



U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

Subject: Performance Specification for
Airport Vehicle Runway Incursion Warning
Systems (RIWS)

Date: 12/19/2019
Initiated By: AAS-100

AC No: 150/5210-25A
Change:

1 **Purpose.**

This advisory circular (AC) provides a performance specification for an airport vehicle runway incursion warning system (RIWS).

2 **Cancellation.**

AC 150/5210-25, *Performance Specification for Airport Vehicle Runway Incursion Warning Systems (RIWS)*, dated 9/28/2012, is cancelled.

3 **Application.**

The Federal Aviation Administration recommends the guidance in this publication for the design and installation of Airport Vehicle Runway Incursion Warning Systems. This AC does not constitute a regulation, and is not legally binding in its own right. It will not be relied upon as a separate basis by the FAA for affirmative enforcement action or other administrative penalty. Conformity with this AC is voluntary, and nonconformity will not affect rights and obligations under existing statutes and regulations, except for the projects described in subparagraphs 2 and 3 below:

1. The standards contained in this AC are specifications the FAA considers essential for the reliability of components to maintain acceptable level of safety, performance and operation of Airport Vehicle Runway Incursion Warning Systems.
2. Use of these standards and guidelines is mandatory for projects funded under Federal grant assistance programs, including the Airport Improvement Program (AIP). See Grant Assurance #34.
3. This AC is mandatory, as required by regulation, for projects funded by the Passenger Facility Charge program. See PFC Assurance #9.

This AC provides one, but not the only, acceptable means of meeting the requirements of 14 CFR part 139, *Certification of Airports*.

4 **Principal Changes.**

The following changes are incorporated:

1. Reformatted to be consistent with the 150 series AC format.
2. Defined performance requirements for RIWS mobile applications (“apps”).
3. Adopted industry standards for RIWS maps.
4. The alarms have been redefined as a caution alarm and a warning alarm as per the FAA’s HFDS-STD-001, *Human Factor Design Standard*.
5. The audibility level of the alarm has been redefined as per FAA HFDS-STD-001.
6. The audio alarm duration has been defined as per FAA HFDS-STD-001.
7. The visual alarm has been redefined as per MIL-STD-1427G, *Department of Defense Design Criteria Standard, Human Engineering*.
8. The out-of-scope specifications have been deleted.
9. The GPS position accuracy error has been addressed during the definition of the alert areas.
10. Moved system types and selection to paragraph 1.2.
11. Moved the related document list to Chapter 2.
12. Moved the terminology list to Appendix A.

Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within this document) are provided throughout this document and are identified with underlined text. When navigating within this document, return to the previously viewed page by pressing the “ALT” and “←” keys simultaneously.

Figures in this document are schematic representations and are not to scale.

5 **Where to Find this AC.**

You can view a list of all ACs at

http://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at http://www.faa.gov/regulations_policies/faa_regulations/.

6 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.



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CHAPTER 1. INTRODUCTION

1.1 Scope.

This specification covers the performance requirements for the Runway Incursion Warning System (RIWS), which provides an alarm to vehicle drivers when the vehicle is near or is inside the protected area of a surface that is designated for aircraft landing and takeoff operations.

A RIWS will also provide an alarm to the vehicle driver to avoid temporary construction areas and other protected portions of the air operations area (AOA). This system can be used to inform the proximity of hot spots (HS) to the vehicle driver. It may be used by the airport to warn the vehicle driver to avoid temporarily closed areas, e.g., a construction project area.

The RIWS map matches what is displayed in the own-ship position display of the electronic flight bag (EFB) as defined in AC 120-76, *Authorization for Use of Electronic Flight Bags*. This match provides the same situational awareness of the AOA to both the pilots and the ground vehicle drivers and will help to reduce runway incursions.

The alarms will help the vehicle driver to avoid a potential for runway incursions. The RIWS should be used as a situational awareness tool. The use of RIWS does not relieve vehicle operators of their responsibilities relevant to airport familiarity, situational awareness, driver training, and following air traffic controllers' instructions when driving on the AOA.

1.1.1 Definition of Runway Incursion.

The FAA defines a runway incursion as any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft. A runway incursion can happen in one or more of the following situations: complacency, poor communications, loss of situational awareness, and poor visibility.

