	3,498.792	5,945.731	5,373.323	-	5,373.323	3,483.842	3,600.696	6,159.792	5,649.274	3,803.000	118,036.476

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C. Other Program Funding Summary (\$ in Millions)											
			FY 2020	FY 2020	FY 2020					Cost To	
Line Item	FY 2018	FY 2019	Base	OCO	Total	FY 2021	FY 2022	FY 2023	FY 2024	Complete	Total Cost
Remarks											
D. Acquisition Strategy											
<p>Plans for the Air and Missile Defense Radar are to leverage research and development investments, integrate sufficiently matured advanced technologies from technology risk reduction efforts, and incorporate Open Architecture approaches to develop a scalable radar design with major improvements in power, sensitivity, resistance to natural and man-made environments over current radar systems for simultaneous multi-mission BMD, Area and Self Defense Anti-Air Warfare (AAW). System design will be accomplished by employing proven technologies and commercial standards to lower schedule risk and develop a product with the lowest life-cycle cost.</p> <p>Program scope consists of the following phases: a Concept Studies phase; a Technology Development phase, which included competitive prototyping; an E&MD phase, which includes completion of a full EDM for land-based testing; and transition to production. The detailed scope of this acquisition is defined in the approved Milestone C AMDR Acquisition Strategy (AS).</p>											
E. Performance Metrics											
<ul style="list-style-type: none"> - Complete Engineering Development Model (EDM) testing - Achieve approval of additional Low Rate Initial Production (LRIP) options - Conduct SVR/FCA/PRR - Support ACB 20 and Ballistic Missile Defense (BMD) 6.X Interim Program Reviews - Award Integration and Production Support Contract - Mission Flight retest - Advanced Distributed Radar (ADR) Development and Integration - Scaled AMDR DDG51 FLT IIA Backfit 											

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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Engineering and Manufacturing Development/Engineering Services	C/CPIF	Raytheon : Sudbury, MA	291.526	25.279	Oct 2017	0.000		0.000		-		0.000	0.000	316.805	-
Integration and Production Support	SS/FFP	Raytheon : Sudbury, MA	0.000	6.982	Dec 2018	16.397	Dec 2018	41.917	Oct 2019	-		41.917	Continuing	Continuing	Continuing
Subtotal			291.526	32.261		16.397		41.917		-		41.917	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Systems Engineering	MIPR	GTRI : Atlanta, GA	0.627	0.000		0.280	Jan 2019	0.363	Nov 2019	-		0.363	0.000	1.270	-
Systems Engineering	SS/CPFF	JHU/APL : Laurel, MD	15.397	1.383	Mar 2018	1.179	Jan 2019	1.527	Nov 2019	-		1.527	Continuing	Continuing	Continuing
Systems Engineering	MIPR	MIT : Cambridge, MD	2.078	0.035	Jan 2019	0.820	Jan 2019	1.063	Nov 2019	-		1.063	Continuing	Continuing	Continuing
Systems Engineering	WR	NRL : Washington, DC	2.647	0.015	Jul 2018	0.198	Dec 2018	0.256	Nov 2019	-		0.256	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/CR : Crane, IN	4.155	0.165	Feb 2018	0.063	Dec 2018	0.081	Oct 2019	-		0.081	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/DD : Dahlgren, VA	9.815	0.492	Jan 2018	0.451	Jan 2019	0.584	Oct 2019	-		0.584	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/PHD : Port Hueneme, CA	2.923	0.000		0.000		0.000		-		0.000	0.000	2.923	-
Systems Engineering	C/CPIF	SPA (Bridge) : Washington, DC	6.147	0.000		0.000		0.000		-		0.000	0.000	6.147	-
Systems Engineering	MIPR	ARL : Adelphi, MD	0.812	0.000		0.000		0.000		-		0.000	0.000	0.812	-
Systems Engineering	WR	NSWC/CD : Carderock, MD	0.255	0.000		0.000		0.000		-		0.000	0.000	0.255	-
Systems Engineering	WR	NSWC/Corona : Corona, CA	0.446	0.000		0.000		0.000		-		0.000	0.000	0.446	-

