

UNCLASSIFIED

PE NUMBER: 0604239F

PE TITLE: F-22 EMD

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604239F F-22 EMD

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	615.467	208.143	76.203	0.000	0.000	0.000	0.000	0.000	0.000	24,084.062
4069 Advanced Tactical Fighter FSD	615.467	208.143	76.203	0.000	0.000	0.000	0.000	0.000	0.000	24,084.062

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

The F/A-22 Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F/A-22 is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The F/A-22 is currently closing out the Engineering and Manufacturing Development (EMD) phase of acquisition and continuing the spiral-modernization phase.

This program is in Budget Activity 5, System Development and Demonstration, because the F/A-22 Program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.

(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	615.467	210.000	75.794	0.000
(U) Current PBR/President's Budget	615.467	208.143	76.203	0.000
(U) Total Adjustments	0.000	-1.857		
(U) Congressional Program Reductions		-1.857		
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
(U) <u>Significant Program Changes:</u>				
None				

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Exhibit R-2a, RDT&E Project Justification

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05 System Development and Demonstration (SDD)					0604239F F-22 EMD			4069 Advanced Tactical Fighter FSD		
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
4069 Advanced Tactical Fighter FSD	615.467	208.143	76.203	0.000	0.000	0.000	0.000	0.000	0.000	24,084.062
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

* Total Cost includes \$3,779,811,000 of Demonstration and Validation funding prior to FY 1992 funded in PE 0603230F.

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

The F/A-22 Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F/A-22 is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The F/A-22 is currently closing out the Engineering and Manufacturing Development (EMD) phase of acquisition and continuing the spiral-modernization phase.

This program is in Budget Activity 5, System Development and Demonstration, because the F/A-22 Program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Air Vehicle	231.438			
- Continue full-scale airframe structural fatigue testing and analysis. (NSP)				
- Continue structural certification analysis activities. (NSP)				
- Continue EMD flight test and flight test support. (NSP)				
(U) Avionics	222.362			
- Complete Avionics Integration Lab Block 3.1.2 Integration. (NSP)				
- Complete Block 3.1.2 FTB testing				
- Complete EMD OFP development and testing. (NSP)				
- Initiate and complete IOT&E OFP FTB flight testing. (NSP)				
- Initiate Avionics Integration Lab Block 3.1.3 Integration. (NSP)				
- Continue DMS redesign, requalification and retesting activities. (NSP)				
(U) Engine	24.700			
- Continue support and test of flight test engines (25 total). (NSP)				
(U) Other Government Cost	136.967			
- Support flight test and flight test support at Edwards AFB.				
- Mission support of the SPO; travel, computer costs, misc contracts, etc.				
(U) Air Vehicle		72.063	41.794	
- Complete full-scale airframe structural fatigue testing and analysis. (NSP)				
- Complete structural certification analysis activities. (NSP)				
- Complete EMD flight test and flight test support. (NSP)				

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Exhibit R-2a, RDT&E Project Justification								DATE February 2005			
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- Complete life extension NRE (early aircraft getting modified to get "full life"). (NSP)											
- Initiate and complete technical support for Force Development Evaluation and Follow-on Operational Test and Evaluation (NSP)											
(U)	Avionics							66.228	31.409		
- Complete Avionics Integration Lab Block 3.1.3 Integration. (NSP)											
- Complete DMS redesign, requalification and retesting activities. (NSP)											
- Complete EMD OFP development and testing. (NSP)											
- Initiate and complete technical support for Force Development Evaluation and Follow-on Operational Test and Evaluation (NSP)											
(U)	Engine							10.800			
- Complete support and test of flight test engines (25 total). (NSP)											
(U)	Other Government Cost							59.052	3.000		
- Complete flight test and flight test support at Edwards AFB.											
- Mission support of the SPO; travel, computer costs, misc contracts, etc.											
(U)	Total Cost							615.467	208.143	76.203	0.000
(U)	C. Other Program Funding Summary (\$ in Millions)										
		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
		Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
(U)	PRTV II (6)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,580.580
(U)	F/A-22 Squadrons RDT&E (PE 0207138F)	303.201	362.394	403.517	582.512	636.687	556.124	606.045	597.913	Continuing	TBD
(U)	F/A-22 Squadrons (3010) Procurement (PE 0207138F)	39.532	95.654	79.547	258.601	295.928	281.894	168.202	392.018	Continuing	TBD
(U)	F/A-22 Squadrons (3080) Procurement (PE 0207138F)	0.481	0.443	1.491	2.740	1.734	0.000	0.721	1.478	Continuing	TBD
(U)	Military Construction (PE 0604239F)	0.000	0.000	0.000	0.000	0.000	0.000			0.000	65.000
(U)	Military Construction (PE 0207219F)	0.000	0.000	0.000	0.000	0.000	0.000			0.000	96.018
(U)	Military Construction (PE 0207138F)	31.164	28.698	47.040	85.450	98.391	0.000	0.000	0.000	0.000	290.749
(U)	Aircraft Procurement (PE 0207219F) Advanced Tactical Fighter, P-1 Line Item #003**	4139.533	4041.493	3814.549	4401.456	4170.177	52.668	26.896		0.000	31,847.94 4
Project 4069											
R-1 Shopping List - Item No. 69-3 of 69-7											
Exhibit R-2a (PE 0604239F)											

