

ICAO/FAA Aviation Workshop

Aerodrome Manual

Location: Trinidad and Tobago

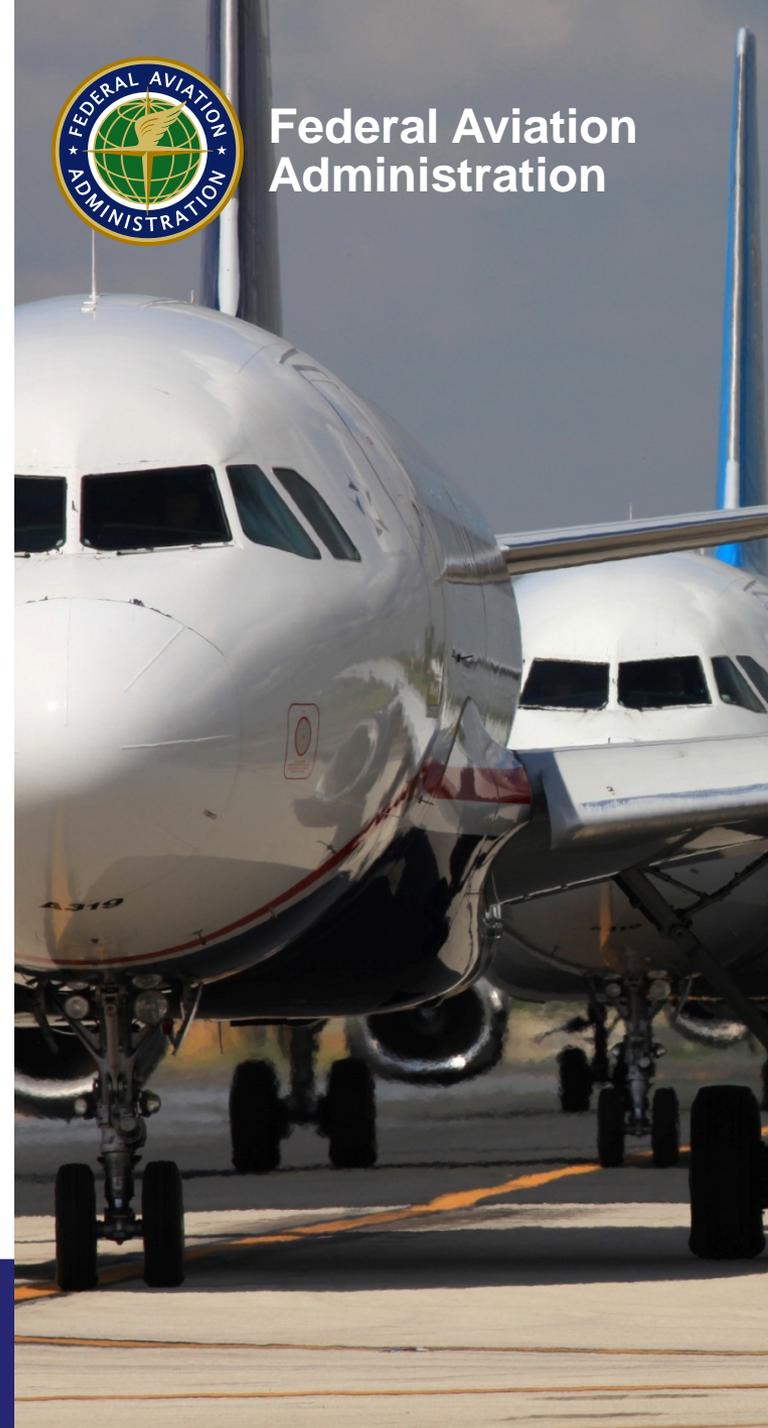
Presented by: FAA, Southern Region

Date: October 2017

Aerodrome Manual, October 2017



**Federal Aviation
Administration**



Course Objectives

- Identify the content required for the ICAO Aerodrome Manual
- Introduce content required for FAA Airport Certification Manual
- Discuss preparation & reviewer techniques
- Use ICAO references & student handouts for reviewing manual content.



