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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0207138F: F-22A 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	2,838.139	531.767	371.667	328.542	-	328.542	248.319	339.213	423.458	431.079	Continuing	Continuing
674785: F-22	2,838.139	531.767	371.667	328.542	-	328.542	248.319	339.213	423.458	431.079	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	6	0	0	0		
MDAP/MAIS Code(s): 265												
[#] 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												
Totals include funding for PRCP Program Number, 265, F-22												
F-22 development and production is complete. This program is a remaining compilation of F-22 OFP development, capability enhancements, and mandates necessary to keep the F-22 weapon system the world's most capable fighter. The Cost to Complete and Total Cost for projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for projects in this program element since the R2 does not account for prior years funding.												
A. Mission Description and Budget Item Justification												
The F-22 Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F-22 is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. While F-22 aircraft production has completed as of May 2012, funding for F-22 modernization is "continuing" beyond the FYDP. The Engineering and Manufacturing Development (EMD) and production phase of F-22 acquisition is complete. The program is now continuing the pre-planned and evolutionary modernization effort through incremental development phases that enhance the F-22 anti-access, area denial, and Global Strike capability. The development program modernizes and upgrades the air vehicle, engine, and training systems to improve/enhance F-22 weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.												
BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.												

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B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	
Previous President's Budget	571.320	371.667	328.542	-	328.542	
Current President's Budget	531.767	371.667	328.542	-	328.542	
Total Adjustments	-39.553	0.000	0.000	-	0.000	
• 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	-22.501	0.000				
• SBIR/STTR Transfer	-17.052	0.000				
• Other Adjustments	0.000	0.000	0.000	-	0.000	
Change Summary Explanation FY 2012: \$39.5M reduction due to \$19.0M OMNIBUS Reprogramming, \$3.5M RAND BTR. amd \$17.1M SBIRs						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: Software Support				40.117	36.886	41.360
Description: Operational Flight Plan (OFP) testing in the Raptor Integration Lab (RAIL) and the Avionics Integration Lab (AIL), Developmental and Operational flight test, Pilot Training Systems (PTS) software upgrades, Synthetic Aperature Radar (SAR) mapping capability development for the Pilot Training Systems (PTS), Trainer/Integrated Maintenance Information System (IMIS) Software Enhancements						
FY 2012 Accomplishments: In FY 2012: Update 4 software support OFPs are completed. Flight testing of all the Update 4 software products will be completed and fielded. Pilot Training Systems (PTS) Software upgrades. Synthetic Aperature Radar (SAR) mapping capability development for the PTS. IMIS to continue ADA to C++ conversion focusing on Present TO and Air Vehicle interface modules and completion of the Forms, Templates, and Engine modules.						
FY 2013 Plans: In FY 2013: Update 4 software support Operational Flight Programs are completed and will be fielded. Software to support two new capabilities (Intraflight Data Link Gateway Mode - 5th to 4th generation IFDL capability and AIM-9X Basic - ability to launch Block 1 AIM-9X missile) will be Coded and Tested for integration into Update 5. Pilot Training Systems (PTS) Software upgrades						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
and Synthetic Aperature Radar (SAR) mapping capability development for the PTS will occur. IMIS to continue ADA to C++ conversion with focus on completion of the Present TO and Air Vehicle Interface modules. FY 2014 Plans: In FY 2014: Update 5 Operational Flight Programs, to include the Automatic Ground Collision Avoidance System, Intraflight Data Link Gateway Mode and AIM-9X Basic, will be tested in the Raptor Integration Lab (RAIL), Avionics Integration Lab (AIL), and at Developmental Test. Pilot Training Systems (PTS) Software upgrades. Synthetic Aperature Radar (SAR) mapping capability development for the PTS. IMIS to continue ADA to C++ conversion with focus on completion of all modules and transition as system of record for the F-22.				
Title: System Engineering/Program Management Support Description: Provides for F-22 program-wide planning and execution to include studies, analysis, and requirements definition. FY 2012 Accomplishments: In FY 2012: Provides for F-22 program wide planning and execution comprised of, but not limited to the following: Future Capabilities Planning and F-22 Mandates Requirements Definition, Cost Estimating Data, and Systems Engineering Process Management. FY 2013 Plans: In FY 2013: Same as prior year. FY 2014 Plans: In FY 2014: Same as prior year.		11.600	18.135	19.143
Title: Mission Support Description: Mission support of the F-22 Program Office; travel, computer costs, misc contracts, etc. FY 2012 Accomplishments: In FY 2012: Funds provide management and oversight activities in direct support of F-22 Increment Development, RAMMP, Aircraft Structural Integrity Program (ASIP), Flight Test Support, 3.2B Should Cost analysis, and 3.2B Milestone B documentation. FY 2013 Plans: In FY 2013: Same as prior year. Increment 3.2B activities under separate Program Element 0605213F. FY 2014 Plans: In FY 2014: Same as prior year. Increment 3.2B activities under separate Program Element 0605213F.		19.497	10.817	10.828
Title: Reliability and Maintainability Maturation Program (RAMMP)		32.804	11.202	10.984

