

UNCLASSIFIED

PE NUMBER: 0401318F
 PE TITLE: CV-22

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0401318F CV-22
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	12.756	16.583	18.562	41.777	39.260	33.138	24.103	Continuing	TBD
4103 CV-22	12.756	16.583	18.562	41.777	39.260	33.138	24.103	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and resupply special operation forces into politically or militarily denied areas. The CV-22 Block 10 configuration adds terrain following radar, additional fuel tanks, additional radios, flare/chaff dispensers, RF warning receiver and jammer, infrared countermeasures, and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes capabilities such as radio frequency and infrared countermeasures improvements, co-site communications interference, electro-optical navigational sensor, tactical data link, intelligence broadcast receiver functionality, improved aero performance, anti-skid brakes, civil GPS, improved desert environment suitability, TF/TA radar improvements, voice/data recorder, and other requirements specified in the V-22 Block C/20 Capabilities Development Document. The V-22 Joint Program Office is using spiral acquisition to develop improved operational safety, suitability, and effectiveness capabilities in block increments.

USSOCOM and USAF jointly fund Block 10 enhancements, correction of deficiencies, and Block 20 development. USSOCOM funds the development, integration and testing of SOF 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, and testing proposed solutions to emerging issues.

(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	26.501	16.688	18.717
(U) Current PBR/President's Budget	12.756	16.583	18.562
(U) Total Adjustments	-13.745	-0.105	
(U) Congressional Program Reductions	0.000	0.000	
Congressional Rescissions		-0.105	
Congressional Increases			
Reprogrammings	-13.000		
SBIR/STTR Transfer	-0.745	-0.105	

(U) Significant Program Changes:

The Air Force reprogrammed \$13.0M to other priorities due to under execution.

Exhibit R-2a, RDT&E Project Justification

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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4103 CV-22	12.756	16.583	18.562	41.777	39.260	33.138	24.103	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and resupply special operation forces into politically or militarily denied areas. The CV-22 Block 10 configuration adds terrain following radar, additional fuel tanks, additional radios, flare/chaff dispensers, RF warning receiver and jammer, infrared countermeasures, and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes capabilities such as radio frequency and infrared countermeasures improvements, co-site communications interference, electro-optical navigational sensor, tactical data link, intelligence broadcast receiver functionality, improved aero performance, anti-skid brakes, civil GPS, improved desert environment suitability, TF/TA radar improvements, voice/data recorder, and other requirements specified in the V-22 Block C/20 Capabilities Development Document. The V-22 Joint Program Office is using spiral acquisition to develop improved operational safety, suitability, and effectiveness capabilities in block increments.

USSOCOM and USAF jointly fund Block 10 enhancements, correction of deficiencies, and Block 20 development. USSOCOM funds the development, integration and testing of SOF 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, and testing proposed solutions to emerging issues.

(U) B. Accomplishments/Planned Program (\$ in Millions)

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Block 10 Development	2.548	1.820	1.510
(U) Block 20 Development	2.086	8.070	11.542
(U) Block 10/20 Test & Evaluation	0.539	4.693	3.510
(U) Support	6.583	1.000	1.000
(U) Management	1.000	1.000	1.000
(U) Total Cost	12.756	16.583	18.562

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) 3010 BP10/11/16/AP, PE 0401318F	387.044	583.766	487.211	503.785	434.656	451.636	461.858	586.907	3,896.863

Total Cost number does not include \$1B procurement funding prior to FY2007.

Exhibit R-2a, RDT&E Project Justification

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4103 CV-22**(U) C. Other Program Funding Summary (\$ in Millions)**

FY2007 funding total includes \$99.252M in GWOT supplemental for one additional CV-22.

FY2008 funding totals do not include \$492.500M FY2008 GWOT requirements still pending Congressional consideration.

(U) D. Acquisition Strategy

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIR PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget. Block 10 RDT&E funding is sent from USAF and USSOCOM to PMA-275 to be placed on contract with the V-22 prime contractor. Block 10 capability is required for compliance with the Joint Operational Requirements Document and associated Milestone III Capabilities Production Document (CPD). Block 20 and subsequent block upgrades are planned to follow the same acquisition strategy, with PMA-275 ensuring the integration of CV-22 unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV-22.

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.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u>													
Development of 2 Production Representative Test Vehicles	SS, CPAF	Bell-Boeing	185.422								185.422		
Block 10 Development	SS, CPAF	Bell-Boeing	30.072	0.444	Aug-07	1.820	Mar-08	1.510	Mar-09	Continuing	TBD		
Block 10 Development	Multiple	Multiple	9.782	2.104	Mar-07					Continuing	TBD		
Block 20 Development	SS, CPAF	Bell-Boeing	1.864	2.086	May-07	8.070	Dec-07	11.542	Dec-08	Continuing	TBD		
Block 20 Development	Multiple	Multiple								Continuing	TBD		
Subtotal Product Development			227.140	4.634		9.890		13.052		Continuing	TBD	0.000	
Remarks:													
(U) <u>Support</u>													
Interim Contractor Support	SS, CPAF	Bell-Boeing, Dyn-Corp	19.306	6.583	Dec-06	1.000	Dec-07	1.000	Dec-08	Continuing	TBD		
Subtotal Support			19.306	6.583		1.000		1.000		Continuing	TBD	0.000	
Remarks:													
(U) <u>Test & Evaluation</u>													
Block 10/20 Testing & Integration	SS, CPAF	Bell-Boeing, Rolls Royce	11.600	0.539	Sep-07	4.693	Feb-08	3.510	Feb-09	Continuing	TBD		
Block 10/20 Testing, Integration and Support	MIPR	Multiple	3.539								3.539		
Subtotal Test & Evaluation			15.139	0.539		4.693		3.510		Continuing	TBD	0.000	
Remarks:													
(U) <u>Management</u>													
Management & Integration Support	MIPR	Multiple	1.000	1.000	Dec-06	1.000	Dec-07	1.000	Dec-08	Continuing	TBD		
Subtotal Management			1.000	1.000		1.000		1.000		Continuing	TBD	0.000	
Remarks:													
(U) Total Cost			262.585	12.756		16.583		18.562		Continuing	TBD	0.000	

