

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE February 2003	
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0401130F C-17 Aircraft					
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	106,005	153,797	184,089	200,215	141,525	86,443	120,044	153,810	0	7,139,869
2569 C-17 Aircraft	106,005	153,797	184,089	200,215	141,525	86,443	120,044	153,810	0	7,094,986
4886 Large Aircraft Infrared Counter Measures (LAIRCM)	0	0	0	0	0	0	0	0	0	44,883
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY02 and later funds for LAIRCM were ZBTed to PE 41134F.

(U) **A. Mission Description**
The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national security strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support producibility enhancements and performance improvements.

(U) **B. Budget Activity Justification**
This program is budget activity 7, Operational System Development, because the program has completed Milestone III and is continuing producibility and performance improvements to support full-rate production and increase the operational capability of the C-17 through programmed modifications.

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(U) C. Program Change Summary (\$ in Thousands)

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	109,513	157,213	135,674	7,139,869
(U) Appropriated Value	109,513	157,213		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions		-1,662		
b. Small Business Innovative Research	-2,992			
c. Omnibus or Other Above Threshold Reprogram		-1,754		
d. Below Threshold Reprogram				
e. Rescissions	-516			
(U) Adjustments to Budget Years Since FY 2003 PBR			48,415	
(U) Current Budget Submit/FY 2004 PBR	106,005	153,797	184,089	7,139,869

(U) Significant Program Changes:

A second project, 674886, was added to the C-17 Program Element for the Large Aircraft Infrared Countermeasures (LAIRCM). All FY 02 and later funds for LAIRCM were ZBTed to PE 41134F.

FY04 adjustment includes funding for additional C-17 Global Air Traffic Management (GATM) requirements, Mission Computer/Central Integrated Processor, and Cargo Delivery System Improvements.

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COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
2569 C-17 Aircraft	106,005	153,797	184,089	200,215	141,525	86,443	120,044	153,810	0	7,094,986

(U) **A. Mission Description**

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national security strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support producibility enhancements and performance improvements.

(U) **FY 2002 (\$ in Thousands)**

(U) \$54,620	Performance Improvement Development & Testing
(U) \$29,116	Systems Engineering / Program Management
(U) \$12,769	Contractor System Test & Evaluation
(U) \$9,500	Producibility Enhancement / Performance Improvement (PE/PI) Government Flight Test
(U) \$106,005	Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$91,496	Performance Improvement Development & Testing
(U) \$35,900	Systems Engineering/Program Management
(U) \$16,051	Contractor System Test & Evaluation
(U) \$10,350	Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test
(U) \$153,797	Total

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(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands)

(U)	\$113,639	Performance Improvement Development & Testing
(U)	\$39,200	Systems Engineering/Program Management
(U)	\$18,550	Contractor System Test & Evaluation
(U)	\$12,700	Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test
(U)	\$184,089	Total

(U) **B. Project Change Summary**(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</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>Estimate</u>	<u>Complete</u>	
(U) APAF, MYP, BA02, PE0401130F	2,789,394	3,147,937	2,017,270	2,556,365	2,590,833	2,372,600	303,200	54,700	0	15,832,299
(U) APAF, ICS, PE0401130F	489,390	532,750	927,627	907,968	781,100	778,801	728,806	777,316	0	5,923,758
(U) APAF, A/C Mods, BA05, PE0401130F	98,764	49,357	20,113	9,248	221,059	254,040	446,408	438,568	0	1,537,557
(U) MilCon, Facilities, PE0401130F	40,983	73,133	70,047	61,800	92,400	148,800	7,400	1,400	0	495,963

(U) **D. Acquisition Strategy**

The C-17 Acquisition Strategy is based on five separate contracts to support the entire scope of the C-17 weapon system. These five contracts are: 1) a multi-year procurement (MYP) aircraft contract (to economically purchase the full complement of production aircraft) - (APAF); 2) a Producibility Enhancement and Performance Improvement (PE/PI) contract (to develop cost reduction changes, capability enhancements, and design fixes to service-revealed problems) - (RDT&E, APAF); 3) a Flexible Sustainment (field support) contract (to support the current and future fielded aircraft) - (APAF); 4) a MYP engine contract (for Government Furnished Equipment [GFE] engines) - (APAF); and 5) a set of simulator and training contracts: two aircrew training systems (ATS) contracts (one for aircrew simulators and one for training & concurrency upgrades), and a maintenance training device contract (for devices & concurrency upgrades) - (APAF).

