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REQUIREMENTS FOR INSTRUMENT FLIGHT PROCEDURE DESIGN (AAR – IFPD)

"State Civil Aviation Agency"
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AZƏRBAYCAN RESPUBLİKASI
RƏQƏMSAL İNKİŞAF VƏ NƏQLİYYAT NAZİRLİYİ
DÖVLƏT MÜLKİ AVİASİYA AGENTLİYİ
PUBLİK HÜQUQİ ŞƏXS

ƏMR

“Cihazlar üzrə uçuş proseduru dizaynına dair tələblər”in təsdiq edilməsi haqqında

Mülki aviasiya qanunvericiliyinə dair tələblərin uyğunlaşdırılmasının həyata keçirilməsi məqsədilə Azərbaycan Respublikası Prezidentinin 2025-ci il 21 fevral tarixli 341 nömrəli Fərmanı ilə təsdiq edilmiş “Dövlət Mülki Aviasiya Agentliyi” publik hüquqi şəxsin Nizamnaməsi”nin 2.1.3-cü, 2.1.5-ci və 4.10.6-cı yarımbəndlərini rəhbər tutaraq,

əmr edirəm:

1. “Cihazlar üzrə uçuş proseduru dizaynına dair tələblər” (“Requirements for Instrument Flight Procedure Design”) adlı sənədin 3-cü nəşri (bundan sonra – Tələblər) təsdiq edilsin.
2. Keyfiyyətə nəzarət sektoru bu Əmrlə birlikdə Tələblərin “Dövlət Mülki Aviasiya Agentliyi” publik hüquqi şəxsinin (bundan sonra – Agentlik) bütün şəxsi heyətinə çatdırılmasını təmin etsin.
3. İnzibati idarəetmə departamenti bu Əmr və onunla təsdiq edilmiş Təlimatın Agentliyin rəsmi internet informasiya ehtiyatında yerləşdirilməsini təmin etsin.
4. Aeronaviqasiya standartlarına və hava hərəkətinin idarə edilməsinə nəzarət (ANS) departamenti bu Əmrlə birlikdə Tələblərin aidiyyəti mülki aviasiya subyektlərinə müşayiət məktubu ilə çatdırılmasını təmin etsin.
5. Əmrin icrasına nəzarət Aeronaviqasiya standartlarına və hava hərəkətinin idarə edilməsinə nəzarət (ANS) departamenti müdirinin müavini Leyla Həsənovaya həvalə edilsin.

İdarə Heyəti sədrinin müavini,
İdarə Heyətinin sədri vəzifəsini
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0 Administration and control of the document

0.1 Approval Page

Organizational Unit	ANS Oversight department
Prepared by (Name, Surname, Position):	Andrey Zhidkov / Lead inspector
Date:	24.04.2026

Organizational Unit	Legal department
Reviewed by (Name, Surname, Position):	Tarja Sariyeva / Senior lawyer
Date:	27.08.2026

Organizational Unit	Legal department
Reviewed by (Name, Surname, Position):	Ramala Abilova / Head of department
Date:	27.08.2026

Organizational Unit	Quality control sector
Standardized by (Name, Surname, Position):	Anna Guseva/specialist
Date:	03.09.2026

0.2 Table of content

0 Administration and control of the document 1
0.1 Approval Page 1
0.2 Table of content 2
0.3 List of effective pages 5
0.4 Distribution and control 7
0.5 Records of amendments and revisions 8
0.6 Terms and definitions 9
0.7 Abbreviations 10
0.8 Terms shall, should, may 12
0.9 Administration and control 12
1 Introduction 1
1.1 Introduction 1
1.2 References 1
2 Organisation requirements 1
2.1 Organisation 1
2.2 Instrument Flight Procedure Operations Manual 1
2.3 Resource Requirements 2
2.4 Documentation and Record 2
2.5 Quality Management System 2
2.6 Safety Management 3
2.7 Minimum Requirements 3
3 Instrument flight procedure designer qualification and training 1
3.1 Personnel Requirement 1
3.2 Qualification 1
3.3 Training 1
4 Procedure design information acquisition 1
4.1 Information Acquisition 1
5 Instrument flight procedure design process 1
5.1 Introduction 1
5.2 Procedure Design 1
5.3 Instrument Flight Procedure Approval 1
5.4 Procedure Design Documentation 1
5.5 Ground and Flight Validation 2

