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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207142F / <i>F-35 Squadrons</i>
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COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	9.682	3.000	40.092	115.395	-	115.395	269.315	339.246	371.797	389.668	Continuing	Continuing
675346: <i>F-35</i>	0.000	3.000	24.477	110.428	-	110.428	243.520	311.476	334.116	340.093	Continuing	Continuing
676011: <i>JSF DUAL CAPABLE AIRCRAFT</i>	9.682	-	15.615	4.967	-	4.967	25.795	27.770	37.681	49.575	Continuing	Continuing

Program MDAP/MAIS Code: 198

A. Mission Description and Budget Item Justification

The F-35 Lightning II Fighter program is developing a family of highly common, affordable, next generation, multi-role aircraft to meet the needs of the USMC, USN, USAF and international partners. The three variants are the F-35A Conventional Takeoff and Landing (CTOL); F-35B Short Takeoff and Vertical Landing (STOVL); and the F-35C Carrier Variant (CV). Maximum commonality among the variants, consistent with National Disclosure Policy, will minimize life cycle costs.

F-35 Follow-on Development (FoD) provides continuing incremental upgrades of the three F-35 variants and associated ground equipment. The FoD acquisition strategy is based upon incremental block development of capabilities with each increment consisting of two development cycles. FoD will provide capability enhancements, required systems upgrades and cost improvements through an incremental acquisition approach. FoD capability planning includes an efficient transition from F-35 System Development and Demonstration (SDD) to FoD. As SDD development activities ramp down, the FoD program will assume responsibility for new development and the maintenance of associated developmental infrastructure. FoD capability planning includes Block 4A and 4B Engineering and Manufacturing Development efforts from FY16 through FY20 followed by DT and OT testing in 2020/2021 with IOC of capabilities in 2022.

Additionally, the F-35 JSF ORD calls for the F-35A (CTOL) Variant Air Vehicle to have the capabilities and provisions for Dual Capable Aircraft (DCA) operations in the first post SDD block upgrade. DCA refers to the capability to carry and deliver conventional and non-conventional weapons. DCA operation for the F-35A is internal carriage of two B-61s. Due to extensive certification requirements, the DCA capability planning and design will begin in Block 4A and continue through testing and certification in Block 4B.

The United Kingdom, other International Partner nations, and Foreign Military Sales customers are also participants in the JSF program. The program shown here reflects USN, USMC, USAF, and International Partner funding.

Funding at the accomplishment/planned program level is reported as the total of all services and partners as these activities support all aircraft variants.

The FY2016 funding request was reduced by \$1.65 million to account for the availability of prior execution balances.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	3.000	43.666	117.812	-	117.812
Current President's Budget	3.000	40.092	115.395	-	115.395
Total Adjustments	-	-3.574	-2.417	-	-2.417
• Congressional General Reductions	-	-3.574			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-2.417	-	-2.417

Change Summary Explanation

FY2015 Congressional reduction: -\$3.574M for Acquisition Decision Memorandum limitation.

FY2016 reduction: -\$767 million for proper program alignment and funding for higher Air Force priorities.

The FY2016 funding request was reduced by \$1.65 million to account for the availability of prior execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons				Project (Number/Name) 675346 / F-35			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
675346: F-35	-	3.000	24.477	110.428	-	110.428	243.520	311.476	334.116	340.093	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Total cost including USN, USMC, and USAF funding: FY2014 \$6.000M; FY15 \$55.698M; FY16 \$261.772M

R-2A table shown above reflects service funding only.

R-2A (section B)/R-3 displays combined program for JSF Follow-on Development (FoD).

