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THURSDAY 16TH MAY, 2024

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LEGAL SUPPLEMENT — B

GUYANA No. 24 of 2024

GUYANA CIVIL AVIATION AUTHORITY

REQUIREMENTS FOR AERONAUTICAL INFORMATION SERVICES 2024

Made under

THE CIVIL AVIATION ACT 2018

(Act No. 21 of 2018)

In exercise of the powers conferred upon the Guyana Civil Aviation Authority by section 142 of the Civil Aviation Act 2018, the Guyana Civil Aviation Authority prescribes the following Requirements which may be cited as the Civil Aviation Requirements for Aeronautical Information Services 2024.

These Requirements are prescribed in respect of the Civil Aviation (Air Navigation Services) Regulations 2024 and contain:

(a) applicable standards;

(b) rules and recommended practices of international aviation organisations; and

(c) other requirements of the Authority.

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ABBREVIATIONS AND ACRONYMS

AIC	- Aeronautical information circular
AIP	- Aeronautical information publication
AIRAC	- Aeronautical information regulation and control
AIS	- Aeronautical information services
ANS	- Air navigation services
ATC	- Air traffic control
ATM	- Air traffic management
ATS	- Air traffic services
EGM-96	- Earth Gravitational Model — 1996
ICAO	- International Civil Aviation Organization
IFR	- Instrument flight rules
MSL	- Mean sea level
NOF	- International NOTAM office
NOTAM	- 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
UTC	- Coordinated Universal Time
VFR	- Visual flight rules
VHF	- Very high frequency
WGS-84	- World Geodetic System — 1984

DEFINITIONS

When the following terms are used in these Requirements, they have the following meanings:

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

Aerodrome mapping data (AMD). Data collected for the purpose of compiling aerodrome mapping information.

Note.— Aerodrome mapping data is collected for purposes that include the improvement of the user's situational awareness, surface navigation operations, training, charting and planning.

Aerodrome mapping database (AMDB). A collection of aerodrome mapping data organized and arranged as a structured data set.

Aeronautical chart. A representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation.

Aeronautical data. A representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing.

Aeronautical fixed service (AFS). A 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. Information resulting from the assembly, analysis and formatting of aeronautical data.

Aeronautical Information Circular (AIC). A notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

Aeronautical information management (AIM). 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. Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media. Aeronautical information products include:

— Aeronautical Information Publication (AIP), including Amendments and Supplements;

— Aeronautical Information Circulars (AIC);

— aeronautical charts;

— NOTAM; and

— digital data sets.

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

Aeronautical information service (AIS). 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.

AIP Amendment. Permanent changes to the information contained in the AIP.

AIP Supplement. Temporary changes to the information contained in the AIP which are provided by means of special pages.

AIRAC. An acronym (aeronautical information regulation and control) signifying a system aimed at advance notification, based on common effective dates, of circumstances that necessitate significant changes in operating practices.

Air defence identification zone (ADIZ). 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 (ATM). 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.

AIS Provider. An air navigation service provider designated or approved under Regulation 5 of the Civil Aviation (Air Navigation Services) Regulations 2024 to provide aeronautical information service.

Application. Manipulation and processing of data in support of user requirements (ISO 19104*).

Area navigation (RNAV). 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.

Note.— Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

ASHTAM. A special series NOTAM 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. A process of merging data from multiple sources into a database and establishing a baseline for subsequent processing.

Note.— The assemble phase includes checking the data and ensuring that detected errors and omissions are rectified.

ATS surveillance service. Term used to indicate a service provided directly by means of an ATS surveillance system.

ATS surveillance system. A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

Note.— A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.

Automatic dependent surveillance — broadcast (ADS-B). 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 (ADS-C). A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

Note.— The abbreviated term "ADS contract" is commonly used to refer to ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode.

Automatic terminal information service (ATIS). The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

Data link-automatic terminal information service (D-ATIS). The provision of ATIS via data link.

Voice-automatic terminal information service (Voice-ATIS). The provision of ATIS by means of continuous and repetitive voice broadcasts.

Bare Earth. Surface of the Earth including bodies of water and permanent ice and snow, and excluding vegetation and manmade objects.

Calendar. Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day (ISO 19108*)

Canopy. Bare Earth supplemented by vegetation height.

Confidence level. The probability that the true value of a parameter is within a certain interval around the estimate of its value.

Note.— The interval is usually referred to as the accuracy of the estimate.

Controller-pilot data link communications (CPDLC). A means of communication between controller and pilot, using data link for ATC communications.

Culture. All man-made features constructed on the surface of the Earth, such as cities, railways and canals.

Cyclic redundancy check (CRC). A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

Danger area. An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

Data accuracy. A degree of conformance between the estimated or measured value and the true value.

Data completeness. The degree of confidence that all of the data needed to support the intended use is provided.

Data format. A structure of data elements, records and files arranged to meet standards, specifications or data quality requirements.

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

Data product. Data set or data set series that conforms to a data product specification (ISO 19131*).

Data product specification. 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 (ISO 19131*).

Data quality. A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution, integrity (or equivalent assurance level), traceability, timeliness, completeness and format.

Data resolution. A number of units or digits to which a measured or calculated value is expressed and used.

Data set. Identifiable collection of data (ISO 19101*).

Data set series. Collection of data sets sharing the same product specification (ISO 19115*).

Data timeliness. The degree of confidence that the data is applicable to the period of its intended use.

Data traceability. 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. Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities (ISO 19104*).

Digital Elevation Model (DEM). The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum.

Note.— Digital Terrain Model (DTM) is sometimes referred to as DEM.

Direct transit arrangements. Special arrangements approved by the public authorities concerned by which traffic which is pausing briefly in its passage through the Contracting State may remain under their direct control.

Ellipsoid height (geodetic height). The height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question.

Feature. Abstraction of real world phenomena (ISO 19101*).

Feature attribute. Characteristic of a feature (ISO 19101*).

Note.— A feature attribute has a name, a data type and a value domain associated with it.

Feature operation. Operation that every instance of a feature type may perform (ISO 19110*).

Note.— An operation upon the feature type dam is to raise the dam. The result of this operation is to raise the level of water in the reservoir.

Feature relationship. Relationship that links instances of one feature type with instances of the same or a different feature type (ISO 19101*).

Feature type. Class of real world phenomena with common properties (ISO 19110*).

Geodesic distance. The shortest distance between any two points on a mathematically defined ellipsoidal surface.

Geodetic datum. A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

Geoid. The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level (MSL) extended continuously through the continents.

