Federal Aviation Administration
National Part 139 CertAlert

** Advisory ** Cautionary ** Non-Directive ** Advisory ** Cautionary ** Non-Directive **

Date:	5/12/2025	**No. 25-01**
To:	All Title 14 CFR Part 139 Airport Operators	
Subject:	**Improve Airfield Safety with Vehicle Movement Area Transmitters (VMATs) and Runway Incursion Warning Systems (RIWS)**	
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1. Purpose.

This CertAlert provides information about Vehicle Movement Area Transmitters (VMATs) using Automatic Dependent Surveillance - Broadcast (ADS-B) and Runway Incursion Warning Systems (RIWS) that improve surface safety on the airfield. It also addresses eligibility to purchase and install the equipment.

VMAT equipment can be used for vehicle tracking at airports selected under the Federal Aviation Administration's (FAA's) Surface Awareness Initiative (SAI) and at airports with active Airport Surface Detection Equipment, Model X/Airport Surface Surveillance Capability (ASDE-X/ASSC) surface surveillance technology.

RIWS equipment can be used to alert vehicle drivers at any Airport Improvement Program (AIP) eligible towered or non-towered airport.

The FAA supports and promotes the acquisition, installation, and use of VMATs and RIWS on vehicles operating in the movement area to improve airfield safety.

2. Background.

The FAA and the aviation community are pursuing a goal of zero serious close calls as identified in the FAA's February 2023 Safety Call to Action Initiative, which includes mitigating incursions of both aircraft and ground vehicles. Currently, ASDE-X and ASSC surface surveillance systems, which are used to monitor airfield movements and enhance safety, are in use, when this CertAlert was published, at 43 civil airports in the National Airspace System (NAS).

Following the Safety Call to Action, the FAA established the Surface Awareness Initiative (SAI) to provide supplemental, cost-effective situational awareness for Air Traffic Control (ATC) at additional airports without existing ASDE-X or ASSC capabilities. Like ASDE-X and ASSC systems, SAI systems use ADS-B to track aircraft and vehicles on the airport surface. At airports equipped with SAI systems, the position and call sign of aircraft equipped with ADS-B and vehicles equipped with VMATs are shown on surface displays in the ATC tower. Ground vehicles without VMATs are not displayed.

In calendar year (CY) 2024, multiple sites completed implementation of SAI. The FAA is evaluating additional candidate sites for implementation in CY 2025.

RIWS are a cost-effective safety tool that provides an alarm to vehicle drivers when the vehicle is near or inside (1) a protected area of a surface that is designated to protect aircraft conducting landing and takeoff operations or (2) other protected portions of the Air Operations Area (AOA). The RIWS should be used as a situational awareness tool available to vehicle operators at towered and non-towered airports.

In October 2024, the Office of Airports Planning and Programming and the Office of Airports Safety and Standards signed and published Program Guidance Letter (PGL) No. 24-01, *Funding for Airfield Ground Vehicle Safety Systems*, which expands eligibility for VMATs using ADS-B and introduces eligibility for RIWS.

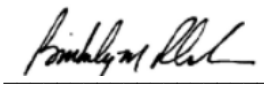
The FAA is actively encouraging airports with ASDE-X and ASSC to voluntarily equip vehicles with VMATs and to install RIWS to improve airfield safety. While VMATs were previously eligible for ground vehicles at ASDE-X and ASSC airports, the FAA has expanded funding eligibility for VMAT equipment at airports equipped with SAI systems.

3. Recommended Actions.

- Assess how VMAT and RIWS equipment can improve surface safety and enhance situational awareness.
- Equip airport operator vehicles with VMAT and encourage the use of VMAT on other vehicles operating in the movement area at airports with ATC towers equipped with ASDE-X, ASSC, or SAI (installed or confirmed to be installed).
- Install and implement the use of RIWS at both towered and non-towered facilities.
- Refer to PGL No. 24-01 for guidance on the expanded funding eligibility criteria for VMAT and RIWS equipment.
- Contact your Airports District Office throughout the implementation process with any questions, including inquiries about technical specifications and eligibility requirements.

4. Related FAA Standards.

- Advisory Circular (AC) 150/5210-25 (current) – *Performance Specification for Airport Vehicle Runway Incursion Warning Systems (RIWS)*
- AC 150/5220-26 (current) – *Airport Ground Vehicle Automatic Dependent Surveillance – Broadcast (ADS-B) Out Squitter Equipment*



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5/12/2025
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