ICAO Annex 14 - Section 1.4

ICAO Annex 14 requires States to certify airports with international operations and recommends the same for any public use airport



ICAO Annex 14 - Section 1.4.4

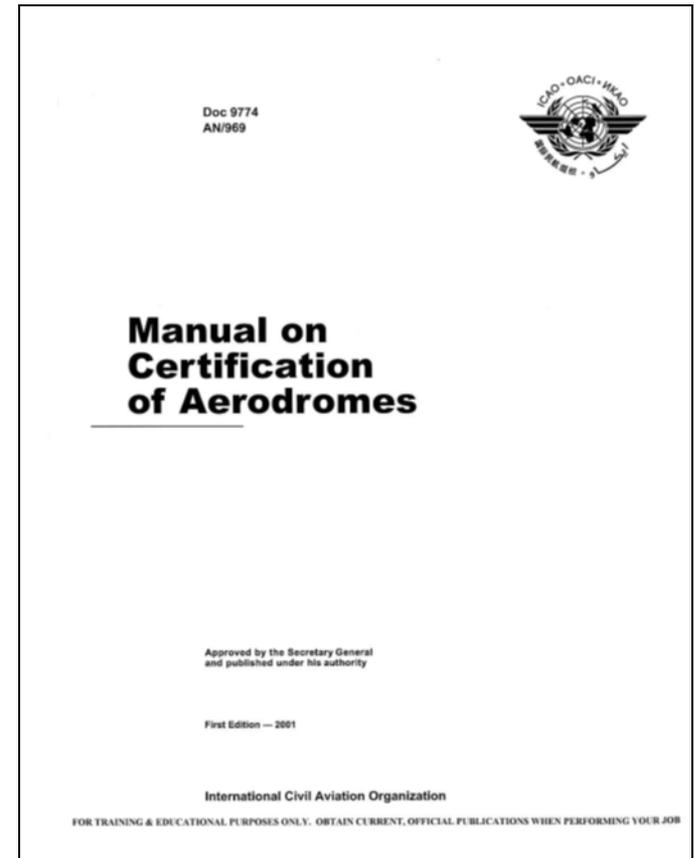
Aerodrome Manual includes all pertinent information:

- the aerodrome site
- facilities
- services
- equipment
- operating procedures
- organization and management
- including a safety management system

Aerodrome Manual

Doc 9774 - sec. 3A.2 Definition of Manual

“The manual that forms part of the application for an aerodrome certificate pursuant to these regulations, including any amendments thereto accepted / approved by the CAA.”



Aerodrome Manual

Preparation requirements

- Typewritten or printed & signed by Aerodrome Operator (AO)
- Formatted for ease of revision
- System for recording & logging revisions and amendments
- Organized to facilitate preparation, review & approval process

Aerodrome Manual

Aerodrome Operator manual requirements

- Must provide CAA complete and current copy
- Must keep at least one complete and current copy at Aerodrome and one at place of business if offsite
- Manual must be available for CAA inspection

Aerodrome Manual

Manual Amendments

- AO must alter or amend when required to maintain accuracy
- CAA may issue written directive to AO requiring alteration or amendment
- AO must notify CAA of changes as soon as practicable and allow for CAA acceptance and approval

