SOUTH AFRICAN CIVIL AVIATION AUTHORITY

CIVIL AVIATION ACT, 2009 (ACT NO. 13 OF 2009)

AMENDMENT OF SA-CATS 1 of 2026

The Director of Civil Aviation has, in terms of section 163 (1) of the Civil Aviation Act, 2009 (Act No. 13 of 2009) amended South African Civil Aviation Technical Standards as reflected in the Schedule hereto. The Amendments as contained in the Schedule shall come into operation on the date of publication.

Poppy Khoza
Director of Civil Aviation
Date: 08 APR 2026

GENERAL EXPLANATORY NOTE:

[ ] Words in bold type in square brackets indicate omissions from existing technical standards.

_____ Words underlined with a solid line indicate insertions in existing technical standards.

SCHEDULE

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(h) Insertion in Technical Standard 91.10.2 after section 1

(i) Substitution in Technical Standard 91.10.9 for Note

(j) Substitution in Technical Standard 91.10.12 for subsection (3)

(k) Substitution of Technical Standard 91.10. 15 (2)

(l) Substitution of Technical Standard 91.10 16 (7)

(m)Substitution of Technical Standard 91.10. 17

5. Amendment of SA-CATS 92

(a) Substitution of Technical Standard 92.01.1

6. Amendment SA-CATS 93

(a) deletion of note in Technical Standard 93.07.23

7. Amendment of SA-CATS 101

(a) Substitution of the heading

8. Amendment of SA-CATS 121

(a) Deletion of a Note in Technical Standard 121.07.31

9. Amendment of SA-CATS 135

(a) Deletion of Note in Technical Standard 135.07.29

10. Amendment of SA-CATS 139

(a) Insertion in Technical Standard 139.02 10 for section (1A)

(b) substitution in Technical Standard 139.02.10 for subsection (16) (a)(dd)

(c) Substitution in Technical Standard 139.02.10 subsection (16) (a) (iv) (cc)

(d) Substitution in Technical Standard 139.02.10 for Table 5 in subsection (28)(c)

(e) Substitution in Technical Standard 139.02.10 for Table 6 in subsection (42)

(f) Substitution in Technical Standard 139.02.10 subsection (16)(d) for subparagraph (iv)

(g) Substitution in Technical Standard 139.02.10 subsection (81)

(h) Substitution in Technical Standard 139.01.30 subsection 2 for subsection (1) for paragraph (h)

(i) Insertion of Technical Standard 139.02.13

(j) Deletion in Technical Standard 139.02.15 for subsection (1)(d) (ii)-(iv)

(k) Deletion in Technical Standard 139.02.15 for subsection (1)(e)

(l) Insertion in Technical Standard 139.02.23 of section 15

(m) Substitution in Technical Standard 139.01.10 section 1 for subsection (1)

(n) substitution in Technical Standard 139.01.10 section 2 for subsection (1)

(o) Substitution in Technical Standard 139.02.10 section 1 for subsection (18)

(p) Substitution in Technical Standard 139.02.10 section 1 subsection for subsection (21) to subsection (39)

(q) Substitution for Technical Standard 139.02.14

(r) Insertion in Technical Standard 139.02.14 after subsection (13)

(s) The insertion in Technical Standard 139.02.15 for section 2

(t) Deletion of Technical Standard 139.02.18.".

11. Amendment of CATS SA 172

(a) Insertion in Technical Standard 172.02.3 sections 1 after subjection (3)

(b) Substitution for Technical Standard 172.03.4 for section 10

(c) Substitution in Annexure F: ATS Standard and Procedures Manual for sections 1 to 5.

AMENDMENT OF SA-CATS 61

1. Document SA-CATS 61 is hereby amended by:

(a) The insertion after Technical Standard 61.02.1 of the following Technical Standard:

"61.02.3 ISSUANCE OF SPL OR ISPL

(1) In a case where an ATO at which a student is registered is not approved to conduct a specific training course or component, the student may be referred to an ATO approved to render such specific training course or component.

(2) The ATO referring the student to another ATO that is approved to render the specific training course or component shall comply with the following requiremets:

(a) a referral shall be made on the appropriate prescribed form and contain a detailed description of the scope of training required;

(b) a student shall be provided with all necessary supporting information and referral documentation in order for another ATO to accurately and effectively provide the required training;

(c) a student's registered ATO, which shall remain responsible for the comprehensiveness of the student's training records;

(d) the completed prescribed referral form shall be returned to the student's registered ATO;

(e) where the training provided requires the completion of official documentation, another ATO that is competent to render the specific training course or component shall provide such documentation to the registered ATO, which remains responsible for the comprehensiveness of the student's training records; and

(f) a copy of the formal referral request form shall accompany the application to the Director for the issuance of the applicable licence or rating.

(3) The ATO to whom a student is referred for the rendering of a specific training course or component shall comply with the following requirements:

(a) the specific training course or component shall be completed within 30 days from the date of referral;

(b) the completed prescribed referral form referred to in subsection (2) shall be returned to the student's registered ATO;

(c) where the training provided requires the completion of official documentation, an approved ATO that has rendered the specific training course or component shall provide such documentation to the student's registered ATO;

(d) an assisting ATO shall provide a registered ATO with feedback regarding the training conducted to allow details of such training to be entered in the student's training file, as required; and

(e) in case of an unsuccessful skills test, it must be reported by another ATO that is competent to render the specific training course or component to the Director and shall record details of such reporting on the appropriate prescribed form referred to in subsection (2).

(4) In a case where the procedure described in this Technical Standard was not complied with, the training provided by an ATO that has rendered the specific training course or component shall not be recognised by the Director.

(5) When selecting another ATO that is approved to render the specific training course or component, the student's preference shall be considered, unless a student's preference is impracticable or a student's registered ATO can provide reasonable justification for its decision.

(b) the substitution for Technical Standard 61.02.5 of the following Technical Standard:

"61.02.5 PRIVILEGES AND LIMITATIONS OF SPL AND ISPL

1. Authorisation, logbook endorsement and supervision requirements

(1) A holder of an SPL or ISPL may not act as PIC, unless authorised and supervised by a flight instructor in accordance with the training and procedural manual of an ATO.

(2) A student pilot shall be limited to the flying exercises and navigation routes detailed in the authorisation;

(3) A pilot logbook of a student shall be endorsed in accordance with the training and procedural manual of an ATO, prior to –

(i) the first solo flight;

(ii) the first solo flight to the general flying area; and

(iii) the first solo navigation flight.

(4) Except for the purpose of practicing a precautionary landing exercise, a student pilot shall not be authorised to conduct solo flights below 500 feet above ground level (AGL), unless authorised in accordance with the training and procedural manual of an ATO.

2. Dual Checks

(1) A dual check flight is required before a student conducts his or her first solo flight, and must include, but is not limited to, the following –

(a) at least 3 take-offs and landings;

(b) one glide approach to a landing;

(c) one simulated engine failure during initial climb out;

(d) one go-around from a full flaps configuration; and

(e) recovery from a balloon during landing and a bounced landing.

(2) A dual check flight is required before a student conducts his or her first solo flight to the general flying area, and first solo navigation flight;

(3) Dual check flights shall be conducted by a Grade I or Grade II flight instructor, in accordance with the training and procedural manual of an ATO.

3. Requirements for the first solo flight

(a) A student shall not be authorised for the first solo flight unless he or she -

(i) has undergone a minimum of 10 hours of dual flight training;

(ii) holds a valid SPL or ISPL;

(iii) has demonstrated an acceptable level of knowledge of the basic principles of flight; and

(iv) has demonstrated an acceptable level of competency in exercises 1 through 13, which includes all associated emergencies.

4. Mandatory dual flying

Following the first solo flight, a dual flight shall precede each subsequent solo flight until a student has accumulated 3 hours of solo flight time.";

(c) the deletion of Technical Standard 61.02.7:

(d) the insertion after Technical Standard 61.02.7 of the following Technical Standards:

61.02.8 SLOW PROGRESS AND ASSISTANCE PROGRAM

(1) When an ATO becomes aware that a student is progressing particularly slowly, it shall provide reasonable assistance to such student, which shall commence at the latest when a student reaches 25 hours of flight time.

(2) The assistance referred to in subsection (1) shall be recorded and include one or more of the following elements:

(a) timeous and pre-emptive assistance to ensure training quality, continuity and safety;

(b) a diagnostic process to determine the root cause or causes of the slow progress;

(c) a series of discussions or interviews with a student pilot that requires such assistance, as provided in this Technical Standard, to understand possible contributing factors;

(d) an accurate, tailored and specialised assistance program to address the identified deficiencies, which shall include measures to correct any training-related shortcomings on the part of the ATO;

(e) remedial educational guidance;

(f) the timeous identification of a possible learning problem or contributing social factors;

(g) psychometric evaluation and input, where appropriate and agreed to by a student;

(h) referral to an external specialist, where appropriate, and agreed to by a student; and

(i) internal disciplinary measures in a case where a student pilot is unwilling to comply with organisational training directives and instructions.

(3) In a case where a student fails to complete the first solo flight by 35 hours of dual flight training, all dual check flights shall henceforth be conducted by the Chief Flying Instructor (CFI), assistant CFI or by a DFE.

(4) In a case where a student who is subject to an assistance program has reached 80 hours of flight time without obtaining a PPL, a letter of recommendation for a skills test shall be prepared by the CFI or assistant CFI"."

"61.02.9 TERMINATION OF STUDENT TRAINING

(1) A report for the termination of a student training shall be submitted by an ATO to the Director on a prescribed form.

(2) When a student's training at an ATO is terminated, the reason for the suspension or termination shall be disclosed in the report referred to in section 1.

(3) When terminating a student's training due to hazardous behaviour, an ATO shall follow the following procedure:

(a) a chronological account of the events shall be documented;

(b) a detailed narrative shall be compiled, with a description of the circumstances which led to the termination, the actions taken by an ATO, the behaviour of the student and any other information which is pertinent to the termination decision;

(c) where practical, supporting evidence shall be included in the report; and

(d) a copy of the additional report shall be made available to the Director on request.".

AMENDMENT OF SA-CATS 66

2. Document SA-CATS 66 is hereby amended by:

(a) the insertion in Technical Standard 66.01.11 after section 1.4 of the following section:

"1.5 Requirement for skills test certificate

(a) Copy of EDE AME licence with an AME instructor endorsement;

(b) Copy of the old/current EDE designation endorsement or certificate;

(c) Copy of annual oversight EDE report;

(d) Attendance proof of EDE annual conference/seminar attendance; and

(e) Skills test report performed on the student by the EDE.";

(b) the substitution in Technical Standard 66.02.3 section 1.1 for subsection (6) of the following subsection:

"(6) A candidate accepted for a theoretical knowledge examination will be required to answer **[in a written examination,]** questions on a computer-based system for such candidate to demonstrate **[his or her]** knowledge of the **[appropriate topics, which are]** relevant subjects prescribed in section 2 below.";

(c) the substitution in Technical Standard 66.02.3 for section 1.3 of the following section:

"**1.3 Examination Results**

(1) A candidate **[is to be notified of his/her examination(s) results giving percentage(s)]** will receive their results immediately upon submission of the examination for the percentage(s) obtained. No examination result will be given telephonically.

[(2). A candidate for an examination success will be valid for twelve months from the date of the examination. A candidate who applies to use that credit after that period is to be re-examined.]".

AMENDMENT OF SA-CATS 67

3. Document SA-CATS 67 is hereby amended by the insertion in Technical Standard 67.00.2 after Schedule 65 of the following Schedules:

SCHEDULE 66: PROTOCOL ON HAEMATOLOGICAL CONDITIONS

1. ANAEMIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant for or a holder of:

(a) a medical certificate shall be subjected to an FBC and Platelet count on his or her initial medical examination;

(b) a class 1 medical certificate shall be subjected to a haemoglobin (Hb) test at each renewal-aeromedical examination;

(c) Class 2, 3, or 4 medical certificates shall be tested for Hb only when clinically indicated;

(d) a medical certificate with a haemoglobin concentration of below 10.00g/L shall be considered as not meeting the standards; and

(e) a medical certificate with a haematocrit of less than 30% shall be considered as not meeting the standards.

