Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy

Date: February 2018

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 5: System

PE 0604810M I (U)Joint Strike Fighter Follow On Mod (FoM) - MC

Development & Demonstration (SDD)

| COST (\$ in Millions) | Prior Years | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Cost To Complete | Total Cost |
|---|----------------|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|---------------|
| Total Program Element | 183.889 | 29.691 | 144.958 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 358.538 |
| 2935: JSF Follow On Modernization - Marine Corps | 183.889 | 29.691 | 144.958 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 358.538 |

Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): 198

A. Mission Description and Budget Item Justification

The F-35 Joint Strike Fighter (JSF) Program will develop and field an affordable, highly common family of next generation strike aircraft for the United States Navy, United States Air Force, United States Marine Corps and International Partners countries. There are three variants the F-35A Conventional Takeoff and Landing variant; F-35B Short Take Off and Vertical Landing; and the F-35C Aircraft Carrier suitable variant. Maximum commonality among the variants, consistent with National Disclosure Policy, will minimize total air system life cycle costs. Planning and pre-development systems engineering for the Block 4 continues as Initial Operational Capability (IOC) is met for each variant during System Development and Demonstration (SDD).

The JSF Continuous Capability Development and Delivery (C2D2) efforts provide incremental warfighting capability improvements to maintain joint air dominance against evolving threats. C2D2 capability requirements were initiated through ongoing Service-led operational analysis of warfighting gaps identified in the Fifth Generation Fighter Modernization Initial Capabilities Document (ICD), and through F-35 JSF Block 4 Mission Decomposition analysis completed in FY2014. These analyses serve as the basis for the F-35 Block 4 Capabilities Development Document (CDD), staffed through the Air Force Requirements Oversight Council (AFROC) and signed by the USAF Chief of Staff in January 2015. Joint Requirements Oversight Council (JROC) approved the CDD 21 March 2017. Modernization activities in FY2017 and FY2018 include systems engineering, risk reduction, and infrastructure upgrades required to deliver full Air System capabilities to support initial fleet availability of Block 4 upgrades in FY2021.

C2D2 efforts designated as Block 4 include a robust weapons integration portfolio and provide new opportunities for International Partners to assess, integrate, and field unique capabilities based on global sovereign requirements.

The United Kingdom, Italy, Netherlands, Turkey, Canada, Australia, Denmark and Norway are participants in F-35 modernization. The program shown here reflects United States Marine Corps funding. Total funding for all Service and International Partners is reported at the accomplishment/planned program level since activities support all aircraft variants. Foreign Military Sales are ongoing separately.

PE 0604810M/N ending in FY18 and continues in PE 0604840M/N as budget moves from BA05 to BA07.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy

R-1 Program Element (Number/Name)

Appropriation/Budget Activity

1319: Research, Development, Test & Evaluation, Navy I BA 5: System Development & Demonstration (SDD)

PE 0604810M I (U)Joint Strike Fighter Follow On Mod (FoM) - MC

Date: February 2018

| B. Program Change Summary (\$ in Millions) | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | |
|---|---------|---------|--------------|-------------|---------------|--|
| Previous President's Budget | 74.227 | 144.958 | 226.310 | - | 226.310 | |
| Current President's Budget | 29.691 | 144.958 | 0.000 | - | 0.000 | |
| Total Adjustments | -44.536 | 0.000 | -226.310 | - | -226.310 | |
| Congressional General Reductions | - | - | | | | |
| Congressional Directed Reductions | - | - | | | | |
| Congressional Rescissions | - | - | | | | |
| Congressional Adds | - | - | | | | |
| Congressional Directed Transfers | - | - | | | | |
| Reprogrammings | - | - | | | | |
| SBIR/STTR Transfer | - | - | | | | |
| Rate/Misc Adjustments | 0.000 | 0.000 | -226.310 | - | -226.310 | |
| Congressional Directed Reductions | -44.536 | _ | - | - | - | |
| Adjustments | | | | | | |

Change Summary Explanation

Adjusted R-4 schedule as follows:

Contracting: Removed Modernization RFP decision to reflect current strategy.

Changed Block 4 Phase II contract award to 2QFY18 to reflect current plan.

Added 4.2 Systems Requirment Review (SRR) in 4QFY19.

Changed contract naming conventions Pre-modernization-Modernization to Phase I and Phase II.

Program Changes:

FY2017 -\$44.536M adjustment in FY17 is due to Congressional Reduction.

