Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army											Date: February 2018	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603003A *I Aviation Advanced Technology*							
COST ($ in Millions)	**Prior Years**	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
Total Program Element	-	111.654	160.746	124.958	-	124.958	111.607	113.305	114.917	115.413	0.000	852.600
313: *Adv Rotarywing Veh Tech*	-	80.834	147.882	113.815	-	113.815	86.849	62.581	63.806	65.082	0.000	620.849
436: *Rotarywing MEP Integ*	-	8.063	6.767	7.424	-	7.424	20.964	46.855	47.162	46.303	0.000	183.538
447: *ACFT Demo Engines*	-	4.757	6.097	3.719	-	3.719	3.794	3.869	3.949	4.028	0.000	30.213
BA7: *AVIATION ADVANCED TECHNOLOGY INITIATIVES (CA)*	-	18.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.000

A. Mission Description and Budget Item Justification

This Program Element (PE) matures and demonstrates manned and unmanned air vehicle technologies to enable Army aviation modernization. Within this PE, aviation technologies are advanced and integrated into realistic and robust demonstrations. Project 313 matures, demonstrates and integrates enabling component, subsystems and systems in the following areas: rotors and, structures. Project 436 matures, integrates and demonstrates air launched weapons systems, mission equipment packages to enable control of unmanned systems and advanced teaming capabilities. Project 447 matures and demonstrates affordable and efficient engines and drive trains.

Work in this PE contributes to the Army Science and Technology (S&T) Air Systems portfolio and is related to and fully coordinated with PE 0602211A (Aviation Technology), PE 0603313A (Missile and Rocket Advanced Technology), PE 0603710A (Night Vision Advanced technology), and PE 0603270A (Electronic Warfare Technology).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering S&T focus areas and the Army Modernization Strategy. Work in this PE is performed by the Army Research, Development, and Engineering Command (RDECOM).

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army	Date: February 2018
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603003A *I Aviation Advanced Technology*

B. Program Change Summary ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	94.280	160.746	127.723	-	127.723
Current President's Budget	111.654	160.746	124.958	-	124.958
Total Adjustments	17.374	0.000	-2.765	-	-2.765
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	18.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.000	-			
• SBIR/STTR Transfer	-3.581	-			
• Adjustments to Budget Years	-	-	-2.765	-	-2.765
• FFRDC	-0.045	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2017	FY 2018
Project: BA7: *AVIATION ADVANCED TECHNOLOGY INITIATIVES (CA)*		
Congressional Add: *Future Vertical Lift*	11.000	-
Congressional Add: *Ballistic seating system*	7.000	-
Congressional Add Subtotals for Project: BA7	18.000	-
Congressional Add Totals for all Projects	18.000	-

Change Summary Explanation

FY17 Congressional increase in project BA7 Aviation Advanced Technology Initiatives for ballistic seating system and Future Vertical Lift (FVL)

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603003A / *Aviation Advanced Technology*	Project (Number/Name) 313 / *Adv Rotarywing Veh Tech*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
313: *Adv Rotarywing Veh Tech*	-	80.834	147.882	113.815	-	113.815	86.849	62.581	63.806	65.082	0.000	620.849

A. Mission Description and Budget Item Justification

This Project matures, demonstrates and integrates components, subsystems and systems for vertical lift and unmanned air systems that provide improved aircraft and occupant survivability, reduced maintenance and sustainment costs, and greater performance through improved rotors, drives, vehicle management systems and platform design and structures. Systems demonstrated include rotors and robust airframe structures. A major effort in this project is the Joint Multi-Role (JMR) Technology Demonstrator (TD) in support of the Future Vertical Lift (FVL) family of aircraft.

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology focus areas and the Army Modernization Strategy.

