

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2000		
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition				PROJECT 653890		
COST (\$ in Thousands)		FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
653890	Joint Direct Attack Munitions	11,516	6,299	1,157	1,564	0	0	0	0	297,034
	Quantity of RDT&E Articles	38	8	0	0	0	0	0	0	517
*Quantity of RDT&E Articles reflect assets by delivery year and cannot be reconciled to the dollar amounts (incremental funding) shown in any one year.										
(U) A. Mission Description										
Operation DESERT STORM confirmed the need for, and Operation ALLIED FORCE confirmed the utility of a more accurate weapon delivery capability in adverse weather conditions from medium/high altitudes. Failure to satisfy this requirement will allow the enemy to continue to take advantage of the sanctuary of weather and/or prevent US air power from prosecuting a conflict on its terms. The Joint Direct Attack Munition (JDAM) is a joint Air Force and Navy munitions program to correct these shortfalls, with the Air Force as the executive service. JDAM will upgrade the existing inventory of general purpose bombs (Mk-84, BLU-109, and Mk-83/BLU-110) by integrating them with a guidance kit consisting of a Global Position System aided Inertial Navigation System (INS/GPS). JDAM will provide an accurate (13 meters) adverse weather capability. JDAM threshold aircraft are B-52H, F-22, AV-8B and F/A-18C/D, and JDAM objective aircraft are B-2, B-1B, F-16, F-15E, and other aircraft. JDAM development is a two-phased Engineering and Manufacturing Development (EMD) effort. EMD Phase I emphasized competitive design and manufacturing processes. This phase completed 10 Oct 95. EMD Phase II emphasizes full scale hardware build and flight test to verify system performance and will support OT&E. JDAM is an Air Force Acquisition Category (ACAT) 1D program. JDAM Low Rate Initial Production (LRIP) began in FY97.										
(U) FY 1999 (\$ in Thousands)										
(U)	\$4,086	Completed EMD prime contractor activities for F/A-18, B-1, B-52 aircraft. Completed operational test of baseline friction brake Mk-84 and BLU-109. Completed development and operational test of flight restriction-free tail assembly on Mk-84 and BLU-109. Continue development flight testing and integration of restriction-free tail assembly on Mk-83. Continued Mk-83 AV-8B integration and F-16 testing.								
(U)	\$2,436	Continued support and management tasks to define and coordinate the program activities of the prime contractor and various government development and test organizations.								
(U)	\$4,994	Continued F/A-18C/D and B-52 aircraft flight testing, and completed B-2 and B-1 aircraft flight testing. Continued operational test of baseline Mk-84 and BLU-109. Start development and operational test of restriction-free tail assembly for Mk-84 and BLU-109. Started development flight test of the Mk-83 with restriction-free tail assembly. Continued F-16 aircraft guided flight tests.								
(U)	\$0	No Activity								
(U)	\$11,516	Total								
Project 653890			Page 1 of 5 Pages				Exhibit R-2 (PE 0604618F)			

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE			
BUDGET ACTIVITY		PE NUMBER AND TITLE		PROJECT	
05 - Engineering and Manufacturing Development		0604618F Joint Direct Attack Munition		653890	
(U) <u>A. Mission Description Continued</u>					
(U) <u>FY 2000 (\$ in Thousands)</u>					
(U)	\$874	Complete development and restriction-free tail assembly for Mk-84 and BLU-109. Complete Mk-83 development activities. Fabricate hardware for F-22 Integration. Start consolidation of multiple flight software packages as a result of parallel integration on F/A-18 C/D, B-52, B-1, F-16 and B-2.			
(U)	\$4,318	Provide test support for completion of operational test activities and flight software consolidation. Conduct JPF wind tunnel testing.			
(U)	\$1,107	Provide support and management tasks to coordinate the program activities of the prime contractor and various test and aircraft organizations. Note: Includes \$1M for risk definition study to integrate 500 lb JDAM on the B-1 and B-2.			
(U)	\$6,299	Total			
(U) <u>FY 2001 (\$ in Thousands)</u>					
(U)	\$789	Complete consolidation and test of flight software. Support F-22 integration analysis and testing.			
(U)	\$250	Provide flight test support for flight software consolidation. Support F-22 integration testing.			
(U)	\$118	Provide support and management tasks to coordinate the program activities of the prime contractor and various test and aircraft organizations.			
(U)	\$1,157	Total			
(U) <u>B. Budget Activity Justification</u>					
This program is funded in Budget Activity 5, EMD, due to its focus on devising an affordable design and manufacturing process.					
(U) <u>C. Program Change Summary (\$ in Thousands)</u>					
		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U)	Previous President's Budget (FY 2000 PBR)	11,954	1,385	1,169	297,034
(U)	Appropriated Value	12,204	6,385		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-216	-3		
	b. Small Business Innovative Research	-206			
	c. Omnibus or Other Above Threshold Reprogram		-43		
	d. Below Threshold Reprogram	-168			
	e. Rescissions	-98	-40		
	f. Other				297,034
(U)	Adjustments to Budget Years Since FY 2000 PBR			-12	
(U)	Current Budget Submit/FY 2001 PBR	11,516	6,299	1,157	
Project 653890		Page 2 of 5 Pages		Exhibit R-2 (PE 0604618F)	

