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THE CIVIL AVIATION ACT

(Cap. 394)

THE CIVIL AVIATION (AERONAUTICAL INFORMATION
SERVICE) REGULATIONS, 2025

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THE CIVIL AVIATION ACT

(Cap. 394)

IN EXERCISE of powers conferred by section 82 of the Civil Aviation Act, 2013 the Cabinet Secretary for Roads and Transport makes the following Regulations—

THE CIVIL AVIATION (AERONAUTICAL INFORMATION SERVICES) REGULATIONS, 2025

PART I—PRELIMINARY

1. These Regulations may be cited as the Civil Aviation (Aeronautical Information Services) Regulations, 2025.

Citation.

2. In these Regulations, unless the context otherwise requires—

Interpretation.

“aerodrome” means 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 mapping data” means data collected for the purpose of compiling aerodrome mapping information;

“aerodrome mapping database” means a collection of aerodrome mapping data organized and arranged as a structured data set;

“aeronautical chart” means a representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation;

“aeronautical data” means a representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing;

“aeronautical fixed service (AFS)” means telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services;

“aeronautical information” means information resulting from the assembly, analysis and formatting of aeronautical data;

“aeronautical information circular” means a notice containing information that does not qualify for the origination of a Notice To Air Men or for inclusion in the aeronautical information publication, but which relates to flight safety, air navigation, technical, administrative or legislative matters;

“aeronautical information management” means the dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties;

“Aeronautical information product” means Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media, and includes—

- (a) Aeronautical Information Publication (AIP), including Amendments and Supplements;
- (b) Aeronautical Information Circulars (AIC);
- (c) aeronautical charts;
- (d) NOTAM; and
- (e) digital data sets .

“aeronautical information publication” means a publication issued by or with the authority of the Authority and containing aeronautical information of a lasting character essential to air navigation;

“aeronautical information service” means a service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation;

“aeronautical information publication amendment” means permanent changes to the information contained in the aeronautical information publication;

“aeronautical information publication supplement” means temporary changes to the information contained in the aeronautical information publication which are published by means of special pages;

“aeronautical information regulation and control” means a system aimed at advance notification, based on common effective dates, of circumstances that necessitate significant changes in operating practices;

“air defence identification zone” means special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services;

“air traffic management” means the dynamic, integrated management of air traffic and airspace (including air traffic services, airspace management and air traffic flow management) — safely, economically and efficiently — through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions;

“application” means manipulation and processing of data in support of user requirements;

“area navigation” means a method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these;

“ASHTAM” means a special series Notice To Air Men notifying by means of a specific format change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations;

“assemble” means a process of merging data from multiple sources into a database and establishing a baseline for subsequent processing;

“air traffic services surveillance service” means a term used to indicate a service provided directly by means of an air traffic services surveillance system;

“air traffic services surveillance system” means a generic term meaning variously, automatic dependent, PSR, SSR or any comparable ground-based system that enables the identification of aircraft;

“area navigation specification” means a navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV;

“automatic dependent surveillance — broadcast” means a means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link;

“automatic dependent surveillance — contract” means a means by which the terms of an automatic dependent surveillance — contract agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions automatic dependent surveillance — contract reports would be initiated, and what data would be contained in the reports;

“Authority” means the Kenya Civil Aviation Authority;

“automatic terminal information service” means the automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof;

“bare earth” means a surface of the earth including bodies of water and permanent ice and snow, and excluding vegetation and manmade objects;

“calendar” means discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day;

“canopy” means bare earth supplemented by vegetation height;

“confidence level” means the probability that the true value of a parameter is within a certain interval around the estimate of its value;

“controller-pilot data link communications” means a means of communication between controller and pilot, using data link for ATC communications;

“culture” means all man-made features constructed on the surface of the earth, such as cities, railways and canals;

“cyclic redundancy check” means a mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data;

“danger area” means an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times;

“data accuracy” means a degree of conformance between the estimated or measured value and the true value;

“data completeness” means the degree of confidence that all of the data needed to support the intended use is provided;

“data format” means a structure of data elements, records and files arranged to meet standards, specifications or data quality requirements;

“data integrity (assurance level)” means a degree of assurance that an aeronautical data and its value has not been lost or altered since the origination or authorized amendment;

“data link-automatic terminal information service” means the provision of automatic terminal information service via data link;

“data product” means a data set or data set series that conforms to a data product specification;

“data product specification” means a detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party;

“data quality” means a degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity;

“data resolution” means a number of units or digits to which a measured or calculated value is expressed and used.

“data set” means identifiable collection of data;

“data set series” means a collection of data sets sharing the same product specification;

“data timeliness” means the degree of confidence that the data is applicable to the period of its intended use;

“data traceability” means the degree that a system or a data product can provide a record of the changes made to that product and thereby enable an audit trail to be followed from the end-user to the originator;

“datum” means any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities;

“Digital Elevation Model” means the representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum;

“direct transit arrangements” means special arrangements approved by the Authority by which traffic which is pausing briefly in its passage through the Republic of Kenya may remain under their direct control;

“ellipsoid height (Geodetic height)” means the height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question;

“feature” means abstraction of real world phenomena;

“feature attribute” means characteristic of a feature;

“feature operation” means operation that every instance of a feature type may perform ;

“feature relationship” means relationship that links instances of one feature type with instances of the same or a different feature type;

“feature type” means class of real world phenomena with common properties ;

“geodesic distance” means the shortest distance between any two points on a mathematically defined ellipsoidal surface;

“geodetic datum” means a minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system or frame;

“geoid” means the equipotential surface in the gravity field of the earth which coincides with the undisturbed mean sea level extended continuously through the continents;

“geoid undulation” means the distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid;

“gregorian calendar” means calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar ;

“height” means the vertical distance of a level, point or an object considered as a point, measured from a specific datum;

“heliport” means an aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters;

“human factors principles” means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance;

“ICAO” means International Civil Aviation Organisation;

“integrity classification (aeronautical data)” means classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data are classified as—

(a) routine data: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

(b) essential data: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and

(c) critical data: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

“international airport” means any airport designated by the Authority as an airport of entry and departure for international air

traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out;

“international Notice To Air Men office” means an office designated by the Authority for the exchange of Notice To Air Men internationally;

“logon address” means a specified code used for data link logon to an air traffic services unit;

“manoeuvring area” means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons;

“metadata” means data about data;

“minimum en-route altitude” means the altitude for an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance;

“minimum obstacle clearance altitude” means the minimum altitude for a defined segment of flight that provides the required obstacle clearance;

“movement area” means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron;

“navigation specification” means a set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

“next intended user” means the entity that receives the aeronautical data or information from the aeronautical information service;

“Notice To Air Men” means a notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations;

“obstacle” means all fixed (whether temporary or permanent) and mobile objects, or parts thereof, that:

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

“obstacle/terrain data collection surface” means a defined surface intended for the purpose of collecting obstacle/terrain data;

“origination (aeronautical data or aeronautical information)” means the creation of the value associated with new data or information or the modification of the value of existing data or information;

“originator (aeronautical data or aeronautical information)” means an entity that is accountable for data or information origination

and/or from which the AIS organization receives aeronautical data and aeronautical information;

“orthometric height” means a height of a point related to the geoid, generally presented as a mean sea level elevation;

“performance-based communication” means communication based on performance specifications applied to the provision of air traffic services;

“performance-based navigation” means area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace;

“performance-based surveillance” means a surveillance based on performance specifications applied to the provision of air traffic services;

“portrayal” means a presentation of information to humans;

“position (geographical)” means a set of coordinates (latitude and longitude) referenced to the mathematical reference ellipsoid which define the position of a point on the surface of the earth;

“post spacing” means an angular or linear distance between two adjacent elevation points;

“precision” means the smallest difference that can be reliably distinguished by a measurement process;

“pre-flight information bulletin” means a presentation of current Notice To Air Men information of operational significance, prepared prior to flight;

“prescribed” means requirements by the Authority as contained in the Implementing Standards, Circulars, Directives, Orders, Notices, Aeronautical Publications and any other documents issued by the Authority;

“prohibited area” means an airspace of defined dimensions, above the land areas or territorial waters of the Republic of Kenya, within which the flight of aircraft is prohibited;

“quality” means a degree to which a set of inherent characteristics fulfils requirements;

“quality assurance” means part of quality management focused on providing confidence that quality requirements will be fulfilled;

“quality control” means part of quality management focused on fulfilling quality requirements;

“quality management” means coordinated activities to direct and control an organization with regard to quality;

“radio navigation service” means a service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids;

“required communication performance specification” means a specification means a set of requirements for air traffic service

provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication;

“required navigation performance specification” means navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP;

“required surveillance performance specification” means a specification means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance;

“requirement” means a need or expectation that is stated, generally implied or obligatory;

“restricted area” means an airspace of defined dimensions, above the land areas or territorial waters of the Republic of Kenya, within which the flight of aircraft is restricted in accordance with certain specified conditions;

“route stage” means a route or portion of a route flown without an intermediate landing;

“service provider” means aeronautical information service provider;

“SNOWTAM” means a special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice or frost on the movement area;

“station declination” means an alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated;

“terrain” means the surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles;

“traceability” means ability to trace the history, application or location of that which is under consideration;

“validation” means confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled;

“verification” means confirmation, through the provision of objective evidence, that specified requirements have been fulfilled;

“voice-automatic terminal information service” means the provision of automatic terminal information service by means of continuous and repetitive voice broadcasts;

“VOLMET” means meteorological information for aircraft in flight;

“data link-VOLMET” means a provision of current aerodrome routine meteorological reports and aerodrome special meteorological

reports, aerodrome forecasts, SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET via data link; and

“VOLMET broadcast” means provision, as appropriate, of current aerodrome routine meteorological reports, aerodrome special meteorological reports, aerodrome forecasts and SIGMET by means of continuous and repetitive voice broadcasts.

(1) These Regulations shall apply to the designated aeronautical information services provider. Application.

(2) These Regulations shall not apply to aeronautical information service provided by the military.

PART II –GENERAL PROVISIONS

3. (1) The Authority shall designate an agency to—

Provision of an
Aeronautical
Information
Service.

- (a) provide an aeronautical information service (AIS); or
- (b) agree with one or more other Contracting State(s) for the provision of a joint service.

(2) The Authority shall certify the designated agency as the aeronautical information service provider in accordance with the Civil Aviation (Certification of Air Navigation Service Providers) Regulations.

(3) A person shall not provide Aeronautical Information Service or undertake aeronautical data and information management unless in accordance with sub-regulation (1) and sub regulation (2).

5. (1) A certified service provider shall develop an operations manual demonstrating how it will comply with the requirements of these Regulations. Operations Manual.

(2) The operations manual required in sub regulation (1) shall contain the following information—

- (a) services to be provided;
- (b) personnel requirements and their responsibilities including the organization chart that shows the position of each personnel and the name, qualification, experience, duties and responsibilities of personnel who are responsible for ensuring the compliance of the organization with the requirements in these regulations;
- (c) training and performance assessment of personnel;
- (d) quality management system;
- (e) contingency plans;
- (f) procedures for reporting of Aeronautical Information Service system malfunction;
- (g) maintenance of documents and records;

- (h) the hours of service;
- (i) detailed description of the Aeronautical Information Service systems and procedures used in the provision of aeronautical information services/aeronautical information management; and
- (j) any other information requested by the Authority.

(3) The operations manual may consist of a main manual covering the main areas that need to be addressed, as well as separate supporting documents and manuals (such as the quality manual, the safety manual or any other document specific to a particular station) that are referenced to in the main manual.

(4) The operations manual shall be issued under the authority of the service provider and shall be approved by the Authority.

(5) A service provider shall amend the operations manual and any other associated procedures whenever necessary to ensure accuracy and currency of the information contained therein.

(6) Changes referred to in sub-regulation (5) shall be brought to the attention of the Authority for approval/acceptance or concurrency as may be applicable before implementation.

6. The aeronautical information service provider and all parties involved in providing aeronautical data and aeronautical information shall—

Horizontal
reference system.

- (a) use the World Geodetic System-1984 (WGS-84) as the horizontal (geodetic) reference system for air navigation;
- (b) express the published aeronautical geographical coordinates indicating latitude and longitude in terms of the WGS-84—geodetic reference datum.
- (c) model and estimate in precise geodetic applications and some air navigation applications, temporal changes in the tectonic plate motion and tidal effects on the Earth's crust

7. (1) A service provider shall—

Vertical
reference system.

- (a) use the mean sea level (MSL) datum as the vertical reference system for air navigation;
- (b) use the earth gravitational model — 1996 (EGM-96) as the global gravity model for air navigation;
- (c) develop regional, national or local geoid models containing high resolution (short wavelength) gravity field data at those geographical positions where the accuracy of Earth Gravitational Model -1996 does not meet the accuracy requirements for elevation and geoid undulation on the basis of EGM-96;
- (d) provide in the Aeronautical Information Publication (AIP) a description of the model used, including the parameters required for height transformation between the model and

EGM-96, when a geoid model other than the EGM-96 is used; and

- (e) conform to the specifications concerning determination and reporting (accuracy of field work and data integrity) of elevation and geoid undulation at specific positions at aerodromes and heliports as specified by the Authority.

(2) Requirements on the determination and reporting (accuracy of field work and data integrity) of elevation and geoid undulation at specific positions at aerodromes/heliports as specified by the Authority.

8. A service provider shall—

- (a) use the gregorian calendar and coordinated universal time as the temporal reference system for air navigation; and
- (b) include either a description of a system or a citation for a document that describes a temporal reference system used for some applications, the feature catalogue, the metadata associated with an application schema or a data set, as appropriate, when a different temporal reference system is used.

Temporal
reference system.

9. A service provider shall—

- (a) include English text for those parts expressed in plain language on the Aeronautical information products intended for international distribution;
- (b) spell place names in conformity with local usage, transliterated, when necessary, into the ISO Basic Latin alphabet;
- (c) use the units of measurement in the origination, processing and distribution of aeronautical data and aeronautical information are consistent with the tables contained in Civil Aviation (Units of Measurement to be Used in Air and Ground Operations) Regulations; and
- (d) use the International Civil Aviation Organization (ICAO) abbreviations in aeronautical information products whenever they are appropriate and their use will facilitate distribution of aeronautical data and aeronautical information.

Miscellaneous
Specifications.

PART III—RESPONSIBILITIES AND FUNCTIONS

10. A Certificated Aeronautical Information Service Provider shall—

- (a) provide an aeronautical information service;
- (b) guarantee that the provision of aeronautical data and aeronautical information covers the entire territory of Kenya and those areas of the high seas for which Kenya is responsible for the provision of air traffic services;

Role of the
Aeronautical
Information
Service Provider.