5.6 Flight Procedure Validation Organization 3
5.7 Qualification for Flight Validation Pilot (FVP) 4
5.8 Errors in Published Instrument Flight Procedures 4
5.9 Procedure Design Parameters 4
6 Design publication 1
6.1 Publication of Instrument Flight Procedures 1
6.2 Differences from ICAO Standards, Recommended Practices and Procedures 1
7 Procedure design automation 1
7.1 General 1
7.2 Procedural Design Automation 1
APPENDIX - 1. Instrument flight procedure design process 1

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0.3 List of effective pages

	Chapter 0	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
3	15.09.2026	00
4	15.09.2026	00
5	15.09.2026	00
6	15.09.2026	00
7	15.09.2026	00
8	15.09.2026	00
9	15.09.2026	00
10	15.09.2026	00
11	15.09.2026	00
12	15.09.2026	00
	Chapter 1	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
	Chapter 2	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
3	15.09.2026	00
4	15.09.2026	00
	Chapter 3	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
	Chapter 4	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
	Chapter 5	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
3	15.09.2026	00
4	15.09.2026	00
	Chapter 6	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00

	Chapter 7	
Page	**Effective date**	**Revision #**
1	15.09.2026	00
2	15.09.2026	00
	Appendix 1	
Page	**Effective date**	**Revision #**
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0.4 Distribution and control

Copy #	Type of Copy	Structural unit	Location
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S) Soft Copy - (electronic version)

(H) Hard Copy – (printed version)

Note: *Electronic and hard copies are considered "uncontrolled" if they are printed or not included into this distribution list.*

0.5 Records of amendments and revisions

Edition/Revision number	Effective date	Entered into force by	Reason
Edition № 02	01.OCT.2019		
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Edition: - *Release of a document having incorporated all previous revisions until the current version. New edition of a document will not show revised text in blue colour. Current edition of a document shown on each page in footer.*

Revision: *- A change made to a part of document, where it is reflected with blue text or accompanied with a vertical line on right side of a document. Basic information on revisions (number and date) given in the List of effective Pages and indicated in header of affected page and in context itself.*

0.6 Terms and definitions

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 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.

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 en-route phase of a flight commences.

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.

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.

0.7 Abbreviations

AIP	Aeronautical Information Publication
AIS	Aeronautical Information Services
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATS	Air Traffic Services
FIR	Flight Information Region
ICAO	International Civil Aviation Organisation
IFP	Instrument Flight Procedure
IFPD	Instrument Flight Procedure Design
IFR	Instrument Flight Rules
OJT	On-the-Job Training
PANS-OPS	Procedure for Air Navigation Services – Aircraft Operations

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0.8 Terms shall, should, may

The following terms shall have the meaning outlined below:

“Shall” - An action verb in the imperative sense means that the application of a rule or procedure or provision is mandatory.

“Should” - Means that the application of a procedure or provision is recommended.

“May” - Means that the application of a procedure or provision is optional.

0.9 Administration and control

The PDF files will be locked and signed to prevent changes.

This document is regularly revised and amended. All personnel must be familiarized with all revisions done.

This document will be Amended and Revised in accordance with requirements of “Documentation and Control” procedure.

1 Introduction

1.1 Introduction

1.1.1 Instrument Flight Procedure Design in the Republic of Azerbaijan is produced by Air Navigation Services Provider (ANSP).

1.1.2 These Requirements under specific operating regulations establish national requirements arising from the primary aviation legislation, for standardized operational procedures, compliance with the applicable Annexes to the Convention on International Civil Aviation.The AAR - IFPD aims to ensure that all published IFP intended for use by aircraft operating under instrument flight rules in the Republic of Azerbaijan Flight Information Region meet ICAO requirements for instrument flight procedures.

1.1.3 AAR-IFPD provides standards and requirements for the design and maintenance of instrument flight procedures (IFP). This is to ensure that all published IFP intended for use by aircraft operating under instrument flight rules (IFR) in the Republic of Azerbaijan flight information region (FIR) meet ICAO requirements for instrument flight procedures.

