

**UNCLASSIFIED**

<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>	DATE <b>February 2002</b>
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<b>BUDGET ACTIVITY</b> <b>05 - Engineering and Manufacturing Development</b>	<b>PE NUMBER AND TITLE</b> <b>0604226F B-1B</b>	<b>PROJECT</b> <b>4596</b>
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COST (\$ in Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
4596 Conventional Mission Upgrades	148,097	150,799	160,688	90,637	80,385	83,922	53,620	52,500	1,972,350
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

(U) **A. Mission Description**  
 This program provides RDT&E funding for the B-1B Conventional Mission Upgrade Program (CMUP). Funding in the FYDP includes integration of advanced conventional weapons including variants of the Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), Joint Stand-Off Weapon (JSOW), and Joint Air to Surface Stand-Off Missile (JASSM). Funding for upgrades to the Electronic Countermeasures (ECM) suite is also in the FYDP. Additional efforts include an upgrade to the avionics computers to enable simultaneous carriage of multiple weapon types, provide growth capability, and reduce support costs; development of the B-1B mission planning interface to the Air Force Mission Support System (AFMSS); and upgrades to the B-1B training systems to keep them current with the aircraft's configuration. The development efforts to improve the display of threat data and situational awareness (S/A) information (to include datalink) to the aircrew; to record mission information; to design fixes that address near term reliability, maintainability, diminishing manufacturing sources (DMS), and performance deficiencies on selected line replaceable units (LRUs) of the ALQ-161A defensive system; and to address reliability and DMS deficiencies along with performance improvements in the radar subsystem are also included. Funding is also provided for engineering and planning studies for potential future weapon system enhancements (weapons, sensors, and avionics); and weapon system operational/safety, supportability, maintainability, reliability, and Total Ownership Cost (TOC) support improvements.

- (U) FY 2001 (\$ in Thousands)
- (U) \$98,637 Continued Conventional Mission Upgrade Program (CMUP) contractual efforts
- (U) \$453 Government Furnished Equipment (GFE)
- (U) \$37,588 Government flight test, Live Fire Test & Evaluation and General Test Support
- (U) \$4,943 Advisory and Assistance Services (A&AS)
- (U) \$2,950 Modeling & Simulation / Studies & Analyses
- (U) \$3,526 Program Management & Administration (PMA)
- (U) \$148,097 Total

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BUDGET ACTIVITY		PE NUMBER AND TITLE		PROJECT	
<b>05 - Engineering and Manufacturing Development</b>		<b>0604226F B-1B</b>		<b>4596</b>	
<b>(U) <u>A. Mission Description Continued</u></b>					
<b>(U) <u>FY 2002 (\$ in Thousands)</u></b>					
(U)	\$110,269	Continued Conventional Mission Upgrade Program (CMUP) contractual efforts			
(U)	\$572	Government Furnished Equipment (GFE)			
(U)	\$29,466	Government flight test, Live Fire Test & Evaluation and General Test Support			
(U)	\$4,598	Advisory and Assistance Services (A&AS)			
(U)	\$2,450	Modeling & Simulation / Studies & Analyses			
(U)	\$3,444	Program Management & Administration (PMA)			
(U)	\$150,799	Total			
<b>(U) <u>FY 2003 (\$ in Thousands)</u></b>					
(U)	\$134,833	Continued Conventional Mission Upgrade Program (CMUP) contractual efforts			
(U)	\$332	Government Furnished Equipment (GFE)			
(U)	\$21,538	Government flight test, Live Fire Test & Evaluation and General Test Support			
(U)	\$515	Advisory and Assistance Services (A&AS)			
(U)	\$2,770	Modeling & Simulation / Studies & Analyses			
(U)	\$700	Program Management & Administration (PMA)			
(U)	\$160,688	Total			
<b>(U) <u>B. Budget Activity Justification</u></b>					
(U) The B-1 CMUP program is included in Budget Activity 5, Engineering and Manufacturing Development. The CMUP program provides new capabilities to the B-1B weapon system, including GPS, Near-Precision Weapons, enhanced computers, datalink, and upgraded ECM. These capabilities require significant software development and testing.					
<b>(U) <u>C. Program Change Summary (\$ in Thousands)</u></b>					
		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
(U)	Previous President's Budget	156,671	194,507	95,299	1,648,348
(U)	Appropriated Value	158,122	194,507		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-1,107	-43,708		
	b. Small Business Innovative Research	-5,230			
Project 4596		Page 2 of 9 Pages		Exhibit R-2 (PE 0604226F)	

