



# **RWANDA CIVIL AVIATION REGULATIONS**

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## **PART 23: FLIGHT PROCEDURE SERVICES**

Consolidated to include Special Regulations issued since last amendment of Ministerial Order N°01/CAB.M/019 OF 06/02/2019 Establishing Civil Aviation Regulations.

# Part 23

## Flight Procedure Services

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## Civil Aviation Regulations

### SUBPART A: GENERAL

#### 23.001 CITATION & APPLICABILITY

- (a) These Regulations may be cited as the Civil Aviation (Instrument Flight Procedure Design Service) Regulations.
- (b) These regulations prescribe the requirements for the design, continuous maintenance and periodic review of instrument flight procedures (IFP).
- (c) This Part is applicable to—
  - (1) persons providing an Instrument Flight Procedure Design Service within certificated airspace and at aerodromes for civil aviation purposes
  - (2) persons seeking certification to provide instrument flight procedures services; and
  - (3) organizations that provide the required instrument flight procedures services; and
  - (4) persons that administer the required instrument flight procedures services on behalf of the organizations.
- (d) These regulations do not apply to the design of aircraft performance operating limitations or flight paths, for critical engine inoperative emergency procedures
- (e) Civil Aviation Technical Standards which may be published by the Authority to further clarify the applicable flight procedures standards and practices shall also be applicable to the development, checking, maintenance and review of aeronautical navigation procedures and charts in Rwanda.
- (f) Those requirements addressing persons certificated under any Part of these Regulations apply also to any person who engages in an operation governed by any Part without the appropriate certificate, licence, operations specification, or similar document required as part of the certification.

#### 23.003 SUMMARY OF AMENDMENTS AND REVISION HIGHLIGHTS

- (a) The summary of amendments and revision highlights to this Part are contained in Appendix 1 to 23.003.

*New: Internal: Special Regulation RSR/01/2020: Effective 15 November 2020*

#### 25.005 DEFINITIONS

- (a) For the purpose of this Part, the following definitions shall apply—

**Aerodrome operating minima.** The limits of usability of an aerodrome for—

- (i) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- (ii) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation;
- (iii) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H); and
- (iv) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

**Aeronautical Information Publication (AIP).** a publication issued by or with the authority of a state and containing aeronautical information of a lasting character essential to air navigation.

**Conceptual design.** High-level graphical and/or textual description of the designer's interpretation of the stakeholders' requirements.

**Designer.** A person adequately trained who performs the design of an instrument flight

procedure.

**Document 8168.** The ICAO document titled Procedures for Air Navigation Services - Aircraft Operations.

**Flight procedure design process.** The process which is specific to the design of instrument flight procedures leading to the creation or modification of an instrument flight procedure.

**Functional validation.** Confirmation of the correct implementation of automation functions and of the compliance of the human machine interface with the user requirements.

**Instrument approach procedure.** A series of pre-determined manoeuvres by reference to flight instruments with specific protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply.

**Instrument flight procedure.** A published procedure used by aircraft flying in accordance with the instrument flight rules which is designed to achieve and maintain an acceptable level of safety in operations and includes an instrument approach procedure, a standard instrument departure, a planned departure route and a standard instrument arrival.

**Instrument flight procedure designer.** A person who has acquired and maintained the required competency level to design instrument flight procedures in accordance with the applicable criteria.

**Instrument flight procedure design service.** A service established for the design, documentation, validation, maintenance and periodic review of instrument flight procedures necessary for the safety, regularity and efficiency of air navigation.

**Integrity (aeronautical data).** A degree of assurance that an aeronautical data and its value has not been lost or altered since the data origination or authorized amendment.

**Planned departure route.** A notified instrument flight rule departure (IFR) route linking the aerodrome or a specific runway of the aerodrome with a specified significant point, normally on the boundary of controlled airspace associated with the aerodrome.

**Procedure.** A specified way to carry out an activity or a process (see ISO 9000:2000 Quality management systems — Fundamentals and vocabulary, section 3.4.5). controller holding a current license, and a rating, or ratings, validated for the particular location, issued in accordance with the Civil Aviation (Personnel Licensing) Regulations.

**Quality record.** Objective evidence which shows how well a quality requirement is being met or how well a quality process is performing. Quality records normally are audited in the quality evaluation process.