Work in this project is coordinated with Program Executive Office Aviation (PEO Aviation) and PEO Intelligence, Electronic Warfare, and Sensors (PEO IEW&S).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Platform Design & Structures Systems	56.342	120.355	83.569
Description: Provide demonstration of Future Vertical Lift (FVL) platform configurations that address multi domain battle capability needs. Determine optimum vehicle attributes that meet future force capability needs for increased system speed, range, payload, and reduced operating costs, to inform and reduce future aviation materiel acquisitions. Flight demonstrate operational capabilities of technology demonstrators.			
FY 2018 Plans: Continue flight demonstrations of two technology demonstrator aircraft to collect data and assess the capabilities of advanced rotary-wing configurations (an advanced tilt rotor and lift-offset, co-axial helicopter with a pusher prop) and enabling component technologies. Begin design and build of a test stand and test articles (hardware and software) for a Single Rotor Tiedown (SRT) test of the two-speed gearbox, Independent Blade Control (IBC) and rotors critical to realizing the performance capabilities of an Optimum Speed Tilt Rotor (OSTR). Complete analysis and modeling of interactional aerodynamics and piloted simulations of a Compound Co-Axial Helicopter (CCH) configuration. Mission Systems Architecture Demonstration: Continued development JCA v2.0. Release of JCA v2.0, including a functional model, data model, supporting documentation and tools. Continue development of model-based engineering processes and tools for the development and analysis of mission systems architectures as part of Development, Architecture Centric Virtual Integration Process (ACVIP). Release of a Broad Area Announcement (BAA) for the Mission System Architecture Capstone Demonstration, seeking the development of a mission systems architecture from a representative architecture specification using JCA, model-based engineering tools, virtual integration methods and open systems			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603003A / *Aviation Advanced Technology*	**Project (Number/Name)** 313 / *Adv Rotarywing Veh Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
architecture. Completion of source selection activities for the Capstone Demonstration and agreement awards to multiple vendors. Begin Mission System Architecture Capstone Demonstration. ***FY 2019 Plans:*** Will mature and demonstrate integrated, fastenerless advanced structural assemblies that enable future vertical lift platforms with crashworthy, damage tolerant, lightweight and sustainable solutions. Will continue flight demonstrations of two Joint Multi-Role (JMR) Technology Demonstrator (TD) aircraft to collect data and assess the capabilities of advanced rotary-wing configurations (an advanced tilt rotor and lift-offset, co-axial helicopter with a pusher prop) and enabling component technologies. Will demonstrate advanced flight control technologies. Will demonstrate on a ground test stand a Single Rotor Tiedown (SRT) test of the two-speed gearbox, Independent Blade Control (IBC) and rotors critical to realizing the performance capabilities of an Optimum Speed Tilt Rotor (OSTR). Will finalize development a mission systems architecture from a representative architecture specification using JCA, model-based engineering tools, virtual integration methods and open systems architecture in a Mission Systems Architecture Capstone Demonstration. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY19 was decreased from FY18 due to completion of expanded scope JMR TD efforts related to the development of advanced flight controls, two speed gearbox and individual blade control technology.			
Title: Rotors & Vehicle Management Systems ***Description:*** This effort demonstrates the performance benefits of advanced rotors through the assessment of alternative designs aimed to satisfy future force capability needs for increased system durability, speed, range and payload. This effort also integrates advanced flight controls with real-time aircraft state information into vehicle management systems to enable safe, low-effort maneuvering and real-time adaptation to aircraft state changes (degradation, damage, mission, etc.) ***FY 2018 Plans:*** Complete detailed design of a new Research Flight Control Computer Assembly for the modernized RASCAL and conduct a thorough government evaluation through a comprehensive technical review. ***FY 2019 Plans:*** Will conduct trade studies to identify reliable technologies that enable highly efficient aircraft performance throughout the flight envelope. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decreased funding from FY2018 to FY2019 to focus on Future Vertical Lift. Funding redirected to other high priority areas for Future Vertical Lift.	3.941	3.172	1.342
Title: Rotorcraft Drive Systems	0.974	2.262	1.077

