| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | | | | | | | | | | | DATE: April 2013 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | | | | | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* | | | | | | | |
| **COST ($ in Millions)** | **All Prior Years** | **FY 2012** | **FY 2013#** | **FY 2014 Base** | **FY 2014 OCO ##** | **FY 2014 Total** | **FY 2015** | **FY 2016** | **FY 2017** | **FY 2018** | **Cost To Complete** | **Total Cost** |
| Total Program Element | - | 128.503 | 190.257 | 177.298 | - | 177.298 | 228.263 | 212.916 | 160.742 | 135.870 | Continuing | Continuing |
| 672671: *F-16 Squadrons* | - | 128.503 | 190.257 | 177.298 | - | 177.298 | 228.263 | 212.916 | 160.742 | 135.870 | Continuing | Continuing |
| Quantity of RDT&E Articles | | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | |

# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## The FY 2014 OCO Request will be submitted at a later date

**Note**

**A. Mission Description and Budget Item Justification**

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 35-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as offensive and defensive counter-air, close air support, forward air control, air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD)/destruction of enemy air defenses (DEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world and foreign military sales production continues in the 21st century. AFLCMC/WWM (The F-16 System Program Office) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission. Enhancements which are being or will be developed during the Five Year Defense Plan (FYDP) include:

a. Operational Flight Program (OFP) Development: Blk 40-52 OFP (M-tapes) are updated continually to integrate new precision weapons, advanced targeting pods, improved avionics, hardware and software mods to keep F-16 training simulators current, and other hardware (HW) Group B subsystems. Major tapes (e.g., M6/6+) are released every three years and a minor tape (e.g., M6.2+) is released 1 year after each major tape. The European Participating Air Forces (EPAF) countries participate in the development of M-tapes and share the cost of developing common capabilities and totally fund development of their unique capabilities. Generally, three major or minor tapes are under development/testing at any one time. Extensive ground and flight testing is required to field each M-tape. Advanced weapons integration includes joint air-to-surface stand-off missile (JASSM) and joint direct attack munitions (JDAM, Laser JDAM), small diameter bomb (SDB and SDB II), advanced medium range air-to-air missile (AMRAAM) AIM-120D, Sidewinder (AIM-9X/AIM-9X Block II), and updates to existing weapons. JASSM-ER (Extended Range) integrates JASSM-ER on F-16 Blk 40-50 aircraft, includes NRE, SEEK EAGLE, test assets, integration, and test. Weapons integration also includes tasks such as performing risk reduction activities on advanced weapon integration, developing and integrating advanced racks, pylons, adapters, and the universal armament interface (UAI), and ensuring nuclear surety, safety and compatibility. Updates to electronic warfare systems allow for incorporation of latest updates for changing threat environment reducing war fighter vulnerabilities. Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other combat aircraft, airborne control aircraft, and ground control centers. Major new capabilities currently being integrated via M-tapes include GPS inertial navigation set (GPS/INS) updates to improve targeting accuracy and GPS security, EGBU-12 (laser/GPS guided bomb), Mode 5 identification friend or foe (IFF), SDB with UAI, AIM-120D, joint mission planning system (JMPS), and Alpha II Lite. As part of OFP transition and M6.5/M7+ OFP upgrade, Lockheed Martin Aeronautics (LM Aero) and Ogden Air Logistics Center will split responsibility for software development. LM Aero will produce the common USAF/EPAF core software tape for USAF M6.5+ and serve as the

baseline for the USAF M7+ OFP. OO-ALC will have software development responsibility for the M7+ software/hardware candidates being incorporated on USAF jets with M7+ Phase III OFP development scheduled to field in FY16. M8+ will be the initial CAPES OFP.

b. F-16 Blk 40-52 Legacy SLEP structures: includes full scale durability test (FSDT) which requires a test fixture and structural analysis to begin structural testing. The test fixture began fabrication in FY11. FSDT is intended to determine whether the F-16 Block 40-52 airworthiness certification can be extended from the current certified service life of 8,000 equivalent flight hours (EFH) to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40-52 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours. Engineering, Manufacturing and Development (EMD) extends through FY16.