Note.— The geoid is irregular in shape because of local gravitational disturbances (wind tides, salinity, current, etc.) and the direction of gravity is perpendicular to the geoid at every point.

Geoid undulation. The distance of the geoid above (positive) or below (negative) the mathematical reference ellipsoid.

Note.— In respect to the World Geodetic System — 1984 (WGS-84) defined ellipsoid, the difference between the WGS-84 ellipsoidal height and orthometric height represents WGS-84 geoid undulation.

Gregorian calendar. Calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar (ISO 19108*).

Note.— In the Gregorian calendar, common years have 365 days and leap years 366 days divided into twelve sequential months.

Height. The vertical distance of a level, point or an object considered as a point, measured from a specific datum.

Heliport. 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. 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.

Integrity classification (aeronautical data). Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data is 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. Any airport designated by the Contracting State in whose territory it is situated 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 NOTAM office (NOF). An office designated by a State for the exchange of NOTAM internationally.

Logon address. A specified code used for data link logon to an ATS unit.

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

Metadata. Data about data (ISO 19115*).

Note.— A structured description of the content, quality, condition or other characteristics of data.

Minimum en-route altitude (MEA). 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 (MOCA). The minimum altitude for a defined segment of flight that provides the required obstacle clearance.,

Movement area. 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. 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:

Required navigation performance (RNP) specification. A navigation specification based on area navigation that includesthe requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1.— The Performance-based Navigation (PBN) Manual *(Doc 9613), Volume II, contains detailed guidance on navigation specifications.*

Note 2.— The term RNP, previously defined as "a statement of the navigation performance necessary for operation within a defined airspace", has been removed from this Annex as the concept of RNP has been overtaken by the concept of PBN. The term RNP in this Annex is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc 9613.

Next intended user. The entity that receives the aeronautical data or information from the aeronautical information service.

NOTAM. 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. 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; or

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. A defined surface intended for the purpose of collecting obstacle/terrain data.

Origination (aeronautical data or aeronautical information). 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). 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. Height of a point related to the geoid, generally presented as an MSL elevation.

Performance-based communication (PBC). Communication based on performance specifications applied to the provision of air traffic services.

Note.— A required communication performance (RCP) specification includes communication performance requirements that are allocated to system components in terms of the communication to be provided and associated transaction time, continuity, availability, integrity, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

Performance-based navigation (PBN). Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note.— Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

Performance-based surveillance (PBS). Surveillance based on performance specifications applied to the provision of air traffic services.

Note.— A required surveillance performance (RSP) specification includes surveillance performance requirements that are allocated to system components in terms of the surveillance to be provided and associated data delivery time, continuity, availability, integrity, accuracy of the surveillance data, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

Portrayal. Presentation of information to humans (ISO 19117*).

Position (geographical). 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. Angular or linear distance between two adjacent elevation points.

Precision. The smallest difference that can be reliably distinguished by a measurement process.

Note.— In reference to geodetic surveys, precision is a degree of refinement in performance of an operation or a degree of perfection in the instruments and methods used when taking measurements.

Pre-flight information bulletin (PIB). A presentation of current NOTAM information of operational significance, prepared prior to flight.

Prohibited area. An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

Quality. Degree to which a set of inherent characteristics fulfils requirements (ISO 9000*).

Note 1.— The term "quality" can be used with adjectives such as poor, good or excellent.

Note 2.— "Inherent", as opposed to "assigned", means existing in something, especially as a permanent characteristic.

Quality assurance. Part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000*).

Quality control. Part of quality management focused on fulfilling quality requirements (ISO 9000*).

Quality management. Coordinated activities to direct and control an organization with regard to quality (ISO 9000*).

Radio navigation service. 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 (RCP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

Required surveillance performance (RSP) specification. A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

Requirement. Need or expectation that is stated, generally implied or obligatory (ISO 9000*).

Restricted area. An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

Route stage. A route or portion of a route flown without an intermediate landing.

SNOWTAM.† A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format.

SNOWTAM.‡ 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. An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

Terrain. 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. Ability to trace the history, application or location of that which is under consideration (ISO 9000*).

Note.— When considering product, traceability can relate to:

— the origin of materials and parts;

— the processing history; and

— the distribution and location of the product after delivery.

Validation. Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000*).

Verification. Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000*).

Note.— The term "verified" is used to designate the corresponding status.

VOLMET. Meteorological information for aircraft in flight.

Data link-VOLMET (D-VOLMET). Provision of current aerodrome routine meteorological reports (METAR) and aerodrome special meteorological reports (SPECI), aerodrome forecasts (TAF), SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET via data link.

VOLMET broadcast. Provision, as appropriate, of current METAR, SPECI, TAF and SIGMET by means of continuous and repetitive voice broadcasts.

CHAPTER 1 - COMMON REFERENCE SYSTEMS FOR AIR NAVIGATION

1.1 HORIZONTAL REFERENCE SYSTEM

1.1.1 The World Geodetic System — 1984 (WGS-84) shall be used as the horizontal (geodetic) reference system for international air navigation. Consequently, published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum.

Note.— Comprehensive guidance material concerning WGS-84 is contained in the World Geodetic System — 1984 (WGS-84) Manual (Doc 9674).

1.1.2 In precise geodetic applications and some air navigation applications, temporal changes in the tectonic plate motion and tidal effects on the Earth's crust shall be modelled and estimated. To reflect the temporal effect, an epoch shall be included with any set of absolute station coordinates.

1.2 VERTICAL REFERENCE SYSTEM

1.2.1 Mean sea level (MSL) datum shall be used as the vertical reference system for international air navigation.

1.2.2 The Earth Gravitational Model — 1996 (EGM-96) shall be used as the global gravity model for international air navigation.

1.2.3 At those geographical positions where the accuracy of EGM-96 does not meet the accuracy requirements for elevation and geoid undulation on the basis of EGM-96 data, regional, national or local geoid models containing high resolution (short wavelength) gravity field data shall be developed and used. When a geoid model other than the EGM-96 model is used, a description of the model used, including the parameters required for height transformation between the model and EGM-96, shall be provided in the Guyana Aeronautical Information Publication (AIP).

1.3 TEMPORAL REFERENCE SYSTEM

1.3.1 The Gregorian calendar and Coordinated Universal Time (UTC) shall be used as the temporal reference system for international air navigation.

1.3.2 When a different temporal reference system is used for some applications, the feature catalogue, or the metadata associated with an application schema or a data set, as appropriate, shall include either a description of that system or a citation for a document that describes that temporal reference system.