**Review.** An activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives (see ISO 9000:2000 Quality management systems — Fundamentals and vocabulary, section 3.8.7).

**Software validation.** Acknowledgement, derived from a series of tests, of the compliance of an automation system with the applicable standards.

**Standard instrument arrival.** A designated instrument flight rule arrival (IFR) route linking a significant point, normally on an ATS route, with a point from which a published instrument approach procedure can be commenced.

**Standard instrument departure.** A designated instrument flight rule (IFR) departure route linking the aerodrome or a specific runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the enroute phase of a flight commences.

**Validation with reference to criteria.** Confirmation through a series of tests of the compliance of the results with reference to applicable criteria.

**Validation.** Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled. The activity whereby a data element is checked as having a value that is fully applicable to the identity given to the data element, or a set of data elements that is checked as being acceptable for their purpose.

**Verification.** Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled. The activity whereby the current value of a data element is checked against the value originally supplied.

### 23.010 ABBREVIATIONS & ACRONYMS

(a) The following abbreviations and acronyms are used in this Part—

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**AIP** = Aeronautical Information Publication  
**ARINC** = Aeronautical Radio Corporation  
**ATS** = Air Traffic Service  
**FVP** = Flight Validation Pilot  
**ICAO** = International Civil Aviation Organisation  
**IFP** = Instrument Flight Procedures  
**IFPD** = Instrument Flight Procedures Design  
**OJT** = On-the-Job Training  
**PANS-OPS** = ICAO Doc 8168  
**PBN** = Performance Based Navigation  
**SID** = Standard Instrument Departure  
**STAR** = Standard Terminal Arrival Route

### 23.015 GENERAL

- (a) The ATS provider shall be responsible for providing instrument flight procedure design services within Kigali flight Information Region.
- (b) The ATS provider may—
  - (1) agree with one or more ATS provider(s) to provide a joint service; and
  - (2) delegate the provision of the service to external agency(ies).
- (c) The IFPD organization shall follow an instrument flight procedure process that encompasses acquisition of data, design and promulgation of procedures and in accordance with design criteria approved by the Authority.
- (d) The IFPD organization shall establish procedures to ensure that the quality and safety of the procedure design product are assured through review, verification, coordination and validation of the procedure at appropriate points in the process.
- (e) The IFPD organization shall ensure that the units of measurement, as prescribed by the authority are used in the design of IFP.

### 23.020 REQUIREMENTS FOR THE PROVISION OF AN INSTRUMENT FLIGHT PROCEDURE DESIGN SERVICE

- (a) A person shall not provide an Instrument Flight Procedure Design Service within Rwanda unless—
  - (1) he is approved by the authority; and
  - (2) the services are provided in accordance with—
    - (i) the requirements prescribed in these Regulations or any other publications issued by the Authority; and
    - (ii) the procedures specified in the service providers' Manual of instrument flight procedure design.

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## **SUBPART B: ORGANISATION REQUIREMENTS**

### **23.025 INSTRUMENT FLIGHT PROCEDURE DESIGN (IFPD) ORGANIZATION**

- (a) The IFPD organization shall;
  - (1) maintain an appropriate instrument design office to enable the Instrument Flight Procedure (IFP) designer to carry on design work in IFP in accordance with the requirements set out in these regulations; and
  - (2) ensure that the designs of instrument flight procedure are in accordance with—
    - (i) the criteria contained the international civil aviation organization document number 8168 as amended;
    - (ii) applicable standards as set out in these regulations
- (b) The IFPD organization shall make provisions for person(s) trained in IFP design to check and verify independently the plans of each instrument flight procedure designed.

### **23.030 INSTRUMENT FLIGHT PROCEDURE DESIGN MANUAL**

- (a) The IFPD organization shall develop and maintain an operations manual which shall serve to demonstrate how the service provider will comply with the requirements set out in these regulations.
- (b) The contents of the operations manual shall include but not limited to the following—
  - (1) the information required of the IFP design organization as mentioned in these regulations; and
  - (2) a description of the IFP design office that shows the role, responsibilities and job functions of the IFP design office personnel who are responsible for ensuring the compliance of the organization with the requirements in paragraph (a).
- (c) The IFPD organization shall—
  - (1) keep the operations manual in a readily accessible form;
  - (2) ensure that the IFP designer has ready access to the operations manual; and
  - (3) amend the operations manual whenever necessary to keep its content up to date.
- (d) The IFPD organization shall submit a copy of the most current operations manual to the Authority for approval.
- (e) The IFPD organization shall ensure that an instrument flight procedure design service provider utilizes a quality management system at each stage of the instrument flight procedure design process.

