

UNCLASSIFIED

PE NUMBER: 0604226F
 PE TITLE: B-1B

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604226F B-1B
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	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	76.496	130.053	159.126	128.892	87.318	4.598	6.694	1.290	Continuing	TBD
4596 Conventional Mission Upgrades	76.496	130.053	159.126	128.892	87.318	4.598	6.694	1.290	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program provides RDT&E funding for the B-1B Conventional Mission Upgrade Program (CMUP). Efforts include, but are not limited to, development of upgrades to the B-1B training systems to keep them current with the aircraft's configuration and funding for development efforts to improve the display of threat situational awareness information (to include datalink) to the aircrew and to record mission information. Also included are ALQ-161A defensive system upgrades to address reliability, maintainability, diminishing manufacturing sources (DMS) and performance deficiencies on selected line replaceable units (LRUs). This program addresses reliability, DMS deficiencies, and performance improvements to the Central Integrated Test System (CITS), Inertial Navigation System/Gyro Stabilization System (INS/GSS), Vertical Situation Display (VSD), Advanced Targeting Pod (ATP) and Radar Modernization Improvement Program (RMIP). It also provides funding for engineering efforts and engineering/planning studies and initiatives for potential future weapon system enhancements (including, but not limited to, weapons, targeting and sensors) and for weapon system operational/safety, supportability, maintainability, reliability, and total ownership cost improvements. All B-1B development programs support planned requirements for unique identification in their production phases. Also included are the B-1B platform-unique development items for integration of Link 16 and Beyond Line of Sight Datalinks, and associated weapons management and communication enhancements. The B-1B CMUP program is included in budget activity 5, system demonstration and development. The CMUP program provides new capabilities to the B-1B weapon system that require significant software development and testing.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	95.910	130.546	95.789	57.750
(U) Current PBR/President's Budget	76.496	130.053	159.126	128.892
(U) Total Adjustments	-19.414			
(U) Congressional Program Reductions				
Congressional Rescissions	-0.003	-0.493		
Congressional Increases				
Reprogrammings	-16.958			
SBIR/STTR Transfer	-2.453			

(U) Significant Program Changes:

FY06: Reprogramming to address higher Air Force priorities
 FY08 and FY09 program funding increases to fully fund development for all four grounding items.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604226F B-1B			PROJECT NUMBER AND TITLE 4596 Conventional Mission Upgrades			
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
4596 Conventional Mission Upgrades	76.496	130.053	159.126	128.892	87.318	4.598	6.694	1.290	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

This program provides RDT&E funding for the B-1B Conventional Mission Upgrade Program (CMUP). Efforts include, but are not limited to, development of upgrades to the B-1B training systems to keep them current with the aircraft's configuration and funding for development efforts to improve the display of threat situational awareness information (to include datalink) to the aircrew and to record mission information. Also included are ALQ-161A defensive system upgrades to address reliability, maintainability, diminishing manufacturing sources (DMS) and performance deficiencies on selected line replaceable units (LRUs). This program addresses reliability, DMS deficiencies, and performance improvements to the Central Integrated Test System (CITS), Inertial Navigation System/Gyro Stabilization System (INS/GSS), Vertical Situation Display (VSD), Advanced Targeting Pod (ATP) and Radar Modernization Improvement Program (RMIP). It also provides funding for engineering efforts and engineering/planning studies and initiatives for potential future weapon system enhancements (including, but not limited to, weapons, targeting and sensors) and for weapon system operational/safety, supportability, maintainability, reliability, and total ownership cost improvements. All B-1B development programs support planned requirements for unique identification in their production phases. Also included are the B-1B platform-unique development items for integration of Link 16 and Beyond Line of Sight Datalinks, and associated weapons management and communication enhancements. The B-1B CMUP program is included in budget activity 5, system demonstration and development. The CMUP program provides new capabilities to the B-1B weapon system that require significant software development and testing.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Continued Conventional Mission Upgrade Program (CMUP) contractual efforts	65.289	123.163	148.940	118.660
(U) Government Flight Test, Live Fire Test & Evaluation and General Test Support	3.934	2.321	4.399	5.367
(U) Continuing Mission Support	7.058	4.539	4.632	4.626
(U) Modeling & Simulation / Studies & Analyses	0.215	0.030	1.155	0.239
(U) Total Cost	76.496	130.053	159.126	128.892