JSF FoD Includes:

- USAF PE 0207142F BPAC 675346
- USN PE 0604810N Project Unit 2936
- USMC PE 0604810M Project Unit 2935

A. Mission Description and Budget Item Justification

F-35 FoD provides continuing incremental upgrades of the three F-35 variants and associated ground equipment. The FoD acquisition strategy is based upon incremental block development of capabilities with each increment consisting of two development cycles. FoD capability planning includes an efficient transition from F-35 SDD to Follow-on Development. As SDD development activities ramp down, the FoD program will assume responsibility for new development and the maintenance of associated developmental infrastructure. FoD capability planning includes Block 4A and 4B Engineering and Manufacturing Development efforts from FY16 through FY19 followed by DT and OT testing in 2020/2021 with IOC of capabilities in 2022.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2014	FY 2015	FY 2016
Title: Air Vehicle Follow-on Development (Capability Planning) (F-35 JSF)	4.333	48.698	239.435
Description: Capability planning effort will focus on mission requirements analysis, early engineering, risk reduction and preparations leading to formal acquisition approval of Block 4. Program planning will consist of engineering and development support for defining, managing and the acquisition of capability enhancements required to address threats indicated in the Electronic Warfare ICD, the Fifth Generation Fighter Modernization ICD.			
FY 2014 Accomplishments: FoD activity supports development and validation of Follow-on Development Increment 1 Capability Development Document (CDD).			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 675346 / F-35

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Requirements analysis and technical requirements development, systems engineering, and technical planning. A combined Systems Requirements Review and System Functional Review is planned followed by development of the Block 4 preliminary design. FY 2016 Plans: The results from the FoD Systems Requirements Review and the Systems Functional Review are incorporated into Block 4 preliminary designs.			
Title: Development Support Description: Technical and Analytical Support FY 2014 Accomplishments: Technical and Analytical Support FY 2015 Plans: Initiate development support for defining, managing and acquiring the envisioned F-35 capability enhancements identified in approved requirements documents. FY 2016 Plans: Continue development support for defining, managing and acquiring the envisioned F-35 Block 4 new capability enhancements identified in approved requirements documents.	1.667	7.000	22.337
Accomplishments/Planned Programs Subtotals	6.000	55.698	261.772
Other Service Program Funding Adjustment	3.000	31.221	151.344
Air Force Subtotals	3.000	24.477	110.428

