



# Advisory Circular

**Subject: Personnel and Equipment Within the Critical Portion of the Runway Strip**

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## 1.0 INTRODUCTION

This Advisory Circular (AC) is provided for information and guidance purposes. It may describe an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

### 1.1 Purpose

- (1) The purpose of this AC is to reinforce the importance of maintaining a critical area of the runway strip free of objects during aircraft operations. Objects that are required to be within the runway strip by function during departures and arrivals must be in accordance with regulations and standards.
- (2) This AC also clarifies the management responsibilities of the airport operator with regard to vehicles and personnel within the manoeuvring area.

### 1.2 Applicability

This document is applicable to all airport operators as defined in Part I of the *Canadian Aviation Regulations* (CARs).

### 1.3 Description of Changes

This document, formerly AC 302-003, Issue 01, has been reissued as AC 302-003, Issue 02. With the exception of minor editorial changes and updated references, the content is unaltered.

## 2.0 REFERENCES AND REQUIREMENTS

### 2.1 Reference Documents

It is intended that the following reference materials be used in conjunction with this document:

- (a) Part III, subpart 2 of the *Canadian Aviation Regulations* (CARs) - *Airports*;
- (b) TP312 Edition 4, dated March 1993 – *Aerodrome Standards and Recommended Practice*.

### 2.2 Cancelled Documents

AC 302-003, Issue No. 01, 2009-01-19 – *Personnel and Equipment Within the Critical Portion of the Runway Strip* (RDIMS # 4128456).

### 2.3 Definitions and Abbreviations

The following definitions and abbreviations are used in this document:

- (a) **ATF** means Aerodrome Traffic Frequency.
- (b) **ATS** means Air Traffic Service.

## 3.0 BACKGROUND

- (1) At airports where vehicle control or advisory services are provided by an ATS, the Airport Operator should have agreements in place identifying the protected areas around the runway where vehicle control or advisory service is provided.
- (2) Operations on the movement area and other portions of the airport that are not subject to the agreement with ATS or at airports where there is no ATS presence during part or all of the airports' operational hours remain the sole responsibility of the airport operator.
- (3) The primary objective at all airports is to provide a safe environment during aircraft operations in the event of a lateral excursion, undershoot, or overshoot by an aircraft. The critical portion of the runway strip to be protected includes the runway, the area surrounding it within the distance

outlined by taxi-holding positions, the take-off/approach surfaces in addition to any areas established for the protection of navigation and landing aids

- (4) All persons and vehicles operating airside must have the authorization of the airport operator. The airport operator must establish procedures for all airside activity to ensure they take place within defined areas to protect and provide the safe operating environment required under Part III of the CARs.
- (5) Airports with Low Visibility Procedures and a Surface Movement and Guidance Control System have additional restrictions for mobile objects written into their plans where protected areas and mobile equipment are governed by their site-specific low visibility plan. Application of TP312 section 3.1.6.8 has varied from airport to airport.
- (6) There is no relaxation within the standards from maintaining the proper runway graded area and strip while conducting maintenance or construction activities adjacent to the runway. Section 5.3 in Appendix A of TP312 provides **guidelines**, but these guidelines have only limited application as the defined zones only correspond in a few cases to the required runway strip and graded area required in TP312 Chapter 3, therefore these guidelines should not be used for normal maintenance activity.
- (7) The actual dimensions of the critical portion of the strip change with the runway code. For the purpose of this circular the areas around the runway are defined as Areas A, B, & C for the take-off/approach surface.
- (8) Areas A and B can be delineated as rectangles around the runway. Area A is the most restrictive and is located 60 m from the runway centre line (see Figures 1 and 2) except where the taxi-holding position is less than 60 m, then the taxi-holding position distance is used (see Figure 1). Area B is the area between the edge of Area A and the taxi holding position (see Figure 2).
- (9) When the activity in Area A is planned for an extended period of time, the Airport Operator should issue a NOTAM indicating their planned action and the expected time of duration. Where there is a requirement to remove equipment, prior notice required should be included in the NOTAM (i.e. Grass cutting activity along runway 25 between 1000 and 1600).
- (10) The rules governing these areas are for the protection of the aircraft operations. Authorized persons with light equipment (such as hand tools) are permitted in Area A for the purpose of in-flight inspection of navigational aids or airport operational maintenance. However, the airport operator must consider other governing rules such as Occupational Health and Safety prior to approving work in Area A while the runway is in use.
- (11) Construction activities and associated equipment are not authorized within the distances required for the runway strip as specified in TP312 while aircraft arrival/departure operations are underway because it would contravene the intent of the runway strip and other areas within it that are for the protection of aircraft operations.