1.4 MISCELLANEOUS SPECIFICATIONS

1.4.1 Aeronautical information products intended for international distribution shall include English text for those parts expressed in plain language.

1.4.2 Place names shall be spelt in conformity with local usage, transliterated, when necessary, into the ISO-Basic Latin alphabet.

1.4.3 Units of measurement used in the origination, processing and distribution of aeronautical data and aeronautical information shall be consistent with the decision taken by Guyana in respect of the use of the tables contained in the Civil Aviation Requirements for Aeronautical Charts 2024.

1.4.4 ICAO abbreviations shall be used in aeronautical information products whenever they are appropriate and their use will facilitate distribution of aeronautical data and aeronautical information.

Note. – Such ICAO abbreviations and codes, including the NOTAM Code, can be found in ICAO Doc 8400.

CHAPTER 2 – RESPONSIBILITIES AND FUNCTIONS

2.1 STATE RESPONSIBILITIES

2.1.1 The Authority shall:

a) ensure the provision of AIS; or

b) agree with one or more other Contracting State(s) for the provision of a joint service; or

c) delegate the authority for the provision of the service to a non-governmental agency, provided the provisions contained in these Requirements are adequately met.

2.2 AIS RESPONSIBILITIES AND FUNCTIONS

2.2.1 The AIS Provider shall ensure that aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation are made available in a form in conformity with Civil Aviation Requirements for Aeronautical Charts 2024, these Requirements and the specifications in ICAO PANS-AIM (Doc 10066), and suitable for the operational requirements of the ATM community, including:

a) those involved in flight operations, including flight crews, flight planning and flight simulators; and

b) the ATS unit responsible for flight information service and the services responsible for pre-flight information.

2.2.2 The AIS Provider shall receive, collate or assemble, edit, format, publish/store and distribute aeronautical data and aeronautical information concerning the entire territory of Guyana as well as those areas over the high seas for which Guyana is responsible for the provision of ATS. Aeronautical data and aeronautical information shall be provided as aeronautical information products.

Note.— An AIS may include origination functions.

2.2.3 Aeronautical information shall be provided in the form of aeronautical information products and associated services.

Note.— Specifications concerning the order of resolution of aeronautical data provided for each aeronautical information product are contained in the PANS-AIM (Doc 10066), Appendix 1.

2.2.4 Where 24-hour service is not provided, the AIS Provider shall ensure that service is available during the whole period an aircraft is in flight in the area of responsibility of the AIS, plus a period of at least two hours before and after such a period. Service shall also be available at such other time as may be requested by an appropriate ground organization.

2.2.5 The AIS Provider shall, in addition, obtain aeronautical data and aeronautical information to enable it to provide pre-flight information service and to meet the need for in-flight information:

a) from the AIS of other States; and

b) from other sources that may be available.

Note.— One such source is the subject of a provision in 11.3 (Post-flight information service)

2.2.6 Aeronautical data and aeronautical information obtained under 2.2.5 a) shall, when distributed, be clearly identified as having the authority of Guyana.

2.2.7 Aeronautical data and aeronautical information obtained under 2.2.5 b) shall, if possible, be verified before distribution and if not verified shall, when distributed, be clearly identified as such.

2.2.8 The AIS Provider shall promptly make available to the AIS of other States any aeronautical data and aeronautical information necessary for the safety, regularity or efficiency of air navigation required by them, to enable them to comply with 2.2.1.

2.3 EXCHANGE OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION

2.3.1 The Authority shall designate the office to which all elements of aeronautical information products provided by other States shall be addressed. Such an office shall be qualified to deal with requests for aeronautical data and aeronautical information provided by other States.

2.3.2 Formal arrangements shall be established 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.

Note.— Guidance material on such formal arrangements is contained in the Aeronautical Information Services Manual (Doc 8126).

2.3.3 Where the Authority designates more than one international NOTAM office, the Authority shall define the extent of responsibility and the territory covered by each office.

2.3.4 The AIS Provider shall arrange, as necessary, to satisfy operational requirements for the issuance and receipt of NOTAM distributed by telecommunication.

2.3.5 Wherever practicable, direct contact between AIS shall be established in order to facilitate the international exchange of aeronautical data and aeronautical information.

2.3.6 Except as provided in 2.3.8, one copy of each of the following aeronautical information products (where available) that have been requested by the AIS of a Contracting State shall be made available by the AIS Provider and provided in the mutually agreed form(s), without charge, even where authority for publication/storage and distribution has been delegated to a non-governmental agency:

a) Aeronautical Information Publication (AIP), including Amendments and Supplements;

b) Aeronautical Information Circulars (AIC);

c) NOTAM; and

d) aeronautical charts.

2.3.7 The exchange of more than one copy of the elements of aeronautical information products, and other air navigation documents, including those containing air navigation legislation and regulations, shall be subject to bilateral agreement between the participating Contracting States and entities.

2.3.8 When aeronautical data and aeronautical information are provided in the form of digital data sets to be used by the AIS, they shall be provided on the basis of agreement between Guyana and the Contracting States concerned.

2.3.9 The procurement of aeronautical data and aeronautical information, including the elements of aeronautical information products, and other air navigation documents, including those containing air navigation legislation and regulations, by States other than Contracting States and by other entities shall be subject to separate agreement between the Guyana and such other States or entities.

2.3.10 Globally interoperable aeronautical data and aeronautical information exchange models shall be used for the provision of data sets.

2.4 COPYRIGHT

2.4.1 Any aeronautical information product of another Contracting State which has been granted copyright protection shall only be made available 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 protection of the originating State.

2.4.2 When aeronautical data and aeronautical information are provided to a State in accordance with 2.3.8, the receiving State shall not provide the digital data sets of Guyana to any third party without the consent.

2.5 COST RECOVERY

The overhead cost of collecting and compiling aeronautical data and aeronautical information shall be included in the cost basis for airport and air navigation services charges, as appropriate, in accordance with the principles contained in ICAO's Policies on Charges for Airports and Air Navigation Services (Doc 9082).

Note.— When costs of collection and compilation of aeronautical data and aeronautical information are recovered through airport and air navigation services charges, the charge to an individual customer for the supply of a particular aeronautical information product may be based on the costs of printing paper copies, production of electronic media and distribution.