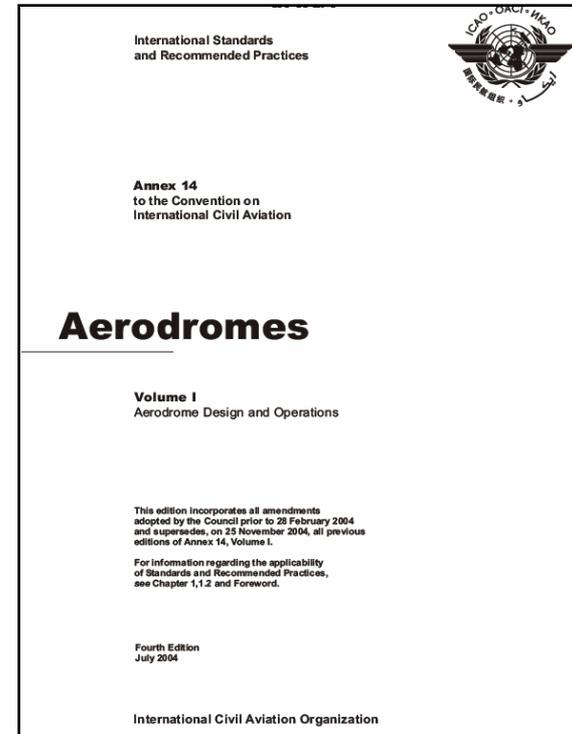
Knowledge test

Which of the following sections of Annex 14 references the requirement for States to ensure a comprehensive Aerodrome Manual?

A. Section 1.4.3

B. Section 1.4.4

C. Section 1.4.5



Aerodrome Manual

Preparation

- WHO is responsible for duties or task?
- WHAT is the information, task or procedure?
- WHEN or in what circumstance is the operating procedure to be activated?
- WHERE is the procedure to be performed?
- HOW is the task or procedure to be performed ?

(specify the number of qualified personnel required, equipment, tools, etc.)

Knowledge test

When writing your Aerodrome Manual, what five questions should you carefully consider?

ANSWER:

1. WHO?
2. WHAT?
3. WHEN?
4. WHERE?
5. HOW?

Aerodrome Manual Contents

PART 1: General Information

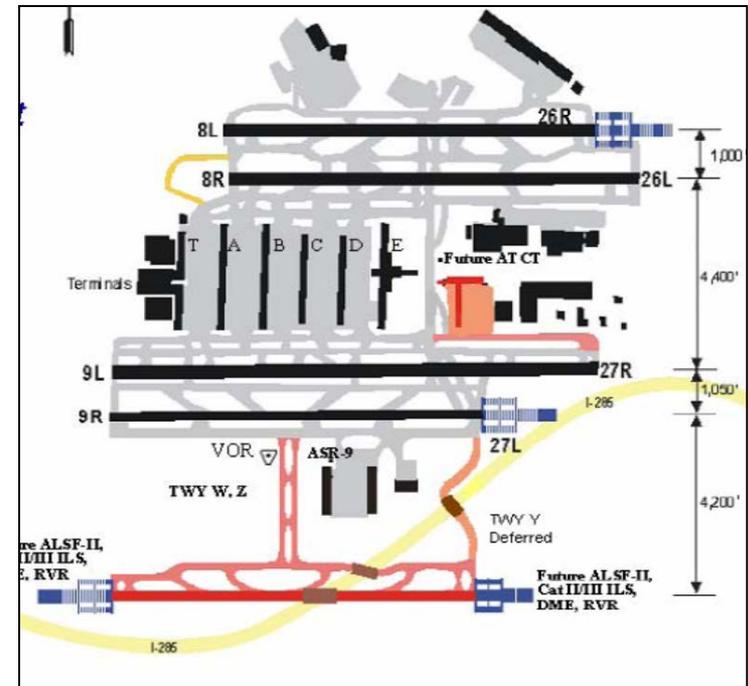
1. Purpose & Scope
2. Cite legal requirement for manual & certificate from national regulation
3. Statement for condition of use based on equal terms and conditions for all
4. Available AIS & circulation procedures
5. System for recording aircraft movement
6. Responsibility and name of the AO

Aerodrome Manual Contents

PART 2: Aerodrome Site

Aerodrome plan showing:

- A. Facility Layout
- B. Boundaries
- C. Distance to nearest populous area and location of aerodrome facilities equipment outside the boundaries
- D. Title Information



Aerodrome Manual Contents

PART 3: AIS Data

1. Aerodrome Name
2. Aerodrome Location
3. Geographic Coordinates
4. Aerodrome Elevation
5. Runway Elevation
6. Aerodrome Reference Temperature
7. Aerodrome Beacon Details
8. AO Name, Address & 24/7 Contact Info.