- (c) remain responsible for the aeronautical data and aeronautical information provided in accordance to sub regulation (b);
- (d) provide aeronautical data and aeronautical information for and on behalf of Kenya and clearly indicate that they are provided under the Authority of Kenya irrespective of the format in which they are provided;
- (e) provide aeronautical data and aeronautical information that are in accordance with the quality requirements contained in regulation 17 of these regulations; and
- (f) establish formal arrangements between originators of aeronautical data and aeronautical information and the aeronautical information service in relation to the timely and complete provision of aeronautical data and aeronautical information.

11. (1) A service provider shall avail aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation in a form suitable for the operational requirements of the air traffic management community, including—

Aeronautical
Information
Service Provider
responsibilities
and functions.

- (a) those involved in flight operations, including flight crews, flight planning and flight simulators; and
 - (b) the air traffic services unit responsible for flight information service and the services responsible for pre-flight information.
- (2) A service provider shall—
- (a) receive, collate or assemble, edit, format, publish or store and distribute aeronautical data and aeronautical information or data concerning the entire territory of Kenya as well as those areas over the high seas in which the country is responsible for the provision of air traffic services;
 - (b) provide aeronautical data and aeronautical information as aeronautical information products;
 - (c) ensure that where 24-hour service is not provided, the service shall be available during the whole period an aircraft is in flight in the area of responsibility of the aeronautical information service, plus a period of at least two hours before and after such a period.
 - (d) make available aeronautical information service at such other time as may be requested by an appropriate ground organisation; and
 - (e) obtain aeronautical data and aeronautical information to enable provision of pre-flight information service and to meet the need for in-flight information from the aeronautical information services of other States and other sources that may be available.

(3) A service provider shall—

- (a) clearly identify aeronautical data and aeronautical information obtained from other States, when distributed, as having the authority of the State of Origin; and
- (b) verify aeronautical data and aeronautical information obtained from other sources other than other States, before distribution and if not verified, when distributed, be clearly identified as such.

(4) A service provider shall promptly make available to the aeronautical information services of other States, any aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation required by them to enable compliance to sub regulation (1).

12. (1) An aeronautical information service provider shall—

(a) designate the office to which all elements of aeronautical information products provided by other States shall be addressed and the office shall be qualified to deal with requests for aeronautical data and aeronautical information provided by other States;

(b) define, where more than one international Notice To Air Men office is designated within Kenya, the extent of responsibility and the territory covered by each office;

(c) arrange as necessary to satisfy operational requirements for the issuance and receipt of Notice To Air Men distributed by telecommunication;

(d) establish direct contact with other providers of aeronautical information services in order to facilitate the international exchange of aeronautical data and aeronautical information;

(e) except as provided in sub-regulation (1) (g) avail one copy of each of the following aeronautical information products upon request by the aeronautical information service of an International Civil Aviation Organisation Contracting State and provided in the mutually agreed forms(s) without charge, even where authority for publication/storage and distribution has been delegated to a non-governmental agency—

- (i) aeronautical Information Publication (AIP), including Amendments and Supplements;
- (ii) aeronautical Information Circulars (AIC);
- (iii) NOTAM; and
- (iv) aeronautical charts.

(f) subject the exchange of more than one copy of aeronautical information products and other air navigation documents, including those containing air navigation legislation and regulations, to a bilateral agreement between the aeronautical information service provider and other International Civil Aviation Organisation Contracting States;

Exchange of
aeronautical data
and aeronautical
information.

- (g) provide aeronautical data and aeronautical information in the form of digital data sets to be used by the AIS on the basis of agreement between the Contracting States concerned;
- (h) subject to separate agreement the procurement of aeronautical data and aeronautical information, including the elements of the aeronautical information products, and other air navigation documents, including those containing air navigation legislation and regulations, by States other than International Civil Aviation Organisation Contracting States and by other entities;
- (i) use globally interoperable aeronautical data and aeronautical information exchange models for the provision of data sets; and
- (j) establish formal arrangements between those parties providing aeronautical data and aeronautical information on behalf of the States and their users in relation to the provision of the service.

13. A service provider shall—

Copyright.

- (a) only avail any aeronautical information product which has been granted copyright protection by the originating State and provided to another State in accordance with regulation 12 to a third party on the condition that the third party is made aware that the product is copyright protected and provided that it is appropriately annotated that the product is subject to copyright by the originating State;
- (b) not avail or provide to any third-party aeronautical data and aeronautical information received from other states in accordance with regulation 12 (g) without the consent of the providing State.

14. A service provider shall recover only the overhead cost of collecting and compiling aeronautical data and aeronautical information.

Cost recovery.

15. (1) Further to the provisions contained in regulation 10(f), the formal arrangements with persons or entities in custody of aeronautical data and aeronautical information established shall—

Obligation of aeronautical data and aeronautical information providers.

- (a) require timely submission of new or amended aeronautical data and aeronautical information;
- (b) ensure that the aeronautical data and aeronautical information provided is accurate, complete and timely;
- (c) the data or information originator commits an offence if as soon as practicable after becoming aware of the need for the change of the data or information does not provide aeronautical information services with updated aeronautical data and aeronautical information within an acceptable timeline;
- (d) A service provider may by a written notice request a person who owns, controls or operates objects or structures that

affect aviation safety to submit data or information on the objects or structures.

PART IV—AERONAUTICAL INFORMATION MANAGEMENT

16. (1) A service provider shall establish adequate information management resources and processes to warrant the timely collection, processing, storing, integration, exchange and delivery of quality-assured aeronautical data and aeronautical information within the air traffic management system.

Information management requirements.

(2) The management of aeronautical data and aeronautical information shall include the following processes—

- (a) collection;
- (b) processing;
- (c) quality control; and
- (d) distribution.

(3) The detailed processes to be implemented under the collection, processing, quality control and distribution shall be as specified by the Authority.

17. (1) A service provider shall meet the following data quality specifications—

Data quality specifications.

- (a) data accuracy: the order of accuracy for aeronautical data shall be in accordance with its intended use;
- (b) data resolution: the order of resolution of aeronautical data shall be commensurate with the actual data accuracy;
- (c) data integrity: the integrity of aeronautical data shall be maintained throughout the data process from origination to distribution to the next intended user;
- (d) data timeliness: timeliness is ensured by including limits on the effective period of the data elements;
- (e) data completeness: completeness of the aeronautical data shall be ensured in order to support the intended use; and
- (f) data format: the format of delivered data is adequate to ensure that the data is interpreted in a manner that is consistent with its intended use.

(2) A service provider shall put in place procedures based on the applicable integrity classification as follows:

- (a) for routine data: avoid corruption throughout the processing of the data;
- (b) for essential data: assure corruption does not occur at any stage of the entire process and include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level; and

- (c) for critical data: assure corruption does not occur at any stage of the entire process and include additional integrity assurance processes to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks.

18. A service provider shall—

- (a) assure data integrity by employing cryptographic technologies such as hash functions, message authentication codes, asymmetric and symmetric encryption, and digital certificates);
- (b) base on the use of systematic cycling codes the technical means used for data error detection.

Data integrity monitoring and assurance.

19. (1) An aeronautical information data provider shall thoroughly check the material to be issued as part of the aeronautical information products before it is submitted to the aeronautical information service in order to ensure that all necessary information has been included and that it is correct in detail.

Aeronautical data and aeronautical information validation and verification.

(2) A service provider shall establish verification and validation procedures which ensure that upon receipt of aeronautical data and aeronautical information, quality requirements are met.

20. A service provider shall use digital data error techniques—

- (a) during the transmission and storage of aeronautical data and digital data sets; and
- (b) in order to maintain the integrity levels as specified in these Regulations.

Data error detection.

21. (1) A service provider shall—

- (a) apply automation in order to ensure the quality, efficiency and cost effectiveness of aeronautical information services;
- (b) take due consideration to the integrity of data and information is given when automated processes are implemented and mitigating steps taken where risks are identified;
- (c) ensure that in order to meet the data quality requirements automation—
 - (i) enables digital aeronautical data exchange between the parties involved in the data processing chain; and
 - (ii) uses aeronautical information exchange models and data exchange models designed to be globally interoperable;
- (d) implement automation systems for processing aeronautical data and aeronautical information to ensure traceability of the performed actions;
- (e) regularly update as necessary the data/information contained in the automated system used for the processing of aeronautical data and aeronautical information.

Use of automation.

(2) Upon acquisition of new equipment or software including recurrent training by the service provider, training sessions conducted by the manufacturers on any new equipment or software procured for service provision, including factory acceptance tests shall be conducted together with the Authority's personnel and the service provider shall meet costs of travelling and upkeep for the personnel from the Authority.

22. A service provider shall—

- (a) have an automated system for the processing of aeronautical data and aeronautical information as part of providing its aeronautical information service;
- (b) update the data in the system as necessary; and
- (c) use the system—
 - (i) that allows the digital exchange and supply of aeronautical data and aeronautical information; and
 - (ii) that can provide the data and information in a format suitable for its intended use.

Update of the automated aeronautical information service systems.

23. (1) A service provider shall implement and maintain a quality management system that—

- (a) encompasses all functions of an aeronautical information service as outlined in these Regulations;
- (b) enables its execution be made demonstrable for each function stage;
- (c) is applicable to the whole aeronautical data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data;
- (d) follows the ISO 9000 series of quality assurance standards and be certified by an accredited certification body; and
- (e) meets requirements prescribed by the Authority.

Quality Management System.

(2) A service provider shall within the context of the established quality management system take actions that guarantee –

- (a) the competencies and the associated knowledge, skills and abilities required for each function are identified;
- (b) the personnel assigned to perform those functions are adequately trained;
- (c) processes are in place to ensure that personnel possess the competencies required to perform specific assigned functions;
- (d) appropriate records are maintained so that the qualifications of personnel can be confirmed;
- (e) initial and periodic assessments are established that require personnel to demonstrate the required competencies;

- (f) procedures are established to maintain currency of the competence of the personnel.
 - (g) periodic assessments of personnel are used as a means to detect and correct shortfalls in knowledge, skills and abilities;
 - (h) inclusion of the necessary policies, processes and procedures, including those for the use of metadata, to ensure and verify that aeronautical data is traceable throughout the aeronautical information data chain so as to allow any data anomalies or errors detected in use to be identified by root cause, corrected and communicated to affected users;
 - (i) providing users with the necessary assurance and confidence that distributed aeronautical data and aeronautical information satisfy the aeronautical data quality requirements.
- (3) The service provider shall take necessary measures to monitor compliance with the quality management system in place.
- (4) The services provider shall—
- (a) conduct audits as a demonstration of compliance of the quality management system applied;
 - (b) identify any nonconformity, initiating action to correct its cause without undue delay;
 - (c) properly document and provide evidence of all audit observations and remedial actions.
- (5) Subject to sub-regulation (1) the service provider shall—
- (a) develop a quality manual that includes the scope of a quality management system as applied to aeronautical information management processes;
 - (b) define and implement a user feedback system in the framework of the quality management system;
 - (c) adhere to other quality management system requirements as specified by the Authority.
24. A service provider shall—
- (a) take into consideration human factors principles which facilitate their optimum utilization of the organisation of the service provider as well as the design, contents, processing and distribution of aeronautical data and aeronautical information;
 - (b) give due consideration to the integrity of information where human interaction is required and mitigating steps are taken where risks are identified.

Human Factors
considerations.

**PART V — SCOPE OF AERONAUTICAL DATA AND
AERONAUTICAL INFORMATION**

25. (1) A service provider shall include at least the following sub-domains of aeronautical data and aeronautical information to be received and managed—

scope of
aeronautical data
and aeronautical
information.

- (a) national regulations, rules and procedures;
- (b) aerodromes and heliports;
- (c) airspace;
- (d) ATS routes;
- (e) instrument flight procedures;
- (f) radio navigation aids/systems;
- (g) obstacles;
- (h) terrain; and
- (i) geographic information.

(2) The determination and reporting of aeronautical data shall be in accordance with the accuracy and integrity classification required to meet the needs of the end-user of aeronautical data.

26. A service provider shall—

Metadata.

- (a) collect metadata for aeronautical data processes and exchange points;
- (b) apply metadata collection throughout the aeronautical information data chain, from origination to distribution to the next intended user;
- (c) collect metadata that includes as a minimum—
 - (i) the names of the organizations or entities performing any action of originating, transmitting or manipulating the data;
 - (ii) the action performed; and
 - (iii) the date and time the action was performed.

27. A service provider shall—

Data origination
requirements.

- (a) collect and transmit data in accordance with the accuracy requirements and integrity classification as specified by the Authority;
- (b) classify positional data as: surveyed points (such as navigation aid positions, runway threshold), calculated points (mathematical calculations from the known surveyed points in space, fixes) or declared points (such as flight information region boundary points);
- (c) determine and report geographical coordinates indicating latitude and longitude in terms of the World Geodetic System — 1984 (WGS-84) geodetic reference datum;

- (d) identify geographical coordinates that have been transformed into WGS-84 coordinates by mathematical means and whose accuracy of original field work does not meet the applicable requirements as specified by the Authority; and
- (e) publish elevation referenced to the MSL (geoid), for the specific surveyed ground positions as well as geoid undulation (referenced to the WGS-84 ellipsoid) for those positions as specified by the Authority.

PART VI — AERONAUTICAL INFORMATION PRODUCTS AND SERVICES

28. A service provider shall—

Aeronautical information in a standardized presentation.

- (a) provide aeronautical information in the form of Aeronautical Information Products and associated services;
- (b) implement processes to ensure data and information consistency between formats where aeronautical data and aeronautical information are provided in multiple formats;
- (c) provide aeronautical information in a standardized presentation including the Aeronautical Information publication, Aeronautical Information Publication Amendment, Aeronautical Information Publication Supplement, Aeronautical Information Circular, Notice To Airmen and Aeronautical Charts;
- (d) provide on paper or as an electronic document the aeronautical information publication, aeronautical information publication amendment, aeronautical information publication supplement and aeronautical information circular; and
- (e) present the Aeronautical Information Publication, Aeronautical Information Publication Amendments, Aeronautical Information Publication Supplements and Aeronautical Information Circulars when provided as an electronic document (eAIP) in a manner that allows for both displaying on electronic devices and printing on paper.

29. (1) The aeronautical information publication shall include—

Aeronautical Information Publication.

- (a) a statement of the competent authority responsible for the air navigation facilities, services or procedures covered by the AIP;
- (b) the general conditions under which the services or facilities are available for international use;
- (c) a list of significant differences between the national regulations and practices of the Authority and the related ICAO Standards, Recommended Practices and Procedures, given in a form that would enable a user to

readily differentiate between the requirements of Kenya and the related ICAO provisions;

- (d) the choice made by the Authority in each significant case where an alternative course of action is provided for in ICAO Standards, Recommended Practices and Procedures

(2) The Aeronautical Information Publication shall—

- (a) be self-contained and include a table of contents;
- (b) not duplicate information within itself or from other sources;
- (c) be published in loose-leaf form unless the complete publication is reissued at frequent interval;
- (d) be organised in three parts (GEN, ENR and AD), sections and sub-sections;
- (e) be dated whereby the date consisting of the day, month (by name) and year, is the publication date or the effective date (AIRAC) of the information;
- (f) provide checklist of valid AIP Supplements regularly.