c. F-16 Blk 40-52 Combat Avionics Programmed Extension Suite (CAPES): This avionics modernization program is needed to keep the F-16 Blk 40-52 aircraft viable in the threat environment beyond 2025. It includes but is not limited to an active electronically scanned array (AESA) radar that offers improved destruction of enemy air defenses (DEAD), and advanced electronic protection capabilities as well as improved reliability and maintainability; center display unit (CDU), which replaces the existing flight instrument cluster with a large higher resolution color multi-function display; electronic warfare suite (EW), which provides a single-point access for automated or hands-on EW system control; and an integrated broadcast service (IBS) that integrates multiple intelligence broadcasts into a system of systems and migrates tactical receive terminals into a single related joint tactical terminal (JTT) family and modular mission computer (MMC) throughput memory upgrades, high speed data communications within the aircraft systems. FY12 risk reduction funding was available as part of SLEP avionics to initiate this capability modernization.

d. Auto ground collision avoidance system (AGCAS) builds on the Air Force research laboratories (AFRL) fighter risk reduction program (FRRP) demonstrated capability and results in the AGCAS capability being production ready for incorporation in the M6.2+ OFP fielding in FY14 with potential for nearly eliminating controlled flight into terrain (CFIT) accidents, a leading cause of F-16 loss of pilot and aircraft accidents.

e. EMD hardware/advanced capability improvements: EMD HW provides funding to develop, test, and qualify, weapon systems, aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I), diminishing manufacturing sources (DMS) and parts obsolescence. The approach to contracting varies by individual project. These hardware improvements include but are not limited to flight systems, improved navigation, multiplex architecture, modular mission computer (MMC) throughput memory upgrades, high speed data communications within the aircraft systems, embedded GPS inertial navigation set (GPS/INS) updates, Blk 40 air-to-air interrogator (AAI), digital video recorder, advanced data transfer equipment (ADTE) and related data transfer and retrieval devices, display upgrades and display generators, radio/communication studies, and Control Actuation System (CAS) data link. Advanced capability improvements include software integration, sensor upgrades, radar updates and other self-protection/electronic protection (EP) enhancements, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes (SNIPER, Harm targeting system (HTS), low (altitude) infrared targeting and navigating (LITENING)) etc. Advanced capabilities also includes integration of new replacement DMS hardware for a crash survivable data recorder.

This program is in Budget Activity 7, Operational System Development because it 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.

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | | | | | DATE: April 2013 |
|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | | | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* | | |
| **B. Program Change Summary ($ in Millions)** | **FY 2012** | **FY 2013** | **FY 2014 Base** | **FY 2014 OCO** | **FY 2014 Total** |
| Previous President's Budget | 131.069 | 190.257 | 255.898 | - | 255.898 |
| Current President's Budget | 128.503 | 190.257 | 177.298 | - | 177.298 |
| Total Adjustments | -2.566 | 0.000 | -78.600 | - | -78.600 |
| • Congressional General Reductions | - | 0.000 | | | |
| • Congressional Directed Reductions | - | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | - | 0.000 | | | |
| • Congressional Directed Transfers | - | 0.000 | | | |
| • Reprogrammings | 0.499 | 0.000 | | | |
| • SBIR/STTR Transfer | -3.065 | 0.000 | | | |
| • Other Adjustments | 0.000 | 0.000 | -78.600 | - | -78.600 |

**Change Summary Explanation**

FY14 reduction for CAPES of -$84.8M

FY14 increase for Legacy SLEP of +$6.2M

| C. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| ***Title:*** OFP Updates Blk 40-52 OFP | 82.683 | 76.723 | 83.238 |

***Description:*** OFP Updates-Blk 40-52 OFP (M-tapes) are updated continually to integrate new weapons, targeting pods, improved avionics. M6.1+ has completed FDE scheduled in CY 2013. M6.5+/M7+ is in Phase III Development with M6.5+ common candidates to include UAI updates and EGI updates and M7+ candidates to include AIM 9X Block II. Phase III anticipated start late CY 2012. The USAF M6.5+ OFP will not field, however, this OFP drop will become the baseline for M7+ Phase III. M7+ fielding is planned for FY16.

