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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force **Date:** February 2019

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 0207133F / <i>F-16 Squadrons</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	250.264	185.864	193.013	0.000	193.013	186.850	182.502	167.155	127.766	Continuing	Continuing
672671: <i>F-16 Squadrons</i>	-	250.264	185.864	193.013	0.000	193.013	186.850	182.502	167.155	127.766	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier fixed-wing, high performance, single engine multi-mission fighter aircraft that comprises 50% of the AF fighter inventory. Operational since 1980, 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). The F-16 remains the USAF's primary SEAD/DEAD platform. The aircraft has evolved its capabilities by capitalizing upon advancements made in computers, avionics systems, engines, and structures technologies to meet emerging warfighter requirements and combat current and evolving enemy threats.

Modification programs include: Operational Flight Program (OFP) development required to integrate new precision weapons, advanced targeting pods, improved avionics, hardware (HW) and software (SW) mods to meet DoD mandates and keep the F-16, the respective training simulators, and other hardware subsystems current; Legacy Service Life Extension Program (SLEP), which is a two-phased RDT&E effort, includes a Full Scale Durability Test (FSDT) and Engineering, Manufacturing and Development (EMD) to support structural modifications to increase Certified Service Life (CSL) from 8,000 Equivalent Flight Hours (EFH) to 10,000 EFH (Threshold), or 12,000 EFH (Objective); EMD Hardware/Advanced capability improvements require 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; Modular Mission Computer (MMC) Upgrade/Display Generator Upgrade resolves shortfalls in mission computer memory and throughput brought on by the addition of incremental combat capability addresses cyber-security and includes Non-Recurring Engineering (NRE), design, development, integration, and ground/flight test for fielding; F-16 Training Simulator updates enable the USAF to exercise/train using the most current F-16 OFP available to all block configurations, to include both aircrew and maintenance trainers; Joint Air-to-Surface Standoff Missile-Extended Range (JASSM-ER) on F-16 aircraft, and includes NRE, test assets, SEEK EAGLE, integration, and flight test; Comm Suite Radio Upgrade (CSU) improved satellite communication (SATCOM) radio upgrade with Mobile User Objective System (MUOS) capability to meet next-gen tactical narrowband SATCOM with better crypto capabilities; an active electronically scanned array (AESA) radar capable on all blocks that offers advanced electronic protection capabilities as well as improved reliability and maintainability on F-16 aircraft; MIDS JTRS provides a real-time, jam resistant and secure information system for the transfer of combat data, voice and navigation information between widely dispersed battle elements; Hybrid Flight Control Computer (HFLCC) Auto Ground Collision Avoidance System (AGCAS) development and integration prevents most controlled flight into terrain (CFIT) accidents using terrain database and prediction algorithms for aircraft trajectory recovery and executes an automated fly up maneuver to avoid collision; Advanced Identification Friend or FOE (AIFF-Mode5) on F-16 aircraft provides improved airspeed and location info to ground stations and other equipped aircraft in vicinity; Digital Radar Warning Receiver improves on existing radar warning receiver performance and improves Electronic Warfare (EW) threat detection range, azimuth, detection time, and allows reduction of radio frequency compatibility issues with other on board transmitters.

UNCLASSIFIED

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This program element may include necessary civilian pay expenses required to manage, execute, and deliver F-16 weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	246.578	191.564	175.610	0.000	175.610
Current President's Budget	250.264	185.864	193.013	0.000	193.013
Total Adjustments	3.686	-5.700	17.403	0.000	17.403
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-5.700			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	10.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.933	0.000			
• SBIR/STTR Transfer	-7.247	0.000			
• Other Adjustments	0.000	0.000	17.403	0.000	17.403

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 672671: *F-16 Squadrons*

Congressional Add: *Multifunctional Information Distribution System Joint Tactical Radio System (MIDS-JTRS)*

Congressional Add Subtotals for Project: 672671

Congressional Add Totals for all Projects

	FY 2018	FY 2019
	10.000	0.000
	10.000	0.000
	10.000	0.000

Change Summary Explanation

FY18: \$10M increase due to Congressional Add for MIDS-JTRS, \$0.933M increase for BTR, and decrease \$7.247 for SBIR Assessment

FY19: \$5.7M decrease for Comm Suite Congressional Mark

FY20: \$17.403M net increase, including +\$31.6M AESA, -\$10.4M DRWR Realignment, -\$3.8M MMC/PDG Realignment