### **23.035 EMPLOYMENT OF PERSONNEL**

- (a) The approved instrument flight procedure design organization shall—
  - (1) employ, contract, or engage sufficient personnel to plan, design, verify, and maintain the instrument flight procedures; and
  - (2) develop job descriptions for its Procedure design technical staff.

### **23.040 PROCEDURE DESIGN FACILITIES & RESOURCE REQUIREMENTS**

- (a) The IFPD organization shall provide and maintain adequate facilities for carrying on design work on instrument flight procedures as follows—
  - (1) having available equipment appropriate for the design, design verification, flight validation, and maintenance of applicable types of instrument flight procedures;
  - (2) access to relevant and current data including, but not limited to, aeronautical data, land contour data or charts detailing terrain, obstacle data, current navigation aid coordinate data and aerodrome reference point and threshold data for the design,

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- design verification, flight verification, and maintenance of the instrument flight procedures;
- (3) ready access to copies of relevant documentation comprising technical standards, practices, and instructions, and any other documentation that may be necessary for the design, design verification, flight validation, and maintenance of the types of instrument flight procedure;
  - (4) the data referred to in paragraph (a)(2) is current, traceable, and meets the required level of accuracy for the design, design verification, flight validation and maintenance of instrument flight procedure.

### **23.045 DOCUMENTS & RECORDS CONTROL SYSTEM**

- (a) The designer organization shall establish and put into effect, a system for controlling documents and records relating to the instrument flight procedures on which the designer carries on design work, including the policies and procedures for making, amending, preserving and disposing of those documents and records.
- (b) The designer organisation shall, at authority's request, make the documents and records, or copies of them or extracts from them, available for inspection by the Authority.
- (c) The documentation developed and maintained by the IFP designer is divided into three categories and includes—
  - (1) information required for publication in the AIP;
  - (2) documentation required to maintain transparency concerning the details and assumptions used by the IFP designer, which should include supporting information/data used in the design, such as—
    - (i) controlling obstacle for each segment of the procedure;
    - (ii) effect of environmental considerations on the design of the procedure;
    - (iii) infrastructure assessment;
    - (iv) airspace constraints;
    - (v) for modifications or amendments to existing procedures, the reasons for any changes; and
    - (vi) for any deviation from existing standards, the reasons for such a deviation and details of the mitigations applied to assure continued safe operations.
  - (3) additional documentation required to facilitate ground and flight validation of the procedure.
- (d) All calculations and results of calculations shall be presented in a manner that enables the reader to follow and trace the logic and resultant output and the record of all calculations shall be kept in order to prove compliance to or variation from the standard criteria.
- (e) Formulae used during calculation shall be the standard formulae as stated in ICAO Doc 8168 and related ICAO publications.
- (f) The IFPD organization shall establish procedure to ensure that all documentation undergo a final verification for accuracy and completeness prior to validation and publication.
- (g) The IFPD organization shall establish procedure to ensure that all documentation be retained to assist in recreating the procedure in the future in the case of incidents and for periodic review and maintenance.
- (h) The periodic retention shall not be less than the operational lifetime of the procedure.

### **23.050 IFP DESIGNER QUALIFICATIONS, TRAINING, EXPERIENCE AND APPROVAL**

- (a) The IFPD organization shall ensure that a person designing or amending a flight instrument procedure has required Competency level for flight procedure design through

training and supervised on- the-job training (OJT).