FY2019 -\$225.442 adjustmnet in FY19 due to change in budget from BA05 to BA 07. PE 060480M/N begins in FY19.

| Exhibit R-2A, RDT&E Project Ju | stification: | PB 2019 N | lavy | | | | | | | Date: Feb | ruary 2018 | | |
|---|----------------|-----------|---------|-----------------|---|------------------|---------|---------|---------|-----------|---|---------------|--|
| Appropriation/Budget Activity 1319 / 5 | | | | | , | | | | | | lumber/Name) - Follow On Modernization - prps | | |
| COST (\$ in Millions) | Prior Years | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Cost To Complete | Total Cost | |
| 2935: JSF Follow On Modernization - Marine Corps | 183.889 | 29.691 | 144.958 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 358.538 | |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | | |

Project MDAP/MAIS Code: 198

Note

Total cost, including International partner contributions, USN, USMC, and USAF funding: FY2017 \$167.902M; FY2018 \$738.389M; FY2019 continues in PE 0604840M/N as budget moves from BA05 to BA07.

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

R-2A (section B)/R-3 displays combined program for JSF Continuous Capability Development and Delivery (C2D2).

JSF C2D2 Includes:

USAF PE 0207142F BPAC 675346

USN PE 0604810N Project Unit 2936

USMC PE 0604810M Project Unit 2935

USN PE 0604800N Project Unit 9999 (FY14): \$1.500M USMC PE 0604800M Project Unit 9999 (FY14): \$1.500M

International Partner Contributions

A. Mission Description and Budget Item Justification

F-35 C2D2 provides continuing incremental upgrades of the three F-35 variants and associated ground equipment. Upgrades are essential capabilities for Air Interdiction and Strategic Attack, Close Air Support, Suppression and Destruction of Enemy Air Defenses, Offensive and Defensive Counter Air and expanded Surface Warfare. The C2D2 acquisition strategy is based upon incremental deliveries of capabilities. The strategy includes periodic deliveries with a focus on hardware, tech refresh and softwre. C2D2 capability planning includes an efficient transition from F-35 SDD to C2D2. As SDD development activities ramp down C2D2 will assume responsibility for improvements and modernization efforts.

| | FY 2019 | FY 2019 | FY 2019 |
|---------------|---------|-------------------|-------------------------|
| 2017 FY 2018 | Base | oco | Total |
| 6.716 314.240 | 0.000 | 0.000 | 0.000 |
| - - | _ | - | - |
| | | 716 314.240 0.000 | 716 314.240 0.000 0.000 |

PE 0604810M: (U)Joint Strike Fighter Follow On Mod (F... Navy

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R-1 Line #157

| Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy | | | | Date: Febr | uary 2018 | | |
|---|--|-------------|---------|-----------------|----------------|------------------|--|
| Appropriation/Budget Activity 1319 / 5 | R-1 Program Element (Number/ PE 0604810M / (U)Joint Strike Fig Follow On Mod (FoM) - MC | | | • | | | |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quanti | <u>ties in Each)</u> | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | |
| Description: Block 4 Planning and Systems Engineering preliminarily de Review (SRR) for all variants of the F-35 Aircraft. Modernization efforts is of capabilities for the entire Block 4 upgrade to include sub-blocks 4.1 and previous Block 4 Requirements Decomposition effort which will include as System Functional Review (SFR) and select facility upgrades required for test and evaluation. Included in Block 4 are upgraded capabilities and cor Air System viability against evolving threats indicated in the Electronic Wa (ICD), the Fifth Generation Fighter Modernization ICD, and the Block 4 Ca (CDD), reduce life cycle cost, and improve operational suitability. Expected Design Review (PDR) and a Block 4.2 System Requirements Review (SFC capabilities requirements. Post-PDR risk reduction, preplanning for subset and investments to deliver the full Block 4 Air System capabilities are incl. FY 2018 Plans: Conduct a Block 4.1 System Functional Review (SFR). Award Phase II co. 4.2 SRR, and Post-PDR risk reduction and Planning. Continuing develop capabilities and service unique weapons. | the Requirements Decomposition d 4.2. This is a continuation of the ctivities leading up to a successful r Block 4 research, development, intinuous improvements to maintain arfare Initial Capabilities Document apability Development Document ed completion of a Block 4.1 Preliminary RR) will address additional Block 4 equent Block 4 Modernization events, uded. | | | | | | |
| FY 2019 Base Plans: FY19 effort continues in PE 0604840M/N. | | | | | | | |
| FY 2019 OCO Plans: N/A | | | | | | | |
| FY 2018 to FY 2019 Increase/Decrease Statement: PE 0604810M/N ending in FY18 and continues in PE 0604840M/N as but | dget moves from BA05 to BA07. | | | | | | |
| Title: Product Development - Technology Refresh 3 (TR-3) | Articles: | 77.177 - | 96.025 | 0.000 | 0.000 | 0.000 | |
| Description: Technology Refresh 3 (TR-3) Design Competition, Develop the design phase of TR-3 program fully supports Block 3F functionality ar capabilities documented in the System Requirements Document (SRD). Is support 4X processing growth factor based on the current processing estion TR-3 subsystems (Integrated Core Processor (ICP), Aircraft Memory States.) | nd allows incorporation of all Block 4 TR-3 hardware redesign is required to imates for all 3F capabilities. Redesign | | | | | | |