CHAPTER 3 – AERONAUTICAL INFORMATION MANAGEMENT

3.1 INFORMATION MANAGEMENT REQUIREMENTS

The information management resources and processes established by the AIS Provider shall be adequate to ensure the timely collection, processing, storing, integration, exchange and delivery of quality-assured aeronautical data and aeronautical information within the air traffic management (ATM) system.

3.2 DATA QUALITY SPECIFICATIONS

3.2.1 DATA ACCURACY

The order of accuracy for aeronautical data shall be in accordance with its intended use.

Note.— Specifications concerning the order of accuracy (including confidence level) for aeronautical data are contained in the Procedures for Air Navigation Services — Aeronautical Information Management *(PANS-AIM, Doc 10066), Appendix 1.*

3.2.2 DATA RESOLUTION

The order of resolution of aeronautical data shall be commensurate with the actual data accuracy.

Note 1.— Specifications concerning the resolution of aeronautical data are contained in the PANS-AIM (Doc 10066), Appendix 1.

Note 2.— The resolution of the data contained in the database may be the same or finer than the publication resolution.

3.2.3 DATA INTEGRITY

3.2.3.1 The integrity of aeronautical data shall be maintained throughout the data chain from origination to distribution to the next intended user.

Note.— Specifications concerning the integrity classification related to aeronautical data are contained in the PANS-AIM (Doc 10066), Appendix 1.

3.2.3.2 Based on the applicable integrity classification, procedures shall be put in place in order to:

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.

3.2.4 DATA TRACEABILITY

Traceability of aeronautical data shall be ensured and retained as long as the data is in use.

3.2.5 DATA TIMELINESS

Timeliness of aeronautical data shall be ensured by including limits on the effective period of the data elements.

Note 1.— These limits may be associated with individual data elements or data sets.

Note 2.— If the effective period is defined for a data set, it will account for the effective dates of all of the individual data elements.

3.2.6 DATA COMPLETENESS

Completeness of aeronautical data shall be ensured in order to support its intended use.

3.2.7 DATA FORMAT

The format of delivered aeronautical data shall be adequate to ensure that the data is interpreted in a manner that is consistent with its intended use.

3.3 AERONAUTICAL DATA AND AERONAUTICAL INFORMATION VERIFICATION AND VALIDATION

3.3.1 Material to be issued as part of an aeronautical information product shall be thoroughly checked before it is submitted to the AIS in order to ensure that all necessary information has been included and that it is correct in detail.

3.3.2 The AIS Provider shall establish verification and validation procedures which ensure that upon receipt of aeronautical data and aeronautical information, quality requirements are met.

3.4 DATA ERROR DETECTION

3.4.1 Digital data error detection techniques shall be used during the transmission and/or storage of aeronautical data and digital data sets.

3.4.2 Digital data error detection techniques shall be used in order to maintain the integrity levels as specified in 3.2.3.

Note.— Detailed specifications concerning digital data error detection techniques are contained in the PANS-AIM (Doc 10066).

3.5 USE OF AUTOMATION

3.5.1 Automation shall be applied in order to ensure the quality, efficiency and cost-effectiveness of aeronautical information services.

Note.— Guidance material on the development of databases and the establishment of data exchange services is contained in Doc 8126.

3.5.2 Due consideration to the integrity of data and information shall be given when automated processes are implemented and mitigating steps taken where risks are identified.

Note.— Risks of altering the integrity of data and information may be introduced by automated processes in cases of unexpected systems behaviours.

3.5.3 In order to meet the data quality requirements, automation shall:

a) enable digital aeronautical data exchange between the parties involved in the data processing chain; and

b) use aeronautical information exchange models and data exchange models designed to be globally interoperable.

CHAPTER 4 – SCOPE OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION

Note.— The scope of aeronautical data and aeronautical information provides the minimum requirement to support aeronautical information products and services, aeronautical navigation data bases, air navigation applications and air traffic management (ATM) systems.

4.1 SCOPE OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION

4.1.1 The aeronautical data and aeronautical information to be received and managed by the AIS Provider shall include at least the following sub-domains:

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.

Note 1.— Detailed specifications concerning the content of each sub-domain are contained in the Procedures for Air Navigation Services — Aeronautical Information Management *(PANS-AIM, Doc 10066), Appendix 1.*

Note 2.— Aeronautical data and aeronautical information in each sub-domain may be originated by more than one organization or authority.

4.1.2 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.

Note.— Specifications concerning the accuracy and integrity classification related to aeronautical data are contained in the PANS-AIM (Doc 10066), Appendix 1.

4.2 AERONAUTICAL INFORMATION UPDATES

4.2.1 Aeronautical data and aeronautical information shall be kept up to date.

4.3 METADATA

4.3.1 Metadata shall be collected for aeronautical data processes and exchange points.

4.3.2 Metadata collection shall be applied throughout the aeronautical information data chain, from origination to distribution to the next intended user.

Note.— Detailed specifications concerning metadata are contained in the PANS-AIM (Doc 10066).

CHAPTER 5 – AERONAUTICAL INFORMATION PRODUCTS AND SERVICES

5.1 GENERAL

5.1.1 Aeronautical information shall be provided in the form of aeronautical information products and associated services.

Note.— Specifications concerning the order of resolution of aeronautical data provided for each aeronautical information product are contained in the Procedures for Air Navigation Services — Aeronautical Information Management (*PANS-AIM, Doc 10066), Appendix 1.*

5.1.2 When aeronautical data and aeronautical information are provided in multiple formats, processes shall be implemented to ensure data and information consistency between formats.

5.2 AERONAUTICAL INFORMATION IN A STANDARDIZED PRESENTATION

5.2.1 Aeronautical information provided in a standardized presentation shall include the aeronautical information publication (AIP), AIP Amendments, AIP Supplements, AIC, NOTAM and aeronautical charts.

Note 1.— Detailed specifications about AIP, AIP Amendments, AIP Supplements, AIC and NOTAM are contained in the PANS-AIM (Doc 10066).

Note 2.— Cases where digital data sets may replace the corresponding elements of the standardized presentation are detailed in the PANS-AIM (Doc 10066).

5.2.1.1 The AIP, AIP Amendment, AIP Supplement and AIC shall be provided on paper and/or as an electronic document.

5.2.1.2 The AIP, AIP Amendment, AIP Supplement and AIC when provided as an electronic document (eAIP) shall allow for both displaying on electronic devices and printing on paper.

CHAPTER 6 – AERONAUTICAL INFORMATION PUBLICATION

6.1 AIP REQUIREMENT

6.1.1 The AIS Provider shall publish an Aeronautical Information Publication (AIP) containing current information, data and aeronautical charts relating to the airspace in which Guyana has responsibility for air traffic services. The contents of the AIP shall be in accordance with these requirements and Chapter 5 of PANS-AIM (Doc 10066).

