Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*					R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	8,924.263	71.938	54.412	43.084	-	43.084	69.816	60.659	53.319	53.002	68.500	9,398.993
1425: *V-22*	8,924.263	71.938	54.412	43.084	-	43.084	69.816	60.659	53.319	53.002	68.500	9,398.993
MDAP/MAIS Code(s): 212												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The V-22 Osprey is an Acquisition Category IC Joint Program led by the Department of the Navy for the purpose of developing, testing, evaluating, procuring and fielding a tilt rotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet the amphibious/ vertical assault needs of the Marine Corps, the utility/rescue needs of the Navy, and the special operations needs of the Air Force and the United States Special Operations Command (USSOCOM). The V-22 is replacing the CH-46E and CH53A/D in the Marine Corps with the MV-22; will supplement the H-60 in the Navy with the MV-22; and replace the MH-53J and MH-53M as well as augment the C-130 in the Air Force and USSOCOM with the CV-22. The V-22 is capable of flying over 2100 nautical miles with a single refueling, giving the services the advantage of a Vertical/Short Take-off and Landing aircraft that can rapidly self-deploy to any location in the world. This program is funded under Engineering Manufacturing and Development for correction of deficiencies and includes Block A and Block B upgrades which encompassed engineering and manufacturing development of new end-items prior to the production incorporation decision. Block C suitability and effectiveness development upgrades continue through FY12. Funding in FY11 addressed Capability Development Document interoperability requirements through a spiral upgrade acquisition strategy. These funds were the first spiral providing Key Enabling Department of Defense mandated open systems architecture upgrades for the mission computer hardware and software while simultaneously addressing required interoperability common avionics upgrades and current avionics obsolescence issues. Development efforts include Block C Upgrade, Mission System Upgrade, Mid-Wing Process Unit, ARC 210 Generation 5 Radio, Mission Computer Obsolescence Initiative, Ramp Mounted Weapon System, AAR-47 Hostile Fire Indicator, Time on Wing, and Blue Force Tracker/Netted Weather. FY12-13 funds initiate instrumentation of a test aircraft. Joint and Allied Threat Awareness System testing will continue in FY14 and funding will provide for additional Aircraft Mission Maneuvering Envelope Expansion, Velocity Not to Exceed Expansion, and Time on Wing efforts such as Improved Inlet Solution.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*			R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	84.477	54.412	40.279	-	40.279
Current President's Budget	71.938	54.412	43.084	-	43.084
Total Adjustments	-12.539	0.000	2.805	-	2.805
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-9.999	0.000			
• SBIR/STTR Transfer	-2.540	0.000			
• Program Adjustments	0.000	0.000	-0.050	-	-0.050
• Rate/Misc Adjustments	0.000	0.000	2.855	-	2.855