3. Initial Reports Required

(1) An applicant or holder of a medical certificate with an Hb of <10.00g/L or HCT of <30% shall provide a physician or Haematologist report on the cause, treatment and response to treatment, functional capability and any other investigation reports conducted.

4. Aeromedical Considerations

(1) A medical fitness assessment may be considered in cases where the primary cause, such as iron or Vitamin B12 deficiency, has been treated, and the haemoglobin and haematocrit have stabilised to normal levels.

(2) An applicant or holder of a medical certificate with anaemia which is unamenable to treatment shall be assessed as medically unfit.

5. Follow-Up Reports

(1) An applicant for or a holder of a medical certificate shall be assessed on a case-by-case basis.

SCHEDULE 67: PROTOCOL ON ERYTHROCYTOSIS /POLYCYTHAEMIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General Requirements

(1) An applicant for or holder of a medical certificate with erythrocytosis shall be assessed as medically unfit on initial diagnosis.

(2) Polycythaemia or Erythrocytosis is characterised by an increase in red cell mass (> 0.52 males, > 0.48 females).

(3) An applicant for or holder of medical certificate with a persistently raised venous haematocrit for more than two months may be investigated by measurement of their red cell mass (RCM).

(4) Normally, RCM is expressed as a mean predicted value based on surface area.

(5) The diagnosis of absolute erythrocytosis is made when an individual's measured RCM is more than 25% above their mean predicted value.

(6) The term "relative erythrocytosis", where RCM is within the normal range and plasma volume is reduced, should be reserved for states of dehydration.

(7) Apparent erythrocytosis" is the term used for those individuals who have a raised venous haematocrit but with a red cell mass within the reference range.

3. Initial Reports

(1) Physicians or Haematologists report on the cause, treatment, response to treatment, functional capability and all relevant investigations (depending on the underlying pathology).

(2) Serum Full Blood Count shall be required.

(3) In cases of secondary erythrocytosis elevated haemoglobin and haematocritdue to lung disease or cyanotic heart conditions, a holder or applicant shall be required to adhere to the relevant protocol or on a case-by-case basis.

4. Aeromedical Considerations

(1) An applicant or holder with a haemoglobin concentration of > 18.5 g/dL shall be considered as not meeting the acceptable medical standard.

(2) An applicant or holder of a medical certificate with a haematocrit of > 50 % shall be considered as not meeting the acceptable medical standard.

(3) A medical fitness assessment may be considered if the investigation establishes that the medical condition of an applicant or holder of a medical certificate is stable, and no associated pathology is demonstrated.

(4) Primary erythrocytosis, polycythemia rubra vera, shall be considered disqualifying owing to its propensity to thromboembolic complications, cerebro-vascular accidents and its rapid, unpredictable progression.

(5) Depending on the results of a medical specialist's report and response to treatment, primarily venesection, aspirin and cyto-reductive medication, selected cases may be considered for restricted certification.

(6) In cases of secondary erythrocytosis elevated haemoglobin and haematocrit due to lung disease or cyanotic heart conditions, the underlying pathology would have a greater bearing on the final assessment than the erythrocytosis. In such cases, refer to the relevant protocol.

5. Follow-Up Reports

(1) The follow-up of an applicant or holder of a medical diagnosis with Erythrocytosis or Polycythaemia will be assessed on a case-by-case basis.

SCHEDULE 68: PROTOCOL ON HAEMOGLOBINOPATHY (THALASSAEMIA; SICKLE CELL TRAITS)

1. Applicability

(1) This protocol applies to an applicant or holder of Class 1, 2, 3 and 4 medical certificates.

2. General Requirements

(1) An applicant or holder of a medical certificate with haemoglobinopathy shall be assessed as medically unfit on diagnosis.

(2) The single most important qualitative haemoglobinopathy is sickle-cell anaemia.

(3) Sickle-cell disease includes: -

(a)Sickle cell anaemia (SS);

(b)Sickle cell haemoglobin C disease (SC);

(c)Sickle cell haemoglobin D disease (SD); and

(d)Sickle cell Thalassaemia (STh).

(4) A clear distinction must be made between sickle-cell disease and sickle-cell trait (AS).

(5) An applicant or holder of medical certificate with Sickle Cell Anaemia (SS), Sickle Cell Haemoglobin C disease (SC), Sickle Cell Haemoglobin D disease (SD) shall be assessed on a case-by case basis.

SCHEDULE 69: PROTOCOL ON THALASSEMIA

1. Applicability

(1) This protocol applies to an applicant or holder of Class 1, 2, 3 and 4 medical certificates.

2. General Requirements

(1) An applicant or holder of a medical certificate with haemoglobinopathy shall be assessed as medically unfit at initial diagnosis.

(2) The most prevalent quantitative haemoglobinopathy is β-thalassaemia, which has a worldwide distribution.

(3) An applicant or holder of a medical certificate with haemoglobinopathy may be assessed as medically fit if the diagnosis of minor thalassemia or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated.

3. Initial Reports

(1) An applicant or holder of a medical certificate shall be required to submit a Haematologist or Physician report initially and when clinically indicated.

(2) An applicant or holder of a medical certificate shall submit a Serum Full Blood Count, initially and annually.

4. Aeromedical Considerations

(1) An applicant or holder of a medical certificate with Thalassemia Traits may be assessed as acceptable for unrestricted medical certification, subject to the receipt of a favourable Haematology report.

(2) An applicant or holder of a medical certificate's medical reports shall be reviewed by the Authority's medical assessor.

5. Follow-Up Reports

(1) The follow-up medical reports of an applicant or holder of a medical certificate shall be assessed on a case-by-case basis

SCHEDULE 70: PROTOCOL ON SICKLE CELL TRAIT

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) The diagnosis of sickle-cell trait shall be based on the following findings including results from sickling tests where an applicant or a holder of medical certificate:

(a) shall not be anaemic;
(b) shall have a normal red cell morphology;
(c) shall have normal levels of haemoglobin F; and
(d) shall have a haemoglobin electrophoretic pattern of haemoglobins A and S in which A predominates such as the concentration of Hb S is less than 45 per cent of total haemoglobin.
(e) with sickle cell trait meeting the above criteria may be assessed as acceptable for unrestricted fit medical certification.

3. Initial Reports Requirements

(1) An applicant or holder of medical certificate shall submit a Haematologist report including Serum Full Blood Count.

4. Follow-Up Reports

(1) An applicant or holder of a medical certificate shall submit an annual Haematologist or Physician report.

SCHEDULE 71 : PROTOCOL ON HAEMOCHROMATOSIS

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General requirements

(1) An applicant or holder of a medical certificate shall submit a diagnosis of Haemochromatosis or other iron overload state and shall be assessed as medically unfit on diagnosis;

(2) Haemachromatosis is characterized by excessive absorption and storage of iron;

(3) Ferritin level above 500ng/mL in females or above 500 ng/mL in males may indicate hemochromatosis; and

(4) An applicant or holder of a medical certificate shall submit an acquired haemachromatosis; which may be as a result of frequent blood transfusions.

3. Initial Requirements

(1) An applicant or holder of a medical certificate shall submit:

(a) a Cardiologist Report including an Echocardiogram, a Holter ECG and stress ECG (to exclude arrhythmia and heart failure);

(b) a Liver Function Test (excluding liver cirrhosis and liver carcinoma).

(c) a HbA1C (to exclude pre-diabetis); and

(d) a Haematologist or Physician report including iron studies and HFE mutation.

4. Aeromedical Considerations

(1) An applicant or holder of a medical certificate shall have normal serum Ferritin following treatment.

(2) An unrestricted medical certification may be considered by the Authority Medical Assessor for a Class I medical certificate once treatment is stabilised and he or she submits a favourable Cardiologist and Haematologist's Reports.

5. Restrictions

(1) An applicant or holder of a medical certificate shall not be allowed to fly within 48 hours of having venesection as treatment.

6. Follow-up Reports

(1) An applicant or holder of a medical certificate shall submit an annual Haematology or Physician report.

SCHEDULE 72: PROTOCOL ON THROMBOCYTOPENIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General Requirements

(1) An applicant or holder of a medical certificate diagnosed with thrombocytopenia [platelet count of under 75,000/mm3 (75×10^9/L)] shall be declared medically unfit for certification.

(2) The condition may be temporary, in an applicant or holder of a medical certificate with iron deficiency anaemia or alcoholic bone marrow suppression, and in such cases, a medical fitness assessment is possible once the platelet count is normalised, with no bleeding.

(3) An applicant or holder of a medical certificate with idiopathic thrombocytopenic purpura, treated by splenectomy and with stable platelet counts for six months, may be considered for certification after cessation of therapy.

3. Initial Reports

(1) An applicant or holder of a medical certificate shall submit a Haematologist report, including Serum Full Blood Count.

4. Follow-Up Reports

(1) An applicant or holder of a medical certificate shall submit a 6-monthly Haematologist report for an applicant or a holder of a medical certificate with confirmed idiopathic thrombocytopenic purpura.

SCHEDULE 73: PROTOCOL ON SPLENOMEGALY

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates

2. General Requirements

(1) An applicant or holder of a medical certificate who presents with splenomegaly procedure shall be assessed as medically unfit on initial diagnosis and require investigation.

(2) A medical fitness assessment may be considered when the enlargement is minimal, an applicant is stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

3. Initial Reports

(a) An applicant or holder of a medical certificate shall submit a treating Physician or Haematologist report annually.

4. Aeromedical consideration and Follow-up or Restriction

(a) An applicant or holder of a medical certificate will be assessed on a case-by-case basis.

SCHEDULE 74: PROTOCOL ON HAEMOPHILIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant for or a holder of a medical certificate with an inherited coagulation disorder or any history of factor replacement shall be considered medically unfit for certification on diagnosis.

(2) Consideration of the medical fitness assessment of an applicant or holder of a medical certificate who is diagnosed with bleeding disorders shall be based on the classification, of mild, moderate or severe, determined by the level of the deficient factor.

(3) An applicant for or a holder of a medical certificate who is diagnosed with mild haemophilia may be considered medically fit if there is no history of significant bleeding episodes.

(4) An applicant for or a holder of a medical certificate who is present with a mild condition of Von Willebrand's disease may be considered medically fit for certification; and

(5) An applicant for or a holder of a medical certificate who presents severe and moderate cases of factor VIII deficiency (classical haemophilia) shall be declared medically unfit for professional flying.

3. Initial Reports

(1) An applicant for or a holder of a medical certificate shall submit a comprehensive specialist report.

(2) An applicant for or a holder of a medical certificate shall submit blood results depending on the underlying medical condition.

4. Aeromedical Considerations

(1) A Class 1 applicant or medical certificate holder may be certified medically fit if the condition is stable with no history of bleeding for six months and shall be restricted to multicrew operations.

(2) A Class 2,3, and 4 applicant or medical certificate holder may be certified medically fit if the condition is stable with no history of bleeding for six months.

(3) An applicant or holder will be reviewed by the Medical Assessor on a case-by-case basis.

5. Follow-up Report

(1) An applicant for or a holder of a medical certificate with mild Haemophilia shall provide annual Haematologist or similar specialist reports.

(2) An applicant for or a holder of a medical certificate with other bleeding disorders shall be assessed on a case-by-case basis.

6. Restrictions

(1) An applicant for or holder of a medical certificate Class 1 shall be restricted to multicrew environment.

(2) An applicant for or holder of a Class 2, 3, & 4 medical certificate will be assessed on a case-by-case basis.

SCHEDULE 75: PROTOCOL ON DEEP VEIN THROMBOSIS

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant for or a holder of a medical certificate with a history of deep vein thrombosis requires a full haematological investigation for underlying pathology before certification.

3. Initial Reports

(1) An applicant for or a holder of a medical certificate will be required to submit a treating specialist's report.

