

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					Program Element 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	724.911	1,708.900	2,171.736	2,226.004	1,999.481	1,647.984	1,309.257	1,056.953
D2261/JSF SDD								
This Program Element continues development efforts budgeted in program element 0603800N prior to FY 2002.								
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Strike Fighter program will develop and field a family of aircraft that meets the needs of the USN, USAF, and USMC and allies, with maximum commonality among the variants, consistent with National Disclosure Policy (NDP), to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom and other International countries are participants in the JSF Program.								

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME Program Element 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM				PROJECT NUMBER AND NAME Project Unit (PU) No. D2261, JOINT STRIKE FIGHTER (JSF) SDD			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	724.911	1,708.900	2,171.736	2,226.004	1,999.481	1,647.984	1,309.257	1,056.953
RDT&E Articles Qty					6	8		

This Program Element continues development efforts budgeted in program element 0603800N prior to FY 2002.

Quantity of 14 RDT&E articles reflect flight test articles; 8 ground test articles are also budgeted in SDD

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Strike Fighter program will develop and field a family of aircraft that meets the needs of the USN, USAF, and USMC and allies, with maximum commonality among the variants, consistent with National Disclosure Policy (NDP), to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom and other International countries are participants in the JSF Program.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD																	
B. Accomplishments/Planned Program (Breakout reflects USN, USAF, UK and other International funding)																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: right;">1,623.047</td> <td style="text-align: right;">3,462.052</td> <td style="text-align: right;">4,515.000</td> <td style="text-align: right;">4,571.000</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	1,623.047	3,462.052	4,515.000	4,571.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	1,623.047	3,462.052	4,515.000	4,571.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> FY02 commenced execution of System Development and Demonstration (SDD) for Air System with Lockheed Martin and F135 Propulsion System with Pratt & Whitney, including International Commonality Effort (ICE). FY03, FY04 and FY05 will continue SDD execution of the Air System and F135 Propulsion System, including ICE and commence Technology Maturation efforts. </div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: right;">26.921</td> <td style="text-align: right;">174.684</td> <td style="text-align: right;">100.000</td> <td style="text-align: right;">231.000</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	26.921	174.684	100.000	231.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	26.921	174.684	100.000	231.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> FY02, FY03, FY04 and FY05 continue the General Electric F136 development for a second, interchangeable, JSF engine for competition in production (previously begun in associated program elements 0603800N and 0603800F). </div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: right;">101.391</td> <td style="text-align: right;">187.474</td> <td style="text-align: right;">273.973</td> <td style="text-align: right;">424.389</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	101.391	187.474	273.973	424.389	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	101.391	187.474	273.973	424.389															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> FY02 commenced SDD Systems Engineering (SE) and Mission Support activities, including modeling, simulation and analysis (MS&A) efforts, risk reduction activities and program office functions. FY03, FY04 and FY05 will continue SE and Mission Support activities and commence technology maturation efforts. </div>																			

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 3 of 13)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD		
B. Accomplishments/Planned Program (Cont.)				
GRAND TOTAL	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	1,751.359	3,824.210	4,888.973	5,226.389
RDT&E Articles Quantity				

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C. PROGRAM CHANGE SUMMARY:

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Funding:				
Previous President's Budget:	762.957	1,727.500	1,931.753	2,489.103
Current President's Budget	724.911	1,708.900	2,171.736	2,226.004
Total Adjustments	-38.046	-18.600	239.983	-263.099
Summary of Adjustments				
Congressional program reductions		-10.000		
Congressional undistributed reductions		-10.601		
Congressional rescissions	-1.633			
Congressional increases		29.750		
SBIR/STTR Transfer	-19.385			
Economic Assumptions	-2.029	-27.749	-50.911	-47.995
Reprogrammings	-14.999			
SPONSOR/FMB/NAVAIR Adjustments			290.894	-215.104
Subtotal	-38.046	-18.600	239.983	-263.099

Schedule:

Not Applicable.

Technical:

Not Applicable.