(3) A service provider shall provide—

- (a) a checklist giving the current date of each page in an aeronautical information publication series reissued frequently and a page number or chart title and date of the checklist appears on the checklist itself;
 - (b) an aeronautical information publication issued as a bound volume and each page of an aeronautical information publication issued in loose-leaf form is so annotated as to indicate clearly the following—
 - (i) the identity of the aeronautical information publication;
 - (ii) the territory covered and subdivisions when necessary;
 - (iii) the identification of the issuing state (Kenya) and producing organisation (Kenya Civil Aviation Authority);
 - (iv) page numbers and chart titles; and
 - (v) the degree of reliability if the information is doubtful;
 - (c) an aeronautical information publication in sheet size of no larger than 210 × 297 millimetres, except that larger sheets may be used provided they are folded to the same size;
 - (d) changes to an aeronautical information publication, or new information on a republished page, which is identified by a distinctive symbol or annotation;
- (4) The aeronautical information publication shall—

- (a) be amended or reissued at such regular intervals specified in the aeronautical information publication, Part 1 — General as may be necessary to keep it up to date;
- (b) keep hand amendments or annotations are to the minimum; and
- (c) employ a normal method of amendment which is by means of replacement sheets

31. A service provider shall—

Specifications for
aeronautical
information
publication
supplements.

- (a) publish temporary changes of three months or more and information of short duration which contains extensive text or graphics as aeronautical information publication supplements;
- (b) allocate each aeronautical information publication supplement a serial number which is consecutive and based on the calendar year;
- (c) provide each aeronautical information publication supplement on distinctive pages allowing for easy identification from the regular aeronautical information publication content;
- (d) whenever an aeronautical information publication supplement is issued as a replacement of a notice to airmen, a reference to the series and number of the notice to airmen shall be included;
- (e) issue a checklist of valid aeronautical information publication supplements at intervals of not more than one month as part of the checklist of notice to airmen and with distribution as for the aeronautical information publication supplements;
- (f) each aeronautical information publication supplement page shows a publication date;
- (g) each AIRAC aeronautical information publication supplement page shows a publication date and an effective date;
- (h) keep aeronautical information publication supplement pages in the aeronautical information publication if all or some of their contents remain valid;
- (i) publish a new AIP Supplement as a replacement whenever an error occurs in an AIP Supplement or when the period of validity of an AIP Supplement is changed.

32. (1) An aeronautical information circular shall be used to provide—

Specifications for
Aeronautical
Information
Circulars.

- (a) a long-term forecast of any major change in legislation, regulations, procedures or facilities;
 - (b) information of a purely explanatory or advisory nature liable to affect flight safety; or
 - (c) information or notification of an explanatory or advisory nature concerning technical, legislative or purely administrative matters.
- (2) An Aeronautical Information Circular is not to be used for information that qualifies for inclusion in Aeronautical Information Publication or Notice to Airmen.
- (3) The validity of Aeronautical Information Circular currently in force is reviewed at least once a year.
- (4) The validity of Aeronautical Information Circular currently in force is reviewed at least once a year.
- (5) A service provider shall issue an Aeronautical Information Circular whenever it is desirable to promulgate:
- (a) forecasts of important changes in the air navigation procedures, services and facilities provided;
 - (b) forecasts of implementation of new navigational systems;
 - (c) significant information arising from aircraft accident/incident investigation which has a bearing on flight safety;
 - (d) information on regulations relating to the safeguarding of international civil aviation against acts of unlawful interference;
 - (e) advice on medical matters of special interest to pilots
 - (f) warnings to pilots concerning the avoidance of physical hazards;
 - (g) effect of certain weather phenomena on aircraft operations;
 - (h) information on new hazards affecting aircraft handling techniques;
 - (i) regulations relating to the carriage of restricted articles by air;
 - (j) reference to the requirements of, and publication of changes in, national legislation;
 - (k) aircrew licensing arrangements;
 - (l) training of aviation personnel;
 - (m) application of, or exemption from, requirements in national legislation;
 - (n) advice on the use and maintenance of specific types of equipment;
 - (o) actual or planned availability of new or revised editions of aeronautical charts;

- (p) carriage of communication equipment;
 - (q) explanatory information relating to noise abatement;
 - (r) selected airworthiness directives;
 - (s) changes in Notice to Airmen series or distribution, new editions of Aeronautical Information Publication or major changes in their contents, coverage or format.
 - (6) The service provider shall—
 - (a) select the aeronautical information circulars that are to be given international distribution;
 - (b) give selected Aeronautical Information Circulars for international distribution the same distribution as for the AIP;
 - (c) allocate a serial number to each aeronautical information circular which shall be consecutive and based on the calendar year;
 - (d) separately identify each Aeronautical Information Circulars by a letter (such as A 2/02, B 4/02) in the event that aeronautical information circulars are provided in more than one series;
 - (e) issue a checklist of aeronautical information circulars currently in force at least once a year, with distribution as for the aeronautical information circulars;
 - (f) issue a checklist of Aeronautical Information Circulars provided internationally in the NOTAM checklist.
 - (7) The service provider shall practice differentiation and identification of AIC topics according to subjects using colour coding as follows—
 - (a) white — administrative;
 - (b) yellow — air traffic control (ATC);
 - (c) pink — safety;
 - (d) mauve — danger area map; and
 - (e) green — maps/charts.
33. (1) The aeronautical charts listed alphabetically below when available for designated international aerodromes or heliports, shall, form part of the Aeronautical Information Publication, or be distributed separately to recipients of the Aeronautical Information Publication—
- (a) Aerodrome/Heliport Chart — International Civil Aviation Organization;
 - (b) Aerodrome Ground Movement Chart — International Civil Aviation Organization;

Aeronautical
Charts.

- (c) Aerodrome Obstacle Chart — International Civil Aviation Organization Type A;
- (d) Aerodrome Terrain and Obstacle Chart — International Civil Aviation Organization (Electronic);
- (e) Aircraft Parking/Docking Chart — International Civil Aviation Organization;
- (f) Area Chart — International Civil Aviation Organization;
- (g) ATC Surveillance Minimum Altitude Chart — International Civil Aviation Organization;
- (h) Instrument Approach Chart — International Civil Aviation Organization;
- (i) Precision Approach Terrain Chart — International Civil Aviation Organization;
- (j) Standard Arrival Chart — Instrument (STAR) — International Civil Aviation Organization;
- (k) Standard Departure Chart — Instrument (SID) — International Civil Aviation Organization; and
- (l) Visual Approach Chart — International Civil Aviation Organization.

(2) The “Enroute Chart — International Civil Aviation Organization” when available, shall be part of the AIP, or be provided separately to recipients of the AIP.

(3) The aeronautical charts listed below when available, shall be provided as Aeronautical Information Products:

- (a) Aerodrome Obstacle Chart — International Civil Aviation Organization Type B;
- (b) World Aeronautical Chart — International Civil Aviation Organization 1:1 000 000;
- (c) Aeronautical Chart — International Civil Aviation Organization 1:500 000;
- (d) Aeronautical Navigation Chart — International Civil Aviation Organization Small Scale;
- (e) Plotting Chart — International Civil Aviation Organization chart; and
- (f) ATC Surveillance Minimum Altitude Chart — International Civil Aviation Organization.

(4) Electronic aeronautical charts shall be provided based on digital databases and the use of geographic information systems.

34. (1) A Service Provider shall provide digital data to be in the form of the following data sets—

- (a) AIP data set;
- (b) terrain data sets;
- (c) obstacle data sets;

Digital data sets in general.

(d) aerodrome mapping data sets; and
 (e) instrument flight procedure data sets.
 (2) each data set shall be provided to the next intended user together with a minimum set of metadata that ensures data traceability from the end-user to the originator.

(3) a checklist of valid data sets shall be regularly provided.

35. (1) A Service Provider shall provide Aeronautical Information Publication data set containing digital representation of aeronautical information of lasting character (permanent information and long duration temporary changes) essential to air navigation.

Aeronautical
information
publication data
sets.

(2) When provided the Aeronautical Information Publication data set shall include data about the following subjects, with the properties indicated in brackets being included as a minimum (if applicable):

- (a) Air Traffic Services airspace (type, name, lateral limits, vertical limits, class of airspace);
- (b) special activity airspace (type, name, lateral limits, vertical limits, restriction, activation);
- (c) route (identifier prefix, flight rules, designator);
- (d) route segment (navigation specification, start point, endpoint, track, distance, upper limit, lower limit, Minimum en-route altitude, Minimum obstacle clearance altitude, direction of cruising level, reverse direction of cruising level, required navigation performance);
- (e) waypoint – en-route (reporting requirement, identification, location, formation);
- (f) Aerodrome and Heliport (location indicator, name, International Air Transport Association designator, served city, certified by the International Civil Aviation Organization, certification date, certification expiration date, control type, field elevation, reference temperature, magnetic variation, airport reference point);
- (g) Runway (designator, nominal length, nominal width, surface type, strength);
- (h) Runway Direction (designator, true bearing, threshold, the take-off run available, take-off distance available, accelerate-stop distance available, and landing distance available, rejected take-off distance available);
- (i) final approach and take-off area (designation, length, width, threshold point);
- (j) touchdown and lift-off area (designator, center point, length, width, surface type); and
- (k) radio navigation aid (type, identification, name, aerodrome served, hours of operation, magnetic variation,

frequency/channel, position, elevation, magnetic bearing, true bearing, zero bearing direction).

(3) When it is not possible to provide a complete AIP data set, the data subset(s) that are available shall be provided.

36. (2) A Service Provider shall specify the coverage areas for sets of terrain and obstacle data as follows—

Terrain and obstacle data sets general.

- (a) Area 1: the entire territory of a State;
- (b) Area 2: within the vicinity of an aerodrome, subdivided as follows—
 - (i) Area 2a: a rectangular area around a runway that comprises the runway strip plus any clearway that exists;
 - (ii) Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;
 - (iii) Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a; and
 - (iv) Area 2d: an area outside the Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing terminal control area (TMA) boundary, whichever is nearest;
- (c) Area 3: the area bordering an aerodrome movement area that extends horizontally from the edge of a runway to 90 m from the runway centre line and 50 m from the edge of all other parts of the aerodrome movement area;
- (d) Area 4: the area extending 900 m prior to the runway threshold and 60 m each side of the extended runway centre line in the direction of the approach on a precision approach runway, Category II or III.

(2) Where the terrain at a distance greater than 900 m (3 000 ft) from the runway threshold is mountainous or otherwise significant, the length of Area 4 shall be extended to a distance not exceeding 2 000 m (6 500 ft) from the runway threshold.

37. (1) A Service Provider shall provide terrain data set that contain the digital representation of the terrain surface in the form of continuous elevation values at all intersections (points) of a defined grid, referenced to common datum.

Terrain data sets

(2) Terrain data shall be provided for Area 1.

(3) For aerodromes regularly used by international civil aviation, terrain data shall be provided for—

- (a) Area 2a;
- (b) the take-off flight path area; and

- (c) an area bounded by the lateral extent of the aerodrome obstacle limitation surfaces.
 - (4) Additional terrain data shall be provided for aerodromes regularly used by international civil aviation within Area 2 as follows—
 - (a) in the area extending to 10 km from the ARP; and
 - (b) within the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller) where terrain penetrates a horizontal terrain data collection surface specified as 120 m above the lowest runway elevation.
 - (5) Arrangements shall be made for the coordination of providing terrain data for adjacent aerodromes where their respective coverage areas overlap to assure that the data for the same terrain are correct.
 - (6) Arrangements shall be made among States concerned to share terrain data for those aerodromes located near territorial boundaries.
 - (7) Terrain data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established and where detailed terrain information is required by operators to enable them to assess the effect of terrain on decision height determination by use of radio altimeters for aerodromes regularly used by international civil aviation
 - (8) A terrain grid shall be angular or linear and of regular or irregular shape.
 - (9) Sets of terrain data shall include spatial (position and elevation), thematic and temporal aspects for the surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles.
 - (10) Subject to sub-regulation (9), on the acquisition method used, this shall represent the continuous surface that exists at the bare Earth, the top of the canopy or something in-between, also known as “first reflective surface”.
 - (11) In terrain data sets, only one feature type terrain, shall be provided.
 - (12) The feature attributes describing terrain shall be those listed in the First Schedule.
 - (13) The feature attributes annotated as mandatory shall be recorded in the terrain data set.
 - (14) Terrain data for each area shall conform to the applicable numerical requirements as contained in the First Schedule.
38. (1) A Service Provider shall publish or provide—
- (a) obstacle data sets that contain the digital representation of the vertical and horizontal extent of obstacles;
- Obstacle data sets.

- (b) no obstacle data in terrain data sets;
 - (c) obstacle data for obstacles in Area 1 whose height is 100 m or higher above ground;
 - (d) obstacle data for all obstacles within Area 2 that are assessed as being a hazard to air navigation, for aerodromes regularly used by international civil aviation.
- (2) For aerodromes regularly used by international civil aviation, obstacle data shall be provided for—
- (a) area 2a for those obstacles that penetrate an obstacle data collection surface outlined by a rectangular area around a runway that comprises the runway strip plus any clearway that exists and surface shall have height of 3 m above the nearest runway elevation measured along the runway centre line, and for those portions related to a clearway, if one exists, at the elevation of the nearest runway end;
 - (b) objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area; and
 - (c) penetrations of the aerodrome obstacle limitation surfaces.
- (3) Obstacle data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established for aerodromes regularly used by international civil aviation.
- (4) Obstacle data elements shall be represented in the data sets by points, lines or polygons.
- (5) All defined obstacle feature types in an obstacle data set shall be provided and each of them described according to the list of mandatory attributes provided in the First Schedule.
- (6) Obstacle data for each area shall conform to the applicable numerical requirements contained in the First Schedule.
- (7) The obstacle data product specification, supported by geographical coordinates for each aerodrome included within the dataset, shall describe the following areas—
- (a) areas 2a, 2b, 2c, 2d;
 - (b) the take-off flight path area; and
 - (c) the obstacle limitation surfaces.
- (8) Arrangements for coordinating the provision of obstacle data for adjacent aerodromes where their respective coverage areas overlap to assure that the data for the same obstacle is correct.
- (9) Obstacle data for Area 3 for obstacles that penetrate the relevant obstacle data collection surface extending a half-metre (0.5 m) above the horizontal plane passing through the nearest point on the aerodrome movement area in aerodromes regularly used by international civil aviation.

(10) Obstacle data for Area 4 for all runways where precision approach Category II or III operations have been established in aerodromes regularly used by international civil aviation.

39. (1) Aerodrome mapping data sets shall contain the digital representation of aerodrome features.

Aerodrome
mapping data sets.