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Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Systems Engineering	Allot	DISA : Scott AFB, Illinois	0.012	0.004	Oct 2017	0.008	Dec 2018	0.010	Nov 2019	-		0.010	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC IH : Indian Head, MD	0.611	0.000		0.000		0.000		-		0.000	0.000	0.611	-
Systems Engineering	SS/FFP	Northrop Grumman : Baltimore, MD	0.367	0.000		0.000		0.000		-		0.000	0.000	0.367	-
Systems Engineering	C/FFP	DRS Power & Control Technologies, Inc. : Milwaukee, WI	0.194	0.000		0.000		0.000		-		0.000	0.000	0.194	-
Systems Engineering	C/CPIF	SPA : Washington, DC	0.315	0.344	Mar 2018	0.264	Nov 2018	0.343	Nov 2019	-		0.343	Continuing	Continuing	Continuing
Subtotal			46.801	2.438		3.263		4.227		-		4.227	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Test and Evaluation	WR	COMOPTEVFOR : Norfolk, VA	1.142	0.000		0.000		0.000		-		0.000	0.000	1.142	-
Test and Evaluation	MIPR	GTRI : Atlanta, GA	0.098	0.000		0.465	Jan 2019	0.603	Jan 2020	-		0.603	0.000	1.166	-
Test and Evaluation	SS/CPFF	JHU/APL : Laurel, MD	16.359	1.025	Mar 2018	0.142	Jan 2019	0.184	Nov 2019	-		0.184	0.000	17.710	-
Test and Evaluation	MIPR	MIT : Cambridge, MD	0.284	0.000		0.000		0.000		-		0.000	0.000	0.284	-
Test and Evaluation	WR	NAWC WD : Pt. Mugu, CA	4.776	1.087	Oct 2018	0.360	Nov 2018	0.466	Nov 2019	-		0.466	0.000	6.689	-
Test and Evaluation	WR	NRL : Washington, DC	1.946	0.055	Oct 2018	1.422	Dec 2018	1.842	Nov 2019	-		1.842	0.000	5.265	-
Test and Evaluation	WR	NSWC/DD : Dahlgren, VA	5.098	0.173	Jan 2018	0.278	Jan 2019	0.359	Nov 2019	-		0.359	0.000	5.908	-

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Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Test and Evaluation	WR	NSWC/PHD : Port Hueneme, CA	5.220	0.281	Feb 2018	0.942	Dec 2018	1.221	Nov 2019	-		1.221	0.000	7.664	-
Test and Evaluation	WR	PMRF : Kekaha, HI	8.602	2.610	Oct 2018	1.138	Jan 2019	1.474	Nov 2019	-		1.474	0.000	13.824	-
Test and Evaluation	C/CPIF	SPA (Bridge) : Washington, DC	3.043	0.000		0.000		0.000		-		0.000	0.000	3.043	-
Test and Evaluation	WR	NSWC/PHD WS : Port Hueneme, CA	78.780	8.046	May 2018	0.000		0.000		-		0.000	0.000	86.826	-
Test and Evaluation	WR	NSWC Corona : Corona, CA	4.224	0.050	Oct 2018	0.262	Nov 2018	0.338	Nov 2019	-		0.338	0.000	4.874	-
Test and Evaluation	WR	CNA-ONR : Arlington, VA	0.146	0.000		0.000		0.000		-		0.000	0.000	0.146	-
Test and Evaluation	C/BA	MDA : Redstone Arsenal, AL	0.905	0.786	Jan 2019	0.000		0.000		-		0.000	0.000	1.691	-
Test and Evaluation	C/CPIF	Engility : Andover, MA	0.405	0.000		0.058	Jan 2019	0.074	Nov 2019	-		0.074	0.000	0.537	-
Test and Evaluation	MIPR	DOI : Boise, ID	1.173	0.000		0.884	Dec 2018	1.145	Nov 2019	-		1.145	0.000	3.202	-
Test and Evaluation	WR	NSWC Crane : Crane, IN	0.633	0.000		0.000		0.000		-		0.000	0.000	0.633	-
Test and Evaluation	MIPR	AFSEO : Eglin AFB, FL	0.011	0.000		0.000		0.000		-		0.000	0.000	0.011	-
Test and Evaluation	WR	FRCE - PMA 226 : Cherry Point, NC	0.005	0.000		0.000		0.000		-		0.000	0.000	0.005	-
Test and Evaluation	WR	NUWC KP : Keyport, WA	0.343	0.000		0.000		0.000		-		0.000	0.000	0.343	-
Test and Evaluation	WR	COMNAVAIRPAC : San Diego, CA	0.052	0.033	Nov 2018	0.175	Dec 2018	0.227	Nov 2019	-		0.227	0.000	0.487	-
Test and Evaluation	WR	NSWC CD : Carderock, MD	0.704	0.355	Nov 2018	0.000		0.000		-		0.000	0.000	1.059	-
Test and Evaluation	MIPR	AFRL : Kirtland AFB, NM	0.143	0.078	Sep 2018	0.000		0.000		-		0.000	0.000	0.221	-
Test and Evaluation	C/CPIF	SPA : Washington, DC	0.194	0.034	Sep 2018	0.822	Dec 2018	0.837	Nov 2019	-		0.837	0.000	1.887	-