- (b) The training for IFP designers shall include an initial training and recurrent training.
- (c) The IFPD organization shall establish procedures to ensure that the instrument flight procedure designer is able to demonstrate a basic level of competency through initial training that includes at least the following elements—
  - (1) knowledge of information contained in International Civil Aviation Organization (ICAO) Document number 8168, ICAO documents and manuals pertaining to the design of instrument flight procedures as amended;
  - (2) enhancement of knowledge and skills in the design of procedures;
  - (3) competency as outlined in the competency framework for flight procedures designers as prescribed by the Authority; and
  - (4) practical exercises in the design of procedures (OJT)
- (d) The IFPD organization shall ensure that the IFP designer, in addition to initial training, acquires more competency through recurrent training that includes at least the following elements—
  - (1) knowledge about updates in ICAO provisions and other provisions pertaining to procedure design; and
  - (2) maintenance and enhancement of knowledge and skills in the design of procedures.
- (e) The IFPD organization shall ensure that new IFP designers undergo an adequate, supervised OJT.
- (f) The IFPD organization shall—
  - (1) develop and implement training programme and a training plan that is commensurate to the technical competence required by its staff;
  - (2) maintain training records for their instrument flight procedure designers; and
  - (3) ensure that only designers approved by the Authority shall undertake the design, review, validation of IFPs for operational use.
- (g) A person seeking approval as required in paragraph (f)(3) shall—
  - (1) provide proof of successful completion of the ICAO PANS-OPS training course applicable to the approval being requested based on the ICAO PANS-OPS criteria;
  - (2) demonstrate practical application of theoretical knowledge through the design of two instrument flight procedures under supervision of a qualified designer;
  - (3) demonstrate ability to maintain a documented quality assurance process for procedure design.
- (h) An approved procedure designer shall only design IFPs within the scope of their approval.
- (i) Ensure that the units of measurement, as specified in the civil aviation (units of measurement to be used in air and ground operations) regulations are used in the design of Instrument flight procedure.

### **23.055 PROCEDURE DATA & INFORMATION ACQUISITION**

- (a) The IFPD organization shall ensure that the quality characteristics of data acquired for the FPD process are known and adequate, or that, in the case where the data's quality characteristics are unknown or inadequate, that appropriate data verification occurs prior to use.
- (b) The IFPD organization shall ensure that the survey and subsequent IFP design activities are controlled and monitored by a person(s) trained in procedure design.
- (c) In the obstacle survey for procedure design, the IFP designer shall consider that—
  - (1) all obstacles be accounted for and Items, such as trees and heights of tall buildings shall be accounted for either by physical examination of the site or by addition of a

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- suitable margin above terrain contours; and
- (2) the accuracy of the vertical and horizontal data obtained may be adjusted by adding an amount equal to the specified survey error to the height of all measured obstructions and by making a corresponding adjustment for specified horizontal error.
- (d) The procedure design information shall be coordinated with all relevant stakeholders throughout the procedure design and validation process to ensure that the procedure meets the needs of the user and the community.
  - (1) As input for the procedure design process the following aspects need to be assessed—
    - (i) Airport, navigation aid, obstacle, terrain coordinate and elevation data, based on verified surveys and complying with technical standard requirements prescribed by the authority;
    - (ii) Airspace requirements;
    - (iii) User requirements – the needs of Air Traffic Service provider and operators who will use this procedure;
    - (iv) Airport infrastructure such as runway classification, lighting, communications, runway markings, and availability of local altimeter setting;
    - (v) Environmental considerations; and
    - (vi) Any other potential issue associated with the procedure.

### **23.060 INSTRUMENT FLIGHT PROCEDURE DESIGN (IFPD)**

- (a) Instrument flight Procedures shall be designed in accordance with these regulations, the procedures for Air Navigation Services – Aircraft Operations criteria to ICAO Doc 8168 – PANS- OPS.
- (b) Each new or revised procedure shall be verified by a person(s) trained in procedure design other than the one who designed the procedure, to ensure compliance with applicable criteria.
- (c) Published procedures shall be subject to periodic review to ensure that they continue to comply with changing criteria, and meets user requirements.
- (d) The maximum interval for this review in (c) above is five years.
- (e) The flight inspection of instrument flight procedures shall be carried for new flight instrument procedure to determine if the procedure is flyable and safe.

### **23.065 FLIGHT VALIDATION**

- (a) Validation shall consist of ground validation and flight validation.
- (b) The IFPD organization shall ensure that a person conducting flight validation including simulator evaluation is a qualified and experienced flight validation pilot.
- (c) The IFP design organization shall ensure that flight validation is conducted in accordance with the requirements of ICAO Doc 9906, Volume 5 — Validation of IFP
- (d) The qualifications for Flight Validation Pilot shall include—
  - (1) At least a commercial pilot licence with instrument rating;
  - (2) A requirement that the licence held by the flight validation pilot shall be for the aircraft category appropriate for the procedure to be validated; and
  - (3) Meet all the experience requirements for the airline transport pilot licence in the relevant category of aircraft as described in personnel licensing regulations except that the Flight Validation Pilot does not have to be the pilot-in-command of the validation flight nor is he required to have the type rating on the aircraft used for the validation flight.
- (e) In order to adequately validate instrument procedures, Flight Validation Pilot's training

shall include the elements prescribed in Appendix 1 to 23.065.