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
<p>Description: The Reliability, Availability, and Maintainability Maturation Program (RAMMP) provides for the development and integration of upgrades to reach mature reliability, availability and maintainability (RAM). The associated RAMMP RDT&E effort develops candidate RAMMP initiatives which are down-selected for implementation based on their development maturity and impact on F-22 life cycle costs. RAMMP provides the development for the Automatic Back-Up Oxygen System(ABOS), other Life Support System (LSS) development projects, and other Urgent Response Requirements required by the Aircraft.</p> <p>FY 2012 Accomplishments: (U) In FY 2012: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. Continue RAMMP development projects including, but are not limited to: Mighty Tough Boot Development, AMNS Liner Redesign, Canopy Wax, Canopy Topcoat Redesign, Redesign Right Hand IRCM Door Bell Crank, AMAD Plenum Sealing, SES Air Filter, Gland Redesign, SMFD Black light Redesign to Low Power LED, Driver B RF Circuit Redesign, Improved External Fuel Drain Valve, Eliminate EMD GINS from Fleet, IMIS LO Handheld, Automated Backup Oxygen System, and 3rd Gen Radar Support Electronics (RSE) Isolator.</p> <p>FY 2013 Plans: (U) In FY 2013: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. FY2013 active RAMMP development projects include, but are not limited to: Mighty Tough Boot Development, AMNS Liner Redesign, IFB Rain Erosion Nose Cap, Canopy Topcoat Redesign, SES Air Filter, APU Plenum Sealing, Gland Redesign, Automated Backup Oxygen System, SMFD Backlight to Lower Power LED, Gland Redesign, and Driver B RF Circuit Redesign.</p> <p>FY 2014 Plans: In FY 2014: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. FY2014 active RAMMP development projects include, but are not limited to: Mighty Tough Boot, AMNS Liner Redesign, IFB Rain Erosion Nose Cap, and Gland Redesign.</p>				
Title: Increment 3.2A		84.379	81.811	33.534

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Description: The F-22 Increment 3.2A Modernization Program consists of the software development necessary to provide Increment 3.2A capabilities including improvements to Electronic Protection, Combat Identification and Link-16 Receive. FY 2012 Accomplishments: In FY 2012: The detailed design phase will continue and will culminate in a Critical Design Review. Preliminary work will continue to prepare lab and test facilities for Development, Integration, and Test. All software coding, integration and testing will begin. FY 2013 Plans: In FY 2013: Work will continue to prepare lab and test facilities for Development, Integration, and Test. All software coding, integration and testing will continue. Developmental Test will be conducted. FY 2014 Plans: In FY2014: Same as prior year.				
Title: Increment 3.2B Description: The F-22 Increment 3.2B Modernization Program consists of the software development necessary to provide Increment 3.2B capabilities including Intra-Flight Data Link Improvements, Electronic Protection, AIM-9X and AIM-120D integration with Common Weapon Engagement Zone, Geolocate 2.0 and Stores Management System Common Split Bus. The Enhanced Stores Management System (ESMS) program is a hardware development and risk reduction program required to integrate any new weapons on the F-22 beyond Increment 3.1. FY 2012 Accomplishments: In FY 2012: MDD will be accomplished. Work to prepare lab and test facilities for Development, Integration and Test continues. Increment 3.2B will continue Design efforts; this effort will require all detailed design phase work necessary to start product development and to plan for the remaining phase efforts required to incorporate Increment 3.2 capabilities into the F-22 weapon system as described in the Increment 3.2 Operational Capability Description Document. FY 2013 Plans: In FY 2013: Increment 3.2B FY13 activities under separate Program Element 0605213F. FY 2014 Plans: In FY 2014: Increment 3.2B FY13 activities under separate Program Element 0605213F.		112.456	0.000	0.000
Title: Combined Test Force (CTF)		73.216	76.031	75.388