(2) Aerodrome mapping data sets shall be made available for aerodromes regularly used by international civil aviation.

40. (1) Instrument flight procedure data sets shall contain the digital representation of instrument flight procedures.

Instrument flight
procedure data
sets.

(2) Instrument flight procedure data sets shall be made available for aerodromes regularly used by international civil aviation.

41. A service provider shall distribute Aeronautical Information Products to authorized users on request, as provided for under the Second Schedule, as follows—

Distribution
services.

- (a) Aeronautical Information Products shall be made available on the most expeditious means;
- (b) notice to airmen shall be prepared in conformity with the relevant provisions of the international civil aviation organization communication procedures;
- (c) the Aeronautical Fixed Service shall whenever practicable, be employed for notice to airmen distribution;
- (d) a six-digit date-time group indicating the date and time of notice to airmen origination, and the identification of the originator shall be used, preceding the text whenever a notice to airmen is sent by means other than the AFS;
- (e) the originating State shall select the notice to airmen that are to be given international distribution;
- (f) international exchange of notice to airmen shall take place only as mutually agreed between the international notice to airmen offices concerned and between the notice to airmen offices and multinational notice to airmen processing Units;
- (g) the originating State shall upon request grant distribution of notice to airmen series other than those distributed internationally.

42. A Service Provider shall—

Pre-Flight
Information
Services.

- (a) include information of operational significance aeronautical information provided for pre-flight planning purposes from the elements of the Aeronautical Information Products;
- (b) use automated pre-flight information systems to make aeronautical data and aeronautical information available to operations personnel including flight crew members for self-briefing, flight planning and flight information service purposes;

- (c) provide self-briefing facilities of an automated pre-flight information system to operations personnel, including flight crew members and other aeronautical personnel concerned, for consultation as necessary with the aeronautical information service by telephone or other suitable telecommunications means;
- (d) provide the human machine interface of such facilities in sub-regulation (4) to ensure easy access in a guided manner to all relevant information and data;
- (e) provide automated pre-flight information systems for the supply of aeronautical data and aeronautical information for self-briefing, flight planning and flight information service which shall—
 - (i) provide for continuous and timely updating of the system database and monitoring of the validity and quality of the aeronautical data stored;
 - (ii) permit access to the system by operations personnel including flight crew members, aeronautical personnel concerned and other aeronautical users through suitable telecommunications means;
 - (iii) ensure provision, in paper copy form, of the aeronautical data and aeronautical information accessed, as required;
 - (iv) use access and interrogation procedures based on abbreviated plain language and ICAO location indicators, as appropriate, or based on a menu-driven user interface or other appropriate mechanism as agreed between the civil aviation authority and operator concerned; and
 - (v) provide for rapid response to a user request for information.
- (f) establish automated pre-flight information systems providing a harmonized, common point of access by operations personnel, including—
 - (i) flight crew members;
 - (ii) other aeronautical personnel concerned with aeronautical information and data;
 - (iii) aeronautical meteorological information, in accordance with paragraph (iv); and
 - (iv) establishing an agreement between the aeronautical information service provider and the relevant aeronautical meteorological service provider.
- (g) remain responsible for the quality and timeliness of the aeronautical data and aeronautical information provided by means of an automated pre-flight information system, where such systems are used to provide the harmonized, common point of access by operations personnel, including flight crew members and other aeronautical personnel concerned, to aeronautical data, aeronautical information and meteorological information;

- (h) comply with requirements specified by the authority in relation to the provision of pre-flight information

43. A Service Provider shall —

Post-flight
information
Services.

- (a) make arrangements to receive information concerning the state and operation of air navigation facilities or services noted by aircrews, for any aerodrome and heliport used for international air operations;
- (b) distribute the information received under paragraph (a) above as circumstances necessitate;
- (c) submit the information in paragraph (b) above in writing and in the prescribed form;
- (d) make arrangements to receive information concerning the presence of wildlife hazard observed by aircrews for any aerodrome and heliport used for international air operations;
- (e) distribute available information about presence of wildlife hazard.

44. When an e-AIP is provided, service provider shall —

Electronic
aeronautical
information
publication (e-
AIP).

- (a) structure the information content of the eAIP chapters, sections and subsections follows the content and structure of the paper AIP;
- (b) include in the eAIP files that allow for printing a paper AIP;
- (c) identify new or revised information either by an annotation against it in the margin or by a mechanism that allows comparing the new/revised information with the previous information;
- (d) make available the eAIP on a physical distribution medium (CD, DVD or any other acceptable medium) or online on the Internet .

PART VII—AERONAUTICAL INFORMATION UPDATES

45. A Service provider shall keep up to date aeronautical data and aeronautical information

General.

46. (1) A service provider shall distribute under the regulated system (AIRAC), information concerning the establishment, withdrawal or significant changes upon a series of common effective dates at intervals of 28 days, including 8th November 2018 on the following circumstances—

Aeronautical
Information
Regulation and
Control
(AIRAC).

- (a) limits (horizontal and vertical), regulations and procedures applicable to—
 - (i) flight information regions;
 - (ii) control areas;

- (iii) control zones;
 - (iv) advisory areas;
 - (v) air traffic service routes;
 - (vi) permanent danger, prohibited and restricted areas (including type and periods of activity when known) and ADIZ;
 - (vii) permanent areas or routes or portions thereof where the possibility of interception exists;
 - (b) positions, frequencies, call signs, identifiers, known irregularities and maintenance periods of radio navigation aids, and communication and surveillance facilities;
 - (c) holding and approach procedures, arrival and departure procedures, noise abatement procedures and any other pertinent ATS procedures;
 - (d) transition levels, transition altitudes and minimum sector altitudes;
 - (e) meteorological facilities (including broadcasts) and procedures;
 - (f) runways and stop ways;
 - (g) taxiways and aprons;
 - (h) aerodrome ground operating procedures (including low visibility procedures);
 - (i) approach and runway lighting;
 - (j) published Aerodrome operating minima.
- (2) The information notified under the AIRAC system is not changed further for at least another 28 days after the effective date, unless the circumstance notified is of a temporary nature and would not persist for the full period.
- (3) Information provided under the AIRAC system is made available by the AIS so as to reach recipients at least 28 days in advance of the AIRAC effective date.
- (4) When information has not been submitted by the AIRAC date, a NIL notification is distributed not later than one cycle before the AIRAC effective date concerned.
- (5) Implementation dates other than AIRAC effective dates are not be used for pre-planned operationally significant changes requiring cartographic work and/or for updating of navigation databases.
- (6) Information provided under the Aeronautical Information Regulation and Control system in paper copy form is distributed at least 42 days in advance of the effective date with the objective of reaching recipients at least 28 days in advance of the effective date.
- (7) Whenever major changes are planned and where advance notice is desirable and practicable, information shall be made available by the AIS so as to reach recipients at least 56 days in advance of the effective date. This shall be applied to the establishment of, and premeditated major changes in, the circumstances listed below, and other major changes if deemed necessary—
- (a) new aerodromes for international instrument flight rules (IFR) operations;
 - (b) new runways for IFR operations at international aerodromes;

- (c) design and structure of the ATS route network;
- (d) design and structure of a set of terminal procedures (including change of procedure bearings due to magnetic variation change);
- (e) circumstances listed in sub regulation (1) above if the entire State or any significant portion thereof is affected or if cross-border coordination is required.

47. A service provider shall—

Aeronautical
Information
Publication
updates.

- (a) amend or re-issue the Aeronautical Information Publication at regular intervals as may be necessary to keep them up to date;
- (b) publish as AIP Amendments permanent changes to the Aeronautical Information Publication;
- (b) publish as Aeronautical Information Publication Supplements temporary changes of long duration (three months or longer) and information of short duration which contains extensive text or graphics;
- (c) specify the AIP Amendment regular interval in the AIP, Part 1 — General (GEN);
- (d) originate and distribute by NOTAM checklist a NIL notification when an AIP Amendment will not be published at the established interval or publication date;
- (e) recourse to a minimum hand amendments or annotations.
- (a) originate a Trigger Notice to Airmen (NOTAM) when an Aeronautical Information Publication Amendment or an Aeronautical Information Publication Supplement is published in accordance with Aeronautical Information Regulation and Control procedures and the Trigger NOTAM shall—
 - (i) come into force on the same effective date and time as the amendment or supplement and shall remain valid in the pre-flight information bulletin for a period of fourteen days;
 - (ii) remain valid for a period of fourteen days in the case of an AIP Supplement;
 - (iii) remain valid for the complete validity period of the AIP Supplement in the case of an AIP Supplement that is valid for less than fourteen days;
 - (iv) remain valid for at least fourteen days in the case of an AIP Supplement that is valid for fourteen days or more;
- (b) originate and issue promptly a NOTAM whenever the information to be distributed is of a temporary nature and of short duration or when operationally significant permanent changes, or temporary changes of long duration are made at short notice, except for extensive text or graphics;

Notice to airmen
(NOTAM)

- (c) originate and issue a NOTAM concerning the following information—
 - (i) establishment, closure or significant changes in operation of aerodrome(s) or heliport(s) or runways;
 - (ii) establishment, withdrawal and significant changes in operation of aeronautical services (Aerodromes and Ground Aids, Aeronautical Information Services, Air Traffic Services, Communication Navigation Surveillance, Meteorology, Search and Rescue, etc.);
- (d) establishment, withdrawal and significant changes in operational capability of radio navigation and air-ground communication services including—
 - (i) interruption or return to operation;
 - (ii) change of frequencies;
 - (iii) change in notified hours of service;
 - (iv) change of identification;
 - (v) change of orientation (directional aids);
 - (vi) change of location,
 - (vii) power increase or decrease amounting to 50 per cent or more,
 - (viii) change in broadcast schedules or contents, or irregularity or unreliability of operation of any radio navigation and air-ground communication services; or
 - (ix) limitations of relay stations including operational impact, affected service, frequency and area
 - (x) unavailability of back-up and secondary systems, having a direct operational impact;
 - (xi) establishment, withdrawal or significant changes made to visual aids;
 - (xii) interruption of or return to operation of major components of aerodrome lighting systems;
 - (xiii) establishment, withdrawal or significant changes made to procedures for air navigation services;
 - (xiv) occurrence or correction of major defects or impediments in the manoeuvring area;
 - (xv) changes to and limitations on availability of fuel, oil and oxygen;
 - (xvi) establishment, withdrawal or return to operation of hazard beacons marking obstacles to air navigation;
 - (xvii) changes in regulations requiring immediate action, e.g. prohibited areas for SAR action;

- (xviii) presence of hazards not otherwise promulgated, which affect air navigation (including obstacles, military exercises and operations, intentional and unintentional radio frequency interferences, rocket launches, displays, fireworks, sky lanterns, rocket debris, races and major parachuting events);
- (xix) conflict zones which affect air navigation (to include information that is as specific as possible regarding the nature and extent of threats of that conflict and its consequences for civil aviation);
- (xx) planned laser emissions, laser displays and search lights if pilots' night vision is likely to be impaired;
- (xxi) erecting or removal of, or changes to, obstacles to air navigation in the take-off/climb, missed approach, approach areas and runway strip;
- (xxii) establishment or discontinuance (including activation or deactivation) as applicable, or changes in the status of prohibited, restricted or danger areas;
- (xxiii) establishment or discontinuance of areas or routes or portions thereof where the possibility of interception exists and where the maintenance of guard on the VHF emergency frequency 121.5 MHz is required;
- (xxiv) allocation, cancellation or change of location indicators;
- (xxv) changes in aerodrome/heliport rescue and firefighting category provided
- (xxvi) presence or removal of, or significant changes in, hazardous conditions due to snow, slush, ice, radioactive material, toxic chemicals, volcanic ash deposition or water on the movement area;
- (xxvii) outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;
- (xxviii) forecasts of solar cosmic radiation, where provided;
- (xxix) an operationally significant change in volcanic activity, the location, date and time of volcanic eruptions and/or horizontal and vertical extent of volcanic ash cloud, including direction of movement, flight levels and routes or portions of routes which could be affected;
- (xxx) release into the atmosphere of radioactive materials or toxic chemicals following a nuclear or chemical incident, the location, date and time of the incident, the flight levels and routes or portions thereof which could be affected and the direction of movement

- (xxx) establishment of operations of humanitarian relief missions, such as those undertaken under the auspices of the United Nations, together with procedures and/or limitations which affect air navigation;
- (xxxi) implementation of short-term contingency measures in cases of disruption, or partial disruption, of air traffic services and related supporting services; and
- (e) not notify by NOTAM the following information—
 - (i) routine maintenance work on aprons and taxiways which does not affect the safe movement of aircraft;
 - (ii) runway marking work, when aircraft operations can safely be conducted on other available runways, or the equipment used can be removed when necessary;
 - (iii) temporary obstructions in the vicinity of aerodromes and heliports that do not affect the safe operation of aircraft;
 - (iv) partial failure of aerodrome and heliport lighting facilities where such failure does not directly affect aircraft operations;
 - (v) partial temporary failure of air-ground communications when suitable alternative frequencies are known to be available and are operative;
 - (vi) the lack of apron marshalling services and road traffic control;
 - (vii) the unserviceability of location, destination or other instruction signs on the aerodrome movement area;
 - (viii) parachuting when in uncontrolled airspace under Visual Flight Rules, when controlled, at promulgated sites or within danger or prohibited areas;
 - (ix) training activities by ground units;
 - (x) unavailability of back-up and secondary systems if these do not have an operational impact;
 - (xi) limitations to airport facilities or general services with no operational impact;
 - (xii) national regulations not affecting general aviation;
 - (xiii) announcement or warnings about possible/potential limitations, without any operational impact;
 - (xiv) general reminders on already published information;
 - (xv) availability of equipment for ground units without containing information on the operational impact for airspace and facility users;

- (xvi) information about laser emissions without any operational impact and fireworks below minimum flying heights;
 - (xvii) closure of movement area parts in connection with planned work locally coordinated of duration of less than one hour;
 - (xviii) closure or unavailability of, or changes in, operation of aerodrome(s)/heliport(s) outside the aerodrome(s)/heliport(s) operational hours; and
 - (xix) other non-operational information of a similar temporary nature.
48. (1) A service provider shall —
- Specifications for
NOTAM.
- (a) publish NOTAM with sufficient lead time for the affected parties to take any required action, except in the case of unserviceability, volcanic activity, release of radioactive material, toxic chemicals and other events that cannot be foreseen;
 - (b) give an estimate of the period of unserviceability or the time at which restoration of service is expected for NOTAM notifying unserviceability of aids to air navigation, facilities or communication services;
 - (c) give at least seven days advance notice of the activation of established danger, restricted or prohibited areas and of activities requiring temporary airspace restrictions other than for emergency operations;
 - (d) give as soon as possible notice of any subsequent cancellation of the activities or any reduction of the hours of activity or the dimensions of the airspace;
 - (e) include information contained in the NOTAM in the relevant aeronautical information product affected within three months from the issuance of a permanent NOTAM;
 - (f) include in the AIP Supplement, within three months from the issuance, the information of a temporary NOTAM of long duration;
 - (g) issue a replacement NOTAM, when a NOTAM with estimated end of validity unexpectedly exceeds the three-month period, unless the condition is expected to last for a further period of more than three months; in which case, an AIP Supplement shall be issued;
 - (h) originate a Trigger NOTAM giving a brief description of the contents, the effective date and time, and the reference number of the amendment or supplement, when an AIP Amendment or an AIP Supplement is published in accordance with AIRAC procedures;