UNCLASSIFIED

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

	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<p>Title: OFP Updates on all F-16 aircraft</p> <p>Description: OFP tapes are updated continually to integrate new weapons, targeting pods, and improved avionics.</p> <p>Both M-Series and Software Capability Upgrade (SCU) programs enable the design and coding of software for integration efforts. OFPs are required to integrate new precision weapons, advanced targeting pods, improved avionics, and hardware and software modifications to meet DoD mandates and keep the F-16 current. The OFPs are developed by the 309th SMXG at Hill AFB, UT.</p> <p>The OFP effort also contains Program Management Administration (PMA) support activities to include travel, office supplies, training courses, Video Teleconferencing (VTC) and support contractors.</p> <p>FY 2019 Plans: Complete dedicated OT&E, Functional Configuration Audit (FCA), and field M7.2+ OFP. Continue software development of M7.3/M8.03 & begin development M8.1. Continue to update M-Series requirements for future OFPs through Warfighter Council. Continue SCU9.1 and SCU10 design and code of selected candidates. Finalize developmental and operational flight test for SCU9.1 and field late 1Q FY19. SCU10 will continue to design and code and will field in 2020. M/SCU are continuing to pursue Agile Software Development Transformation to improve software delivery to the warfighter.</p> <p>FY 2020 Base Plans: Begin M7.3/M8.03 SIL & combined Developmental Flight and Operational Flight test. Continue M8.1 software development. Continue to update M-Series requirements for future OFPs through Warfighter Council. SCU10 will field late 2020. M/SCU are continuing to pursue Agile Software Development Transformation to improve software delivery to the warfighter.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: Decrease due to OFP: M7.2+ fielding in FY19. Once fielded, OFP development will decrease from three simultaneous software development projects back to the steady-state level of two simultaneous development projects</p>	108.061	100.383	86.520	-	86.520
<p>Title: Flight Test</p> <p>Description: Development Test and Evaluation (DT&E) at Edwards AFB and Development Test/Operational Test (DT/OT) at Eglin AFB, Edwards AFB, Nellis AFB, and Air National Guard Air Force Reserve Test Center</p>	17.759	17.044	17.613	0.000	17.613

UNCLASSIFIED

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

	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
(AATC), including integration tests of associated subsystems and weapons as well as maintain test schedule for F-16 MMC OFPs, weapons integration, Radio Frequency (RF) compatibility, and sub-systems to ensure capabilities meet CAF's fielding schedule. FY 2019 Plans: Continue support of DT&E infrastructure. Finish M7.2+ test execution (Force Development Evaluation) for M7.2+ (AESA JEON, MIDS-JTRS, JASSM-ER, AIM-120 SIP2, ASQ-236 and Comm Suite - Integrated Waveform), and support out-of-cycle regression testing. M7.2+ fielding date is August 2019. Initiate M7.3 and M8 test planning. FY 2020 Base Plans: Continue support of DT&E infrastructure. Initiate combined Developmental flight and Operational flight test with M7.3/M8.03 OFP (M7.2+ baseline running on MMCU legacy cards with basic Ethernet load, MIDS-JTRS (if not fielded with M7.2+), Correlation (small fixes), AESA Phase 3 - Step 1, SATURN and RF Compatibility), and support out-of-cycle regression testing. FY 2020 OCO Plans: N/A FY 2019 to FY 2020 Increase/Decrease Statement: Increase due to inflation and current estimate.					
Title: EMD HW/Advanced Capabilities Improvements Description: Advanced Capability Improvements includes, but not limited to sensor upgrades, Radar updates and other self-protection/electronic protection (EP) enhancements, 4th/5th gen fighter network communications, Radio Frequency (RF) compatibility, requirements analysis and studies analysis, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements. FY 2019 Plans: Continue support to develop, test, and qualify aircraft weapons systems including F-16 subsystems replaced or modified due to requirements changes, P3I, DMS and/or parts obsolescence. Radio Frequency Compatibility (RFC) development efforts to minimize and understand the EMI on the F-16. FY 2020 Base Plans:	0.000	0.200	0.200	-	0.200