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603003A / *Aviation Advanced Technology*	**Project (Number/Name)** 313 / *Adv Rotarywing Veh Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Description: This effort demonstrates advanced rotorcraft drive technologies with the potential to: increase the horsepower-to-weight ratio; reduce drive system noise; reduce production, operating and support costs; and provide automatic component impending failure detection. The drive system demonstrators for this effort will be applicable to Future Vertical Lift (FVL) platforms. ***FY 2018 Plans:*** Complete design of advanced multi-speed drive train for advanced aircraft configurations under the Next Generation Rotorcraft Transmission program and initiate fabrication of demonstrator hardware. ***FY 2019 Plans:*** Will continue fabrication of advanced multi-speed drive train hardware and initiate development testing of demonstrator hardware under the Next Generation Rotorcraft Transmission program to enable greater aircraft speed/range in support of Future Vertical Lift. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decreased funding from FY2018 to FY2019 de-scoped efforts in support of CH-47, Chinook. Remaining effort focused on FVL. Funding redirected to other high priority areas for Future Vertical Lift.			
Title: Survivability for Degraded Visual Environment (DVE) Operations ***Description:*** Develop and mature advanced sensor cueing and flight controls to provide ability to maintain terrain and obstacle situational awareness during all DVEs both aircraft induced (brown-out & white-out) and environmentally induced (fog, rain, snow etc.) Flight testing on fleet aircraft is an integral component of the demonstration. Work in this area is being done in coordination with efforts at United States (U.S.) Army Communications-Electronics Research, Development, and Engineering Center (CERDEC), Program Element (PE) 0603710A, Night Vision Advanced Technology. The program presents an opportunity to North Atlantic Treaty Organization (NATO) nations, global industry, and academia to participate with their own assets in order to foster information exchange and collaboration. ***FY 2018 Plans:*** Continue to refine Integrated Cueing Environment (ICE) design and to integrate new technology, including spatial aural cues and experiment in the flight environment. Conduct limited flight test of real time enroute path guidance from sensor data using Obstacle Field Navigation (OFN) algorithms. ***FY 2019 Plans:*** Will conduct multiple research focused trials and demonstrations while seeking opportunities to spin off and transition research to programs that will provide capability to the warfighter. Will physically integrate sensor fusion engine onto test aircraft and conduct engineering flight test of integrated system. Will implement approaches for multi ship networking and operations in DVE.	7.214	9.000	17.005

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603003A / *Aviation Advanced Technology*	**Project (Number/Name)** 313 / *Adv Rotarywing Veh Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Will conduct capstone demonstration in government SIL that validates optimal cueing symbology, sensor driven guidance, flight control configuration, and optimum presentation of sensor data through augmented and virtual reality. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding increase from FY18 to FY 19 to support DVE demonstration.			
Title: Aircraft & Occupant Survivability Systems ***Description:*** This effort increases rotorcraft survivability by reducing platform signatures, providing the means to more efficiently counter enemy detection and tracking systems, and also increases protection to the aircraft and aircrew against ballistic munitions, crash landings, and post-crash fire events. This effort enhances air crew situational awareness, allowing manned/ unmanned aircraft to avoid enemy air threats. ***FY 2018 Plans:*** Continue maturation of individual technologies that comprise the Aircraft and Aircrew Protection solution. Establish a virtual prototype of the integrated Aircraft and Aircrew Protection solution and initiate incremental verification testing. Refine aircraft integration and system level demonstration strategies. Continue the demonstration of efficient, low drag rotor and hub designs and technologies to allow for high speed flight. Mature rotorcraft threat protection capabilities including self-protection and engagement technologies. ***FY 2019 Plans:*** Will develop aircraft survivability correlator algorithms that take into account aircraft signatures, vulnerable areas, maneuverability, terrain, threat understanding, and available countermeasures to provide an appropriate response for an increased level of threat aircraft protection. Will develop ownship and team based survivability behaviors and continue integration of rotorcraft threat protection technologies. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease investment in integration and demonstration of novel countermeasures.	8.724	9.196	7.822
Title: Next Generation Tactical UAS Technology Demonstration (NGTUAS) ***Description:*** Develop and demonstrate transformational air vehicle technologies that overcome key barriers to meet the Army?s future Unmanned Aircraft System (UAS) performance, survivability, and reliability requirements and operational capabilities. Work in this area is being done in coordination with efforts at AMRDEC Program Element (PE) 0602211A, Platform Design & Structures Technologies. ***FY 2019 Plans:***	-	-	3.000