1.1.2 Identifiable Features to Prevent Runway Incursions.

Areas that could potentially result in a runway incursion at an airport involve those normally required to be clear of ground vehicles, people, and aircraft while a runway is active. These areas are bounded by controlled points for which a pilot or vehicle driver must receive permission from air traffic control (ATC) to enter at an airport with an air traffic control tower (ATCT) or ensure there is no conflict with aircraft traffic before entering at an airport without an ATCT. These boundaries are typically supplemented with pavement markings, signs, and lighting so pilots and vehicle drivers are aware of their locations. These boundary areas are:

- Holding positions on taxiways and runways.
- Non-movement area boundaries or any boundary bordering the AOA that may cause a runway incursion if inadvertently crossed.
- Boundaries of Runway Safety Areas (RSA).

- Boundaries of Instrument Landing System (ILS) critical areas.
- Boundaries of Precision Obstacle Free Zones.

Detailed information about these boundaries is available in *AC 150/5210-20, Ground Vehicle Operations on Airports*, *AC 150/5300-13, Airport Design*, *AC 150/5340-1, Standards for Airport Markings*, and in the *Aeronautical Information Manual*.

1.2 **Classification.**

1.2.1 Types.

1.2.1.1 **Mobile Application (“App”).**

The performance specification of the RIWS can be implemented as a mobile app for smart phones or tablets. (In Chapter 3 of this AC, only the paragraphs 3.2.1, 3.2.2, 3.2.9.3, 3.2.10, 3.2.11, 3.2.12, 3.2.13, 3.2.14, 3.2.15, 3.2.6, 3.2.7, 3.3, and 3.4 are applicable for the mobile application development.)

1.2.1.2 **Preconfigured.**

An RIWS may consist of a preconfigured commercial off-the-shelf (COTS) system that must function without any additional modifications.

1.2.1.3 **Custom.**

An RIWS may consist of a custom system that may be configured by an airport operator to reflect changing needs (e.g., construction areas).

CHAPTER 2. REFERENCE DOCUMENTS

2.1 General.

The following is a list of documents referenced in this AC.

2.2 FAA Advisory Circulars.

ACs may be obtained from www.faa.gov/airports/resources/advisory_circulars/.

<u>AC 120-76</u>	<i>Authorization for Use of Electronic Flight Bags</i>
<u>AC 150/5210-19</u>	<i>Driver's Enhanced Vision System (DEVS)</i>
<u>AC 150/5210-20</u>	<i>Ground Vehicle Operations on Airports</i>
<u>AC 150/5300-13</u>	<i>Airport Design</i>
<u>AC 150/5340-1</u>	<i>Standards for Airport Markings</i>
<u>AC 150/5340-18</u>	<i>Standards for Airport Sign Systems</i>
<u>AC 150/5340-30</u>	<i>Design and Installation Details for Airport Visual Aids</i>

2.3 FAA Standards.

FAA JO 7210.3	<i>Facility Operation and Administration.</i>
FAA <u>HFDS-STD-001</u>	<i>Human Factor Design Standard.</i>

2.4 Military Standards.

MIL-STD-1427G	<i>Department of Defense Design Criteria Standard, Human Engineering.</i>
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2.5 RTCA.

RTCA/DO-257B	<i>Minimum Operational Performance Standards for the Depiction of Navigational Information on Electronic Maps.</i>
RTCA/DO-272	<i>User Requirements for Aerodrome Mapping Information.</i>

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CHAPTER 3. EQUIPMENT REQUIREMENTS

3.1 **General.**

The RIWS system is an advisory system.

3.2 **Performance Requirements.**

3.2.1 Basic Functions.

- 3.2.1.1 The RIWS must use Global Positioning System (GPS) technology to provide the vehicle location information for the warning system.
- 3.2.1.2 The vehicle location information must be displayed either on a mobile app or on a dedicated device or on a multipurpose device such as a laptop or tablet computer.
- 3.2.1.3 The RIWS must provide the position of the RIWS equipped vehicle location within the AOA.
- 3.2.1.4 The RIWS must provide a caution alarm and a warning alarm (both audible and visual) to the vehicle driver as specified in alarm paragraph 3.2.10.
- 3.2.1.5 The RIWS must not cause electromagnetic interference (EMI) with any current airport and aircraft systems; including, but not limited to, communication, navigation, surveillance, and security.
- 3.2.1.6 The RIWS must allow the airport operator to disable alert areas, for specified time periods, as necessary. When an alert area is disabled, a visual notification shall be provided on every display indicating alarms will not be received for the alert area that has been disabled. Notifications shall be sent, at intervals determined by the airport operator, to the individual that disabled the alert area to remind the individual to enable the area once the activities have concluded.
- 3.2.1.7 The RIWS must be designed to allow the airport operator the ability to configure, add, and remove all warning, caution, and temporary areas.
- 3.2.1.8 **Proximity Warnings.**
Proximity warnings must consist of an audible and visual signal to the vehicle driver, making the driver aware that the vehicle is approaching an alert area and there is a potential for an incursion. For a vehicle traveling 0-10 mph (0-16 km/hr), the system must trigger a proximity warning of an alert area 20 ft (6 m) on either side of the vehicle's location receiver and at a minimum distance of 60 ft (18 m) in advance of the vehicle's direction of movement. The proximity warning must increase 6 ft (2 m) in advance of the movement direction for every 1 mph (1.6 km/hr) increase in speed. The

proximity warning must decrease in the same manner to a minimum of 60 ft (18 m). Table 3-1 shows speed and proximity warning distances, using this criteria.

