

UNCLASSIFIED

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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	291.751	3.601	13.324	-	-	-	-	-	-	-	-	308.676
654102: <i>Joint Primary Aircraft Training System (JPATS)</i>	288.900	1.407	6.212	-	-	-	-	-	-	-	-	296.519
654376: <i>T-38 Avionics Upgrade Program (AUP)</i>	0.000	0.225	7.112	-	-	-	-	-	-	-	-	7.337
655340: <i>Advanced Trainer Replacement T-X</i>	2.851	1.969	-	-	-	-	-	-	-	-	-	4.820

Program MDAP/MAIS Code: 560

Note
 In FY 2015 PE 0604233F Specialized Undergraduate Flight Training, Project 655340, Advanced Trainer Replacement T-X, efforts were transferred to Program Element 0605223F, Advanced Pilot Training, Project 655340, Advanced Trainer Replacement T-X, to improve transparency on ACAT I acquisition programs.

In FY15 PE 0604233F Specialized Undergraduate Flight Training, Project 654376 T-38C AUP was Completed.

In FY16 PE 0604233F Specialized Undergraduate Flight Training, Project 654102 JPATS was transferred to Budget Activity 7 as it no longer met the criteria for Budget Activity 5.

A. Mission Description and Budget Item Justification
 Supports Air Education and Training Command's (AETC) implementation of Specialized Undergraduate Pilot Training (SUPT) and the Department of Defense initiative for joint pilot training.

The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34 respectively) and their associated Ground Based Training Systems (GBTS) with the T-6 and its GBTS. The Air Force is the Executive Service.

The T-38 Avionics Upgrade Program (AUP) is an integrated modernization of the T-38A and AT-38B cockpits to support mission ready fighter and bomber training.

The Advanced Trainer Replacement, T-X, will replace AETC's T-38C aircraft and associated GBTS currently used in the fighter/bomber advanced SUPT track as well as in the Introduction to Fighter Fundamentals (IFF) program. The T-38 was first introduced in 1961.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production

UNCLASSIFIED

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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>
---	--

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	3.601	13.324	9.810	-	9.810
Current President's Budget	3.601	13.324	-	-	-
Total Adjustments	-	-	-9.810	-	-9.810
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-9.810	-	-9.810

Change Summary Explanation

PE 0604233F Specialized Undergraduate Flight Training, Project 654102 JPATS was transferred to Budget Activity 7

PE 0604233F Specialized Undergraduate Flight Training, Project 654376 T-38C AUP was transferred to Budget Activity 7

All funding has been transferred to PE 0604233F Specialized Undergraduate Flight Training BA07; no funds remain in PE 0604233F Specialized Undergraduate Flight Training BA05

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>				Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
654102: <i>Joint Primary Aircraft Training System (JPATS)</i>	288.900	1.407	6.212	-	-	-	-	-	-	-	-	296.519
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note

In FY16 PE 0604233F Specialized Undergraduate Flight Training, Project 654102 JPATS was transferred to Budget Activity 07 as it no longer met the criteria for Budget Activity 05.

A. Mission Description and Budget Item Justification

The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34, respectively) and associated Ground Based Training Systems (GBTS). Additionally the US Army will be purchasing four T-6 Army Variant aircraft to replace the T-34 aircraft for the Army Test and Evaluation Command. The T-6 aircraft and GBTS are used to train entry-level student aviators in the fundamentals of flying so they can transition into advanced training tracks leading to qualification as military pilots, combat systems officers, and naval flight officers. The project develops aircraft, simulators, and other associated ground-based training devices, Training Integration Management System (TIMS), instructional courseware, and logistics support to include Diminishing Manufacturing Sources and Material Shortages (DMSMS) and development activities related to DMSMS.

This project upgrades software and threat libraries for the T25 Simulator for Electronic Combat Technology (SECT). The T25 SECT primary training mission is to train undergraduate Combat Systems Officers (CSO) in all fundamental aspects of Electronic Combat (EC), including the operation and application of a wide variety of representative EC equipment in Threat Penetration, Electronic Counter Measures (ECM), Electronic Surveillance Measurement (ESM), and Suppression of Enemy Air Defenses (SEAD) or electronic attack (EA) type operations. Although in the same project, SECT is unrelated to the JPATS program.