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Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Subtotal			134.286	14.613		6.948		8.770		-		8.770	0.000	164.617	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Support Management Services	C/CPIF	SPA (Bridge) : Washington, DC	5.120	0.000		0.000		0.000		-		0.000	0.000	5.120	-
Travel	Sub Allot	PEOISW2 : Washington, DC	0.507	0.047	Jun 2018	0.100	Dec 2018	0.102	Jan 2020	-		0.102	Continuing	Continuing	Continuing
Support Management Services	WR	NSWC/DD : Dahlgren, VA	1.940	0.042	Jan 2018	0.099	Jan 2019	0.129	Oct 2019	-		0.129	Continuing	Continuing	Continuing
Support Management Services	C/CPFF	TMB-PSS : Washington, DC	0.256	0.053	Oct 2017	0.042	Aug 2019	0.043	Nov 2019	-		0.043	Continuing	Continuing	Continuing
Support Management Services	C/CPFF	CACI-PSS : Washington, DC	0.734	0.088	Dec 2017	0.050	Jan 2019	0.051	Nov 2019	-		0.051	Continuing	Continuing	Continuing
Support Management Services	C/CPFF	STRATEGIC INSIGHT : Arlington, VA	0.111	0.035	Feb 2018	0.058	Apr 2019	0.059	Nov 2019	-		0.059	Continuing	Continuing	Continuing
Support Management Services	C/CPIF	UNC : Chapel Hill, NC	0.098	0.000		0.000		0.000		-		0.000	0.000	0.098	-
Support Management Services	WR	NSWC/CD : Carderock, MD	0.072	0.000		0.000		0.000		-		0.000	0.000	0.072	-
Support Management Services	C/CPIF	SPA : Washington, DC	0.430	0.066	Sep 2018	0.051	Dec 2018	0.051	Nov 2019	-		0.051	Continuing	Continuing	Continuing
