

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605606A / Aircraft Certification							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	4.612	3.936	3.461	-	3.461	2.738	2.728	2.717	2.704	Continuing	Continuing
092: Aircraft Certification	-	4.612	3.936	3.461	-	3.461	2.738	2.728	2.717	2.704	Continuing	Continuing

## A. Mission Description and Budget Item Justification

The Airworthiness Certification Program Element (PE) ensures safe flight operation of Army aircraft and aviation systems by means of technical design approval and qualification of systems to appropriate airworthiness standards. This PE provides independent airworthiness qualification for all assigned developmental and in-production Army aircraft, both manned and unmanned, as required by Army Regulation (AR) 70-62 ("Airworthiness of Aircraft Systems"), and is essential for ensuring the safe operation of Army aircraft. This PE performs engineering functions (design, analysis, testing, demonstrations, and system specification compliance) essential for certifying the airworthiness of assigned Army aircraft, to include performing safety-of-flight investigations/assessments, evaluating system risks, developing Airworthiness Impact Statements, developing Airworthiness Releases, and evaluating Safety of Flight Messages and Aviation Safety Action Messages for new and upgraded aircraft systems. This PE also provides: management/execution of the Army's Aeronautical Design Standards (ADS) program; management/execution of airworthiness approval for new systems and materiel changes for all assigned Army aircraft systems; airworthiness engineering support for major development/modification and future systems/subsystems requirements of the Program Executive Officer for Aviation (PEO AVN) and U.S. Army Special Operations Command's Technology Applications Program Office (TAPO); and management of test and evaluation processes in support of the airworthiness qualification process.

The Airworthiness Certification PE also performs general research and development in support of aircraft qualification and overarching airworthiness projects that involve multiple aircraft models. Ongoing programs requiring airworthiness qualification include the following PEO Aviation and TAPO Future Force systems: Longbow Apache E-model; Chinook F-model; Blackhawk M-model; Special Operations MH-47G and MH-60M; Light Utility Helicopter; Gray Eagle unmanned aircraft system (UAS); Enhanced Multi-sensor Airborne Reconnaissance and Sensor System (EMARSS); and modified Shadow UAS. Additionally, the Airworthiness Certification PE supports the application of other critical aviation subsystems onto Army aircraft, including the following Aircraft Survivability Equipment: Advanced Threat Infrared Countermeasures (ATIRCM), Common Missile Warning System (CMWS), Aviation Mission Equipment (e.g. advanced multiband avionics and Tactical Radio Systems and digital data links), Common Sensor (electro-optical multi-spectrum visual sensor), and Blue Force Tracker.

Finally, this PE also provides: airworthiness certification for military-use civil derivative aircraft technical qualification through the Federal Aviation Administration's Military Certification Office; development of airworthiness procedures, specifications, critical standards, and other design and qualification documents; participation in senior leadership mandated airworthiness tri-service activities (e.g. National Airworthiness Council, Joint Aeronautical Commanders Group) and international airworthiness related activities mandated by treaty (e.g. Flight Into Non-segregated Airspace (FINAS)); and limited early airworthiness involvement in Technology Transition projects (e.g. Joint Multi Role (JMR) Technology Demonstrator and Future Vertical Lift aircraft) and other Office of the Secretary of Defense (OSD) initiatives.

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army				Date: March 2019	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support		PE 0605606A / Aircraft Certification			
B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	4.804	3.941	3.461	-	3.461
Current President's Budget	4.612	3.936	3.461	-	3.461
Total Adjustments	-0.192	-0.005	0.000	-	0.000
• Congressional General Reductions	-0.004	-0.005			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.188	-			

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army										Date: March 2019		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605606A / Aircraft Certification				Project (Number/Name) 092 / Aircraft Certification			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
092: Aircraft Certification	-	4.612	3.936	3.461	-	3.461	2.738	2.728	2.717	2.704	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Airworthiness Certification Project assures safe flight operation of Army aircraft and aviation systems by means of technical design approval and qualification of systems to appropriate airworthiness standards. This Project supports independent airworthiness qualification for all assigned developmental and in-production Army aircraft, both manned and unmanned, as required by Army Regulation (AR) 70-62 ("Airworthiness of Aircraft Systems"), and is essential for assuring the safe operation of Army aircraft. This Project performs engineering functions (design, analysis, testing, demonstrations, and system specification compliance) essential for certifying the airworthiness of assigned Army aircraft. This Project also supports: management/execution of the Army's Aeronautical Design Standards (ADS) program; management/execution of airworthiness approval for new systems and materiel changes for all assigned Army aircraft systems; airworthiness engineering support for major development/modification and future systems/ subsystems requirements of the Program Executive Officer for Aviation (PEO AVN) and U.S. Army Special Operations Command's Technology Applications Program Office (TAPO); and management of test and evaluation processes in support of the airworthiness qualification process.

The Airworthiness Certification Project also performs general research and development in support of aircraft qualification and overarching airworthiness projects that involve multiple aircraft models, and supports the application of other critical aviation subsystems onto Army aircraft.

