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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				PE 0401318F: CV-22							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	17.648	13.223	28.027	-	28.027	25.438	21.223	14.656	14.484	Continuing	Continuing
654103: CV-22	17.648	13.223	28.027	-	28.027	25.438	21.223	14.656	14.484	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding.

A. Mission Description and Budget Item Justification

The CV-22 is a Special Operations Forces (SOF) variant of the 1st generation V-22 tilt-rotor, multi-mission aircraft. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and re-supply special operation forces into politically or militarily denied areas. The CV-22 Block 10 configuration added terrain following radar, additional fuel tanks, additional radios, flare/chaff dispensers, radio frequency/infrared and defensive countermeasures, weapons, situational awareness improvements, and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes, but is not limited to improved communications, situational awareness, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. A future capabilities increment is anticipated following Block 20 to enhance self-deployment capabilities such as Distributed Ice Protection and Engine Time-On-Wing. CV-22 RDT&E also provides for a baseline CV-22 flight test aircraft for validation/verification of Block 20 and various software and reliability and maintainability mods through 2017. The V-22 Joint Program Office is developing improved operational safety, suitability, and effectiveness capabilities in block increments. Ongoing planning and associated activities will take place to prevent diminishing manufacturing resources and obsolescence issues, as required. USSOCOM and USAF jointly fund correction of deficiencies and Block 20 development. USSOCOM funds the development, integration and testing of SOF unique mission capability, while USAF funds interoperability, basic air vehicle enhancements, integration of Air Force and Navy maintenance and information systems used with the V-22, support for operational testing, and CV-22 implementation and testing of MV-22 Block B and Block C changes. USSOCOM and USAF jointly fund development projects to meet operational safety, suitability, and effectiveness mission needs. This includes designing, prototyping, integrating, testing and fielding proposed solutions to emerging warfighter issues.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

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B. Program Change Summary (\$ in Millions)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total		
Previous President's Budget		18.270	20.723	22.658	-	22.658		
Current President's Budget		17.648	13.223	28.027	-	28.027		
Total Adjustments		-0.622	-7.500	5.369	-	5.369		
• Congressional General Reductions		-	-					
• Congressional Directed Reductions		-	-7.500					
• Congressional Rescissions		-	-					
• Congressional Adds		-	-					
• Congressional Directed Transfers		-	-					
• Reprogrammings		-	-					
• SBIR/STTR Transfer		-0.529	-					
• Other Adjustments		-0.093	-	5.369	-	5.369		
Change Summary Explanation								
FY11 funding was decreased \$0.093 million by Congressional General Reduction and is reflected in the Other Adjustment Row for FY11.								
FY12 funding was decreased \$7.500 million by the Appropriations Conference Committee.								
FY13 funding was increased \$5.369 million to fund development activities for Block 20 Long-Range Communications.								
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: CV-22 Block 20 RDT&E				17.648	13.223	23.027	-	23.027
Description: Develop, test, and evaluate additional capabilities for the CV-22 aircraft. The V-22 Joint Program Office is developing improved operational safety, suitability, and effectiveness.								
FY 2011 Accomplishments: RDT&E activities will continue on Block 20. Block 20 development includes, but is not limited to improved communications, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. Complete Line-of-sight communications Critical Design Review (CDR). Continue Increment 1, 2 & 3 efforts.								
FY 2012 Plans: RDT&E activities will continue on Block 20. Block 20 development includes, but is not limited to improved communications, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. Complete line-of-sight communications proof of concept testing. Complete long-range								

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C. Accomplishments/Planned Programs (\$ in Millions)									FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
communications System Requirements Review (SRR) and System Functional Review (SFR). Continue Increment 1, 2 & 3 efforts. FY 2013 Base Plans: RDT&E activities will continue on Block 20. Block 20 development includes, but is not limited to improved communications, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. Conduct PDR/CDR for improved Long Range Communications. Develop requirements for Mode 5 IFF alternatives. FY 2013 OCO Plans: N/A													
Title: Enhanced Self-deployment Capabilites Description: Future capabilities increment to enhance self-deployment capabilities such as Distributed Ice Protection and Engine Time-On-Wing. FY 2011 Accomplishments: N/A FY 2012 Plans: N/A FY 2013 Base Plans: Future capabilities increment to enhance self-deployment capabilities such as Distributed Ice Protection and Engine Time-On-Wing. FY 2013 OCO Plans: N/A									-	-	5.000	-	5.000
Accomplishments/Planned Programs Subtotals									17.648	13.223	28.027	-	28.027
D. Other Program Funding Summary (\$ in Millions)													
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost		
• PE1160421BB, Defense-wide, RDT&a...: Special Operations, CV-22 Development	13.976	10.775	1.800	0.000	1.800	0.900	0.180	0.000	0.000	0.000	518.719		