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• RDTE: BA05: PE 0604800F: JSF SDD, BPAC 653831	600.360	535.296	517.980	-	517.980	323.446	114.595	5.291	5.365	-	22,006.092
• RDTE:BA05: PE 0604800F: JSF Deployability and Suitability Enhancements, BPAC 653832	16.200	32.593	71.461	-	71.461	-	-	-	-	-	-
• RDTE: BA07: PE 207142F: Dual Capable Aircraft (DCA), BPAC 676011	-	15.615	4.967	-	4.967	25.795	27.770	37.681	49.575	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 675346 / F-35
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RD TEN: BA05: PE 604800N: <i>JSF SDD (CV), BPAC 2261</i>	409.421	485.263	467.759	-	467.759	443.185	45.436	0.574	0.615	-	19,832.613
• RD TEN: BA05: PE 604800M: <i>JSF SDD (STOVL), BPAC 2262</i>	394.248	487.068	505.949	-	505.949	398.976	87.145	8.014	8.473	-	3,692.657
• International: <i>International SDD</i>	10.311	15.000	17.000	-	17.000	22.000	27.450	-	-	Continuing	Continuing
• International 3: <i>International FoD</i>	0.610	21.086	79.318	-	79.318	128.965	157.602	169.315	171.636	Continuing	Continuing
• APAF: BA01: ATA000: <i>JSF CTOL, PE 0207142F, BP10</i>	2,889.602	3,691.046	5,260.212	-	5,260.212	5,356.041	6,109.330	6,023.688	5,526.504	-	-
• APAF: BA01:ATA000: <i>JSF CTOL Advance Procurement, PE 207142F, BP10</i>	339.533	291.880	460.260	-	460.260	528.560	522.180	497.720	506.000	19,787.624	24,451.221
• APN: BA01: BP0147: <i>JSF (CV), PE 0204146N</i>	1,028.415	848.552	897.542	-	897.542	848.056	1,217.562	1,496.303	1,606.088	32,734.961	51,085.532
• APN: BA01: BP0147C: <i>JSF Advance Procurement (CV), PE 204146N</i>	79.016	29.400	48.630	-	48.630	91.908	111.898	126.003	204.132	3,733.206	5,719.322
• APN: BA01:BP0152: <i>JSF (STOVL), PE 0204146M</i>	1,172.248	1,184.410	1,483.414	-	1,483.414	2,049.754	2,713.087	2,796.129	2,810.155	26,147.806	43,146.851
• APN: BA01: BP0152C: <i>JSF Advance Procurement (STOVL), PE 204146M</i>	103.195	143.885	203.060	-	203.060	226.148	136.872	139.562	142.353	2,900.408	4,834.934
• International 2: <i>International Production</i>	1,954.600	2,975.641	4,175.668	-	4,175.668	6,006.257	7,809.829	7,962.298	7,166.485	Continuing	Continuing
• MILCON: <i>F-35B Milcon</i>	-	71.704	21.960	-	21.960	219.100	64.660	121.990	119.800	642.400	1,966.114
• OPN: BA03: BP4267: <i>JSF Logistics Information System (ALIS), PE 204261N</i>	3.389	-	-	-	-	-	-	-	-	-	19.105
• OPN: BP4268: <i>Aviation Support Equipment ALIS Ship Alts</i>	-	5.516	3.893	-	3.893	2.136	3.909	3.774	3.854	Continuing	Continuing
• OPN: BP902010: <i>ALIS Spares and Repair Parts</i>	1.010	1.576	2.946	-	2.946	1.948	1.940	1.957	1.995	Continuing	Continuing
• APAF: BA06: ATA000: <i>JSF Initial Spares, PE 0207142F, BP16</i>	91.414	236.418	238.673	-	238.673	245.991	326.971	368.702	372.588	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 675346 / F-35
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• APN: BA06:ATA000: <i>Initial Spares (CV), PE 0204146N, BP0605</i>	25.809	28.200	59.914	-	59.914	58.795	42.726	35.247	38.394	-	-
• APN: BA06: ATA000: <i>Initial Spares (STOVL), PE 0204146M, BP0605</i>	88.304	64.194	111.569	-	111.569	76.703	29.756	100.362	136.763	-	-
• MILCON: BA01: PE 207597F: <i>JSF Military Construction</i>	-	-	65.400	-	65.400	34.000	18.900	21.000	-	-	139.300
• MILCON: BA01: PE 0207142F: <i>JSF Military Construction</i>	56.000	66.700	132.850	-	132.850	124.000	-	-	-	1,328.000	2,238.050
• APAF: BA05: ATA000: <i>JSF Modifications, PE 0207142F, BP11</i>	126.777	187.646	70.167	-	70.167	310.237	294.229	260.071	259.791	Continuing	Continuing
• OPAF: BA01: 821800: <i>Joint Strike Fighter, PE 0207142F</i>	1.431	4.463	3.858	-	3.858	2.333	2.374	2.415	-	Continuing	Continuing
• APN: BA05: BP0593: <i>Modifications (CV), PE 204146N</i>	29.950	20.502	68.527	-	68.527	47.294	50.707	17.214	17.484	Continuing	Continuing
• APN: BA05: BP0592: <i>Modifications (STOVL), PE 204146M</i>	111.158	215.819	256.106	-	256.106	170.624	175.250	16.752	17.641	Continuing	Continuing
• RDTE: BA05: PE 604810N: <i>F-35C Follow-on Development (CV), BPAC 2936</i>	-	10.622	47.579	-	47.579	103.564	134.250	145.580	148.975	Continuing	Continuing
• RDT&EN: BA05: PE 604800N: <i>F-35C Sustainment/Capability Enhancements (CV), BPAC 3352</i>	14.419	16.997	36.977	-	36.977	-	-	-	-	-	68.393
• RDT&EN: BA05: PE 604800M: <i>F-35B Sustainment/Capability Enhancements (STOVL), BPAC 3350</i>	14.332	11.980	31.952	-	31.952	-	-	-	-	-	58.264
• RDTE: BA07: PE 604810M: <i>F-35B Follow-on Development (STOVL), BPAC 2935</i>	-	10.399	59.265	-	59.265	120.028	157.257	168.502	171.946	Continuing	Continuing
• MILCON: USN:: <i>F-35C MILCON</i>	-	60.200	72.460	-	72.460	11.800	-	-	-	-	-
• RDTE: USN: BA05: PE604800N: <i>CV RDTE FOD CDD</i>	1.500	-	-	-	-	-	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force	Date: February 2015
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Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 675346 / F-35
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RETEN: USMC: BA05: PE604800M: STOVL, RDTE, FOD, CDD	1.500	-	-	-	-	-	-	-	-	-	-