Note 1.— The AIP is intended primarily to satisfy international requirements for the exchange of aeronautical information of a lasting character essential to air navigation.

Note 2.— The AIP constitutes the basic information source for permanent information and long duration temporary changes.

6.1.2 The AIS Provider shall ensure that the AIP to be published is self-contained, includes a table of contents and:

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 Guyana and the related ICAO Standards, Recommended Practices and Procedures, given in a form that would enable a user to differentiate readily between the requirements of Guyana and the related ICAO provisions;

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

6.2 AIP AMENDMENT

6.2.1 The aeronautical information publication (AIP) shall be amended or reissued at such regular intervals as may be necessary to keep it up to date.

6.2.2 Permanent changes to the AIP shall be published as AIP Amendments.

6.2.3 Each AIP Amendment shall be allocated a serial number, which shall be consecutive. Each AIP Amendment page, including the cover sheet, shall display a publication date. A brief indication of the subjects affected by the amendment shall be given on the AIP Amendment cover sheet.

6.2.4 The AIS Provider shall establish and publish the publication dates for its AIP Amendments in the AIP.

6.3 AIP SUPPLEMENT

6.3.1 The AIS Provider shall ensure that temporary changes of long duration (three months or longer) and information of short duration which contains extensive text and/or graphics are published as AIP Supplement.

6.3.2 Each AIP Supplement shall be allocated a serial number which shall be consecutive and based on the calendar year. AIP Supplement pages shall be kept in the AIP as long as all or some of their contents remain valid.

6.3.3 A checklist of valid AIP Supplements shall be regularly provided.

Note.— Detailed specifications concerning the frequency for providing checklists of valid AIP Supplements are contained in the PANS-AIM (Doc 10066).

6.4 ELECTRONIC AIP (EAIP)

6.4.1 The AIS Provider shall publish the AIP, AIP Amendment, AIP Supplement and AIC in a format that allows for displaying on a computer screen and printing on paper.

Note 1. – This composite electronic document is named "Electronic AIP" (eAIP) and may be based on a format that allows for digital data exchange.

6.4.2 When provided, the information content of the eAIP and the structure of chapters, sections and sub-sections shall follow the content and structure of the paper AIP. The eAIP shall include files that allow for printing a paper AIP.

6.4.3 When provided, the eAIP shall be available on a physical distribution medium (CD, DVD, etc) and/or online on the Internet.

CHAPTER 7 – AERONAUTICAL INFORMATION CIRCULARS

7.1 An AIC shall be used to provide:

a) a long-term forecast of any major change in legislation, regulations, procedures or facilities; or

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.

7.2 An AIC shall not be used for information that qualifies for inclusion in AIP and NOTAM.

7.3 The validity of AIC currently in force shall be reviewed at least once a year.

7.4 A checklist of currently valid AIC shall be regularly provided.

Note.— Detailed specifications concerning the frequency for providing checklists of valid AIC are contained in the PANS-AIM (Doc 10066).

CHAPTER 8 – AERONAUTICAL INFORMATION REGULATION AND CONTROL (AIRAC)

8.1 The AIS Provider shall publish under the AIRAC system, i.e. basing establishment, withdrawal or significant changes upon a series of common effective dates at intervals of 28 days, including 8 November 2018:

a) limits (horizontal and vertical), regulations and procedures applicable to:

1) flight information regions;

2) control areas;

3) control zones;

4) advisory areas;

5) air traffic services (ATS) routes;

6) permanent danger, prohibited and restricted areas (including type and periods of activity when known) and air defence identification zones (ADIZ);

7) 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 stopways;

g) taxiways and aprons;

h) aerodrome ground operating procedures (including low visibility procedures);

i) approach and runway lighting; and

j) Guyana aerodromes operating minima when published

8.2 The information notified under the AIRAC system shall not be 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.

8.3 Information provided under the AIRAC system shall be made available by the aeronautical information service (AIS) so as to reach recipients at least 28 days in advance of the effective date.

Note.— AIRAC information is distributed by the AIS unit at least 42 days in advance of the AIRAC effective dates with the objective of reaching recipients at least 28 days in advance of the effective date.

8.4 When information has not been submitted by the AIRAC date, a NIL notification shall be distributed not later than one cycle before the AIRAC effective date concerned.

8.5 The AIS Provider shall ensure that implementation dates other than AIRAC effective dates shall not be used for pre-planned operationally significant changes requiring cartographic work and/or for updating of navigation databases.

8.6 The regulated system (AIRAC) shall be used for the provision of information relating to the establishment and withdrawal of, and premeditated significant changes in, the circumstances listed below:

a) position, height and lighting of navigational obstacles;

b) hours of service of aerodromes, facilities and services;

c) customs, immigration and health services;

d) temporary danger, prohibited and restricted areas and navigational hazards, military exercises and mass movements of aircraft; and

e) temporary areas or routes or portions thereof where the possibility of interception exists.

8.7 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 8.1 if the entire State or any significant portion thereof is affected or if cross-border coordination is required.

Note.— Guidance material on what constitutes a major change is included in the Aeronautical Information Services Manual (Doc 8126).

CHAPTER 9 - NOTAMs

9.1 GENERAL NOTAM REQUIREMENT

9.1 The AIS Provider shall promptly originate and issue 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 and/or graphics.

9.1.1 The AIS Provider shall ensure that the NOTAM service to be established shall:

(a) designate a NOF for Guyana;

(b) operate the NOF on a 24-hour basis;

(c) establish agreements with other international NOTAM offices or between the NOTAM offices and multinational NOTAM Processing Units for the exchange of NOTAM;

(d) use appropriate telecommunication facilities to issue and receive NOTAM;

(e) issue a checklist of the NOTAMs that are currently in force, at intervals of not more than one month; and

(f) issue promptly NOTAM in a format in accordance with these Requirements and the specifications for NOTAM in PANS-AIM (Doc 10066).

9.2 NOTAM SPECIFICATIONS

Note.— Detailed specifications for NOTAM, including formats for SNOWTAM and ASHTAM, are contained in the PANS-AIM (Doc 10066).

9.2.1 A checklist of valid NOTAM shall be regularly provided.

Note.— Detailed specifications concerning the frequency for providing checklists of valid NOTAM are contained in the PANS-AIM (Doc 10066).