Change Summary Explanation

Technical: Not applicable

Schedule: Instrumented Aircraft Test Delivery moved from 3Q 2014 to 1Q 2015 in accordance with contract.
SSOT in 3rd QTRS of FY2013/FY2015/FY2017 now reflected as OT IIIJ, OT IIIK and OT IIIL.
OT-C1 in 3rd QTR of FY2014 new from PB13.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
1425: *V-22*	8,924.263	71.938	54.412	43.084	-	43.084	69.816	60.659	53.319	53.002	68.500	9,398.993
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The V-22 Osprey is an Acquisition Category IC Joint Program led by the Department of the Navy for the purpose of developing, testing, evaluating, procuring and fielding a tilt rotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet the amphibious/ vertical assault needs of the Marine Corps, the utility/rescue needs of the Navy, and the special operations needs of the Air Force and the United States Special Operations Command (USSOCOM). The V-22 is replacing the CH-46E and CH53A/D in the Marine Corps with the MV-22; will supplement the H-60 in the Navy with the MV-22; and replace the MH-53J and MH-53M as well as augment the C-130 in the Air Force and USSOCOM with the CV-22. The V-22 is capable of flying over 2100 nautical miles with a single refueling, giving the services the advantage of a Vertical/Short Take-off and Landing aircraft that can rapidly self-deploy to any location in the world. This program is funded under Engineering Manufacturing and Development for correction of deficiencies and includes Block A and Block B upgrades which encompassed engineering and manufacturing development of new end-items prior to the production incorporation decision. Block C suitability and effectiveness development upgrades continue through FY12. Funding in FY11 addressed Capability Development Document interoperability requirements through a spiral upgrade acquisition strategy. These funds were the first spiral providing Key Enabling Department of Defense mandated open systems architecture upgrades for the mission computer hardware and software while simultaneously addressing required interoperability common avionics upgrades and current avionics obsolescence issues. Development efforts include Block C Upgrade, Mission System Upgrade, Mid-Wing Process Unit, ARC 210 Generation 5 Radio, Mission Computer Obsolescence Initiative, Ramp Mounted Weapon System, AAR-47 Hostile Fire Indicator, Time on Wing, and Blue Force Tracker/Netted Weather. FY12-13 funds initiate instrumentation of a test aircraft. Joint and Allied Threat Awareness System testing will continue in FY14 and funding will provide for additional Aircraft Mission Maneuvering Envelope Expansion, Velocity Not to Exceed Expansion, and Time on Wing efforts such as Improved Inlet Solution.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Continued development of V-22	54.401	36.483	24.476
Articles:	0	0	0
FY 2012 Accomplishments: Continued MV-22 development efforts by Bell-Boeing. Rolls-Royce continued to provide engine support and development of MV-22 flight testing. Continued MV-22 software development/sustainment efforts. Continued development in support of MV-22 Block upgrades. Continued engineering, logistics, flight test, flight test support and address correction of deficiencies. Continued contracted development efforts on test aircraft. Initiated funding for instrumentation of test aircraft.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue MV-22 development efforts by Bell-Boeing. Rolls-Royce will continue to provide engine support and development of MV-22 flight testing. Continue MV-22 software development efforts. Continue development in support of MV-22 Block upgrades. Continue engineering, logistics, flight test, flight test support and address correction of deficiencies. Continue contracted development efforts on test aircraft. Continue instrumentation of test aircraft. Reduction in funding is the result of cost savings incurred on Instrumented Test Aircraft FPIF contract which awarded in March 2012. ***FY 2014 Plans:*** Continue MV-22 development efforts by Bell-Boeing. Rolls-Royce will continue to provide engine support and development of MV-22 flight testing. Continue MV-22 software development/sustainment efforts. Continue development in support of MV-22 Block upgrades and Time on Wing efforts such as Improved Inlet Solution. Continue engineering, logistics, flight test, flight test support and address correction of deficiencies. Continue contracted development efforts on test aircraft.			
Title: Continued support of V-22 development, test and evaluation program	17.537	17.929	18.608
Articles:	0	0	0
FY 2012 Accomplishments: Continued in-house field activity support of Integrated Test Team, Integrated Product Teams, engineering and logistics. Continued development in support of MV-22 Block Upgrades. Continued field development efforts on test aircraft. Provided Research & Development support in areas of Reliability and Maintainability data analysis, loads and dynamics, electromagnetic environmental effects, V-22 avionics, facilities management, structures, communications, etc. Provided engineering, logistics, flight test, flight test support, envelope expansion testing and correction of deficiencies as required in support of the Flight Test Program, Block C, Defensive Weapon System, and the overall V-22 development program. Initiated support of instrumentation of test aircraft. Conductd aero-performance rebaseline, Time on Wing and Mission Computer Obsolescence Initative Testing. Expanded shipboard launch and recovery envelopes with additional dynamic interface testing. Conducted KPP sustainment testing of proprotor improvements and nacelle sail design. ***FY 2013 Plans:*** Continue in-house field activity support of Integrated Test Team, Integrated Product Teams, engineering and logistics. Continue development in support of MV-22 Block Upgrades. Continue field development efforts on test aircraft. Provide Research & Development support in areas of Reliability and Maintainability data analysis, loads and dynamics, electromagnetic environmental effects, V-22 avionics, facilities management, structures, communications, etc. Provide engineering, logistics, flight test, flight test support, envelope expansion testing and correction of deficiencies as required in support of the Flight Test Program, Block C, Defensive Weapon System, and the overall V-22 development program. Initiate support of instrumentation of test aircraft. Conduct aero-performance rebaseline, Time on Wing and Mission Computer Obsolescence Initative Testing. Expanded shipboard launch and recovery envelopes with additional dynamic interface testing. Conduct KPP sustainment testing of proprotor improvements and nacelle sail design. Continue support of instrumentation of test aircraft. Test B 5.01 software suite. Conduct			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Joint and Allied Threat Awareness System testing. Conduct Aircraft Mission Maneuvering Envelope Expansion and Velocity Not to Exceed Expansion testing. ***FY 2014 Plans:*** Continue support of instrumentation of test aircraft. Conduct Joint and Allied Threat Awareness System (JATAS)/APR-39(D)v2 testing. Conduct Aircraft Time on Wing, Mission Maneuvering Envelope Expansion and Velocity Not to Exceed Expansion testing.			
Accomplishments/Planned Programs Subtotals	71.938	54.412	43.084