Table 3-1. Speed and Proximity Warning Distances

Speed mph (km/hr)	Proximity alert distance ft (m)
0-10 (0-16)	60 (18)
11 (18)	66 (20)
12 (19)	72 (22)
13 (21)	78 (24)
20 (32)	120 (37)
30 (48)	180 (55)
40 (64)	240 (73)
50 (80)	300 (91)
60 (97)	360 (110)

3.2.2 System Characteristics.

- 3.2.2.1 The accuracy of the vehicle position must be within less than 10 feet (ft) (3 meters) 95% of the time.
- 3.2.2.2 The vehicle position data update rate must be a minimum of once per second.
- 3.2.2.3 The RIWS must generate a warning if vehicle position information is subject to errors due to interference received or when insufficient GPS satellites are available.
- 3.2.2.4 The RIWS must not exceed one false alarm per 500 hours of use, excluding those related to GPS signal availability.
- 3.2.2.5 The RIWS must not exceed one missed alarm per 1000 alarm situations, excluding those related to GPS signal availability.

3.2.3 Environmental Requirements.

The RIWS must operate under the following conditions:

- Operating temperature range: -4° Fahrenheit (F) to 140°F (-20° Celsius (C) to 60°C), or as specified by the airport operator for local extreme conditions.
- Storage Temperature range: -40°F to 167°F (-40°C to 75°C).

- Dust resistance: The equipment must be protected against the ingress of dust that could adversely affect keyboard, data communications ports, and mechanical functions.
- Humidity: to 95% relative humidity at 140°F (60°C).
- Water resistance: Resistant to dripping water arising from condensation and spills.
- Vibration resistance: Resistant to damage caused by vehicle vibration while in operation over rough terrain and other activities (4.5g rms at 5 to 500 Hz sine).

3.2.4 Power Requirements.

- 3.2.4.1 The system power requirements must allow operation from the vehicle battery power bus for a minimum of 1 hour without adversely affecting other systems.
- 3.2.4.2 Equipment installed on the vehicle battery power bus must be designed to withstand up to ± 20 percent voltage variations from the vehicle nominal power bus voltage, alternator load dumps, and voltage spikes/transients/noise, and be protected from reverse polarity.
- 3.2.4.3 Vehicle-mounted equipment is powered by 12 volts DC (VDC). The device or system in vehicles may be by direct hardwire power connections, 12 VDC quick plug-ins, battery, battery backup, or a combination(s) of these methods, as specified by the airport operator.

3.2.5 Installation Requirements.

The equipment manufacturer must provide detailed installation instructions for the equipment. The placement of the display system and RIWS inside the vehicle must not interfere with the safe operation of the vehicle.

3.2.6 Testing Requirements.

- 3.2.6.1 The vendor must provide a test procedure to verify proper system operation after installation of the system.
- 3.2.6.2 The airport operator may participate in the development of a system test procedure that is tailored to the airport's operating environment.
- 3.2.6.3 The airport operator reserves the right to approve any jointly developed (airport operator/vendor) testing procedures.
- 3.2.6.4 The field tests must demonstrate that the RIWS system functions are in compliance with this AC over the entire range of operation within the AOA.
- 3.2.6.5 The vendor must correct any system malfunctions discovered during testing.

3.2.7 Training Requirements.

- 3.2.7.1 Training techniques must be developed to ensure that the RIWS users are exposed to all forms of alerts and that they understand how to deal with them.
- 3.2.7.2 The RIWS vendor must provide qualified personnel at the time of system delivery to train airport/airline staff in the operation and maintenance of the system.
- 3.2.7.3 The training must include written operating instructions with step-by-step instructions that describe how to use the system.
- 3.2.7.4 The training session must include troubleshooting, operational theory, and hands-on training.
- 3.2.7.5 The vendor must provide operation maintenance manual(s).