9.2.2 (AN15) When an AIP Amendment or an AIP Supplement is published in accordance with AIRAC procedures, a Trigger NOTAM shall be originated.

Note.— Detailed specifications concerning the Trigger NOTAM are contained in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066).

9.2.3 A NOTAM shall be originated and issued concerning the following information:

a) establishment, closure or significant changes in operation of aerodrome(s) or heliport(s) or runways;

b) establishment, withdrawal or significant changes in operation of aeronautical services (aerodromes, AIS, ATS, communications, navigation and surveillance (CNS), meteorology (MET), search and rescue (SAR), etc.);

c) establishment, withdrawal or significant changes in operational capability of radio navigation and air-ground communication services. This includes: interruption or return to operation, change of frequencies, change in notified hours of service, change of identification, change of orientation (directional aids), change of location, power increase or decrease amounting to 50 per cent or more, change in broadcast schedules or contents, or irregularity or unreliability of operation of any radio navigation and air-ground communication services or limitations of relay stations including operational impact, affected service, frequency and area;

d) unavailability of back-up and secondary systems, having a direct operational impact;

e) establishment, withdrawal or significant changes to visual aids;

f) interruption of or return to operation of major components of aerodrome lighting systems;

g) establishment, withdrawal or significant changes to procedures for air navigation services;

h) occurrence or correction of major defects or impediments in the manoeuvring area;

i) changes to and limitations on availability of fuel, oil and oxygen;

j) major changes to search and rescue facilities and services available;

k) establishment, withdrawal or return to operation of hazard beacons marking obstacles to air navigation;

l) changes in regulations requiring immediate action, e.g. prohibited areas for SAR action;

m) 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);

n) 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);

Note.— Guidance related to conflict zones is contained in the Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones (Doc 10084).

o) planned laser emissions, laser displays and search lights if pilots' night vision is likely to be impaired;

p) erecting or removal of, or changes to, obstacles to air navigation in the take-off/climb, missed approach, approach areas and runway strip;

q) establishment or discontinuance (including activation or deactivation) as applicable, or changes in the status of prohibited, restricted or danger areas;

r) 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;

s) allocation, cancellation or change of location indicators;

t) changes in aerodrome/heliport rescue and firefighting category provided;

u) 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;

v) outbreaks of epidemics necessitating changes in notified requirements for inoculations and quarantine measures;

w) observations or forecasts of space weather phenomena, the date and time of their occurrence, the flight levels where provided and portions of the airspace which may be affected by the phenomena;

x) 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;

y) 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;

z) 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; and

aa) implementation of short-term contingency measures in cases of disruption, or partial disruption, of ATS and related supporting services.

Note.— Specifications concerning the timely promulgation of information by NOTAM are contained in Chapter 6 of the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066).

9.2.4 The following information shall not be notified by NOTAM:

a) routine maintenance work on aprons and taxiways which does not affect the safe movement of aircraft;

b) runway marking work, when aircraft operations can safely be conducted on other available runways, or the equipment used can be removed when necessary;

c) temporary obstructions in the vicinity of aerodromes/heliports that do not affect the safe operation of aircraft;

d) partial failure of aerodrome/heliport lighting facilities where such failure does not directly affect aircraft operations;

e) partial temporary failure of air-ground communications when suitable alternative frequencies are known to be available and are operative;

f) the lack of apron marshalling services and road traffic control;

g) the unserviceability of location, destination or other instruction signs on the aerodrome movement area;

h) parachuting when in uncontrolled airspace under VFR (see 6.3.2.3 m)), when controlled, at promulgated sites or within danger or prohibited areas;

i) training activities by ground units;

j) unavailability of back-up and secondary systems if these do not have an operational impact;

k) limitations to airport facilities or general services with no operational impact;

l) national regulations not affecting general aviation;

m) announcement or warnings about possible/potential limitations, without any operational impact;

n) general reminders on already published information;

o) availability of equipment for ground units without containing information on the operational impact for airspace and facility users;

p) information about laser emissions without any operational impact and fireworks below minimum flying heights;

q) closure of movement area parts in connection with planned work locally coordinated of duration of less than one hour;

r) closure or unavailability of, or changes in, operation of aerodrome(s)/heliport(s) outside the aerodrome(s)/heliport(s) operational hours; and

s) other non-operational information of a similar temporary nature.

Note.— Information which relates to an aerodrome and its vicinity and does not affect its operational status may be distributed locally during pre-flight or in-flight briefing or other local contact with flight crews.

9.2.5 The AIS Provider shall ensure that:

(a) each NOTAM issued is allocated 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;

(b) each NOTAM issued is brief, deal with only one subject, and be compiled so that its meaning is clear without reference to another document;

(c) if a NOTAM contains information that requires an amendment to the AIP or an AIP Supplement, the NOTAM shall contain a cross reference to the affected AIP text or AIP Supplement;

(d) if a NOTAM is issued which cancels or supersedes a previous NOTAM, the serial number of the previous NOTAM shall be specified;

(e) if an error is detected in a NOTAM, a replacement NOTAM which cancels the original shall be issued;

9.3 PREDETERMINED DISTRIBUTION SYSTEM FOR NOTAM

9.3.1 The predetermined distribution system provides for incoming NOTAM (including SNOWTAM and ASHTAM) to be channelled through the aeronautical fixed service (AFS) direct to designated addressees predetermined by the receiving State concerned while concurrently being routed to the international NOTAM office for checking and control purposes.

9.3.2 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 NOTAM office of the receiving State.

2) Third and fourth letters:

The letters "ZZ" indicating a requirement for special distribution.

3) Fifth letter:

The fifth letter differentiating between NOTAM (letter "N"), SNOWTAM (letter "S"), and ASHTAM

(letter "V").

4) 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.

Note.— The fifth, sixth and seventh letters replace the three-letter designator YNY which, in the normal distribution system, denotes an international NOTAM office.

5) Eighth letter:

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

3.The Authority shall ensure that the AIS Provider informs the States from which they receive NOTAM of the sixth and seventh letters to be used under different circumstances to ensure proper routing.

9.4 NOTAM DISTRIBUTION

9.4.1 The AIS Provider shall ensure that each NOTAM is distributed on the basis of a request and where possible be distributed as a single telecommunication message.

9.4.2 The AIS Provider shall ensure that whenever practicable, the AFS is employed for NOTAM distribution. A predetermined distribution system for NOTAM transmitted on the AFS shall be used, subject to agreement established with other international NOTAM offices.

