

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2005</b>
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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0604856F Common Aero Vehicle</b>
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Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	17.025	16.464	27.394	32.529	31.651	39.756	92.711	94.074	Continuing	TBD
A012 Common Aerospace Vehicle	17.025	16.464	27.394	32.529	31.651	39.756	92.711	94.074	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 from and 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 meets the intent of Congress. Within the Falcon program, CAV has been redesignated the Hypersonic Technology Vehicle and all weaponization activities have been excluded from Falcon.

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)**

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	17.025	21.610	27.247	32.564
(U) Current PBR/President's Budget	17.025	16.464	27.394	32.529
(U) Total Adjustments	0.000	-5.146		
(U) Congressional Program Reductions		-10.000		
Congressional Rescissions		-0.146		
Congressional Increases		5.000		
Reprogrammings				
SBIR/STTR Transfer				

(U) **Significant Program Changes:**

FY05 Congressional reduction: Net -\$5.0M. \$10M plus up, -\$5M reduction and directed that no funds be used to develop, integrate or test a CAV variant that includes weapons, nor use CAV on an Intercontinental Ballistic Missile or Submarine Launched Ballistic Missile. Congressional language stated that Congress will consider expanding this program if safeguards are negotiated among our international partners. The CAV portion was restructured to meet Congress' intent and redesignated Hypersonic Technology Vehicle (HTV) which excludes weaponization of CAV.

**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2005**

BUDGET ACTIVITY <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>							PE NUMBER AND TITLE <b>0604856F Common Aero Vehicle</b>		PROJECT NUMBER AND TITLE <b>A012 Common Aerospace Vehicle</b>	
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	17.025	16.464	27.394	32.529	31.651	39.756	92.711	94.074	Continuing	TBD
Quantity of RDT&E Articles	0	0	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 from and 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 meets the intent of Congress. Within the Falcon program, CAV has been redesignated the Hypersonic Technology Vehicle and all weaponization activities have been excluded from Falcon.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Initiated CAV system definition, systems engineering and flight test planning for Phase I	4.293			
(U) Continue Hypersonic Technology Vehicle (HTV) system design and development, systems engineering and flight test planning/support for Phase II	3.000	11.464	23.147	13.250
(U) Initiate HTV systems engineering and flight test planning/support for Phase III				13.553
(U) Supported early CAV/penetrator demonstration flights	3.000			
(U) Perform analysis and assess alternative HTV concepts/requirements and program management support	4.232	5.000		
(U) Perform Prompt Global Strike Analysis of Alternatives			4.247	5.726
(U) Prepared hypersonics test corridor	0.500			
(U) Developed critical CAV technology	2.000			
(U) Total Cost	17.025	16.464	27.394	32.529

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

	<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>FY 2010</u>	<u>FY 2011</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>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E, PE 0604855F, ORL (R-60)	21.544	33.068	23.480	35.504	41.321	74.924	76.327	77.411	Continuing	TBD
(U) Other APPN										
(U) Defensewide RDT&E, DARPA, PE 0603285E,	17.500	12.500	40.000						Continuing	TBD

## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2005

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

Falcon

**(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 4QtrFY07. Phase III will fabricate and launch the succeeding HTV demonstrations in the Falcon program.

UNCLASSIFIED

**Exhibit R-3, RDT&E Project Cost Analysis**

DATE

**February 2005**

BUDGET ACTIVITY										PE NUMBER AND TITLE		PROJECT NUMBER AND TITLE			
<b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>										<b>0604856F Common Aero Vehicle</b>		<b>A012 Common Aerospace Vehicle</b>			
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u>															
Four Phase I contracts	OTA	various		4.293	Nov-03								4.293	4.293	
Phase II contract	OTA	Lockheed-Martin, Palmdale, CA		3.000	Aug-04	11.464	Feb-05	23.147	Dec-05	13.250	Oct-06		50.861	50.860	
Phase III contract	TBD	TBD								13.553		Continuing	TBD	TBD	
Subtotal Product Development			0.000	7.293		11.464		23.147		26.803		Continuing	TBD	TBD	
Remarks:															
(U) <u>Test &amp; Evaluation</u>															
CAV/Penetrator Flight Support	MIPR	SMC Det 12/RP, Kirtland AFB NM		3.000	Mar-04								3.000	3.000	
Prepare hypersonic test corridor	MIPR	AF Flt Test Center, Edwards AFB CA		0.500	Mar-04								0.500	0.500	
Subtotal Test & Evaluation			0.000	3.500		0.000		0.000		0.000		0.000	3.500	3.500	
Remarks:															
(U) <u>Development Support and Management</u>															
Perform analysis and assess alternative HTV concepts/requirements & program support	various	various		4.232	Feb-04	5.000	Oct-04					Continuing	TBD	TBD	
Perform PGS AoA	TBD	TBD						4.247	Oct-05	5.726	Oct-06	Continuing	TBD		
Develop critical CAV technology	MIPR	AFRL, Kirtland AFB, NM		2.000	Feb-04								2.000	2.000	
Subtotal Development Support and Management			0.000	6.232		5.000		4.247		5.726		Continuing	TBD	TBD	
Remarks:															
(U) Total Cost			0.000	17.025		16.464		27.394		32.529		Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0604856F Common Aero Vehicle