- (i) ensure that the Trigger NOTAM comes into force on the same effective date and time as the amendment or supplement and remains valid in the pre-flight information bulletin for a period of fourteen days in the case of an AIP Supplement, the Trigger NOTAM remains valid for a period of fourteen days;
 - (j) ensure that the Trigger NOTAM remains valid for the complete validity period of the AIP Supplement, in the case of an AIP Supplement that is valid for less than fourteen days; and
 - (k) ensure that, in the case of an AIP Supplement that is valid for fourteen days or more, the Trigger NOTAM remains valid for at least fourteen days.
- (2) A service provider shall—
- (a) allocate each Notice To Air Men a series identified by a letter and a four-digit number followed by a stroke and a two-digit number for the year;
 - (b) ensure that the four-digit number is consecutive and based on the calendar year;
 - (c) ensure that each NOTAM contains information in the order shown in the NOTAM Format in the Third Schedule;
 - (d) compose NOTAM text using significations or uniform abbreviated phraseology assigned to the ICAO NOTAM Code complemented by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language;
 - (e) issue all NOTAM in the English language;
 - (f) report by means of a SNOWTAM, information concerning snow, slush, ice, frost, standing water, or water associated with snow, slush, ice or frost on the movement area and shall contain the information in the order shown in the SNOWTAM Format in the Fourth Schedule;
 - (g) report by means of an ASHTAM, information concerning an operationally significant change in volcanic activity, volcanic eruption or volcanic ash cloud and shall contain the information in the order shown in the ASHTAM Format in the Fifth Schedule;
 - (h) issue a NOTAM with a new number to replace an erroneous NOTAM, when errors occur in a NOTAM, or cancel the erroneous NOTAM and issue a new NOTAM;
 - (i) issue cancelling or replacing NOTAM indicating the series and number of the previous NOTAM and whose series, location indicator and subject of both NOTAM shall be the same;
 - (j) when a NOTAM is issued which cancels or replaces a previous NOTAM, the series and number of the previous

NOTAM shall be indicated and the series, location indicator and subject of both NOTAM shall be the same;

- (3) A service provider shall ensure that—
- (a) only one NOTAM is cancelled or replaced by a NOTAM;
 - (b) each NOTAM deals with only one subject and one condition of the subject;
 - (c) each NOTAM is as brief as possible and so compiled that its meaning is clear without the need to refer to another document;
 - (d) each NOTAM is transmitted as a single telecommunication message;
 - (e) a NOTAM containing permanent information or temporary information of long duration carries appropriate AIP or AIP Supplement references;
 - (f) location indicators included in the text of a NOTAM are those published by the International Civil Aviation Organization;
 - (g) where no ICAO location indicator is assigned to the location, its place name is entered in plain language, spelt in conformity with local usage, transliterated, when necessary, into the ISO basic Latin alphabet;
 - (h) the international NOTAM office allocates to each NOTAM a series identified by a letter and a four-digit number followed by a stroke and a two-digit number for the year. The four-digit number shall be consecutive and based on the calendar year;
 - (i) all NOTAM are divided in series based on subject, traffic or location or a combination thereof, depending on end-user needs;
 - (j) NOTAM for aerodromes allowing international air traffic are issued in international NOTAM series;
 - (k) the content and geographical coverage of each NOTAM series is stated in detail in the AIP, section General 3;
 - (l) series allocation is monitored and, if required, appropriate measures taken to assure that no series reach the maximum possible number of issued NOTAM before the end of the calendar year;
 - (m) a checklist of valid NOTAM is issued as a NOTAM checklist at intervals of not more than one month;
 - (n) one NOTAM checklist is issued for each series;
 - (o) a NOTAM checklist refers to the latest AIP Amendments, AIP Supplements, data sets and at least the internationally distributed AIC, and, when selected, include the checklist of AIP Supplements;

- (p) a NOTAM checklist has the same distribution as the actual message series to which it refers and is clearly identified as a checklist.

50 (1) A service provider shall—

Data set updates.

- (a) amend or reissue data sets at such regular intervals as may be necessary to keep them up to date;
- (b) make available as digital data permanent changes and temporary changes of long duration (three months or longer) and issue in the form of a complete data set or a sub-set that includes only the differences from the previously issued complete data set;
- (c) indicate the differences from the previously issued complete data set when made available as a completely reissued data set.

(2) The updates to AIP, AIP data sets and Instrument Flight Procedures data sets shall be synchronised.

PART VIII— ADMINISTRATIVE AND PERSONNEL REQUIREMENTS

51. (1) Subject to the provisions of the Civil Aviation (Rules of the Air) Regulations, a service provider shall establish and operationalize an air traffic service reporting offices as appropriate for the purpose of reception and management of flight plans.

Establishment of air traffic service reporting offices.

(2) The established air traffic service reporting offices in sub regulation (1) shall be adequately equipped and staffed with personnel sufficient for the effective execution of the function.

(3) A person shall not provide an air traffic service reporting office service other than when under supervision unless he is a holder of an appropriate instrument of Authority in the form of a certificate of competency with endorsement type equivalent to the function being undertaken.

(4) The certificate of competency required in sub regulation (3) shall be issued by the Authority.

52. (1) A service provider shall appoint—

- (a) an accountable officer for aeronautical information service to whom authority has been granted to ensure that all activities undertaken are carried out in accordance with the applicable requirements in these regulation;
- (b) a Standards and Quality Assurance officer who shall be responsible for quality control and implementation of the Authority's requirements on QMS and SMS and who has direct access to the accountable manager referred to in paragraph (a);
- (c) adequately trained and certified personnel to—

Aeronautical information service and air traffic service reporting offices personnel competency requirements.

- (i) plan, provide and supervise the approved services listed in the air navigation service provider certificate and the unit's manual of operations, in a safe and efficient manner;
- (ii) receive, collate or assemble, edit, format, publish/store and distribute aeronautical data and aeronautical information;
- (iii) facilitate flight planning, provide pre-flight information, and receive post flight information as necessary; and
- (iv) facilitate the development, maintenance and promulgation of aeronautical charts.

(2) A service provider shall include in the manual of operations an analysis of the personnel required to perform the aeronautical information service and aeronautical charts function by taking into account the duties and responsibilities of the staff concerned and also guidance provided by the Authority.

(3) A service provider shall develop a training policy, training programme and training plan as well as job description for each of the staff under the jurisdiction of the accountable officer and implement the same as applicable with the following considerations—

- (a) the training policy and programme shall lay down the training courses that staff have to undergo to perform their duties, including initial, recurrent and specialized training, where applicable; and
- (c) the job description shall depict the job purpose, key responsibilities, and outcome to be achieved by staff.

(4) A service provider shall maintain individual training records for each of its staff, which shall include details of the courses completed by each staff as well as the time-frame for attending future courses as required under the training plan.

(5) A service provider shall conduct a yearly review of the training plan for each staff at the beginning of the financial year to identify any gaps in competency, changes in training requirement and prioritize the type of training required for the subsequent years.

(6) An Aeronautical Information service provider shall-

- (a) designate an On-Job Training Instructor who must have undertaken training in instructional techniques as with the requisite work experience;
- (b) develop and implement an on-job training program to guide in training activities;
- (c) amend the on-job training program and associated procedures whenever necessary to ensure accuracy and currency of the information contained therein.

(7) The on-job training program developed under sub regulation (6) shall be accepted by the Authority.

53. A Service provider shall—

- (a) develop and implement a policy to guide the identification of required competencies and endorsements to undertake specific tasks and or functions;
- (b) identify the competencies and the associated knowledge, skills and abilities required for each function and ensure that personnel possess the competencies required to perform the specific assigned functions;
- (c) establish initial and periodic assessments that require personnel to demonstrate the required competencies;
- (d) appropriately train personnel assigned to perform specific functions;
- (e) establish procedures to maintain currency of the competence of the personnel; and
- (f) maintain sufficient numbers of personnel, with the requisite experience and give them appropriate authority to be able to discharge their duties

54. (1) A person shall not provide an aeronautical information service other than when under supervision unless he is a holder of an appropriate instrument of Authority in the form of a certificate of competency with endorsement type equivalent to the function being undertaken.

(2) The certificate of competency required in sub regulation (1) shall be issued by the Authority.

55. A service provider shall—

- (a) have the facilities and equipment that are necessary for providing its aeronautical information service, including appropriate premises and equipment to allow operational personnel to perform their duties; and
- (b) provide its operational personnel with access to the aeronautical data and aeronautical information required for the publication of the aeronautical information products that the provider publishes.

Aeronautical
information
service
contingency plan.

56. (1) A service Provider shall put in place a contingency plan that sets out the procedures to be followed if a service provided as part of its aeronautical information service is interrupted.

(2) The contingency plan required in sub regulation (1) shall include—

- (a) the actions to be taken by personnel responsible for providing the service;

- (b) possible alternative arrangements for providing the service; and
- (c) arrangements for resuming normal provision of the service.

57. A service provider shall implement a safety management system that—

- (a) is a systemic approach to managing safety;
- (b) integrates human factors principles; and
- (c) includes the following elements—
 - (i) organisational structures, accountabilities, policies and procedures necessary to manage safety in a systemic way;
 - (ii) a statement of the provider's safety policy, objectives and planning, including details of the following;
 - (iii) the management commitment to, and responsibility for, safety;
 - (iv) the safety accountabilities of managers;
 - (v) the appointment of safety management personnel;
 - (vi) a safety management system implementation plan;
 - (vii) relevant third party relationships and interactions;
 - (viii) coordination of an emergency response plan;
 - (ix) safety management system documentation;
- (d) includes a safety risk management process with—
 - (i) hazard identification processes; and
 - (ii) risk assessment and mitigation processes;
- (e) includes a safety assurance system, with details of processes for—
 - (i) safety performance monitoring and measurement;
 - (ii) internal safety investigation;
 - (iii) management of change; and
 - (iv) continuous improvement of the safety management system;
- (f) includes a safety training and promotion system, with details of the following—
 - (i) safety management system training;
 - (ii) safety management system safety communication.

58. (1) A service provider shall have procedures for making, collecting, indexing, storing, securing, maintaining, accessing and disposing of—

- (a) records that identify all incoming and outgoing aeronautical data and aeronautical information;

Maintenance of records.

- (b) records that identify each person who is authorised by the provider to process, check, edit, publish or distribute aeronautical data and aeronautical information;
- (c) records that list the endorsements, qualifications and competencies of personnel who process, check, edit, publish or distribute aeronautical data and aeronautical information;
- (d) records that identify each aeronautical information publication responsible person;
- (e) records that identify each Notice to Air Men authorised person for an aeronautical data originator;
- (f) records that identify each occurrence of an error or omission in aeronautical data or aeronautical information published by the provider in the Aeronautical Information product; and
- (g) records that contain the results of any audit, inspection or review of the provider's aeronautical information service.

(2) A service provider shall ensure that records mentioned in sub-regulation (1) are legible and permanent

(3) A service provider shall keep records referred in sub-regulation (1) and the data or information for at least ten years after the data or information ceases to be effective.

PART IX — EXEMPTIONS

59. (1) A person may apply to the Authority for an exemption from the requirements of these Regulations.

(2) Unless in case of emergency, a person requiring exemptions from any of these Regulations shall make an application to the Authority at least sixty days prior to the proposed effective date, giving the following information—

- (a) name and contact address including electronic mail and fax if any;
- (b) telephone number;
- (c) a citation of the specific requirement from which the applicant seeks exemption;
- (d) justification for the exemption;
- (e) a description of the type of operations to be conducted under the proposed exemption;
- (f) the proposed duration of the exemption;
- (g) an explanation of how the exemption would be in the public interest;
- (h) a detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question;
- (i) A safety risk assessment carried out in respect of the exemption applied for;
- (j) if the applicant handles international operations and seeks to operate under the proposed exemption, an indication whether the exemption would contravene any provision of

Requirements for application for exemption.

the Standards and Recommended Practices of the International Civil Aviation Organization (International Civil Aviation Organisation); and

(k) any other information that the Authority may require.

(3) Where the applicant seeks emergency processing of an application for exemption, the application shall contain supporting facts and reasons for not filing the application within the time specified in sub regulation (2) and satisfactory reason for deeming the application an emergency.

(4) The Authority may in writing, decline an application made under sub regulation (3), where in the opinion of the Authority, the reasons given for emergency processing are not satisfactory.

(5) The application for exemption shall be accompanied by fee prescribed by the Authority.

60. (1) The Authority shall review the application for exemption made under these regulations for accuracy and compliance and if the application is satisfactory, the Authority shall publish a detailed summary of the application for comments, within a prescribed time, in either—

- (a) the Kenya Gazette; or
- (b) aeronautical information circular; or
- (c) a daily newspaper with national circulation.

(2) Where application requirements have not been fully complied with, the Authority shall request the applicant in writing, to comply prior to publication or making a decision under sub regulation (3).

(3) If the request is for emergency relief, the Authority shall publish the decision as soon as possible after processing the application.

61. (1) Where the application requirements have been satisfied, the Authority shall conduct an evaluation of the request to include—

- (a) determination of whether an exemption would be in the public interest;
- (b) a determination, after a technical evaluation of whether the applicant's proposal would provide a level of safety equivalent to that established by the regulation, although where the Authority decides that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis;
- (c) a determination of whether a grant of the exemption would contravene these Regulations; and
- (d) a recommendation based on the preceding elements, of whether the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

(2) The Authority shall notify the applicant in writing, the decision to grant or deny the request and publish a detailed summary of its evaluation and decision.

Evaluation of the request.

(3) The summary referred to in sub-regulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(4) If the exemption affects a significant population of the aviation community within the Kenya, the Authority shall publish the summary in aeronautical information circular.

62. The validity of any exemption issued under these regulations shall be dependent on the air navigation service provider complying with any condition that Authority may specify in the exemption as being necessary in the interests of safety of air navigation.

Validity of an exemption.

63. An air navigation service provider shall comply with any Condition specified by the Authority in the exemption.

PART XV — OTHER PROVISIONS

64. A person may apply to the Authority in the prescribed form for replacement of documents issued under these Regulations if such documents are lost or destroyed.

Replacement of documents.

65. (1) Any person who knows of a violation of any Regulations, rules, or orders issued there under, shall report it to the Authority.

Reports of violation.

(2) The Authority may determine the nature and type of investigation or enforcement action that need to be taken.

