Advisory Circular

GUIDANCE IN OPERATIONAL PROCEDURES AND PRINCIPLES FOR APRON MANAGEMENT

AC AGA–AMGT–01–2024

(Second Issue)

Aerodrome & Air Navigation Safety Oversight Office (AANSOO)
Office of the Director General
Civil Aviation Authority of the Philippines
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Advisory Circulars (AC) are intended to provide recommendations and guidance, illustrate a means-but not necessarily the only means of complying with regulatory requirements, or to explain certain regulatory requirements by providing interpretative and explanatory materials.

CAAP will generally accept that when the provisions of an Advisory Circular have been met, compliance with the relevant regulatory obligations has been satisfied.

Where an AC is referred to in a "Note" within regulatory documentation, the AC remains as a guidance material.

ACs should always be read in conjunction with the referenced regulations.

I. PURPOSE

The purpose of this Advisory Circular (AC) is to provide guidance to aerodrome operators in adopting operational procedures and principles for apron management in accordance with the provision in the Manual of Standards for Aerodromes (MOS) Chapter 10, Section 10.13.4 – Apron Management Service. The aerodrome operators, in cooperation with ATS Unit, when warranted, shall provide an appropriate apron management service in order to:

A. Ensure safe movement with the objective of preventing collisions between aircraft, and between aircraft and obstacles. Obstacles include buildings, fixed and mobile equipment, passenger loading bridges, lighting masts;
B. Ensure safe entry of aircraft into, and coordinate exit of aircraft from, the apron with the aerodrome control tower;
C. Ensure safe and expeditious movement of vehicles and appropriate regulation of other activities; and
D. Ensure timely management of the allocation of aircraft parking stands.

II. APPLICATION

AC AGA-AMGT-01-2024 is applicable to all aerodromes providing apron management or those intending to establish the same service.

III. RELATED RULES

This Advisory Circular relates specifically to the requirements of Civil Aviation Regulations Governing - Aerodromes (CAR-Aerodromes) Part 2.2.250– Apron Management Service.

IV. ACKNOWLEDGEMENT

Aerodrome and Air Navigation Safety Oversight Office (AANSOO) of the Civil Aviation Authority of the Philippines (CAAP) acknowledges the valuable information provided by ICAO through its published Guidance Materials for all Contracting States and through other related best practices developed by international organizations.

V. CHANGE NOTICE

This Advisory Circular in Operational Procedures and Principles for Apron Management, AC AGA-AMGT-01-2024, replaces AC 139-AMGT-01 which was published on February 2017.

V. COPIES OF THIS AC

AC AGA-AMGT-01-2024 is available and can be downloaded at the official website of CAAP at www.caap.gov.ph. A printed copy of this AC can be requested from the Regulatory Safety Standards Division (RSSD) of the Aerodrome and Air Navigation Safety Oversight Office (AANSOO), Civil Aviation Authority of the Philippines, located at MIA Road corner, Ninoy Aquino Avenue, Pasay City, Metro Manila, 1300 with Tel. No.: (02) 8246 4988 local 2040.

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FOREWORD

The apron is the area of highest density and variety of movements. It is the one place where aircraft, vehicles, passengers, and airport personnel cross and intercross. There are a large number of activities taking place on aprons within a congested and time-sensitive environment. Accidents, incidents and occurrences can affect the safety and health of personnel as well as cause aircraft damage.

Also, an aerodrome apron is an essential facility supporting aircraft parking and operational arrangements. Aprons are designed to support aircraft of varying sizes, weights and capacities. Aprons at commercial airports are likely to accommodate multiple aircraft types in adjacent bays. An apron surface may be constructed of dirt, grass, asphalt or concrete depending on the category (based on weight and size) of aircraft for which the apron will be used.

Ensuring safety on the apron is primarily the responsibility of the aerodrome operator. However, all third parties operating on the apron have a responsibility to ensure the safety of their specific operations. Apron hazards should be identified and, when necessary, mitigation measures should be developed as part of the aerodrome operator's safety management system (SMS). All staff operating on the apron need to be made aware of its hazards: this may be achieved through general safety introduction training for all staff with unescorted access to the apron areas. Part of this training includes aerodrome operating procedures related to apron management and safety.