Remarks

This is a joint program with no executive service. Service Acquisition Executive (SAE) authority alternates between the Department of the Navy and the Department of the Air Force and currently resides with the Navy. Program Element 0604800N/0604800M continues USN development efforts budgeted in 0603800N prior to FY2002. The United Kingdom and other International countries are participants in the SDD phase of JSF.

Note: The USAF/USN/USMC PROCUREMENT lines include Aircraft Procurement and Advanced Procurement only. Initial Spares and Repair Parts for all Services are reflected in separate lines. International Partner Funding includes funds provided under the Italy and Netherlands Bilateral agreements.

RELATED RDT&E: Funding prior to F-35 SDD (FY94-FY01): USN PE 0603800N \$1,950,617; USAF PE 0603800F \$1,907,352; DARPA PE 0603800E \$118,056; and International Partner contributions of \$253.921 for a total of \$4,229,896.

D. Acquisition Strategy

To enable the ability to adjust to potential discrepancies discovered during SDD Block 3 Test and Evaluation, the engineering and development planning support for FoD will be procured under a cost type contract. A fee provision will be used to target and motivate contractor performance. A separate Basic Ordering Agreement or Indefinite Quantity/Indefinite Delivery contract is planned to provide a long term approach to upgrading and maintaining laboratories and test aircraft. Both Development Support and Management Services will primarily use CPFF Delivery Orders.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 675346 / F-35
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Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Requirements Analysis, Systems Engineering and Risk Reduction	SS/CPFF	Lockheed Martin : Ft Worth, TX	0.000	2.463		46.017	Feb 2015	238.654	Feb 2016	-		238.654	Continuing	Continuing	TBD
Prime LM IDIQ 13-D-0005	C/CPAF	Lockheed Martin : Ft Worth, TX	0.000	1.600		-		-		-		-	-	1.600	1.600
Product Development System Engineering	C/CPAF	Lockheed Martin : Ft Worth, TX	0.000	-		0.781		0.781		-		0.781	-	1.562	1.600
Subtotal			0.000	4.063		46.798		239.435		-		239.435	-	-	-

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical and Analytic Support LM	SS/CPFF	Lockheed Martin : Ft Worth, TX	0.000	-		-		-		-		-	Continuing	Continuing	10.062
Product Development / Primary H/W Development	Various	Lockheed Martin : Ft Worth, TX	0.000	1.667		-		-		-		-	-	1.667	-
Eglin	C/CPAF	Lockheed Martin : Ft Worth, TX	0.000	-		4.000		10.982		-		10.982	-	14.982	-
Pax	C/CPAF	Lockheed Martin : Ft Worth, TX	0.000	-		3.000		11.355		-		11.355	-	14.355	-
Subtotal			0.000	1.667		7.000		22.337		-		22.337	-	-	-

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 675346 / F-35
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Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Functional Wyle	TBD	Wyle : Arlington, VA	0.000	0.270	Dec 2014	1.900	Dec 2015	-		-		-	-	2.170	-
Subtotal			0.000	0.270		1.900		-		-		-	-	2.170	-
Cost Category Subtotals			0.000	6.000		55.698		261.772		-		261.772	-	-	-
Other Service Program Funding Adjustment			0.000	3.000		31.221		151.344		-		151.344	-	185.565	-
Project Cost Totals			0.000	3.000		24.477		110.428		-		110.428	-	-	-

Remarks

The Project information shown here reflects USN, USMC, USAF and International Partner funding total for each contract. By agreement, USN and USMC funding shares are approximately equal and when combined are equal to the USAF share. Partner funding share is based upon future aircraft procurement numbers updated annually in accordance with the Production, Sustainment, Follow-on Development Memorandum of Agreement. FY 2013 Risk Reduction conducted with Partner funding to maintain planned schedule for integration and delivery of Block 4 Capabilities. Funding was contributed by Partner nations in anticipation of U.S. funding in FY 2014.