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
<p>Description: The F-22 Combined Test Force (CTF), located at Edwards Air Force Base, conducts full-up weapons system testing to assess the synergistic effect of the F-22 combined characteristics of stealth, speed, maneuverability, and integrated avionics in mission accomplishment. The CTF uses operationally significant ground and flight test scenarios, when practical, to identify system performance deficiencies early before they are more difficult and costly to resolve. Starting in FY13, CTF efforts directly associated with Increment 3.2B development are located in the 3.2B program documentation, Program Element 0605213F.</p> <p>FY 2012 Accomplishments: In FY 2012: The significant programs undergoing flight test at AFFTC include: Update 3.6 and update 4 software testing; AIM-9X Risk reduction and AIM-9X SEEK EAGLE testing, arresting gear, External Fuel Tank testing, 6 gallon testing, Bio-fuel Certification, and ECS OBOGS investigations. Small projects currently-planned also include: NUCIF, MOP, dragging brake issue, Weapon Bay Door Redesign, and cracking/missile fin rub.</p> <p>FY 2013 Plans: In FY 2013: The significant programs undergoing flight test at AFFTC include: major software improvements associated with Increment 3.2A; Update 5 testing. Other small program requirements are expected to require testing such as supersonic tanks; AIM-9 employment with tanks; and Auto Ground Collision Avoidance software.</p> <p>FY 2014 Plans: In FY 2014: The significant programs undergoing flight test at AFFTC include: major software improvements associated with Increment 3.2A; Update 5 testing. Other small program requirements are expected to require testing such as supersonic tanks; AIM-9 employment with tanks; and Auto Ground Collision Avoidance software.</p>				
<p>Title: Laboratory Test & Operations (LTO)</p> <p>Description: Lab Test & Operations is a continuous activity that plans and conducts development, integration, test, & verification (IT&V) of F-22 OFPs with F-22 hardware. LTO provides ready state maintenance, staffing, and operation of 20 development labs including 5 unique major System Integration Laboratories (SILs): the Agile Integration Lab (AIL); the Raptor Integration Lab; the Air Combat Simulation (ACS) Lab; the Vehicle Management System (VMS) Vehicle Integration Facility (VIF); and the Vehicle System Simulator (VSS). Through the ACS, LTO provides the combat air forces with advanced mission-level test and training capability through a fully representative simulation. Starting in FY13, LTO efforts directly associated with Increment 3.2B development are located in the Increment 3.2B program documentation, Program Element 0605213F.</p> <p>FY 2012 Accomplishments: In FY 2012: Maintain lab ready state availability in support of F-22 programs. Update critical systems as required to support new aircraft configurations and capabilities. Accomplish OFP verification and risk reduction. Support pilot training in support of</p>		72.096	79.800	72.374

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Air Combat Command exercises and war gaming; Air Force Operational Test & Evaluation Center test planning; and test event rehearsals. Support periodic Air Warfare Center operational mission data updates. FY 2013 Plans: In FY 2013: Same as prior year. FY 2014 Plans: In FY 2014: Same as prior year.				
Title: VAX Migration Description: The F-22 VAX Migration program develops, integrates, tests, and deploys computer infrastructure and software tools to replace existing VAX-based resources used to develop, field, and sustain F-22 capabilities. The current VAX architecture is obsolete, resulting in increased program risk, and delays in development due to reliance upon increasingly unreliable and unsupportable infrastructure. FY 2012 Accomplishments: In FY 2012: Continue development and delivery of the Network User Control Interface (NUCIF) card allowing for non-VAX computers to interface with F-22 test aircraft and development labs; continue site-by-site replacement of VAX systems through deployment of PC-based systems, compilers and software support tools including Dimensions, Cradle, Quicksilver, Deployment of instrumentation tools, simulation tools and user unique tools. FY 2013 Plans: In FY 2013: Same as prior year. FY 2014 Plans: In FY 2014: Same as prior year.		22.950	9.741	7.153
Title: F-22 Small Project Roll-up Description: Provides for F-22 modernization activities including, but not limited to: LO Signature Mgmt, EN/Threat Modeling Support, DT Weapons Assets, PT Dynamic SAR, Flight Test Engine Refurbishment, Support Equipment Development, and OGC/GFE. FY 2012 Accomplishments:		15.504	9.873	5.135