66. Any person who fails to comply with any direction given by the Authority or by any authorised person under any provision of these Regulations shall be deemed for the purposes of these Regulations to have contravened that provision.

Failure to comply with direction.

PART XI — OFFENCES AND PENALTIES

67. A person who contravenes any provision of these Regulations may have his certificate or exemption cancelled or suspended.

Contravention of Regulations.

68. (1) A person who contravenes any provision of these Regulations, shall, upon conviction, be liable to a fine or imprisonment or both, and in the case of a continuing contravention, each day of the contravention shall constitute a separate offence.

Penalties.

(2) A person who contravenes any provision specified as an "A" provision in the Sixth Schedule to these Regulations commits an offence and is liable on conviction to a fine not exceeding one million shillings for each offence and or to imprisonment for a term not exceeding one year or to both.

(3) A person who contravenes any provision specified as a "B" provision in the Sixth Schedule to these Regulations commits an offence and is liable on conviction to a fine not exceeding two million shillings for each offence and or to imprisonment for a term not exceeding three years or to both.

(4) A person who contravenes any provision that is not specified in the Sixth Schedule to these Regulations commits an offence and is liable on conviction to a fine not exceeding five hundred thousand shillings for each offence and or to imprisonment for a term not exceeding six months or to both.

(5) If it is proved that an act or omission of any person, which would otherwise have been a contravention by that person of a provision of these Regulations, was due to any cause not avoidable by

the exercise of reasonable care by that person, the act or omission shall be deemed not to be a contravention by that person of that provision.

69. Where any person is aggrieved by any order made under these Regulations the person may, within thirty days of such order being made, appeal against the order to a court of law with competent jurisdiction.

Appeal.

70. The Civil Aviation (Aeronautical Information Services) Regulations, 2018 are revoked.

Revocation of LN
No. 132/2018.

71. (1) All valid licenses, certificates, permits or authorisations issued or granted by the Authority before the commencement of these Regulations shall continue to be in force to the extent that the terms and conditions there of are not inconsistent with the provisions of these Regulations or until expiry or are revoke, annulled or replaced.

Savings and
transitional
provisions.

(2) Notwithstanding any other provision of these Regulations, a person who at the commencement of these Regulations, is carrying out any acts, duties or operations affected by these Regulations shall, within one (1) year from the date of commencement comply with the requirements of these Regulations or cease to carry out such acts, duties or operations.

FIRST SCHEDULE

(rr. 37(12) and (14), 38(5) and (6))

TERRAIN AND OBSTACLE DATA REQUIREMENTS

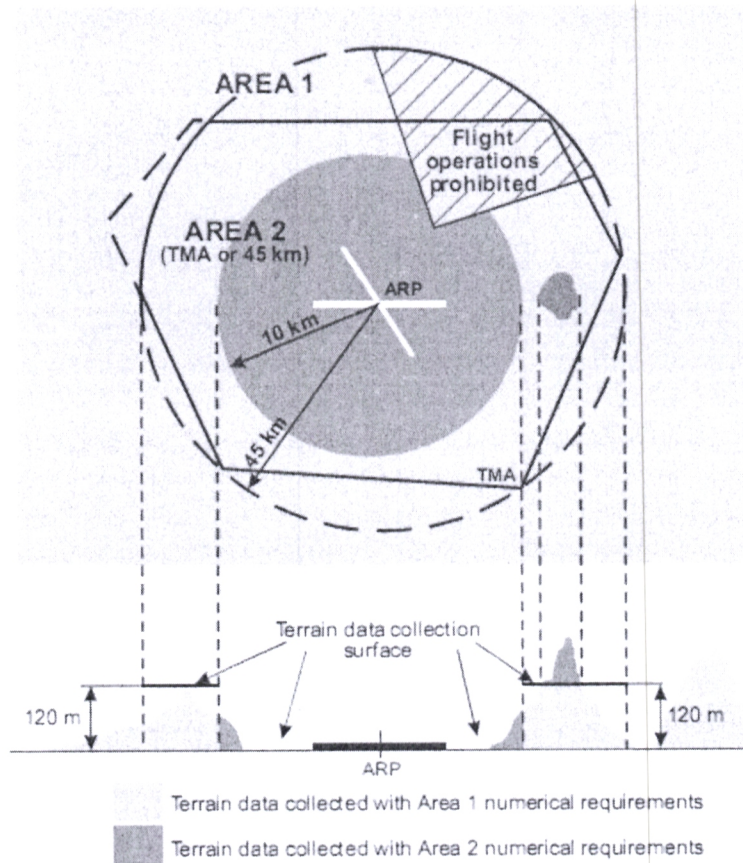


Figure S6-1. Terrain data collection surfaces — Area 1 and Area 2

1. Within the area covered by a 10-km radius from the ARP, terrain data shall comply with the Area 2 numerical requirements.

2. In the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller), data on terrain that penetrates the horizontal plane 120 m above the lowest runway elevation shall comply with the Area 2 numerical requirements.

3. In the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller), data on terrain that does not penetrate the horizontal plane 120 m above the lowest runway elevation shall comply with the Area 1 numerical requirements.

4. In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, terrain data shall comply with the Area 1 numerical requirements.

5. Terrain data numerical requirements for Areas 1 and 2 are specified in the First schedule.

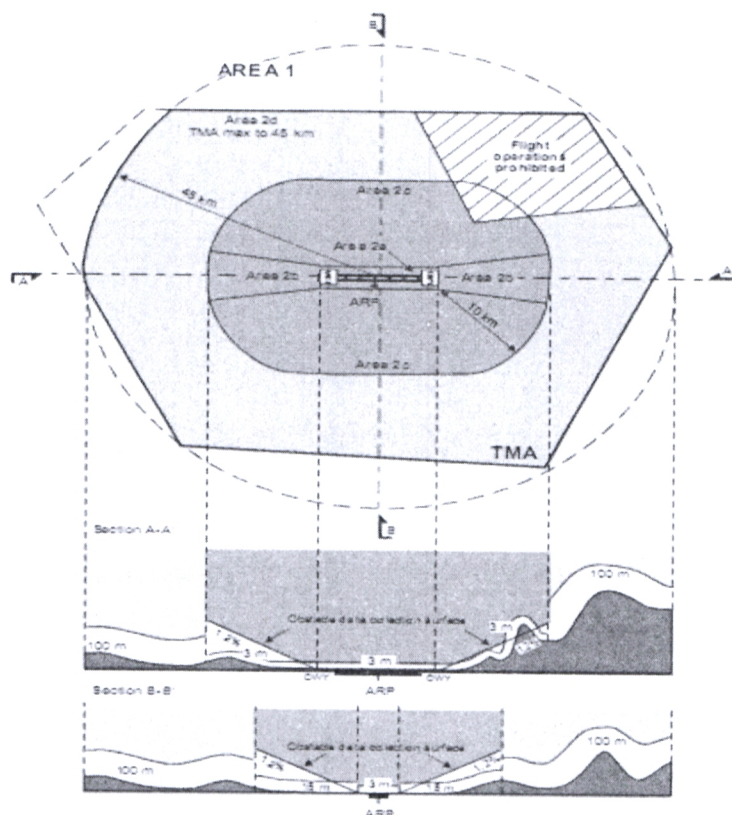


Figure S6-2. Obstacle data collection surfaces — Area 1 and Area 2

1. Obstacle data shall be collected and recorded in accordance with the Area 2 numerical requirements specified in the First Schedule.
2. In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, obstacle data shall be collected and recorded in accordance with the Area 1 requirements.
3. Data on every obstacle within Area 1 whose height above the ground is 100 m or higher shall be collected and recorded in the database in accordance with the Area 1 numerical requirements specified in the First schedule.

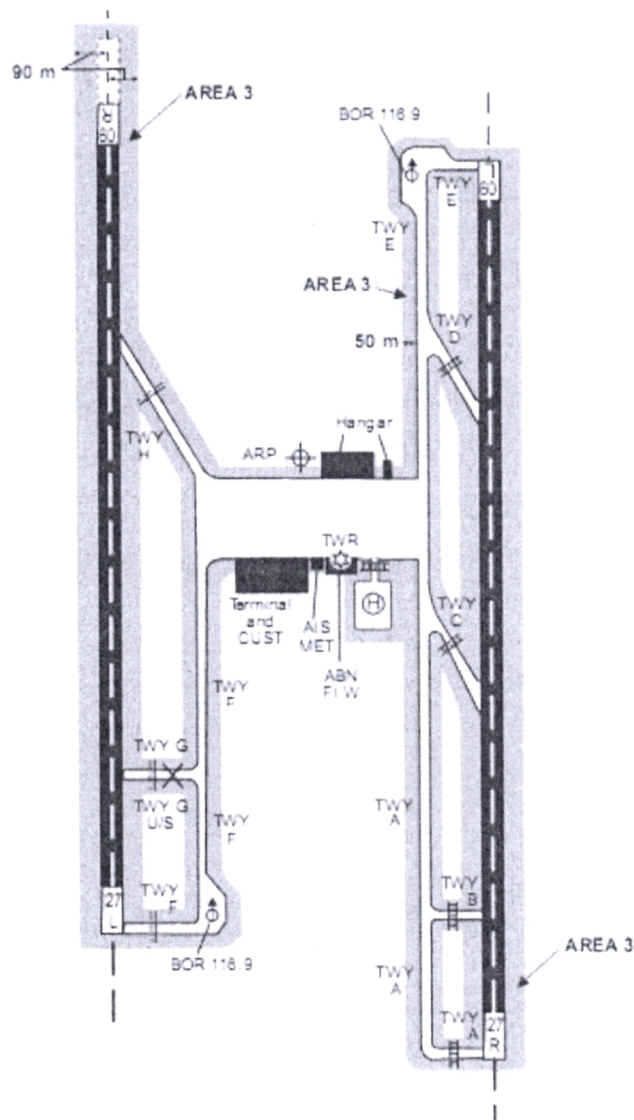


Figure S6-3. Terrain and obstacle data collection surface — Area 3

Terrain and obstacle data in Area 3 shall comply with the numerical requirements specified in the First Schedule.

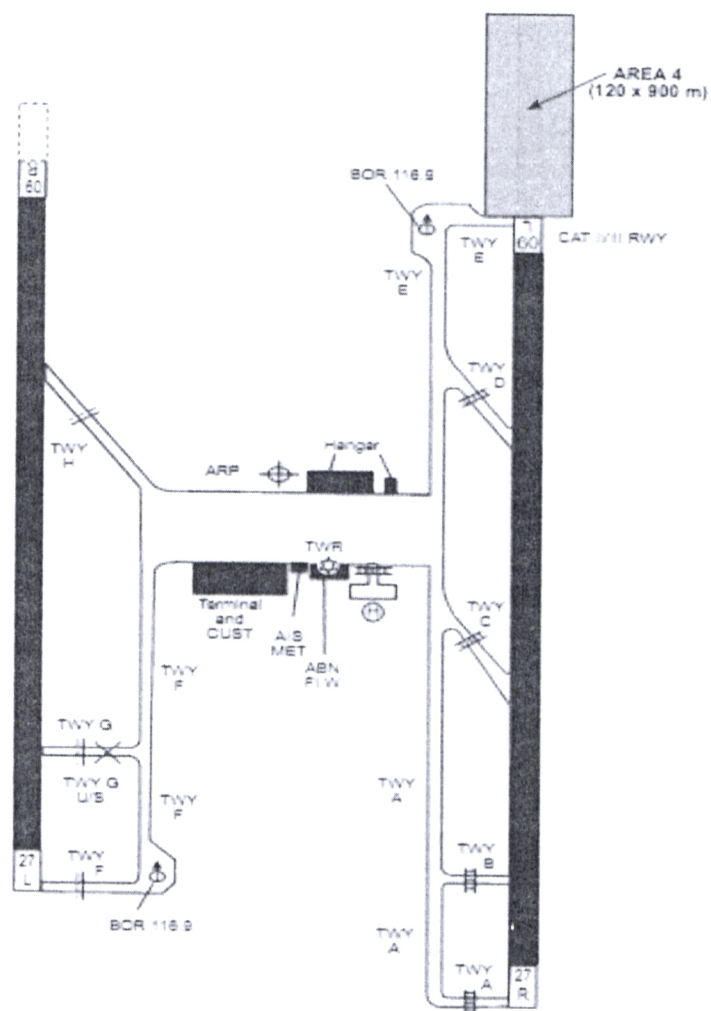


Figure A6-4. Terrain and obstacle data collection surface — Area 4

Terrain and obstacle data in Area 4 shall comply with the numerical requirements specified in the First Schedule.

TERRAIN AND OBSTACLE ATTRIBUTES PROVISION REQUIREMENTS
Table S7-1. Terrain attributes

<i>Terrain Attribute</i>	<i>Mandatory/Optional</i>
Area of coverage	Mandatory
Data source identifier	Mandatory
Acquisition method	Mandatory
Post spacing	Mandatory
Horizontal reference system	Mandatory
Horizontal resolution	Mandatory
Horizontal accuracy	Mandatory
Horizontal confidence level	Mandatory
Horizontal position	Mandatory
Elevation	Mandatory
Elevation reference	Mandatory
Vertical reference system	Mandatory
Vertical resolution	Mandatory
Vertical accuracy	Mandatory
Vertical confidence level	Mandatory
Surface type	Optional
Recorded surface	Mandatory
Penetration level	Optional
Known variations	Optional
Integrity Mandatory	Mandatory
Date and time stamp	Mandatory
Unit of measurement used	Mandatory

Table S8-2. Obstacle attributes

<i>Obstacle attribute</i>	<i>Mandatory/Optional</i>
Area of coverage	Mandatory
Data source identifier	Mandatory
Obstacle identifier	Mandatory
Horizontal accuracy	Mandatory
Horizontal confidence level	Mandatory
Horizontal position	Mandatory
Horizontal resolution	Mandatory
Horizontal extent	Mandatory
Horizontal reference system	Mandatory
Elevation	Mandatory
Height	Mandatory
Vertical accuracy	Mandatory
Vertical confidence level	Mandatory
Vertical resolution	Mandatory
Vertical reference system	Mandatory
Obstacle type	Mandatory
Geometry type	Mandatory
Integrity	Mandatory
Date and time stamp	Mandatory
Unit of measurement used	Mandatory
Operations	Optional
Effectivity	Optional
Lighting	Mandatory
Marking	Mandatory

SECOND SCHEDULE

(regulation 41)

PREDETERMINED DISTRIBUTION SYSTEM FOR NOTAM

1. The predetermined distribution system provides for incoming Notice To Air Men (including SNOWTAM and ASHTAM) to be channelled through the AFS direct to designated addressees predetermined by the receiving country concerned while concurrently being routed to the international Notice To Air Men office for checking and control purposes.

2. The addressee indicators for those designated addressees are constituted as follows:

(1) First and second letters:

The first two letters of the location indicator for the AFS communication centre associated with the relevant international Notice To Air Men office of the receiving country.