9.4.3 NOTAM shall be prepared in conformity with the relevant provisions of the ICAO communication procedures.

9.4.4 When a NOTAM is sent by means other than the AFS, a six-digit date-time group indicating the date and time of NOTAM origination, and the identification of the originator

shall be used, preceding the text. The originating State shall select the NOTAM that are to be given international distribution.

9.4.5 International exchange of NOTAM shall take place only as mutually agreed between the international NOTAM offices concerned, and between the NOTAM offices and multinational NOTAM processing units.

9.4.6 The originating State shall, upon request, grant distribution of NOTAM series other than those distributed internationally.

CHAPTER 10 – DIGITAL DATA SETS

10.1.1 Digital data shall be in the form of the following data sets:

a) AIP data set;

b) terrain data sets;

c) obstacle data sets;

d) aerodrome mapping data sets; and

e) instrument flight procedure data sets.

10.1.2 Specifications concerning the content of the digital data sets shall be based on the requirements in PANS-AIM (Doc 10066).

10.1.3 Each data set shall be provided to the next intended user together with at least the minimum set of metadata based on the specifications in these Requirements and PANS-AIM (Doc 10066) that ensures traceability.

10.1.4 A checklist of valid data sets shall be regularly provided.

10.2 TERRAIN AND OBSTACLE DATA SETS

Note 1.— Numerical requirements for terrain and obstacle data sets are contained in the PANS AIM (Doc 10066), Appendices 1 and 8.

Note 2.— Requirements for terrain and obstacle data collection surfaces are contained in the PANS-AIM (Doc 10066), Appendix 8.

10.2.1 The coverage areas for terrain and obstacle data sets shall be specified as:

— Area 1: the entire territory of Guyana;

— Area 2: within the vicinity of an aerodrome, subdivided as follows:

— Area 2a: a rectangular area around a runway that comprises the runway strip plus any clearway that exists;

Note.— See Annex 14, Volume I, Chapter 3, for dimensions for runway strips.

— 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;

— 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

— Area 2d: an area outside 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;

— 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; and

— 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.

10.2.2 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.

10.3 TERRAIN DATA SETS

10.3.1 Terrain data sets shall 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.

10.3.2 Terrain data shall be provided for Area 1.

10.3.3 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.

10.3.4 For aerodromes regularly used by international civil aviation, additional terrain data shall be provided within Area 2 as follows:

a) in the area extending to a 10-km radius from the ARP; and

b) within the area between 10 km and the TMA boundary or a 45-km radius (whichever is smaller), where terrain penetrates a horizontal terrain data collection surface specified as 120 m above the lowest runway elevation.

10.3.5 Arrangements shall be made for coordinating the provision of terrain data for adjacent aerodromes where their respective coverage areas overlap to assure that the data for the same terrain is correct.

10.3.6 For those aerodromes located near territorial boundaries, arrangements shall be made among States concerned to share terrain data.

10.3.7 For aerodromes regularly used by international civil aviation, terrain data shall be provided for Area 3.

10.3.8 For aerodromes regularly used by international civil aviation, 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.

10.3.9 Where additional terrain data is collected to meet other aeronautical requirements, the terrain data sets shall be expanded to include this additional data.

10.4 OBSTACLE DATA SETS

10.4.1 Obstacle data sets shall contain the digital representation of the vertical and horizontal extent of obstacles.

10.4.2 Obstacle data shall not be included in terrain data sets.

10.4.3 Obstacle data shall be provided for obstacles in Area 1 whose height is 100 m or higher above ground.

10.4.4 For aerodromes regularly used by international civil aviation, obstacle data shall be provided for all obstacles within Area 2 that are assessed as being a hazard to air navigation.

10.4.5 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. The Area 2a obstacle collection surface shall have a 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.

Note.— Take-off flight path areas are specified in Annex 4, 3.8.2. Aerodrome obstacle limitation surfaces are specified in Annex 14, Volume 1, Chapter 4.

10.4.6 For aerodromes regularly used by international civil aviation, obstacle data shall be provided for Areas 2b, 2c and 2d for obstacles that penetrate the relevant obstacle data collection surface specified as follows:

a) 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. The Area 2b obstacle collection surface has a 1.2 per cent slope extending from the ends of Area 2a at the elevation of the runway end in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;

b) 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. The Area 2c obstacle collection surface has a 1.2 per cent slope extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a. The initial elevation of Area 2c has the elevation of the point of Area 2a at which it commences; and

c) Area 2d: an area outside Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing TMA boundary, whichever is nearest. The Area 2d obstacle collection surface has a height of 100 m above ground;

except that data need not be collected for obstacles less than a height of 3 m above ground in Area 2b and less than a height of 15 m above ground in Area 2c.

10.4.7 Arrangements shall be made 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.

10.4.8 For those aerodromes located near territorial boundaries, arrangements shall be made among States concerned to share obstacle data.

10.4.9 For aerodromes regularly used by international civil aviation, obstacle data shall be provided 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.

10.4.10 For aerodromes regularly used by international civil aviation, obstacle data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established.

10.4.11 Where additional obstacle data is collected to meet other aeronautical requirements, the obstacle data sets shall be expanded to include this additional data.

10.5 AIP DATA SET

10.5.1 An AIP data set shall be provided covering the extent of information as provided in the AIP.

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

10.5.3 The AIP data set shall contain the digital representation of aeronautical information of lasting character (permanent information and long duration temporary changes) essential to air navigation.

10.6 AERODROME MAPPING DATA SETS

10.6.1 Aerodrome mapping data sets shall contain the digital representation of aerodrome features.

Note.— Aerodrome features consist of attributes and geometries, which are characterized as points, lines or polygons. Examples include runway thresholds, taxiway guidance lines and parking stand areas.

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

10.7 INSTRUMENT FLIGHT PROCEDURE DATA SETS

10.7.1 Instrument flight procedure data sets shall contain the digital representation of instrument flight procedures.

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

10.8 DATA SET UPDATES

10.8.1 Data sets shall be amended or reissued at such regular intervals as may be necessary to keep them up to date.

10.8.2 Permanent changes and temporary changes of long duration (three months or longer) made available as digital data shall be issued in the form of a complete data set or a subset that includes only the differences from the previously issued complete data set.

10.8.3 When made available as a completely reissued data set, the differences from the previously issued complete data set shall be indicated.

10.8.4 When temporary changes of short duration are made available as digital data (digital NOTAM), they shall use the same aeronautical information model as the complete data set.