3.2.8 Maintenance Requirements.

3.2.8.1 **Preventive Maintenance.**

The manufacturer must provide written documentation for recommended preventive maintenance actions to the airport operator.

3.2.9 Information Display Unit.

- 3.2.9.1 Information presented on the display unit must be readily visible to a driver operating a ground vehicle.
- 3.2.9.2 The display unit must have the capability for automatic/manual brightness adjustment.
- 3.2.9.3 **Moving Map.**
 - 3.2.9.3.1 The vehicle's location must be centered on the map for a complete 360-degree situational awareness around the vehicle.
 - 3.2.9.3.2 The moving map display must show the airport AOA movement and non-movement areas. This includes the runway safety areas and taxiway safety areas.
 - 3.2.9.3.3 The map must not be crowded to the degree that its readability is compromised.
 - 3.2.9.3.4 The system software must allow for zooming, panning, variable heading orientation, and selecting a variable-sized area for a full screen display.

3.2.10 Alarm Signals.

3.2.10.1 There must be two types of alarm signals:

1. Warning Alarm Signal. The purpose of the warning alarm is to alert the driver that the ground vehicle is inside the warning area and immediate action may be required to move away from this warning area. It indicates the existence of a hazardous condition that may require immediate action to prevent loss of life, equipment damage, or a service interruption (per FAA HFDS-STD-001).

The warning alarm must trigger when the ground vehicle is inside the warning area. (Refer to Figure 3-1 or Figure 3-2 for a warning area example.)

2. Caution Alarm Signal. The caution alarm indicates the existence of a condition that requires attention but not immediate action (per FAA HFDS-STD-001).

The caution alarm must trigger when the ground vehicle is inside the caution area. (Refer to Figure 3-1 or Figure 3-2 for a caution area example.)

3.2.10.2 Caution alarm signals must be readily distinguishable from warning signals (per FAA HFDS-STD-001).

3.2.10.3 The caution and warning alarm signals must be composed of both audible and visual signals as per paragraphs 3.2.11 and 3.2.12.

3.2.10.4 There may be a scenario when a caution area may be inside a warning area. The RIWS must always select the higher alarm state when more than one alarm state, e.g., caution alarm state and warning alarm state, is present, and must generate the audio and visual alarm signals for the higher alarm state.

3.2.10.5 The RIWS must stop generating audio and visual alarm signals as soon as the ground vehicle moves outside the caution or the warning area.

3.2.11 Audio Alarm Signal Requirements.

3.2.11.1 The lowest intensity of the audible signal must be set at 10 dB(A) higher than the ambient sound level inside the ground vehicle.

3.2.11.2 The highest intensity of the audio signal must not exceed 90 dB(A).

3.2.11.3 The audio alarm signal must be intermittent rather than continuous.

3.2.11.4 The audio alarm signal must remain active as long as the vehicle is within an alert area unless muted by the vehicle operator.

- 3.2.11.5 The vehicle driver must be able to mute the audible signal if there is a legitimate reason for the vehicle to be present in the alert area, e.g., a maintenance purpose. The audio signal must automatically reset when the vehicle exits the alert area that triggered the signal.

3.2.12 Visual Alarm Signal Requirements.

- 3.2.12.1 The warning visual signal must generate a red flashing signal that is overlaid on the moving map.
- 3.2.12.2 The caution visual signal must generate a yellow flashing signal that is overlaid on the moving map.
- 3.2.12.3 The visual alarm must not cover the whole moving map display.
- 3.2.12.4 The visual alarm must remain active as long as the vehicle is inside the caution or the alert area.

3.2.13 Alert Area.

The alert area is the area where the RIWS must warn the driver with audible and visual alarms when a ground vehicle enters that area. An alert area will be either a caution area or a warning area. The RIWS must generate audio and visual warning signals as specified in the paragraph [3.2.4](#) when a vehicle enters a caution area or a warning area.