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Exhibit R-2a, RDT&E Project Justification

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

(U)	Munitions Procurement (PE 0207219F)	9.410	9.044	10.984	10.993	12.314	12.614	15.909	12.702	0.000	106.426
(U)	F/A-22 Adv Comm Sys Procurement (PE 27445F)				16.658	31.130	32.811	34.139	16.901	Continuing	TBD
(U)	F/A-22 Tactical Data Link RDT&E (PE 27445F)	36.418	49.951	96.939	66.504	22.321					300.997

PE 0207138F includes manpower authorizations, peculiar and common support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Operation, maintenance, and logistical support of the F/A-22 fighter

** NOTE: Includes BP 10, 11, 16, 19 and Advance Buy.

(U) **D. Acquisition Strategy**

The EMD contract is Cost Plus Award Fee with Lockheed Martin Aeronautical Systems (LMAS) to produce the F/A-22 air vehicle and Pratt & Whitney (P&W) to produce the F119 engines. The engines are provided to LMAS as GFE.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

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PROJECT NUMBER AND TITLE

4069 Advanced Tactical Fighter FSD

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Award</u> <u>Date</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u> Lockheed (Air Veh)	C/CPAF	Lockheed Martin, Marietta, GA	15,857.377	453.800	Aug-91	138.291	Aug-91	73.203	Aug-91			0.000	16,522.671	14,727.198
Pratt & Whitney	C/CPFF	Pratt & Whitney, Hartford, CT	2,464.217	24.700	Aug-91	10.800	Aug-91					0.000	2,499.717	2,388.171
GFE	Various		60.609	5.290	Aug-91	0.400						0.000	66.299	
Subtotal Product Development			18,382.203	483.790		149.491		73.203		0.000		0.000	19,088.687	17,115.369
Remarks:														
(U) <u>Support</u> Support Contracts	Various		18.104	1.500		1.500						0.000	21.104	
In House Support	Various		140.096	5.500		2.000		3.000				0.000	150.596	
Subtotal Support			158.200	7.000		3.500		3.000		0.000		0.000	171.700	0.000
Remarks:														
(U) <u>Test & Evaluation</u> AEDC	PO	Arnold AFB, TN	158.000	0.000								0.000	158.000	
AFFTC	PO	Edwards AFB, CA	605.160	124.477	Nov-03	55.152	Nov-04					0.000	784.789	
All Other Tests	Various		100.875	0.200		0.000				0.000		0.000	101.075	
Not Applicable												0.000	0.000	
Subtotal Test & Evaluation			864.035	124.677		55.152		0.000		0.000		0.000	1,043.864	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
Remarks:														
(U) Total Cost			19,404.438	615.467		208.143		76.203		0.000		0.000	20,304.251	17,115.369

NOTE: Total program cost for Engineering and Manufacturing Development only. Does not include \$3,779,811,000 of Demonstration and Validation funding prior to FY92.