**Note:**

*Closing portions of the runway or procedurally reducing the runway operating environment from precision to non-instrument would reduce the size of the protected areas allowing construction equipment closer to the runway.*

- (12) A critical portion of the runway strip must be protected for the section of the runway being used for take off and landings. The origin of the Runway strip may be adjusted to meet the operational need of the runway.

**Note:**

*For example; during helicopter operations or in the case of an intersection take-off, if only a portion of the runway is used, the origin of the strip can be adjusted to reflect only the portion of the runway in use.*

- (13) All persons must be authorized by the Airport Operator to be airside. Authorized persons in Areas A and B and C are to establish and maintain two-way radio communications with airport control service, vehicle control or advisory service. Where no ATS is provided, they are to broadcast and maintain a listening watch on the mandatory frequency (MF) or the ATF as appropriate.

**Note:**

*Where a number of workers and equipment are working under escort and supervision, one person is to be responsible for advising all other workers and equipment to clear the area.*

- (14) The conditions outlined herein are consistent with TP312 and satisfy the requirements of Subpart 302 of the CARs.

#### **4.0 APPLICATION**

##### **4.1 Operations within the runway strip, parallel to the runway sides during aircraft arrival and/or departure operations (take-off/landing)**

- (1) For runways where the taxi-holding positions are established at a distance of **60 m or less** from the runway centre-line, only authorized personnel (pedestrian only) may enter the area depicted in Figure 1 Area A. When necessary to drop off light equipment, a vehicle, with authorization, may be brought into this area **between** aircraft operations provided the vehicle is removed from that area prior to the next aircraft operation.
- (2) For runways where the taxi-holding positions are established at a distance **greater than 60 m** from the runway centre-line, only authorized personnel (pedestrian only) may enter the area depicted in Figure 2 Area A in accordance with the conditions outlined in (1) above. Vehicular, mowing, maintenance or other equipment may enter, with authorization, Area B during aircraft operations (take-off and landing) [see Figure 2 Area B] (Area B is the area between the edge of Area A and the taxi-holding position). For example mobile equipment, required to be on the runway strip in support of the ongoing runway operation would include, grass cutting, wildlife control, runway/taxiway inspection, or other maintenance vehicles associated with keeping the runway operating. **This does not include construction equipment.**

**Note:**

*For the most part these vehicles are not stationary but in motion to complete their job. It is not unlike an aircraft (by function) that must taxi and occasionally stop within the runway strip as it moves between the runway and the apron. Construction equipment or other vehicles not required "by their function" to be in the runway strip are like a parked or manoeuvring aircraft on an apron, they must remain clear of the runway strip and associated Obstacle Limitation Surfaces.*

- (3) Authorization from the ATS unit, the airport operator or designate is required before proceeding within these areas.
- (4) Also, in no case are any additional areas established for the protection of navigation and landing aids at the site to be compromised.

##### **4.2 Operations beyond the runway ends during aircraft arrival and/or departure operations (take-off and landings) areas A and C**

- (1) Access by vehicles, mowing, and other equipment is limited to areas not less than 60 m from the runway end and **below** the take-off/approach surface, or clearway plane where provided (see Figure 1 and Figure 2 Area A and C), unless that runway is closed or the threshold is relocated in accordance with Subpart 302 of the CARs. Special attention is required to keep the take-off and approach surface clear where the threshold has been displaced.
- (2) During aircraft operations, only authorized personnel (pedestrian only) may enter the area beyond the runway (Area A and C). If necessary, an authorized vehicle may be brought into this area between aircraft operations, to drop off small equipment, provided the vehicle is removed from the area described in (1) prior to the next aircraft operation.