(2) Third and fourth letters:

(3) The letters "ZZ" indicating a requirement for special distribution.

(4) Fifth letter:

The fifth letter differentiating between Notice To Air Men (letter "N"), SNOWTAM (letter "S"), and ASHTAM (letter "V").

(5) Sixth and seventh letters:

The sixth and seventh letters, each taken from the series A to Z and denoting the national and/or international distribution list(s) to be used by the receiving AFS centre.

(6) Eighth letter:

The eighth position letter shall be the filler letter "X" to complete the eight-letter addressee indicator.

States are to inform the States from which they receive Notice To Air Men of the sixth and seventh letters to be used under different circumstances to ensure proper routing.

THIRD SCHEDULE
(regulation 49(2)(c))
NOTAM FORMAT

TRANSMISSION IDENTIFICATION	NOTAM CLASS I FORMAT	CHECK NO.
Priority Indicator	→	
Address		
≡ <<		
Date and Time of filing	→	
Originator's Indicator	≡ << (	

Message Series, Number and Identifier

NOTAM containing new information NOTAM replacing a previous NOTAM NOTAM cancelling a previous NOTAM	 NOTAMN (Series and number/year) NOTAMR (Series and number/year) (Series and number/year of NOTAM to be replaced) NOTAMC (Series an number/year) (Series and number/year of NOTAM to be cancelled) ≡ <<
---	--

Qualifiers

Q	FIR	NOTAM Code	Traffic	Purpose	Scope	Lower Limit	Upper Limit	Coordinates, Radius
								/

Identification of ICAO location indicator in which the facility, airspace or condition reported on is located	A) →
---	------

Period of Validity

From (date-time group)	B)		→
(PERM or date-time group)	C)		EST PERM ≡ <<
Time Schedule (if applicable)	D)		≡ <<

Text of NOTAM: Plain Language Entry (using ICAO Abbreviations)

E)	≡ <<
Lower Limit	F)
Upper Limit	G)) ≡ <<
Signature	

Delete as appropriate

INSTRUCTIONS FOR THE COMPLETION OF THE NOTICE TO AIR MEN
FORMAT

1. General

The qualifier line (Item Q) and all identifiers (Items A) to G) inclusive) each followed by a closing parenthesis, as shown in the format, shall be transmitted unless there is no entry to be made against a particular identifier.

2. Notice To Air Men numbering

Each Notice To Air Men shall be allocated a series identified by a letter and a four-digit number followed by a stroke and a two-digit number for the year (e.g. A0023/19). Each series shall start on 1 January with number 0001.

3. Qualifiers (Item Q)

Item Q) is divided into eight fields, each separated by a stroke. An entry shall be made in each field. Examples of how fields are to be filled are shown in the Aeronautical Information Services Manual (Doc 8126). The definition of the field is as follows:

(1) FIR

- (a) If the subject of the information is located geographically within one FIR, the International Civil Aviation Organisation location indicator shall be that of the FIR concerned. When an aerodrome is situated within the overlying FIR of another State, the first field of Item Q) shall contain the code for that overlying FIR (e.g. Q) LFRR/...A) EGJJ); or, if the subject of the information is located geographically within more than one FIR, the FIR field shall be composed of the International Civil Aviation Organisation nationality letters of the State originating the Notice To Air Men followed by "XX". (The location indicator of the overlying UIR shall not be used). The International Civil Aviation Organisation location indicators of the FIRs concerned shall then be listed in Item A) or indicator of State or non-governmental agency which is responsible for provision of a navigation service in more than one State.
- (b) If one State issues a Notice To Air Men affecting FIRs in a group of States, the first two letters of the International Civil Aviation Organisation location indicator of the issuing State plus "XX" shall be included. The location indicators of the FIRs concerned shall then be listed in Item A) or indicator of State or non-governmental agency which is responsible for provision of a navigation service in more than one State.

(2) Notice To Air Men CODE

All Notice To Air Men Code groups contain a total of five letters and the first letter is always the letter Q. The second and third letters identify the subject, and the fourth and fifth letters denote the status or condition of the subject reported upon. The two-letter codes for subjects and conditions are those contained in the PANS-ABC (Doc 8400). For combinations of second and third, and fourth and fifth letters, refer to the Notice To Air Men Selection Criteria contained in Doc 8126 or insert one of the following combinations, as appropriate:

- (a) If the subject is not listed in the Notice To Air Men Code (Doc 8400) or in the Notice To Air Men Selection Criteria (Doc 8126), insert "XX" as the second and third letters (e.g. QXXAK);

- (b) If the condition of the subject is not listed in the Notice To Air Men Code (Doc 8400) or in the Notice To Air Men Selection Criteria (Doc 8126), insert “XX” as the fourth and fifth letters (e.g. QFAXX);
 - (c) When a Notice To Air Men containing operationally significant information is issued in accordance with Appendix 4 and Chapter 6 and when it is used to announce the existence of Aeronautical Information Regulation And Control aeronautical information publication Amendments or Supplements, insert “TT” as the fourth and fifth letters of the Notice To Air Men Code;
 - (d) When a Notice To Air Men is issued containing a checklist of valid Notice To Air Men, insert “KKKK” as the second, third, fourth and fifth letters; and
 - (e) The following fourth and fifth letters of the Notice To Air Men Code shall be used in Notice To Air Men cancellations:
 - AK = RESUMED NORMAL OPERATION
 - AL = OPERATIVE (OR RE-OPERATIVE) SUBJECT TO PREVIOUSLY PUBLISHED LIMITATIONS/CONDITIONS
 - AO = OPERATIONAL
 - CC = COMPLETED
 - CN = CANCELLED
 - HV = WORK COMPLETED
 - XX = PLAIN LANGUAGE
- (3) TRAFFIC
- I = IFR
 - V = VFR
 - K = Notice To Air Men is a checklist
- (4) PURPOSE
- N = Notice To Air Men selected for the immediate attention of flight crew members
 - B = Notice To Air Men of operational significance selected for PIB entry
 - O = Notice To Air Men concerning flight operations
 - M = Miscellaneous Notice To Air Men; not subject for a briefing, but it is available on request
 - K = Notice To Air Men is a checklist
- (5) SCOPE
- A = Aerodrome
 - E = En-route
 - W = Nav Warning
 - K = Notice To Air Men is a checklist
- (6) and 7) LOWER/UPPER

LOWER and UPPER limits shall only be expressed in flight levels (FL) and shall express the actual vertical limits of the area of influence without the addition of buffers. In the case of navigation warnings and airspace restrictions, values entered shall be consistent with those provided under Items F) and G).

If the subject does not contain specific height information, insert “000” for LOWER and “999” for UPPER as default values.

8) COORDINATES, RADIUS

The latitude and longitude accurate to one minute, as well as a three-digit distance figure giving the radius of influence in NM (e.g. 4700N01140E043). Coordinates present approximate centre of circle whose radius encompasses the whole area of influence, and if the Notice To Air Men affects the entire FIR/UIR or more than one FIR/UIR, enter the default value “999” for radius.

4. Item A)

Insert the location indicator as contained in International Civil Aviation Organisation Doc 7910 of the aerodrome or FIR in which the facility, airspace, or condition being reported on is located. More than one FIR/UIR may be indicated when appropriate. If there is no available International Civil Aviation Organisation location indicator, use the International Civil Aviation Organisation nationality letter as given in International Civil Aviation Organisation Doc 7910, Part 2, plus “XX” and followed up in

Item E) by the name, in plain language. If information concerns GNSS, insert the appropriate International Civil Aviation Organisation location indicator allocated for a GNSS element or the common location indicator allocated for all elements of GNSS (except GBAS).

(1) Item B)

For date-time group use a ten-figure group, giving year, month, day, hours and minutes in UTC. This entry is the date-time at which the Notice To Air Men N comes into force. In the cases of Notice To Air Men R and Notice To Air Men C, the date-time group is the actual date and time of the Notice To Air Men origination. The start of a day shall be indicated by “0000”.

(2) Item C)

With the exception of Notice To Air Men Cancelling, a date-time group (a ten-figure group giving year, month, day, hours and minutes in UTC) indicating duration of information shall be used unless the information is of a permanent nature in which case the abbreviation “PERM” is inserted instead. The end of a day shall be indicated by “2359” (i.e. do not use “2400”). If the information on timing is uncertain, the approximate duration shall be indicated using a date-time group followed by the abbreviation “EST”. Any Notice To Air Men which includes an “EST” shall be cancelled or replaced before the date-time specified in Item C).

(3) Item D)

If the hazard, status of operation or condition of facilities being reported on will be active in accordance with a specific time and date schedule between the dates-times indicated in Items B) and C), insert such information under Item D). If Item D) exceeds 200 characters, consideration shall be given to providing such information in a separate, consecutive Notice To Air Men.

(4) Item E)

Use decoded Notice To Air Men Code, complemented where necessary by International Civil Aviation Organisation abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language. When Notice To Air Men is selected for

international distribution, English text shall be included for those parts expressed in plain language. This entry shall be clear and concise in order to provide a suitable PIB entry. In the case of Notice To Air Men C, a subject reference and status message shall be included to enable accurate plausibility checks.

(5) Items F) and G)

These items are normally applicable to navigation warnings or airspace restrictions and are usually part of the PIB entry. Insert both lower and upper height limits of activities or restrictions, clearly indicating only one reference datum and unit of measurement. The abbreviations GND or SFC shall be used in Item F) to designate ground and surface respectively. The abbreviation UNL shall be used in Item G) to designate unlimited.

FORTH SCHEDULE

(regulation 49 (2) (f))

SNOWTAM FORMAT

(COM heading)	(PRIORITY INDICATOR)		(ADDRESSES)				<≡
	(DATE AND TIME (OF FILING))		(ORIGINATOR'S (INDICATOR))				<≡
(Abbreviated heading)	(SW* SERIAL NUMBER)		(LOCATION INDICATOR)	DATE/TIME OF ASSESSMENT			(OPTIONAL GROUP)
	S	W	*	*			<≡
							(

SNOWTAM →	(Serial number)	<≡
AEROPLANE PERFORMANCE CALCULATION SECTION		
(AERODROME LOCATION INDICATOR)	M	A) <≡
(DATE/TIME OF ASSESSMENT <i>(Time of completion of assessment in UTC)</i>)	M	B) →
(LOWER RUNWAY DESIGNATION NUMBER)	M	C) →
(RUNWAY CONDITION CODE (RWYCC) ON EACH RUNWAY THIRD) <i>(From Runway Condition Assessment Matrix (RCAM) 0, 1, 2, 3, 4, 5 or 6)</i>	M	D) / / →
(PER CENT COVERAGE CONTAMINANT FOR EACH RUNWAY THIRD)	C	E) / / →
(DEPTH (mm) OF LOOSE CONTAMINANT FOR EACH RUNWAY THIRD)	C	F) / / →
(CONDITION DESCRIPTION OVER TOTAL RUNWAY LENGTH) <i>(Observed on each runway third, starting from threshold having the lower runway designation number)</i> DRY STANDING WATER WET	M	G) / / →
(WIDTH OF RUNWAY TO WHICH THE RUNWAY CONDITION CODES APPLY, IF LESS THAN PUBLISHED WIDTH)	O	H) <≡≡
SITUATIONAL AWARENESS SECTION		
(REDUCED RUNWAY LENGTH, IF LESS THAN PUBLISHED LENGTH (m))	O	I) →
(DRIFTING SNOW ON THE RUNWAY)	O	J) →
(LOOSE SAND ON THE RUNWAY)	O	K) →
(CHEMICAL TREATMENT ON THE RUNWAY)	O	L) →
(SNOWBANKS ON THE RUNWAY)	O	M) →

(If present, distance from runway centre line (m) followed by "L", "R" or "LR" as applicable)			
(SNOWBANKS ON A TAXIWAY)	O	N)	→
(SNOWBANKS ADJACENT TO THE RUNWAY)	O	O)	→
(TAXIWAY CONDITIONS)	O	P)	→
(APRON CONDITIONS)	O	R)	→
(MEASURED FRICTION COEFFICIENT)	O	S)	→
(PLAIN-LANGUAGE REMARKS)	O	T)	)
NOTES: *Enter ICAO nationality letters as given in ICAO Doc 7910, Part 2 or otherwise applicable aerodrome identifier. - Information on other runways, repeat from B to H. - Information in the situational awareness section repeated for each runway, taxiway and apron. Repeat as applicable when reported. - Words in brackets () not to be transmitted. - For letters A) to T) refer to the <i>Instructions for the completion of the SNOWTAM Format</i>, paragraph 1, item b).			
SIGNATURE OF ORIGINATOR (not for transmission)			

INSTRUCTIONS FOR THE COMPLETION OF THE SNOWTAM FORMAT

Note. — *Origin of data, assessment process and the procedures linked to the surface conditions reporting system are prescribed in the Procedures for Air Navigation Services — Aerodromes (PANS-Aerodromes, Doc 9981).*

1. *General*

- (a) When reporting on more than one runway, repeat Items B to H (aeroplane performance calculation section).
- (b) The letters used to indicate items are only used for reference purpose and should not be included in the messages. The letters, M (mandatory), C (conditional) and O (optional) mark the usage and information and shall be included as explained below.
- (c) Metric units (i.e. Millimeter (mm), and Centimeter (cm)) shall be used and the unit of measurement not reported.
- (d) The maximum validity of SNOWTAM is 8 hours. New SNOWTAM shall be issued whenever a new runway condition report is received.
- (e) A SNOWTAM cancels the previous SNOWTAM.
- (f) The abbreviated heading “TTAAiiii CCCC MMYYGg (BBB)” is included to facilitate the automatic processing of SNOWTAM messages in computer data banks. The explanation of these symbols is:

TT	=	data designator for SNOWTAM = SW
AA	=	geographical designator for States, e.g. HK = KENYA, HU = Uganda (see Location Indicators (Doc 7910), Part 1 Index to Nationality Letters for Location Indicators);
iiii	=	SNOWTAM serial number in a four- digit group;
CCCC	=	four-letter location indicator of the aerodrome to which the SNOWTAM refers (see Location Indicators (Doc 7910));
MMYYGg	=	date/time of observation/measurement whereby: MM= month, e.g. January = 01 December = 12 YY=day of the month GGg = time in hours (GG) and minutes (g) UTC
(BBB)	=	optional group for correction, in the case of an error, to a SNOWTAM message previously disseminated with the same serial number = COR.

Note 1. — Brackets in (BBB) are used to indicate that this group is optional.

Note 2:—When reporting on more than one runway and individual dates/times of observation/assessment are indicated by repeated Item B, the latest date/time of observation/assessment is inserted in the abbreviated heading (MMYYGGgg).

