PE NUMBER: 0604856F PE TITLE: Common Aero Vehicle

	Exhibit R-2, RDT&E Budget Item Justification									February 2006		
BUDGE	BUDGET ACTIVITY PE NUMBER AND TITLE											
04 Adv	vanced Component Development a	nd Prototype	s (ACD&P)	C	0604856F Common Aero Vehicle							
Cost (\$ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total		
		Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete			
	Total Program Element (PE) Cost	16.053	26.993	33.386	32.387	40.840	44.033	82.386	Continuing	TBD		
A012	Common Aerospace Vehicle	16.053	26.993	33.386	32.387	40.840	44.033	82.386	Continuing	TBD		

### (U) A. Mission Description and Budget Item Justification

The Prompt Global Strike (PGS) Mission Needs Statement (MNS) established the requirement for rapid conventional strike worldwide to counter the proliferation of weapons of mass destruction and provide a forward presence without forward deployment. In December 2002 the DepSecDef directed the Air Force and Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Common Aero Vehicle (CAV) effort to meet this requirement. This joint program has been named Falcon and was focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide through space. As a result of FY05 Congressional language, the Falcon portion of the CAV program was restructured by DARPA and the Air Force to ensure it met the intent of Congress. Within the Falcon program, CAV has been redesignated the Hypersonic Technology Vehicle (HTV) and all weaponization activities have been excluded from Falcon. This PE will be renamed HTV.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

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

		1 1 2003	1 1 2000	1 1 2007
(U)	Previous President's Budget	16.464	27.394	32.539
(U)	Current PBR/President's Budget	16.053	26.993	33.386
(U)	Total Adjustments	-0.411	-0.401	
(U)	Congressional Program Reductions	-0.013	-0.010	
	Congressional Rescissions		-0.391	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.398		
(U)	Significant Program Changes:			

EV 2005

EV 2006

R-1 Shopping List - Item No. 60-1 of 60-6

FY 2007

Exhibit R-2a, RDT&E Project Justification										2006	
					PE NUMBER AND <b>0604856F Con</b>				ROJECT NUMBER AND TITLE 012 Common Aerospace Vehicle		
	Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total	
A012	Common Aerospace Vehicle	16.053	26.993	33.386	32.387	40.840	44.033	82.386	Continuing	TBD	
	Quantity of RDT&E Articles	0	0	(	0	0	0	0			

#### (U) A. Mission Description and Budget Item Justification

The Prompt Global Strike (PGS) Mission Needs Statement (MNS) established the requirement for rapid conventional strike worldwide to counter the proliferation of weapons of mass destruction and provide a forward presence without forward deployment. In December 2002 the DepSecDef directed the Air Force and Defense Advanced Research Projects Agency (DARPA) to establish a joint program office to accelerate the Common Aero Vehicle (CAV) effort to meet this requirement. This joint program has been named Falcon and was focused on the development and transition of more mature technologies into a future weapon system capable of delivering and deploying conventional payloads worldwide through space. As a result of FY05 Congressional language, the Falcon portion of the CAV program was restructured by DARPA and the Air Force to ensure it met the intent of Congress. Within the Falcon program, CAV has been redesignated the Hypersonic Technology Vehicle (HTV) and all weaponization activities have been excluded from Falcon. This PE will be renamed HTV.

This program is Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

( <b>U</b> )	B. Accomplishments/Planned Program (\$ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue HTV system design and development, systems engineering and flight test planning/support for Phase II	11.464	20.470	24.745
(U)	Perform analysis and assess alternative HTV concepts/requirements and program management support	4.589	2.530	2.915
(U)	Perform Prompt Global Strike Analysis of Alternatives		3.993	5.726
(U)	Total Cost	16.053	26.993	33.386

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U	) AF RDT&E, PE 0604855F, ORL (R-60)	32.142	38.519	Estimate	Estimate	Estimate	Estimate	<u>Listimate</u>	Continuing	TBD
(U (U				35.625	41.663	75.720	77.064	78.122	Continuing	TBD
(U		12.500	40.000	50.000					Continuing	TBD

### (U) D. Acquisition Strategy

Efforts will be executed by the joint AF/DARPA Falcon Program Office. Four Phase I contracts were awarded in November 2003, Other Transaction Agreements, with a duration of 6 months. A downselect between the four Phase I contractors occurred in August 2004 for Phase II with a single 36 month award using an Other Transaction Agreements contract vehicle. Phase II develops and launches the first HTV. Phase III is scheduled for one contractor with award set for 1QtrFY08. Phase Project A012

R-1 Shopping List - Item No. 60-2 of 60-6

Exhibit R-2a (PE 0604856F)

Exhibit R-2a, RDT&E Proj	DATE February 2006	
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604856F Common Aero Vehicle	PROJECT NUMBER AND TITLE A012 Common Aerospace Vehicle
III will fabricate and launch the succeeding HTV demonstrations in the Fa	lcon program.	
Project A012 R-1 Sho	opping List - Item No. 60-3 of 60-6	Exhibit R-2a (PE 0604856F)