(2) An applicant for or a holder of a medical certificate shall submit a Compression Ultrasound Report; and

(3) An applicant for or a holder of a medical certificate shall be required to submit D-Dimer.

4. Aeromedical Considerations

(1) An applicant or a holder of a medical certificate may be considered for certification for a minimum of 6 weeks post initiation of other anticoagulation therapy.

(2) An applicant or a holder of a medical certificate using Warfarin is required to comply with the Warfarin protocol.

SCHEDULE 76: PROTOCOL ON PULMONARY EMBOLI

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or holder of a medical certificate with a history of pulmonary emboli shall be declared medically unfit on diagnosis for a minimum of three (3) months before an application for medical certificate is considered.

(2) An applicant or a holder of a medical certificate with recurrent pulmonary embolism shall be declared medically unfit for aviation duties, unless he or she has been assessed for the underlying cause and the said applicant or a holder of a medical certificate relies on anticoagulation.

(3) An applicant or a holder of a medical certificate with a history of pulmonary emboli on Warfarin will be required to comply with the Warfarin protocol.

3. Initial Reports

(1) An applicant or a holder of a medical certificate shall submit the following reports three (3) months post-event.

(a) D-Dimer;

(b) Cardiologist or similar specialist report and treating specialist's report; and

(c) CT Pulmonary Angiogram.

4. Aeromedical Considerations

(1) An applicant or a holder of a medical certificate with a history of pulmonary emboli may apply for recertification at least 3 months after initiation of anticoagulation therapy.

5. Follow-Up Reports

(1) An applicant or a holder will be assessed on a case-by-case basis.

SCHEDULE 77: PROTOCOL ON GLUCOSE-6-PHOSPHATE DEHYDROGENASE DEFICIENCY (g6pd)

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificate.

2. Initial Report

(1) An applicant or a holder of a medical certificate must submit a specialist or Haematologist's Report.

(2) An applicant or a holder of a medical certificate must submit a Full Blood Count report.

3. Aeromedical Considerations

(1) A diagnosis of G6PD does not automatically disqualify an applicant or a holder of a medical certificate from medical certification, as long as their haemoglobin levels remain stable, and the holder or applicant is knowledgeable about which foods and medications to avoid.

4. Follow-Up Reports

(1) An applicant or a holder of a medical certificate shall be assessed on a case-by-case basis.

SCHEDULE 78: PROTOCOL ON BLOOD DONATION

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or a holder of a medical certificate may present with a small risk of fainting or syncope following donation.

3. Aeromedical Considerations

(1) An applicant for or a holder of a medical certificate who donates blood or plasma must not donate blood during the 24 hours before duty. This applies to a holder of a Class 1, 2, and 4 and during the 12 hours before duty for holders of a Class 3 medical certificate.

SCHEDULE 79: PROTOCOL ON BONE MARROW HARVESTING

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or a holder of a medical certificate shall be grounded from the date of harvesting.

(2) The date of harvesting is calculated from the date when the first injection of Granulocyte-Colony Stimulating Factor (G-CSF) is given.

3. Initial Reports

(1) An applicant for or a holder of a medical certificate shall submit a report outlining the underlying conditions.

(2) An applicant or a holder of a medical certificate shall submit a Full Blood Count two (2) weeks after completion of the harvesting procedure.

4. Aeromedical Considerations

(1) If the Full Blood Count is normal, an applicant or a holder of the medical certificate may be considered to exercise the privileges of the licence he or she is applying for, subject to protocols relating to the underlying condition.

(2) If the Full Blood Count is abnormal, an applicant or a holder of a medical certificate shall remain grounded until all abnormalities have been corrected, subject to protocols relating to the underlying condition.

5. Follow-Up Reports

(1) An applicant or a holder of a medical certificate shall submit a Specialist's report on the status of the underlying condition.

(2) An applicant or a holder of a medical certificate shall be reviewed on a case-by-case basis based on the outcome of the report referred to in subsection (1).

6. Restrictions

(1) An applicant or a holder shall be required to be reviewed on a case-by-case basis depending on the underlying medical condition.

SCHEDULE 80: PROTOCOL ON PERIPHERAL BLOOD STEM-CELL DONATION

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(2) An applicant or a holder of a medical certificate shall submit a Full Blood Count to the Authority.

3. Aeromedical Considerations

(1) An applicant or a holder of a medical certificate who feels fully recovered after 48 hours, shall contact his or her Medical Assessor for a medical fitness assessment to return to operational duties.

(2) If there is any doubt about the medical fitness of an applicant or holder of medical certificate, a Medical Assessor may request a report regarding any side effects or complications from the Applicant.

SCHEDULE 81: PROTOCOL ON ACUTE LEUKAEMIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or a holder of a medical certificate diagnosed with acute Leukaemia shall be assessed as medically unfit on initial diagnosis.

(2) The following treatment of Leukemia is not compatible with aviation:
(a) the use of toxic medicines;
(b) high doses of radiation;
(c) bone marrow transplantation; or
(d) antineoplastic medicines.

(3) An applicant or a holder of a medical certificate shall report if they have a previous history of successful Leukaemia treated with antineoplastic medicines to exclude the long-term complications of such treatment, which can include subtle cardiac abnormalities, pulmonary fibrosis, cataracts, and endocrine dysfunction, including hypothyroidism.

3. Initial Reports

(1) An applicant or a holder of a medical certificate shall submit an Oncologist report or similar specialist report.

(2) An applicant or a holder of a medical certificate shall submit a report of Full Blood Count with platelet count.

(3) An applicant or a holder of a medical certificate with a favourable specialist report on remission may be considered for restricted certification.

4. Aeromedical Considerations

(1) An applicant or a holder of a medical certificate diagnosed with acute Leukaemia may be assessed as medically fit after a period of demonstrated stability, and this shall be considered on a case-by-case basis by a Medical Assessor.

(2) An applicant or a holder of a medical certificate with a history of Leukaemia shall have no history of central nervous system involvement and no continuing side-effects from treatment of flight safety importance.

(3) An applicant or a holder of a medical certificate is required to have haemoglobin and platelet count within normal ranges for a medical fitness assessment.

5. Follow-up Reports

(1) An applicant or a holder of a medical certificate shall submit an annual Oncologist or Haematologist report, including blood results for FBC, and Peripheral Blood Smear.

6. Restriction

(1) An applicant or a holder of a medical certificate shall be reviewed on a case-by-case basis by a Medical Assessor.

SCHEDULE 82: PROTOCOL ON CHRONIC MYELOID LEUKAEMIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(2) An applicant or a holder of a medical certificate with Chronic Myeloid Leukemia shall be assessed as medically unfit on diagnosis.

3. Initial Reports

(3) An applicant or a holder of a medical certificate shall submit an Oncologist's report, including blood results for FBC, U&E, and LFT.

4. Aeromedical Considerations

(1) An applicant or a holder of a medical certificate in the early stages of Chronic Myeloid Leukemia may qualify for a restricted certification, provided that there is no Haemolytic Anaemia and no requirement for chemotherapy or corticosteroids. The reports must be submitted to the Medical Assessor for consideration.

(2) An applicant or a holder of a medical certificate with a history of diagnosis of Chronic Myeloid Leukemia must not have a history of central nervous system involvement and no continuing side-effects from any treatment taken such for such Chronic Myeloid Leukemia disease, for flight safety.

(3) An applicant or a holder of a medical certificate shall submit a haemoglobin and platelet count blood results that are within normal range for a medical fitness assessment.

5. Restrictions

(1) A Class 1 applicant or a holder of a medical certificate shall be restricted to Multicrew operations.

(2) A Class 2 applicant or a holder of a medical certificate shall be restricted to duties as a Safety Pilot.

(3) Class 3, ATC applicant or a holder of a medical certificate shall be restricted to work under supervision.

6. Follow-up Reports

(1) An applicant or a holder of a medical certificate shall be required to submit an annual Oncologist or Haematologist report, including blood results for FBC and Peripheral Blood Smear, and the medication side-effect profile.

SCHEDULE 83: PROTOCOL ON CHRONIC LYMPHOCYTIC LEUKAEMIA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or a holder of a medical certificate with a diagnosis of Chronic Lymphocytic Leukaemia (CCL) shall be assessed as medically unfit on diagnosis and shall be reviewed by the Medical Assessor.

3. Initial Reports

(1) An applicant or a holder of a medical certificate shall be required to submit an Oncologist or Haematologist report; and

(2) An applicant or a holder of a medical certificate shall be required to submit blood and drug side-effect profiles.

4. Aeromedical Considerations

(1) Chronic Lymphocytic Leukaemia (CLL) is a relatively benign condition which often requires no treatment.

(2) An applicant or a holder of a medical certificate with CLL may be assessed as medically fit provided he or she remains well and does not need any medication, and a six-monthly review by a Haematologist shall be required.

5. Follow-up Reports

(1) An applicant or a holder of a medical certificate shall be assessed on a case-by-case basis by a Medical Assessor.

6. Restrictions

(1) Class 1 shall be restricted to Multicrew.

(2) Other classes on a case-by-case basis, by a Medical Assessor.

SCHEDULE 84: PROTOCOL NON-HODGKINS LYMPHOMA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or a holder of a medical certificate shall be declared medically unfit on diagnosis.

(2) An applicant or a holder of a medical certificate may apply for recertification at least two (2) years after being declared Non-Hodgkins Lymphoma free.

3. Initial Requirements

(1) An applicant or a holder of a medical certificate shall be required to submit a treating specialist (oncologist or haematologist) report to also address Cardiovascular risk factors.

(2) An applicant or a holder of a medical certificate shall be required to submit a Cardiologist's report, if indicated.

(3) An applicant or a holder of a medical certificate shall be required to submit the following results:

(a) Full blood count;

(b) biochemical profile including the following tests –

(i) s-LDH;

(ii) Thyroid function test;

(iii) s-glucose; and

(iv) s-cholesterol (Lipogram)

(4) An applicant or a holder of medical certificate shall be required to submit a PET Scan where an applicant or a holder of a medical certificate presents with abnormal physical findings, abnormal laboratory results or is symptomatic of Non-Hodgkins Lymphoma.

4. Follow-up Reports

(1) An applicant or a holder of a medical certificate shall submit an annual oncologist or haematologist report (to also address Cardiovascular risk factors.

(2) An applicant or a holder of a medical certificate shall submit a Cardiologist's report, if indicated.

(3) An applicant or a holder of a medical certificate shall submit the following results:

(a) an annual Full blood count;

(b) biochemical profile the following tests –,

(i) s-LDH;

(ii) Thyroid function test;

(iii) s-glucose; and

(iv) s-cholesterol (Lipogram).

(4) An applicant or a holder of a medical certificate shall submit a PET Scan where such an applicant or a holder of a medical certificate presents with abnormal physical findings, abnormal laboratory results or is symptomatic of Non-Hodgkins Lymphoma.

5. Restrictions

(1) An applicant or a holder of a medical certificate is to be assessed on a case-by-case basis and to operate in a Multicrew environment.

SCHEDULE 85: PROTOCOL ON HODGKINS LYMPHOMA

1. Applicability

(1) This protocol applies to an applicant or a holder of Class 1, 2, 3 and 4 medical certificates.

2. General

(1) An applicant or a holder of a medical certificate diagnosed with Hodgkin's Lymphoma undergoing therapy for Hodgkin's disease shall be declared medically unfit due to the risk of sudden incapacitation and must be referred to the Medical Assessor for medical consideration.

(2) An applicant or a holder of a medical certificate with an active Hodgkin's disease may present with long-term complications of treatment for Hodgkin's disease, including the development of acute Leukaemia and second malignancies of other types, radiation-related heart disease, pulmonary fibrosis, and hypothyroidism.

3. Initial Reports

(1) An applicant or a holder of a medical certificate shall submit a treating specialist Oncologist or Haematologist report commenting on past and present treatment.

(2) An applicant or a holder of a medical certificate shall submit an S-FBC& ESR, U&E and LFT.