Subtotal			9.268	0.331		0.400		0.435		-		0.435	Continuing	Continuing	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			481.881	49.643		27.008		55.349		-		55.349	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy							Date: March 2019			
Appropriation/Budget Activity 1319 / 5			R-1 Program Element (Number/Name) PE 0604522N I (U)Air and Missile Defense Radar (AMDR) System			Project (Number/Name) 3186 I Air and Missile Defense Radar				
	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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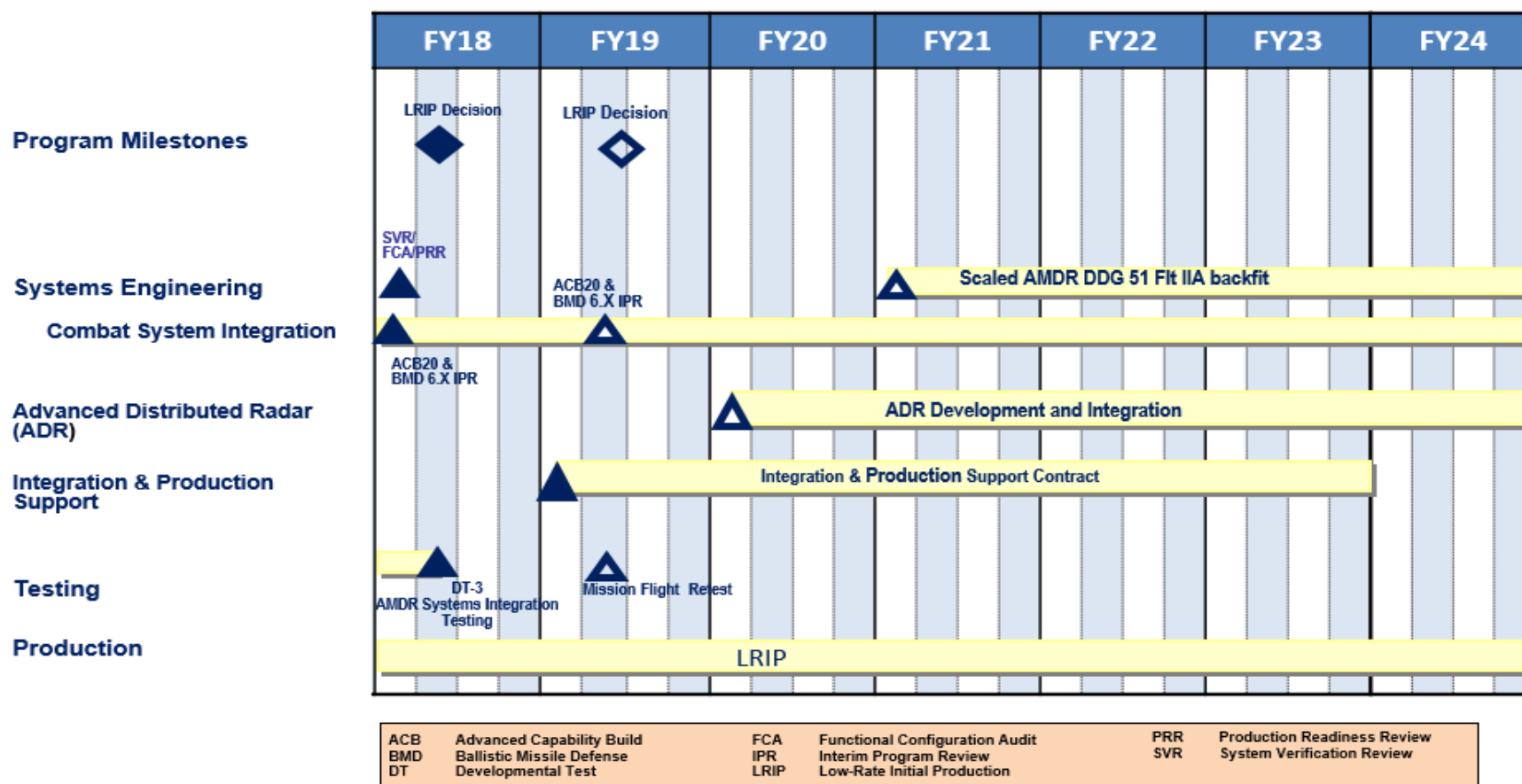
Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Date: March 2019

Appropriation/Budget Activity
1319 / 5

R-1 Program Element (Number/Name)
PE 0604522N / (U)Air and Missile Defense
Radar (AMDR) System

Project (Number/Name)
3186 / Air and Missile Defense Radar



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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604522N / (U)Air and Missile Defense Radar (AMDR) System	Project (Number/Name) 3186 / Air and Missile Defense Radar	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3186				
E&MD AMDR System Integration Testing (DT-3)	1	2018	2	2018
System Verification Review/Functional Configuration Audit/Production Readiness Review	1	2018	1	2018
ACB 20 and BMD 6.X Interim Program Review (IPR)	1	2018	1	2018
FY18 LRIP Decision	2	2018	2	2018
Integration and Production Support Contract	1	2019	4	2023
ACB 20 and BMD 6.X IPR	2	2019	2	2019
Mission Flight retest	2	2019	2	2019
FY19 LRIP Decision	2	2019	2	2019
Advanced Distributed Radar (ADR)	1	2020	4	2024
Scaled AMDR DDG51 FLT IIA Backfit	1	2021	4	2024