1.1.4 The ANSP shall ensure that the quality and safety of the procedure design product are assured through the review, verification, coordination and validation at appropriate points in the process, so that corrections could be made at the earliest opportunity in the process.

1.1.5 In the interest of safety, the ANSP shall implement the provisions in the AAR-IFPD and PANS-OPS in a consistent manner, using processes that will minimize the possibility of errors, identify errors that do occur before they impact safety, and provide for continuous improvement of the procedure design process in order to eliminate or reduce future errors.

1.2 References

Requirements for aeronautical charts (AAR-ACh)

Requirements for aeronautical information services (AAR-AIS)

ICAO Doc 8168 – Procedures for Air Navigation Services – Aircraft Operations, Volume I Flight Procedures and Volume II Construction of Visual and Instrument Flight Procedures

ICAO Doc 9368 – Instrument Flight Procedures Construction Manual

ICAO Doc 9674 – World Geodetic System – 1984 (WGS-84) Manual

ICAO Doc 9734 – Safety Oversight Manual

ICAO Doc 9859 – Safety Management Manual

ICAO Doc 9905 – Required Navigation Performance Authorization Required (RNP AR) Procedure Design Manual

ICAO Doc 9906 – Quality Assurance Manual for Flight Procedure Design

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2 Organisation requirements

2.1 Organisation

2.1.1 The ANSP shall maintain an appropriate instrument design office to enable the IFP designer to carry on design work in instrument flight procedures in accordance with the requirements set out in this document.

2.1.2 The ANSP shall ensure that the designs of instrument flight procedure are in accordance with:

1. applicable standards set out or referred to in ICAO Doc 8168; and
2. applicable standards as set out in this document.

2.1.3 The ANSP shall make provisions for a person(s) trained in IFPD to check and verify independently the plans of each instrument flight procedure designed.

Note: *A reference to verifying an instrument flight procedure is a reference to the process of checking the procedure (including all data, computations and drawings for the procedure) in accordance to the applicable standards set out in this document.*

2.2 Instrument Flight Procedure Operations Manual

2.2.1 The ANSP shall develop and maintain an instrument flight procedure operations manual. The operations manual shall serve to demonstrate how the service provider will comply with the requirements set out in this document.

2.2.2 The contents of the operations manual shall include, but not limited to the following:

a) the organisational structure of the instrument flight procedure design office;

b) a job description of each of the personnel involved with the instrument flight procedure design process which must contain the job function and responsibilities;

c) the qualifications and training requirements of personnel responsible for instrument flight procedure designs;

d) the criteria used for the design of instrument flight procedure;

e) the documentation required for the design of instrument flight procedure;

f) the instrument flight procedure design process;

g) a system maintained by the ANSP's instrument flight procedure design office for keeping documents and records relating to the instrument flight procedure design process;

h) the quality assurance programme established under paragraph 2.5;

i) the details of the procedures necessary to ensure compliance with this AAR-IFPD; and

j) the procedures to control, amend and distribute the operations manual, including the distribution of the initial copy and all subsequent amendments made to the operations manual.

2.2.3 The ANSP 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.

2.3 Resource Requirements

2.3.1 The ANSP shall provide and maintain facilities for the design work on instrument flight procedures. This would include:

1. having available equipment appropriate for the design, design verification, ground validation, and maintenance of the types of instrument flight procedures;
2. access to relevant and current data including, but not limited to, aeronautical data, land contour data, and obstacle data for the design, design verification, flight verification, and maintenance of the instrument flight procedures; and
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.

2.3.2 If an aeronautical database and aeronautical data is required for designing an instrument flight procedure, the ANSP shall ensure the integrity of the database and the data. The data used shall be current, traceable, and meets the required level of verifiable accuracy for the design.

2.4 Documentation and Record

2.4.1 The ANSP 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.

2.4.2 Requirements for maintaining and having access to the following documents and records

1. technical standards;
2. practices;
3. instructions; and
4. any other documentation that may be necessary for the design, validation and maintenance of the types of instrument flight procedures

2.4.3 The ANSP shall maintain all documents and records which are necessary for the operation of the service. Electronic or paper copies of these documents shall be made available to personnel where needed.

