REQUIREMENT DESCRIPTION WITH SALIENT CHARACTERISTICS

Virtual Reality Training Simulator

In detail, please describe those physical, functional, performance, or material element qualities of an item that are essential to ensure that the intended use of the item can be satisfactorily realized.

Must provide a portable, secure, and immersive virtual reality (VR) training solution for military mission rehearsal and tactical upskilling in high-stress simulated environments.

Must operate entirely offline on a closed network without requiring an internet connection. Must not require fixed training facilities, planning rooms, or external base stations.

Must pack into a single deployable hardened case. Maximum weight: 50 lbs. Must be a 2-person portable system capable of setup within minutes.

Must support 1 to 8+ simultaneous users, 1 instructor, and 1 to 4 role players. Must support single-user, team-based, and Force-on-Force training configurations.

Must include a minimum 11-inch tablet with a protective case to serve as the instructor console. Must not require any additional external servers or computers to operate.

Must include enterprise-grade VR headsets featuring 4K resolution, a minimum 2-hour operational runtime, hot-swappable battery capability, and spare batteries.

Must utilize an "inside-out" VR tracking system managed through the headsets and rail-mounted weapon sensors. Must not require external tracking cameras or arrays.

Must support standard service rifle platforms. Must convert operational rifles into dry-fire mode with full recoil using a CO2/gas system via drop-in bolt and magazine kits. Alternatively, must support inert gas recoil rifles.

Must provide inert gas recoil generating training pistols that match the profile of standard service pistols. Must also support integration with operational service pistols.

Must support in-service Conducted Energy Weapons (CEW) and inert chemical/OC spray trainers.

Must include an integrated software tool that allows users to build, edit, and modify custom training scenarios.

Must simulate multiple lighting conditions, specifically Day, Night, and Night Vision Goggle (NVG) environments.

Must feature both active and passive virtual threats with variable and adjustable skill levels.

Software must include built-in scenarios for Mission Rehearsal, Hostage Rescue, Close