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D. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PE1160421BB, Defense-wide, Procurement: <i>Special Operations, CV-22 Modifications</i>	138.350	118.002	137.391	0.000	137.391	97.675	19.579	6.402	6.517	0.000	1,678.412
• PE 040318F, APAF, Procurement: <i>CV-22 Osprey, Procurement</i>	474.473	359.865	309.220	0.000	309.220	230.798	0.000	0.000	0.000	0.000	4,208.043
• PE 040318F, APAF, Modifications: <i>CV-22 Osprey, Modifications</i>	15.497	14.715	23.881	0.000	23.881	41.707	103.070	71.958	72.007	320.984	729.883
• PE 0604262N, USN, RDT&E: <i>V-22A, Development</i>	42.686	84.477	54.436	0.000	54.436	40.316	54.929	51.217	52.292	111.055	9,384.588

E. Acquisition Strategy

The V-22 Joint Program Office (NAVAIRSYSCOM PMA-275) ensures that CV-22 changes are incorporated into the ongoing V-22 production line with minimal impact. The JPO is developing new capabilities for the V-22 in blocks. Block 0 and Block 10 have completed development, and Block 20 is currently underway. NAVAIRSYSCOM awarded a cost plus fixed fee contract with the prime contractor in Dec 2007 for Block 20 development and test. Development activities for the V-22 program are performed by the prime contractor selected on a sole-source basis. Bell-Boeing is a strategic partnership between Bell Helicopter and Boeing Integrated Defense Systems.

F. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0401318F: CV-22	PROJECT 654103: CV-22
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development of 2 Production Representative Test Vehicles	SS/CPAF	Bell Boeing:Amarillo, TX	161.859	-		-		-		-	0.000	161.859	0.000
Block 10 Development	SS/CPAF	Bell Boeing:Amarillo, TX	44.025	-		-		-		-	0.000	44.025	0.000
Block 10 Development Technical Support	Various	Various:Various	11.886	-		-		-		-	0.000	11.886	0.000
Block 20 Development	SS/CPFF	Bell Boeing:Amarillo, TX	49.137	7.763	Mar 2012	14.132	Dec 2012	-		14.132	60.300	131.332	166.918
Enhanced Self-deployment Capability	Various	Various:Various,	-	-		5.000	Mar 2013	-		5.000	0.000	5.000	0.000
Situational Awareness Hazard Avoidance Federated Terminal (SHAFT) Contractual Engineering Task (CET)	C/CPAF	Manufacturing Technology Inc:Fort Walton Beach, FL	5.000	-		-		-		-	0.000	5.000	0.000
Subtotal			271.907	7.763		19.132		-		19.132	60.300	359.102	166.918

Remarks

The Block 20 Development effort target value of contract differs from the total cost because the target contract value includes some test related funding and USSOCOM MFP-11 funding for Special Operations Forces (SOF) peculiar development efforts.

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Interim Contractor Support	SS/CPAF	Bell Boeing:Amarillo, TX	26.889	-		-		-		-	0.000	26.889	0.000
Contractor Logistics Support for Test Aircraft	Various	Various:Various,	9.795	1.860	Mar 2012	3.345	Dec 2012	-		3.345	10.700	25.700	0.000
Subtotal			36.684	1.860		3.345		-		3.345	10.700	52.589	0.000

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	SS/CPFF	Bell Boeing:Amarillo, TX	26.119	2.600	Feb 2012	4.387	Feb 2013	-		4.387	10.700	43.806	0.000
Test & Evaluation Technical Support	MIPR	Various:Various,	5.573	1.000	Feb 2012	1.163	Dec 2012	-		1.163	14.500	22.236	0.000
Subtotal			31.692	3.600		5.550		-		5.550	25.200	66.042	0.000

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support	MIPR	Various:Various	2.119	-		-		-		-	0.000	2.119	0.000
Subtotal			2.119	-		-		-		-	0.000	2.119	0.000

			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			342.402	13.223		28.027		-		28.027	96.200	479.852	166.918

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 20 Increment 1 Development, Testing and Evaluation	1	2011	3	2013
-- Line-of-site Comm development and design reviews	1	2011	2	2012
-- Line-of-site Comm ground and flight tests	1	2012	3	2013
Block 20 Increment 2 Development, Testing and Evaluation	1	2011	3	2014
-- Situational awareness and avionics upgrades design reviews	1	2011	1	2012
-- Situational awareness/avionics upgrades ground & flight tests	1	2012	3	2014
Block 20 Increment 3 Development, Testing and Evaluation	1	2011	3	2015
-- Long range comm upgrades development and design reviews	3	2011	4	2013
-- Long range comm upgrades ground and flight tests	2	2013	3	2015
Future Capabilities Development	2	2013	4	2017