FY 2014 reflects \$3.000M USAF/\$1.500M USN/\$1.500M USMC/\$0.000M International/Total \$6.000M

FY 2015 reflects \$24.477M USAF/\$10.622M USN/\$10.399M USMC/\$10.200M International/Total \$55.698M

FY 2016 reflects \$110.428M USAF/\$47.579M USN/\$59.2655M USMC/\$44.500M International/Total \$261.772M

F-35 FoD Includes:
 USAF PE 0207142F BPAC 675346
 FY13: USN PE 0604800N Project Unit 2261
 FY14: USN PE 0604800N Project Unit 3353
 FY15: USN PE 0604810N Project Unit 2936
 FY13: USMC PE 0604800M Project Unit 2262
 FY14: USMC PE 0604800M Project Unit 3351
 FY15: USMC PE 0604810M Project Unit 2935

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / <i>F-35 Squadrons</i>	Project (Number/Name) 675346 / <i>F-35</i>
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Block 4: CDD Validation																												
Block 4A: Requirements Decomposition and Risk Reduction																												
Block 4A: EMD																												
Block 4: Lab Upgrade																												
Block 4: System Engineering Air System Preliminary Design																												
Block 4: Developmental Testing Aircraft / Engine Upgrades																												
Block 4B: Requirements Decomposition and Risk Reduction																												
Block 4B: EMD																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / <i>F-35 Squadrons</i>	Project (Number/Name) 675346 / <i>F-35</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 4: CDD Validation	2	2015	2	2015
Block 4A: Requirements Decomposition and Risk Reduction	1	2015	4	2016
Block 4A: EMD	1	2016	4	2020
Block 4: Lab Upgrade	4	2016	4	2018
Block 4: System Engineering Air System Preliminary Design	2	2016	4	2017
Block 4: Developmental Testing Aircraft / Engine Upgrades	4	2016	4	2020
Block 4B: Requirements Decomposition and Risk Reduction	1	2017	3	2018
Block 4B: EMD	4	2018	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons				Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
676011: JSF DUAL CAPABLE AIRCRAFT	9.682	-	15.615	4.967	-	4.967	25.795	27.770	37.681	49.575	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

NOTE:

F-35 FoD Includes:

USAF:PE 0207142F BPAC 675346

USN: FY13 PE 0604800N Project Unit 2261

USN: FY14 PE 0604800N Project Unit 3353

USN: FY15 PE 0604810N Project Unit 2936

USMC: FY13 PE 0604800M Project Unit 2262

USMC: FY14 PE 0604800M Project Unit 3351

USMC: FY15 PE 0604810M Project Unit 2935

F-35 DCA Includes:

USAF PE 0207142F BPAC 676011

USN N/A

USMC N/A

A. Mission Description and Budget Item Justification

The F-35 Lightning II Fighter program is developing a family of highly common, affordable, next generation, multi-role aircraft to meet the needs of the USMC, USN, USAF and international partners. The three variants are the F-35A Conventional Takeoff and Landing (CTOL); F-35B Short Takeoff and Vertical Landing (STOVL); and the F-35C Carrier Variant (CV). Maximum commonality among the variants, consistent with National Disclosure Policy, will minimize life cycle costs. FY2015 continues development and testing of the F-35. As the initial capabilities are being delivered from the System Development and Demonstration (SDD) program, planning for Follow-on Development (FoD) continues. Capability requirements are being matured and FoD planning continues based upon the approved Fifth Generation Fighter Modernization Initial Capabilities Document (ICD), an approved Electronic Warfare ICD, and the results of an OSD Tiger Team Review. FY14 F-35 FoD activity includes drafting of Follow-on Development Increment 1 Capability Development Document (CDD) and further risk reduction. Follow-on Development will provide capability enhancements, required systems upgrades and cost improvements through an incremental acquisition approach.

