Transport Canada Transports Canada

Advisory Circular

Subject: **Emergency Access Roads and Gates**

Issuing Office:	Civil Aviation, Standards	Document No.:	AC 302-040
File Classification No.:	Z 5000-32	Issue No.:	01
RDIMS No.:	21514669-V6	Effective Date:	2026-10-23

Table of contents

1.0 Introduction 2
1.1 Purpose 2
1.2 Applicability 2
1.3 Description of changes 2
2.0 References and requirements 2
2.1 Reference documents 2
2.2 Cancelled documents 2
2.3 Definitions and abbreviations 2
3.0 Background 3
4.0 Emergency Access Roads 3
4.1 General 3
4.2 Design and Construction 4
4.3 Gates and Barriers 4
4.4 Inspection and Maintenance 4
5.0 Information management 4
6.0 Document history 5
7.0 Contact us 5

1.0 Introduction

(1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes 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 document is to provide aerodromes guidance on the planning, provision, maintenance, and use of emergency access roads. The objective is to ensure emergency responders can rapidly and safely access all operational areas of the aerodrome, aircraft accident sites, and locations where an emergency response may be required.

1.2 Applicability

(1) This document applies to Transport Canada Civil Aviation (TCCA) personnel, delegates, and the aerodrome operators.

1.3 Description of changes

(1) Not applicable.

2.0 References and requirements

2.1 Reference documents

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

- (a) *Aeronautics Act* (R.S.C., 1985, c. A-2)
- (b) Part III, Subpart 2 Division II – Airport Emergency Planning Canadian Aviation Regulations (CARs) — Aircraft Crash Charts and Airport Grid Maps
- (c) Part III, Subpart 3 Division IV of the Canadian Aviation Regulations (CARs) – Response Readiness & Response Test
- (d) International Civil Aviation Organization (ICAO) – International Standards and Recommended Practices – Annex 14, Volume 1
- (e) ICAO Annex 14 — Aerodromes, Volume I — Aerodrome Design and Operations, 9.2.33
- (f) ICAO – Airport Services Manual (Doc 9137) Part 1 – Rescue and Fire Fighting

2.2 Cancelled documents

(1) Not applicable.

(2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and abbreviations

(1) The following **definitions** are used in this document:

(a) **Emergency access roads:** A designated route intended to provide emergency vehicles and personnel with expedient access to all areas of the aerodrome for emergency response purposes.

(b) **Emergency access gates:** A designated, controlled entry point through the airport perimeter that provides authorized emergency responders with access to the aerodrome during an emergency.

(2) The following **abbreviations** are used in this document:

(a) **AC:** Advisory Circular

(b) **ARFF:** Aircraft Rescue Firefighting

(c) **CARs:** Canadian Aviation Regulations

(d) **ICAO**: International Civil Aviation Organization

(e) **TCCA:** Transport Canada Civil Aviation

3.0 Background

(1) Airport grid maps are required to be reviewed and updated annually. The grid map enables emergency responders to quickly determine the most efficient access route to any location on the aerodrome, including runways, taxiways, aprons, fuel storage areas, terminals, and other critical facilities. Emergency access gates and access control points should be clearly marked and referenced within the airport emergency plan.

(2) Emergency access roads should be depicted on the airport grid map and assigned unique identifiers. Emergency access roads are dedicated routes that allow emergency response vehicles to reach any point on the movement area, including runways and their immediate surroundings, as quickly and safely as possible during an emergency.

(3) As outlined in CARs 303.18(4), designated and participating airports are expected to demonstrate the following in order to be considered satisfactory:

(a) within three minutes after an alarm is sounded, aircraft fire-fighting vehicles in a number sufficient for applying the principal extinguishing agent at 50 per cent of the total discharge capacity required by section 303.09 of the CARs are dispatched from their assigned position and, under optimum surface and visibility conditions at the airport or aerodrome, reach the midpoint of the farthest runway serving commercial passenger-carrying aircraft, or another predetermined point of comparable distance and terrain; and

(b) within four minutes after the alarm is sounded, any other aircraft fire-fighting vehicle required by section 303.09 of the CARs reaches the location referred to in paragraph (a).

4.0 Emergency Access Roads

4.1 General

(1) Emergency access roads are recommended to be provided on an aerodrome where terrain conditions permit their construction, to facilitate achieving Aircraft Rescue Firefighting minimum response times.

4.2 Design and Construction

(1) Emergency access roads and associated bridges should:

(a) Be capable of supporting the heaviest vehicles expected to use them;

(b) Be usable in all weather conditions;

(c) where located within 90 m of a runway, be surfaced to prevent erosion and the transfer of debris onto the runway; and

(d) provide sufficient vertical clearance from overhead obstructions for the largest emergency response vehicles.

(e) Particular attention should be given to the provision of ready access to approach areas up to 1 000 m from the threshold, or at least within the aerodrome boundary. Where a fence is provided, the need for convenient access to outside areas, such as gates, should be taken into account.

(f) Aerodrome service roads may serve as emergency access roads when they are suitably located and constructed.

(2) Where the surface of an emergency access road is not readily distinguishable from the surrounding area, or where snow accumulation may obscure its location, edge markers should be provided at 10 m intervals.

4.3 Gates and Barriers

(1) Roads, gates and barriers should be maintained free of parked vehicles, snow accumulation and other impediments that could delay emergency response operations.

(2) Where an emergency access road leads through an aerodrome boundary fence to a public roadway by means of a gate or frangible barrier:

(a) the exterior face of the gate or barrier should be clearly marked to indicate its emergency access function;

(b) vehicle parking should be prohibited in its immediate vicinity; and

(c) Sufficient maneuvering space should be provided to facilitate the movement of emergency response vehicles.

(3) Where gates are non-frangible and secured by mechanical means, access through the gate should be readily available to responding personnel. This may be achieved through measures such as providing gate keys in ARFF vehicles.

4.4 Inspection and Maintenance

(1) Emergency access roads, gates and barriers should be inspected at intervals appropriate to local conditions and operational requirements.

(2) Inspections should include physical testing, where necessary, to verify the proper operation of mechanical components and to ensure that emergency access facilities remain available for immediate use.

5.0 Information management

(1) Not Applicable

6.0 Document history

(1) Not applicable

7.0 Contact us

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We invite suggestions for amendments to this document. Submit your comments to:
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