3.2.13.1 **Runway Holding Position Warning Area.**

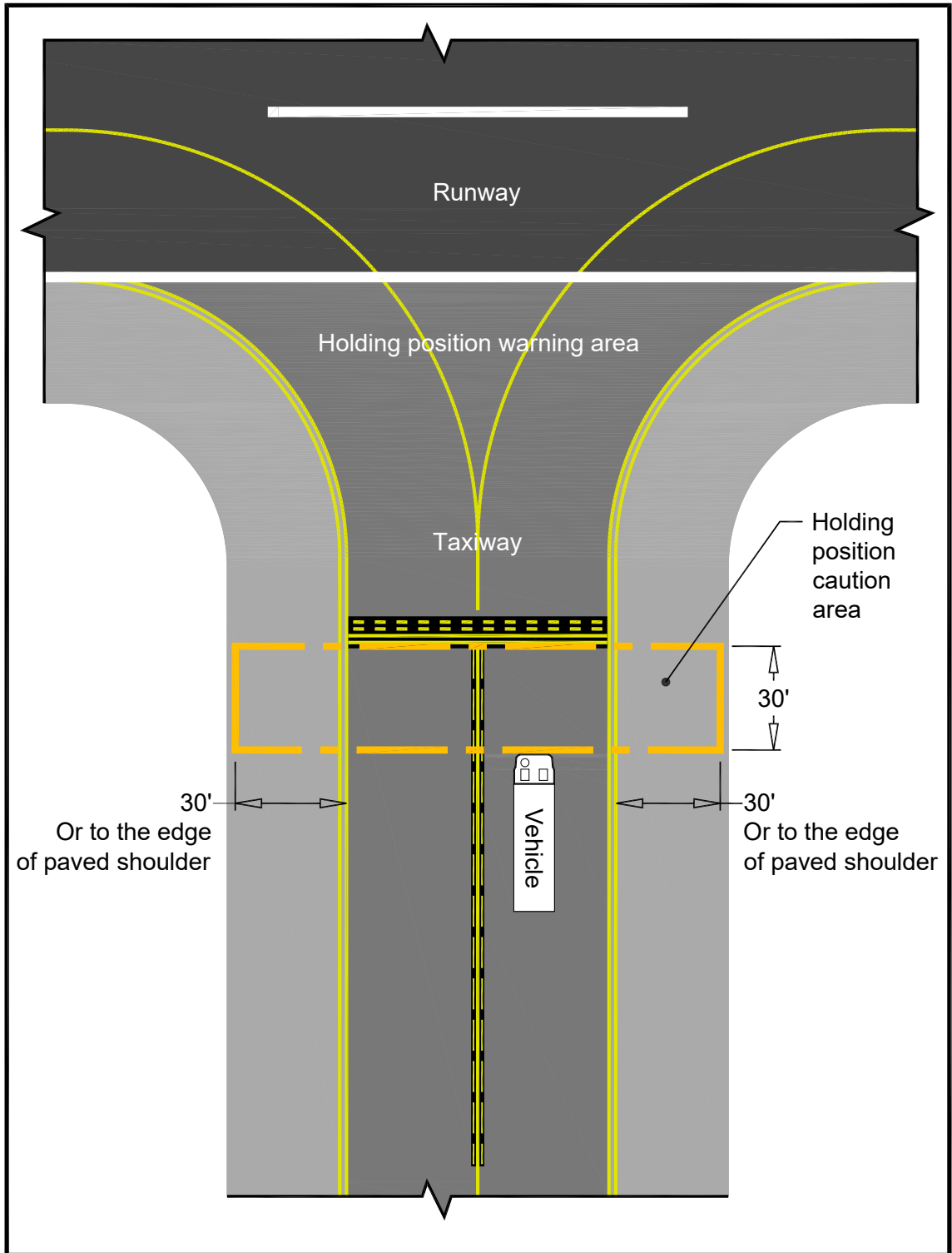
The runway holding position warning area must consist of an area extending from the holding position marking in the direction toward the runway.

3.2.13.2 **Runway Holding Position Caution Area.**

The runway holding position caution area must consist of an area extending from the holding position marking 30 feet in the direction away from the runway, and extending 30 feet to each side of the taxiway edge.

[Figure 3-1](#) shows an example of runway holding position alert areas, including a caution area and a warning area.