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BUDGET ACTIVITY <b>05 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604226F B-1B</b>				PROJECT <b>4596</b>		
<b>(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u></b>										
				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>			<u>Total Cost</u>	
	c. Omnibus or Other Above Threshold Reprogram			-1,140						
	d. Below Threshold Reprogram			-2,205						
	e. Rescissions			-343						
(U)	Adjustments to Budget Years Since FY 2002 PBR					65,389			324,002	
(U)	Current Budget Submit/FY 2003 PBR			148,097	150,799	160,688			1,972,350	
<b>(U) <u>Significant Program Changes:</u></b>										
(U) FY02: Congressional/General Reductions: -\$43.708M (-\$42.200M ANG operations; -\$1.438 Cong Act Multi Appn; -\$0.070 CGR)										
(U) FY03: \$65.389M for increased lethality, survivability, and supportability.										
<b>(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u></b>										
		<u>FY 2001</u>	<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>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)	Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP11, Mods	48,267	36,823	98,026	134,341	102,975	132,290	130,541	434,060	1,117,323
(U)	Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP16, Initial Spares	12,759	15,363	7,815	7,638	31,839	28,208	20,504	0	124,126
(U)	Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP12, Common Support Equipment	1,900	20,598	18,703	34,171	38,569	18,621	5,946	0	138,508
(U)	Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP13, Post Production Charges	16,500	6,400	1,969	8,932	12,916	14,071	10,434	0	71,222
(U)	Appn 10, PE 0207442F,	0	0	0	30,428	22,604	22,181	22,817	5,662	103,692
Project 4596		Page 3 of 9 Pages						Exhibit R-2 (PE 0604226F)		

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002	
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604226F B-1B				PROJECT 4596	
<b>(U) D. Other Program Funding Summary (\$ in Thousands)</b>									
	<u>FY 2001</u>	<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>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>	
B-1B, EW Production (TDS/IDECM) BP11, Mods (CMUP-related only)									
(U) Appn 10, PE 0207446F, Bomber TDL Core BP11	0	0	0	0	132,099	98,840	56,709	74,700	362,348
(U) Appn 10, PE 027434F, TDL Infrastructure BP11 Related RDT&E:	0	0	0	0	0	0	8,485	34,900	43,385
(U) Program Element 0205164F, Global Positioning System (GPS)									
(U) Program Element 0207325F, Joint Air to Surface Standoff Missile (JASSM)									
(U) Program Element 0604618F/N, Joint Direct Attack Munition (JDAM)									
(U) Program Element 0604727F/N, Joint Stand-Off Weapon (JSOW)									
(U) Program Element 0604754F, Joint Tactical Information Distribution System (JTIDS)									
(U) Program Element 0604600F, Wind Corrected Munitions Dispenser (WCMD)									
(U) Program Element 0208006F, Air Force Mission Support System (AFMSS)									
(U) Program Element 0604270F, Electronic Warfare (EW) Development									
(U) Program Element 0207446F, Bomber Tactical Datalink (TDL)									
(U) Program Element 0207434F, Tactical Datalink Infrastructure (TDL)									
<b>(U) E. Acquisition Strategy</b>									
(U) Key elements of the overall CMUP acquisition strategy include: use of a sole source contract with a prime/integrating contractor; assignment of Total System Installed Performance Responsibility (TSIPR) to the integrating contractor; use of cost plus award fee (CPAF) development contracts; and combining developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime and differences in fielded configurations.									
<b>(U) F. Schedule Profile</b>									
				<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>	