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APN 0164: *V-22*	2,265.833	1,457.322	1,487.769		1,487.769	1,487.769	1,563.279	1,514.459	435.163	7,592.808	37,046.980
• APN 0590: *V-22 Series*	81.196	95.856	160.834		160.834	156.970	138.235	160.111	162.934	863.571	2,434.779
• APN 0605: *V-22 Inital Spares*	9.772	15.985	10.729		10.729	16.465	7.388	5.007	0.000	142.653	974.726
• RDTE 0401318F : *CV-22 USAF*	12.836	28.027	46.705		46.705	41.588	26.728	16.073	14.566	131.500	660.416
• RDTE 1160421BB: *CV-22 SOCOM*	10.497	1.822	0.000		0.000	0.000	0.000	0.000	0.000	0.000	519.807
• RDTE 1160403BB: *CV-22 Special Operations, Aviation Systems*	0.000	0.000	2.911		2.911	0.182	0.000	0.000	0.000	0.000	3.093

Remarks

D. Acquisition Strategy

The MV-22 is a post Milestone III ACAT-IC program. As a result of mishaps during and subsequent to MV-22 Operational Evaluation (Apr and Dec 00), the program was restructured employing a phased approach to return to flight and tactical introduction. The Contractor and Government defined deficient areas within the program/ aircraft requiring correction prior to return to flight. A Block Upgrade approach was planned, with required efforts identified in Block "A", "B", and "C". Block "A" included those efforts necessary to return the V-22 to safe and operational fleet operations. Block "B" included those efforts necessary to improve the effectiveness and suitability of the aircraft. Block "C" includes mission enhancements like weather radar, cabin effectiveness suitability improvements, i.e., Environmental Control System, and Forward Firing ALE-47. Non-recurring development activities are to be initiated and completed for all efforts identified in Block "A", "B", and "C". The Contractor will develop specific Statements of Work and Preliminary Specification Change Notices required to integrate the Block Upgrade efforts into the baseline Program. A Systems Requirements Review, Initial Design Review, and Final Design Review was held for each of the Block efforts so the design maturity could be reviewed and the Government could redirect activities as appropriate. The CV-22 Engineering Manufacturing and Development program is also structured in Blocks to define an evolutionary approach to achieving full operational capability. Block "0" is the initial baseline CV-22 variant. Block "10" enhances mission capability with

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

the addition of terrain following radar, additional fuel tanks, additional radios, and Block "20" includes capabilities such as radio frequency and infrared countermeasures improvements. Additional Blocks are in the planning stages to continue the growth process throughout the operational life of the weapon system.