BUDGET ACTIVITY   Dec   Advanced Component Development and Prototypes (ACD&P)   PENUMBER AND TITLE   De604856F Common Acre vehicle   PROJECT NAMSER AND TITLE   De604856F Common Name vehicle   PROJECT NAMSER AND TITLE   PROJECT NAMSER AND TITLE		E	xhibit R-	3, RDT&E F	Project Co	st Anal	ysis				D	Feb	ruary 20	06
Clair to WRS, or System/team Requirements   Method & Activity & Print in FY   Cost   Award   Award   Cost   Award		BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT NUMBER AND TITLE												
Fine Flase   Contracts   OTA   Various   4,293   4.294   4.2		(Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Method &	Activity &	Prior to FY 2005		Award		Award		Award		Total Cost	Target Value of Contract
Phase III contract	(U)	Four Phase I contracts		Lockheed-Mart										4.293
Remarks:		Phase III contract	TBD	CA	3.000	11.464	Feb-05	20.470	Dec-05	24.745	Oct-06			TBD TBD
1.2/RP,	(U)	Remarks:			7.293	11.464		20.470		24.745		Continuing	TBD	TBD
Center, Edwards AFB		CAV/Penetrator Flight Support	MIPR	12/RP, Kirtland AFB	3.000								3.000	3.000
Remarks: (U) Development Support and Management Perform PGS AoA TBD TBD Perform PGS AoA MIPR AFRL, Subtotal Development Support and Management Remarks: (U) Total Cost  Remarks: (U) Development Support and Management Perform PGS AoA TBD TBD AFRL, Sirtland AFB, 2.000 NM  AFRL, Birtland AFB, 2.000 NM  AFRL,		Prepare hypersonic test corridor	MIPR	Center, Edwards AFB	0.500								0.500	0.500
Perform analysis and assess alternative HTV various various 4.232 4.589 Oct-04 2.530 Oct-05 2.915 Oct-06 Continuing TBD T concepts/requirements & program support Perform PGS AoA TBD TBD Develop critical CAV technology MIPR AFRL, Kirtland AFB, 2.000 NM Subtotal Development Support and Management Remarks:  (U) Total Cost  Total Cost  Various various 4.232 4.589 Oct-04 2.530 Oct-05 2.915 Oct-06 Continuing TBD T  3.993 Feb-06 5.726 Oct-06 Continuing TBD T  3.993 Feb-06 5.726 Oct-06 Continuing TBD T  3.993 Feb-06 5.726 Oct-06 Continuing TBD T  4.282 4.589 6.523 8.641 Continuing TBD T	(U)	Remarks:			3.500	0.000		0.000		0.000		0.000	3.500	3.500
Perform PGS AoA TBD TBD AFRL, Develop critical CAV technology MIPR AFRL, Kirtland AFB, 2.000 NM  Subtotal Development Support and Management Remarks:  (U) Total Cost 17.025 16.053 26.993 33.386 Continuing TBD T  TBD TBD TBD T T TBD TBD T T TBD TBD T TBD TBD	(-)	Perform analysis and assess alternative HTV	various	various	4.232	4.589	Oct-04	2.530	Oct-05	2.915	Oct-06	Continuing	TBD	TBD
Kirtland AFB, 2.000 0.000 2.000 2.000 2.000 2.000 Subtotal Development Support and Management 6.232 4.589 6.523 8.641 Continuing TBD T Remarks:  (U) Total Cost 17.025 16.053 26.993 33.386 Continuing TBD T		Perform PGS AoA	TBD					3.993	Feb-06	5.726	Oct-06	Continuing	TBD	TBD
Remarks:  (U) Total Cost  17.025 16.053  26.993  33.386  Continuing TBD T		Develop critical CAV technology	MIPR	Kirtland AFB,	2.000							0.000	2.000	2.000
(U) Total Cost 17.025 16.053 26.993 33.386 Continuing TBD T		1 11			6.232	4.589		6.523		8.641		Continuing	TBD	TBD
	(U)				17.025	16.053		26.993		33.386		Continuing	TBD	TBD
Project A012 R-1 Shopping List - Item No. 60-4 of 60-6 Exhibit R-3 (PE 0604856F	Pr	oject A012		ı	R-1 Shonning I	st - Item No	) 60-4 of 60	-6				Evh	ihit R-3 (PF (	)604856F)

#### DATE **Exhibit R-4, RDT&E Schedule Profile** February 2006 BUDGET ACTIVITY PE NUMBER AND TITLE PROJECT NUMBER AND TITLE 04 Advanced Component Development and Prototypes (ACD&P) **A012 Common Aerospace Vehicle** 0604856F Common Aero Vehicle HTV Schedule U.S. AIR FORCE FY05 FY06 **FY07 FY10 FY11** FY08 FY09 Hypersonic Tech Vehicles (funded by CAV PE 64856F) Design & Development Flight Demos HTV-1 FIt Demo CDR PDR FIt Demo HTV-2 on SLV PDR CDR HTV-3 \FIt Demo PDR CDR Military Utility Analysis CAV Studies (Follow-on to Falcon) CAV Design & Development AoA: Analysis of Alternatives CDR: Critical Design Review PDR: Preliminary Design Review PGS: Prompt Global Strike Concept activities Design / development Integration / test Operations / sustainment ∆♦ Key events Production / fielding FY07 OSD/OMB Budget Hearing Exhibit R-4 (PE 0604856F) Project A012 R-1 Shopping List - Item No. 60-5 of 60-6

Exhibit R-4a, RDT&E Sche	DATE			
		February 2006		
BUDGET ACTIVITY  04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0604856F Common Aero Vehicle	PROJECT NUMBER AND T A012 Common Aeros		
(U) Schedule Profile (U) Phase II Preliminary Design Review	<u>FY 2005</u> 2Q	FY 2006	FY 2007	
(U) Phase II Critical Design Review		1Q		
(U) PGS AoA		2-4Q	1-4Q	
(U) Initial HTV Test Launch (U) Complete Phase II			4Q 4Q	
(O) Complete Phase II			4Q	
		_ :		
Project A012 R-1 Shoppin	ng List - Item No. 60-6 of 60-6	Exhibit F	R-4a (PE 0604856F)	