(3) An applicant or a holder of a medical certificate shall submit a Chest X Ray, ECG and Lung Function Test.

(4) An applicant or a holder of a medical certificate shall be required to submit a comprehensive Cardiologist report if received chemotherapy or have undergone radiotherapy to the chest and cardiac tissues.

4. Aeromedical Considerations

(1) An applicant or a holder of a medical certificate shall submit an Oncologist or Haematologist's Report and may be considered for medical certification at least six (6) weeks after completion of radiotherapy.

(2) An applicant or a holder of a medical certificate treated with radiotherapy to the chest and cardiac tissue is required to submit a Cardiac or Pulmonologist evaluation shall be included in the assessment.

(3) Medical certification may be considered at least two (2) months after completion of chemotherapy, excluding anthracyclines.

(4) For an applicant or a holder who were treated with anthracyclines, medical certification may be considered at least six (6) months after completion of chemotherapy.

(5) An applicant or a holder of a medical certificate who has undergone chemotherapy shall undergo a cardiac evaluation.

(6) An applicant or a holder of a medical certificate shall have satisfactory haematological parameters Haemoglobin >12g/dl (male) or >11.5g/dl (female), Platelets >100,000/mm3, (or > 50,000 mm3 provided the trend is upwards and thrombocytopaenia is secondary to therapy and not the primary disease), White Cell Count (WCC) > 3,000/mm3 and Neutrophils >1,000/mm3.

(7) An applicant or a holder of a medical certificate shall have no continuing side-effects from chemotherapy treatment.

(8) An applicant or a holder of a medical certificate shall continue to be in clinical remission without symptoms of potential flight safety importance.

(9) An applicant or a holder of a medical certificate shall not have a history of central nervous system involvement.

5. Follow-up Report

(1) An applicant or a holder of a medical certificate shall submit a 6-monthly Full Blood Count (to include WCC and differential) and Biochemical Profile (to include Liver Function Tests) for five (5) years.

(2) An applicant or a holder of a medical certificate shall submit an annual report, except for the following cases:

(a) follicular lymphoma; B-cell CLL;

(b) Lymphoplasmocytic lymphoma;

(c) T-cell prolymphocytic leukaemia;

(d) T-cell granular lymphocytic leukaemia;

(e) Hairy cell leukaemia;

(f) MZ B-cell lymphoma (nodal splenic) considered incurable using current therapy.

(3) An applicant or a holder of a medical certificate shall be subjected to annual appraisals after frequent re-evaluation during a period of 10 years.

6. Restrictions

(1) An applicant or a holder of Class 1 and 2 medical certificates may be considered after six (6) months post treatment for a operational multicrew environment and may apply for the removal of restrictions after two (2) years.

(2) An applicant or a holder of Class 2 of a medical certificate may be considered after six (6) months post-treatment for an unrestricted medical certification.

(3) An applicant or a holder of a medical certificate shall be assessed on a case-by-case basis.

SCHEDULE 86: PROTOCOL ON HYPERTHYROIDISM

1. Applicability:

(1) This protocol is applicable to an applicant for or a holder of the following medical certificate:

(a) Class 1;

(b) Class 2;

(c) Class 3; and

(d) Class 4.

2. Medical Requirements

(1) An applicant or a holder of a Class 1 and 3 medical certificate with hyperthyroidism must be assessed as medically unfit.

(2) An appropriate test must be considered passed for an applicant or a holder of Class 1 and 3 medical certificates to be assessed and declared as medically fit.

(3) An appropriate test must be considered passed for an applicant or a holder of Class 2 and 4 medical certificate with thyroid disease once a stable euthyroid state is attained.

(4) An applicant or a licence holder shall be unfit upon diagnosis of Hyperthyroidism and any Class of medical certificate holder may be considered for medical assessment when they have been euthyroid for at least two (2) months or when a stable euthyroid state is attained.

(5) An applicant or a licence holder shall submit an Endocrinologist or a Physician's Report, recording the following information:

(a) Diagnosis;

(b) Medications that are acceptable in aviation within the last six (6) months and current medications, dosages and their side-effects, if any;

(c) Other treatment employed such as Radioiodine Ablation; and

(d) Development of any associated illness such as, Dysrhythmia, impaired memory or attention, irritability, or anxiety.

(6) An applicant or a licence holder shall submit an Ophthalmologist's Report to ensure satisfactory eye movements and no Diplopia, Heterophoria, Corneal damage or Optic Neuropathy, and such report shall include Clinical Activity Score (CAS) if Graves' Ophthalmopathy is present.

(7) An applicant or a licence holder shall submit the results of any investigations performed such as sonars or thyroid ultrasound report, echocardiogram, thyroid scan, FNA's, and biopsies.

(8) An applicant or a holder must submit current blood test results such as Thyroid Function Test, and thyroid antibodies or anti-TPO and TSH-receptor antibodies, as clinically indicated.

(9) An Electrocardiogram (ECG) shall be performed.

(10) An applicant or a licence holder who underwent thyroid surgery, whether total or partial, shall be assessed as unfit.

(11) A medical fitness assessment may be made for an applicant or a licence holder, following full surgical recovery and demonstrated stability of thyroid function.

(12) An applicant or a licence holder shall submit a Surgeon's Report confirming details of the surgery, recovery, ongoing treatment, and confirmation of euthyroid state.

(13) An applicant or a licence holder shall submit annual blood test results for Thyroid Function, confirming euthyroid state.

(14) An applicant or a licence holder who undergoes Radioactive Iodine Treatment will be assessed as unfit until all treatment is complete and an euthyroid state has been achieved.

(15) An applicant or a licence holder who received Radioactive Iodine Treatment shall submit a report from a Nuclear Medicine Physician that confirms details of treatment, follow-up, and confirmation of euthyroid state.

3. Follow-up Reports

(1) An applicant or a licence holder will be required to submit blood test results for Thyroid Function, such as Thyroid Stimulating Hormone (TSH) and Thyroxine (T4), annually on recertification examination.

SCHEDULE 87: PROTOCOL ON HYPOTHYROIDISM

1. Applicability

(1) This protocol is applicable to an applicant for or the holder of the following medical certificate:

(a) Class 1;
(b) Class 2;
(c) Class 3; and
(d) Class 4.

2. Medical Requirements

(1) An applicant or a holder of Class 1 and 3 medical certificate with Hypothyroidism must be assessed as medically unfit.

(2) An applicant or a holder of Class 2 and 4 medical certificate with hypothyroid disease may be assessed as fit once a stable euthyroid state is attained.

(3) An applicant or a licence holder shall be unfit upon diagnosis of Hypothyroidism and may be considered for medical assessment in any class when they have been in euthyroid for at least two (2) months or when a stable euthyroid state is attained.

(4) An applicant or a licence holder will be required to submit an Endocrinologist or a Physician's Report, containing the following information:

(a) Diagnosis;
(b) Presentation of condition, and treatment;
(c) Past medical history;

(d) Social and family history;

(e) Physical Exam: Attention to vitals, skin and hair, neurologic, ocular, neck, and cardiac system;

(f) Laboratory and X-ray data such as, Electrocardiogram (ECG), Full Blood Count (FBC), and a Complete Metabolic Panel, including a Thyroid ultrasound report, if obtained.

(g) Medications over the last six (6) months before the application and current medication dosage.

3. Follow-up Reports

(1) Endocrinologist's or Physician's Report; documenting continued clinical and chemical euthyroidism.

(2) Blood test results for Thyroid Stimulating Hormone (TSH) and Thyroxine (freeT4), annually at a minimum.

(3) Medications: Report any medication changes or dosage adjustments.

SCHEDULE 88: PROTOCOL FOR PRIMARY HYPERPARATHYROIDISM

1. Applicability

(1) This protocol is applicable to an applicant for or the holder of the following medical certificate:

(a) Class 1;

(b) Class 2;

(c) Class 3; and

(d) Class 4.

2. Initial Requirements

(1) An applicant or a licence holder shall be unfit upon diagnosis of Primary Hyperparathyroidism.

(2) An applicant or a licence holder will be required to submit an Endocrinologist's Report.

(3) The Endocrinologist's Report shall contain the following information:

(a) Name and dosage of medication;

(b) Side-effects, if any;

(c) Other systemic manifestations, such as cardiac, renal, or skeletal;

(d) Prognosis; and

(e) Results of tests performed such as Serum Phosphorus levels, Ionize and Calcium levels, Intact Parathyroid hormone (PTH) levels, and 25-OH-vitamin D levels.

(4) A Urologist's or Radiologist's report on renal stone imaging to identify presence of stones and renal function, with eGFR, 24-hour Urine Calcium, and Creatinine Excretion.

(5) If post-surgery, a Surgeon's Report that confirms the disease is controlled, stable, and there is no sequela with PTH. Calcium levels post-operatively indicating stable calcium levels.

3. Follow-up Report

(1) An applicant or a holder shall submit annual blood test results for intact Parathyroid Hormone (PTH), Ionized Calcium, and Phosphorus levels, and renal function, with eGFR, on recertification examination.

SCHEDULE 89: PROTOCOL FOR HYPOPARATHYROIDISM

1. Applicability

(1) This protocol applies to applicants, including UASP and Cabin Crew, holding the following certificate:

(a) Class 1;

(b) Class 2;

(c) Class 3, and

(d) Class 4

2. Initial Requirements

(1) An applicant or a licence holder shall be unfit upon diagnosis of Hypoparathyroidism.

(2) An applicant or a licence holder shall submit an Endocrinologist's Report with summary of the condition, medication, medication dosage, results of blood test, other tests performed, other systemic manifestations, the prognosis, and follow-up.

(3) An applicant or a licence holder shall submit blood test results for intact Parathyroid hormone (PTH), Magnesium, Phosphorus, Total Serum or Ionized Calcium, and 25-hydroxy Vitamin D.

(4) An Ophthalmologist's Report to exclude Cataracts or Keratoconjunctivitis, the report must include current medication dosage, and side-effects, , prognosis, and follow-up.

3. Follow-up Report

(1) Recertification Requirements: Blood test results for Parathyroid Hormone, Magnesium, Phosphorus, Total Serum or Ionized Calcium, and 25-hydroxy Vitamin D.

SCHEDULE 90: PROTOCOL FOR MALE HYPOGONADISM

1. Applicability

(1) This protocol is applicable to an applicant for or the holder of the following medical certificate:

(a) Class 1;

(b) Class 2;

(c) Class 3, and

(d) Class 4.

2. Initial Reports

(1) An applicant or a licence holder with Hypogonadism may be assessed as unfit at diagnosis.

(2) An applicant or a licence holder must not use medication that may render the applicant or licence holder unable to safely perform aviation duties.

(3) An applicant or a licence holder must have no organic, functional, or structural disease, defect, or limitation that would make them unable to safely exercise the privileges of their respective licences.

(4) An applicant or licence holder must be aware that the use of Sildenafil, Vardenafil, or Tadalafil has been associated with reported visual disturbances, which may have aeromedical implications.

(5) The treating specialist's Endocrinologist or Urologist's Report must contain the following details:

(a) Clinical history indicating how the condition was diagnosed;

(b) Past medical history, social and family history;

(c) History must include reproductive history, military/occupational history, vitals, body habitus, neck and waist circumference, weight, BMI, genito-urinary examination, including testicular size (cm or ml), body hair

distribution, presence or absence of Gynecomastia, and Prostate examination;

(d) Imaging data such as the MRI of the Pituitary if secondary (Hypogonadotropic) Hypogonadism;

(e) Karyotype, if primary hypogonadism is present to exclude Klinefelter Syndrome;

(f) Medications: Must be on acceptable list, current dosage and frequency, and side-effects, if any; and

(g) Blood Results for Testosterone, Follicle Stimulating Hormone (FSH), and Luteinizing Hormone (LH), Serum Prolactin, Iron Saturation, Ferritin, Haematocrit (HCT), and Prostate Specific Antigen (PSA) recorded at baseline and six (6) months post-treatment.