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
In FY 2012: Continue F-22 modernization development and support activities including, but not limited to: LO Signature Mgmt, Test Agent Support, PT Dynamic SAR, AIM-9X Risk Reduction, Support Equipment Development, Test Aircraft Instrumentation, and OGC/GFE. FY 2013 Plans: In FY 2013: Continue F-22 modernization development and support activities including, but not limited to: DT Weapons Assets, Threat Modeling Support, Test Agent Support, PT Dynamic SAR, AIM-9X Risk Reduction, and OGC/GFE. FY 2014 Plans: In FY 2014: Continue F-22 modernization development and support activities including, but not limited to: DT Weapons Assets, Threat Modeling Support, Test Agent Support, Flight Test Engine Refurbishment, and OGC/GFE.				
Title: Crypto Modernization Description: Crypto Modernization provides for development to support crypto-graphic updates required by the National Security Agency (NSA). Two crypto-graphic projects are currently in work: the KOV-20 Field Upgrade (field upgrade only) and the KOV-20 Crypto Modernization. FY 2012 Accomplishments: FY 2012: Crypto Modernization activities: KOV-20 Field Upgrade to begin fleet retrofit with upgraded KOV-20 units. KOV-20 Crypto Modernization will conduct requirements analysis and generation phase will be accomplished and the design phase will begin. FY 2013 Plans: In FY 2013: KOV-20 Crypto Modernization will continue the design phase and transition into coding and testing. FY 2014 Plans: In FY 2014: Same as prior year.		0.020	13.990	15.544
Title: Advanced Technology Development Description: Technology Maturation and risk reduction of Classified F-22 related development efforts FY 2012 Accomplishments:		26.255	16.334	13.472

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
In FY 2012: Technology Maturation and risk reduction of Classified F-22 related development efforts. Study and analysis of a variety of Special Projects for integration onto our platform continues. Perform proof of concept demonstration on select projects. Detailed integration efforts begin on successfully demonstrated projects. FY 2013 Plans: In FY 2013: Same as prior year. FY 2014 Plans: In FY 2014: Same as prior year.				
Title: Line In-The-Sky Auto Ground Collision Avoidance System (AGCAS) Description: (U) The LIS AGCAS will be designed and integrated on the F-22 to prevent the aircraft from unintentionally descending below ground level. This capability will be fielded with Update 5. FY 2012 Accomplishments: FY 2012: Requirements development and coding for AGCAS will be accomplished. In addition, design work will begin to develop design solutions for Block 20, 30, and 35. FY 2013 Plans: In FY 2013: Same as prior year. FY 2014 Plans: In FY 2014: Software code, integration, and test will continue. Development test will be conducted.		2.890	7.047	13.886
Title: Increment 3.1/3.2A Cost and Software Data Report (CSDR) Description: This funding pays for both the Increment 3.1 and Increment 3.2A Cost and Software Data Reports. FY 2012 Accomplishments: In FY 2012: Funds provide CSDR's for both Increment 3.1 and Increment 3.2A. FY 2013 Plans: In FY 2013: No planned effort in FY13 FY 2014 Plans: In FY 2014: No planned effort in FY14.		7.443	0.000	0.000
Title: F-22 Mandates		0.000	0.000	9.741