- (f) The IFP designer shall be the originator of all data applicable to conduct a flight validation provided to the flight inspection operations activity.
- (g) The flight validation of IFP shall—
  - (1) Provide assurance that adequate obstacle clearance has been provided;
  - (2) Verify that the navigation data to be published, as well as that used in the design of the procedure, is correct;
  - (3) Verify that all required infrastructure, such as runway markings, lighting, and communications and navigation sources, are in place and operative;
  - (4) Conduct an assessment of fly ability to determine that the procedure can be safely flown; and
  - (5) evaluate the charting, required infrastructure, visibility and other operational factors.
- (h) Flight validation of IFP when required shall be carried out as part of the initial record and shall be included as part of the periodic quality assurance programme.
- (i) The qualifications for Flight Validation Pilot (FVP) shall include;
  - (1) At least a commercial pilot licence with instrument rating. Alternatively, an equivalent authorization from the [appropriate authority designated by the State] meeting the Annex 1 knowledge and skill requirements for issuing the commercial pilot license and instrument rating is acceptable;
  - (2) The licence held by the FVP shall be for the aircraft category (e.g. aeroplane or helicopter) appropriate for the procedure to be validated; and
  - (3) FVPs shall meet all the experience requirements for the airline transport pilot licence in the relevant category of aircraft (e.g. aeroplane or helicopter) as defined in Annex 1.
- (j) Flight validation is conducted whenever the following conditions exist—
  - (1) The fly ability of a procedure cannot be determined by other means;
  - (2) The procedure requires mitigation for deviations from design criteria
  - (3) The accuracy and/or integrity of obstacle and terrain data cannot be determined by other means; and
  - (4) New procedures differ significantly from existing procedures.

#### **23.070 GROUND VALIDATION**

- (a) Ground validation shall review of the entire instrument flight procedure package by a person(s) trained in procedure design and with appropriate knowledge of flight validation issues.
- (b) The ground validation shall be conducted to determine if flight validation is needed for modifications and amendments to previously published procedures.
- (c) Ground validation is undertaken by a qualified flight procedure designer with appropriate knowledge of validation issues.

#### **23.075 SAFETY ASSESSMENT**

- (a) The Designer shall carry out a safety assessment in respect of proposals for new flight procedure designs or any significant changes in a revised procedure and the proposals shall be implemented only when the assessment has shown that an acceptable level of safety will be met.
- (b) The safety assessment shall consider relevant factors determined to be safety-significant, including but not limited to—
  - (1) Types of aircraft and their performance characteristics, including navigation capabilities and navigation performance;
  - (2) Traffic density and distribution;
  - (3) Airspace complexity; ATS route structure and classification of the airspace;

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- (4) Aerodrome layout;
  - (5) Type and capabilities of ground navigation systems; and
  - (6) Any significant local or regional data (e.g. Obstacles, infrastructures, operational factors, etc).
- (c) Safety risk control/mitigation process shall include hazard/consequence identification and safety risk assessment.
- (d) As part of the safety assurance, the risk control/ mitigation process shall include a system of feedback to ensure integrity, efficiency and effectiveness of the defences under the new operational conditions.
- (e) The ATS Provider responsible for procedure design shall establish procedure to ensure that the results and conclusions of the safety assessment and mitigation process of a new or changed procedure are specifically documented, and that this documentation is maintained throughout the life of the instrument flight procedure.

### **23.080 APPROVAL OF INSTRUMENT FLIGHT PROCEDURES**

- (a) An instrument flight procedure for use by civil aircraft within Rwanda shall not be published unless the instrument flight procedure is approved by the Authority;
- (b) The Authority shall only accept IFPs for approval, submitted by approved procedure designers;
- (c) For IFPs designed by approved procedure designers independently outside the approved organization the submission of approval shall be in line with these regulations.