***FY 2012 Accomplishments:***

M5.2+ has fielded. M6.1+ Phase III FDE is complete with fielding scheduled for early CY13. M6.2+ Minor Tape has started early flight testing, M7+ Phase III development efforts start 1QFY13 and DTO is ongoing as detail design and code efforts for Phase III at OO-ALC. OFP transition from LM Aero to OO-ALC will be completed and final System Integration Lab (SIL) HW assets are now on contract. M6.5+ Phase III contract has been negotiated to begin requirements definition for M6.5+ common OFP development efforts with EPAF.

***FY 2013 Plans:***

Continue OFP software design and begin integration and DTE efforts for M6.2+ Minor tape which incorporates Auto GCAS as well as new FAA SW requirement that will allow Mode 5 to field as part of the M6.2+ Minor Tape. M6.5+ merges with M7+ as part of

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | DATE: April 2013 |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* |

| C. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| Phase III risk reduction. Begin M8+ SW candidate assessment to include Combat Avionics Programmed Extension Suite (CAPES) OFP integration and initiates Alpha II Lite.<br>***FY 2014 Plans:***<br>Finalize DT/OT testing and field M6.2+ Minor Tape in 2Q2014 which incorporates Auto GCAS as well as new FAA SW requirement that will allow Mode 5 to field. M7+ OFP baseline will incorporate all M6.5+ candidates as part of final design, code and unit test and enters into SIL testing.<br>Phase 0/1 efforts continue for M8+ SW candidates and requirements are defined as part of the F-16 CAPES OFP. Begin JASSM-ER NRE, procure SEEK EAGLE test assets. | | | |
| ***Title:*** Flight Test<br>***Description:*** F-16 Baseline Flight Test funds F-16 test and evaluation at the Combined Test Facility (CTF) at Edwards AFB and DT/OT Test facility at Eglin AFB including integration test of associated subsystems and weapons as well as maintain test schedule for F-16 Block 40-52 MMC OFPs, weapons integration, and sub-systems to ensure capabilities meet ACC's fielding schedule.<br>***FY 2012 Accomplishments:***<br>FY12 funding supports CTF infrastructure (Government and Contractor). M5.2+ completed Fighter Development Evaluation (FDE). M6+ OFP has completed FDE testing. Auto GCAS DT has started as well as M7+ DTO testing completing late CY 2012. Continue Legacy OFP (M4+/M5+) advanced weapons/subsystem regression testing.<br>***FY 2013 Plans:***<br>FY13 funding supports CTF infrastructure (Government and Contractor) and DT flight DTE sorties for M6.2+ Minor Tape OFP as well as M7+ DTO testing.<br>***FY 2014 Plans:***<br>FY14 funding supports CTF infrastructure (Government and Contractor). M6.2+ Minor Tape OFP completes FDE as well as M7+ DTO testing. | 22.124 | 24.446 | 25.463 |
| ***Title:*** Combat Avionics Programmed Extension Suite (CAPES)<br>***Description:*** F-16 Blk 40/50 Combat Avionics Programmed Extension Suite (CAPES): This avionics modernization program is needed to keep the F-16 Blk 40-52 aircraft viable in the threat environment beyond 2025. It includes but is not limited to an active electronically scanned array (AESA) radar that offers improved destruction of enemy air defenses (DEAD), and advanced electronic protection capabilities as well as improved reliability and maintainability; center display unit (CDU), which replaces existing flight instrument cluster with large higher resolution color multi-function display; electronic warfare (EW) updates (ALQ-213), which provides a single-point access for automated or hands-on EW system control; and integrated broadcast service | 11.444 | 68.445 | 42.999 |