2.5 Quality Management System

2.5.1 Requirement of quality management system containing the necessary procedures, processes and resources.

2.5.2 The IFPD process shall establish a quality system for the entire IFP development process. Refer to ICAO Doc 9906 for guidance on such a quality system.

2.5.3 Processes shall ensure that:

1. aeronautical information/data used in the design at any moment is traceable to its origin so as to allow any data anomalles or errors to be corrected.
2. the currency of documentation can be readily determined;
3. documents are available at locations where needed by staff;

4. only current versions of documents are available; and
5. all relevant documents are document controlled.

2.5.4 The ANSP shall establish documented procedures to record, investigate, correct and report any errors that are detected in the flight procedure design published.

2.5.5 The order of accuracy for aeronautical information/data as specified in *AAR - ATS, Chapter 4, 4.15* and *AAR-Aerodrome Standards, Chapter 6* shall be applied by the ANSP.

2.5.6 The order of publication resolution and data integrity of aeronautical information/data shall comply with *AAR-AIS paragraph 3.2 and Appendices 1 and 7*.

2.6 Safety Management

2.6.1 The ANSP shall manage the safety of its service by:

1. establishing formal interfaces with all stakeholders which may influence directly the safety of their services;
2. implementing a documented procedure for managing safety for new procedures or changing existing ones

2.6.2 ICAO Doc 9859 – “Safety Management Manual outlines the principles of safety management and provides guidance for the conduct of an effective safety management system”.

2.6.3 The ANSP can thereby refer to a safety management system in place;

2.6.4 The ANSP shall ensure the validation of instrument flight procedures according the provisions in ICAO Doc 9906 Chapter 1.

2.7 Minimum Requirements

2.7.1 In the interest of safety, the ANSP shall implement the provisions in flight procedure design in a consistent manner, using processes that will minimise the possibility of error, identify errors that do occur before they impact safety and provide for continues improvement of the procedure design process in order to eliminate or reduce future errors.

2.7.2 The ANSP shall establish relevant procedures in order to implement the requirements of this document and provide for evidence-based oversight by the SCAA.

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3 Instrument flight procedure designer qualification and training

3.1 Personnel Requirement

3.1.1 The ANSP shall employ sufficient number of competent personnel to perform the operation of the service. The number of personnel required to operate the flight procedure service shall take into account the duties, training, annual leave, workload required and shall be regularly reviewed.

3.1.2 The ANSP shall develop detailed job descriptions for its staff. The job description shall depict the job purpose, key responsibilities, and outcome to be achieved of each staff. Initial and periodic assessments shall be established that require personnel to demonstrate the required competencies.

3.2 Qualification

IFP Designer

3.2.1 The ANSP shall ensure that a person designing or amending instrument flight procedures shall demonstrate required competency level for flight procedures design. IFP designers shall acquire and maintain this competency level through training and supervised on-the-job training (OJT). This is to ensure that the quality assurance in the procedure design process and its output, including the quality of aeronautical information/data meets the requirements of ICAO Doc 8168 (PANS-OPS), ICAO Doc 9613 (PBN Manual), ICAO Doc 9905 (RNP-AR Procedure Design Manual) and ICAO Doc 9906 (Quality Assurance Manual for Flight Procedure Design).

Chief Designer

3.2.2 The ANSP may nominate a Chief Designer who shall supervise and be accountable for the procedure design activities and serve as the focal point to the competent Authority.

3.2.3 The ANSP shall ensure that a Chief Designer demonstrates required competency level for flight procedures design that are specified in paragraph 3.2.1 and 3.3.2.

3.2.4 Experience required for a Chief Designer to achieve competency would not normally be less than 3 years in procedure design involving the design of a considerable number of individual procedures.

3.3 Training

3.3.1 The ANSP shall develop a training programme and plan for its staff. The training programme and plan shall lay down the training courses that different levels of staff have to undergo to perform their duties, including initial, recurrent and specialized trainings.