E. Performance Metrics

Milestone Reviews.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Hardware Dev Airframe	SS/CPAF	Boeing Co.:Ridley Park, PA	3,820.466	33.123	Jan 2012	27.940	Jan 2013	24.176	Jan 2014	-		24.176	188.109	4,093.814	4,093.814
MV-22 Award Fee (BLK C)	SS/CPAF	Boeing Co.:Ridley Park, PA	212.167	0.000		0.000		0.000		-		0.000	0.000	212.167	212.167
MV-22 Hardware Dev Propulsion	SS/CPIF	Rolls-Royce Corp.:Indianapolis, IN	195.969	0.168	Jan 2012	0.807	Jan 2013	0.300	Jan 2014	-		0.300	0.500	197.744	197.744
MV-22 Hardware Dev Airframe:Instrumented A/C	SS/FPIF	Boeing Co.:Ridley Park, PA	0.000	21.110	Mar 2012	7.736	Mar 2013	0.000		-		0.000	0.000	28.846	28.846
Prior Year Prod Dev	Various	Various:Various	1,015.617	0.000		0.000		0.000		-		0.000	0.000	1,015.617	
		Subtotal	5,244.219	54.401		36.483		24.476		0.000		24.476	188.609	5,548.188	

Remarks

The Instrumented Aircraft was originally part of the Boeing Co. Hardware Dev. Airframe line. When the contract was awarded, it was awarded as a FPIF. It is now broken out as a separate line.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Govt Engineering Sppt	WR	NAWCAD:Pax River, MD	1,099.706	1.926	Dec 2011	1.627	Nov 2012	1.686	Nov 2013	-		1.686	27.169	1,132.114	
Prior Year Support	Various	Various:Various	189.718	0.000		0.000		0.000		-		0.000	0.000	189.718	
		Subtotal	1,289.424	1.926		1.627		1.686		0.000		1.686	27.169	1,321.832	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Dev Test & Evaluation	WR	NAWCAD:Pax River, MD	988.803	8.894	Dec 2011	8.722	Nov 2012	8.931	Nov 2013	-		8.931	43.315	1,058.665	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Operational Test & Evaluation	WR	OT&E Force:Norfolk, VA	41.914	4.010	Dec 2011	4.310	Dec 2012	4.709	Dec 2013	-		4.709	18.345	73.288	
Prior Year T & E	Various	Various:Various	48.200	0.000		0.000		0.000		-		0.000	0.000	48.200	
		Subtotal	1,078.917	12.904		13.032		13.640		0.000		13.640	61.660	1,180.153	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Engineering Tech Sppt	Various	Various:Various	1,045.448	0.675	Nov 2011	0.538	Nov 2012	0.484	Nov 2013	-		0.484	7.437	1,054.582	
MV-22 Management Sppt Svc	Various	Various:Various	154.325	0.543	Nov 2011	0.553	Nov 2012	0.641	Nov 2013	-		0.641	5.780	161.842	
MV-22 Program Mgmt Support	WR	NAWCAD:Pax River, MD	55.571	0.974	Nov 2011	1.855	Nov 2012	1.865	Nov 2013	-		1.865	10.136	70.401	
MV-22 Travel	WR	NAWCAD:Pax River, MD	15.272	0.515	Jan 2012	0.324	Jan 2013	0.292	Jan 2014	-		0.292	4.505	20.908	
Prior Year Mgmt	Various	Various:Various	41.087	0.000		0.000		0.000		-		0.000	0.000	41.087	
		Subtotal	1,311.703	2.707		3.270		3.282		0.000		3.282	27.858	1,348.820	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8,924.263	71.938		54.412		43.084		0.000		43.084	305.296	9,398.993	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