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | DATE: April 2013 |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* |

| C. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| (IBS) that integrates multiple intelligence broadcasts into a system of systems and migrates tactical receive terminals into a single related joint tactical terminal (JTT) family.<br><br>***FY 2012 Accomplishments:***<br>The CAPES avionics modernization program initiated risk reduction efforts for Group A/B HW. CAPES ASP was held Jun 2012 and AESA NTE was received in late CY 2012. Initial risk reduction efforts require our prime integrator and subsystem vendors to define the F-16 CAPES avionics architecture, determine potential requirements, conduct studies on RF compatibility impacts, and gather assistance to draft the system requirement document (SRD). A flight demo has been initiated to assess CDU system functionality, performance and interfaces to determine unique requirements for the integration of the CDU into an F-16 Block 40/42 aircraft.<br>***FY 2013 Plans:***<br>CAPES AESA UCA has been awarded as part of the Radar Modernization Program with vendor selection scheduled for 4QFY13, test assets will be procured at that time.<br>***FY 2014 Plans:***<br>Continue AESA EMD as well as initiate CAPES integration contract with F16 Prime Contractor. Finalize all procurement of EMD test assets. | | | |
| ***Title:*** Legacy Service Life Extension Program (SLEP) Structures<br>***Description:*** F-16 Blk 40/50 Legacy Service Life Extension Program (SLEP) Structures: This structural-SLEP includes full scale durability test (FSDT) which started in FY11 and requires a test fixture and structural analysis to begin testing. FSDT is intended to determine whether the F-16 Block 40-52 airworthiness certification can be extended from the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours. FSDT started in FY11 and EMD begins 3QFY13 and extends through FY16.<br><br>***FY 2012 Accomplishments:***<br>Initiates structures EMD design to extend the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Sructural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural uprgrade program that replaces or reworks know life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 EFH.<br>***FY 2013 Plans:*** | 0.800 | 8.867 | 18.181 |

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | DATE: April 2013 |
|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | **R-1 ITEM NOMENCLATURE**<br>PE 0207133F: *F-16 Squadrons* |

| C. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| Continue FSDT analysis. Legacy SLEP EMD MS B forecast March 2013 and EMD contract award June 2013 for design to extend the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours.<br>***FY 2014 Plans:***<br>Continue FSDT analysis and structures EMD design to extend the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours. | | | |
| ***Title:*** EMD HW/Advanced Capibilities Improvements | 0.500 | 0.478 | 0.500 |
| ***Description:*** EMD hardware (HW)/advanced capability improvements: EMD HW provides funding to develop, test, and qualify aircraft weapons systems including F-16 subsystems replaced or modified due to requirements changes, pre-lanned product improvements (P3I) and diminishing manufacturing source (DMS)and parts obsolescence. The approach to contracting varies by individual project. These hardware improvements include but are not limited to flight systems, improved navigation, mux architecture, MMC throughput memory upgrades, high speed data communications within the aircraft systems, embedded GPS/ INS updates, Blk 40 air-to-air interrogator (AAI), digital video recorder, advanced data transfer equipment (ADTE) and related data transfer devices and interfaces, display upgrades, radio/communication studies, and CAS data link. Advanced capability improvements include software integration, sensor upgrades, radar updates and other self-protection/electronic protection (EP) enhancements, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/ capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes (SNIPER, HTS, LITENING) etc. Also includes integration of new replacement DMS hardware for a crash survivable data recorder.<br>***FY 2012 Accomplishments:***<br>EMD HW/advanced capabilities improvements varies by individual project and is used to develop, test, and qualify aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I) and diminishing manufacturing source (DMS) and parts oboslescense unique to data transfer devices and interfaces (Micro CID). Advanced capability improvements include software integration, sensor upgrades, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated | | | |

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | DATE: April 2013 |
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| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* |

| C. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes.<br><br>***FY 2013 Plans:***<br>EMD HW/advanced capabilities improvements varies by individual project and is used to develop, test, and qualify aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I) and diminishing manufacturing source (DMS) and parts obsolescense unique to data transfer devices (Micro CID). Advanced capability improvements include software integration, sensor upgrades, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes.<br><br>***FY 2014 Plans:***<br>EMD HW/advanced capabilities improvements varies by individual project and is used to develop, test, and qualify aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I) and diminishing manufacturing sources (DMS) and parts obsolescence unique to data transfer devices (Micro CID). Advanced capability improvements include software integration, sensor upgrades, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes. | | | |
| ***Title:*** Auto Ground Collision Avoidance System<br><br>***Description:*** This program will nearly eliminate controlled flight into terrain (CFIT) accidents, a leading cause of F-16 loss of pilots and aircraft accidents. One study predicted this capability could have saved 10 pilots and 15 aircraft lost from CFIT accidents had it been available. Air Force 1067 signed by the Combat Air Force Requirements Oversight Council (CAFROC) on 3 Mar 2008 directed development of Auto GCAS for F-16 Blk 40-52 aircraft for fielding with M6.2+.<br><br>The requested solution is for Auto GCAS and other flight control safety enhancements identified in Phase II for F-16 Blocks 40-52 aircraft to be integrated and delivered with the M6.2+ OFP in FY14. The effort is to qualify and release a digital flight control computer (DFLCC) configuration that is backward compatible with M6.1+ F-16 USAF OFP that can initiate DFLCC Time Compliance Technical Order (TCTO) upgrades without Auto GCAS in the core avionics. Production configurations of the remaining software items will be incorporated during the M6.2+ effort and will enable the Auto GCAS function.<br><br>***FY 2012 Accomplishments:*** | 6.741 | 5.061 | 0.000 |

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| C. Accomplishments/Planned Programs ($ in Millions) | FY 2012 | FY 2013 | FY 2014 |
|---|---|---|---|
| Completed Auto GCAS Phase IIIb efforts that address in-flight anomalies via software updates. The contractor incorporates avionics and flight control requirements or requirement revisions (core avionics, DTS, mission planning and flight control OFPs) into DTO #2. Key efforts include configuring the Design Try Out (DTO) #2 digital flight control (DFLCC) flight test OFP as a production OFP and formally regression testing it with the F-16 USAF M6.1+ avionics suite so fielding of the DFLCC with an Auto GCAS enabled OFP can be initiated via TCTO prior to fielding with M6.2+ OFP.<br>***FY 2013 Plans:***<br>Continue Auto GCAS integration and testing for incorporation into the M6.2+ OFP (Minor Tape) scheduled to field in FY 2014 and finish updating support equipment software to accommodate Auto GCAS testing. | | | |
| ***Title:*** Program Mgmt Support Cost<br>***Description:*** Effort includes advisory and analytical suppost (A&AS), travel, and Air Force Life Cycle Management Center/Fighter Bomber (AFLCMC/FB) wing bills.<br>***FY 2012 Accomplishments:***<br>includes A&AS, travel, and AFLCMC/FB wing bills.<br>***FY 2013 Plans:***<br>includes A&AS, travel, and AFLCMC/FB wing bills.<br>***FY 2014 Plans:***<br>includes A&AS, travel, and AFLCMC/FB wing bills. | 4.211 | 6.237 | 6.917 |
| **Accomplishments/Planned Programs Subtotals** | 128.503 | 190.257 | 177.298 |

**D. Other Program Funding Summary ($ in Millions)**

| Line Item | FY 2012 | FY 2013 | FY 2014 Base | FY 2014 OCO | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • APAF: BA05: F01600: *Modifications, PE 0207133F* | 56.746 | 6.896 | 11.794 | | 11.794 | 20.137 | 14.143 | 27.919 | 248.639 | 1,958.553 | 2,344.827 |
| • APAF: BA07: F01600: *Post Production Support,PE 0207133F* | 4.537 | 8.506 | 3.455 | | 3.455 | 11.101 | 15.271 | 15.546 | 15.826 | Continuing | Continuing |

**Remarks**

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | DATE: April 2013 |
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| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* |

**E. Acquisition Strategy**

RDT&E funds will primarily be executed in developing improved capability, maintenance and safety mods. Operational flight program (OFP) software will be continuously updated to complement modification development efforts. Starting with M7+ OO-ALC will be primary OFP SW developer.