### **23.085 PUBLICATION OF INSTRUMENT FLIGHT PROCEDURES**

- (a) The approved service provider shall ensure that instrument flight procedure designs/charts, are provided to the Aeronautical Information Service (AIS) provider for publication in the Aeronautical Information Publication (AIP).
- (b) The IFP shall be accompanied by a narrative, which describes the procedure in textual format.
- (c) The intended effective date for operational use of the IFP shall be included in the document narrative.
- (d) The designs/charts published in the AIP shall be produced in accordance with the provisions contained in the documents listed below—
  - (1) Civil aviation (Aeronautical Information services) regulations
  - (2) ICAO Doc 8168 Volumes I and II - Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS)
  - (3) ICAO Doc 8697 – Aeronautical Chart Manual
  - (4) Civil Aviation technical standards- Aeronautical information service.
- (e) The aeronautical charts included in the AIP shall be kept up-to date by means of replacement sheets where necessary and significant amendments or revisions in the IFP shall be clearly indicated in the revised charts.

### **23.090 USE OF AUTOMATION IN PROCEDURE DESIGN & FLIGHT VALIDATION**

- (a) The IFPD organization or designated service provider of designer organization using an automated flight procedure design tool shall ensure that such tool is validated.
- (b) Validation of the software shall be in accordance with the requirements of ICAO Doc 9906, Volume 3 — *Flight Procedure Design Software Validation*.
- (c) The scope of validation shall include compliance with ICAO criteria contained in document number 8168.
- (d) The flight validation tools required under this section shall include the use of equipment that—

- (1) Has the precision, and accuracy traceable to appropriate standards, that are necessary for the validation being performed;
- (2) Has known measurement uncertainties including, but not limited to, the software, firmware and crosswind uncertainties;
- (3) Records the actual flight path of the validation aircraft;
- (4) Is checked before being released for use, and at intervals not exceeding the calibration intervals recommended by the manufacturer, to establish that the system is capable of verifying the integrity of the instrument flight procedure; and
- (5) Is operated in accordance with flight validation system procedures and criteria by persons who are competent and current on the system used.

**23.095 ERRORS IN PUBLISHED INSTRUMENT FLIGHT PROCEDURES**

- (a) The IFPD organization shall establish procedures for recording, investigating, correcting, and reporting, any identified error, and any identified non-conformance or suspected non-conformance with these regulations.
- (b) The procedure required by paragraph (a) shall require that—
  - (1) An instrument flight procedure is immediately withdrawn from operational use if the error or non-conformance affects, or may affect, the safety of an aircraft operation;
  - (2) The error or non-conformance is corrected, and approved by a senior person who is appropriately authorized by the service provider;
  - (3) The correction required by paragraph (b)(2) is clearly identified and promulgated by the most appropriate means relative to the operational significance of the error or non-conformance; and
  - (4) The source of the error or non-conformance is identified, and—
    - (i) If possible, eliminated to prevent a recurrence;
    - (ii) Preventive action is taken to ensure that the source of the error or non-conformance has not affected the integrity of any other instrument flight procedure; and
    - (iii) The Authority is immediately notified, of a promulgated information incident relating to an error or non-conformance referred to in paragraph (a) above.

**23.100 AERODROME OPERATING MINIMA**

- (a) The requirements for aerodrome operating minima are as specified in the civil aviation (operation of aircraft) regulations.
- (b) The procedures for the establishment of the aerodrome operating minima shall be prescribed by the Authority.
- (c) The requirements for aerodrome operating minima are as specified in the Civil Aviation (Operation of Aircraft) Regulations.