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PE 0604810M: (U)Joint Strike Fighter Follow On Mod (F... Navy Page 4 of 13 R-1 Line #157

| _ | NOLASSII ILD | | | | | |
|--|---|-------------|---------|-----------------|---------------------------|------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy | | | | Date: Febr | uary 2018 | |
| Appropriation/Budget Activity 1319 / 5 | R-1 Program Element (Number/ PE 0604810M / (U)Joint Strike Fig Follow On Mod (FoM) - MC | | | | n e) Modernizat | ion - |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities | s in Each) | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total |
| Display (PCD)) configurations will contain new backplane technology, commodified middleware necessary to take the design of the TR-3 System through | | | | | | |
| FY 2018 Plans: The TR-3 program will continue design toward Critical Design Review of the Panoramic Cockpit Display (PCD), and Aircraft Memory System (AMS). In a prototype the middleware software that will enable F-35's new messaging are and ensure compatibility with current F-35 sensors. Additionally the initial lal timely first article delivery to the production line in FY23. | ddition the TR-3 program will chitecture delivered as part of TR-3 | | | | | |
| FY 2019 Base Plans: FY19 effort continues in PE 0604840M/N. | | | | | | |
| FY 2019 OCO Plans: N/A | | | | | | |
| FY 2018 to FY 2019 Increase/Decrease Statement: PE 0604810M/N ending in FY18 and continues in PE 0604840M/N as budge | t moves from BA05 to BA07. | | | | | |
| Title: Infrastructure and Support Costs | Articles: | 52.009 - | 132.026 | 0.000 | 0.000 | 0.00 |
| Description: Funding will support infrastructure investment planning and oth for Block 4 development, integration, test and evaluation. Funding related to government, and contractor labor. Other costs in support of ranges, chase p | the Integrated Test Force, | | | | | |
| FY 2018 Plans: Continue development support for defining, managing and acquiring the F-35 in approved requirements documents. Transfer of integrated test force require to closure. | | | | | | |
| FY 2019 Base Plans: FY19 effort continues in PE 0604840M/N. | | | | | | |
| FY 2019 OCO Plans: N/A | | | | | | |
| FY 2018 to FY 2019 Increase/Decrease Statement: | | | | | | |