Aerodrome Manual Contents

PART 3: AIS Data

9. Runways – Bearing, Designation, Dimensions, Displacement, Surface, Type & OFZ for PIR
10. Dimensions and Surface of Runway Strip, End Safety Areas & Stopways
11. Dimensions and Surface of Taxiways
12. Apron Surface & Aircraft Stands
13. Clearway Length & Ground Profile

Aerodrome Manual Contents

PART 3: AIS Data

14. Lighting – Visual Aids, Edge, Centerline, Stop Bars, Visual Docking Guidance & Availability of Standby Power
15. Frequency / Location VOR Checkpoint
16. Location / Designation of Standard Taxi Route
17. Geo-Coordinates of each threshold
18. Geo-Coordinates of applicable taxiway center line points
19. Geo-Coordinates of each aircraft stand

Aerodrome Manual Contents

PART 3: AIS Data

20.Obstruction Chart

21.Pavement surface type and bearing strength

22.One or more pre-flight altimeter check locations & elevations

23.Declared Distances

24.Disabled aircraft removal plan (contact #s & local capabilities)

25.Rescue & Firefighting (RFF) Category & normally available amounts of ext. agent

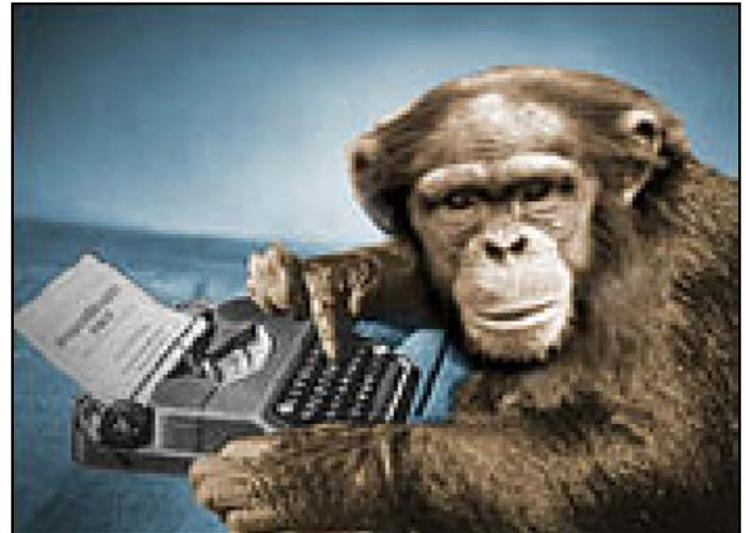
Knowledge test

Which of the following would be included in the Aerodrome Manual under Part 3: AIS Data?

A. Runway Dimensions

B. Obstruction Chart

C. Both A & B



Knowledge test

In which document would you find the requirements for the contents of the Aerodrome Manual?

A. Article 37

B. Doc 9137

C. Doc 9774



Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

- A. Aerodrome Reporting (Part 4.1)
- B. Movement Area Access (Part 4.2)
- C. Aerodrome Emergency Plan (Part 4.3)
(Review ICAO Doc 9137, Part 7)

Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

- D. Rescue & Fire-Fighting (RFF) (Part 4.4)
- E. Inspecting Movement Areas & Obstacle Limitation Surfaces (Part 4.5)



Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

- F. Inspecting Visual Aids & Aerodrome Electrical Systems (Part 4.6)
- G. Movement Area Maintenance (Part 4.7)

Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

- H. Aerodrome Works (part 4.8)**
- I. Apron Management (part 4.9)**



Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

J. Apron Safety Management (part 4.10)

K. Airside Vehicle Control (part 4.11)

Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

L. Wildlife Hazard Management (Part 4.12)

M. Obstacle Control (Part 4.13)

N. Removal

Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

- O. Handling Hazardous Materials (Part 4.15)**
- P. Low-Visibility Operations (part 4.16)**



Aerodrome Manual Contents

PART 4: Aerodrome Operating Procedures & Safety Measures

Q. Protection of Radar & NAVAIDS



Aerodrome Manual Contents

PART 5: Aerodrome Administration & Safety Management System

- A. Aerodrome Administration
- B. Safety Management System (SMS)



Knowledge test

Which “Part” of the Aerodrome Manual addresses operating procedures & safety measures?