3.3.2 IFP designer shall demonstrate a basic level of competency through initial training that includes at least the following elements:

1. overview of ICAO Standards and Recommended Practices (SARPs) relating to IFPD and promulgation;
2. knowledge of information contained in ICAO Doc 8168 (PANS-OPS) and other related ICAO provisions relevant to procedure designs;
3. general criteria in IFP-designing;

4. non-precision approach design;
5. precision approach design;
6. instrument departure design;
7. criteria for RNAV, GNSS and RNP; and
8. practical exercises in the design of procedures.

3.3.3 The ANSP shall ensure a suitable period of supervised on-the-job-training for their staff before being deployed for duties. OJT is aimed at permitting the new IFP designer to integrate his basic knowledge with actual practice. The ANSP shall ensure that new IFP designers undergo an adequate, supervised OJT.

3.3.4 The ANSP shall ensure that the IFP designer and Chief designer are able to demonstrate a basic level of 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.

3.3.5 The ANSP shall ensure that the interval between the initial training and the first recurrent training, and subsequent recurrent training for each of its IFP designers does not exceed 3 years.

3.3.6 The ANSP shall maintain individual training records for each staff member.

4 PROCEDURE DESIGN INFORMATION ACQUISITION

4.1 Information Acquisition

4.1.1 Current and complete survey data and information is crucial to the design of safe IFP. The ANSP shall ensure that the survey and subsequent IFPD activities are controlled and monitored by a person(s) trained in procedure design.

4.1.2 In the obstacle survey for procedure design, the IFP designer shall consider that:

1. all obstacles be accounted for. 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 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.

4.1.3 The procedure design information shall be coordinated with all relevant stakeholders. As input for the procedure design process the following aspects need to be assessed:

1. airport, navigation aid, obstacle, terrain coordinate and elevation data, based on verified surveys and complying with SCAA relevant document requirements;
2. airspace requirements;
3. user requirements – the needs of Air Traffic Service provider and operators who will use this procedure;
4. airport infrastructure such as runway classification, lighting, communications, runway markings, and availability of local altimeter setting;
5. environmental considerations; and
6. any other potential issue associated with the procedure.

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5 Instrument flight procedure design process

5.1 Introduction

5.1.1 The Instrument Flight Procedure Design process (see Appendix 1) encompasses the acquisition of data, design and promulgation of procedures. It starts with compilation and verification of the many inputs and ends with ground and/or flight validation of the finished product, and documentation for publication.

5.1.2 IFP shall be accompanied by a narrative, which describes the procedure in textual format.

Note: More *details are provided in document M-ANS-005*

5.2 Procedure Design

5.2.1 Procedures shall be designed according to ICAO Doc 8168 – PANS-OPS criteria. Coordination with all concerned parties shall continue throughout the procedure design and validation process to ensure that the procedure meets the needs of the user and the community.

5.2.2 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.

5.2.3 Published procedures shall be subject to periodic review to ensure that they continue to comply with changing criteria, and meets user requirements. The maximum interval for this review is 5 years.

5.3 Instrument Flight Procedure Approval

5.3.1 Flight procedure design for new procedures or for relevant changes to existing procedures shall require approval by the SCAA prior to distribution and publication in the AIP of Azerbaijan Republic.

5.3.2 Application for flight procedure design approval shall be submitted to the SCAA in accordance with the procedures established in *M-ANS-005.* The approval process must ensure that all the appropriate steps within the flight procedure design process have been completed, documented and signed off by the SCAA.

5.4 Procedure Design Documentation

5.4.1 The documentation provided by the IFP designer is divided into three categories and includes:

a) documentation required for publication in the AIP in accordance with *AAR-ACh* and *AAR-AIS*;

b) 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:

1. controlling obstacle for each segment of the procedure;
2. effect of environmental considerations on the design of the procedure;
3. infrastructure assessment;
4. airspace constraints;

5. for modifications or amendments to existing procedures,
6. for any deviation from existing standards, the reasons for such a deviation and details of the mitigations applied to assure continued safe operations.

c) additional documentation required to facilitate ground and flight validation of the procedure.

5.4.2 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. A record of all calculations shall be kept in order to prove compliance to or variation from the standard criteria.