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

	FY 2014	FY 2015	FY 2016
Title: Joint Primary Aircraft Training System (JPATS) Studies	1.407	0.359	-
Description: JPATS studies & development efforts.			
FY 2014 Accomplishments: Continued JPATS studies and development activities include development of the T-6 Power Management Unit (PMU) software upgrade, parachute surveillance study, safe/arm handle development, and Engine Component Improvement Program (CIP) study.			
FY 2015 Plans: Continued JPATS studies and development activities including: - Development of the T-6 Power Management Unit (PMU) software upgrade - Parachute surveillance study			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015		
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016
<ul style="list-style-type: none"> - Safe/arm handle development - Engine Component Improvement Program (CIP) study. <p>FY 2016 Plans: N/A</p>				
<p>Title: T25 SECT</p> <p>Description: Funding upgrades to the Simulator for Electronic Combat Technology (SECT)</p> <p>FY 2014 Accomplishments: N/A</p> <p>FY 2015 Plans: Updated threat database definitions and threat library.</p> <p>N/A</p> <p>FY 2016 Plans: N/A</p>		-	1.118	-
<p>Title: Avionics Upgrades for FAA (Federal Aviation Administration) Compliance</p> <p>Description: Funding supports component selection, integration, test and certification of Automated Dependent Surveillance Broadcast (ADS-B Out) capability for use in T-6A aircraft and Ground Based Training System (GBTS).</p> <p>FY 2014 Accomplishments: N/A</p> <p>FY 2015 Plans: Developed and tested upgrades and enhancements to hardware and software components to include Avionics Upgrades for Federal Aviation Administration (FAA) Compliance. Supported development, integration, test and certification of the Automated Dependent Surveillance Broadcast (ADS-B Out) capability in the T-6 Training System to comply with the January 1, 2020 Federal Aviation Administration (FAA) ADS-B Out mandate.</p> <p>FY 2016 Plans: NA</p>		-	3.100	-
<p>Title: GBTS ATD IOS Joystick & Throttle</p>		-	0.451	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015	
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015
<p>Description: Joystick/Throttle ECP Project includes developing, integrating, testing, and delivering for the T-6 Aircrew Training Device (ATD) a Joystick and Throttle capability at the Instructor Operating System (IOS). This IOS Modification is only applicable to ATDs with Visual Systems (OFTs & IFTs) and will initially only be deployed to the ATDs at NAS Pensacola (AETC CSO and USN UMFO).</p> <p>FY 2015 Plans: Developed, integrated, tested, and delivered for the T-6 Aircrew Training Device (ATD) Joystick/Throttle at the Instructor Operating System (IOS). This IOS Modification is only applicable to ATDs with Visual Systems (OFTs & IFTs) and will initially only be deployed to the ATDs at NAS Pensacola (AETC CSO and USN UMFO).</p> <p>FY 2016 Plans: N/A</p>			
<p>Title: GBTS ATD DAS II Control Loading/Flight Deck Retrofit</p> <p>Description: Elements of the legacy platforms to the Electronic Control Loading System (ECLS) and Flight Deck I/O of the JPATS ATDs are obsolete and have limited supportability and must be replaced before student training is impacted. This ECP will develop and retrofit the JPATS ATD fleet to the updated Control Loading Baseline (DAS-II)</p> <p>FY 2015 Plans: Developed and retrofitted the JPATS ATD fleet with Electronic Control Loading System (ECLS) and Flight Deck I/O to update the Control Loading Baseline (DAS-II)</p> <p>FY 2016 Plans: N/A</p>		-	0.325
<p>Title: Engine Study Upgrade</p> <p>Description: Compilation of six individual studies to investigate engine life limiting issues and to evaluate and recommend potential upgrade options to increase service life and decrease life cycle costs for the T106-PW-100 engine.</p> <p>FY 2015 Plans: Accomplished a compilation of six individual studies to investigate engine life limiting issues and to evaluate and recommend potential upgrade options to increase service life and decrease life cycle costs for the T106-PW-100 engine.</p> <p>FY 2016 Plans: N/A</p>		-	0.636
<p>Title: High Cycle Fatigue Research</p>		-	0.223

