

AIRPORT STANDARDS DIRECTIVE 504
[ASD 504]

AERODROME OPERATIONS & SERVICES



AIRPORT STANDARDS DIVISION
DEPARTMENT OF CIVIL AVIATION
MALAYSIA

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INTRODUCTION

1. In exercise of the powers conferred by regulation 12 (h) of the Civil Aviation (Aerodrome Operations) Regulations 2016, the Director General makes this Airport Standards Directive.
2. This Airport Standards Directive is published by the Director General under section 24O of Civil Aviation Act 1969 [Act 3] – Amendment 2006.
3. The title of the directive refers to aerodrome operations and services. This title has been selected to discriminate between those services which relate to the safety and efficiency of aircraft operations and those which relate to such matters as the administration of airport finances and servicing of passengers.
4. Examination of the table of contents will show that the directive discuss particular services to be provided by the aerodrome operator without detailing the responsibilities of individual departments.

OBJECTIVE

5. ICAO Annex 14, in addition to specifying certain facilities to be provided at airports, identifies a number of duties to be carried out by aerodrome operators.
6. The purpose of this directive is to bring under one cover a compilation of various technical functions that are required to be fulfilled by an airport. Most airports will be required to fulfil all of the duties reviewed in this directive. What will vary between individual airports is the size and character of the organization that will be required to fulfil them and the amount of time that each duty will occupy.

APPLICABILITY

7. This Directive is applicable and prescribes rules governing aerodrome operations and services at aerodromes, in any state of Malaysia, intended for use by public transport aircraft.
8. Government aerodromes and military aerodromes are not subjected to the need for certification thus not covered under this directive.
9. Private-owned aerodrome that is not open for use by public transport aircraft are not subjected to the need for certification and will not be covered under this directive.

AUTHORITY

10. The Authority that governs the aspect of aerodrome operations and services is the Director General of Civil Aviation Malaysia.

APRON MANAGEMENT SERVICE

11. When warranted by the volume of traffic and operating conditions, an appropriate apron management service should be provided on an apron by an aerodrome ATS unit, by another aerodrome operating authority, or by a cooperative combination of these, in order to:
 - a) regulate movement with the objective of preventing collisions between aircraft, and between aircraft and obstacles;
 - b) regulate entry of aircraft into, and coordinate exit of aircraft from, the apron with the aerodrome control tower; and
 - c) ensure safe and expeditious movement of vehicles and appropriate regulation of other activities.
12. When the aerodrome control tower does not participate in the apron management service, procedures should be established to facilitate the orderly transition of aircraft between the apron management unit and the aerodrome control tower.
13. An apron management service shall be provided with radiotelephony communications facilities.
14. Where low visibility procedures are in effect, persons and vehicles operating on an apron shall be restricted to the essential minimum.
15. An emergency vehicle responding to an emergency shall be given priority over all other surface movement traffic.
16. A vehicle operating on an apron shall:
 - a) give way to an emergency vehicle; an aircraft taxiing, about to taxi, or being pushed or towed; and
 - b) give way to other vehicles in accordance with local regulations.
17. An aircraft stand shall be visually monitored to ensure that the recommended clearance distances are provided to an aircraft using the stand.

GROUND SERVICING OF AIRCRAFT

18. Fire extinguishing equipment suitable for at least initial intervention in the event of a fuel fire and personnel trained in its use shall be readily available during the ground servicing of an aircraft, and there shall be a means of quickly summoning the rescue and fire fighting service in the event of a fire or major fuel spill.
19. When aircraft refuelling operations take place while passengers are embarking, on board or disembarking, ground equipment shall be positioned so as to allow:
 - a) the use of a sufficient number of exits for expeditious evacuation; and
 - b) a ready escape route from each of the exits to be used in an emergency.

AERODROME VEHICLE OPERATIONS

20. It is intended that roads located on the movement area be restricted to the exclusive use of aerodrome personnel and other authorized persons, and that access to the public buildings by an unauthorized person will not require use of such roads.
21. A vehicle shall be operated:
 - a) on a manoeuvring area only as authorized by the aerodrome control tower; and
 - b) on an apron only as authorized by the appropriate designated authority.
22. The driver of a vehicle on the movement area shall comply with all mandatory instructions conveyed by markings and signs unless otherwise authorized by:
 - a) the aerodrome control tower when on the manoeuvring area; or
 - b) the appropriate designated authority when on the apron.
23. The driver of a vehicle on the movement area shall comply with all mandatory instructions conveyed by lights.

24. The driver of a vehicle on the movement area shall be appropriately trained for the tasks to be performed and shall comply with the instructions issued by:
- a) the aerodrome control tower, when on the manoeuvring area; and
 - b) the appropriate designated authority, when on the apron.
25. The driver of a radio-equipped vehicle shall establish satisfactory two-way radio communication with the aerodrome control tower before entering the manoeuvring area and with the appropriate designated authority before entering the apron. The driver shall maintain a continuous listening watch on the assigned frequency when on the movement area.