Example: Abbreviated heading of SNOWTAM No. 149 from Jomo Kenyatta, measurement/observation of 7 November at 0620 UTC:

SWLS0149 HKJK 11070620

Note: -The information groups are separated by a space, as illustrated above

- (g) The text “SNOWTAM” in the SNOWTAM Format and the SNOWTAM serial number in a four-digit group shall be separated by a space, for example: SNOWTAM 0124.
- (h) For readability purposes for the SNOWTAM message, include a line feed after the SNOWTAM serial number, after Item A, and after the aeroplane performance calculation section.
- (i) When reporting on more than one runway, repeat the information in the aeroplane performance calculation section from the date and time of assessment for each runway before the information in the situational awareness section.
- (j) Mandatory information is:
 - (i) Aerodrome Location Indicator;
 - (ii) Date and Time of Assessment;
 - (iii) Lower Runway Designator Number;
 - (iv) Runway Condition Code for Each Runway Third; and
 - (v) Condition Description for Each Runway Third (When Runway condition code (RWYCC) is reported 1–5)

2. Aeroplane performance calculation section

- (i) *Item A* — Aerodrome location indicator (four-letter location indicator).
- (ii) *Item B* — Date and time of assessment (eight-figure date/time group giving time of observation as month, day, hour and minute in UTC).
- (iii) *Item C* — Lower runway designator number (nn[L] or nn[C] or nn[R]).

Note. — Only one runway designator is inserted for each runway and always the lower number.

- (iv) *Item D* — Runway condition code for each runway third. Only one digit (0, 1, 2, 3, 4, 5 or 6) is inserted for each runway third, separated by an oblique stroke (n/n/n).
- (v) *Item E* — Per cent coverage for each runway third. When provided, insert 25, 50, 75 or 100 for each runway third, separated by an oblique stroke ([n]nn/[n]nn/[n]nn).

Note 1: This information is provided only when the runway condition for each runway third (Item D) has been reported as other than 6 and there is a condition description for each runway third (Item G) that has been reported other than DRY.

Note 2: When the conditions are not reported, this will be signified by the insertion of "NR" for the appropriate runway third(s).

- (vi) *Item F — Depth of loose contaminant for each runway third. When provided, insert in millimetres for each runway third, separated by an oblique stroke (nn/nn/nn or nnn/nnn/nnn).*

Note 1.— This information is only provided for the following contamination types:

- ☐ *standing water, values to be reported 04, then assessed value. Significant changes 3 mm up to and including 15 mm;*

Note 2. — When the conditions are not reported, this will be signified by the insertion of "NR" for the appropriate runway third(s).

- (vii) *Item G — Condition description for each runway third. Insert any of the following condition descriptions for each runway third, separated by an oblique stroke.*

STANDING WATER

WET

DRY (only reported when there is no contaminant)

Note:—When the conditions are not reported, this will be signified by the insertion of "NR" for the appropriate runway third(s).

- (viii) *Item H — Width of runway to which the runway condition codes apply. Insert the width in metres if less than the published runway width.*

3. *Situational awareness section*

Note 1: Elements in the situational awareness section end with a full stop.

Note 2: Elements in the situational awareness section for which no information exists, or where the conditional circumstances for publication are not fulfilled, are left out completely.

Note 3: Report only the elements that are applicable to the situation obtaining at the airport.

- (ix) *Item I — Reduced runway length. Insert the applicable runway designator and available length in meters (example: RWY nn [L] or nn [C] or nn [R] REDUCED TO [n]nnn).*

Note: -This information is conditional when a NOTAM has been published with a new set of declared distances.

- (x) *Item J — Drifting snow on the runway. When reported, insert "DRIFTING SNOW".*

- (xi) *Item K — Loose sand on the runway. When loose sand is reported on the runway, insert the lower runway designator and with a space "LOOSE SAND" (RWY nn or RWY nn[L] or nn[C] or nn[R] LOOSE SAND).*

- (xii) Item L — Chemical treatment on the runway. When chemical treatment has been reported applied, insert the lower runway designator and with a space “CHEMICALLY TREATED” (RWY nn *or* RWY nn[L] *or* nn[C] *or* nn [R] CHEMICALLY TREATED).
- (xiii) Item M — Snow banks on the runway. When snow banks are reported present on the runway, insert the lower runway designator and with a space “SNOW BANK” and with a space left “L” or right “R” or both sides “LR”, followed by the distance in metres from centre line separated by a space FM CL (RWY nn *or* RWY nn[L] *or* nn[C] *or* nn[R] SNOW BANK Lnn *or* Rnn *or* LRnn FM CL).
- (xiv) Item N — Snow banks on a taxiway. When snow banks are present on a taxiway, insert the taxiway designator and with a space “SNOW BANK” (TWY [nn]n SNOW BANK).
- (xv) Item O — Snow banks adjacent to the runway. When snow banks are reported present penetrating the height profile in the aerodrome snow plan, insert the lower runway designator and “ADJ SNOW BANKS” (RWY nn *or* RWY nn[L] *or* nn[C] *or* nn[R] ADJ SNOW BANKS).
- (xvi) Item P — Taxiway conditions. When taxiway conditions are reported as poor, insert the taxiway designator followed by a space “POOR” (TWY [n *or* nn] POOR *or* ALL TWYS POOR).
- (xvii) Item R — Apron conditions. When apron conditions are reported as poor, insert the apron designator followed by a space “POOR” (APRON [nnnn] POOR *or* ALL APRONS POOR).
- (xviii) Item S — Measured friction coefficient. Where reported, insert the measured friction coefficient and friction measuring device.
- (xix) Item T — Plain language remarks.

EXAMPLE OF COMPLETED SNOWTAM FORMAT

Example SNOWTAM 1

GG HUENYNYX HKNAZQZX HKNAZEZX

170100 HKJKYNYX

SWHK0149 HKJK 02170055

(SNOWTAM 0149

HKJK

02170055 06 5/5/5 100/100/100 NR/NR/03 WET/WET/WET 38)

FIFTH SCHEDULE
(r. 49(2)(g))
ASHTAM FORMAT

(COM heading)	(PRIORITY INDICATOR)	(ADDRESSEE INDICATOR(S)) ¹	
	(DATE AND TIME (OF FILING))	(ORIGINATOR'S (INDICATOR))	
(Abbreviated heading)	(VA* ² SERIAL NUMBER)	(LOCATION INDICATOR)	DATE/SSUANCE TIME OF I
	V A *2 *2		

ASHTAM	(SERIAL NUMBER)
(FLIGHT INFORMATION REGION AFFECTED)	A)
(DATE/TIME (UTC) OF ERUPTION)	B)
(VOLCANO NAME AND NUMBER)	C)
(VOLCANO LATITUDE/LONGITUDE OR VOLCANO RADIAL AND DISTANCE FROM NAVAID)	D)
(VOLCANO LEVEL OF ALERT COLOUR CODE, INCLUDING ANY PRIOR LEVEL OF ALERT COLOUR CODE) ³	E)
(EXISTENCE AND HORIZONTAL/VERTICAL EXTENT OF VOLCANIC ASH CLOUD) ⁴	F)
(DIRECTION OF MOVEMENT OF ASH CLOUD) ⁴	G)
(AIR ROUTES OR PORTIONS OF AIR ROUTES AND FLIGHT LEVELS AFFECTED)	H)
(CLOSURE OF AIRSPACE AND/OR AIR ROUTES OR PORTIONS OF AIR ROUTES, AND ALTERNATIVE AIR ROUTES AVAILABLE)	I)
(SOURCE OF INFORMATION)	J)
(PLAIN-LANGUAGE REMARKS)	K)
NOTES: - See also the fifth schedule regarding addressee indicators used in predetermined distribution systems. *Enter ICAO nationality letter as given in ICAO Doc 7910, Part 2. - See paragraph 3.5 below. - Advice on the existence, extent and movement of volcanic ash cloud G) and H) may be obtained from the volcanic ash advisory centre(s) responsible for the FIR concerned. - Item titles in brackets () not to be transmitted.	

SIGNATURE OF ORIGINATOR (*not for transmission*)

INSTRUCTIONS FOR THE COMPLETION OF THE ASHTAM FORMAT

1. General

- 1.1.1 The ASHTAM provides information on the status of activity of a volcano when a change in its activity is, or is expected to be of operational significance. This information is provided using the volcano level of alert colour code given in 3.5 below.
- 1.1.2 In the event of a volcanic eruption producing ash cloud of operational significance, the ASHTAM also provides information on the location, extent and movement of the ash cloud and the air routes and flight levels affected.
- 1.1.3 Issuance of an ASHTAM giving information on a volcanic eruption, in accordance with section 3 below, should not be delayed until complete information A) to K) is available but should be issued immediately following receipt of notification that an eruption has occurred or is expected to occur, or a change in the status of activity of a volcano of operational significance has occurred or is expected to occur, or an ash cloud is reported. In the case of an expected eruption, and hence no ash cloud evident at that time, items A) to E) should be completed and items F) to I) indicated as "not applicable". Similarly, if a volcanic ash cloud is reported, e.g. by special air-report, but the source volcano is not known at that time, the ASHTAM should be issued initially with items A) to E) indicated as "unknown", and items F) to K) completed, as necessary, based on the special air-report, pending receipt of further information. In other circumstances, if information for a specific field A) to K) is not available indicate "NIL".
- 1.1.4 The maximum period of validity of ASHTAM is 24 hours. New ASHTAM must be issued whenever there is a change in the level of alert.

2. Abbreviated heading

- 2.1 Following the usual AFTN communications header, the abbreviated heading "TT AAiiii CCCC MMYYGg (BBB)" is included to facilitate the automatic processing of ASHTAM messages in computer data banks. The explanation of these symbols is:

TT –	data designator for ASHTAM = VA;
AA –	geographical designator for States, e.g. HK – Kenya (see Location Indicators (Doc 7910), Part 2, Index to Nationality Letters for Location Indicators);
iiii –	ASHTAM serial number in a four-figure group;
CCCC –	four-letter location indicator of the flight information region concerned (see Location Indicators (Doc 7910), Part 5, addresses of centres in charge of FIR/UIR);
MMYYGg –	date/time of report, whereby;
MM –	month, e.g. January – 01, December – 12;
YY –	day of the month;
Gg –	time in hours (GG) and minutes (gg) coordinated universal time;

- (BBB) - Optional group for correction to an ASHTAM message previously disseminated with the same serial number - COR.

2. Content of ASHTAM

- 3.1 Item A — Flight information region affected, plain-language equivalent of the location indicator given in the abbreviated heading, in this example “Auckland Oceanic FIR”.
- 3.2 Item B — Date and time (coordinated universal time) of first eruption.
- 3.3 Item C — Name of volcano, and number of volcano as listed in the International Civil Aviation Organisation Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds (Doc 9691), Appendix H, and on the World Map of Volcanoes and Principal Aeronautical Features.
- 3.4 Item D — Latitude/Longitude of the volcano in whole degrees or radial and distance of volcano from NAVAID (as listed in the International Civil Aviation Organisation Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds (Doc 9691), Appendix H, and on the World Map of Volcanoes and Principal Aeronautical Features).
- 3.5 Item E — Colour code for level of alert indicating volcanic activity, including any previous level of alert colour code follows:

<i>Level of alert colour code</i>	<i>Status of activity of volcano</i>
GREEN ALERT	Volcano is in normal, non-eruptive state. or, after a change from a higher alert level: Volcanic activity considered to have ceased, and volcano reverted to its normal, non-eruptive state.
YELLOW ALERT	Volcano is experiencing signs of elevated unrest above known background levels. or, after a change from higher alert level: Volcanic activity has decreased significantly but continues to be closely monitored for possible renewed increase.
ORANGE ALERT	Volcano is exhibiting heightened unrest with increased likelihood of eruption. or, Volcanic eruption is underway with no or minor ash emission [specify ash-plume height if possible].
RED ALERT	Eruption is forecasted to be imminent with significant emission of ash into the atmosphere likely. or, Eruption is underway with significant emission of ash into the atmosphere [specify ash-plume height if possible]

The colour code for the level of alert indicating the status of activity of the volcano and any change from a previous status of activity shall be provided to the area control centre by the responsible vulcanological agency in the State concerned, e.g. “RED ALERT FOLLOWING YELLOW” OR “GREEN ALERT FOLLOWING ORANGE”.

- 3.6 Item F — If volcanic ash cloud of operational significance is reported, indicate the horizontal extent and base/top of the ash cloud using latitude/longitude (in whole degrees) and altitudes in thousands of metres (feet) and/or radial and distance from source volcano. Information initially may be based only on special air-report, but subsequent information may be more detailed based on advice from the responsible meteorological watch office and/or volcanic ash advisory centre.
- 3.7 Item G — Indicate forecast direction of movement of the ash cloud at selected levels based on advice from the responsible meteorological watch office and/or volcanic ash advisory centre.
- 3.8 Item H — Indicate air routes and portions of air routes and flight levels affected, or expected to become affected.
- 3.9 Item I— Indicate closure of airspace, air routes or portions of air routes, and availability of alternative routes.
- 3.10 Item J — Source of the information, e.g. “special air-report” or “vulcanological agency”, etc. The source of information should always be indicated, whether an eruption has actually occurred or ash cloud reported, or not.
- 3.11 Item K — Include in plain language any operationally significant information additional to the foregoing.

SIXTH SCHEDULE
(regulation 68(2),(3) and (4))

PENALTIES

REG. NO.	TITLE	PART
4	Provision of an Aeronautical Information Service	B
5	Operations Manual	A
10	Role of the Aeronautical Information Service Provider	B
11	Aeronautical Information Service Provider Responsibilities and functions	B
12	Exchange of aeronautical data and aeronautical information	A
15	Obligation of Aeronautical Data and Aeronautical Information Providers	A
16	Information management requirements	A
17	Data Quality Specifications	A
18	Data Integrity monitoring and assurance	A
19	Aeronautical data and aeronautical information validation and verification	A
23	Quality Management System	A
27	Data origination requirements	A
28	Aeronautical Information in a standardized presentation	A
29	Aeronautical Information Publication	A
30	Specifications for aeronautical information publication amendments	A
31	Specifications for aeronautical information publication supplements	A
32	Specifications for Aeronautical Information Circulars	A
33	Aeronautical Charts	A
34	Digital Data Sets in general	A
35	Aeronautical Information Publication data sets	A
36	Terrain and obstacle data sets general	A
37	Terrain data sets	A
38	Obstacle data sets	A
39	Aerodrome Mapping data sets	A
40	Instrument flight procedure data sets	A
42	Pre-flight information services	A

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43	Post Flight information services	A
46	Aeronautical Information Regulation and Control (AIRAC)	A
48	Notice to Airmen (NOTAM)	A
49	Specification for NOTAM	A
51	Establishment of air traffic service reporting offices	A
52	Aeronautical information service and air traffic service reporting office Personnel Requirements	B
53	Aeronautical information service and Air Traffic Service reporting office personnel competency requirements	B
54	Instrument of Authority to perform aeronautical information service functions	B
56	Aeronautical information service contingency plan	A

Made on the 15th December, 2025

DAVIS CHIRCHIR,
Cabinet Secretary for Roads and Transport.