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Continue support to develop, test, and qualify aircraft weapons systems including F-16 subsystems replaced or modified due to requirements changes, P3I, DMS and/or parts obsolescence. Radio Frequency Compatibility (RFC) development efforts to minimize and understand the EMI on the F-16. FY 2019 to FY 2020 Increase/Decrease Statement: N/A					
Title: MMC Upgrade / Display Generator Upgrade on F-16 aircraft Description: The MMC upgrade on the F-16 post-block aircraft, Blk 40, 42, 50, 52 resolves shortfalls in mission computer memory and throughput. Funding includes NRE, design, development, integration, and ground/flight test for fielding of MMC with the M8.0.3 OFP and fielding of PDG with the M8.1 OFP. The addition of an Ethernet High Speed Data Network (HSDN) facilitates future increments of combat capability with the OFP and system compatibility/interoperability (e.g., digital targeting pod video). The Programmable Display Generator (PDG) upgrade allows a fully integrated Multifunction Display solution including Hands On Throttle and Stick (HOTAS) integration with Sensor of Interest (SOI), format swapping and high definition video on 4x4 displays; provides improved display formats during dynamic maneuvers; resolves symbol freezing issues due to throughput constraints; and provides a sustainable approach to address growing DMS concerns with the current Programmable Display Generator. FY 2019 Plans: Continue NRE activities for HSDN, MMC Upgrade and PDG Upgrade for design, development, integration, deliver test assets for SIL and flight test for fielding with the M8.0.3 and 8.1 OFPs. FY 2020 Base Plans: Continue NRE activities for HSDN, MMC Upgrade and PDG Upgrade for design, development, integration, deliver test assets for SIL and flight test for fielding with the M8.0.3 and 8.1 OFPs. FY 2019 to FY 2020 Increase/Decrease Statement: Decrease from FY19 to FY20 due to ramping down of development efforts for program.	18.958	11.613	3.837	-	3.837
Title: Simulator Trainers Description: F-16 Simulator Training Programs (Simulators) supports the development, acquisition, fielding and integration of F-16 Simulators. Enables the USAF to exercise and train using the latest F-16 capabilities available to multiple aircraft configurations, while reducing the overall cost of maintenance and aircrew training. In order to maintain concurrency with the aircraft OFP, this funding support development, test and integration	3.292	14.323	14.594	-	14.594

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Continues Phase III development efforts for full CDD radar development including flight testing and TO development. FY 2019 to FY 2020 Increase/Decrease Statement: Increase due to ramp up of radar software and radome development and purchase of 15 test assets needed in FY20 for continuation of full CDD radar development efforts.					
Title: Comm Suite Radio Upgrade Aircraft					
Description: Provides updates to the ARC-210 satellite communication (SATCOM) radios on F-16 aircraft including Second Generation Anti-Jam Tactical radio for NATO (SATURN) with Mobile User Objective System (MUOS) and improved crypto capability and the addition of a Cockpit Communication Control Panel (C3PO, and Digital Comm Matrix(DCM).					
FY 2019 Plans: No FY19 funding for this effort					
FY 2020 Base Plans: Continue NRE efforts, procure Group B test assets					
FY 2019 to FY 2020 Increase/Decrease Statement: Ramp up of activities					
	4.287	0.000	5.099	-	5.099
Title: Hybrid Flight Control Computer (HFLCC) Auto Ground Collision Avoidance System (AGCAS)					
Description: Development for Hybrid Flight Control Computer (HFLCC) Auto Ground Collision Avoidance System (AGCAS).					
FY 2019 Plans: N/A					
FY 2020 Base Plans: N/A					
	1.200	0.000	0.000	-	0.000
Title: Digital Radar Warning Receiver					
Description: Digital Radar Warning Receiver improves on existing radar warning receiver performance and improves Electronic Warfare (EW) threat detection range. The DRWR program also facilitates Radio Frequency (RF) compatibility with associated systems.					
	42.974	35.321	0.001	-	0.001

UNCLASSIFIED

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

	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
<p><i>FY 2019 Plans:</i> Continue efforts for Digital Radar Warning Receiver, continue NRE efforts for Group A and Group B Hardware, continue Digital RWR Software and any associated OFP updates. ALQ-213 system procurement for Blk 50C. Blk 50C kit build and TVI install. Blk 42C TVI install. Blk 40C design completion and kit build. D model design to commence. Fund ALR-69A SW changes to support AESA/RFC integration. JPRIMES chamber testing. Additional flight testing. Fund EMI ECP. Fund RFC SIE (SW). MDF continue work for lab expansion.</p> <p>This program includes execution of a Section 804 Rapid Prototyping effort to evaluate next-gen electronic warfare options that meet the DRWR requirements.</p> <p><i>FY 2020 Base Plans:</i> Continue efforts for Digital Radar Warning Receiver, continue NRE efforts for Group A and Group B Hardware, continue Digital RWR Software and any associated OFP updates. Seek MS C approval. Prep for kit proof on Blk 50C and other blocks ready to go. D model kit builds and TVI installs. MDF lab expansion and bench complete.</p> <p>This program includes execution of a Section 804 Rapid Prototyping effort to evaluate next-gen electronic warfare options that meet the DRWR requirements.</p> <p><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i> Based on current constrained budget provided.</p>					
<p><i>Title:</i> Multifunctional Information Distribution System Joint Tactical Radio System(MIDS-JTRS)</p> <p><i>Description:</i> Multifunctional Information Distribution System Joint Tactical Radio System (MIDS JTRS) provides real time, jam-resistant and secure information system for the transfer of combat data, voice and navigation information between widely dispersed battle elements. Enhances situational awareness by exchanging digital data over a common communication link that is continuously and automatically updated in real time. Additionally MIDS JTRS enhanced capabilities provide concurrent multinetting which enhances Link 16 by adding capability to receive four messages in a single time slot and allows for greater network design flexibility along with concurrent contention receive capabilities and J-voice. The F-16 MIDS JTRS effort is developing Ethernet connectivity within the terminal.</p> <p><i>FY 2019 Plans:</i> Provide funding to the USN MPO development of the F-16 firmware build along with Ethernet capabilities. Fund the creation of technical data/orders. Fund remaining trial vehicle installations (TVIs) for test as well as</p>	0.000	3.511	0.000	-	0.000