Based on JROCM 091-03, the JSF ORD Change stated that F-35A design must incorporate dual-capability. Dual-Capable Aircraft (DCA) operations refers to the capability to carry and employ conventional and non-conventional weapons. Extensive Certification process, DCA certification tasks, integration planning, environmental testing, and design compatibility work began in FY15 and continue through testing and certification. Initial Certification will be achieved on the earliest feasible increment.

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Title: Dual Capable Aircraft (DCA)(F-35 JSF)	-	15.615	4.967
Description: This effort provides for the assessment of Dual Capable Aircraft (DCA) weapon integration impacts on the Joint Strike Fighter (JSF) aircraft, early in the weapon design phase. It identifies and avoids potential technical and cost risks, as well as defining the integration and certification trade-space to field the DCA capability with the B61 weapon. This effort also supports follow-on risk reduction efforts that will ensure future integration alignment with the first feasible post SDD block upgrade, and is expected to include full integration efforts pending Service decisions.			
FY 2015 Plans: Initiate Nuclear Certification and environmental flight test efforts to integrate dual-capability on F-35A (CTOL). Based on initial nuclear certification timelines of legacy platforms, the process to achieve Nuclear Certification on F-35A must begin now in order to field capability in time to meet national/alliance nuclear posture commitments. Additionally, the environmental flight tests will help ensure F-35A environments are compatible with the B61-12 prior to the weapon completing its design phase.			
FY 2016 Plans: Continue Nuclear Certification efforts to integrate dual-capability on F-35A (CTOL).			
Accomplishments/Planned Programs Subtotals	-	15.615	4.967

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE: BA05: PE 0604800F: JSF SDD, BPAC 653831	600.360	535.296	517.980	-	517.980	323.446	114.595	5.291	5.365	-	22,011.826
• RDTE: BA04: PE 0604800F: JSF SDD, BPAC 653831	-	4.976	4.979	-	4.979	-	-	-	-	-	-
• RDTEN: BA05: PE 604800N: JSD SDD (CV), BPAC 2261	409.421	485.263	467.759	-	467.759	443.185	45.436	574.000	615.000	-	19,848.894
• RDTEN: BA05: PE 604800M: JSD SDD (STOVL), BPAC 2262	394.248	487.068	505.949	-	505.949	398.976	87.145	8.014	8.473	-	3,702.962
• APN: BA01:BP0152C: JSF Advance Procurement (STOVL), PE 204146M	103.195	143.885	203.060	-	203.060	226.148	136.872	139.562	142.353	2,900.408	4,834.934

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• RD TEN:BA05: PE 604800N: USRL, BPAC 3194	-	-	-	-	-	-	-	-	-	-	144.769
• International R&D: <i>International R&D (SDD/FOD)</i>	10.311	15.000	17.000	-	17.000	22.000	27.450	-	-	Continuing	Continuing
• APAF: BA01: ATA000: JSF <i>CTOL, PE 207142F, BP10</i>	2,889.602	3,691.046	5,260.212	-	5,260.212	5,356.041	6,109.330	6,023.688	5,526.504	156,549.82	1206,804.043
• APAF:BA01: ATA000: JSF <i>CTOL Advance Procurement, PE 207142F, BP10 AP</i>	339.533	291.880	460.260	-	460.260	528.560	522.180	497.720	506.000	19,787.624	24,451.221
• APN: BA01: BP0147: <i>JSF (CV), PE 204146N</i>	1,028.415	848.552	897.542	-	897.542	848.056	1,217.562	1,496.303	1,606.088	32,654.887	50,468.174
• APN: BA01: BP0147C: <i>JSF Advance Procurement (CV) PE 204146N</i>	79.016	29.400	48.630	-	48.630	91.908	111.898	126.003	204.132	3,733.258	5,719.374
• APN: BA01: BP0152: JSF <i>(STOVL), PE 204146M</i>	1,172.248	1,184.410	1,483.414	-	1,483.414	2,049.754	2,713.087	2,796.129	2,810.155	25,958.968	43,041.456
• International Production: <i>JSF International Production</i>	1,954.600	2,975.641	4,175.668	-	4,175.668	6,006.257	7,809.829	7,962.298	7,166.485	Continuing	Continuing
• OPAF: BA01: 821800: <i>Joint Strike Fighter, PE 0207142F</i>	1.431	4.463	3.858	-	3.858	2.333	2.374	2.415	-	Continuing	Continuing
• OPN: BA04: BP4265: JSF <i>Other Procurement, PE 204261N</i>	-	-	-	-	-	-	-	-	-	-	5.665
• OPN: BA03: BP4267: <i>JSF Logistics Information System (ALIS), PE 204261N</i>	3.389	-	-	-	-	-	-	-	-	-	-
• OPN BA03: BP4268: <i>JSF Logistics Information Systems (ALIS) Ship Alts</i>	-	5.516	3.893	-	3.893	2.136	3.909	3.774	3.854	Continuing	Continuing
• OPN: BA03:902010: <i>ALIS Spares and Repair Parts</i>	1.010	1.576	2.946	-	2.946	1.948	1.940	1.957	1.995	Continuing	Continuing
• APAF: BA06: PE 207142F, BP16: <i>JSF Initial Spares</i>	91.414	236.418	238.673	-	238.673	245.991	326.971	368.702	372.588	12,115.975	14,919.962