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<b>05 - Engineering and Manufacturing Development</b>					<b>0604226F B-1B</b>					<b>4596</b>				
<b>(U) <u>F. Schedule Profile Continued</u></b>														
		<u>FY 2001</u>					<u>FY 2002</u>					<u>FY 2003</u>		
		1	2	3	4	1	2	3	4	1	2	3	4	
(U)	Defensive System Upgrade Program													
(U)	T&E Milestones													
(U)	- Complete subsystem qual test								X					
(U)	- Flight Test Start				*									
(U)	- Complete DT&E												X	
(U)	Mission Planning System (MPS)													
(U)	T&E Milestones													
(U)	- S/W Release 2.0 Test Readiness Review/FQT				*									
(U)	Contract Milestones													
(U)	- S/W Release 2.02 Delivery							X						
(U)	Training Systems													
(U)	Acquisition Milestones													
(U)	- Complete JDAM/GPS EMD				*									
(U)	Weapons													
(U)	Engineering Milestones													
(U)	- JSOW/JASSM CDR							X						
(U)	T&E Milestones													
(U)	- Start Computer/WCMD Flight Test				*									
(U)	- Start JSOW/JASSM Ground Test												X	
(U)	- Complete Computer/WCMD DT&E								X					

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002			
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT			
<b>05 - Engineering and Manufacturing Development</b>				<b>0604226F B-1B</b>			<b>4596</b>			
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>										
						<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>
(U)	CMUP contractual efforts					98,637		110,269		134,833
(U)	Government flight test					37,588		29,466		21,538
(U)	Government Furnished Equipment					453		572		332
(U)	Advisory and Assistance Services (A&AS)					4,943		4,598		515
(U)	Modeling & Simulation / Studies & Analyses					2,950		2,450		2,770
(U)	Program Management & Administration (PMA)					3,526		3,444		700
(U)	Total					148,097		150,799		160,688
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>										
<b>(U) Performing Organizations:</b>										
	<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>Budget</u>	<u>Budget</u>
	<u>Activity</u>		<u>Vehicle</u>		<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>
									<u>FY 2003</u>	<u>Budget to</u>
									<u>Complete</u>	<u>Total</u>
										<u>Program</u>
<u>Product Development Organizations</u>										
(U)	DSUP									
(U)	TBC	SS/CPAF	May 93	31,918	31,918	31,918	0	0	0	0
(U)	TBC	SS/CPAF	June 97	341,079	341,079	191,771	46,388	50,290	67,851	11,507
(U)	Mission Planning System									
(U)	Lockheed-Sanders	C/CPAF	Aug 94	545	545	545	0	0	0	0
(U)	Logicon	CPAF	Dec 95	54,566	54,566	47,416	3,883	1,299	3,950	1,308
(U)	Training Systems									
(U)	Lockheed-Martin	C/CPAF	Jun 94	13,284	13,284	13,284	0	0	0	0
(U)	Intelx	C/CPAF	Jun 99	34,517	34,517	18,548	9,069	800	5,900	23,985
(U)	Weapons									
(U)	TBC - CBUs	SS/CPFF	Mar 93	4,960	4,960	4,960	0	0	0	0
(U)	TBC - CBUs	SS/CPFF	Jan 94	16,314	16,314	16,314	0	0	0	0
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										February 2002	
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<b>05 - Engineering and Manufacturing Development</b>					<b>0604226F B-1B</b>					<b>4596</b>	
<b>(U) <u>Performing Organizations Continued:</u></b>											
<u>Product Development Organizations</u>											
(U)	TBC - FWEP	SS/T&M	Sep 98	3,866	3,866	3,866	0	0	0	0	3,866
(U)	TBC - EFX	SS/T&M	Feb 98	5,727	5,727	5,727	0	0	0	0	5,727
(U)	TBC- JDAM/GPS	SS/CPFF	Aug 93	72,223	72,223	72,223	0	0	0	0	72,223
Pre-EMD											
(U)	TBD - INS/GSS	TBD	Jan 06	49,900	49,900					49,702	49,702
(U)	TBD - RADAR	TBD	Jan 03	105,100	105,100	0	0	0	10,000	84,245	94,245
Improvements											
(U)	AIL - ALQ-161	SS/CPFF	Apr 02	27,852	27,852	0	0	1,600	11,628	11,007	24,235
R&M/DMS											
(U)	TBC - S/A	SS/CPFF	Mar 02	5,356	5,356	0	0	2,950	2,406	0	5,356
Improvements											
(U)	TBD - TSAS/AVTR	TBD	Jan 03	8,800	8,800	0	0	0	6,000	0	6,000
Improvements											
(U)	TBD - VSD	TBD	Jan 07	33,300	33,300	0	0	0	0	23,200	23,200
Improvements											
(U)	TBD - CITS/EMUX	TBD	Jan 05	44,500	44,500	0	0	0	0	29,400	29,400
R&M/DMS											
(U)	TBD -JMPS	TBD	Jan 05	18,400	18,400	0	0	0	0	18,400	18,400
Transistion											
(U)	TBD -FIDL	TBD	Jan 04	73,000	73,000	0	0	0	0	72,960	72,960
(U)	TBC- JDAM/ GPS	SS/CPAF	Mar 95	272,404	272,404	272,404	0	0	0	0	272,404
EMD											
(U)	TBC-ACBM	SS/CPAF	Mar 98	1,900	1,900	1,900	0	0	0	0	1,900
(U)	TBC-Wing Sweep	SS/T&M	Jul 97	1,089	1,089	1,089	0	0	0	0	1,089
(U)	TBC- Computer	SS/CPAF	May 96/Jan 97	265,761	265,761	172,041	19,828	21,733	3,646	0	217,248
(U)	TBC-WCMD	SS/CPAF	May 96/Jan	67,460	67,460	45,872	8,163	11,819	1,590	0	67,444