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
<p>Description: Support to provide High Cycle Fatigue (HCF) and Structural Health Monitoring (SHM) research and development analysis of the T106-PW-100 gas turbine engine</p> <p>FY 2015 Plans: Provided High Cycle Fatigue (HCF) and Structural Health Monitoring (SHM) research and development analysis of the T106-PW-100 gas turbine engine</p> <p>FY 2016 Plans: N/A</p>			
Accomplishments/Planned Programs Subtotals	1.407	6.212	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• APAF: BA06: Line Item # 000999: <i>Initial Spares/Repair Parts</i>	0.538	0.948	0.910	-	0.910	2.556	2.605	2.653	2.716	Continuing	Continuing
• APAF: BA05: Line Item # JPAT00: <i>T-6</i>	5.392	14.486	17.968	-	17.968	26.300	25.844	26.245	26.689	Continuing	Continuing
• APN: BA03: Line Item # 033900: <i>JPATS</i>	249.080	-	8.914	-	8.914	5.913	-	-	-	-	2,036.802
• APN: BA05: Line Item # 057100: <i>JPATS Series</i>	1.576	1.085	7.594	-	7.594	14.439	22.200	27.613	24.652	Continuing	Continuing
• APN: BA06: Line Item # 060500: <i>Spares and Repair Parts</i>	3.046	0.011	0.264	-	0.264	0.099	0.102	-	-	Continuing	Continuing
• APA: BA01: Line Item # A11300: <i>Utility F/W Aircraft</i>	12.617	-	-	-	-	-	-	-	-	-	29.919

Remarks

D. Acquisition Strategy
Avionics Upgrades for FAA Compliance are outside of the JPATS Major Defense Acquisition Program and will be established as a new Joint Acquisition Program with the Navy. For the JPATS Avionics Upgrades for FAA Compliance effort, an competitive award is anticipated to be the strategy for the T-6A air vehicles due to their federated design.

The SECT upgrade effort is an Engineering Change Proposal (ECP) to the competitively awarded Firm Fixed Price Contractor Logistics Support (CLS) contract.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>

E. Performance Metrics

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

UNCLASSIFIED

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

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>
--	--	--

Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JPATS Engine CIP	PO	Arnold Engineering Development Center : Arnold AFB, TN	1.157	0.521	Jun 2015	0.359	Sep 2015	-		-		-	-	2.037	5.676
JPATS Engine Study Upgrade	C/CPFF	BDC : Various,	0.000	-		0.636	Jan 2015	-		-		-	-	0.636	-
JPATS Engine High Cycle Fatigue	C/CPFF	Universal Technology Corp : Dayton, OH	0.194	-	Apr 2014	0.223	Jan 2015	-		-		-	-	0.417	0.233
JPATS PMU	Various	Various : Various,	0.082	-	Dec 2013	-		-		-		-	-	0.082	TBD
GBTS ATD IOS Joystick & Throttle	C/FFP	NAS Pensacola : Pensacola, FL	0.000	-		0.451	Feb 2015	-		-		-	-	0.451	0.706
GBTS ATD DAS II Control Loading/Flight Deck Retrofit	C/FFP	Various : Various,	0.000	-		0.325	Mar 2015	-		-		-	-	0.325	0.325
SECT Upgrade	C/FFP	BowHead Systems Management, Inc. : King George, VA	2.395	0.886		1.118		-		-		-	-	4.399	-
Avionics Upgrades for FAA Compliance	C/FFP	TBD : TBD,	0.000	-		3.100	Aug 2015	-		-		-	-	3.100	TBD
JPATS Completed Contracts	C/Various	Various : Various,	285.072	-		-		-		-		-	-	285.072	288.900
Subtotal			288.900	1.407		6.212		-		-		-	-	296.519	-

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

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
JPATS Parachute Surveillance System Development	████████████████████																											
JPATS Engine Studies	████████████████████				████████████████████																							
JPATS Avionics Upgrades for FAA Compliance									████████████████████																			
JPATS Continuing USN / USA T-6 Deliveries	████████████████████				████████████████████																							
JPATS Continuing USN T-6B Aircrew Training Device (ATD) Deliveries	██████																											
JPATS US Army Variant	████████████████████																											
JPATS GBTS ATD IOS Joystick & Throttle					████████████████████																							
JPATS GBTS ATD DAS II Control Loading/ Flight Deck Retrofit					████████████████████				████████████████████																			
JPATS Engine Upgrade Study					████████████████████				████████████████████																			
JPATS High Cycle Fatigue Research	████████████████████				████████████████████																							
SECT Update Software and Threat Library (FY2015/FY2016)					████████████████████																							

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654102 / <i>Joint Primary Aircraft Training System (JPATS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JPATS Parachute Surveillance System Development	1	2014	4	2015
JPATS Engine Studies	1	2014	1	2017
JPATS Avionics Upgrades for FAA Compliance	4	2016	4	2017
JPATS Continuing USN / USA T-6 Deliveries	1	2014	2	2016
JPATS Continuing USN T-6B Aircrew Training Device (ATD) Deliveries	1	2014	2	2014
JPATS US Army Variant	1	2014	3	2015
JPATS GBTS ATD IOS Joystick & Throttle	1	2015	2	2016
JPATS GBTS ATD DAS II Control Loading/Flight Deck Retrofit	2	2015	3	2017
JPATS Engine Upgrade Study	1	2015	1	2017
JPATS High Cycle Fatigue Research	1	2014	1	2017
SECT Update Software and Threat Library (FY2015/FY2016)	2	2015	3	2016

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>				Project (Number/Name) 654376 / <i>T-38 Avionics Upgrade Program (AUP)</i>			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
654376: <i>T-38 Avionics Upgrade Program (AUP)</i>	-	0.225	7.112	-	-	-	-	-	-	-	-	7.337
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY15 PE 0604233F Specialized Undergraduate Flight Training, Project 654376 T-38C AUP was Completed.