A. Part 4

B. Part 3

C. Part 2



Airport Certification Manual

FAA Part 139

The ACM is an extension of the regulation and the contents are legally enforceable.



Airport Certification Manual

AIRPORT CERTIFICATION MANUAL
The Eastern Iowa Airport

Rev. 07/25/01

Section 311
Page 311.1

SECTION 311
MARKING AND LIGHTING

A. RUNWAY/TAXIWAY MARKING

Runways and taxiways are marked in accordance with Advisory Circular 150/5340-1H, *Standards for Airport Marking*. Runways and taxiways at The Eastern Iowa Airport are marked as follows:

1. Runway 9/27 - Precision Instrument Runway with a displaced threshold on Runway 27 end.
2. Runway 13/31 - Non-Precision Instrument Runway with a displaced threshold on Runway 13 end.
3. Taxiways - Centerline marking and hold position markings.

B. HOLD POSITION MARKINGS

The approach category/airplane design group for the runways are as follows:

- Runway 09/27: C IV
- Runway 13/31: C IV

The minimum clearance for hold position markings is 250 feet from the runway centerline for Runway 09/27 and 250 feet from the runway centerline for Runway 13/31. All hold position markings and signs are currently located 250 feet or greater.

C. AIRFIELD SIGNS

Taxiway guidance signs required by part 139.311(a)(3), holding position signs required by part 139.311 (a)(4), and ILS hold position signs required by part 311 (a)(5), are installed in accordance with the Sign Plan included as Appendix D. The signs meet standards set forth in the AC 150/5340-18C, *Standards for Airport Sign Systems*, and sign specifications in AC 150/5345-44F, *Specifications for Taxiway and Runway Signs*.

Runway distance remaining signs are installed on Runways 09/27 and 13/31.

D. RUNWAY/TAXIWAY LIGHTING

Runway lighting at The Eastern Iowa Airport is in accordance with standards in the current edition of AC 150/5340-24, *Runway and Taxiway Edge Lighting System*, to meet the specifications for the lowest approach minimums authorized for each runway. Runway lighting at the Airport is:

1. Runway 9/27 - High Intensity Runway Lights (HIRL)
2. Runway 13/31 - Medium Intensity Runway Lights (MIRL)

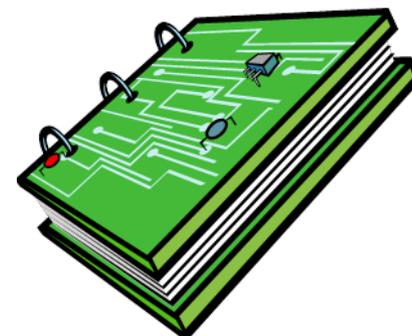
On Runway 09/27, semiflush runway lights are installed at all intersections where needed to maintain uniform spacing.

FAA APPROVED
M. M. Miller
DATE: AUG 3 2001

• Each page of the ACM is signed and dated by an airport certification safety inspector

Airport Certification Manual

ACM Contents Part 139.203

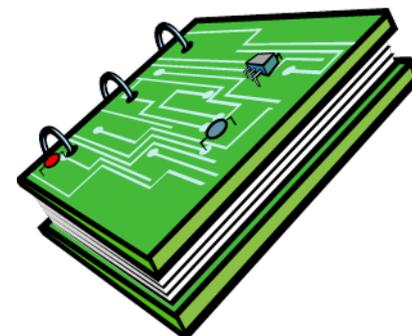


Manual elements	Airport certificate class			
	Class I	Class II	Class III	Class IV
1. Lines of succession of airport operational responsibility	X	X	X	X
2. Each current exemption issued to the airport from the requirements of this part	X	X	X	X
3. Any limitations imposed by the Administrator	X	X	X	X
4. A grid map or other means of identifying locations and terrain features on and around the airport that are significant to emergency operations	X	X	X	X
5. The location of each obstruction required to be lighted or marked within the airport's area of authority	X	X	X	X
6. A description of each movement area available for air carriers and its safety areas, and each road described in § 139.319(k) that serves it	X	X	X	X

