RECORD VERSION

STATEMENT BY

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ON SMALL UAS AND COUNTER-SMALL UAS: GAPS, REQUIREMENTS, AND PROJECTED CAPABILITIES

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INTRODUCTION

Chairman Wittman, Ranking Member Norcross, and distinguished members of the Subcommittee, thank you for this opportunity to discuss the Army's Counter-Small Unmanned Aircraft Systems (C-sUAS) and Small Uncrewed Aircraft Systems (sUAS) modernization efforts. On behalf of the Secretary of the Army, the Honorable Daniel P. Driscoll, and the Chief of Staff of the Army, General Randy A. George, we thank you for the invitation to join you today and look forward to answering your questions.

COUNTER-SMALL UNMANNED AIRCRAFT SYSTEMS

The proliferation of sUAS presents an evolving and asymmetric threat to United States and allied forces, requiring a layered, adaptable, and multi-domain approach. The Army, as the Department of Defense (DoD) Executive Agent for C-sUAS, has developed a layered architecture to counter current and future threats through enduring systems, modernization efforts, and future investments.

The Army's initial capabilities fielded to counter sUAS threats were systems such as the Stinger missile system and Counter Rocket Artillery and Mortar (CRAM) systems. The Army quickly adapted by developing prototype systems such as Mobile-Low, Slow, Small Unmanned Aircraft Integrated Defeat System (M-LIDS) and Fixed Site LIDS (FS-LIDS), both with electronic warfare (EW) and kinetic effectors. The Army combined the low-cost prototype kinetic effector, Coyote, with the Ku-band Radio Frequency Sensor (KuRFS) radar. These deployed capabilities proved effective in combat operations, leading the Army to choose them as the enduring solution C-sUAS Batteries.

The Army is continuously modernizing C-sUAS capabilities across five distinct lines of effort (LOEs):

- **LOE 1: JUONS support.** The Army provides C-sUAS capability through validated Joint Urgent Operational Need (JUONs) and Operational Needs Statement (ONS) requests from United States Central Command (CENTCOM) and United States Africa Command (AFRICOM). The intent of this LOE is to get capabilities in theater to mitigate immediate risk to our Soldiers from adversary

UAS. These capabilities include M-LIDS and FS-LIDS with kinetic and EW systems. The Army continues to improve its Coyote kinetic effector and provide expanded sensor coverage. The Army also increased the production capacity of the Coyote interceptor to 1,200 rounds per year in support of Army requirements.

- **LOE 2: Homeland and Specified Fixed Sites.** The Army provides C-sUAS protection capability to priority installations in both in the Continental United States (CONUS) and outside CONUS (OCONUS) in response to an Army Directed Requirement. The Army procured all the equipment for the priority installations and is working to field, install, and train these installations over the next two years as the equipment is produced and delivered as part of the layered defense strategy. The Army has delivered several assets and continues to work with other Agencies as it relates to Homeland Defense.
- **LOE 3: C-sUAS Batteries.** The third line of effort utilizes C-sUAS equipment, proven in Combatant Commander areas of responsibility, to establish a layer of protection for division critical assets with the newly authorized division-level C-sUAS battery. The Army will field the first of these batteries in the third quarter of Fiscal Year (FY) 2025 (with the First Cavalry Division, immediately followed by the 82nd Airborne Division).
- **LOEs 4 and 5: Unit and Soldier Common C-sUAS capabilities.** The Army's newest lines of effort will deliver capability from the brigade level down to the squad level to provide C-sUAS protection at all echelons of the Army's combat formations. Through the Army's Transformation in Contact 2.0 initiatives, the Army is experimenting with capabilities for both the unit and individual Soldier to ensure layered protection across maneuver formations. The Unit and Soldier Common LOE follows an iterative "try, decide, buy" methodology, which allows the Army to identify C-sUAS "best in breed" that are available in a matter of weeks versus years.