10.8.5 Updates to AIP and digital data sets shall be synchronized.

CHAPTER 11 – PRE-FLIGHT AND POST-FLIGHT INFORMATION SERVICE

11.1 PRE-FLIGHT INFORMATION SERVICE

11.1.1 For any aerodrome/heliport used for international air operations, aeronautical information relative to the route stages originating at the aerodrome/heliport shall be made available to flight operations personnel, including flight crews and services responsible for pre-flight information.

11.1.2 Aeronautical information provided for pre-flight planning purposes shall include information of operational significance from the elements of aeronautical information products.

Note 1.— The elements of aeronautical information products may be limited to national publications and when practicable, those of adjacent States, provided a complete library of aeronautical information is available at a central location and means of direct communications are available with that library.

Note 2.— A recapitulation of valid NOTAM of operational significance and other information of urgent character may be made available to flight crews in the form of plain-language pre-flight information bulletins (PIB). Guidance material on the preparation of PIB is contained in Doc 8126.

11.2 POST-FLIGHT INFORMATION SERVICE

11.2.1 For any aerodrome/heliport used for international air operations, arrangements shall be made to receive information concerning the state and operation of air navigation facilities or services noted by flight crews.

11.2.2 The arrangements specified in 2.1 shall ensure that such information is made available to the aeronautical information service (AIS) for distribution as the circumstances necessitate.

11.2.3 For any aerodrome/heliport used for international air operations, arrangements shall be made to receive information concerning the presence of wildlife hazards observed by flight crews.

11.2.4 The information about presence of wildlife hazards shall be made available to the aeronautical information service for distribution as the circumstances necessitate.

11.3 AUTOMATED PRE-FLIGHT INFORMATION SYSTEM

11.3.1 Automated pre-flight information systems for the supply of aeronautical data and aeronautical information for self-briefing, flight planning and flight information service shall:

a) provide for continuous and timely updating of the system database and monitoring of the validity and quality of the aeronautical data stored;

b) permit access to the system by operations personnel including flight crew members, aeronautical personnel concerned and other aeronautical users through suitable telecommunications means;

c) ensure provision, in paper copy form, of the aeronautical data and aeronautical information accessed, as required;

d) 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

e) provide for rapid response to a user request for information.

CHAPTER 12 – AERONAUTICAL CHARTS

Note.— The Civil Aviation Requirements for Aeronautical Charts 2024 provides the minimum standards for aeronautical charts including provision requirements for each chart type.

12.1 The aeronautical charts listed below shall, when available for designated international aerodromes/heliports, form part of the AIP, or be provided separately to recipients of the AIP:

a) Aerodrome/Heliport Chart — ICAO;

b) Aerodrome Ground Movement Chart — ICAO;

c) Aerodrome Obstacle Chart — ICAO Type A;

d) Aerodrome Obstacle Chart — ICAO Type B (when available);

e) Aerodrome Terrain and Obstacle Chart — ICAO (Electronic);

f) Aircraft Parking/Docking Chart — ICAO;

g) Area Chart — ICAO;

h) ATC Surveillance Minimum Altitude Chart — ICAO;

i) Instrument Approach Chart — ICAO;

j) Precision Approach Terrain Chart — ICAO;

k) Standard Arrival Chart — Instrument (STAR) — ICAO;

l) Standard Departure Chart — Instrument (SID) — ICAO; and

m) Visual Approach Chart — ICAO.

12.2 The Enroute Chart — ICAO shall, when available, form part of the AIP, or be provided separately to recipients of the AIP.

12.3 The aeronautical charts listed below shall, when available, be provided as aeronautical information products:

a) World Aeronautical Chart — ICAO 1:1 000 000;

b) Aeronautical Chart — ICAO 1:500 000;

c) Aeronautical Navigation Chart — ICAO Small Scale; and

d) Plotting Chart — ICAO chart.

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

12.5 The chart resolution of aeronautical data shall be that as specified for a particular chart.

Note.— Specifications concerning the chart resolution for aeronautical data are contained in the PANS-AIM (Doc 10066), Appendix 1.

Note.— Detailed specifications concerning the Trigger NOTAM are contained in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066).

12.6 DISTRIBUTION SERVICES

12.6.1 Aeronautical information products shall be distributed to authorized users who request them.

12.6.2 AIP, AIP Amendments, AIP Supplements and AIC shall be made available by the most expeditious means.

12.6.3 Global communication networks such as the Internet shall, whenever practicable, be employed for the provision of aeronautical information products.

CHAPTER 13 – QUALITY MANAGEMENT SYSTEM

13.1 Quality management systems shall be implemented and maintained encompassing all functions of an AIS, as outlined in 2.2. The execution of such quality management systems shall be made demonstrable for each function stage.

Note.— Guidance material is contained in the Manual on the Quality Management System for Aeronautical Information Services *(Doc 9839) (planned for development by November 2019).*

13.2 Quality management shall be 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.

13.3 The quality management system established in accordance with 3.6.1 should follow the ISO 9000 series of quality assurance standards and be certified by an accredited certification body.

13.4 Within the context of the established quality management system, the competencies and the associated knowledge, skills and abilities required for each function shall be identified, and personnel assigned to perform those functions shall be appropriately trained. Processes shall be in place to ensure that personnel possess the competencies required to perform specific assigned functions. Appropriate records shall be maintained so that the qualifications of personnel can be confirmed. Initial and periodic assessments shall be established that require personnel to demonstrate the required competencies. Periodic assessments of personnel shall be used as a means to detect and correct shortfalls in knowledge, skills and abilities.

13.5 Each quality management system shall include 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.

13.6 The established quality management system shall provide users with the necessary assurance and confidence that distributed aeronautical data and aeronautical information satisfy the aeronautical data quality requirements.

13.7 All necessary measures shall be taken to monitor compliance with the quality management system in place.

13.8 Demonstration of compliance of the quality management system applied shall be by audit. If nonconformity is identified, initiating action to correct its cause shall be determined and taken without undue delay. All audit observations and remedial actions shall be evidenced and properly documented.

13.9 In the framework of the quality management system, the AIS Provider shall define and identify a user feedback system.

CHAPTER 14 – HUMAN FACTORS CONSIDERATIONS

14.1 The organization of the AIS as well as the design, contents, processing and distribution of aeronautical data and aeronautical information shall take into consideration Human Factors principles which facilitate their optimum utilization.

14.2 Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

Note.— This may be accomplished through the design of systems, operating procedures or improvements in the operating environment.

Made this 16th day of May 2024.

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Director-General

For the Guyana Civil Aviation Authority