5.4.3 Formulae used during calculation shall be the standard formulae as stated in ICAO Doc 8168 vol. II and related ICAO publications. Units of measurement and conversion factors between such units shall be in accordance to *AAR - ACh, AAR-Units of Measurement to be used in Air and Ground operations* and *AAR-OPS*.

5.4.4 Rounding of results shall follow the standard guidelines in ICAO Doc 8168 vol. II and related ICAO publications. Rounding shall only be made at the publication stage to facilitate usable figures on maps and charts. Where rounding is required at earlier stages rounding shall be made to the pessimistic consideration, i.e. obstacles heights rounded up, speeds rounded up, turn altitudes rounded down etc.

5.4.5 All documentation shall undergo a final verification for accuracy and completeness prior to validation and publication.

5.4.6 All documentation shall be retained to assist in recreating the procedure in the future in the case of incidents and for periodic review and maintenance. The periodic retention shall not be less than the operational lifetime of the procedure.

5.5 Ground and Flight Validation

5.5.1 Validation

5.5.1.1 Validation is the necessary final quality assurance step in the procedure design process, prior to publication. The purpose of validation is the verification of all obstacle and navigation data, assessment of flyability of the procedure. Validation normally consists of ground validation and flight validation.

5.5.1.2 Ground validation shall always be undertaken.

5.5.1.3 When ground validation can verify the accuracy and completeness of all obstacle and navigation data considered in the procedure design, and any other factors normally considered in the flight validation, then the flight validation requirement may be dispensed with.

5.5.2 Ground Validation

5.5.2.1 Ground validation is a review of the entire instrument flight procedure package by a person(s) trained in procedure design and with appropriate knowledge of flight validation issues. It is meant to arrest errors in criteria and documentation, and evaluate on the ground, to the extent possible, those elements that will be evaluated in a flight validation. Issues identified in the ground validation should be addressed prior to any flight validation.

5.5.2.2 The ground validation would also determine if flight validation is needed for modifications and amendments to previously published procedures.

Note: *More details are provided in DOC 9906 Vol 5 to guide the ground validation process.*

5.5.3 Flight Validation

5.5.3.1 Flight validation of instrument flight procedures should be carried out as part of the initial record and should also be included as part of the periodic quality assurance programme. It shall be accomplished by a qualified and experienced flight inspector.

5.5.3.2 The objectives of the flight validation of instrument flight procedures are to:

a) provide assurance that adequate obstacle clearance has been provided;

b) verify that the navigation data to be published, as well as that used in the design of the procedure, is correct;

c) verify that all required infrastructure, such as runway markings, lighting, and communications and navigation sources, are in place and operative;

d) conduct an assessment of flyability to determine that the procedure can be safely flown; and

e) evaluate the charting, required infrastructure, visibility and other operational factors.

5.5.3.3 Flight validation should be apart from flight inspection. Flight inspection of IFP is required to assure that the appropriate radio navigation aids adequately support the procedure. This is carried out as part of a formal flight inspection programme and is performed by a qualified flight inspector using an appropriately equipped aircraft.

5.5.3.4 The IFP designer shall be the originator of all data applicable to conduct a flight validation provided to the flight inspection operations activity. The IFP designer should be prepared to provide briefings to the flight inspection crews in those cases where flight procedures have unique application or special features.

5.5.3.5 The IFP designer may participate in the initial validation flight to assist in its evaluation and obtain direct knowledge of issues related to the procedure's design from the flight inspection pilot and/or inspector.

5.6 Flight Procedure Validation Organization

5.6.1 The organization that provides flight procedures validation shall be recognized by the SCAA.

5.6.2 This organization shall develop operations manual and submit this document to SCAA for acceptance.

5.6.3 If the organization providing the flight procedures validation is not registered in the Republic of Azerbaijan, then it must be recognized by the Civil Aviation Authority of the country to which it belongs. This organization must provide the following documents:

a) a certificate confirming that it is recognized by the Civil Aviation Authority of the country where it is registered;

b) operations manual that complies with ICAO requirements;

c) flight validation pilot's license and training certificates.

5.6.4 The SCAA of the Republic of Azerbaijan may request confirmation of the submitted documents from the Civil Aviation Authority, in which this organization is certified.