## SUBPART C: Design criteria—instrument flight procedure

### 23.105 Design

- (a) Every instrument flight procedure must be designed in accordance with the requirements of this Part and in accordance with the appropriate design processes, standards, guidelines, and aeronautical data quality requirements contained in the following: (1) ICAO Documents— (i) Doc 8168, Procedures for Air Navigation Services – Aircraft Operations — Volume I Flight Procedures, and Volume II, Construction of Visual and Instrument Flight Procedures:
- (1) ICAO Documents;
    - (i) Doc 8697, Aeronautical Chart Manual;
    - (ii) Doc 9365, Manual of All-Weather Operations;
    - (iii) Doc 9613 Performance Based Navigation Manual — Volume I Concept and implementation Guidance, and Volume II Implementing RNAV and RNP;
    - (iv) Doc 9881, Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information;
  - (2) ICAO Annexes:
    - (i) Annex 4, Aeronautical Charts;
    - (ii) Annex 6, Operation of Aircraft;
    - (iii) Annex 11, Air Traffic Services;
    - (iv) Annex 14, Volumes I & II Aerodromes;
    - (v) Annex 15, Aeronautical Information Services;
  - (3) Any other guideline or standard that is applicable to a particular type of instrument flight procedure and is acceptable to the Authority.
- (b) For the purposes of paragraph (a), if there is a conflicting difference between any of the applicable design processes, standards, guidelines, or aeronautical data quality requirements, the particular design process, standard or guideline to be used must be acceptable to, or specified by the Authority.
- (c) The design of an instrument flight procedure must—
- (1) be coordinated with all appropriate air traffic service providers;
  - (2) be compatible with any air traffic service and associated procedure that is provided within the area or areas of airspace where the instrument flight procedure is intended to be established; and
  - (3) take into account—
    - (i) any noise abatement procedure;
    - (ii) any bylaws or other legislation restricting aircraft operations;
    - (iii) the classification and any associated designation of the airspace in which the instrument flight procedure is to be established and any adjacent airspace that may be affected by the procedure; and
    - (iv) the effect that the proposed instrument flight procedure may have on any other instrument flight procedure established in the airspace.

- (d) An instrument flight procedure must not be designed for an aerodrome or heliport unless the operator of the aerodrome or heliport agrees in writing that the aerodrome or heliport may be used for IFR operations using the intended instrument flight procedure.
- (e) An instrument flight procedure must not be designed on or use a ground based aeronautical facility unless—
  - (1) the aeronautical facility is operated under the authority of an aeronautical telecommunication service certificate issued in accordance with the Civil Aviation (Aeronautical Telecommunication Services) Regulations; and
  - (2) the holder of the aeronautical telecommunication service certificate agrees in writing that the aeronautical facility can be used for the intended instrument flight procedure.

*New: Doc 8168: Special Regulation RSR/01/2020 Effective 15 November 2020*

**APPENDICES**

**APPENDIX 1 TO 23.003.- SUMMARY OF AMENDMENTS AND REVISION HIGHLIGHTS**

This Appendix contains a summary of all amendments and revision highlights to this Part since the issuance of the original regulation.

Amended Regulation	Amendment Source	Revision	Description of Revision
23.003	Internal	Special Regulation RSR/01/2020 Effective 15 November 2020	Inserted a new summary of Amendments and Highlight of Revisions.
23.105	PAN Doc 8168 (OPS) Volume II	<i>Special Regulation P23.01.2020 Effective 15 November 2020</i>	Added section to enforce the requirement for Design criteria – instrument flight procedures
Appendix 1 to 23.003	Internal	Special Regulation RSR/01/2020 Effective 15 November 2020	Inserted a new summary of Amendments and Highlight of Revisions.

*New: Internal: Special Regulation RSR/01/2020: Effective 15 November 2020*

**APPENDIX 1 TO 23.065: FLIGHT VALIDATION PILOT TRAINING**

- (a) The Flight Validation Pilot shall receive the following training—
  - (1) Standards, procedures and guidance pertinent to AIS, including Annex 15;
  - (2) Standards, procedures and guidance pertinent to flight inspection, including Annex 10 and ICAO Doc 8071 — Manual on Testing of Radio Navigation Aids;
  - (3) Standards, procedures and guidance pertinent to aerodromes, including Annex 14, ICAO Doc 9157 — Airport Services Manual and ICAO Doc 9157 — Aerodrome Design Manual;
  - (4) Standards, procedures and guidance pertinent to charting and aviation publications including Annex 4 and ICAO Doc 8697 — Aeronautical Chart Manual;
  - (5) Performance-based navigation (PBN) and conventional instrument procedure construction such as standard instrument departures/standard instrument arrivals (SIDs/STARs) and holding/reversal procedures, including the PANS-OPS;
  - (6) The PBN concept including the ICAO Doc 9613 — Performance-based Navigation (PBN) Manual;
  - (7) the basic concept of and differences between flight validation and flight inspection;

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- (8) ARINC 424 coding;
- (9) Human Factors;
- (10) Different types of aircraft operations and aircraft performance (i.e. Limitations and equipment);
- (11) Obstacle assessment methodology;
- (12) Safety assessment process;
- (13) Geodesy, including ICAO Doc 9906, Volume 2, paragraph 3.3.3.8; and
- (14) Comprehensive understanding of ICAO Doc 9906, Volume 5.

*END OF RCAR PART 23*