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BUDGET ACTIVITY										PROJECT	
05 - Engineering and Manufacturing Development										4596	
PE NUMBER AND TITLE											
0604226F B-1B											
<b>(U) Performing Organizations Continued:</b>											
<u>Product Development Organizations</u>											
			97								
(U)	Lockheed-Martin - WCMD	SS/CPAF	Jan 97	1,801	1,801	801	1,000	0	0	0	1,801
(U)	TBC- JSOW/ JASSM	SS/CPAF	Mar 99	63,167	63,167	17,053	6,469	19,204	21,816	0	64,542
(U)	Lockheed- Martin - JASSM	SS/T&M	Jan 99	11,743	11,743	6,822	2,677	1,871	646	0	12,016
(U)	Raytheon -JSOW	SS/T&M	Jan 99	3,283	3,283	1,350	1,160	500	0	0	3,010
(U)	TBD - Future CMUP	TBD	TBD	300	300	0	0	100	100	100	300
Related EMD											
<u>Support and Management Organizations</u>											
(U)	A&AS	Various	Annual	38,418	38,418	24,847	4,943	4,598	515	0	34,903
(U)	Studies & Analyses / Modeling & Sim	Various	Various	28,009	28,009	22,739	2,950	2,450	2,770	1,700	32,609
(U)	Program Mgmt & Admin	Various	Various	44,296	44,296	29,598	3,526	3,444	700	0	37,268
<u>Test and Evaluation Organizations</u>											
(U) Modernization											
(U)	AFFTC	P.O.	Various							74,348	74,348
(U)	DSUP										
(U)	AFFTC	P.O.	Various	94,395	94,395	14,042	16,751	14,501	13,390	3,587	62,271
(U)	Weapons										
(U)	AFFTC	P.O.	Various	125,182	125,182	81,195	20,837	13,068	7,448	2,960	125,508
<b>(U) Government Furnished Property:</b>											
<u>Contract</u>											
	<u>Item</u>	<u>Method/Type</u>	<u>Award or</u>								
	<u>Description</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>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>

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BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604226F B-1B			PROJECT 4596			
<b>(U) Government Furnished Property Continued:</b>										
<u>Item</u>	<u>Contract</u>	<u>Method/Type</u>	<u>Award or</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>or Funding</u>	<u>Vehicle</u>	<u>Obligation</u>	<u>Delivery</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>										
(U) DSUP										
(U) Various	Various	Various	Various	Various	4,069	300	500	300	0	5,169
(U) Weapons										
(U) Various	Various	Various	Various	Various	1,931	153	72	32	32	2,220
<u>Support and Management Property</u>										
<u>Test and Evaluation Property</u>										
<u>Subtotals</u>					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
					<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					931,904	99,090	112,738	135,865	325,846	1,605,443
Subtotal Support and Management					77,184	11,419	10,492	3,985	1,700	104,780
Subtotal Test and Evaluation					95,237	37,588	27,569	20,838	80,895	262,127
Total Project					1,104,325	148,097	150,799	160,688	408,441	1,972,350