5.7 Qualification for Flight Validation Pilot (FVP)

5.7.1 FVP must be qualified in term of minimum qualifications and trainings and competent for flight validations and flight inspection's work.

5.7.2 The qualifications for FVPs shall include:

a) At least a commercial pilot licence with instrument rating.

b) The licence held by the FVP should be for the aircraft category (e.g. aeroplane or helicopter) appropriate for the procedure to be validated.

c) FVPs shall meet all the experience requirements for the airline transport pilot licence in the relevant category of aircraft (e.g. aeroplane or helicopter).

d) The FVP 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) A thorough knowledge of ICAO PANS-OPS and PBN procedures design principles and methods;

f) Satisfactory completion of a flight validation course designed according to ICAO Doc 9906 Volume 6.

5.8 Errors in Published Instrument Flight Procedures

5.8.1 An ANSP shall establish procedures for investigating, correcting and reporting any identified errors and any identified non-conformance with the standards and requirements in an instrument flight procedure that is published.

5.8.2 The procedures shall require that:

a) an instrument flight procedure is immediately withdrawn from operational use if the error or non-conformance affects or may affect the safety of any aircraft operation;

b) the error or non-conformance is reviewed by the designer (Chief Designer);

c) the source of the error or non-conformance is identified a

- if possible, eliminated to prevent a recurrence and
- preventative action is taken to ensure that the source of the error or non-conformance has not affected the integrity of any other instrument flight procedures.

5.9 Procedure Design Parameters

5.9.1 The obstacle clearance altitude/heights (OCA/H) for the aircraft categories for which the procedure is designed shall be shown on the relevant instrument approach chart.

5.9.2 The ANSP only publishes visibility, MDA/H or DA/H for instrument approaches at aerodromes if it is required by the procedure.

5.9.3 Published geographical coordinates indicating latitude and longitude shall be expressed in terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum as in ICAO Doc 9674 World Geodetic System – 1984 (WGS-84) Manual

5.9.4 Latest available Azerbaijan obstacle database shall be used.

6 Design publication

6.1 Publication of Instrument Flight Procedures

6.1.1 The ANSP shall ensure that instrument flight procedures designs/charts, are provided to the Aeronautical Information Service (AIS) provider for publication in the AIP.

6.1.2 The intended effective date for operational use of the IFP shall be included in the document narrative.

6.1.3 The designs/charts published in the AIP shall be produced in accordance with the provisions contained in the documents listed below:

a) Requirements for Aeronautical Charts (AAR-ACh)

b) Requirements for Aeronautical Information Services (AAR-AIS)

c) ICAO Doc 8168 Volumes I and II - Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS)

d) ICAO Doc 8697 – Aeronautical Chart Manual

6.1.4 The aeronautical charts included in the AIP shall be kept up-to-date by means of replacement sheets where necessary. Significant amendments or revisions in the IFP shall be clearly indicated in the revised charts.

6.2 Differences from ICAO Standards, Recommended Practices and Procedures

6.2.1 Differences between a State requirement and the related ICAO standards and recommended practices (SARPs) can occur because the state requirement sets a lower, higher or different than required or the ICAO SARPs have not, or only partially been implemented;

6.2.2 Any differences that exist for Doc 8168, Doc 9905 and Doc 9613 shall be promulgated in the AIP Azerbaijan.

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7 Procedure design automation

7.1 General

7.1.1 Procedure design automation tools have the potential to reduce errors in the procedure design process, as well as to standardize the application of the PANS-OPS criteria.

7.1.2 ICAO produces several tools automating elementary portions of the procedure design criteria, where the consequences of error are particularly significant to safety. Included in these tools are the PANS-OPS Obstacle Assessment Surface (OAS) Software and the PANS-OPS Software (CD-101), providing a means to evaluate the total risk of impact with an obstacle or the ground on precision approaches.

7.2 Procedural Design Automation

7.2.1 The ANSP shall ensure that all automation tools or software used in the design of an instrument flight procedure are in accordance with Volume 3 of ICAO Doc 9906.