Exhibit R-4, RDT&E Schedule Profile

DATE

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

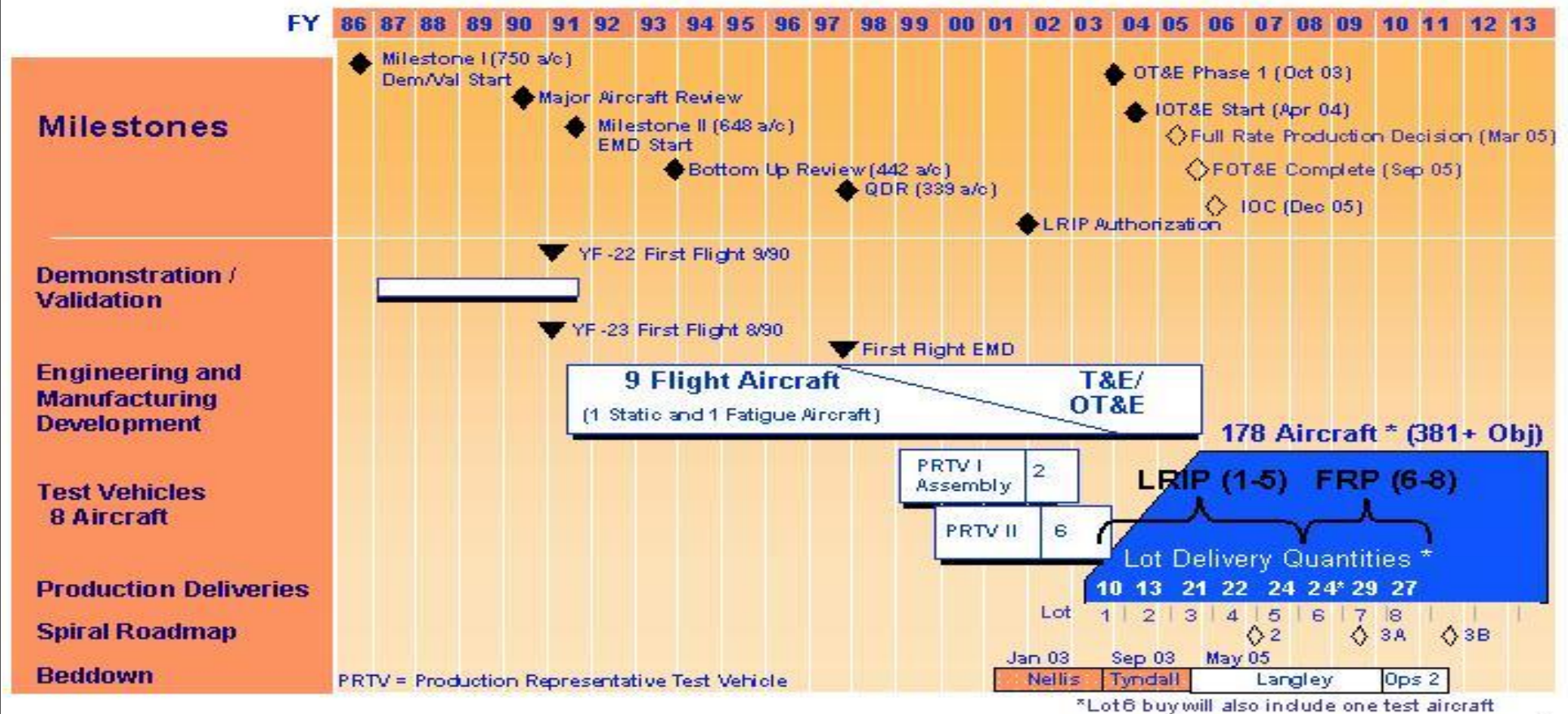
PE NUMBER AND TITLE

0604239F F-22 EMD

PROJECT NUMBER AND TITLE

4069 Advanced Tactical Fighter FSD

Program Overview (FY06 PB)



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Exhibit R-4a, RDT&E Schedule Detail

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PE NUMBER AND TITLE

0604239F F-22 EMD

PROJECT NUMBER AND TITLE

4069 Advanced Tactical Fighter FSD

(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) OT&E Phase I Start

1Q

(U) OT&E Phase I Complete

2Q

(U) IOT&E Start

3Q

(U) IOT&E Complete

2Q

(U) FDE Start

2Q

(U) FDE Complete

1Q

(U) FOT&E Start

4Q

(U) FOT&E Complete

1Q