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2012	FY 2013	FY 2014
Description: The F-22 Mandates program consists of the software and hardware development necessary to provide mandates such as Mode 5, Mode S, and numerous Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) mandates to the F-22. These mandates are required by the Joint Requirements Oversight Council (JROC), Federal Aviation Administration (FAA), and the International Civil Aviation Organization (ICAO).												
FY 2012 Accomplishments: In FY 2012: No planned activity in FY12.												
FY 2013 Plans: In FY 2013: No planned activity in FY13.												
FY 2014 Plans: In FY 2014: Funding will begin the various elements associated with capabilities analysis and selection, requirements development, design maturity, and early software modeling and test. The intent is to satisfy the product development process by delivering design content required to reach the next milestone.												
Title: Open System Architecture										10.540	0.000	0.000
Description: Conduct studies and analysis to reduce the risk of integrating Open Architecture (OA) hardware and fusion architecture onboard the F-22. The goal of this effort is to ultimately reduce the F-22 costs and timeline (development, test, and fielding) with more cost-effective solutions.												
FY 2012 Accomplishments: In FY 2012: Study and analysis of the Open System Architecture integration onto F22.												
FY 2013 Plans: In FY 2013: No planned effort in FY13												
FY 2014 Plans: In FY 2014: No planned effort in FY14.												
Accomplishments/Planned Programs Subtotals										531.767	371.667	328.542
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: F02200: F-22A Squadrons, PE 0207138F*	386.835	332.349	463.970		463.970	397.286	407.038	465.765	467.081	Continuing	Continuing	

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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: BA01: F02200: <i>Advanced Tactical Fighter, PE 0207219F**</i>	85.722	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF: BA03: 837300: <i>Other Procurement, PE0207138F, F-22A Squadrons</i>	1.162	0.669	0.947		0.947	1.378	1.144	0.992	1.010	Continuing	Continuing
• OPAF: BA03: 834010: <i>Other Procurement, PE0207138F, F-22A Squadrons</i>	0.537	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MILCON: PE 0207138F: <i>MILCON</i>	16.500	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E: BA07: PE0207163F: <i>AIM-120D, AMRAAM***</i>	10.515	18.990	23.830		23.830	23.940	5.820	0.000	0.000	0.000	15.110
• RDT&E: BA07: PE 0605213F: <i>Increment 3.2B****</i>	0.000	140.100	131.100		131.100	137.700	86.300	34.600	1.423	Continuing	Continuing

Remarks

NOTES:

*Includes PE 0207138F BP's 11 (Aircraft Modifications), 12 (Age Equipment), 16 (Initial Spares), and 19 (Depot Activation)

**Includes PE 0207219F BP 10 (Air Vehicle) and 11 (FY12 Low Cost Modifications)

***Includes PE 0207163F AIM-120D RDT&E, portion of funds supports the Increment 3.2B effort.

****Includes PE 0605213F Increment 3.2B funding is identified in the Increment 3.2B documentation

E. Acquisition Strategy

The Raptor Enhancement Development & Integration (REDI) contract is an Indefinite Delivery/Indefinite Quantity Ordering contract that maximizes flexibility to start, stop, accelerate and decelerate projects as required. The REDI contract was established to be more responsive to evolving war fighter requirements. The REDI contract allows the issuance of orders for the highest priority war fighter capabilities in operationally meaningful capability increments, requirements analysis, contractor cost estimates and studies, development and demonstration of capability enhancements, and unanticipated future war fighter requirements. Each increment is broken into phases to initiate requirements analysis, the design phase and the development, integration and verification phase of a specific incremental development effort. The (REDI) II contract is a follow-on Indefinite Delivery/Indefinite Quantity contract to the current REDI contract. REDI II provides maximum flexibility to manage various modernization projects. The REDI II contract allows for the issuance of orders for efforts associated with the planning, analysis, design, development,

