

UNCLASSIFIED

PE NUMBER: 0604327F
 PE TITLE: Hardened Target Munitions

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
---	------------------------------

BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604327F Hardened Target Munitions
---	---

Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	6.953	9.551	6.383	0.000	0.000	0.000	0.000	0.000	22.887
4641 Hard and Deeply Buried Target Defeat System (HDBTDS)	6.953	9.551	6.383	0.000	0.000	0.000	0.000	0.000	22.887

(U) A. Mission Description and Budget Item Justification

This program is an effort designed to hold at risk those highest priority assets essential to the enemy's war fighting ability, which are heavily defended and protectively hardened. The Air Force is improving capability to attack hardened and/or deeply buried targets during adverse environmental conditions. The performance of the current 4,700-lb BLU-113, used on the GBU-28 laser-guided bomb, is being greatly enhanced through the design modification of the BLU-113 warhead, improving its penetration, lethality, and survivability. This modification will increase the number of deeply buried targets held at risk. In addition, some existing targets held at risk will require fewer weapons, therefore reducing the number of missions necessary to defeat a target. The MIL-STD 1760 conduit will also be extended to connect the guidance system to the fuze to support a future in-flight fuze reprogramming capability. The existing GBU-28 B/B--B-2 interface will be maintained and the GBU-28 will also be integrated onto the F-15E through the Joint Direct Attack Munition (JDAM) Smart Unknown Weapon Interface. This program was a NEW START in FY03. The program is in Budget Activity 04 (BA 04) because the program will develop and demonstrate a hard target munition capability to defeat hard and deeply buried targets not currently held at risk.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	7.338	12.633	0.000
(U) Current PBR/President's Budget	6.953	9.551	6.383
(U) Total Adjustments	-0.385	-3.082	
(U) Congressional Program Reductions		-3.000	
Congressional Rescissions		-0.082	
Congressional Increases			
Reprogrammings	-0.170		
SBIR/STTR Transfer	-0.215		

(U) Significant Program Changes:

FY04 funding decreased by \$3M. A cost reduction initiative to redesign telemetry was eliminated from the program. Existing telemetry will be used for captive flight testing and no telemetry will be used during flight testing.

FY05 funding increased by \$6.383.

Exhibit R-2a, RDT&E Project Justification

DATE
February 2004

BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)							PE NUMBER AND TITLE 0604327F Hardened Target Munitions		PROJECT NUMBER AND TITLE 4641 Hard and Deeply Buried Target Defeat System (HDBTDS)	
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total	
4641 Hard and Deeply Buried Target Defeat System (HDBTDS)	6.953	9.551	6.383	0.000	0.000	0.000	0.000	0.000	22.887	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

This program is an effort designed to hold at risk those highest priority assets essential to the enemy's war fighting ability, which are heavily defended and protectively hardened. The Air Force is improving capability to attack hardened and/or deeply buried targets during adverse environmental conditions. The performance of the current 4,700-lb BLU-113, used on the GBU-28 laser-guided bomb, is being greatly enhanced through the design modification of the BLU-113 warhead, improving its penetration, lethality, and survivability. This modification will increase the number of deeply buried targets held at risk. In addition, some existing targets held at risk will require fewer weapons, therefore reducing the number of missions necessary to defeat a target. The MIL-STD 1760 conduit will also be extended to connect the guidance system to the fuze to support a future in-flight fuze reprogramming capability. The existing GBU-28 B/B--B-2 interface will be maintained and the GBU-28 will also be integrated onto the F-15E through the Joint Direct Attack Munition (JDAM) Smart Unknown Weapon Interface. This program was a NEW START in FY03. The program is in Budget Activity 04 (BA 04) because the program will develop and demonstrate a hard target munition capability to defeat hard and deeply buried targets not currently held at risk.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Begin HDBTDS. Design warhead, integrate explosive and upgrade case material	4.347	0.674	0.659
(U) Weapon system and aircraft integration	1.247	3.608	1.509
(U) Plan and prepare for testing redesigned warhead	0.630	3.754	3.429
(U) Air Force Research Laboratory provide technical engineering design support and analysis.	0.475	0.000	0.000
(U) Perform field agency activities, including project office and computer support to manage the Hardened Target Munition program	0.131	0.662	0.441
(U) System Engineering and Technical Analysis (SETA) support including independent analysis and evaluation of prototy] warhead designs	0.123	0.853	0.345
(U) Total Cost	6.953	9.551	6.383