PE 0604810M: (U) Joint Strike Fighter Follow On Mod (F... Navy

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| Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy | | | | Date: Febr | uary 2018 | | |
|---|--|---------|--------------|-----------------|----------------|------------------|--|
| 1319 / 5 | R-1 Program Element (Number/I PE 0604810M <i>I (U)Joint Strike Fig</i> Follow On Mod (FoM) - MC | | | • | | | |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in | Each) | FY 2017 | FY 2018 | FY 2019 Base | FY 2019 OCO | FY 2019 Total | |
| PE 0604810M/N ending in FY18 and continues in PE 0604840M/N as budget m | oves from BA05 to BA07. | | | | | | |
| Title: Test and Evaluation | Articles: | 2.000 | 196.098 - | 0.000 | 0.000 | 0.000 | |
| Description: Non-recurring engineering required to plan for the service life externand modification necessary to bring DT aircraft fleet to a common configuration. to support development and evaluation of improvements driven by changes in the as identified in the Electronic Warfare ICD, the Fifth Generation Fighter Modernic Capability Development Document (CDD). Execution of all DT activities in support | Additional upgrades required the threat environment and seation ICS, and the Block 4 | | | | | | |
| FY 2018 Plans: Funding will support investment planning and prioritization required to maintain f This funding supports the non-recurring engineering (NRE) for capability upgrad modifications to include engine, structural and mission systems updates to main C2D2 efforts. This funding also supports laboratory upgrades required to support capabilities in a relevant environment. | es and service life extension tain the viability of DT fleet for | | | | | | |
| FY 2019 Base Plans: FY19 effort continues in PE 0604840M/N. | | | | | | | |
| FY 2019 OCO Plans: N/A | | | | | | | |
| FY 2018 to FY 2019 Increase/Decrease Statement: PE 0604810M/N ending in FY18 and continues in PE 0604840M/N as budget m | oves from BA05 to BA07. | | | | | | |
| Accomplishment | s/Planned Programs Subtotals | 167.902 | 738.389 | 0.000 | 0.000 | 0.000 | |
| 0604810N JSF Continuous Cap | ability Development and Delivery | 25.041 | 143.855 | - | - | - | |
| International Continuous Cap | ability Development and Delivery | 65.008 | 150.168 | - | - | - | |
| 0207142F JSF Continuous Cap | ability Development and Delivery | 48.162 | 299.408 | - | - | - | |
| | Navy Subtotals | 29.691 | 144.958 | 0.000 | 0.000 | 0.000 | |

| Exhibit R-2A, RDT&E Project Justi | ification : PB | 2019 Navy | | | | | | | Date: Feb | ruary 2018 | | |
|--|-----------------------|-----------|---------|---------|---|---------------|---------|---------|--|------------|-------------------|--|
| Appropriation/Budget Activity 1319 / 5 | | | | PE 06 | r ogram Ele r 04810M / (U / On Mod (Fo |)Joint Strike | • | | Number/Name) SF Follow On Modernization - orps | | | |
| C. Other Program Funding Summa | ary (\$ in Milli | ons) | | | | | | | | | | |
| | | | FY 2019 | FY 2019 | FY 2019 | | | | | Cost To | | |
| <u>Line Item</u> | FY 2017 | FY 2018 | Base | OCO | <u>Total</u> | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Complete | Total Cost | |
| • RDT&E/0604810N/2936: <i>F-35C</i> | 25.041 | 143.855 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 352.785 | |
| Follow On Modernization - Navy | | | | | | | | | | | | |
| USAF/FOD/0207142F: | 48.162 | 299.408 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 394.593 | |
| USAF Continuous Capability | | | | | | | | | | | | |
| Development and Delivery | | | | | | | | | | | | |
| International: International | 84.602 | 158.273 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 316.896 | |
| Continuous Capability | | | | | | | | | | | | |
| Development and Delivery | | | | | | | | | | | | |

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 Air Force. Program Element 0604800N/0604800M continues USN development efforts budgeted in 0603800N prior to FY2002. The United Kingdom, Italy, Netherlands, Turkey, Canada, Australia, Denmark, and Norway are participants in the SDD phase of JSF.

PE 0604810M/N ending in FY18 and continues in PE 0604840M/N as budget moves from BA05 to BA07.

D. Acquisition Strategy

The C2D2 acquisition strategy is to employ both Cost and Fixed Price Incentive contracts for the Block 4 engineering and development efforts. A new modernization contract structure will be established for all post SDD Block 4 efforts. In addition, 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 and supporting technology maturation for future C2D2 capabilities.

E. Performance Metrics

Overall Block 4 Performance Metrics will reflect Key Performance Parameters established in the F-35 Block 4 Capability Development Document.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