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qualification ,test and documentation of F-22 weapon system performance enhancements, life-cycle improvements, Operational Flight Program (OFP) upgrades, and associated efforts essential to accomplishing the F-22 mission.		
<u>F. Performance Metrics</u> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Support	SS/CPIF	Lockheed Martin:Fort Worth, TX	232.941	40.117	Dec 2011	36.886	Dec 2012	41.360	Dec 2013	-		41.360	Continuing	Continuing	
System Engineering / Program Management	SS/CPIF	Lockheed Martin:Fort Worth, TX	176.533	11.600	Dec 2011	18.135	Dec 2012	19.143	Dec 2013	-		19.143	Continuing	Continuing	
RAMMP	SS/CPFF	Lockheed Martin:Fort Worth, TX	110.105	32.804	Jan 2012	11.202	Jan 2013	10.984	Jan 2014	-		10.984	Continuing	Continuing	
Increment 3.2A	SS/CPIF	Lockheed Martin:Fort Worth, TX	170.382	84.379	Dec 2011	81.811	Nov 2012	33.534	Nov 2013	-		33.534	3.109	373.215	
Increment 3.2B	SS/CPIF	Lockheed Martin:Fort Worth, TX	306.938	112.456	Dec 2011	0.000		0.000		-		0.000	0.000	419.394	
VAX Migration	SS/CPIF	Lockheed Martin:Fort Worth, TX	144.368	22.950	Dec 2011	9.741	Dec 2012	7.153	Dec 2013	-		7.153	0.000	184.212	
F-22 Small Projects	SS/ Various	Lockheed Martin:Fort Worth, TX	525.068	15.504	Dec 2011	9.873	Oct 2012	5.135	Oct 2013	-		5.135	Continuing	Continuing	
Crypto-Modernization	SS/CPIF	Lockheed Martin:Fort Worth, TX	0.976	0.020	Dec 2011	13.990	Nov 2012	15.544	Nov 2013	-		15.544	10.244	40.774	
Advanced Technology Development	Various	Various:Various,	18.699	26.255	Jan 2012	16.334	Mar 2013	13.472	Jan 2014	-		13.472	Continuing	Continuing	
Auto Ground Collision Avoidance System (AGCAS)	SS/CPIF	Lockheed Martin:Fort Worth, TX	0.000	2.890	Sep 2012	7.047	Mar 2013	13.886	Nov 2013	-		13.886	0.000	23.823	
Increment 3.1 and 3.2 Cost and Software Data Report	SS/CPFF	Lockheed Martin:Fort Worth, TX	0.000	7.443	Mar 2013	0.000		0.000		-		0.000	0.000	7.443	
F-22 Mandates	SS/ Various	Lockheed Martin:Fort Worth, TX	0.000	0.000		0.000		9.741	Feb 2014	-		9.741	331.554	341.295	
Open System Architecture	SS/CPIF	Lockheed Martin:Fort Worth, TX	0.000	10.540	Dec 2011	0.000		0.000		-		0.000	0.000	10.540	
Subtotal			1,686.010	366.958		205.019		169.952		0.000		169.952			
Remarks FY13-18 Increment 3.2B costs and estimated contract award dates are summarized in separate documentation PE/BPAC 0605213F/654785. All Increment 3.2B efforts and funding prior to FY13 continues to be shown in PE/BPAC 0207138F/674785.															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>							R-1 ITEM NOMENCLATURE PE 0207138F: <i>F-22A Squadrons</i>				PROJECT 674785: <i>F-22</i>				

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	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)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combined Test Force	Various	Various:Various,	585.346	73.216	Dec 2011	76.031	Nov 2012	75.388	Nov 2013	-		75.388	Continuing	Continuing	
Laboratory Test & Operations (LTO)	SS/ Various	Lockheed Martin:Ft Worth, TX	456.678	72.096	Dec 2011	79.800	Nov 2012	72.374	Nov 2013	-		72.374	Continuing	Continuing	
Subtotal			1,042.024	145.312		155.831		147.762		0.000		147.762			