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

	<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>Complete</u>	
(U) Procurement of Ammunition, Air Force (PE 0208030F)			19.600	32.000	32.000			0.000	83.600

(U) D. Acquisition Strategy

The warhead design contract was awarded competitively and the weapon system modification and integration contract was awarded sole source because the GBU-28 was

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0604327F Hardened Target Munitions

PROJECT NUMBER AND TITLE

4641 Hard and Deeply Buried Target Defeat System (HDBTDS)

developed at contractor expense and the government does not own the technical data package.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2004			
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)					PE NUMBER AND TITLE 0604327F Hardened Target Munitions					PROJECT NUMBER AND TITLE 4641 Hard and Deeply Buried Target Defeat System (HDBTDS)			
<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</u> Prior to FY 2003 Cost	<u>FY</u> 2003 Cost	<u>FY</u> 2003 Award Date	<u>FY</u> 2004 Cost	<u>FY</u> 2004 Award Date	<u>FY</u> 2005 Cost	<u>FY</u> 2005 Award Date	<u>Cost to Complete</u>	<u>Total</u> Cost	<u>Target</u> Value of Contract	
<u>(U) Product Development</u>													
General Dynamics Ordnance and Tactical Systems	CPFF/PI	Niceville, FL	0.000	4.347	Jun-03	0.655	Nov-04	0.718	Mar-05	0.000	5.720	5.720	
Raytheon Company	T&M	Tucson, AZ	0.000	0.332	Jul-03					0.000	0.332	0.332	
Raytheon Company	CPIF	Tucson, AZ	0.000	0.915	Jan-04	3.066		0.972			4.953	4.953	
Subtotal Product Development			0.000	5.594		3.721		1.690		0.000	11.005	11.005	
Remarks:													
<u>(U) Support</u>													
Government Furnished Equipment (GFE)	MIPR	Various	0.000	0.475	Sep-03	0.517		0.478		0.000	1.470		
Air Armament Center System Program Office (AAC/YHH)	Various	Eglin AFB, FL	0.000	0.114		0.436		0.425		0.000	0.975		
Support Contracts	AFMC Form 277	Eglin AFB, FL	0.000	0.143	Jan-03	1.231	Oct-03	0.538	Oct-04	0.000	1.912		
Subtotal Support			0.000	0.732		2.184		1.441		0.000	4.357	0.000	
Remarks:													
<u>(U) Test & Evaluation</u>													
Eglin Flight Test Support	AFMC Form 277	Eglin AFB, FL	0.000	0.017		1.299	Jun-04	0.004	Dec-04	0.000	1.320		
Defense Threat Reduction Agency (DTRA)	MIPR	White Sands Missile Range, NM	0.000	0.200	Oct-04	0.247	Jul-04	1.038	Dec-04	0.000	1.485		
Edwards Flight Test Support	MIPR	Edwards AFB, CA				0.598		1.519			2.117		
Applied Research Associates - Test Design Support	MIPR	Albuquerque, NM		0.360							0.360		
Naval Weapons Center - Arena and IM Testing	MIPR	China Lake, CA				0.311		0.691			1.002		
B-2 System Program Office (SPO) Test Support	MIPR	Wright Patterson AFB, OH		0.050		1.191					1.241		
Subtotal Test & Evaluation			0.000	0.627		3.646		3.252		0.000	7.525	0.000	
Remarks:													

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis	DATE February 2004
---	------------------------------

BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604327F Hardened Target Munitions	PROJECT NUMBER AND TITLE 4641 Hard and Deeply Buried Target Defeat System (HDBTDS)
---	---	---

(U) <u>Management</u>					0.000			
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Total Cost	0.000	6.953	9.551	6.383	0.000	22.887	11.005	