1319 / 5

Appropriation/Budget Activity

PE 0604810M I (U)Joint Strike Fighter Follow On Mod (FoM) - MC

2935 I JSF Follow On Modernization -

Date: February 2018

Marine Corps

| Product Developme | nt (\$ in M | illions) | | FY 2 | 2017 | FY 2 | 2018 | FY 2 Ba | 2019 ise | | 2019 CO | FY 2019 Total | | | |
|---|------------------------------|------------------------------------|----------------|---------|---------------|---------|---------------|------------|---------------|------|---------------|------------------|---------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To | Total Cost | Target Value of Contract |
| Prime LM TBD (Phase II) | C/CPFF | Lockheed Martin : FT. Worth, TX | 0.000 | 28.140 | Feb 2018 | 276.520 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 304.660 | 304.660 |
| Prime LM 14-G-0020 (TR3) | C/CPFF | Lockheed Martin : FT. Worth, TX | 19.660 | 77.177 | Mar 2017 | 96.025 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 192.862 | 192.862 |
| Prime LM BOA 0020 (Nimble Lightning + Pilot Training) | C/CPFF | Lockheed Martin : FT Worth, TX | 1.206 | 3.500 | Sep 2017 | 4.250 | Mar 2018 | 0.000 | | - | | 0.000 | 0.000 | 8.956 | 8.956 |
| Prime Flight Test Assets | Various | Various : Various | 0.000 | 0.000 | | 37.548 | Mar 2018 | 0.000 | | - | | 0.000 | 0.000 | 37.548 | 37.548 |
| Prime LM ECASE | C/CPFF | Lockheed Martin : FT. Worth, TX | 0.000 | 0.000 | | 15.670 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 15.670 | 15.670 |
| Prime LM TBD DT AC Viability | C/CPFF | Lockheed Martin : FT. Worth, TX | 0.000 | 0.000 | Sep 2017 | 65.205 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 65.205 | 65.205 |
| Systems Engineering | C/CPFF | Various : Various | 0.266 | 5.076 | Dec 2016 | 17.800 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 23.142 | 23.142 |
| Prior Year No Longer Funded in FYDP | Various | Various : Various | 144.540 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 144.540 | 144.540 |
| | | Subtotal | 165.672 | 113.893 | | 513.018 | | 0.000 | | - | | 0.000 | 0.000 | 792.583 | N/A |

Remarks

Block 4 Modernization R-2A includes Phase II, Nimble Lightning, ECASE & Systems Engineering. Added Prior Year No Longer Funded in FYDP line in Product Development section. Added Prime LM Phase 0 & Phase I Prior Year amounts to Prior Year No Longer Funded in FYDP line. Deleted Phase O. Phase I and Block 4 Modernization lines.

| Support (\$ in Millions | s) | | | FY 2 | 2017 | FY 2 | 2018 | FY 2 Ba | 2019 se | FY 2 | | FY 2019 Total | | | |
|-------------------------|------------------------------|-----------------------------------|----------------|-------|---------------|--------|---------------|------------|---------------|------|---------------|------------------|---------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To | Total Cost | Target Value of Contract |
| Development Support | WR | NAWCAD : Patuxent River, MD | 7.903 | 8.195 | Dec 2016 | 15.750 | Dec 2017 | 0.000 | | - | | 0.000 | 0.000 | 31.848 | Continuing |
| Development Support | WR | NAWCWD : China Lake, CA | 0.429 | 0.600 | Dec 2016 | 8.150 | Dec 2017 | 0.000 | | - | | 0.000 | 0.000 | 9.179 | - |

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 5

PE 0604810M I (U)Joint Strike Fighter Follow On Mod (FoM) - MC

2935 I JSF Follow On Modernization - Marine Corps

Date: February 2018

| Support (\$ in Million | s) | | | FY 2017 | | FY 2 | 2018 | FY 2 Ba | | FY 2 | 2019 FY 2019 CO Total | | | | |
|------------------------|------------------------------|-----------------------------------|----------------|---------|---------------|--------|---------------|------------|---------------|------|--------------------------|-------|---------------------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Development Support | Various | Edwards AFB : Edwards AFB, CA | 0.986 | 0.000 | | 3.802 | Dec 2017 | 0.000 | | - | | 0.000 | 0.000 | 4.788 | - |
| Development Support | Various | Eglin : Various | 0.015 | 2.250 | Dec 2016 | 3.450 | Jan 2018 | 0.000 | | - | | 0.000 | 0.000 | 5.715 | - |
| Development Support | Various | Various : Various | 7.903 | 8.682 | Dec 2016 | 8.852 | Dec 2017 | 0.000 | | - | | 0.000 | 0.000 | 25.437 | - |
| Development Support | MIPR | AFLCMC : Wrigth Patterson AFB | 0.281 | 1.005 | Dec 2016 | 1.125 | Dec 2017 | 0.000 | | - | | 0.000 | 0.000 | 2.411 | - |
| | | Subtotal | 17.517 | 20.732 | | 41.129 | | 0.000 | | - | | 0.000 | 0.000 | 79.378 | N/A |