Figure 3-1. Example of a Holding Position Marking Alert Area



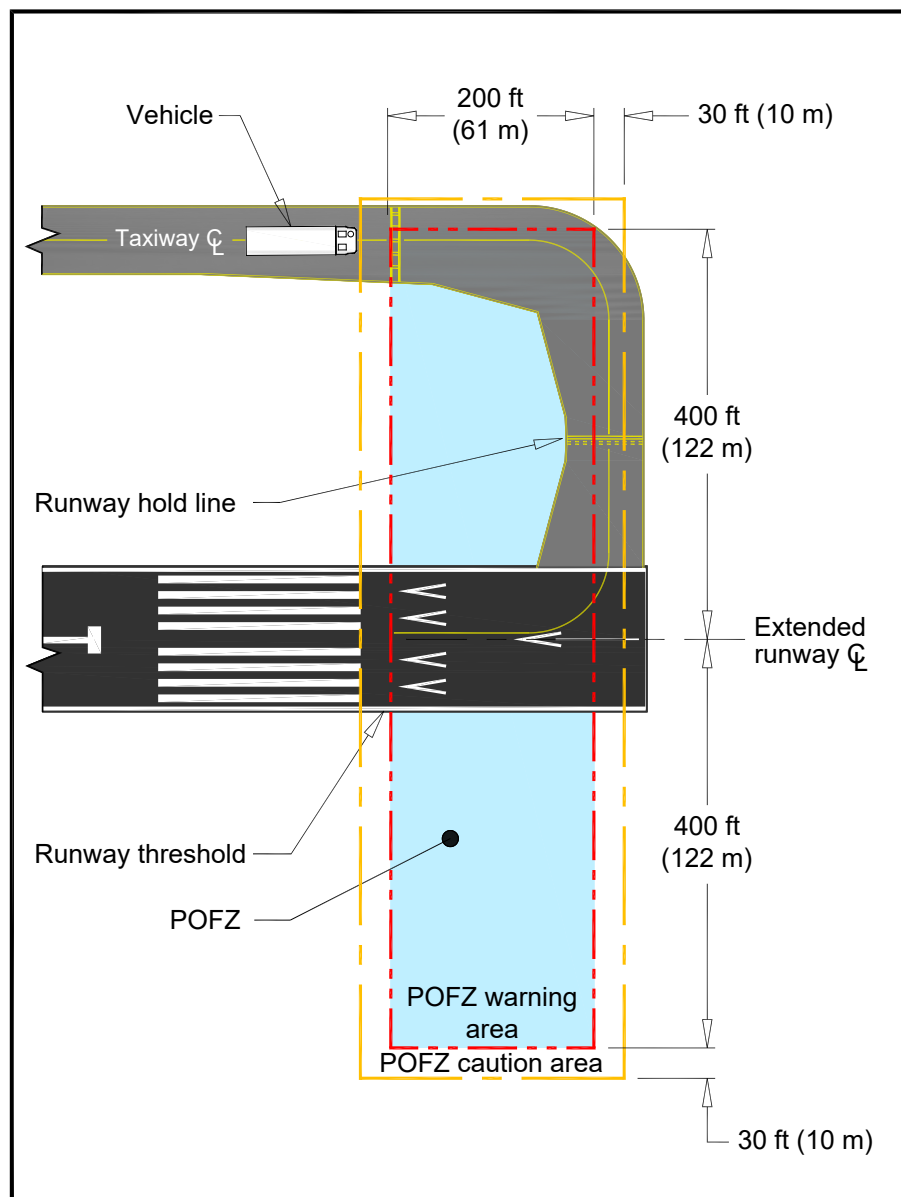
3.2.13.3 ILS Critical Area/Precision Obstacle Free Zone (POFZ) Warning Area.

Two special cases of a holding position marking are those bounding an ILS critical area and a POFZ.

The ILS Critical Area and POFZ warning areas must consist of an area extending from the ILS Critical Area or POFZ holding position marking in the direction toward the runway.

Figure 3-2 shows an example of ILS Critical Area/Precision Obstacle Free Zone (POFZ) alert areas, including a caution area and a warning area.

Figure 3-2. Example of an ILS Critical/Precision Obstacle Free Zone (POFZ) Alert Area