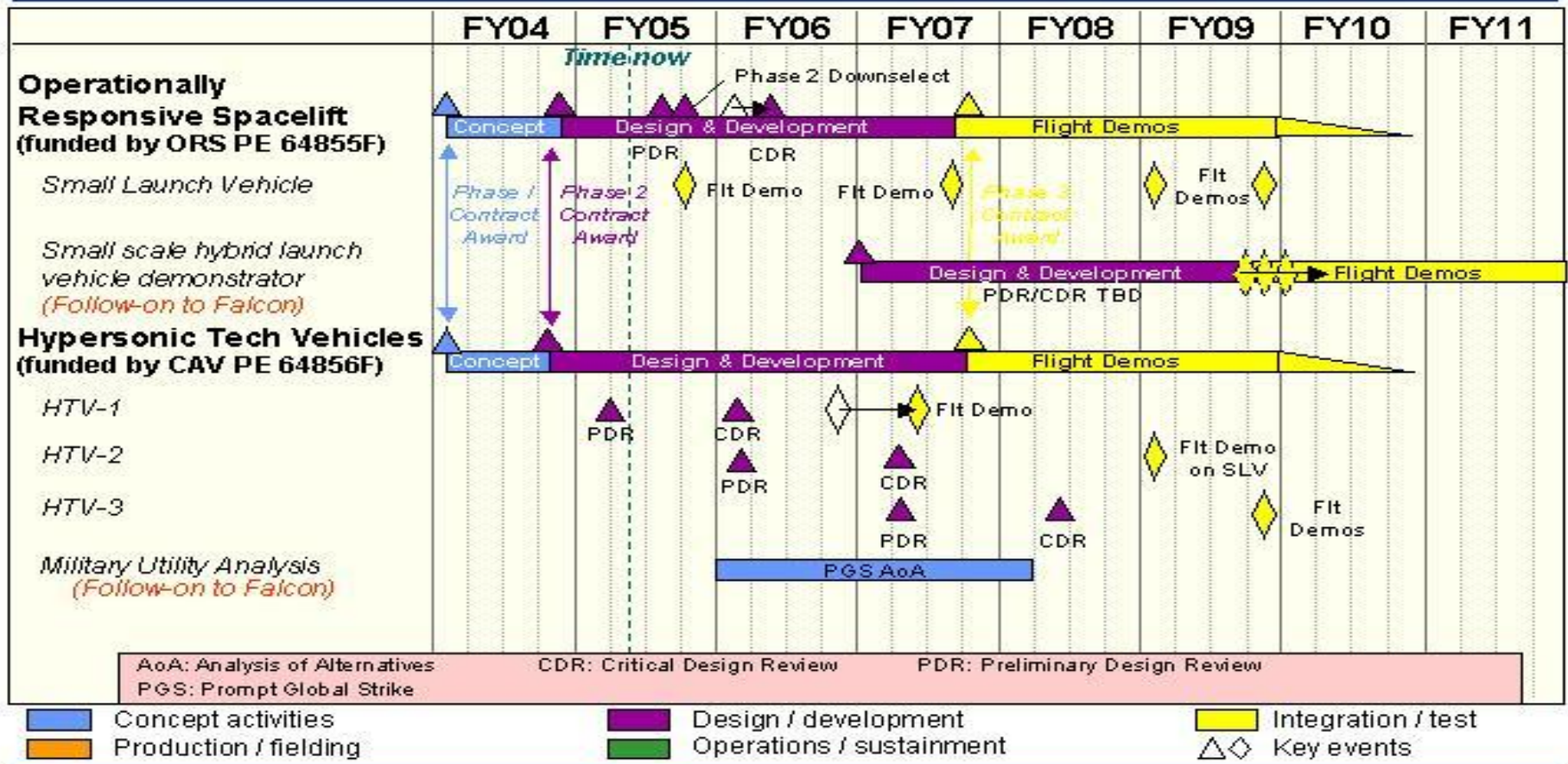
PROJECT NUMBER AND TITLE

A012 Common Aerospace Vehicle



# ORS/CAV Schedule

U.S. AIR FORCE



FY06 Staffer Brief

**Exhibit R-4a, RDT&E Schedule Detail**

DATE

**February 2005**

BUDGET ACTIVITY <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	PE NUMBER AND TITLE <b>0604856F Common Aero Vehicle</b>	PROJECT NUMBER AND TITLE <b>A012 Common Aerospace Vehicle</b>
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(U) <u>Schedule Profile</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) System Definition (Phase I)	1-4Q			
(U) Design and Development (Phase II) Contract Award	4Q			
(U) Phase II Preliminary Design Review		2Q		
(U) Phase II Critical Design Review			1Q	
(U) Initial HTV Test Launch				2Q
(U) Complete Phase II				4Q
(U) System Engineering and Test (Phase III) Contract Award				4Q