| Test and Evaluation | (\$ in Milli | ions) | | FY 2017 FY 2018 | | FY 2019 Base | | FY 2019 OCO | | FY 2019 Total | | | | | |
|---|------------------------------|-----------------------------------|----------------|-----------------|---------------|-----------------|---------------|----------------|---------------|------------------|---------------|-------|---------------------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | WR | NAWCAD : Patuxent River, MD | 0.000 | 0.000 | | 34.995 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 34.995 | - |
| Developmental Test & Evaluation | WR | NAWCWD : China Lake , CA | 0.000 | 0.000 | | 10.350 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 10.350 | - |
| Developmental Test & Evaluation Edwards/AFB | Various | Edwards AFB : Edwards AFB, CA | 0.000 | 0.000 | | 25.250 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 25.250 | - |
| Developmental Test & Evaluation | Various | Various : Various | 0.000 | 0.000 | | 10.250 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 10.250 | - |
| Developmental Test Aircraft Viability | WR | AFOTECH : Kirtland AFB, NM | 0.700 | 2.000 | Feb 2017 | 12.500 | Feb 2018 | 0.000 | | - | | 0.000 | 0.000 | 15.200 | - |
| | | Subtotal | 0.700 | 2.000 | | 93.345 | | 0.000 | | - | | 0.000 | 0.000 | 96.045 | N/A |

Remarks

Increase in Test and Evaluation funding due to transfer of Integrated Test Force (ITF)requirements from SDD to C2D2 budget.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

PE 0604810M I (U)Joint Strike Fighter Follow On Mod (FoM) - MC

Project (Number/Name)

2935 I JSF Follow On Modernization -

Date: February 2018

Marine Corps

| Management Service | es (\$ in M | illions) | | FY 2 | 2017 | FY 2 | 2018 | FY 2 Ba | | | 2019 CO | FY 2019 Total | | | |
|--|------------------------------|---|----------------|--------|---------------|--------|---------------|------------|---------------|------|---------------|------------------|---------------------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| AFLCMC Civilian Pay | Various | AFLCMC CIVPAY : Wright Patterson, AFB | 0.000 | 29.377 | Oct 2016 | 44.700 | Oct 2017 | 0.000 | | - | | 0.000 | 0.000 | 74.077 | - |
| Financial Mgmt Database Support IDS | Various | Various : Various | 0.000 | 0.000 | | 0.800 | Jan 2018 | 0.000 | | - | | 0.000 | 0.000 | 0.800 | - |
| Earned Value/Finance/ Cost ACT-I | Various | Various : Various | 0.000 | 0.000 | | 4.500 | Jan 2018 | 0.000 | | - | | 0.000 | 0.000 | 4.500 | - |
| CIO BOS | Various | Various : Various | 0.000 | 0.000 | | 20.000 | Jan 2018 | 0.000 | | - | | 0.000 | 0.000 | 20.000 | - |
| Systems System High BOS | Various | Various : Various | 0.000 | 0.000 | | 9.336 | Jan 2018 | 0.000 | | - | | 0.000 | 0.000 | 9.336 | - |
| Other CIO Services | Various | Various : Various | 0.000 | 0.000 | | 8.239 | Jan 2018 | 0.000 | | - | | 0.000 | 0.000 | 8.239 | - |
| Travel | Various | Various : Various | 0.000 | 1.900 | Oct 2016 | 3.322 | Oct 2017 | 0.000 | | - | | 0.000 | 0.000 | 5.222 | - |
| | | Subtotal | 0.000 | 31.277 | | 90.897 | | 0.000 | | - | | 0.000 | 0.000 | 122.174 | N/A |

Remarks

1319 / 5

Increase in Management Services funding due to transfer of Integrated Test Force (ITF)requirements from SDD to C2D2 budget.

| | Prior Years | FY 2 | 2017 | FY 2 | 018 | | 2019 ase | FY 2 | FY 2019 Total | Cost To | Total Cost | Target Value of Contract |
|--|----------------|---------|------|---------|-----|-------|-------------|------|----------------------|---------|---------------|--------------------------------|
| Cost Category Subtotals | 183.889 | 167.902 | | 738.389 | | 0.000 | | - | 0.000 | 0.000 | 1,090.180 | N/A |
| 0604810N JSF Continuous Capability Development and Delivery | - | 25.041 | | 143.855 | | - | | - | - | | | - |
| International Continuous Capability Development and Delivery | - | 65.008 | | 150.168 | | - | | - | - | | | - |
| 0207142F JSF Continuous Capability Development and Delivery | - | 48.162 | | 299.408 | | - | | - | - | | | - |
| Project Cost Totals | 183.889 | 29.691 | | 144.958 | | 0.000 | | - | 0.000 | 0.000 | 1,090.180 | - |

Remarks

Subtotals and totals may not add due to rounding.