3.2.13.4 ILS Critical Area and POFZ Runway Holding Position Caution Area.

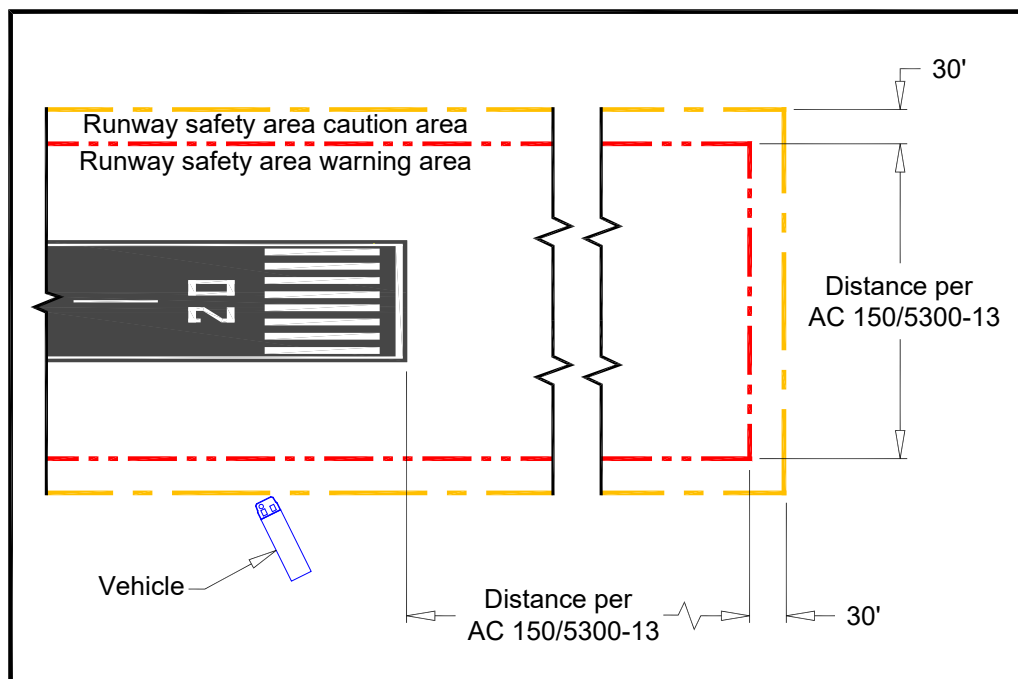
The ILS Critical Area and POFZ runway holding position caution areas must consist of an area extending from the holding position marking 30 feet in the direction away from the runway and extending 30 feet to each side of the RSA warning area.

3.2.13.5 RSA Warning Area.

The RSA warning area must include the entire RSA.

1. The size of the RSA is determined by the criteria in AC 150/5300-13.
2. Figure 3-3 gives an example of an RSA alert area composed of caution and warning areas.

Figure 3-3. Example of an RSA Alert Area



3.2.13.6 RSA Caution Area.

The RSA caution area must extend 30 feet (9 m) from the edge of the RSA extending in all directions away from the runway.

3.2.13.7 Airport Departure Surface Warning Area

The airport departure surface warning area must include the entire departure surface.

The airport departure surface area is determined by the criteria in AC 150/5300-13 and AC 150/5340-1.

3.2.13.8 Airport Departure Surface Caution Area

The departure area caution area must extend 30 feet (9 m) from the edge of the departure surface in all directions away from the departure surface.

3.2.13.9 Hot Spot Warning Area.

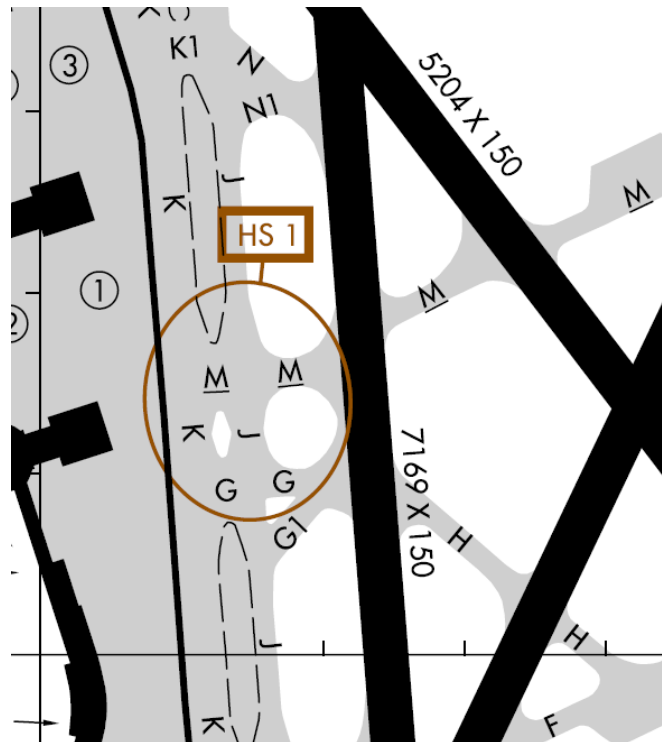
A Hot Spot (HS) is defined as a general area within an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

The HS areas depicted on the airport diagram must be referenced to define the RIWS HS warning area.

The airport diagrams can be found at

https://www.faa.gov/airports/runway_safety/diagrams/

Figure 3-4. Example of a Hot Spot Warning Area shown as HS 1



3.2.13.10 Temporary Warning Area. (Optional Feature).

If specified, the user must be able to define (and delete) a temporary warning area in the RIWS for a closed area due to construction or any other activities on the AOA.

This feature will be implemented using a central “base unit” and uploaded to all vehicle-mounted units.

3.2.14 Prohibited Function.

An RIWS must not give directions for navigating on an airport AOA. The system must only be used as a situational awareness tool.