For safe and efficient apron operations there is a need for a close liaison between the aerodrome operator, aircraft operators, air traffic services (ATS) and other third parties. The operational safety and efficiency of apron management depends very largely upon this close cooperation.

DEFINITIONS

A full list of definitions is contained in the CAR-Aerodromes and Manual of Standard for Aerodromes, but the essential definitions are listed below:

Aerodrome. A defined area on land or water (including any buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Aerodrome facilities and equipment. Facilities and equipment, inside or outside the boundaries of an aerodrome, that are constructed or installed and maintained for the arrival, departure and surface movement of aircraft.

Aircraft stand. A designated area on an apron intended to be used for parking an aircraft.

Apron. A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fueling, parking or maintenance.

Apron Controller. A person trained in managing the apron who is in control of the allocation of aircraft stands.

Apron management service. A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

Intermediate holding position. A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.

Maneuvering area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).

a) are located on an area intended for the surface movement of aircraft; or
b) that extend above a defined surface intended to protect aircraft in flight; or
c) stand outside those defined surfaces and have been assessed as being a hazard to air navigation.

Road. An established surface route on the movement area meant for the exclusive use of vehicles.

Taxiway. A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including ***(on an apron)***:

a) ***Aircraft stand taxilane.*** A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

b) ***Apron taxiway.*** A portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron.

Two of the critical definitions above are apron and maneuvering area. It is essential that the aerodrome operator clearly defines in its aerodrome manual where the boundaries are between its aprons and the maneuvering area. Aircraft movements on the maneuvering area are deemed to be air traffic and cannot be controlled by an apron management officer who is not a licensed air traffic controller.

ACRONYMS AND ABBREVIATIONS

AANSOO	Aerodrome and Air Navigation Safety Oversight Office
AC	Advisory Circular
AGA	Aerodrome Ground Aids
AIH	Aerodrome Inspector's Handbook
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Service
ANSP	Air Navigation Services Provider
ARCID	Aerodrome Registration Certification Inspection Division
ARFFS	Aerodrome Rescue and Fire Fighting Services
ATC	Air Traffic Controller
CAAP	Civil Aviation Authority of the Philippines
CAR-Aerodromes	Civil Aviation Regulations governing Aerodromes
ETA	Estimated Time of Arrival
FOD	Foreign Object Debris
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IGOM	IATA Ground Operations Manual
MOS-Aerodromes	Manual of Standards for Aerodromes
MOWP	Method of Working Plan
NOTAM	Notice to Airman
PANS	Procedure for Air Navigation Services
RSSD	Regulatory Safety Standards Division

SARPs	Standards and Recommended Practices
VDGS	Visual Docking Guidance System

REFERENCES

Civil Aviation Regulations for Aerodromes (CAR-Aerodromes)

Manual of Standards for Aerodromes (MOS-Aerodromes)

AC 139-AMGT-01: Guidelines in Operational Procedures and Principles for Apron Management

ICAO Annex 14 Vol. 1 – Aerodrome Design and Operations

ICAO Annex 14 Vol. 2 – Heliports

ICAO Document 9137 Part 8 – Airport Services Manual (Airport Operational Manual)

ICAO Document 998 – PANS Aerodromes

IATA Ground Operations Manual (IGOM)

1. WHEN IS APRON MANAGEMENT REQUIRED

1.1 The international requirement for the provision of Apron management is based on the statement "when warranted by the volume of traffic and operating conditions". The volume of traffic that warrants the provision of an apron management service will not be the same for every aerodrome, but will depend upon circumstances including the following:

A. Visibility of the apron, both stands and taxiways, from the ATC Control Tower;

B. Workload and other duties of the ATC controller who communicates with aircraft on the apron in the absence of an apron management unit, e.g. tower controller or ground controller. (Does the controller have the capacity to communicate with aircraft on the apron?);

C. Provision of an ATC clearance delivery service;

D. Complexity of an air traffic and of apron traffic;

E. Complexity of the apron layout;

F. History of safety incidents on the apron or when transiting between the apron and maneuvering area;

G. Complexity of ground handling arrangements, such as nose-in push out aircraft parking, or self-maneuvering parking, or a mixture; provision of VDGS, duration of aircraft turn-arounds, complexity of aircraft loading, such as a combination of lower deck, upper deck, nose and tail cargo loading, use of rear steps for passenger embarkation/disembarkation, use of buses, and use of pedestrian lanes;