3. Follow-up Report

(1) An applicant or a licence holder shall submit an annual Endocrinologist's Report.

(2) An applicant or a licence holder shall submit an annual Serum Testosterone level, Haematocrit (HCT), and Prostate Specific Antigen (PSA).

(3) An applicant or a licence holder shall report any medication changes or dosage adjustments.

SCHEDULE 91: PROTOCOL FOR PROLACTINOMA

1. Applicability

(1) This protocol is applicable to an applicant for or the holder of the following medical certificate:

(a) Class 1;

(b) Class 2;

(c) Class 3, and

(d) Class 4.

2. Initial Reports

(1) An applicant or a licence holder with symptoms on first diagnosis must be assessed as medically unfit.

(2) A medical fitness assessment may be considered subject to a satisfactory Endocrinologist's Report and visual assessment after at least three (3) months of being stable on treatment, such as Cabergoline and other dopamine agonist therapy.

(3) For consideration, an applicant or a holder must submit the following reports:

(a) All Specialists' Reports such as Neurologist, Neurosurgeon, Ophthalmologist, and Endocrinologist and investigations relating to the condition such as Brain MRI/CT scan, and Blood results for Prolactin levels.

(b) A recent Endocrinologist's Report to include comments on risk of deterioration.

(c) Ophthalmologist's Report with visual fields test in the case of Pituitary Macroadenoma.

3. Recertification (Follow-up) Requirements

(1) Specialists' Reports such as –

(a) Endocrinologist;

(b) Neurologist or Neurosurgeon; and

(c) Ophthalmologist's Report including visual fields for macroprolactinomas.

(2) Prolactin levels"."

AMENDMENT OF SA-CATS 91

3. Document SA-CATS 91 is hereby amended by:

(a) the insertion after Technical Standard 91.01.16 of the following Technical Standard:

"**91.01.17 Specific approval**

1. In the absence of an OpSpec, the issuance of specific approvals shall be in accordance with the following layout:

SPECIFIC APPROVAL				
ISSUING AUTHORITY and CONTACT DETAILS[1]				
Issuing Authority[1] _____				
Address _____				
Signature:_____ Date[2]: _____ _____				
Telephone:_____ Email: _____ _____				
OWNER/OPERATOR				
Name[3]: _____				
Address: _____				
Telephone: _____ Email: _____				
Aircraft model[4] and registration marks:				
SPECIFIC APPROVAL	YES	NO[5]	DESCRIPTION	REMARKS
Low visibility operations				
Approach and landing	☐	☐	CAT[6]: _____ RVR: _____ m DH: _____ ft	

Take-off	☐	☐	RVR[7]: _____ m	
Operational credit(s)	☐	☐	[8]	
RVSM	☐	☐		
AR navigation specifications for PBN operations	☐	☐	[9]	
EFB	☐	☐	[10]	
Other[11]	☐	☐		

Notes. —

(a) Civil Aviation Authority name and contact details, including the country telephone code and email if available.

(b) Issuance date of the specific approval (dd-mm-yyyy) and signature of the Authority representative.

(c) Owner or operator's name and address.

(d) Insert the aeroplane make, model and series, or master series, if a series has been designated.

(e) List in this column the most permissive criteria for each specific approval (with appropriate criteria).

(f) Insert the applicable precision approach category (CAT II, III). Insert the minimum RVR in meters and decision height in feet. One line is used per listed approach category.

(g) Insert the approved minimum take-off RVR in meters, or the equivalent horizontal visibility if RVR is not used. One line per approval may be used if different approvals are granted.

(h) List the airborne capabilities such as automatic landing, HUD, EVS, SVS, CVS and associated operational credit granted.

(i) Performance-based navigation (PBN): one line is used for each PBN AR navigation specification approval (such as RNP AR APCH), with appropriate limitations listed in the "Description" column.

(j) List the EFB functions used for the safe operation of aeroplanes and any applicable limitations.

(k) Other specific approvals or data can be entered here, using one line (or one multi-line block) per approval (such as specific approach operations approval).".

(b) the substitution for Technical Standard 91.05.5 of the following Technical Standard:

"(1) ADS-B and Mode S 1090Mhz Extended Squitter Transponder is required within RVSM **[airspace]** from F290 to F410 and class A airspace **[shall be applicable]** as specified by the Director. **[from1 June 2025 (AIRAC)]**

(2) ADS-B and Mode S 1090Mhz Extended Squitter Transponder is required within **[class A and designated]** designated ADS-B class C airspace as specified by the Director. **[from 1 June 2025 (AIRAC)]**.".

(c) the deletion in Technical Standard 91.07.33 of Note 1, as follows:

[Note 1: TGM HUD and Equivalent Displays is available on the SACAA website]

(d) by the following insertion in Technical Standard 91.10.1 subsection (6) after paragraph (b) of the following paragraph:

"(c) The Authority shall establish procedures to ensure that an aeroplane operator is notified, within 14 days of publication by ICAO, of any programme eligibility changes, including any decision by ICAO to immediately revoke such eligibility.".

(e) the insertion in Technical Standard 91.10.2 section 1 after subsection (2) of the following subsection:

"(3) Further information on administration procedures and ICAO documents are listed as follows:

(a) CORSIA States for Chapter 3 State Pairs;
(b) ICAO CORSIA CO2 Estimation and Reporting Tool;
(c) CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes;
(d) CORSIA Approved Sustainability Certification Schemes;
(e) CORSIA Sustainability Criteria for CORSIA Eligible Fuels;
(f) CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels;
(g) CORSIA Methodology for Calculating Actual Life Cycle Emissions Values;
(h) CORSIA Eligible Emissions Units;
(i) CORSIA Emissions Unit Eligibility Criteria;
(j) CORSIA Central Registry (CCR): Information and Data for the Implementation of CORSIA;
(k) CORSIA Aeroplane Operator to State Attributions;
(l) CORSIA 2020 Emissions;
(m) CORSIA Annual Sector's Growth Factor (SGF); and
(n) CORSIA Central Registry (CCR): Information and Data for Transparency.

Note: *These ICAO documents are available on the ICAO CORSIA website and may only be amended by the Council.*

(4) Recommendation – If the aeroplane operator is close to the threshold of annual CO2 emissions, as defined in 2.1.1 and 2.1.3, from international flights, as defined in 1.1.2, it should consider engaging with the State to which it is attributed for guidance. Likewise, the **[state]** State should carry out oversight of the aeroplane operators attributed to it, and engage with any that it considers may be close to or above the threshold. The aeroplane operator with annual CO2 emissions below the threshold may choose to voluntarily engage with the State to which it is attributed. An aeroplane operator that was within the

scope of applicability the previous year but falls outside of scope in the given year, should notify the State to which it is attributed of this fact.

(f) the insertion in Technical Standard 91.10.2 section 1 subsection (1.1) after paragraph (a) of the following paragraph:

"(1.1) Method A

(b) For short term leasing where the previous or subsequent flight is performed by another aeroplane operator, then the necessary data shall be acquired from the third party. When this information is not available, the use of Block-on or Block-off data is allowed.";

(g) the insertion in Technical Standard 91.10.2 section 1 subsection (1.2) after paragraph (b) of the following paragraph:

"(1.2) Method B

(c) For short term leasing where the previous or subsequent flight is performed by another aeroplane operator, then the necessary data shall be acquired from the third party. When this information is not available, the use of Block-on or Block-off data is allowed.";

(h) the substitution in Technical Standard 91.10.2 section 1 subsection (1.5) for paragraph (b) (i) of the following paragraph:

"(b) Computation of average fuel burn ratios

(i) An aeroplane operator with distinguished fuel uplifts, shall compute, for each aeroplane type, the average fuel burn ratios by summing up all actual fuel uplifts determined by using the Fuel Use Monitoring Method Fuel Uplift from international flights, as defined in CAR 91 Subpart 10, divided by the sum off

all actual block hours from international flights for a given year, according to the following formula:

$$AFBR_{AO,AT} = \frac{\sum_N U_{AO,AT,N}}{\sum_N BH_{AO,AT,N}}$$

where:

$AFBR_{AO,AT}$ = Average fuel burn ratios for aeroplane operator (AO) and aeroplane type (AT) (in tonnes per hour),

$U_{AO,AT,N}$ = Fuel uplifted for the international or a domestic flight $_N$ for aeroplane operator (AO) and aeroplane type (AT) measured using the Fuel Use Monitoring Method Fuel Uplift (in tonnes); and

$BH_{AO,AT,N}$ = Block hour for the international and domestic flight $_N$ for aeroplane operator (AO) and aeroplane type (AT) (in hours).";

(i) the insertion in Technical Standard 91.10.7 after subsection (1) of the following subsection:

"(2) Recommendations:

(a) In cases where an aeroplane operator that meets the requirements in sections 2.1.1 and 2.1.3 after 1 January 2021 for the first time without qualifying as a new entrant falls into scope of 2.1 near the end of year y, or does not realise that it has fallen into scope until the beginning of year y+1, the aeroplane operator and the State shall determine how much, if any, flexibility is to meet the deadlines for submitting an EMP, State approval of the EMP and completion of the verification process.

(b) An aeroplane operator shall engage with their State well before falling into scope and include the development of the EMP as part of any planning process for situations such as mergers, splits, subsidiary development, expanding from domestic to international operations, or other change in

status or activity which may cause them to fall into the scope of applicability of this volume.

Note. *— Further guidance material on the Emissions Monitoring Plan and material changes is provided in the Environmental Technical Manual (Doc 9501), Volume IV – Procedures for demonstrating compliance with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).";*

(j) the substitution in Technical Standard 91.10.9 for Note 2 of the following Note:

"Note 2. – The emissions reduction from the use of a CORSIA eligible fuel are calculated as indicated in Part II, Chapter 3, 3.3 in the context of the calculation of the CO2 offsetting requirements in Chapter 3. These calculations use the approved life cycle emissions value ***[L_{SF}]*** *L_{CEF} for the CORSIA eligible fuel. Information on emissions reductions from using CORSIA eligible fuel is included in the aeroplane operators Emissions Report (Field 14 of Table A5-1 in Appendix 5), in accordance with Part II, Chapter 2, 2.3.1 and 2.3.3."*

(k) the substitution in Technical Standard 91.10.12 for subsection (3) of the following subsection:

"(3) list of verification bodies, accredited in each State, is included within the ICAO document, titled: "*CORSIA Central Registry (CCR): Information and Data for Transparency*", that is available on the ICAO CORSIA website. An aeroplane operator shall, before engaging the verification body, conduct a check to confirm the verification body's accreditation status for the purpose of this volume. Supporting resources for this purpose include the list of verification bodies accredited in States, included within the ICAO document entitled "CORSIA Central Registry (CCR): Information and Data for Transparency" that is available on the ICAO CORSIA website, as well as lists of accredited verification bodies with their corresponding CORSIA scopes provided through the accrediting national accreditation body.";

(l) the substitution in Technical Standard 91.10.15 for subsection (2) of the following subsection:

"(2) The amount of CO2 emissions, required to be offset by an aeroplane operator in a given year, from 1 January 2021 to 31 December 2035, prior to the consideration of the CORSIA eligible fuels, shall be calculated by the Authority, as follows:

$$ORy = OE * SGFy$$

Where:

ORy = aeroplane operator's offsetting requirements in the given year y;

OE = aeroplane operator's CO2 emissions covered by sub regulation (1) in the given year y or aeroplane operator's CO2 emissions covered by sub regulation (1) in **[2020]** 2019, depending upon the option selected by the Authority which will be applied to all aeroplane operators that have been attributed to it; and SGFy = Sector's Growth Factor.