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• APN: BA06: PE 204146N, BP0605: <i>Initial Spares (CV)</i>	25.809	28.200	59.914	-	59.914	58.795	42.726	35.247	38.394	2,115,809.00	2,883.975
• APN: BA06: PE 204146M, BP0605: <i>Initial Spares (STOVL)</i>	88.304	64.194	111.569	-	111.569	76.703	29.756	100.362	136.763	2,487,705.00	3,323.290
• MILCON: BA01: PE 207142F: <i>JSF Military Construction</i>	56.000	66.700	50.400	-	50.400	14.700	135.900	91.500	134.600	1,844.500	2,408.317
• USN MILCON: BA01: <i>USN JSF MILCON</i>	-	60.200	72.460	-	72.460	11.800	-	-	-	-	60.200
• APAF: BA05: PE 20742F, BP11: <i>JSF Modifications</i>	126.777	187.646	70.167	-	70.167	310.237	294.229	260.071	259.791	Continuing	Continuing
• APN: BA05: BP0593: <i>Modifications (CV), PE 204146N</i>	29.950	20.502	68.527	-	68.527	47.294	50.707	17.214	17.484	Continuing	Continuing
• APN: BA05: BP0592: <i>Modifications (STOVL), PE 204146M</i>	111.158	215.819	256.106	-	256.106	170.624	175.250	16.752	17.641	Continuing	Continuing
• RDTE: BA07: PE 207142F: <i>JSF Follow-on Development (FoD), BPAC 675346</i>	3.000	24.477	110.428	-	110.428	243.520	311.476	334.116	340.093	Continuing	Continuing
• RDTE: BA05: PE 0604800F: <i>JSF Deployability and Suitability Enhancements, BPAC 653832</i>	14.491	16.997	36.977	-	36.977	-	-	-	-	-	-
• RDTE: BA05: PE 604800N: <i>F-35C Follow-on Development (CV), BPAC 3353</i>	-	10.622	47.579	-	47.579	103.564	134.250	145.580	148.975	Continuing	Continuing
• RDT&EN: BA05: PE 604800N: <i>F-35C Sustainment/Capability Enhancements (CV), BPAC 3352</i>	14.419	16.997	16.977	-	16.977	-	-	-	-	-	48.966
• RDTE: BA05: PE 604800M: <i>F-35B Follow-on Development (STOVL), BPAC 3351</i>	-	10.399	59.265	-	59.265	120.028	157.257	168.502	171.946	Continuing	Continuing
• RDT&EN: BA05: PE 604800M: <i>F-35B Sustainment/ Capability Enhancements (STOVL), BPAC 3350</i>	14.332	11.980	31.952	-	31.952	-	-	-	-	-	38.836