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

	<u>FY 2006</u>	<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>Complete</u>							
(U) Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP11, Mods	33.456	53.061	53.125	98.725	163.161	184.114	123.601	108.345	777.525	1,595.113
(U) Appn 10, PE 0101126F, B-1B, Aircraft Procurement	3.476	5.332	7.913	3.221	9.076	9.826	6.408	6.535	58.266	110.053

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604226F B-1B	PROJECT NUMBER AND TITLE 4596 Conventional Mission Upgrades
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(U) C. Other Program Funding Summary (\$ in Millions)

BP16, Initial Spares										
(U) Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP12, Common Support Equipment	2.391	2.048	2.688	2.683	2.747	2.783	2.839	2.895	5.734	26.808
(U) Appn 10, PE 0101126F, B-1B, Aircraft Procurement BP13, Post Production Charges	13.285	10.282	0.000	0.000	0.000	0.000	0.000	0.000	10.000	33.567
(U) Appn 28, PE 0207446F, Bomber TDL Core Related RDT&E:	67.913	-3.621	36.560	0.000	0.000	0.000	0.000	0.000	0.000	100.852
(U) Program Element 0205164F, Global Positioning System (GPS)										
(U) Program Element 0207325F, Joint Air to Surface Standoff Missile (JASSM)										
(U) Program Element 0604600F, Wind Corrected Munitions Dispenser (WCMD)										
(U) Program Element 0208006F, Air Force Mission Planning Systems (AFMSS, JMPS)										

(U) D. Acquisition Strategy

(U) Key elements of the overall CMUP acquisition strategy include: use of a sole source contract with a prime/integrating contractor (Boeing); installed performance responsibility; use of cost plus incentive fee (CPIF) development contracts; and combining developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime and differences in fielded configurations.

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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 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</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>														
(U) Mission Planning System														0.000
(U) Training Systems														0.000
(U) Rockwell Collins	C/FPIF		2.659	1.524	May-06	0.478		0.664		0.748		2.313	8.386	
(U) Weapons														0.000
(U) TBC - INS/GSS	SS/CPIF			7.649	Feb-06	15.398	Nov-06	33.943	Oct-07	19.256	Nov-08	2.731	78.977	
(U) TBC - RADAR R&M Improvements	SS/CPIF			21.082	Jan-06	58.540	Oct-06	49.658	Oct-07	47.194	Oct-08	53.076	229.550	
(U) AIL - ALQ-161 R&M/DMS	SS/CPFF		35.173	8.523	Sep-06	7.698	Nov-06	12.077	Nov-07	22.318	Dec-08	26.612	112.401	
(U) TBC - TSAS/AVTR Improvements	SS/CPFF		37.889	0.972	Sep-06								38.861	
(U) TBC - VSD Upgrade	SS/CPIF			8.332	Mar-06	12.150	Oct-06	33.638	Nov-07	27.285	Nov-08		81.405	
(U) TBC - CITS/R&M/DMS	SS/CPIF		9.241	6.840	Feb-06	11.137	Jan-07	1.770	Jan-08				28.988	
(U) TBC - FIDL SDD	SS/CPIF		18.038	4.760	Mar-06	8.202	Nov-06	8.660	Nov-07	1.859	Nov-08		41.519	
(U) TBC - FIDL (Congressional Add)	SS/CPFF		1.800										1.800	
(U) EO/IR Targeting Pod	TBD					9.560	Mar-07	8.530	Oct-07				18.090	
(U) EO/IR Targeting Pod (Congressional Add)	SS/CPFF		18.494										18.494	
(U) BRU-56 (Congressional Add)	TBD			0.900	Sep-06							31.734	32.634	
(U) Digital Communications (Congressional Add)	TBD			2.889	Sep-06								2.889	
(U) Pneumatic Assist Rack (Congressional Add)	C/CPFF			1.800	Jul-06								1.800	
(U) Mode S/Mode 5	TBD											4.389	4.389	
(U) TBD - Future CMUP Related SDD	TBD											Continuing	TBD	
Subtotal Product Development			123.294	65.271		123.163		148.940		118.660		Continuing	TBD	0.000
Remarks:														
(U) <u>Support</u>														
(U) A&AS	Various		30.223	7.097	Jan-06	4.539	Jan-07	4.632	Jan-08	4.626	Jan-09	7.315	58.432	
(U) Studies & Analyses / Modeling & Sim	Various		15.025	0.194	Jun-06	0.030	Jan-07	1.155	Jan-08	0.239	Jan-09	0.421	17.064	
Subtotal Support			45.248	7.291		4.569		5.787		4.865		7.736	75.496	0.000
Remarks:														
(U) <u>Test & Evaluation</u>														
(U) Weapons														0.000
(U) AFFTC	P.O.		60.379	3.934	Jul-06	2.321	Jan-07	4.399	Dec-07	5.367	Dec-08	2.656	79.056	
Subtotal Test & Evaluation			60.379	3.934		2.321		4.399		5.367		2.656	79.056	0.000
Remarks:														
(U) <u>Management</u>														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis

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PROJECT NUMBER AND TITLE

**4596 Conventional Mission
Upgrades**

Remarks:

(U) Total Cost	228.921	76.496	130.053	159.126	128.892	Continuing	TBD	0.000
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Exhibit R-4, RDT&E Schedule Profile

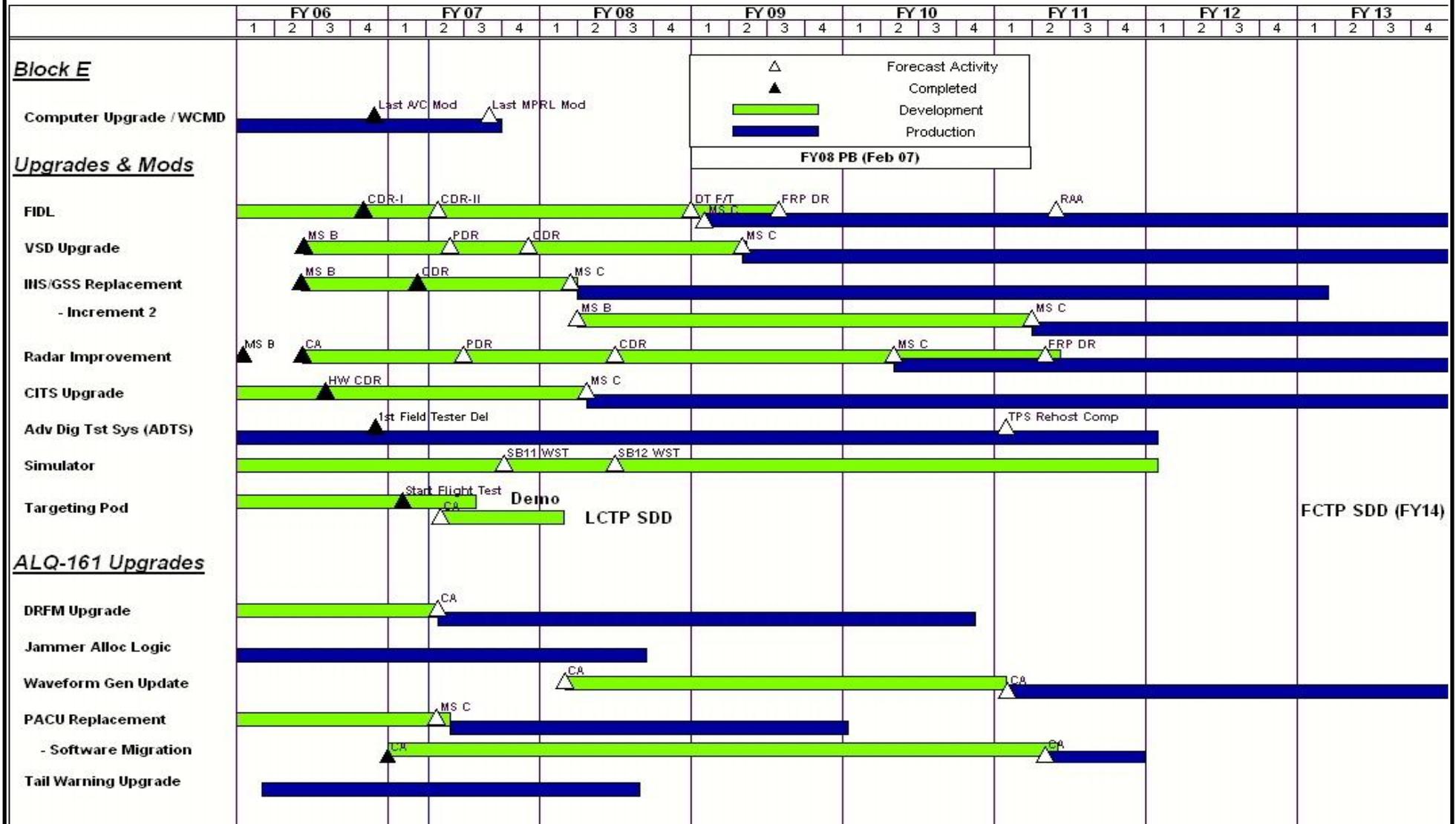
DATE

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BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604226F B-1B

PROJECT NUMBER AND TITLE
4596 Conventional Mission
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Exhibit R-4 (PE 0604226F)

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)	0604226F B-1B	4596 Conventional Mission Upgrades		
(U) Schedule Profile	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Fully Integrated Data Link (FIDL) -- CDR-I	4Q			
(U) Fully Integrated Data Link (FIDL) -- CDR-II		2Q		
(U) Fully Integrated Data Link (FIDL) -- DT&E Flight Test			4Q	
(U) Fully Integrated Data Link (FIDL) -- MS C				1Q
(U) Fully Integrated Data Link (FIDL) -- FRP Decision Review				3Q
(U) Vertical Situation Displays (VSD) Upgrade -- MS B	2Q			
(U) Vertical Situation Displays (VSD) Upgrade -- PDR		2Q		
(U) Vertical Situation Displays (VSD) Upgrade -- CDR		4Q		
(U) Vertical Situation Displays (VSD) Upgrade -- MS C				2Q
(U) Vertical Situation Displays (VSD) Upgrade -- Production				2Q
(U) Inertial Nav Sys/Gyro Stab Sys (INS/GSS) -- MS B	2Q			
(U) Inertial Nav Sys/Gyro Stab Sys (INS/GSS) -- CDR		1Q		