H. Frequency of adverse weather and poor visibilities; and

I. Frequency of special traffic, such as VVIP, large aircraft, ad-hoc special handling aircraft.

2. IATA GROUND OPERATIONS MANUAL (IGOM)

2.1 The guidance in this document is not intended to take precedence over the information and operational instructions or considerations contained within the IATA Ground Operations Manual (IGOM) where that is applied at an aerodrome. It merely seeks to complement, where applicable, and provide all aerodrome operators, whether handling IATA members or not, of guidance in the provision of apron management services. The aerodrome operator may determine locally, in consultation with their service partners, the appropriate and exact procedures to be used on its aerodrome, as long as they are clearly set out in the aerodrome manual and fully comply with the CAR and MOS for Aerodromes. Aerodrome operators are encouraged to standardize terminology in documentation and procedures in accordance with the MOS for Aerodromes that in turn is based upon ICAO terminology.

3. GENERAL SAFETY

3.1 To ensure that the highest level of safety management is maintained, and that actual incidents or accident are minimized, the aerodrome operator shall have measures which:

A. Ensure each service provider on the apron has the safety procedures for the operation service rendered within the apron.

B. Ensure that all employees working on the apron are trained in safety principles and practices and regularly assessed on their competency and knowledge.

C. Have in place a program of periodically reviewing and checking:

1. Accuracy of safety records and data on the apron;

2. The validity of the safety procedures; and

3. Safety awareness and practices of each employee working on the apron.

D. For safety management purpose, the aerodrome operator shall provide the surface markings and signages to communicate safety information, rules and limitations for passengers, drivers of vehicles and equipment and airport staff on the apron.

E. Ensure that access to the aprons by personnel and vehicles are limited to only those that have been specifically and individually approved to work on the apron, and are required to be there.

F. Ensure that each person working on the apron reports incidents or accidents of unsafe practice that have been observed.

G. Ensures any airside organization which requires outside personnel or contractors to their premises abides by the terms and conditions associated with the issue of airport pass and the general rules applicable to pedestrians and workers in the airside and that they adhere strictly to the rules and procedures governing the airside;

H. Ensure any organization contracted to work on the airside area submit a Safety Management Plan (this may form part of the MOWP – Method of Working Plan detailed in MOS for Aerodromes) that shall be in force for the whole period of contract. As a minimum the safety management plan shall include the following:

1. Training on safety in relation to:

   i. Hazards to himself/herself and others emanating from his/her occupation; and

   ii. Hazards to equipment, other employees and third parties, structures and installations.

2. Issue and enforce the wearing of approved personal protective equipment.

3. Make provision or procedures for handling of accidents and injury to its personnel.

4.. Provide the name and contact details of the person designated as the Safety Officer for the organization.

5. Plan for providing its staff refresher training on safety at least once every 6 months.

4. CONTROLLED AREA

4.1 The movement area of a typical Aerodrome operator is split up into several areas, on which aircraft can move or park and which are controlled by different entities.

A. The apron including the apron taxiways and taxilanes, where provided on an apron, the maintenance apron and the cargo apron are controlled by the aerodrome operator, or a specific operator of that apron, such as the military, or an aircraft maintenance repair and overhaul operator;

B. The runway(s) are controlled by ATC – Tower;

C. The maneuvering areas except the runway(s) are controlled by ATC – Ground;

D. Any helicopter final approach and take-off areas are typically controlled by

ATC- Tower;

E. The control of an isolated aircraft parking position can be handed over to security forces in the event of a security emergency.

5. COORDINATION WITH AIR TRAFFIC CONTROL SERVICES

5.1 There must be strict procedures in place for the transfer of control between the different parties involved. The aerodrome operator is responsible for coordinating the transfer points of responsibility with all concerned parties and clearly setting these out in the aerodrome manual and AIP AD2 in the Aerodrome / Heliport Chart - ICAO.