Modernization Efforts

Recognizing the rapid advancements in enemy UAS technology, the Army prioritized and integrated modernization efforts in all aspects of the Army's LOEs. The Army has several ongoing competitive efforts to advance C-sUAS technologies:

- **Next-Generation C-sUAS Missile.** To counter increasingly agile and resilient threats, the Army is developing a new missile interceptor with improved range, speed to target and guidance capability. The Army is using a competitive Other Transaction Agreement (OTA) with an expected down select in FY 2025.
- **Forward Area Air Defense Command and Control (FAAD-C2) Competitive Replacement.** FAAD-C2 currently serves as the Army's primary engagement control system for integrating C-sUAS sensors and effectors. However, recognizing the need for enhanced interoperability and scalability, the Army is evaluating competitive replacements that will offer improved data fusion, AI-driven automation, and joint force integration. The Army is partnered with the Defense Innovation Unit (DIU) in an ongoing competition to select a replacement for the FAADC2 C-UAS fire control functions by the end of FY 2025.
- **Handheld and Small Arms-Integrated Optics.** In response to the increasing prevalence of commercial off-the-shelf (COTS) drones used by adversaries, the Army is fielding handheld C-sUAS systems and integrating smart optics onto small arms to enhance dismounted Soldier capabilities. These solutions provide rapid engagement options for forward-deployed units. Solutions from this competitive opportunity will identify multiple systems for the Army to select for varying Soldier Common LOE requirements.

The Army is also planning future competitions for advanced radar, both passive and active, and electronic warfare technology. The U.S. Army's Rapid Capability and Critical Technologies Office (RCCTO) is working on directed energy and high-power microwave technologies. Several RCCTO capabilities have conducted operational assessments in the CENTCOM area of operations.

C-sUAS FUTURE MODERNIZATION PLANS

Looking ahead, the Army is committed to developing and fielding next-generation C-sUAS capabilities that provide persistent, adaptable, and scalable protection across multiple echelons. Key focus areas include:

- **Artificial Intelligence (AI) and Machine Learning Integration.** AI-enabled threat detection and automated decision-making will enhance the speed and accuracy of C-sUAS engagements while decreasing the cognitive burden of the Soldier.
- **Directed Energy Weapons.** High-energy lasers and high-power microwaves are being developed as cost-effective solutions for countering large numbers of sUAS at minimal per-shot cost.
- **Multi-Domain Integration.** C-sUAS efforts are expanding beyond ground forces to include maritime and aerial platforms, ensuring a joint-force capability that addresses the full spectrum of threats.
- **Joint and Coalition Integration.** Striving for C-sUAS interoperability across all Services and with NATO allies will be critical to addressing the global drone threat.
- **Industry Partnerships and Rapid Acquisition.** The Army is working closely with industry partners to accelerate the development and fielding of cutting-edge solutions through rapid prototyping and iterative testing.

SMALL UNCREWED AIRCRAFT SYSTEMS (sUAS)

The Army continues to make significant progress in integrating UAS into its operations and we are delivering these capabilities to Soldiers today in Transformation in Contact Units. Group 1 through Group 3 UAS provide crucial intelligence, surveillance, and reconnaissance (ISR) capabilities at the brigade and below echelons throughout the Army. These platforms offer real-time situational awareness, enhance force protection, extend lethality, and enable more informed decision-making in complex environments.

The Army has several modernization efforts in the sUAS portfolio in order to provide a layered capability:

- **Purpose Built Attritable System (PBAS) / First Person View (FPV):** (Group 1 UAS). PBAS focuses on the rapid deployment of FPV systems by leveraging COTS technology to rapidly equip units. This program prioritizes speed, efficiency, and affordability to deliver enhanced situational awareness, reconnaissance, remote operation capabilities, and extend Soldier lethality.
- **Short Range Reconnaissance (SRR):** (Group 1 UAS) Provides organic maneuver platoons with uncrewed air vehicles designed to support reconnaissance, surveillance, targeting and acquisition (RSTA). The system has an aircraft weight of less than five pounds, a range of three to five kilometers, and an endurance of 30 minutes. The system includes modular payloads, obstacle avoidance, target recognition, automated following, and networked capability. The Army completed the fielding of 1,138 baseline SRR UAS in 2024. The second round of fielding, beginning in FY 2025, includes additional capabilities based on Soldier feedback and leverages the maturation of technology.
- **Company Level Directed Requirement (DR):** (Group 2 UAS) The Company level DR provides organic maneuver companies with uncrewed air vehicles designed to support RSTA efforts. Company level DR systems include a range of 10 kilometers and mission coverage of eight hours within a 24-hour period. The Army delivered 41 systems to the Transformation in Contact (TiC) 1.0 designated units in FY24. The TiC 2.0 system includes Assured Positioning, Navigation and Timing (APNT) and laser marking capability while leveraging the Modular Open Systems Approach (MOSA) for rapid integration of emerging technologies. The Company level DR is informing the requirement for the Medium Range Reconnaissance (MRR).
- **Long Range Reconnaissance (LRR):** (Group 2 UAS). LRR provides organic maneuver battalions with uncrewed air vehicles designed to support RSTA

efforts. The system will have an aircraft weight of less than 55 pounds, a range of 40-60 kilometers and endurance of 5-10 hours. The LRR system will include APNT, Electro-Optical/Infrared, laser marking, and kinetic architectures while leveraging MOSA for rapid integration of emerging technologies. The program applies mature modified COTS solutions to facilitate rapid delivery of capability. This program will deliver developmental capability to TiC units in FY 2025.