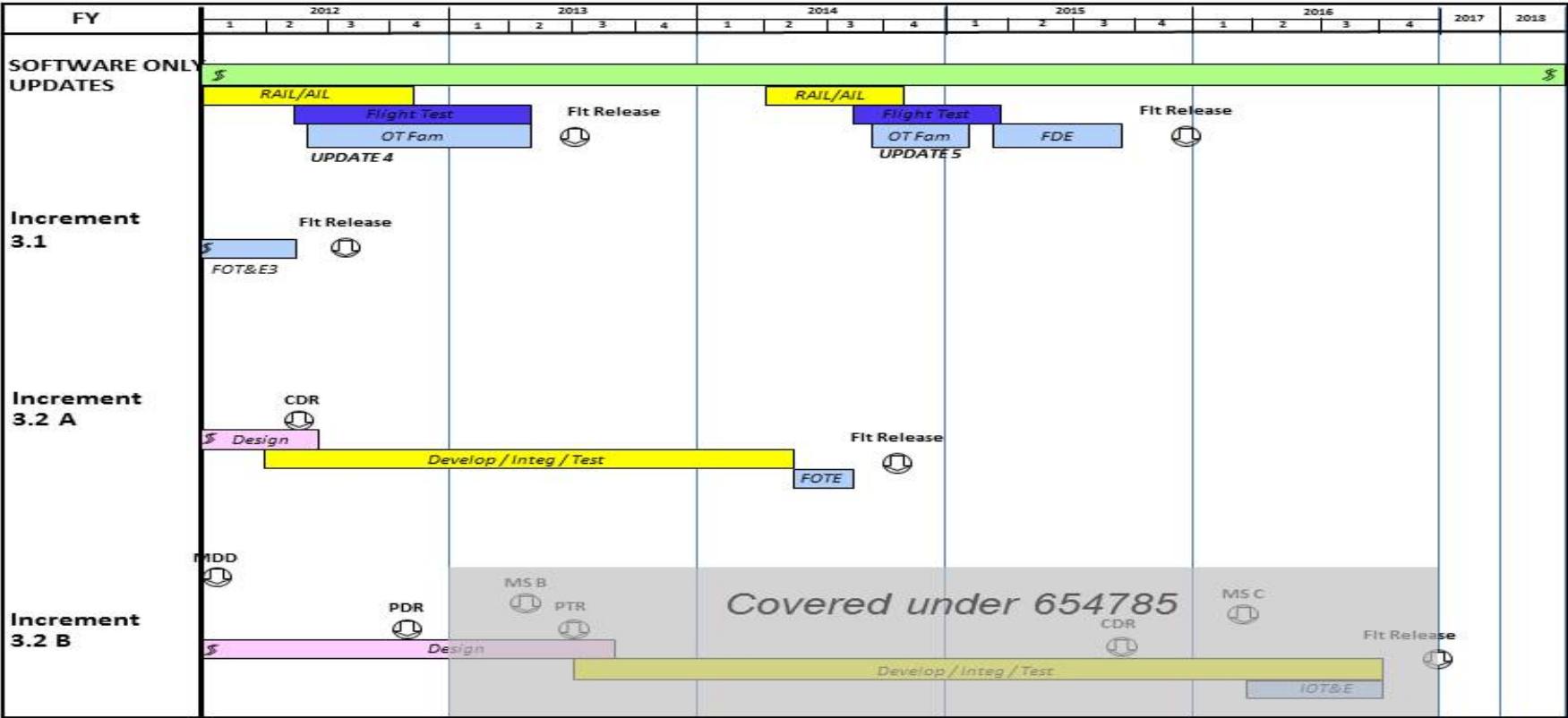
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	C/Various	Various:Various,	110.105	19.497	Oct 2011	10.817	Oct 2012	10.828	Oct 2013	-		10.828	Continuing	Continuing	
Subtotal			110.105	19.497		10.817		10.828		0.000		10.828			

	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		2,838.139	531.767	371.667	328.542	0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0207138F: F-22A Squadrons	PROJECT 674785: F-22

Baseline F-22 Program Schedule Summary



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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