Airport Certification Manual

ACM Contents Part 139.203

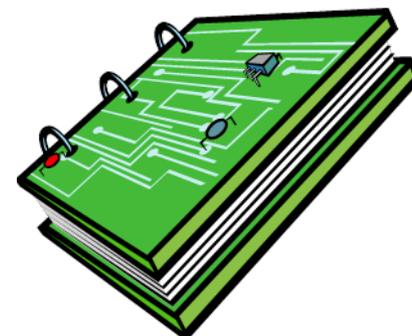
Manual elements	Airport certificate class			
	Class I	Class II	Class III	Class IV
7. Procedures for avoidance of interruption or failure during construction work of utilities serving facilities or NAVAIDs that support air carrier operations	X	X	X	
8. A description of the system for maintaining records, as required under § 139.301	X	X	X	X
9. A description of personnel training, as required under § 139.303	X	X	X	X
10. Procedures for maintaining the paved areas, as required under § 139.305	X	X	X	X
11. Procedures for maintaining the unpaved areas, as required under § 139.307	X	X	X	X
12. Procedures for maintaining the safety areas, as required under § 139.309	X	X	X	X
13. A plan showing the runway and taxiway identification system, including the location and inscription of signs, runway markings, and holding position markings, as required under § 139.311	X	X	X	X
14. A description of, and procedures for maintaining, the marking, signs, and lighting systems, as required under § 139.311	X	X	X	X
15. A snow and ice control plan, as required under § 139.313	X	X	X	
16. A description of the facilities, equipment, personnel, and procedures for meeting the aircraft rescue and firefighting requirements, in accordance with §§ 139.315, 139.317, and 139.319	X	X	X	X
17. A description of any approved exemption to aircraft rescue and firefighting requirements, as authorized under § 139.111	X	X	X	X



Airport Certification Manual

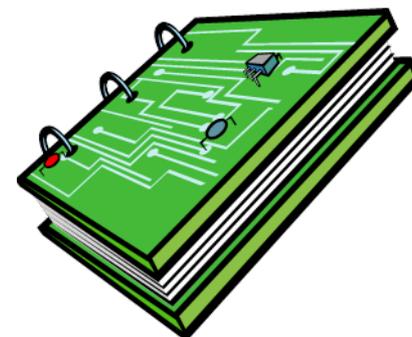
ACM Contents Part 139.203

Manual elements	Airport certificate class			
	Class I	Class II	Class III	Class IV
18. Procedures for protecting persons and property during the storing, dispensing, and handling of fuel and other hazardous substances and materials, as required under § 139.321	X	X	X	X
19. A description of, and procedures for maintaining, the traffic and wind direction indicators, as required under § 139.323	X	X	X	X
20. An emergency plan as required under § 139.325	X	X	X	X
21. Procedures for conducting the self-inspection program, as required under § 139.327	X	X	X	X
22. Procedures for controlling pedestrians and ground vehicles in movement areas and safety areas, as required under § 139.329	X	X	X	
23. Procedures for obstruction removal, marking, or lighting, as required under § 139.331	X	X	X	X
24. Procedures for protection of NAVAIDs, as required under § 139.333	X	X	X	
25. A description of public protection, as required under § 139.335	X	X	X	
26. Procedures for wildlife hazard management, as required under § 139.337	X	X	X	
27. Procedures for airport condition reporting, as required under § 139.339	X	X	X	X
28. Procedures for identifying, marking, and lighting construction and other unserviceable areas, as required under § 139.341	X	X	X	
29. Any other item that the Administrator finds is necessary to ensure safety in air transportation	X	X	X	X



Airport Certification Manual

1. Easy to revise
2. Submitted in duplicate
3. Signed by certificate holder
4. Each page stamped & dated by approver
5. Kept current at all times
6. Distributed to personnel with duties in the ACM
7. Structure mirrors ICAO requirements



Administrative Recordkeeping

1. Conduct at least quarterly review of aerodrome manual to ensure manual is compliant with ICAO/ national requirements.
2. Conduct quarterly review to ensure aerodrome personnel are complying with the requirements of the manual & ICAO recordkeeping requirements.
3. Mid level manager or supervisor should directly participate in the review process.





Questions