The F-16 Blk 40-52 Legacy SLEP and CAPES programs will keep the F-16 aircraft viable in the threat environment beyond 2025 by extending the service life and increasing the capabilities of the F-16. Legacy SLEP EMD runs through FY17. CAPES AESA Radar EMD ends in FY18.

The EMD hardware development line provides funding to develop, test, and qualify aircraft subsystems upgrades, communication upgrades, parts obsolescence and diminishing manufacturing source (DMS). The approach to contracting varies by individual project. LM Aero is the prime contractor on all systems except the General Electric engines and the Pratt & Whitney engines. Contract types are Time and Material (T&M), Cost Plus Incentive Fee (CPIF), Cost Plus Fixed Fee (CPFF) and Firm Fixed Price (FFP).

**F. 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.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force | | | DATE: April 2013 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* | PROJECT<br>672671: *F-16 Squadrons* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OFP Updates | Various | Various:Various, | - | 82.683 | Nov 2011 | 76.723 | Nov 2012 | 83.238 | Nov 2013 | - | | 83.238 | Continuing | Continuing | |
| CAPES - Avionics | Various | Various:Various, | - | 11.444 | Mar 2012 | 68.445 | Sep 2013 | 42.999 | Mar 2014 | - | | 42.999 | Continuing | Continuing | 352.206 |
| Service Life Extension Program (SLEP Structures | Various | Various:Various, | - | 0.800 | Mar 2012 | 8.867 | Mar 2013 | 18.181 | Nov 2012 | - | | 18.181 | Continuing | Continuing | 95.209 |
| EMD HW / Advanced Capabilities | Various | Various:Various, | - | 0.500 | Sep 2012 | 0.478 | May 2013 | 0.500 | Mar 2014 | - | | 0.500 | Continuing | Continuing | |
| Auto GCAS | Various | Various:Various, | - | 6.741 | Feb 2012 | 5.061 | Jan 2013 | 0.000 | | - | | 0.000 | Continuing | Continuing | 32.877 |
| Reprogramming Pending | TBD | Various:, | - | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 102.168 | | 159.574 | | 144.918 | | 0.000 | | 144.918 | | | |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Subtotal** | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flight Tests | Various | Various:Various, | - | 22.124 | Oct 2011 | 24.446 | Oct 2012 | 25.463 | Oct 2013 | - | | 25.463 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 22.124 | | 24.446 | | 25.463 | | 0.000 | | 25.463 | | | |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | FY 2012 Cost | FY 2012 Award Date | FY 2013 Cost | FY 2013 Award Date | FY 2014 Base Cost | FY 2014 Base Award Date | FY 2014 OCO Cost | FY 2014 OCO Award Date | FY 2014 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Mgmt Support Costs | Various | Not specified.:, | - | 4.211 | Jan 2012 | 6.237 | Jan 2013 | 6.917 | Jan 2014 | - | | 6.917 | Continuing | Continuing | |
| | | **Subtotal** | 0.000 | 4.211 | | 6.237 | | 6.917 | | 0.000 | | 6.917 | | | |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force | | | DATE: April 2013 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* | PROJECT<br>672671: *F-16 Squadrons* | |