- **Joint Tactical Autonomous Aerial Resupply System (JTAARS):** (Group 3 UAS by weight; waiver for training and operation as a Group 1 UAS). JTAARS is an autonomous aerial cargo delivery system, organic to the maneuver commander, that provides rapid and agile sustainment of highly mobile tactical combat forces. JTAARS provides single lift capability to dispersed troops, and includes autonomous takeoff, navigation, landing and payload release. Additionally, it includes global positioning system (GPS) or satellite communications navigation, a range of 26 kilometers, and carries a minimum of 125 pounds. In fiscal year 2024 the Army successfully completed an assessment of the United States Marine Corps (USMC) TRV-150C against the Army's A-CDD. Partnering with the USMC condensed the three-year timeline to six months. This program will deliver additional capability directly to TiC units in FY 2025.
- **Brigade-Level Directed Requirement (DR):** (Group 2-3 UAS). Currently in the evaluation stage, the Brigade-level Directed Requirement provides the Army with an immediate interim training capability. Nine vendors have been invited to fly-offs and manufacturing readiness assessments occurring in March and April 2025.
- **Future Tactical Uncrewed Aircraft System (FTUAS):** (Group 3 UAS). FTUAS will employ multi-domain capabilities, increasing the Army's ability to generate overmatch, provide ground commanders with multiple options, and enable joint force freedom of maneuver. The FTUAS aircraft will be a Group 3 UAS with a vertical take-off and landing (VTOL), runway independent, reconnaissance and security capability. Additionally, the FTUAS requires a smaller landing area and

shorter setup time, improves transportability, and boasts a lower acoustic signature as compared to the recently divested Shadow system. The FTUAS program achieved significant milestones, such as completing Critical Design Reviews (CDR), conducting vendor flight demonstrations, validating MOSA use cases, and delivering the first prototypes to the Government. Lastly, FTUAS has commenced developmental test, which is a critical step in validating that FTUAS can meet Army requirements for operations in a deployed threat environment.

sUAS FUTURE MODERNIZATION PLANS

To maintain battlefield dominance in an era of evolving threats, the Army is exploring a few different areas to invest in future capabilities in the sUAS space. The Army is also committed to staying flexible in re-evaluating plans as adversaries evolve to ensure that we are responding at the speed of relevance.

- **MOSA:** The Army is leveraging MOSA compliant development to upgrade platforms without being locked into a specific configuration or solution. This allows industry to compete quickly as new capabilities come online.
- **Next-Generation Technologies:** The Army is investing in resources associated with UAS with enhanced capabilities, including longer endurance (batteries), increased payload capacity, improved resilience against EW threats, and advanced autonomy features.
- **Interoperability and Data Fusion:** To ensure seamless integration of UAS data into existing and future Army networks and also enable rapid dissemination and analysis of information across all echelons, the Army is investing in data centric efforts. The Army recognizes that although hardware is often the focus in this area, the software is just as important as we continually learn from Soldier use and feedback from the field.
- **Enhanced Training and Simulation Capabilities:** To prepare our Soldiers for an array of different threats, the Army is also investing in robust training programs and realistic simulators to equip operators with the skills and

experience needed to effectively operate UAS in complex and contested environments and reduce training losses.

CONCLUSION

Due to the current and future security challenges presented by our adversaries, we will have to continue to work as a Department and with Congress to quickly adapt to the ever-changing landscape. As adversaries continue to invest in technology to counter or evade U.S. strengths and exploit vulnerabilities, it is critical that the sUAS/C-sUAS portfolios receive timely, adequate, predictable, and sustained funding to maintain an advantage over adversaries. Mr. Chairman and distinguished Members of this Subcommittee, thank you for your steadfast and strong support of our outstanding Soldiers, Civilians, and their Families.