A. Mission Description and Budget Item Justification

The T-38C Avionics Upgrade Program (AUP) installed a "Glass Cockpit" into the T-38 jet trainer and re-designated the upgraded aircraft from the T-38A/B to the T-38C model. The AUP modification, which utilized a Commercial Off-The-Shelf (COTS)/Non-Developmental Item (NDI) approach to acquire kits, is currently in sustainment phase under the T-38C Avionics Post Production Support acquisition program. The avionics system requires regular block upgrades to keep the system current and airworthy. Block upgrades incorporate software and/or hardware improvements to comply with new requirements mandated by Department of Defense, Federal Aviation Administration or National Airspace System (DoD/FAA/NAS) and to address flight safety issues. The block upgrades support the T-38C aircraft and Aircrew Training Devices (ATD). This effort also includes development of the aircraft Mission Planning System (MPS) support to obtain Joint Mission Planning System (JMPS) currency and certification for T-38C flight operations. The JMPS requirements are levied from outside the T-38 program office and may or may not correlate with block upgrade requirements. Additionally, engineering services, studies, analysis and support are required to determine the feasibility of integrating changes into the system and making informed business decisions related to Diminishing Manufacturing Sources and Material Shortages (DMSMS) and other lifecycle related concerns. FY2015 also includes an avionics obsolescence remediation effort to qualify updated instruments in the T-38C.

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

	FY 2014	FY 2015	FY 2016
Title: T-38C Avionics Post Production Support (APPS)	0.225	7.112	-
Description: T-38C APPS hardware and software block upgrades, Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) compliance and Joint Mission Planning System (JMPS) support.			
FY 2014 Accomplishments: Finalized requirement analysis for Block 10 Finalized JMPS mission planning software upgrade requirements			
FY 2015 Plans: Completed initial work on development solutions for T-38C avionics component obsolescence including a replacement Active Matrix Liquid Crystal Display (AMLCD) for the Electronic Engine Heads-Up Display, Up-Front Control panel and Mission Display Processor.			
FY 2016 Plans:			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654376 / <i>T-38 Avionics Upgrade Program (AUP)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
N/A			
Accomplishments/Planned Programs Subtotals	0.225	7.112	-

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

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• APAF: BA05: Line Item # T03800: T-38	19.334	34.845	38.974	-	38.974	37.562	25.409	25.824	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Avionics Post Production Support (APPS) acquisition program awarded a contract in FY2012 through a competitive bid, C type, Firm Fixed Price contract with a period of performance from April 2012 through March 2017. The block 10 software update will be a Firm Fixed Price effort based on AETC operational requirements. Unknown/unforeseen requirements will be negotiated and separately priced by the government as an out-of-cycle update/modification as provisioned within the contract. Component Diminishing Manufacturing Sources and Material Shortages are mitigated incrementally and prioritized based on funding availability and impact to aircraft airworthiness.

The Avionics Component Integration (AvCI) contract is currently in the source selection process. The current contract strategy is projected to be a Type D IDIQ contract competitively awarded to address T-38C avionics system obsolescence issues and provide CLS follow-on support.

E. Performance Metrics

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

UNCLASSIFIED

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

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654376 / <i>T-38 Avionics Upgrade Program (AUP)</i>
--	--	---

Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
APPS - T-38 Avionics Upgrade Program (AUP)	C/FFP	Various : ,	0.000	0.120	Jul 2014	-		-		-		-	-	0.120	-
APPS - Solutions for avionics component obsolescence	C/FFP	TBD : ,	0.000	-		7.007	Jul 2015	-		-		-	-	7.007	-
Subtotal			0.000	0.120		7.007		-		-		-	-	7.127	-

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

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

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Travel	C/Various	Various : ,	0.000	0.055	Feb 2014	0.055	Oct 2014	-		-		-	-	0.110	-
PMA Contract Support	C/FFP	Not specified. : ,	0.000	0.050	Jan 2014	0.050	Dec 2014	-		-		-	-	0.100	-
Subtotal			0.000	0.105		0.105		-		-		-	-	0.210	-

Remarks
T-38 SPO and program A&AS support.