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603003A / *Aviation Advanced Technology*	**Project (Number/Name)** 313 / *Adv Rotarywing Veh Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Will refine air vehicle technologies maturation, integration and system level test and demonstration strategies. Will validate new design and assessment methodologies relevant to UAS-scaled platforms through demonstration. Will develop an informed Model Performance Specifications (MPS) and provide quantifiable metrics and key attributes for the NGTUAS. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** New start in FY19 for Next Generation Tactical UAS Technology Demonstration (NGTUAS)			
Title: Maintainability & Sustainability Systems ***Description:*** Enables highly reliable, low maintenance platforms that can survive un-sustained in the multi-domain battle space for extended periods. Integrates and demonstrates technology solutions comprising aircraft health state awareness, data driven sustainment approaches, and operationally durable designs with minimal operating and sustainment costs. ***FY 2018 Plans:*** Initiate effort to develop an embedded and networked rotorcraft sustainment capability. Mature integrated health management technologies in a SIL environment to demonstrate: an aircraft level sustainment network; embedded health assessment, adaptive aircraft control inputs, and component self-assessment; usage tracking; and embedded history data interfaces with mission planning and enterprise logistics systems. Identify and select hardware and software for integration into a sustainment rig and/or SIL test. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease in funding from FY2018 to FY2019: In FY19, funding redirected to other high priority areas for Future Vertical Lift.	3.639	3.897	-
Accomplishments/Planned Programs Subtotals	80.834	147.882	113.815

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603003A / *Aviation Advanced Technology*	Project (Number/Name) 436 / *Rotarywing MEP Integ*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
436: *Rotarywing MEP Integ*	-	8.063	6.767	7.424	-	7.424	20.964	46.855	47.162	46.303	0.000	183.538

A. Mission Description and Budget Item Justification

This Project matures and validates man-machine integration and mission equipment software and hardware technologies for unmanned and optionally manned aircraft systems and integrated threat protection systems. Efforts focus on artificial intelligence, intelligent agents, cognitive decision aiding, sensors, avionics, communications, and pilot vehicle interfaces. This Project improves the overall mission execution by demonstrating manned and unmanned system teaming, enhanced aircraft pilotage capability, improved crew workload distribution, and new capabilities for both manned and unmanned aircraft. This Project supports Army transformation by providing mature technology to greatly expand the capabilities of unmanned aircraft, in current operating roles and future unmanned wingman roles.

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Unmanned and Optionally Manned Systems	8.063	6.767	5.857
Description: Mature and apply tactical behavior algorithms and safe-flight technologies to enable unmanned and optionally manned aircraft to maintain safe, responsive, flexible, and tactical formation flight with manned helicopters for unmanned wingman applications in re-supply, reconnaissance, surveillance and attack missions. Develop, mature, apply, and integrate advanced decision aiding, autonomy, and human-machine interface technologies to enable the helicopter flight crew to make full use of the capabilities of an unmanned aerial system (UAS) without requiring continuous attention. Efforts include development of intelligent algorithms that aid decisions and actions in order to increase situation awareness, maximize use of on-board and off-board sensors, efficiently manage a team of manned and unmanned vehicles and their mission systems, and develop and execute effective and appropriate offensive and defensive responses.			
FY 2018 Plans: Integrate and demonstrate third party vendor pilot aiding software and advanced human machine interface technologies in simulations to inform cockpit development programs for both legacy fleet aircraft upgrades and future aircraft procurements. Demonstrate software integration within an open systems, modular architecture based system.			
FY 2019 Plans: Will continue the development, integration and demonstration of third party vendor software and advanced human machine interface technologies in simulations to enable increased manned and unmanned teaming capabilities and to inform crew station			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603003A / *Aviation Advanced Technology*	**Project (Number/Name)** 436 / *Rotarywing MEP Integ*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
development programs for both legacy fleet aircraft upgrades and future aircraft procurements. Will continue to demonstrate software and hardware integration within an open systems, modular architecture based system. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Funding in FY19 will be decreased to other high priority areas for Future Vertical Lift.			
Title: Advanced Teaming ***Description:*** Develop and demonstrate teaming behaviors and autonomous decision making for mixed platform formations in combined arms operations. Focus areas include: resilient autonomous algorithms; self-organizing unmanned formations; distributed command and control; and navigation. ***FY 2019 Plans:*** Develop and mature teaming algorithm development focused on resupply, reconnaissance and surveillance mission areas. Integrate and demonstrate sensor and processing technology to support teaming behavior for heterogeneous platform formations. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** This is a new start effort in FY19.	-	-	1.567
Accomplishments/Planned Programs Subtotals	8.063	6.767	7.424