A. The transfer points of responsibility between TOWER and Apron Control should be decided in consultation between ATC and the aerodrome operator subject to the following criteria:

1. Normally at the boundary between the apron and maneuvering area;

2. Apron control cannot accept aircraft until they have entered the apron;

3. Apron control must not control aircraft on the maneuvering area;

4. The transfer point should normally be at an intermediate holding position; and

5. Intermediate holding positions must be marked by the correct single broken line, and have a designator in accordance with the MOS and the appropriate sign.

B. For arriving aircraft, the TOWER controller shall release the aircraft to apron control at or after it crosses the transfer points indicated in (a) above. However, he may release the aircraft earlier once the pilot reports that he has the marshaller in sight, and there is no conflict with other movements;

C. For departing aircraft, the apron controller shall release the aircraft to TOWER before it crosses the transfer points in (a) above. However, he may release the aircraft earlier once it is definitely heading to the correct intermediate holding position and is clear of all obstacles;

D. TOWER shall inform Apron Management of the ETA of each arriving aircraft and, if not otherwise indicated, the apron of its destination.

The period of advanced notification shall be determined in consultation between the aerodrome operator and ATC;

E. TOWER shall advise the Apron Control of the landing of each aircraft as soon as it touches down, passing the time, call sign and aircraft type; and

F. For arriving aircraft, Apron Control shall advise the TOWER of the aircraft stand or place that it has allocated to an arriving aircraft as early as possible and before it reaches the point of transfer of control.

6. ALLOCATION OF AIRCRAFT STANDS

A. Allocation of Aircraft Stands is the responsibility of the aerodrome operator, normally undertaken by the apron controller;

B. In assessing the demand for aircraft stands on a particular day or for a particular period of that day, the apron controller shall consider:

1. The scheduled aircraft movements.

2. The number of stands already occupied by aircraft especially those whose departure have been delayed, and.

C. In allocating stands, the aerodrome operator shall consider the following:

1. The type of aircraft i.e., weight, wingspan (including with or without winglets), fuselage length, fueling requirements, cargo loading door and deck, etc.;

2. The airports' movement schedule for the day;

3. Generally, on the principle of first come first served, but,

4. Any special conditions such as large aircraft full passenger load (e.g.A380), any health or medical emergency on board an incoming aircraft, etc.; and

5. Duration of the intended parking.

7. RULES AND PROCEDURES FOR AIRCRAFT MARSHALLING

7.1 Marshalling is a service provided to an arriving aircraft so that it can move safely from the taxiway or aircraft stand taxi lane to its allocated parking stand; and when it departs, from the stand to the taxiway or taxilane.

7.2 The marshalling of aircraft shall be carried out in accordance to the provisions adopted from CAR-ANS Part 14, Chapter 14.3. The marshalling and parking of aircraft shall ensure that aircraft are guided and parked clear of other aircraft, vehicles, and fixed or stationery objects by at least the following margins in front and around the moving aircraft:

Code letter for aircraft	From centerline of aircraft parking position taxi lane to object	From wing tip of aircraft on aircraft parking position to object
A	12.0 m	3.0 m
B	16.5 m	3.0 m
C	22.5 m	4.5 m
D	33.5 m	7.5 m
E	40.0 m	7.5 m*
F	47.5 m	7.5 m*
* The minimum separation distance is 10 meters if free moving parking is used.		

7.3 While the safety of an aircraft is always the captain's responsibility, the Marshaller has authority over all drivers and personnel on or near the stand while marshalling, and is authorized to stop an aircraft at any time if the above safety margins might not be achieved, or if vehicles or personnel are seen to be encroaching within the stand and its safety margins.

Note: A distinctive high-visibility jacket or vest should be worn by the marshaller to easily distinguish them from other apron personnel.

8. PROCEDURES FOR ENGINE START-UP

8.1 The pilot normally seeks permission to start up engines from ATC. When apron management services are in place, the procedure for start-up must be agreed between the aerodrome operator and ATC. This will include the radio frequencies used, and procedure for any changing of frequency during the clearance delivery, engine start, push and taxi sequences. Before allowing an aircraft to start engines, or push back, an aircraft operator's engineer or ground supervisor shall ensure that the aircraft is in a state in which it can safely do so in relation to people and equipment around and behind the aircraft, that the passenger loading bridge is retracted and correctly parked, and that the airline's procedures for chocks and cones have been completed.