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT

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

Line Item	FY 2014	FY 2015	FY 2016	FY 2016	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Cost To	
			Base	OCO	Total					Complete	Total Cost
• RDTE: BA07: PE 207142(AF): DCA	-	15.615	4.967	-	4.967	25.795	27.770	37.681	49.575	-	-
• MILCON: USAF 27142F: MILCON Operations	56.000	66.700	132.850	-	132.850	124.000	-	-	-	-	-
• RDTEN: USMC: 05 PE 604800M: STOVL, RDTE, FOD CDD	1.500	-	-	-	-	-	-	-	-	-	-
• MILCON: USAF 27597F: MILCON Training	-	-	65.400	-	65.400	34.000	18.900	21.000	-	-	-
• MILCON: USAF 52635F: MILCON Air National Guard	-	-	-	-	-	-	4.500	-	-	-	-
• RDTEN: USN: 05 PE 604800N: CV RDTE, FOD, CDD	1.500	-	-	-	-	-	-	-	-	-	-
• MILCON: USMC: F-35B MILCON	-	71.704	21.960	-	21.960	219.100	64.660	121.990	119.800	-	-
• INTL: INTL R&D FOD	610.000	21.068	79.318	-	79.318	128.965	157.602	169.315	171.636	-	-

Remarks

This is a joint program with no executive service. Service Acquisition Executive (SAE) authority alternates between the Department of the Navy and the Department of the Air Force and currently resides with the Navy. Program Element 0604800N/0604800M continues USN development efforts budgeted in 0603800N prior to FY2002. The United Kingdom and other International countries are participants in the SDD phase of JSF.

Note: The USAF/USN/USMC PROCUREMENT lines include Aircraft Procurement and Advanced Procurement only. Initial Spares and Repair Parts for all Services are reflected in separate lines. International Partner Funding includes funds provided under the Italy and Netherlands Bilateral agreements.

RELATED RDT&E: Funding prior to JSF SDD (FY94-FY01): USN PE 0603800N \$1,950,617; USAF PE 0603800F \$1,907,352; DARPA PE 0603800E \$118,056; and International Partner contributions of \$253.921 for a total of \$4,229,896.

D. Acquisition Strategy

The DCA effort will be procured via a cost type contract. It is anticipated that fee provisions will be used to target and motivate the contractor performance.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT
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Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Lockheed Martin - DCA Integration	SS/CPFF	Lockheed Martin : Ft. Worth, TX	9.682	-		15.615	Mar 2015	4.967	Mar 2016	-		4.967	Continuing	Continuing	19.682
Subtotal			9.682	-		15.615		4.967		-		4.967	-	-	19.682

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			9.682	-		15.615		4.967		-		4.967	-	-	19.682

Remarks
 F-35 FoD Includes:
 USAF:PE 0207142F BPAC 675346
 USN: FY13 PE 0604800N Project Unit 2261
 USN: FY14 PE 0604800N Project Unit 3353
 USN: FY15 PE 0604810N Project Unit 2936

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force							Date: February 2015			
Appropriation/Budget Activity			R-1 Program Element (Number/Name)			Project (Number/Name)				
3600 / 7			PE 0207142F / F-35 Squadrons			676011 / JSF DUAL CAPABLE AIRCRAFT				
	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract	
USMC: FY13 PE 0604800M Project Unit 2262 USMC: FY14 PE 0604800M Project Unit 3351 USMC: FY15 PE 0604810M Project Unit 2935 F-35 DCA Includes: USAF PE 0207142F BPAC 676011 USN N/A USMC N/A										

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / F-35 Squadrons	Project (Number/Name) 676011 / JSF DUAL CAPABLE AIRCRAFT
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DCA Risk Reduction																												
B61 Flight Tests																												
Nuclear Certification																												
Design, Build and Test																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207142F / <i>F-35 Squadrons</i>	Project (Number/Name) 676011 / <i>JSF DUAL CAPABLE AIRCRAFT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DCA Risk Reduction	3	2014	3	2016
B61 Flight Tests	1	2015	4	2015
Nuclear Certification	4	2015	4	2020
Design, Build and Test	1	2017	4	2020