Table 3-1. Taxiway minimum separation distances

Code letter	Distance between taxiway centre line and runway centre line (metres)								Taxiway centre line to taxiway centre line (metres)	Taxiway, other than aircraft stand taxilane, centre line to object (metres)	Aircraft stand taxilane centre line to object (metres)
	Instrument runways Code number				Non-instrument runways Code number						
	1	2	3	4	1	2	3	4			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A	82.5	82.5	–	–	37.5	47.5	–	–	23.75	16.25	12
B	87	87	–	–	42	52	–	–	33.5	21.5	16.5
C	–	–	168	–	–	–	93	–	44	26	24.5
D	–	–	176	176	–	–	101	101	66.5	40.5	36
E	–	–	–	182.5	–	–	–	107.5	80	47.5	42.5
F	–	–	–	190	–	–	–	115	97.5	57.5	50.5

Note 1.— The separation distances shown in columns (2) to (9) represent ordinary combinations of runways and taxiways. The basis for development of these distances is given in the ICAO Aerodrome Design Manual (Doc 9157), Part 2.

Note 2.— The distances in columns (2) to (9) do not guarantee sufficient clearance behind a holding aeroplane to permit the passing of another aeroplane on a parallel taxiway. See the ICAO Aerodrome Design Manual (Doc 9157), Part 2.

SITING OF EQUIPMENT AND INSTALLATIONS ON OPERATIONAL AREAS

26. Unless its function requires it to be there for air navigation or for aircraft safety purposes, no equipment or installation shall be:
- a) on a runway strip, a runway end safety area, a taxiway strip or within the distances specified in Table 3-1, column 11, if it would endanger an aircraft; or
 - b) on a clearway if it would endanger an aircraft in the air.

27. Any equipment or installation required for air navigation or for aircraft safety purposes which must be located:
- a) on that portion of a runway strip within:
 - 1) 75 m of the runway centre line where the code number is 3 or 4;
or
 - 2) 45 m of the runway centre line where the code number is 1 or 2;
or
 - b) on a runway end safety area, a taxiway strip or within the distances specified in Table 3-1; or
 - c) on a clearway and which would endanger an aircraft in the air;
- shall be frangible and mounted as low as possible.
28. Unless its function requires it to be there for air navigation or for aircraft safety purposes, no equipment or installation shall be located within 240 m from the end of the strip and within:
- a) 60 m of the extended centre line where the code number is 3 or 4; or
 - b) 45 m of the extended centre line where the code number is 1 or 2; of a precision approach runway category I, II or III.
29. Any equipment or installation required for air navigation or for aircraft safety purposes which must be located on or near a strip of a precision approach runway category I, II or III and which:
- a) is situated on that portion of the strip within 77.5 m of the runway centre line where the code number is 4 and the code letter is F; or
 - b) is situated within 240 m from the end of the strip and within:
 - 1) 60 m of the extended runway centre line where the code number is 3 or 4; or
 - 2) 45 m of the extended runway centre line where the code number is 1 or 2; or
 - c) penetrates the inner approach surface, the inner transitional surface or the balked landing surface;
- shall be frangible and mounted as low as possible.

FENCING

30. A fence or other suitable barrier shall be provided on an aerodrome to prevent the entrance to the movement area of animals large enough to be a hazard to aircraft.
31. A fence or other suitable barrier shall be provided on an aerodrome to deter the inadvertent or premeditated access of an unauthorized person onto a non-public area of the aerodrome.

Note 1.— This is intended to include the barring of sewers, ducts, tunnels, etc., where necessary to prevent access.

Note 2.— Special measures may be required to prevent the access of an unauthorized person to runways or taxiways which overpass public roads.

32. Suitable means of protection shall be provided to deter the inadvertent or premeditated access of unauthorized persons into ground installations and facilities essential for the safety of civil aviation located off the aerodrome.
33. The fence or barrier shall be located so as to separate the movement area and other facilities or zones on the aerodrome vital to the safe operation of aircraft from areas open to public access.
34. When greater security is thought necessary, a cleared area should be provided on both sides of the fence or barrier to facilitate the work of patrols and to make trespassing more difficult. Consideration should be given to the provision of a perimeter road inside the aerodrome fencing for the use of both maintenance personnel and security patrols.

SECURITY LIGHTING

35. At an aerodrome where it is deemed desirable for security reasons, a fence or other barrier provided for the protection of international civil aviation and its facilities should be illuminated at a minimum essential level. Consideration should be given to locating lights so that the ground area on both sides of the fence or barrier, particularly at access points, is illuminated.

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Dated : 25 APRIL 2016