9. FOLLOW-ME SERVICE

9.1 The aerodrome operator shall develop procedures for follow-me service to provide guidance on the movement area of an aerodrome for:

A. Visiting vehicles not familiar with apron layout;

B. Aircraft taxing in low visibility condition; and

C. Any other situations in which follow-me services may be deemed necessary or requested by a pilot.

10. BLAST PRECAUTIONS

10.1 The aerodrome operator shall ensure that all apron users are made aware of the hazards arising from jet blast and propeller slipstream.

10.2 All vehicles and wheeled equipment shall be left properly braked. Where appropriate, equipment should be left on jacks or chocked to minimize the risk of movement when subjected to jet blast or propeller slipstream. Where practicable, equipment should be parked in areas where the risk of jet blast is minimized. Particular care should be exercised with apron equipment having a large flat side surface area.

10.3 Foreign object debris (FOD) may be moved by jet blast, creating additional hazards and it is thus necessary to ensure that aprons are kept clean.

10.4 The responsibility for the safety of passengers walking across aprons, rests with the aircraft operator or its handling agent. The relevant procedures shall be in line with the safety requirements established by the aerodrome operator. All staff operating on the apron shall be aware of the risk to passengers on aprons from jet blast, propeller slipstream and rotor wash and should be prepared to take appropriate action when necessary.

10.5 When designing or making changes to apron layouts, consideration should be given to jet blast and, if necessary, the installation of blast protection fences.

11. APRON CLEANING

11.1 The aerodrome operator should ensure that at regular intervals, aircraft stands and adjacent areas should be cleaned in order to remove oil, grease and rubber marks.

11.2 Spillages may occur involving fuel, oil, hydraulic fluids, water, toilet waste and other contaminants. Aerodrome operators shall ensure that procedures are established to contain, remove and correctly dispose of such spillage.

Note.— When dealing with spillages, local or national environmental protection guidelines may also apply.

12. AIRCRAFT PUSHBACKS

12.1 Aerodrome operators shall establish procedures or ensure that procedures are in place to ensure aircraft pushbacks are conducted safely. The following shall be included in the procedures:

A. ensure that conflicts with other pushbacks in progress or with an aircraft that is ready to taxi, as well as with other traffic on the apron, are avoided;

B. prior to pushback, ensure that the area behind the aircraft is clear of obstacles; and

C. after pushback, ensure that the aircraft is positioned in such a way as to avoid concentrating break-away blast at buildings, parked or taxiing aircraft, vehicles and/or persons on the apron.

12.2 In some cases, aircraft operators may request to "power-back" from an aircraft stand. Given the potential hazards created by power-back operations, a safety assessment shall be carried out prior to approval of the procedure. The safety assessment shall include the following factors, at the minimum:

A. jet blast or propwash;

B. surface conditions;

C. noise levels;

D. communication with other apron users that a power-back is about to take place (especially if there is a rear of stand road);

E. maneuvering space;

F. conflict with other traffic (pushback, power-back or taxiing); and

G. effect on pedestrians, buildings, vehicles, mobile equipment and other aircraft.

13. OPERATION OF AEROBRIDGES

13.1 The area used for the movement of the aerobridge should be kept free of vehicles and/or equipment to ensure its safe operation. Operators should do a visual check (camera, mirrors or looking out the window) before moving the air bridge in order to ensure that there are no obstructions.

13.2 When not in use, the air bridge should be parked with the wheel base in the designated position.

14. VEHICLE MOVEMENTS

14.1 The aerodrome operator shall ensure that the movement of vehicles on the apron is safely managed through:

A. the establishment and implementation of driving rules, and the monitoring and enforcement of their application; and

B. the establishment of vehicle driving routes, as appropriate, and the installation and maintenance of proper signs and markings.

15. APRON DISCIPLINE

15.1 The aerodrome operator, either through its own means or through arrangements with other parties, should monitor activities and take action when deviations from the established rules are observed.

15.2 If the designated party for monitoring apron discipline is different from the aerodrome operator, the aerodrome operator should be informed of any deviations observed.

15.3 The aerodrome operator should establish enforcement measures, or ensure that such measures are established and implemented, in order to manage any violation of the apron safety rules.

16. DISSEMINATION OF INFORMATION

16.1 The aerodrome operator shall establish a process to disseminate relevant information in a timely manner on limitations to operations on the apron.