7.2.2 The ANSP shall take all reasonably practicable measures and develop and apply appropriate procedures to ensure that all equipment, including software, used in the design of every instrument flight procedure, are operated in accordance with the manufacturer's operating instructions and manuals.

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APPENDIX - 1. Instrument flight procedure design process

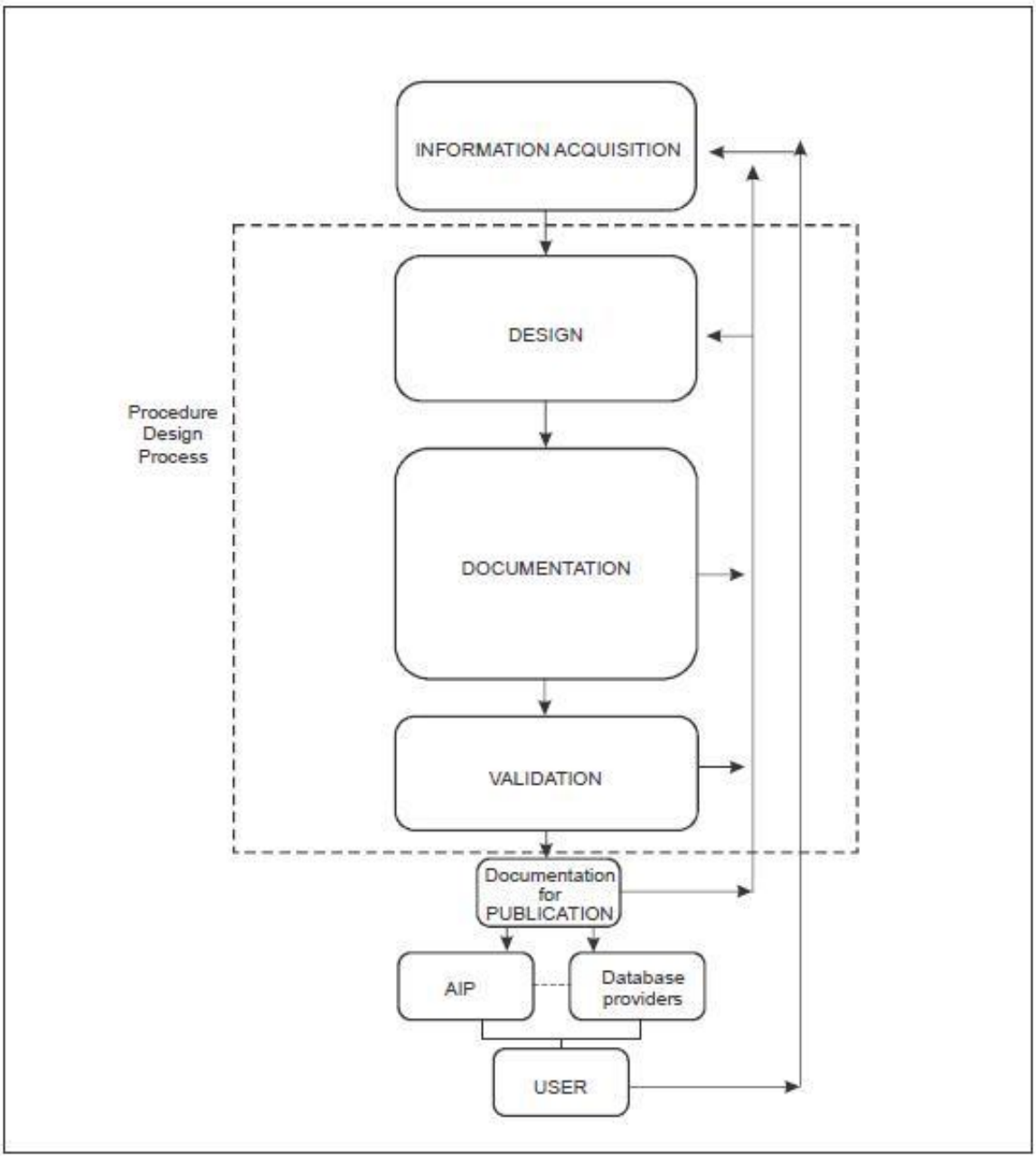


Figure – Instrument flight procedure design process.

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