- (3) Authorization from the ATS unit, the airport operator or designate is required before proceeding within the above-mentioned areas outlined in (2).
- (4) At airports with no ATS Services the Airport Operator is responsible to implement procedures consistent with the provisions of Section 8.7 of TP312.

## **5.0 SUMMARY**

- (1) It is necessary to emphasize the requirement of airport operators to keep critical areas in proximity of the runway free of obstacles during aircraft operation. Other certification requirements such as for the runway strip, obstacle limitation surfaces etc., are still applicable and must be maintained to the specifications outlined in Part III of the CARs.
- (2) A critical portion of the runway strip must be protected for the section of the runway being used for take off and landings.
- (3) Airport operators are responsible for ensuring that personnel adjacent to the runway area near an Obstacle Limitation Surface and other areas protected for navigation and landing aids, know the boundaries of these areas, so that they keep vehicles and/or equipment such as mowers clear of these areas during aircraft operations. The above information and information regarding airfield maintenance procedures would normally be found in the Airport Operations Manual together with a letter of agreement for delivery of airport control service, vehicle control or advisory service.
- (4) Aside from the authorized activities described in this circular, vehicles and / or equipment in the areas described herein would be viewed as a violation of Subpart 302 of the CARs, and recorded as a runway incursion.

## **6.0 CONTACT OFFICE**

For more information please contact:

The appropriate Transport Canada Regional Office listed in Appendix B

Suggestions for amendment to this document are invited, and should be submitted via the Transport Canada Civil Aviation Issues Reporting System (CAIRS) at the following Internet address:

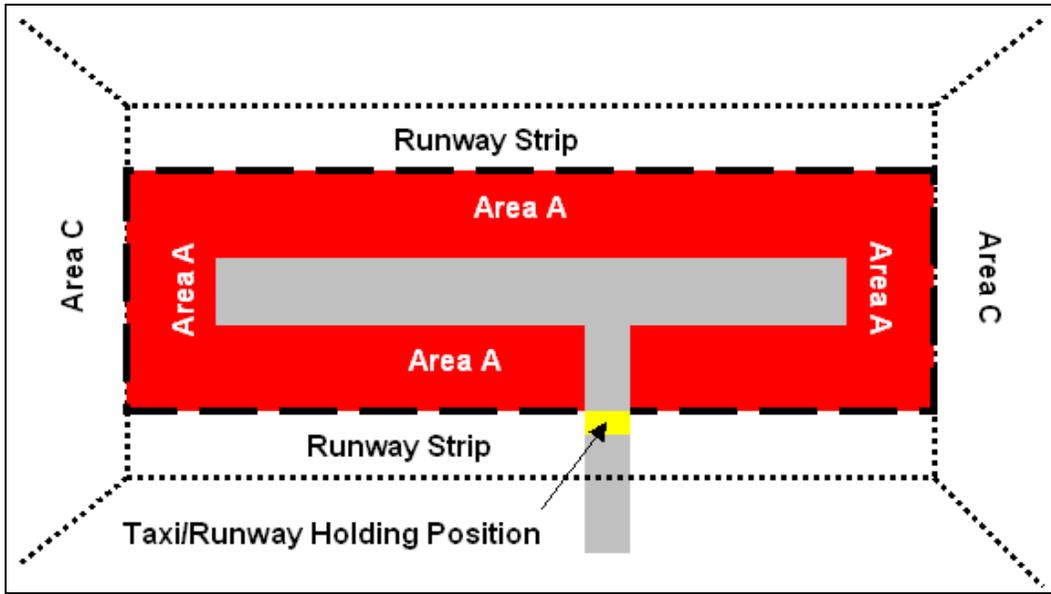
[www.tc.gc.ca/CAIRS](http://www.tc.gc.ca/CAIRS)

or by e-mail at: [CAIRS\\_NCR@tc.gc.ca](mailto:CAIRS_NCR@tc.gc.ca)