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
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kit proofing efforts. Fund group A IDIQ contracts required for TVIs and Kit proofing. Fund studies to explore expansion of additional/future MIDS JTRS capabilities including ICAS.

FY 2020 Base Plans:
N/A

FY 2019 to FY 2020 Increase/Decrease Statement:
No MIDS JTRS activity in FY20

Title: Advanced Identification Friend or Foe (AIFF Mode5)	2.967	0.000	0.000	-	0.000
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Description: Project 633032, F-16 AIFF Mode 5, changed from F-16 ADS-B Out.

Advanced Identification Friend or Foe (AIFF Mode 5) provides hardware and software/firmware update required to comply with DoD mandate for Advanced Identify Friend or Foe (IFF) Mode 5

Transponder upgrade program replaces/upgrades existing hardware with an AIFF Mode 5 capable system via software/firmware update.

Advanced Identify Friend or Foe system (AIFF) provides positive identification for Air Traffic Control reporting, combat targeting, and fratricide prevention.

FY 2019 Plans:
N/A

FY 2020 Base Plans:
N/A

Accomplishments/Planned Programs Subtotals	240.264	185.864	193.013	0.000	193.013
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	FY 2018	FY 2019
Congressional Add: Multifunctional Information Distribution System Joint Tactical Radio System (MIDS-JTRS)	10.000	0.000

UNCLASSIFIED

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	FY 2018	FY 2019
FY 2018 Accomplishments: Provide funding to the USN MPO development of the F-16 firmware build along with Ethernet capabilities. Fund the creation of technical data/orders. Fund remaining trial vehicle installations (TVIs) for test as well as kit proofing efforts. Fund group A IDIQ contracts required for TVIs and Kit proofing.		
FY 2019 Plans: N/A		
Congressional Adds Subtotals	10.000	0.000

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

<u>Line Item</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020 Base</u>	<u>FY 2020 OCO</u>	<u>FY 2020 Total</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF 05 Line Item F01600: <i>F-16 Aircraft Modifications</i>	223.948	303.424	234.782	-	234.782	765.616	594.616	602.437	682.441	Continuing	Continuing
• APAF 07 Line Item F0160P: <i>F-16 Post Production Support</i>	8.151	4.918	15.348	-	15.348	25.397	19.707	20.067	20.429	Continuing	Continuing
• APAF 06 Line Item <i>F01600: F-16 Initial Spares</i>	20.555	11.235	30.463	-	30.463	25.395	39.954	16.039	25.317	Continuing	Continuing

Remarks

E. Acquisition Strategy

The F-16 Program acquisition strategy is to improve capability, maintenance and safety mods through OFP development/flight test, enhanced weapons integration, structural upgrades, and simulator concurrency.

F-16 OFP SW updates will continually bring new capabilities to the warfighter. OFP SW development effort is now completely developed at Hill AFB (309 SMXG). Numerous Integration contracts (CPFF, FFP) are required to allow for Improved Avionics, Weapon, ADS-B, MIDS JTRS integration to successfully field with each OFP. MMC Upgrade awarded to Raytheon on 22 Nov 2016. PDG Upgrade awarded to General Dynamics Mission Systems on 17 Apr 2017. The EMD HW/Advanced capability improvements will develop, test, and qualify aircraft weapons systems, including subsystems and uses various contract types (Cost Plus and Fixed Price).

The Active Electronically Scanned Array (AESA) Joint Emergent Operational Need (JEON) contract for development and production of the APG-83 radar awarded to Northrop Grumman 31 May 2017. The US Government is the prime integrator and a separate contract is in work for Lockheed Martin to provide integration support.

