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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537
SF200: <i>Special Operations CV-22 Development/SF200</i>	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537

**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. The CV-22 will provide long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment was completed in FY 2007, and the Block 20 increment started in FY 2008.

Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness Station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, more robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Design and Development started in FY 2008.

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0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>
BA 7: <i>Operational Systems Development</i>	

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

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	40.120	12.687	0.000	0.000	0.000
Current President's Budget	30.970	12.634	14.406	0.000	14.406
Total Adjustments	-9.150	-0.053	14.406	0.000	14.406
• Congressional General Reductions		-0.053			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-7.600	0.000			
• SBIR/STTR Transfer	-1.550	0.000			
• Other Adjustment	0.000	0.000	14.406	0.000	14.406

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$9.150 million is due to Small Business Innovative Research transfer (-\$1.550 million) and a reprogramming for risk reduction efforts on a Precision Strike Package MC-130 Multi-Mission Modification (-\$7.600 million).

FY10: Decrease of -\$0.053 million is due to Section 8097 congressional general reduction.

FY11: Net increase of \$14.406 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>				SF200: <i>Special Operations CV-22 Development/SF200</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
SF200: <i>Special Operations CV-22 Development/SF200</i>	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537
Quantity of RDT&E Articles											

**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. The CV-22 will provide long range, high speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments supported with rapid prototyping. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment completed in FY 2007, and the Block 20 increment started in FY 2008.

Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness Station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Development and Demonstration started in FY 2008.

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

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
CV-22 Block 20	30.970	12.634	14.406	0.000	14.406

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> FY09 Continued flight test support and design and development of Block 20.</p> <p><i>FY 2010 Plans:</i> FY10 Continues flight test support and design and development of Block 20.</p> <p><i>FY 2011 Base Plans:</i> FY11 Continue flight test support and design and development of Block 20.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	30.970	12.634	14.406	0.000	14.406

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC:: CV-22 SOF MOD	155.030	114.200	124.035		124.035	108.002	114.185	84.158	6.308	Continuing	Continuing

**D. Acquisition Strategy**

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIRSYSCOM 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 Research, Development, Testing, and Evaluation funding was sent from USSOCOM to NAVAIRSYSCOM 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. Block 20 and subsequent block upgrades are planned to follow the same acquisition strategy, with NAVAIRSYSCOM PMA-275 ensuring the integration of SOF-unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV 22.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Completed Efforts	Various/ Various	VARIOUS VARIOUS	384.605	0.000		0.000		0.000		0.000	0.000	384.605	Continuing
Integration, Assembly, Test, and Checkout (Block 20)	SS/CPFF	Bell-Boeing Amarillo, TX	36.012	0.000		6.513	Dec 2010	0.000		6.513	2.874	45.399	Continuing
Systems Engineering	SS/CPFF	Raytheon Indianapolis, IN	5.882	4.709	Dec 2009	0.012	Dec 2010	0.000		0.012	0.000	10.603	Continuing
<b>Subtotal</b>			426.499	4.709		6.525		0.000		6.525	2.874	440.607	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Completed Efforts	Various/ Various	VARIOUS VARIOUS	43.653	0.000		0.000		0.000		0.000	0.000	43.653	Continuing
Systems Test and Evaluation (Block 20)	Various/ Various	Bell-Boeing, Amarillo, TX, and 413FLTS Hurlburt Field, FL	2.250	3.786	Nov 2009	5.117	Nov 2010	0.000		5.117	3.780	14.933	Continuing
System Test and Evaluation (ATA)	Various/ Various	Bell-Boeing and DynCorp	9.565	4.139	Dec 2009	2.764	Nov 2010	0.000		2.764	2.876	19.344	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total		Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date			
		Amarillo, TX ;Fort Worth, TX												
<b>Subtotal</b>			55.468	7.925		7.881		0.000		7.881	6.656	77.930		

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	481.967	12.634		14.406		0.000		14.406	9.530	518.537	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>

Exhibit R-4, RDT&E Program Schedule Profile		Date: FEBRUARY 2010																																			
Appropriation/Budget Activity		Program Element Number and Name																Project Number and Name																			
RDT&E/7		PE1160421BB/Special Operations CV-22 Development																SF200/CV-22																			
Fiscal Year		2009				2010				2011				2012				2013				2014				2015											
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
CV-22 Block 20 Development/Test		▲																																			
CV-22 Initial Operational Capability			▲																																		

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
CV-22 Block 20 Development/Test	1	2009	4	2012
CV-22 Initial Operational Capability	2	2009	2	2009

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