The congressionally mandated Mobility Requirements Study (MRS), initially forwarded to Congress on 23 Jan 92 and updated in 1995 and again in 2001, validated the need for the C-17 aircraft. Two C-17 Defense Acquisition Board (DAB) decisions, contained in the 3 Nov 95 and 1 Feb 96 USD(A&T) Acquisition Decision

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2569(U) **D. Acquisition Strategy Continued**

Memoranda (ADM), directed the Air Force to proceed with a 120-aircraft production program and pursue a multi-year procurement for the last 80 aircraft. The FY96 Supplemental Appropriations Act and FY97 Defense Appropriations Act approved a 7-year MYP program. The Air Force is proceeding with an 80-aircraft MYP program (along with engines to support them) to complete a 120-aircraft total purchase at the maximum affordable rate (FY97-03 Quantity: 8-9-13-15-12-15-8), beginning with the economic order quantity (EOQ) funding in FY96. Sixty additional C-17s have been programmed at the end of the 80-aircraft MYP to replace Air Mobility Command's (AMC's) C-141 aircraft and meet requirements not included in the 120 aircraft program. The adjusted program is (FY03-07 Quantity): 7-11-14-15-13.

During FY04 the Air Force will continue evaluation of commercial C-17 Civil Reserve Air Fleet (CRAF) applications and feasibility. The Air Force will evaluate commercial market opportunities with industry to reduce the Government's risk. In addition, commercial practices and design changes required for an FAA-certifiable version of the C-17 will be investigated. Airlift service agreements with commercial partners, however, will not be negotiated until authorized by law.

New Starts For FY 04: Mission Computer Core Integration Processor (CIP)

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Incremental Funding of Ongoing Performance Improvement Projects (FY03)						X						
(U) Software Block 16 - (FY03)										X		
(U) T1 Integrated Drive Generator (FY03)							X					
(U) Liquid Oxygen Bottle Crew Armor (12.7 mm) (FY03)							X					
(U) Required Navigation Performance (RNP) Improvements (FY03)							X					
(U) Army Communication Requirements (SECOMP-1) (FY03)							X					
(U) Covert Lighting (FY03)							X					
(U) Mission Computer /Core Integrated Processor												X

* = completed event - contract obligation

X = planned event - contract obligation

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE February 2003	
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT	
07 - Operational System Development					0401130F C-17 Aircraft					2569	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
					FY 2002		FY 2003		FY 2004		
(U) Contractor Furnished Engineering & Test					96,378		143,317		171,250		
(U) Government Test & Other Government Costs (OGC)					9,627		10,480		12,839		
(U) Total					106,005		153,797		184,089		
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
(U) <u>Performing Organizations:</u>											
<u>Contractor or</u>		<u>Contract</u>									
<u>Government</u>		<u>Method/Type</u>		<u>Award or</u>		<u>Performing</u>		<u>Project</u>			
<u>Performing</u>		<u>or Funding</u>		<u>Obligation</u>		<u>Activity</u>		<u>Office</u>		<u>Total Prior</u>	
<u>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>to FY 2002</u>	
								<u>Budget</u>		<u>Budget</u>	
								<u>FY 2002</u>		<u>FY 2003</u>	
								<u>FY 2004</u>		<u>Budget to</u>	
										<u>Complete</u>	
										<u>Total</u>	
										<u>Program</u>	
<u>Product Development Organizations</u>											
Boeing		C,FPI/FP		8/31/81		5,000,000		5,190,366		4,954,767	
Boeing		C,CPFF		7/13/95		1,352,095		1,352,095		483,368	
Pratt & Whitney		C,FP		5/24/91		25,346		25,346		25,346	
Boeing		C,FPI		4/14/89		83,885		83,885		83,885	
Pratt & Whitney		FP+EPA		4/18/95		7,831		7,831		7,506	
<u>Support and Management Organizations</u>											
Mission Support OGC		PO						97,615		0	
Site Activation OGC		PO						1,539		0	
Miscellaneous								22,400		0	
<u>Test and Evaluation Organizations</u>											
Combined Test Force		PO						259,245		9,500	
Wright Labs/Arnold Eng		PO						10,357		127	
Dev Center										10,350	
Other		PO						3,030		130	
										139	
										807	
										74,000	
										365,795	
										11,560	
										3,030	

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07 - Operational System Development				0401130F C-17 Aircraft			2569		
(U) <u>Government Furnished Property:</u>									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
None									
<u>Support and Management Property</u>									
None									
<u>Test and Evaluation Property</u>									
None									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				5,554,872	96,378	143,317	171,250	627,230	6,593,047
Subtotal Support and Management				121,554	0	0		0	121,554
Subtotal Test and Evaluation				272,632	9,627	10,480	12,839	74,807	380,385
Total Project				5,949,058	106,005	153,797	184,089	702,037	7,094,986

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