Calculation of SGF for the pilot phase

Note 1. The Sector's Growth Factor applicable for a given year (SGFy) is provided in the ICAO document entitled "CORSIA Annual Sector's Growth Factor (SGF) that is available from the ICAO CORSIA website, and is calculated as

$$\frac{(SEy - SEB_{,Y})}{SE_y}$$

Where SE_y = Total Sectoral CO_2 emissions covered by 3.1 in the given year y and $SE_{B,y}$ = Total annual sectoral CO_2 emissions in **[average of 2019-2020]** 2019 covered by 3.1 in the given year y.

where SE_y = Total sectoral CO_2 emissions covered by 3.1 in the given year y and $SE_{B,y}$ = 85 per cent of total annual sectoral CO_2 emission in 2019 covered by 3.1 in the given year y.

Note 2. Sectoral emissions in a given year (SE_y) do not include the CO_2 emission from new entrants during their exception period, as defined in 3.1.2.

Note 3. As the States which form the "CORSIA States for Chapter 3 State Pairs", as defined by 3.1, change over time the total annual sectoral CO_2 emissions in **[average of 2019-2020]** 2019 covered by these State pairs in the given year y ($SE_{B,y}$) will be recalculated.

Note 4.— As the States which form the "CORSIA States for Chapter 3 State Pairs", as defined by 3.1, change over time, the 85 per cent of total annual sectoral CO_2 emissions in 2019 covered by these State pairs in the given year y ($SE_{B,y}$) will be recalculated.

(4) **[Previous weight values (first edition of Annex 16, Volume IV)**

Table 3.1. Overview of CO_2 offsetting requirements on a sectoral and individual basis

Year of applicability	$\%S_y$	$\%O_y$
1 January 2024 to 31 December 2029	100%	0%
1 January 2030 to 31 December 2032	(100% - $\%O_y$)	A specified percentage of at least 20%
1 January 2033 to 31 December 2035	(100% - $\%O_y$)	A specified percentage of at least 70%

Note.— The specified percentage (i.e., $\%O_y$) will be determined by the ICAO Assembly in 2028.

Updated weight values (second edition of Annex 16, Volume IV) :

Table 3.1. Overview of CO_2 offsetting requirements on a sectoral and individual basis

Year of applicability	$\%S_y$	$\%O_y$
1 January 2024 to 31 December 2029	100%	0%
1 January 2030 to 31 December 2032	100%	0%
1 January 2033 to 31 December 2035	85%	15%

(5) An aeroplane operator's Growth Factor for a given year (OGFy) shall be calculated by the Authority, in accordance with the CO2 emissions, from the aeroplane operator's verified Emissions Report, as follows:

$$OGF_Y = \frac{(OE_y - OE_{B,y})}{OE_y}$$

Where:

OE_y = Total aeroplane operator's CO2 emissions covered by sub regulation (1) in the given year y; and

$OE_{B,y}$ = 85 % of total annual aeroplane operator's CO2 emissions in **[average of 2019-2020]** 2019 covered by 3.1 in the given year y.

(6) When an aeroplane operator does not have CO_2 emissions covered by 3.1 in 2019, and does not qualify as a new entrant as defined in 3.1.2, the State shall use a value of 10 000 tonnes of CO_2 as the $OE_{B,y}$.".

(m) the substitution in Technical Standard 91.10.16 by the insertion after subsection (7) of the following subsection:

"(8) If the sum of the aeroplane operator's offsetting requirements in the three years of given compliance period $(OR_{1,C} + OR_{2,C} + OR_{3,C})$ is less than 3000 tonnes of CO_2, then the aeroplane operator has no offsetting requirements for the compliance period.

Note 1. — If the sum of the aeroplane operator's offsetting requirements in the three years of a given compliance period $(OR_{1,C} + OR_{2,C} + OR_{3,C})$ is less than 3000 tonnes of CO_2, the aeroplane operator may choose to voluntarily engage with the State to which it is attributed in order to offset such emissions.";

(n) the insertion after Technical Standards 91.10.16 of the following Technical Standards:

"**91.10.17 Cancelling of CORSIA Eligible Emissions Units**

(1) Recommendation:

(i) The Authority shall develop procedures to ensure aeroplane operators are notified of programme eligibility changes involving a decision by the ICAO to immediately revoke eligibility within 14 days of the publication of the changes by ICAO.".

Amendment of SA-CATS 92

4. Document SA-CATS 92 is hereby amended by:

(a) the substitution in Technical Standard 92.01.1 for the definition of "Exception" of following definition:

"'**Exception**' means a provision in **[the Technical Instructions]** Part 92 of the Regulations which excludes specific item of dangerous goods from the requirements normally applicable to that item.";

(b) the substitution for Technical Standard 92.01.2 of the following technical standard:

"92.01.2 PROHIBITION OF CONVEYANCE OF DANGEROUS GOODS

1. Dangerous goods forbidden for transport by air under any circumstances

Articles and substances that when presented for transport are liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under conditions normally encountered in transport shall not be carried in aircraft under any circumstance. These include those that are specifically identified by name or by generic description in Table 3-1 of the Technical Instructions or by the classification process of the Technical Instructions as being forbidden for conveyance by air under any circumstances.

2. Dangerous goods forbidden for transport by air under normal circumstances

Articles and substances that are specifically identified by name or by generic description in Table 3-1 of the Technical Instructions or by the classification process of the Technical Instructions as being forbidden for conveyance by air under normal circumstances but can be transported on aircraft based on a specific approval or authorisation granted through the commissioner's discretionary powers provided overall safety in transport is equivalent to the level of safety provided for in these standards and the Technical Instructions"."

AMENDMENT OF SA-CATS 93

5. Document SA-CATS 93 is hereby amended by the deletion of Note 1 preceding section 1 in Technical Standard 93.07.23,

[Note: TGM HUD and Equivalent Displays is available on the SACAA website]

Amendment of SA-CATS 101

6. Document SA-CATS 101 is hereby amended by the substitution for the following heading of Document SA-CATS 101:

" **[Remotely Piloted]** Unmanned Aircraft Systems".

Amendment of SA-CATS 121

7. Document SA-CATS 121 is hereby amended by the deletion of the Note preceding section 1 in Technical Standard 121.07.31, as follows:

[Note: TGM HUD and Equivalent Displays is available on the SACAA website]

AMENDMENT OF SA-CATS 135

8. Document SA-CATS 135 is hereby amended by the deletion of the Note preceding section 1 in Technical Standard 135.07.29, as follows:

[Note: TGM HUD and Equivalent Displays is available on the SACAA website]

Amendment of SA-CATS 139

9. Document SA-CATS 139 is hereby amended by–

(a) the insertion in Technical Standard 139.02.10 after section 1 of the following section:

"(1A) Aerodrome reference code

(a) Aerodrome reference code — code number and letter — which is selected for aerodrome planning purposes; shall be determined in accordance with the characteristics of the aeroplane for which an aerodrome facility is intended.

Table 1: Code element 1 of the aerodrome reference code

Code number	Aerodrome reference field length
1	Less than 800m
2	800m up to but not including 1200m
3	1200m up to but not including 1800m
4	1800m and over

Code element 2 of the aerodrome reference code

Code letter	Wingspan
A	Up to but not including 15m
B	15m up to but not including 24m
C	24m up to but not including 36m
D	36m up to but not including 52m
E	52m up to but not including 65m
F	65m up to but not including 80m

(b) the substitution in Technical Standard 139.02.10 for subsection (16) (a)(dd) of the following subsection:

"(dd) A strip including a non-instrument runway shall extend on each side of the centre line of the runway and its extended centre line throughout the length of the strip, to a distance of at least –

"(Aa) 75m where the code number is 4;

(Bb) 55m where the code number is 3;

(Cc) 40m where the code number is 2; and

(Dd) 30m where the code number is 1"."

(c) the substitution in Technical Standard 139.02.10 subsection (16)(a) for subparagraph (iv) of the following subparagraph:

"(cc) The surface of that portion of a strip that abuts a runway, shoulder or stopway, shall be **[flush]** flushed with the surface of the runway, shoulder or stopway–

(Aa) 75 m where the code number is 4;

(Bb) 55 m where the code number is 3;

(Cc) 40 m where the code number is 2; and

(Dd) 30 m where the code number is 1"."

(d) the substitution in Technical Standard 139.02.10 for Table 5 in subsection(28)(c) of the following Table:

Code letter	Distance between taxiway centre line and runway centre line (metres)								Taxiway centre line to taxiway centre line (metres)	Taxiway, other than aircraft stand taxilane, centre line to object (metres)	Aircraft stand taxilane centre line to aircraft stand taxilane centre line (metres)	Aircraft stand taxilane centre line to object (metres)
	Instrument runways Code number				Non-instrument runways Code number							
	1	2	3	4	1	2	3	4				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
A	77.5	77.5	-	-	37.5	47.5	-	-	23	15.5	19.5	12
B	82	82	152	-	42	52	**[87]** 67	-	32	20	28.5	16.5

C	88	88	158	158	48	58	**[93]** 73	93	44	26	40.5	22.5
D	-	-	166	166	-	-	**[101]** 81	101	63	37	59.5	33.5
E	-	-	172.5	172.5	-	-	**[107.5]** 87.5	107.5	76	43.5	72.5	40
F	-	-	180	180	-	-	**[115]** 95	115	91	51	87.5	47.5
Note 1 - The separation distances shown in columns (2) to (9) represent ordinary combinations of runways and taxiways. The basis for development of these distances is provided in the Aerodrome Design Manual (Doc 9157), Part 2.												
Note 2 - The distances in columns (2) to (9) do not guarantee sufficient clearance behind a holding aeroplane to permit the passing of another aeroplane on a parallel taxiway. See the Aerodrome Design Manual (Doc 9157), Part 2.												

(e) the substitution in Technical Standard 139.02.10 for a Table 6 in subsection (42) of the following Table:

Type of Runway	**Code Number**			
	1	**2**	**3**	**4**
Non-instrument and Take-off	30m	40m	**[75m]** 55m	75m
Non-precision approach	40m	40m	75m	75m
Precision approach category 1	60m	60m	90m	90m
Precision approach categories II and III	-	-	90m	90m
Take-off runways	30m	40m	55m	75m

(f) the substitution in Technical Standard 139.02.10 subsection (16)(d) for subparagraph (iv) of the following subparagraph:

"(d) The centre portion of a taxiway strip shall provide a graded area to a distance from the centre line of the taxiway of not less than that provided by the following –

(iv) **[18.50m]** 17m where the OMGWS is 9m up to but not including 15m, where the code letter is D;"

(g) the substitution in Technical Standard 139.02.10 for subsection (81) of the following subsection:

(a) A visual docking guidance system shall be provided when it is intended to indicate, by a visual aid, the precise positioning of an aircraft on an aircraft stand and other alternative means, such as marshaller, are not practicable.

(b) The accuracy of the system shall be adequate for the type of passenger boarding bridge and fixed aircraft servicing installations with which it is to be used.

(h) the substitution in Technical Standard 139.01.30 section 2 for subsection (1) for paragraph (h) of the of the following paragraph:

(h) Low-intensity obstacle lights on objects with limited mobility such as **[aero]**bridges shall be fixed red, and as a minimum be in accordance with the specifications for low-intensity obstacle lights, Type A. The intensity of the lights shall be sufficient to ensure conspicuity considering the intensity of the adjacent lights and the general levels of illumination against which they would normally be viewed.

(i) insertion after technical standard 139.02.12 of the following Technical Standard:

"139.02.13 Personnel Requirements

(1) The aerodrome operator shall ensure that the procedure for assessing the competency of personnel responsible for operating and maintaining an aerodrome shall outline –

(a) the minimum qualifications and experience to be met by such persons to perform their required duties;

(b) the training programme to be followed by such persons, which shall cover initial or induction, on-the-Job training (OJT), recurrent and specialised training.

(2) The training programme shall be translated into the training plan which shall be implemented and completed annually by personnel operating and maintaining an aerodrome.

(3) Evidence of minimum qualifications and training certificates shall be kept in each employee file.

(4) Other documents that shall be kept in the employees file shall include the following:

(a) Curriculum Vitae;

(b) Job Descriptions; and

(c) Proof of Certificates obtained.