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D. OTHER PROGRAM FUNDING SUMMARY: This is a joint program with no executive service. Program Element 0604800F continues USAF development efforts budgeted in 0603800F prior to FY 2002. The United Kingdom and multiple other countries are participants in the SDD phase of JSF.								
<u>RDT&E:</u>	<u>FY 2002</u>	<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>
0604800F	720.058	1,697.810	2,194.087	2,242.485	1,992.356	1,640.118	1,302.679	1,046.762
United Kingdom	95.000	161.000	200.000	356.000	384.500	355.200	266.200	85.000
Canada	56.000	6.200	6.920	7.520	7.480	5.320	2.870	1.580
Denmark	3.200	7.400	7.700	24.030	23.980	21.910	14.510	4.110
Netherlands	48.000	90.000	103.000	123.000	133.000	120.000	76.000	28.000
Norway	7.890	8.950	22.980	24.700	24.590	15.380	8.290	4.560
Italy	85.000	104.000	126.000	152.000	171.000	154.000	98.000	36.000
Turkey	11.300	25.700	28.700	31.200	31.000	22.100	11.900	6.500
Australia		14.250	27.850	39.450	29.950	15.000	8.500	5.000
<u>RELATED RDT&E:</u> Funding prior to JSF SDD (FY94-FY01): USN PE 0603800N \$1,950.617; USAF PE 0603800F \$1,907.352; DARPA PE 0603800E \$118.006; UK \$201.221; Multi-Lateral \$32.100; Canada \$10.600; and Italy \$10.000 for a total of \$4,229.896.								
<u>RELATED PROCUREMENT:</u>	<u>FY 2002</u>	<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>
0214146N (Quantity)				48.696	744.041 (4)	1,293.365 (8)	3,550.168 (29)	5,496.110 (52)
0207142F (Quantity)				70.833	992.385 (6)	1,733.950 (14)	1,981.764 (20)	2,872.598 (30)

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM			PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD			
	<u>FY 2002</u>	<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>RELATED SPARES AND REPAIR PARTS:</u>								
USN					15.002	34.107	28.979	23.238
<u>RELATED MILCON:</u>								
0207142F			19.060	10.300	0.000	0.000	104.100	93.000
91211F			1.000	0.900				
24146N			24.370					

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Exhibit R-2a, RDTEN Project Justification
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD

E. ACQUISITION STRATEGY:

Activities in the prior phase of JSF centered around three distinct objectives to provide a sound foundation for the start of SDD in Fall 2001:

- (1) facilitated the Services' development of fully validated, affordable operational requirements;
- (2) lowered risk by investing in and demonstrating key leveraging technologies that lowered the cost of development, production and ownership; and
- (3) demonstrated operational concepts.

Early warfighter and technologist interaction was an essential aspect of the requirements definition process, and achieved JSF affordability goals. To an unprecedented degree the JSF Program used cost-performance trades early, as an integral part of the weapon system development process. The Services defined requirements through an iterative process, balancing weapon system capability against life cycle cost at every stage. Each iteration of requirements was provided to industry. They evolved their designs and provided cost data back to the warfighters. The warfighters evaluated trades and made decisions for the next iteration. This iterative process produced iterations of the Services' Joint Interim Requirements Documents in 1995, 1997, 1998 and culminated in the approved joint Operational Requirements Document (ORD) in FY 2000.

A sizable technology maturation effort was conducted to reduce risk and life cycle cost (LCC) through technology maturation and demonstrations. The primary emphasis was on technologies identified as high payoff contributors to affordability, supportability, survivability, and lethality. Numerous demonstrations were accomplished to validate performance and life cycle cost impact to component, subsystem, and the total system.

In November 1996, contracts were awarded to Boeing and Lockheed Martin for Concept Demonstration Programs. These competing contractors built and flew concept demonstrator aircraft, conducted concept unique ground demonstrations, and refined their respective weapon system concepts. Specifically, Boeing and Lockheed Martin demonstrated commonality and modularity, STOVL hover and transition, and low speed handling qualities of their respective weapon system concepts. Pratt and Whitney provided propulsion hardware and engineering support. General Electric continued development of a second, interchangeable, engine for competition in production.

Following evaluation of proposals and a favorable Milestone B decision, the JSF Program entered SDD on 26 October 2001 with SDD contract awards to Lockheed Martin and Pratt & Whitney. The SDD plan reflects a block approach, based on open systems architecture, for accomplishing aircraft and weapons integration. General Electric continues propulsion development efforts.

Procurement of the USAF and USMC JSF variants is planned to begin in FY 2006, with advance procurement for Lot 1 in FY 2005. Procurement of the USN JSF variant is planned to begin in FY 2008, with advance procurement for Lot 3 in FY 2007.