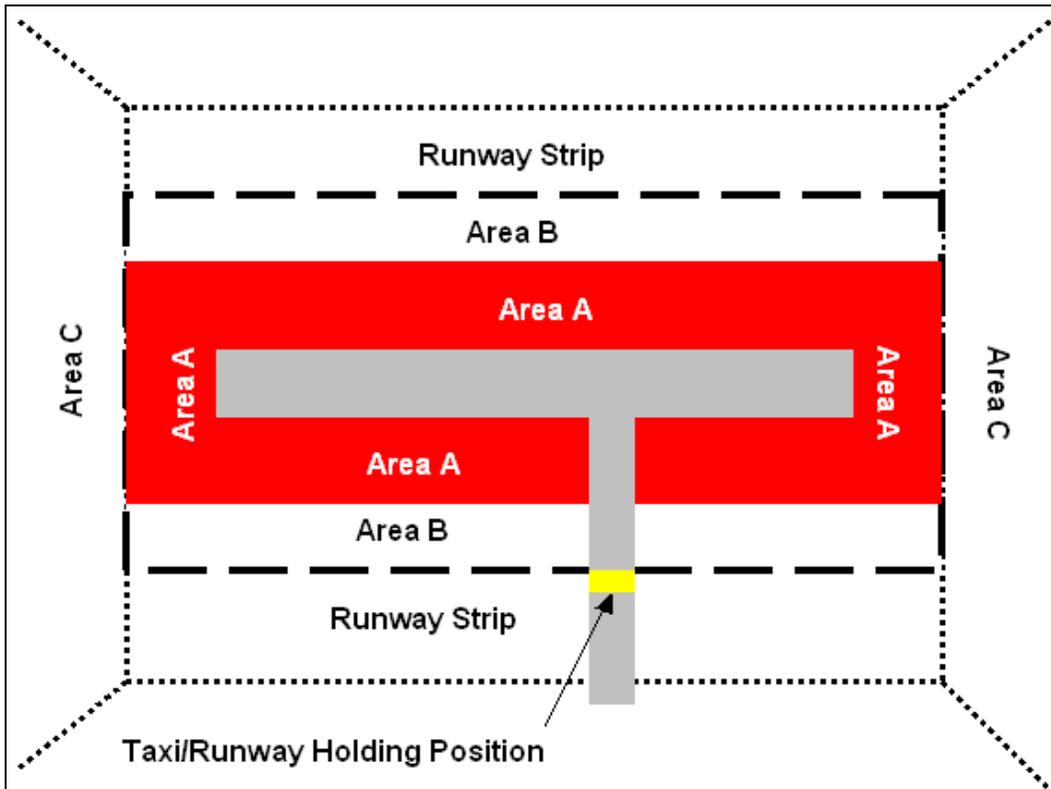
*Original signed by*

D. B. Sherritt  
Director, Standards  
AART

APPENDIX A— FIGURE 1 AND FIGURE 2



**Figure 1**  
TAXI- HOLDING POSITION ESTABLISHED AT A DISTANCE  
OF 60 M OR LESS FROM RUNWAY CENTRE-LINE



**Figure 2**  
TAXI- HOLDING POSITION ESTABLISHED AT A DISTANCE  
GREATER THAN 60 M FROM RUNWAY CENTRE-LINE

**APPENDIX B— LIST OF TRANSPORT CANADA AERODROME SAFETY REGIONAL OFFICES**

**1) Pacific Region**

Office of Aerodrome Safety  
620-800 Burrard St.  
Vancouver, B.C.  
V6Z 2J8  
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**2) Prairie & Northern Region**

Office of Aerodrome Safety  
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344 Edmonton  
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Phone: (204) 983-4335  
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**3) Ontario Region**

Office of Aerodrome Safety  
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Dorval, Quebec  
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