(j) the deletion in Technical Standard 139.02.15 for subsection (1)(d) (ii)-(iv):

(k) the deletion in Technical Standard 139.02.15 for subsection (1)(e):

(l) the insertion in Technical Standard 139.02.23 after section 14 of the following section:

"15. Local runway safety programme

(1) A holder of an aerodrome licence shall establish a runway safety programme which comprises of the following:

(a) establishment of a runway safety team:

(i) An aerodrome operator shall establish a runway safety team comprised of but not limited to the following stakeholders:

(aa) Aerodrome operator;

(bb) air traffic services;

(cc) commercial air operator;

(dd) representatives of flight crew operating at the aerodrome; and

(ee) members from the general aviation community (if applicable).

(ii) The RST may also include:

(aa) the Authority as an observer;

(bb) technical experts of controller associations;

(cc) technical experts of pilots associations;

(dd) military operator if applicable, based on joint use of the aerodrome or other military roles;

(ee) support services such as catering, ground handling;

(ff) emergency response service providers;

(gg) subject matter experts such as but not limited to meteorologists, ornithologists, accident investigation authority (AIA) upon invitation; and

(hh) consideration may be given to periodically inviting members of other RSTs to promote coordination, learning and the sharing of information.

(iii) The terms of reference (ToRs) of the runway safety team (RST) shall include the following activities:

(aa) analyse the safety data relating to the number, type, and, if available, severity of runway incursions;

(bb) consider the outcome of investigation reports in order to identify local hot spots or problem areas at an aerodrome;

(cc) work as a cohesive team to better understand the operating difficulties of personnel working in other areas and recommending areas for improvement;

(dd) ensure that recommendations for the prevention of runway incursions are implemented;

(ee) identify any local problem areas and suggest improvements;

(ff) conduct runway safety awareness campaigns that focus on local issues such as producing and distributing local hot spot maps or other guidance material as considered necessary; and

(gg) regularly review the aerodrome and runway operations to proactively identify any situation that may contribute to runway safety risk.

(b) prevention of runway incursion, excursions and confusion

(i) New infrastructure and changes to existing infrastructure shall be designed so as to prevent runway incursions.

(ii) Changes to manoeuvring area practices and procedures, including planned works and work in progress, shall take account of runway safety and may require consultation with the RST.

(iii) An aerodrome operator shall designate taxiways in order to eliminate ground navigation errors and communication confusion.

(c) suspension or closure of runway operations

(i) Planned and unplanned events on an aerodrome can necessitate the temporary suspension of runway operations for a short period of time (counted in hours) or for a longer period of time (counted in days).

(ii) The reasons for suspending runway operations may include the following:

(aa) short-term removal of disabled aircraft or vehicle on runway;

(bb) significant foreign object debris (FOD) on runway;

(cc) significant wildlife strike remains on runway;

(dd) significant failure of aeronautical ground lighting or instrument landing system (ILS);

(ee) presence of ice, snow or flooding on runway;

(ff) aircraft incident such as tail scrape, aborted take-off or tire burst; and

(gg) full emergency or local standby.

(d) identification of hotspots

(i) If hotspots are identified, the hazard may be removed to mitigate and manage the risk by implementing the following mitigating strategies:

(aa) construction of new taxiways;

(bb) additional visual aids such assigns, markings, lights;

(cc) use of alternative routings;

(dd) identifying blind spots in the aerodrome control tower;

(ee) awareness campaigns; or

(ff) publishing the hot spot in the AIP.";

(m) the substitution in Technical Standard 139.01.10 section 1 for subsection (1) of the following subsection:

"(1) A non-aeronautical ground light near an aerodrome that might endanger the safety of aircraft shall be extinguished, screened, or otherwise modified to eliminate the source of danger.

(1A) An aerodrome licence holder shall establish a procedure to monitor and control non-aeronautical lights.";

(n) the substitution in Technical Standard 139.01.10 section 2 for subsection (1) of the following subsection:

"(1) A non-aeronautical ground light which by reason of its intensity, configuration or colour, might prevent or cause confusion in the clear interpretation of aeronautical ground lights shall be extinguished, screened or otherwise modified to eliminate such a possibility.

(2) When addressing the requirements in subsection (1) particular attention shall be directed to a non-aeronautical ground light visible from the air within the areas described hereunder:

(a) instrument runway – code number 4: within the areas before the threshold and beyond the end of the runway extending at least 4500m in length from the threshold and runway end and 750m either side of the extended runway centre line in width;

(b) instrument runway – code number 2 or 3), except that the length shall be at least 3 000m.

(c) instrument runway – code number 1; and non-instrument runway: within the approach area'.";

(o) the substitution in Technical Standard 139.02.10 section 1 subsection for (18) of the following subsection:

"(a) the design of aprons shall take into consideration criteria for safe ground handling, including –

(i) sufficient space between aircraft stands to enable personnel and equipment to move safely and efficiently;

(ii) adequate apron markings, apron signs and apron floodlighting;

(iii) adequate staging and storage areas for ground support equipment (GSE);

(iv) positioning of fixed ground services;

(v) storage areas for unit load devices (ULD);

(vi) adequate access and egress routes for fuel, GSE and emergency vehicles;

(vii) clearly delineated and visible access and egress routes for passengers;

(viii) new technologies such as electric charging points, autonomous vehicles;

(ix) avoidance of rear of aircraft stand service roads, wherever practicable; and

(x) appropriate protection for persons, equipment and infrastructure from jet blast and propeller wash.

(b) each part of an apron shall be capable of withstanding the traffic of an aircraft it is intended to serve with due consideration to a higher density of traffic and, as a result of slow moving or stationary aircraft;

(c) slopes on an apron, including those on an aircraft stand taxilane, shall be sufficient to prevent accumulation of water on the surface of the apron but shall be kept at a maximum slope 1%; and

(d) an aircraft stand shall provide the following minimum clearances between an aircraft entering or exiting the stand and any adjacent building, aircraft on another stand and other objects, as specified in Table 2A.

Table 9: aircraft stand minimum clearance distances

Code letter	Clearance

A	3m
B	3m
C	4.5m
D	7.5m
E	7.5m
F	7.5m

(e) When special circumstances so warrant, the clearances referred to in Table 9 may be reduced at a nose-in aircraft stand, where the code letter is D, E or F –

(i) between the terminal, including any fixed passenger boarding bridge,and the nose of an aircraft; and

(ii) over any portion of the stand provided with azimuth guidance by a visual docking guidance system.";

(p) the substitution in Technical Standard 139.02.10 section 1 for subsections 21 to 39 of the following subsections:

"(21) Landing Direction Indicator

(a) Where provided, a landing direction indicator shall be located in a conspicuous place in an aerodrome.

(b) The landing direction indicator shall be in the form of a "T".

(c) The colour of the landing "T" shall be either white or orange, the choice being dependent on the colour that contrasts best with the background against which the indicator will be viewed. Where required for use at night, the landing "T" shall either be illuminated or outlined by white lights. The shape and minimum dimensions of a landing "T" shall be as shown in Diagram 4.

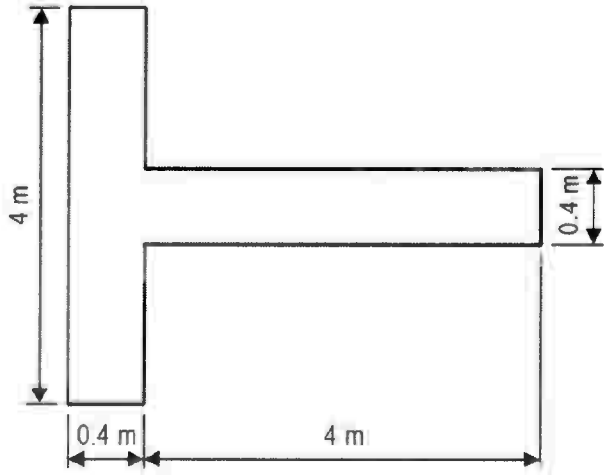

Diagram 3: Landing direction Indicator.

(22) Signalling Devices

(a) A signalling lamp shall be provided at a controlled aerodrome in the aerodrome control tower.

(b) A signalling lamp shall be capable of producing red, green and white signals, and of—

(i) being aimed manually at any target as required;

(ii) giving a signal in any one colour followed by a signal in either of the two other colours; and

(iii) transmitting a message in any one of the three colours by Morse Code up to a speed of at least four words per minute.

(c) The beam spread shall be not less than 1° nor greater than 3°, with negligible light beyond 3°. When the signalling lamp is intended for use in the daytime, the intensity of the coloured light shall be not less than 6 000cd.

(23) Markings

(a) Interruption of runway markings

(i) At an intersection of two or more runways, the markings of the more important runway, except for the runway side stripe marking, shall be displayed, and the markings of the other runway shall be interrupted.

(ii) The runway side stripe marking of the more important runway may be either continued across the intersection or interrupted.

(iii) The order of importance of runways for the display of runway markings shall be as follows:

(aa) 1st — precision approach runway;

(bb) 2nd — non-precision approach runway; and

(cc) 3rd — non-instrument runway.

(vi) At an intersection of a runway and taxiway the markings of the runway shall be displayed and the markings of the taxiway interrupted, except that runway side stripe markings may be interrupted.

(b) Colour and conspicuity

(i) Runway markings shall be white.

(ii) Taxiway markings, runway turn pad markings and aircraft stand markings shall be yellow.

(iii) Apron safety lines shall be of a conspicuous colour which shall contrast with that used for aircraft stand markings.

(iv) At an aerodrome where operations take place at night, pavement markings shall be made with reflective materials designed to enhance the visibility of the markings.

(c) Unpaved taxiways

(i) An unpaved taxiway shall be provided, so far as practicable, with the markings prescribed for paved taxiways.

(24) Runway designation marking

(a) A runway designation marking shall be provided at the thresholds of a paved runway.

(b) A runway designation marking shall be provided, so far as practicable, at the thresholds of an unpaved runway.

(c) A runway designation marking shall be located at a threshold as shown in Diagram 1 in subsection (56), as appropriate.

(d) A runway designation marking shall consist of a two-digit number and, on parallel runways shall be supplemented with a letter.

(e) On a single runway, dual parallel runways and triple parallel runways, the two-digit number shall be the whole number nearest to one-tenth of the magnetic North when viewed from the direction of approach.

(f) On four or more parallel runways, one set of adjacent runways shall be numbered to the nearest one-tenth magnetic azimuth and the other set of adjacent runways numbered to the next nearest one-tenth of the magnetic azimuth.

(g) As provided in paragraph (f), when a single digit number shall be preceded by a zero.

(h) In the case of parallel runways, each runway designation number shall be supplemented by a letter in the order shown from left to right when viewed from the direction of approach, as follows:

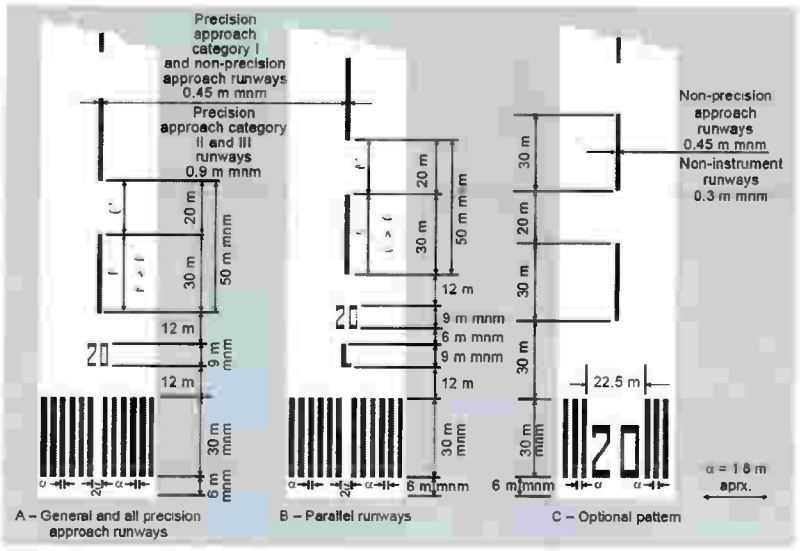

Diagram 4: Runway designation, centre line and threshold markings.