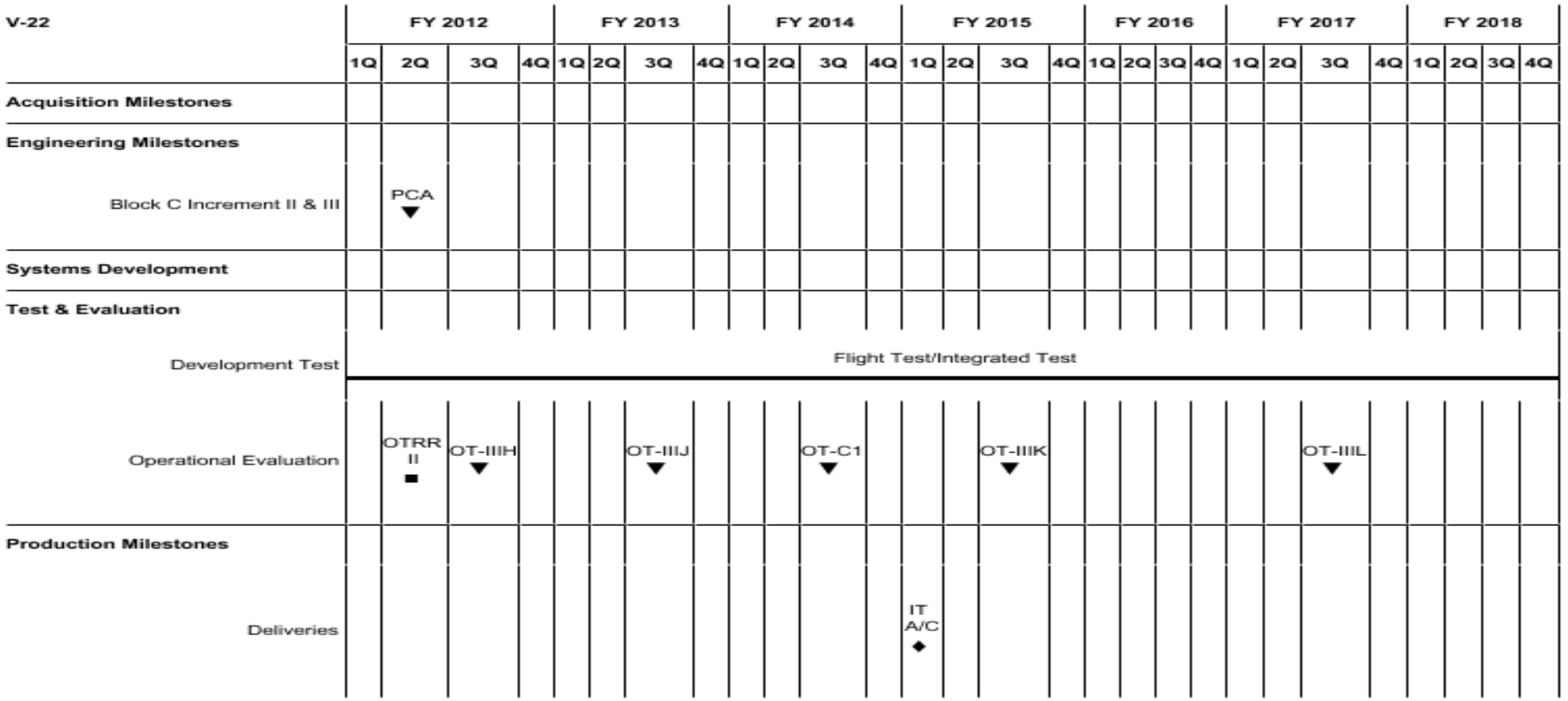

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
V-22				
Engineering Milestones: Block C Increment II & III: Block C Inc II & III PCA	2	2012	2	2012
Test & Evaluation: Development Test: Development Flight Test / Integrated Test (IT-IIID) & Continuous software sustainment developmental testing	1	2012	4	2018
Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIH)	3	2012	3	2012
Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIJ)	3	2013	3	2013
Test & Evaluation: Operational Evaluation: Joint and Allied Threat Awareness System Testing (OT-C1)	3	2014	3	2014
Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIK)	3	2015	3	2015
Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIL)	3	2017	3	2017
Test & Evaluation: Operational Evaluation: Operational Test Readiness Review (OTRR) II	2	2012	2	2012
Production Milestones: Deliveries: Instrumented Test Aircraft Delivery	1	2015	1	2015