Exhibit R-4, RDT&E Schedule Profile

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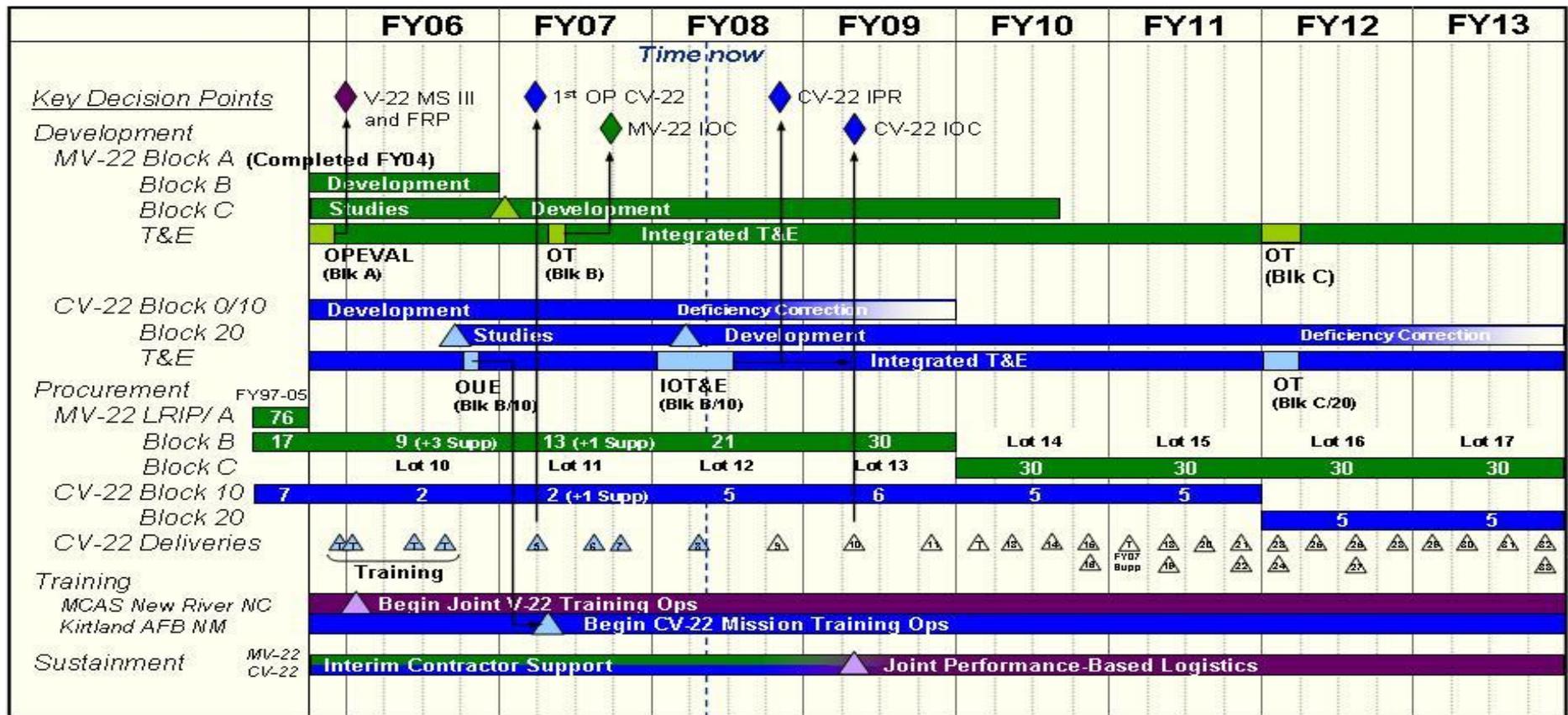
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CV-22 Schedule



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Exhibit R-4a, RDT&E Schedule Detail

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(U) <u>Schedule Profile</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Block 10 Development/Correction of Deficiencies	1-4Q	1-4Q	1-4Q
(U) Block 0/10 Flight Test	1-4Q	1-4Q	1-4Q
(U) Operational Test & Evaluation		1-3Q	
(U) Block 20 Studies/Development/Test	1-4Q	1-4Q	1-4Q
(U) Aircraft Deliveries	1-4Q	1-4Q	1-4Q
(U) CV-22 IOC			2Q