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2004

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

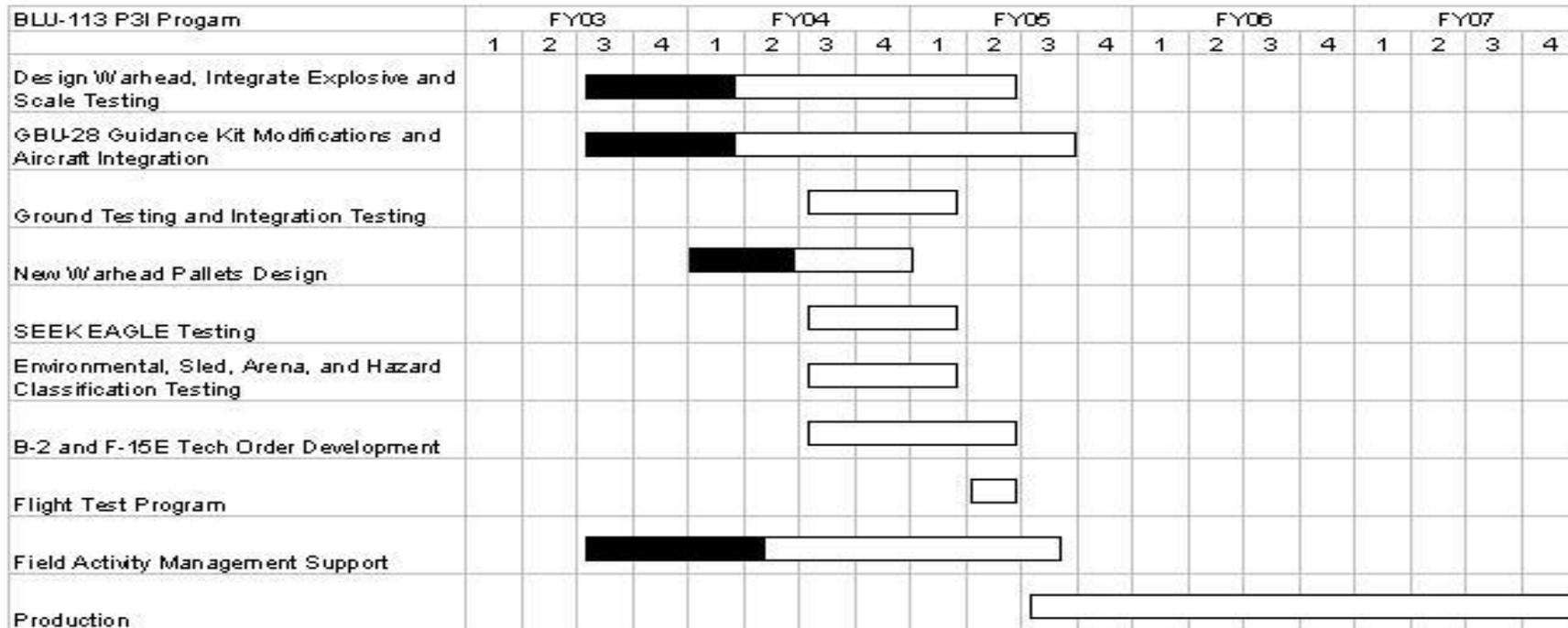
PE NUMBER AND TITLE

0604327F Hardened Target Munitions

PROJECT NUMBER AND TITLE

4641 Hard and Deeply Buried Target Defeat System (HDBTDS)

GBU-28 BLU-113 P3I Program



AS OF JAN 04

UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2004
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604327F Hardened Target Munitions	PROJECT NUMBER AND TITLE 4641 Hard and Deeply Buried Target Defeat System (HDBTDS)

(U) <u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Design Warhead, Integrate Explosive and Scale Testing	3Q		
(U) GBU-28 Guidance Kit Modifications and Aircraft Integration	3Q		
(U) Ground Testing and Integration Testing		3Q	
(U) New Warhead Pallets Design		1Q	
(U) SEEK EAGLE Testing		3Q	
(U) Environmental, Sled, Arena, and Hazard Classification Testing		3Q	
(U) B-2 and F-15E Tech Order Development		3Q	
(U) Flight Test Program			2Q
(U) Field Activity Management Support Production 3Q FY2005 through 4Q FY2007	3Q		