3.2.15 Historical Tracking.

3.2.15.1 The RIWS must record and retain the vehicle's historical track information for 48 hours.

3.2.15.2 The track information must be downloadable for investigation purposes.

3.3 **Airport Map Requirements.**

3.3.1 The airport map must be displayed from a database and must be compliant with RTCA/DO-257B. The map data requirements must comply with RTCA/DO-272.

3.3.2 Controls, labeling, use of colors, symbology, behavior, responsiveness, and map features must follow the guidance in RTCA/DO-257B.

3.3.3 The RIWS must provide functionality to verify the accuracy of and to correct the map data in real time.

3.4 **Mobile Application ("App") Performance Requirements.**

A mobile app must implement the performance requirements of the paragraphs 3.2.1, 3.2.2, 3.2.9.3, 3.2.10, 3.2.11, 3.2.12, 3.2.13, 3.2.14, 3.2.15, 3.2.6, 3.2.7 and 3.3.

In addition, a mobile app must implement the following performance requirements.

3.4.1 Cyber Security.

3.4.1.1 The app must implement appropriate measures to prevent unauthorized access of sensitive airport airfield information.

3.4.1.2 The app must implement appropriate measures to prevent unauthorized modification, addition, or deletion of sensitive airport airfield information.

3.4.1.3 The app must implement appropriate measures to ensure that all functions and data are available to authorized users.

3.4.1.4 The app must implement appropriate authentication and authorization functions to allow only authorized users to use the app. (Logical access security)

3.4.1.5 The app must ensure that the airport airfield data, part of national critical infrastructure data, is protected appropriately. (Physical access security)

3.4.2 Platform.

- 3.4.2.1 A mobile app may be developed for the Android, Mac OS, IOS, or Windows operating systems.
- 3.4.2.2 The vendor should ensure the compatibility of the app when a new version of the operating system is released.

3.4.3 Operation

- 3.4.3.1 The app must execute as the highest priority application.
- 3.4.3.2 The app response time will be as specified by the airport operator.
- 3.4.3.3 The app must be able to function in the absence of external communication services, e.g., mobile data service or wi-fi service.
- 3.4.3.4 The app must produce an alert signal when the battery power is low.

APPENDIX A. GLOSSARY**A.1 Definitions.**

1. **Air Operations Area (AOA).** For the purpose of this AC, AOA means any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
2. **Alert area.** A defined area within which an RIWS will provide an audible or visual alarm.
3. **Apron.** That part of an airport, other than the movement area, intended to accommodate the loading and unloading of passengers and cargo, the refueling, servicing, maintenance, and parking of aircraft, and any movement of aircraft, vehicles, and pedestrians necessary for such purposes. Also called the “ramp.”
4. **Continuous surveillance.** Uninterrupted surveillance by a sensor of a surface within a specific scan area.
5. **Caution Alarm.** Caution alarm indicates the existence of a condition requiring attention but not immediate action. (FAA HFDS-STD-001)
6. **False alarm.** An unnecessary audible or visual alarm delivered when not within the defined area.
7. **Missed alarm.** An occasion when the system fails to present an alarm within the defined area.
8. **Movement area.** The runways, taxiways, and other areas of an airport that are used for taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and aircraft parking areas (reference Title 14 CFR Part 139, Certification of Airports).
9. **Moving map.** A map that shows the vehicle icon stationary, with the surroundings moving and rotating to maintain a heading-up orientation such as a north-up orientation or other user-defined view options.
10. **Protected area.** An area normally required to be clear of ground vehicles, people, and other aircraft while a runway is active.
11. **Ramp.** See apron.
12. **Warning Alarm.** Warning alarm indicates the existence of a hazardous condition that may require immediate action to prevent loss of life, equipment damage, or a service interruption. (FAA HFDS-STD-001)

A.2 Acronyms.

AC	Advisory Circular
AIP	Airport Improvement Program
AOA	Air Operations Area
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
COTS	Commercial Off-the-shelf
EFB	Electronic Flight Bag
FAA	Federal Aviation Administration
GPS	Global Positioning System
HS	Hot Spot
ILS	Instrument Landing System
PFC	Passenger Facility Charge
POFZ	Precision Obstacle Free Zone
RIWS	Runway Incursion Warning System
RSA	Runway Safety Area
VDC	Volts DC

Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/5210-25A

Date: _____

Please check all appropriate line items:

An error (procedural or typographical) has been noted in paragraph _____ on page _____.

Recommend paragraph _____ on page _____ be changed as follows:

In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

Other comments:

I would like to discuss the above. Please contact me at (phone number, email address).

Submitted by: _____

Date: _____

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