This Project also supports: airworthiness certification for military-use civil derivative aircraft technical qualification through the Federal Aviation Administration's Military Certification Office; development of airworthiness procedures, specifications, critical standards, and other design and qualification documents; participation in senior leadership mandated airworthiness tri-service activities (e.g., National Airworthiness Council) and international airworthiness related activities mandated by treaty (e.g. Flight Into Non-segregated Airspace (FINAS)); and early airworthiness involvement in Technology Transition projects such as the Future Attack Reconnaissance Aircraft, Future Long Range Assault Aircraft, Advanced Unmanned Aircraft Systems, Modular Open System Architecture, and other Office of the Secretary of Defense (OSD) initiatives.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Certification Assessments and Studies Force Modernization Aircraft	0.051	0.042	0.037
<b>Description:</b> Perform assessments and studies in support of Force Modernization Aircraft Systems			
<b>FY 2019 Plans:</b> Conduct technical and airworthiness qualification assessments and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems or multi-system programs (e.g. AH-64E, UH-60M, MH-47G, MH-60M, etc).			
<b>FY 2020 Plans:</b>			

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army		Date: March 2019		
Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605606A / Aircraft Certification	Project (Number/Name) 092 / Aircraft Certification		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
Will conduct technical and airworthiness qualification assessments and studies to demonstrate airworthiness and system performance for Army force modernization aircraft systems or multi-system programs (e.g. AH-64E, UH-60M, MH-47G, MH-60M, etc).				
FY 2019 to FY 2020 Increase/Decrease Statement: Funding change due to adjustments in costing assumptions.				
Title: Certification Requirements and Studies for Future Aircraft Description: Perform studies to support airworthiness certification requirements for Future Aircraft Systems FY 2019 Plans: Conduct studies of Airworthiness Certification requirements for future aircraft systems and other technology transition programs (e.g. Joint Multi-Role Technology Demonstrator Aircraft, Future Vertical Lift Aircraft, Improved Turbine Engine Program) FY 2020 Plans: Will conduct studies of Airworthiness Certification requirements for future aircraft systems and other technology transition programs (e.g. Joint Multi-Role Technology Demonstrator Aircraft, Future Vertical Lift Aircraft, Improved Turbine Engine Program) FY 2019 to FY 2020 Increase/Decrease Statement: Funding change due to adjustments in costing assumptions.		0.617	0.512	0.445
Title: Design Standards Description: Support the development, implementation and maintenance to support Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching Airworthiness qualification documentation. FY 2019 Plans: Develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation. FY 2020 Plans: Will develop, implement, and maintain Army Aeronautical Design Standards, airworthiness procedures and tools, and overarching airworthiness qualification documentation. FY 2019 to FY 2020 Increase/Decrease Statement: Funding change due to adjustments in costing assumptions.		2.475	2.023	1.918
Title: Certification Assessments of Technology Upgrades Description: Perform certification assessments of technology upgrades.		0.051	0.042	0.037

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2020 Army			Date: March 2019		
Appropriation/Budget Activity 2040 / 6		R-1 Program Element (Number/Name) PE 0605606A / Aircraft Certification	Project (Number/Name) 092 / Aircraft Certification		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2018	FY 2019	FY 2020
<b>FY 2019 Plans:</b> Conduct technical and airworthiness certification assessments of technology upgrades to Army force modernization aircraft systems or programs (e.g. Advanced Threat Infrared Countermeasures integration, Common Missile Warning System integration, Common Sensor integration).  <b>FY 2020 Plans:</b> Will conduct technical and airworthiness certification assessments of technology upgrades to Army force modernization aircraft systems or programs (e.g. Advanced Threat Infrared Countermeasures integration, Common Missile Warning System integration, Common Sensor integration).  <b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Funding change due to adjustments in costing assumptions.					
<b>Title:</b> Commercial Derivative Aircraft  <b>Description:</b> Technical and airworthiness qualification for Commercial Derivative Aircraft.  <b>FY 2019 Plans:</b> Provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration.  <b>FY 2020 Plans:</b> Will provide technical and airworthiness qualification for Commercial Derivative Aircraft through the Federal Aviation Administration.  <b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Funding change due to adjustments in costing assumptions.			0.446	0.370	0.322
<b>Title:</b> Technology Advancement  <b>Description:</b> Support efforts to establish and maintain aircraft safety for a fleet of aircraft.  <b>FY 2019 Plans:</b> Lead and participate in national and international airworthiness certification committees, conferences and working groups responsible for establishing and maintaining aircraft safety for a fleet of aircraft (e.g. National Airworthiness Council, Joint Aeronautical Commanders Group, Joint Propulsion Coordinating Committee, NATO Airworthiness working groups, ASIC Airworthiness Working Groups, and Global Air Traffic Management working groups.)  <b>FY 2020 Plans:</b> Will lead and participate in national and international airworthiness certification committees, conferences and working groups responsible for establishing and maintaining aircraft safety for a fleet of aircraft (e.g. National Airworthiness Council, Joint			0.972	0.807	0.702

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Army		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 2040 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605606A / <i>Aircraft Certification</i>	<b>Project (Number/Name)</b> 092 / <i>Aircraft Certification</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
Aeronautical Commanders Group, Joint Propulsion Coordinating Committee, NATO Airworthiness working groups, ASIC Airworthiness Working Groups, and Global Air Traffic Management working groups.)			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Funding change due to adjustments in costing assumptions.			
<b>Title:</b> FY2019 SBIR/STTR Transfer		-	0.140
<b>Description:</b> FY2019 SBIR/STTR Transfer			-
<b>FY 2019 Plans:</b> FY2019 SBIR/STTR			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Adjustment made for FY2019 SBIR/STTR transfer			
<b>Accomplishments/Planned Programs Subtotals</b>		4.612	3.936
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
N/A			
<b>E. Performance Metrics</b>			
N/A			