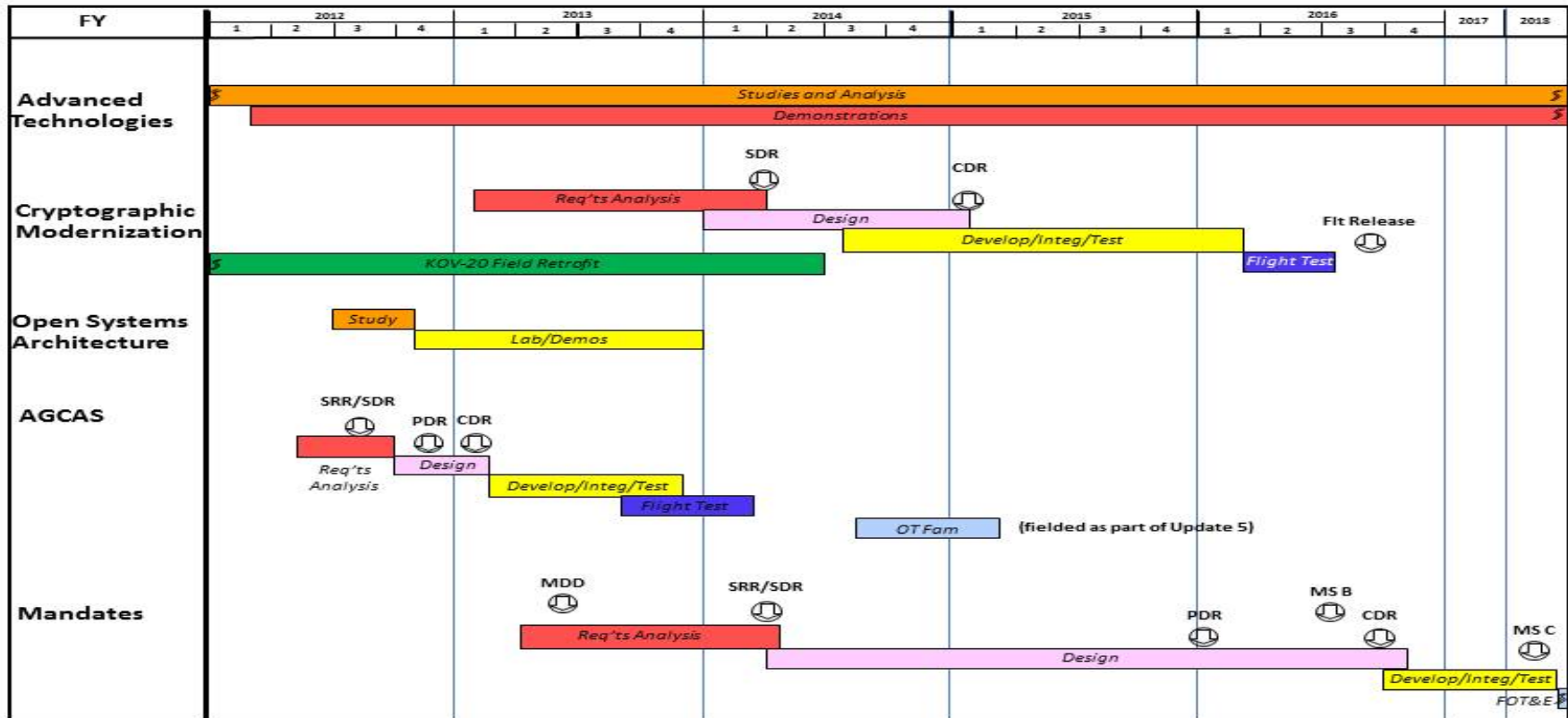
R-1 ITEM NOMENCLATURE

PE 0207138F: F-22A Squadrons

PROJECT

674785: F-22

Baseline F-22 Program Schedule Summary Cont.



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207138F: <i>F-22A Squadrons</i>	PROJECT 674785: <i>F-22</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment 3.1 Development, Integration, & Test - Actual Start: 4Q 2007	1	2012	1	2012
Increment 3.2B Material Development Decision (MDD)	1	2012	1	2012
Increment 3.2B System Requirements Review (SRR)	1	2012	1	2012
Increment 3.2B System Design Review (SDR)	1	2012	1	2012
Increment 3.2B Preliminary Design Review (PDR)	3	2012	3	2012
Increment 3.2A Critical Design Review (CDR)	2	2012	2	2012
Initiate 3.2A Development, Integration, & Test	1	2012	1	2012
Advanced Technology Development Studies & Analysis	1	2012	4	2018
Advanced Technology Development Demonstrations	1	2012	4	2018
Open Systems Architecture	2	2012	4	2013
AGCAS Requirements Analysis	2	2012	4	2012
AGCAS System Requirements Review (SRR)	3	2012	3	2012
AGCAS System Design Review (SDR)	3	2012	3	2012
Initiate AGCAS Design	4	2012	4	2012
AGCAS Preliminary Design Review (PDR)	4	2012	4	2012
AGCAS Critical Design Review (CDR)	1	2013	1	2013
AGCAS Development, Integration, & Test	1	2013	4	2013
F-22 Mandates Material Development Decision (MDD)	2	2013	2	2013
F-22 Mandates System Requirements Review (SRR)	1	2014	1	2014
F-22 Mandates System Design Review (SDR)	1	2014	1	2014
F-22 Mandates Preliminary Design Review (PDR)	1	2016	1	2016