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654376 / <i>T-38 Avionics Upgrade Program (AUP)</i>

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

APPS Solutions for T-38C avionics component obsolescence

[REDACTED]																											
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 654376 / <i>T-38 Avionics Upgrade Program (AUP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
APPS Solutions for T-38C avionics component obsolescence	4	2015	1	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>				Project (Number/Name) 655340 / <i>Advanced Trainer Replacement T-X</i>			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
655340: <i>Advanced Trainer Replacement T-X</i>	2.851	1.969	-	-	-	-	-	-	-	-	-	4.820
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2015, Project 655340, Advanced Trainer Replacement T-X, efforts were transferred to Program 0605223F, Advanced Pilot Training, Project 655340, Advanced Trainer Replacement T-X, in order to comply with OSD direction that Major Defense Acquisition Programs (MDAP) be in separately identifiable program elements.

A. Mission Description and Budget Item Justification

The Advanced Trainer Replacement, T-X, will replace AETC's T-38C aircraft and associated Ground Based Training System (GBTS) currently used in the fighter/bomber advanced Specialized Undergraduate Pilot Training (SUPT) track as well as in the Introduction to Fighter Fundamentals (IFF) program. The T-38C was first introduced in 1961.

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

	FY 2014	FY 2015	FY 2016
Title: Advanced Pilot Training (APT) Family of Systems (FoS)	1.969	-	-
Description: Conduct studies, analysis and acquisition activities to reduce risk in support of technology, engineering and manufacturing development. Includes APT PMA costs such as travel, Other Govt Costs (OGC) and Advisory and Assistance Services (A&AS).			
FY 2014 Accomplishments: Conducted studies, analysis and acquisition activities to reduce risk in support of technology, engineering and manufacturing development. Funds APT PMA costs such as travel, Other Govt Costs (OGC) and Advisory and Assistance Services (A&AS).			
FY 2015 Plans: N/A			
FY 2016 Plans: N/A			
Accomplishments/Planned Programs Subtotals	1.969	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 655340 / <i>Advanced Trainer Replacement T-X</i>

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

<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE: BA05: PE 0605223F: <i>Advanced Pilot Training</i>	-	8.201	11.920	-	11.920	71.685	166.595	408.618	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

A full and open competitive source selection is anticipated with a specific acquisition strategy to be developed after acquisition milestone entry point determination.

E. Performance Metrics

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

UNCLASSIFIED

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

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 655340 / <i>Advanced Trainer Replacement T-X</i>
--	--	--

Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Advanced Pilot Training (APT) Family of Systems (FoS) - Studies and Analyses	Various	Various : Various,	0.971	-		-		-		-		-	-	0.971	-
Subtotal			0.971	-		-		-		-		-	-	0.971	-

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

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

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Advanced Pilot Training (APT) Family of Systems (FoS) - PMA - Contractor Services	C/FFP	AFRLCMC : Dayton, OH	1.481	0.950	Mar 2014	-		-		-		-	-	2.431	-
Training (APT) Family of Systems (FoS) - PMA - Government Costs	C/Various	AFRLCMC : Dayton, OH	0.399	1.019		-		-		-		-	-	1.418	-
Subtotal			1.880	1.969		-		-		-		-	-	3.849	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force								Date: February 2015			
Appropriation/Budget Activity 3600 / 5			R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>			Project (Number/Name) 655340 / <i>Advanced Trainer Replacement T-X</i>					
	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	2.851	1.969	-	-	-	-	-	4.820	-		

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 655340 / <i>Advanced Trainer Replacement T-X</i>

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Capability Development Document	██████████																											
Analysis of Alternatives Update Support	██████████																											
USAF Source Selection Tool Development	██████████																											
AFIT Source Selection Tool Development	██████████																											
RAND Study	██████████																											
Live / Virtual / Constructive Training Enhancement Study	██████████																											

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604233F / <i>Specialized Undergraduate Flight Training</i>	Project (Number/Name) 655340 / <i>Advanced Trainer Replacement T-X</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Capability Development Document	1	2014	4	2014
Analysis of Alternatives Update Support	1	2014	2	2014
USAFA Source Selection Tool Development	1	2014	2	2014
AFIT Source Selection Tool Development	1	2014	2	2014
RAND Study	1	2014	2	2014
Live / Virtual / Constructive Training Enhancement Study	1	2014	4	2014