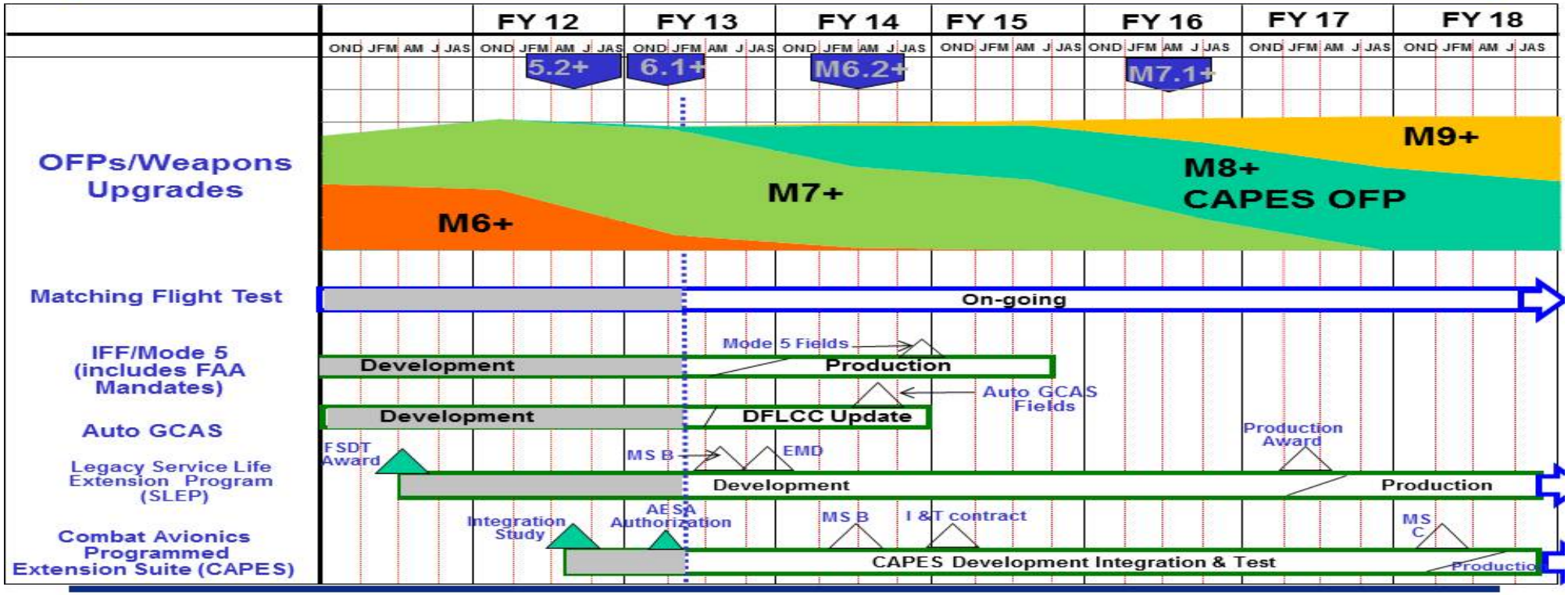
| | All Prior Years | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project Cost Totals | 0.000 | 128.503 | | 190.257 | | 177.298 | | 0.000 | | 177.298 | | | |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force | | DATE: April 2013 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | R-1 ITEM NOMENCLATURE<br>PE 0207133F: *F-16 Squadrons* | PROJECT<br>672671: *F-16 Squadrons* |

# F-16 Program Schedule – USAF (R-4 Exhibit)

U.S. AIR FORCE



| Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force | | DATE: April 2013 |
|---|---|---|
| **APPROPRIATION/BUDGET ACTIVITY**<br>3600: *Research, Development, Test & Evaluation, Air Force*<br>BA 7: *Operational Systems Development* | **R-1 ITEM NOMENCLATURE**<br>PE 0207133F: *F-16 Squadrons* | **PROJECT**<br>672671: *F-16 Squadrons* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events** | **Quarter** | **Year** | **Quarter** | **Year** |
| M5.2+ Field | 3 | 2012 | 3 | 2012 |
| M6.1+ Field | 2 | 2013 | 2 | 2013 |
| M6.2+ Minor Tape Field | 2 | 2014 | 2 | 2014 |
| Auto GCAS Field | 3 | 2014 | 3 | 2014 |
| Mode 5 IFF Field | 4 | 2014 | 4 | 2014 |
| Legacy Service Life Extension Program (SLEP) Structures EMD | 4 | 2013 | 1 | 2017 |
| CAPES AESA Radar Authorization, Integration | 1 | 2013 | 2 | 2016 |
| CAPES MS B | 2 | 2014 | 2 | 2014 |