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603003A / *Aviation Advanced Technology*	Project (Number/Name) 447 / *ACFT Demo Engines*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
447: *ACFT Demo Engines*	-	4.757	6.097	3.719	-	3.719	3.794	3.869	3.949	4.028	0.000	30.213

A. Mission Description and Budget Item Justification

This Project matures and demonstrates power system technologies through design, fabrication, and evaluation of advanced engine components in order to improve the performance of turbine engines and drive systems for vertical lift aircraft and Unmanned Aerial Systems (UAS) vehicles This Project supports Army modernization by demonstrating mature technologies for lighter turbine engines and drives that provide increased power, increased fuel efficiency, improved sustainability and reduced maintenance. These advanced engine designs and drives will significantly improve the overall aircraft performance characteristics and reduce the logistical footprint of Army Aircraft.

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Alternative Concept Engine (ACE)	4.757	6.097	3.719
Description: This effort demonstrates alternative, adaptive, and intelligent engine technologies to provide improved / mission-optimized performance, readiness, and affordability across an expanding engine envelope for increased operational capability for Army Aviation manned and unmanned platforms. The alternative concept engine technology demonstrations planned for this effort are applicable to current and future platforms. Work in this project is coordinated with efforts in PE 0602211A, Project 47A. ***FY 2018 Plans:*** Complete detailed design and initiate fabrication of innovative/adaptive engine component technologies such as variable speed power turbine. Perform component design integration efforts in preparation for full system demonstration. ***FY 2019 Plans:*** Will continue fabrication and initiate component test of innovative/adaptive engine component technologies such as variable speed power turbine. Will continue component design integration efforts and perform fabrication of hardware for full system demonstration to enable greater aircraft performance and engine durability in support of Future Vertical Lift. ***FY 2018 to FY 2019 Increase/Decrease Statement:*** In FY19, Funding redirected to other high priority areas for Future Vertical Lift.			
Accomplishments/Planned Programs Subtotals	4.757	6.097	3.719

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603003A / *Aviation Advanced Technology*	**Project (Number/Name)** 447 / *ACFT Demo Engines*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603003A / *Aviation Advanced Technology*	Project (Number/Name) BA7 / *AVIATION ADVANCED TECHNOLOGY INITIATIVES (CA)*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
BA7: *AVIATION ADVANCED TECHNOLOGY INITIATIVES (CA)*	-	18.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.000

Note

Congressional increases for Ballistic seating system ($7M); Future Vertical Lift ($11M)

A. Mission Description and Budget Item Justification

Congressional Interest Item funding for Aviation advanced technology development.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018
Congressional Add: Future Vertical Lift ***FY 2017 Accomplishments:*** N/A	11.000	-
Congressional Add: Ballistic seating system ***FY 2017 Accomplishments:*** N/A	7.000	-
Congressional Adds Subtotals	18.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A