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Exhibit R-3 Cost Analysis						DATE:		February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604800N, JOINT STRIKE FIGHTER (JSF) PROGRA			D2261, JOINT STRIKE FIGHTER SDD						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hdw Develop - Air System	C/CPAF	Lockheed Martin, Ft. Worth TX	851.493	2,707.796	10/02	3,777.000	10/03	3,683.000	10/04	TBD	TBD	19,041.545
Award Fees (Non-Add -Budgeted)			(83.333)	(195.902)		(302.000)		(337.000)				
Award Fees (% Funded to Date)			100%	0%								
Primary Hdw Develop - F135 Engine	SS/CPAF	Pratt & Whitney, Hartford CT	763.242	754.256	10/02	738.000	10/03	888.000	10/04	TBD	TBD	4,833.785
Award Fees (Non-Add -Budgeted)			(62.365)	(82.833)		(90.000)		(91.000)				
Award Fees (% Funded to Date)			100%	0%								
Prim Hdw Dev	SS/BOA	Pratt & Whitney	8.312									
Subtotal SDD			1,623.047	3,462.052		4,515.000		4,571.000		TBD	TBD	
Primary Hdw Dev - F136 Eng Phase IIlb	SS/CPAF	General Electric, Cincinnati OH	26.921	174.684	10/02	100.000	10/03	22.000	10/04	TBD	TBD	425.498
Award Fees (Non-Add - Budgeted)			(8.001)	(11.056)		(14.000)		(5.000)				
Award Fees (% Funded to Date)			100%	0%								
Primary Hdw Dev - F136 Eng Phase IV	SS/TBD	General Electric						209.000		TBD		
Award Fees (Non-Add)												
System Eng/Mission Support	Various	Field Activities	82.380	159.755	10/02	240.668	10/03	395.046	10/04	TBD	TBD	
	Various	Miscellaneous	5.775	5.150	10/02	5.200	10/03	5.400	10/04	TBD	TBD	
	C/CPAF	Sverdrup/Anteon, Arlington VA	3.150	4.975	12/02	5.124	12/03	5.278	12/04	TBD	TBD	
	SS/CPFF	LSI/Veridian, Patuxent River MD	4.709	6.719	12/02	6.921	12/03	7.127	12/04	TBD	TBD	
Subtotal System Eng/Mission Support			96.014	176.599		257.913		412.851			TBD	
Subtotal Product Development			1,745.982	3,813.335		4,872.913		5,214.851		TBD	TBD	
Remarks:												
Cost to Complete and Total Cost are TBD pending completion of the December 2002 Selected Acquisition Report (SAR).												
The GE Target Value of Contract reflects the negotiated value of the current Phase IIlb.												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 9 of 13)

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Exhibit R-3 Cost Analysis (page 1)						DATE:						
APPROPRIATION/BUDGET ACTIVITY						February 2003						
RDT&E, N / BA-5			PROGRAM ELEMENT 0604800N / JOINT STRIKE FIGHTER (JSF) PROGRAM			PROJECT NUMBER AND NAME D2261 / JOINT STRIKE FIGHTER SDD						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
											0.000	
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											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604800N / JOINT STRIKE FIGHTER (JSF) PROGRAM			D2261 / JOINT STRIKE FIGHTER SDD						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Included in Product Development											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Program Mgmt Support	SS/CPFF	Stanley, Arlington VA	3.836	8.555	10/02	13.670	10/03	9.076	10/04	TBD	TBD	
	SS/CPFF	Aegis, Arlington VA	1.541	2.320	12/02	2.390	12/03	2.462	12/04	TBD	TBD	
Subtotal Management			5.377	10.875		16.060		11.538		TBD	TBD	
Remarks:												
Total Cost			1,751.359	3,824.210		4,888.973		5,226.389		TBD	TBD	
Remarks: Prior Years reflect \$ 724.911 USN / \$720.058 USAF / \$95.000 UK / \$211.390 Other International / Total \$1,751.359 FY 2003 reflects \$1,708.900 USN / \$1,697.810 USAF / \$161.000 UK / \$256.500 Other International / Total \$3,824.210 FY 2004 reflects \$2,171.736 USN / \$2,194.087 USAF / \$200.000 UK / \$323.150 Other International / Total \$4,888.973 FY 2005 reflects \$2,226.004 USN / \$2,242.485 USAF / \$356.000 UK/ \$401.900 Other International / Total \$5,226.389												

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EXHIBIT R4, Schedule Profile

DATE:

February 2003

APPROPRIATION/BUDGET ACTIVITY

RDT&E, N /

BA-05

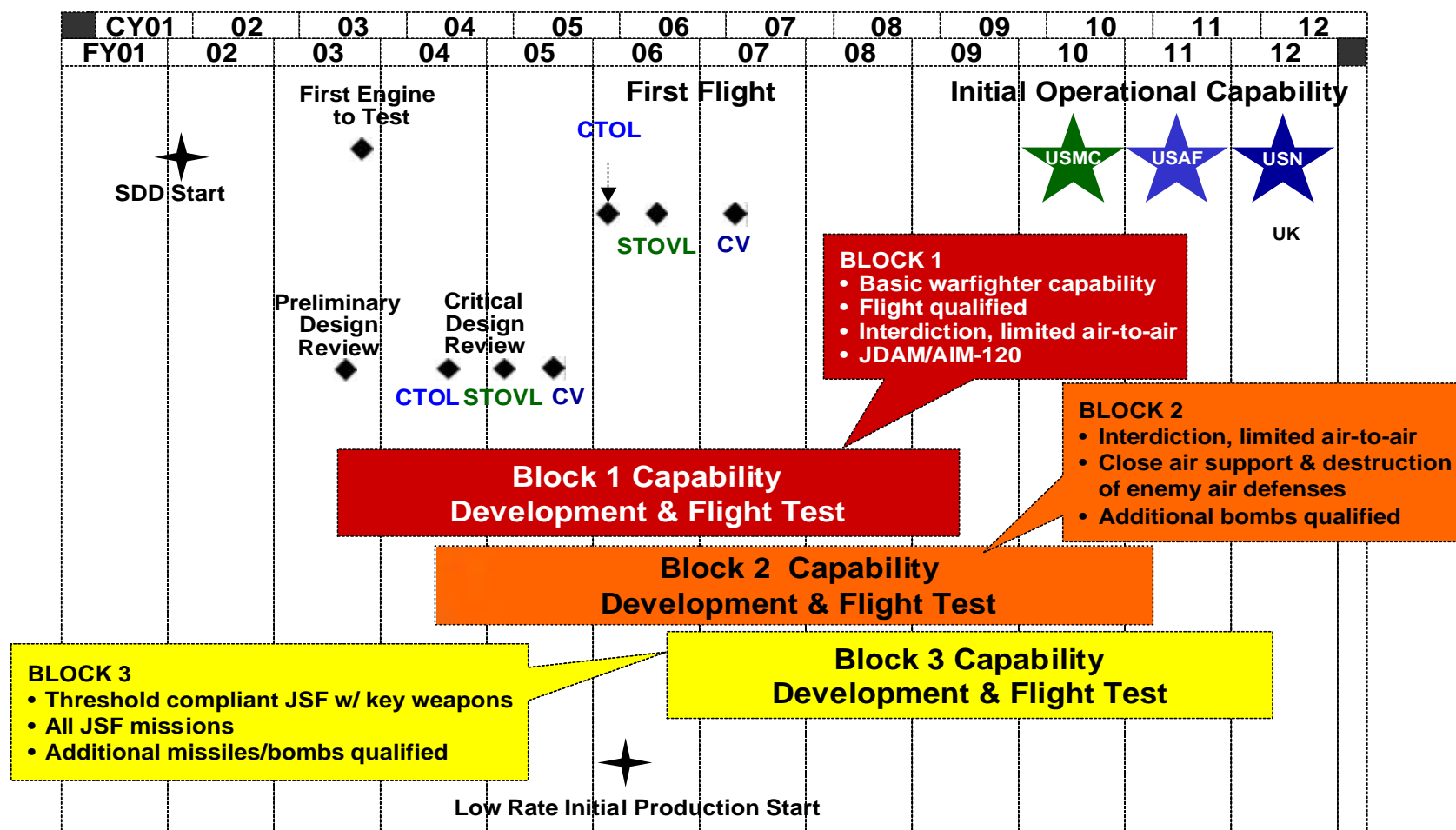
PROGRAM ELEMENT NUMBER AND NAME

0604800N / JOINT STRIKE FIGHTER (JSF) PROGRAM

PROJECT NUMBER AND NAME

D2261 / JOINT STRIKE FIGHTER SDD

System Development and Demonstration (SDD) Schedule



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Exhibit R-4, Schedule Profile

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Exhibit R-4a, Schedule Detail						DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT 0604800N / JOINT STRIKE FIGHTER (JSF) PROGRAM				PROJECT NUMBER AND NAME D2261 / JOINT STRIKE FIGHTER SDD			
Schedule Profile		FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone B and Award of SDD Contract		1Q							
Air System Requirements Review (ASRR)		2Q							
Integrated Baseline Reviews at Lockheed Martin, Pratt & Whitney and GE		2Q-3Q							
Preliminary Design Review (PDR) for Air System			3Q						
Critical Design Reviews (CDRs) for Three Variants				3Q	1Q-3Q				
CTOL First Flight						1Q			
STOVL First Flight						3Q			
CV First Flight							2Q		
First Operational Aircraft Delivered								3Q	
USMC Initial Operational Capability (IOC)									
USAF IOC									
USN IOC									
Milestone C									

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Exhibit R-4a, Schedule Detail
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