(U) Inertial Nav Sys/Gyro Stab Sys (INS/GSS) -- MS C			1Q	
(U) Inertial Nav Sys/Gyro Stab Sys (INS/GSS) -- Production			1Q	
(U) Inertial Nav Sys/Gyro Stab Sys (INS/GSS) Increment 2 -- MS B			2Q	
(U) RADAR Improvement Upgrade -- Milestone B	1Q			
(U) RADAR Improvement Upgrade -- SDD Contract Award	2Q			
(U) RADAR Improvement Upgrade -- PDR		2Q		
(U) RADAR Improvement Upgrade -- CDR			2Q	
(U) Central Integrated Test System (CITS) -- CDR	3Q			
(U) Central Integrated Test System (CITS) -- MS C			2Q	
(U) Central Integrated Test System (CITS) -- Production			2Q	
(U) Advanced Digital Testing System (ADTS) -- First Field Tester Delivery	4Q			
(U) Advanced Target Pod (ATP) Demo -- Flight Test		1Q		
(U) Advanced Target Pod (ATP) -- Contract Award		2Q		
(U) ALQ-161A Digital Radio Frequency Memory (DRFM) -- Contract Award		2Q		
(U) ALQ-161A Digital Radio Frequency Memory (DRFM) -- Production		2Q		
(U) ALQ-161A Waveform Generator -- Contract Award			1Q	
(U) ALQ-161A Preprocessor Avionics Control Unit (PACU) -- MS C		2Q		
(U) ALQ-161A Preprocessor Avionics Control Unit (PACU) -- Production		2Q		
(U) ALQ-161A Preprocessor Avionics Control Unit (PACU) Software Migration --	4Q			

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Exhibit R-4a (PE 0604226F)

Exhibit R-4a, RDT&E Schedule Detail

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604226F B-1B

PROJECT NUMBER AND TITLE

**4596 Conventional Mission
Upgrades**

Contract Award