

Doc 9157

Aerodrome Design Manual Fifth Edition, 2020

Part 2 — Taxiways, Aprons and Holding Bays



Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION



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AMENDMENTS

Amendments are announced in the supplements to the *Products and Services Catalogue;* the Catalogue and its supplements are available on the ICAO website at <u>www.icao.int</u>. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

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FOREWORD

A properly designed taxiway system ensures a smooth, continuous flow of aircraft ground traffic, operating at the highest level of safety and efficiency and contributes to optimum aerodrome utilization. Subsequent to the Fourth Edition in 2005, new specifications on taxiways have been developed based on reliable, demonstrable and scientifically tested information. Revised specifications are expected to significantly improve efficiency, reduce construction and maintenance costs in addition to having a positive impact on the environment.

This new Fifth Edition includes material on the general layout and description of updated design criteria for taxiway physical characteristics, including the shoulder and strips. The guidance is based on well-equipped modern aircraft which have increased capabilities offered by advanced technologies, often providing very precise guidance on landing, take-off and taxiing. This manual also contains illustrations of the newer generation of larger aircraft and their impact at existing aerodromes. Existing appendices have been retained from previous editions; however, new charts containing information on jet blast for the design of blast fences have been added in Appendix 2.

In accordance with the provisions in Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*, it is recommended to provide holding bays when the traffic volume is high and the provision of aprons where necessary, to permit the on- and off-loading of passengers, cargo or mail as well as the servicing of aircraft without interfering with the aerodrome traffic. The guidance for holding bays and dual or multiple taxiways, which describes the advantages and disadvantages of the different configurations, is aimed at providing aerodrome controllers with greater flexibility in adjusting the take-off sequence to overcome undue delays. The guidance concerning aprons describes, inter alia, basic apron layouts, design requirements and the area required for a particular apron layout.

This manual also includes guidance for the segregation of traffic on the movement area and considerations for designing aerodrome facilities in order to achieve the maximum practical segregation of aircraft and ground vehicular traffic.

The purpose of this manual is to assist States in the implementation of the specifications described above and help ensure their uniform application. Future editions of this manual will be updated to include any experience gained. Comments and suggestions from users and readers are therefore encouraged and should be directed to the Secretary General of ICAO.

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