Prior Year reflects \$75.951M USAF/\$30.286M USN/\$29.726M USMC/\$47.926M International/Total \$183.889M

PE 0604810M: *(U)Joint Strike Fighter Follow On Mod (F...* Navy

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R-1 Line #157

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy Date: February 2018 Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) 2935 I JSF Follow On Modernization -PE 0604810M I (U)Joint Strike Fighter 1319 / 5 Follow On Mod (FoM) - MC Marine Corps Target FY 2019 Prior FY 2019 FY 2019 Cost To Value of Total oco Years FY 2017 FY 2018 Base Total Complete Cost Contract

FY 2017 reflects \$ 48.162M USAF/\$ 25.041M USN/\$29.691M USMC/\$65.008M International/Total \$167.902M FY 2018 reflects \$299.408M USAF/\$143.855M USN/\$144.958M USMC/\$150.168M International/Total \$738.389M FY 2019 continues in PE 0604840M/N as budget moves from BA05 to BA07.

R-2A (section B)/R-3 displays total combined program (i.e. not Service-specific), including International partners.

JSF Continuous Capability Development and Delivery (C2D2) Includes: USAF PE 0207142F BPAC 675346
USN PE 0604810N Project Unit 2936
USMC PE 0604810M Project Unit 2935

USN PE 0604800N Project Unit 9999 (FY14): \$1.500 USMC PE 0604800M Project Unit 999 (FY14): \$1.500

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|---------------------------------------|-----------------|-------|---------|-----|------------|-------------------------|--|----|----|----|----|----|----|----|-----|-----------------|-----|-------|---|----|----|----|----|----|----|----|----|----|
| Appropriation/Budget Activity 319 / 5 | | | | | | | R-1 Program Element (Number/Name) PE 0604810M <i>I</i> (<i>U</i>)Joint Strike Fighter Follow On Mod (FoM) - MC | | | | | | | | | | | 2 | Project (Number/Name) 2935 I JSF Follow On Modernization Marine Corps | | | | | | | | | |
| Proj 2935 | FY 2017 FY 2018 | | | | | FY 2019 FY 2020 FY 2021 | | | | | | | | | | FY 2022 FY 2023 | | | | | | | | | | | | |
| | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q |
| Requirements | | | CDD | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | (JROC) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acquisition | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | IPR ♦ | Phase II CA | | | | | | | | | | | | | | | | | | | | | | |
| Contracting | | | Block 4 | Pha | ise I | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 1 | | | | | | | | Blo | ock 4 | Pha | ase I | ı | | | | | l | | | | |
| Systems Engineering | 4.1 SRR | | | | 4.1 SFR | | | | | | | | | | | | | | | | | | | | | | | |
| | * | | | | • | | | | | | | | | | | | | | | | | | | | | | | |

UNCLASSIFIED PE 0604810M: (U)Joint Strike Fighter Follow On Mod (F... Navy

| Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy | | | Date: February 2018 |
|--|--|-----|---|
| Appropriation/Budget Activity 1319 / 5 | R-1 Program Element (Number/Name) PE 0604810M I (U)Joint Strike Fighter Follow On Mod (FoM) - MC | , , | umber/Name) F Follow On Modernization - rps |

Schedule Details

| | Si | tart | End | | | |
|---|---------|------|---------|------|--|--|
| Events by Sub Project | Quarter | Year | Quarter | Year | | |
| Proj 2935 | | | | | | |
| Requirements: Final CDD (JROC) | 3 | 2017 | 3 | 2017 | | |
| Acquisition: Block 4 Phase II Contract Award | 2 | 2018 | 2 | 2018 | | |
| Acquisition: Interim Program Review (IPR) FY18 | 1 | 2018 | 1 | 2018 | | |
| Contracting: Block 4 Phase I | 1 | 2017 | 2 | 2018 | | |
| Contracting: Block 4 Phase II | 2 | 2018 | 4 | 2023 | | |
| Systems Engineering: 4.1 System Requirements Review (SRR) | 1 | 2017 | 1 | 2017 | | |
| Systems Engineering: 4.1 System Functional Review (SFR) | 1 | 2018 | 1 | 2018 | | |