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2000
--	------------------------------

BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604618F Joint Direct Attack Munition	PROJECT 653890
--	---	--------------------------

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

(U) **Significant Program Changes:**
 \$5M FY00 congressional add. To be used to determine the cause and solution of the BLU-109 JDAM/Joint Programmable Fuze (JPF) high altitude release malfunction.

(U) **D. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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) (U) Procurement of Ammunition, Air Force, P-1 Line Item JDAM	79,548	189,700	219,848	186,192	186,391	191,092	191,001	84,600	1,390,300

(U) **E. Acquisition Strategy**

The JDAM contract for Engineering and Manufacturing Development (EMD) Phase II is Cost Plus Award Fee. Procurement Lots 3, 4, (LRIP) and 5 have a Production Price Commitment Curve agreement to ensure a low unit cost.

(U) **F. Schedule Profile**

	<u>FY 1999</u>			<u>FY 2000</u>			<u>FY 2001</u>				
	1	2	3	1	2	3	4	1	2	3	4
(U) LRIP (Lot 2) Option			*								
(U) LRIP (Lot 3)			*								
(U) Milestone III (2000 lb)							X				
(U) Milestone III (1000 lb)								X			
(U) MK-84 Development and Operational Test (DT/OT) Start/Finish		*									
(U) MK-84 Initial Operational Test & Eval (IOT&E) Start/Finish	*			*							
(U) BLU-109 DT/OT Start/Finish		*		*							
(U) BLU-109 IOT&E Start/Finish	*					X					
(U) MK-83 DT Flight Tests Start/Finish			*			X					
(U) MK-83 DT/OT Start/Finish						X	X				
(U) MK-83 IOT&E Start/Finish								X	X		
(U)											

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000			
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
05 - Engineering and Manufacturing Development				0604618F Joint Direct Attack Munition				653890		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>
(U)	Primary Hardware Development					4,086		874		789
(U)	Test & Evaluation					4,994		4,318		250
(U)	Engineering & Prog Mgt Support					2,436		1,107		118
(U)	Total					11,516		6,299		1,157
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<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>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>										
Prime Contractors Boeing (St C/CPAF		Oct-95	167,113	167,113	160,436	4,086	874	789	928	167,113
Louis, MO) Lockheed Martin										
FY94/95 Only										
Conceptual Studies	Various	Various	N/A	N/A	22,428	0	1,000	0	0	23,428
<u>Support and Management Organizations</u>										
Engineering Spt.	CPAF	Oct 96	12,837	12,837	11,977	860	0	0	0	12,837
TAMS Contractor	CPAF	Oct 96	4,553	4,553	4,246	307	0	0	0	4,553
Program Office	Various	Various	N/A	N/A	15,862	1,269	150	118	384	17,783
<u>Test and Evaluation Organizations</u>										
Aircraft SPO/PMA Supt.	Various	Various	N/A	N/A	12,711	100	207	250	250	13,518
Flight Testing	Various	Various	N/A	N/A	34,930	4,661				39,591
Ground Testing	Various	Various	N/A	N/A	9,575	233				9,808
JPF Wind Tunnel Testing	TBD	TBD	N/A	N/A			4,068			4,068
GFE	Various	Various	N/A	N/A	4,335					4,335