AIFF Mode 5 Out program uses numerous contracts for DMS resolution, integration, production, support and installs. Funding will be awarded on the following contacts: harness IDIQ, Bracket IDIQ, Falcon 2020, Mode 5 IDIQ, and SASSM/EGI IDIQ.

UNCLASSIFIED

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Automatic Ground Collision Avoidance System (AGCAS) development will accomplish test and evaluation of the AGCAS system on F-16 Block 25/30/32 aircraft. Contracts are expected to be awarded by the end of 2018 with LM, flight test, and engineering contractors.

DRWR is organically being integrated on the F-16 by F-16 System Program Office (AFLCMC/WWM) and the Electronic Warfare Avionics (EWA) group at AFLCMC/WNY, Warner Robins AFB, GA. The ALR-69A production contract (managed by AFLCMC/WNY) was awarded on 30 March 2018 to Raytheon, Goleta, CA (CAGE CD 06129). The ALR-69A software is organically managed by AFLCMC/WNY utilizing the 579 SMXS (Software Maintenance) team and the OEM Raytheon, Goleta, CA. The ALR-69A hardware is sustained by the 408 SCMS (Supply Chain) and 402MXW (Hardware Maintenance) group at Warner Robins AFB, GA.

Flight Test requires both organic test range support and various contract support for integration test of F-16 subsystems to ensure capabilities meet CAF fielding schedule, which includes Radio Frequency (RF) compatibility.

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.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force **Date:** February 2019

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207133F / F-16 Squadrons	Project (Number/Name) 672671 / F-16 Squadrons
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Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
OFP Updates on F-16 aircraft	Various	309th SMG : Hill AFB, UT	-	95.815	Nov 2017	87.005	Nov 2018	72.530	Nov 2019	-		72.530	Continuing	Continuing	-
MMC Upgrade / Display Generator Upgrade	Various	Various : Various	-	18.958	Jan 2018	11.613	Jan 2018	3.837	Jan 2019	-		3.837	Continuing	Continuing	-
EMD HW / Advanced Capabilities	Various	Various : Various	-	0.000	Aug 2018	0.000	Aug 2019	0.200	Aug 2020	-		0.200	Continuing	Continuing	-
Simulator Trainers	Various	Various : Various	-	3.292	Mar 2018	14.323	Mar 2019	14.594	Mar 2020	-		14.594	Continuing	Continuing	-
AESA Radars	Various	Various : Various	-	40.766	Jun 2018	3.469	May 2019	65.149	May 2020	-		65.149	Continuing	Continuing	-
Digital Radar Warning Receiver	Various	Various : Various	-	42.974	Apr 2018	35.321	Aug 2019	0.001	Aug 2020	-		0.001	Continuing	Continuing	-
Comm Suite Radio Upgrade	Various	Various : Various	-	4.287	Feb 2018	0.000	Feb 2019	5.099	Feb 2020	-		5.099	Continuing	Continuing	-
Hybrid Flight Control Computer (HFLCC) AGCAS	Various	Various : Various	-	1.200	Mar 2018	-		-		-		-	Continuing	Continuing	-
Advanced Identification Friend or Foe (AIFF MODE5)	Various	Various : Various	-	2.967	Mar 2018	-		-		-		-	Continuing	Continuing	-
MIDS JTRS	Various	Various : Various	-	10.000	Oct 2018	3.511	Nov 2018	-		-		-	Continuing	Continuing	-
Subtotal			-	220.259		155.242		161.410		-		161.410	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Flight Tests	Various	Various : Various	-	17.759	Nov 2017	17.044	Nov 2018	17.613	Nov 2019	0.000		17.613	Continuing	Continuing	-
Subtotal			-	17.759		17.044		17.613		0.000		17.613	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force **Date:** February 2019

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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>F-16 Development Efforts</i>				
Legacy Service Life Extension Program (SLEP) Structures Complete SLEP Kit Proof	3	2019	3	2019
MMC Upgrade / Display Generator Upgrade Flt Test Release	2	2019	2	2019
M7.2 OFP Field	3	2019	3	2019
AESA JEON Initial Fielding	3	2019	1	2020
Hybrid Flight Control Computer (HFLCC) AGCAS Field	1	2021	1	2021
Digital Radar Warning Receiver Flt Test Complete	1	2020	3	2020
Digital Radar Warning Receiver Fielding Recommendation	2	2021	2	2021
M7.3/8.03 OFP Fielding	3	2021	4	2021
M8.1 OFP Fielding	4	2021	4	2024