(aa) for two parallel runways: "L" "R";

(bb) for three parallel runways: "L" "C" "R";

(cc) for four parallel runways: "L" "R" "L" "R";

(dd) for five parallel runways: "L" "C" "R" "L" "R" or "L" "R" "L" "C" "R"; and

(ee) for six parallel runways: "L" "C" "R" "L" "C" "R".

(i) The numbers and letters shall be in the form and proportion shown in Diagram 4. The dimensions shall be not less than those shown in Diagram 5, but where the numbers are incorporated in the threshold marking, larger dimensions shall be used in order to fill adequately the gap between the stripes of the threshold marking.

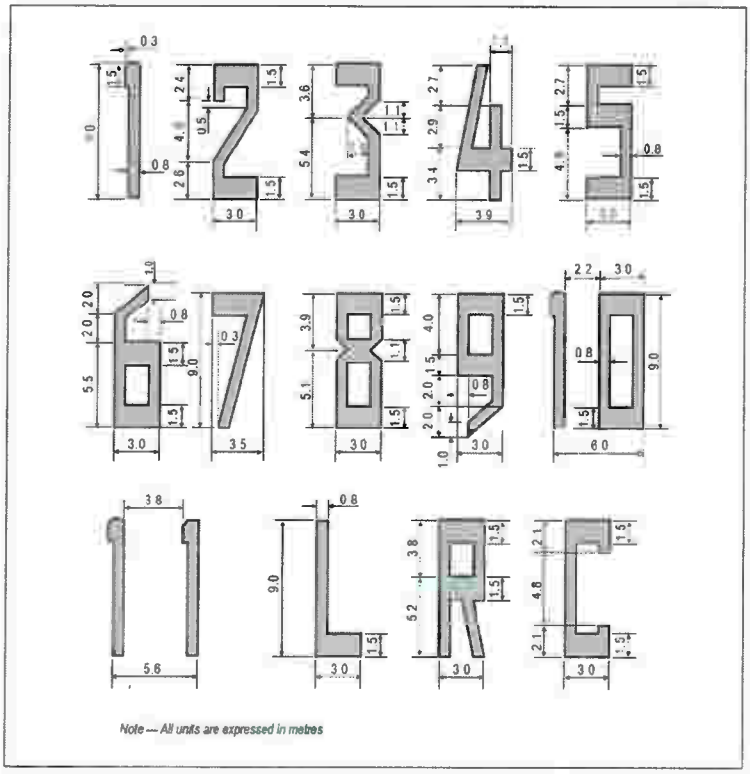

Diagram 5. Form and proportions of numbers and letters for runway designation markings

(25) Runway centre line marking

(a) A runway centre line marking shall be provided on a paved runway.

(b) A runway centre line marking shall be located along the centre line of the runway between the runway designation markings as shown in Diagram 6, except when interrupted in compliance with Technical Standard 139.02.10.

(c) A runway centre line marking shall consist of a line of uniformly spaced stripes and gaps. The length of a stripe plus a gap shall be not less than 50m or more than 75m. The length of each stripe shall be at least equal to the length of the gap or 30m, whichever is greater.

(d) The width of the stripes shall be not less than —

(aa) 0.90 m on precision approach category II and III runways;

(bb) 0.45m on non-precision approach runways where the code number is 3 or 4, and precision approach category I runways; and

(cc) 0.30m on non-precision approach runways where the code number is 1 or 2, and on non-instrument runways.

(26) Threshold Marking

(a) A threshold marking shall be provided at the threshold of a paved instrument runway, and of a paved non-instrument runway where the code number is 3 or 4 and the runway is intended for use by international commercial air transport.

(b) A threshold marking shall be provided at the threshold of a paved non-instrument runway where the code number is 3 or 4 and the runway is intended for use by other than international commercial air transport.

(c) A threshold marking shall be provided, so far as practicable, at the thresholds of an unpaved runway.

(d) The stripes of the threshold marking shall commence 6m from the threshold.

(e) A runway threshold marking shall consist of a pattern of longitudinal stripes of uniform dimensions disposed symmetrically about the centre line of a runway as shown in Diagram 5 (Illustration A) and (Illustration B) for a runway width of 45m. The number of stripes shall be in accordance with the runway width as follows:

Runway width	Number of stripes
18 m	14 m
23 m	16 m
30 m	18 m
45 m	12 m
60 m	16 m

Except that on non-precision approach and non-instrument runways 45m or greater in width, they may be as shown in Diagram 4 (Illustration C).

(f) The stripes shall extend laterally to within 3m of the edge of a runway or to a distance of 27m on either side of a runway centre line, whichever results in the smaller lateral distance.

(g) A runway designation marking that is placed within a threshold marking shall be a minimum of three stripes on each side of the centre line of the runway. Where a runway designation marking is placed above a threshold marking, the stripes shall be continued across the runway.

(h) The stripes shall be at least 30m long and approximately 1.80m wide with spacings of approximately 1.80m between them unless, where the stripes are continued across a runway, a double spacing shall be used to separate the two stripes nearest the centre line of the runway, and in the case where the designation marking is included within the threshold marking, this spacing shall be 22.5m.

(i) Transverse stripe

(aa) Where a runway threshold is displaced from the extremity of a runway or where the extremity of a runway is not square with the runway centre line, a transverse stripe, as shown in Diagram 4 (Illustration) shall be added to the threshold marking.

(bb) A transverse stripe shall be not less than 1.80m wide.

(j) Arrows

(i) Where a runway threshold is permanently displaced, arrows conforming to Diagram 6 (Illustration (B) shall be provided on the portion of the runway before the displaced threshold.

(ii) When a runway threshold is temporarily displaced from the normal position, it shall be marked as shown in Diagram 6 (Illustration A) or (Illustration B), and all markings prior to the displaced threshold shall be obscured except the runway centre line marking, which shall be converted to arrows.

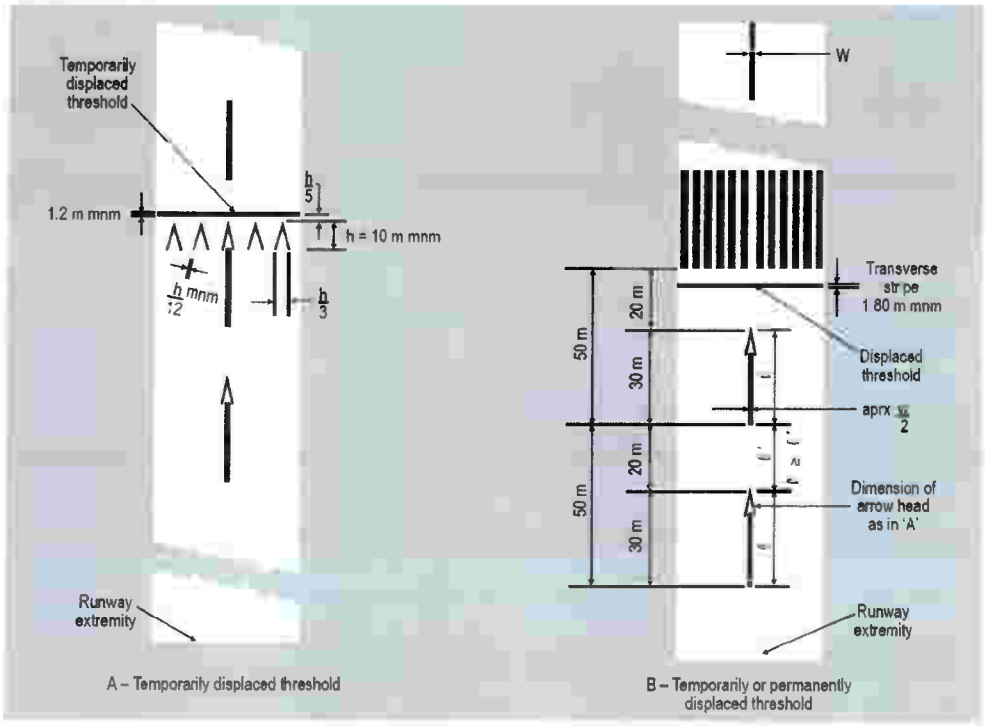

Diagram 6: Displaced threshold markings

(27) Aiming point marking

(a) An aiming point marking shall be provided at each approach end of a paved instrument runway where the code number is 2, 3 or 4.

(b) An aiming point marking shall be provided at each approach end of —

(i) a paved non-instrument runway where the code number is 3 or 4;

(ii) a paved instrument runway where the code number is 1 when additional conspicuity of the aiming point is desirable.

(c) The aiming point marking shall commence no closer to the threshold than the distance indicated in the appropriate column of Table 3, unless, on a runway equipped with a visual approach slope indicator system, the beginning of the marking shall be coincident with the visual approach slope origin.

(d) An aiming point marking shall consist of two conspicuous stripes. The dimensions of the stripes and the lateral spacing between their inner sides shall be in accordance with the provisions of the appropriate column of Table 8. Where a touchdown zone marking is provided, the lateral spacing between the markings shall be the same as that of the touchdown zone marking.

Landing distance available				
Location and dimensions (1)	Less than 800 m (2)	800 m up to but not including 1200 m (3)	1200 m up to but not including 2400 m (4)	2400 m and above (5)
Distance from threshold to beginning of marking	150 m	250 m	300 m	400 m
Length of stripe[a]	30 – 45 m	34 – 45 m	45 – 60 m	45 – 60 m
Width of stripe	4 m	6 m	6 - 10 m[b]	6 - 10 m[b]
Lateral spacing between inner sides of stripes	6 m[c]	9 m[c]	18 – 22.5 m	18 – 22.5 m
a. The greater dimensions of the specified ranges are intended to be used where increased conspicuity is required.				

b. The lateral spacing may be varied within these limits to minimize the contamination of the marking by rubber deposits. c. These figures were deduced by reference to the outer main gear wheel span, which is element 2 of the aerodrome reference code in Chapter 1.

Table 3. Location and dimensions of aiming point marking

(28) Touchdown zone marking

(a) A touchdown zone marking shall be provided in the touchdown zone of a paved precision approach runway where the code number is 2, 3 or 4.

(b) A touchdown zone marking shall be provided in the touchdown zone of a paved non-precision approach or non-instrument runway where the code number is 3 or 4 and additional conspicuity of the touchdown zone is desirable.

(c) A touchdown zone marking shall consist of pairs of rectangular markings symmetrically disposed about the runway centre line with the number of such pairs related to the landing distance available, and, where the marking is to be displayed at both the approach directions of a runway, the distance between the thresholds, shall be as follows:

Landing distance available or the distance between thresholds	Pair(s) of markings
less than 900 m	1
900 m up to but not including 1 200 m	2
1 200 m up to but not including 1 500 m	3
1 500 m up to but not including 2 400 m	4
2 400 m or more	6

(d) A touchdown zone marking shall conform to either of the two patterns shown in Diagram 7. For the pattern shown in Diagram 7 (Illustration A), the markings shall not be less than 22.5m long and 3m wide.

(e) For the pattern shown in Diagram (B), each stripe of each marking shall not be less than 22.5m long and 1.8m wide with a spacing of 1.5m between adjacent stripes.

(f) The lateral spacing between the inner sides of the rectangles shall be equal to that of the aiming point marking, where provided. Where an aiming point marking is not provided, the lateral spacing between the inner sides of the rectangles shall correspond to the lateral spacing specified for the aiming point marking in Table 8 columns 2, 3, 4 or 5.

(g) The pairs of markings shall be provided at longitudinal spacings of 150m beginning from the threshold, unless that pairs of touchdown zone markings coincident with or located within 50m of an aiming point marking shall be deleted from the pattern.

(h) On a non-precision approach runway where the code number is 2, an additional pair of touchdown zone marking stripes shall be provided 150m beyond the beginning of the aiming point marking.

(29) Runway side stripe marking

(a) A runway side stripe marking shall be provided between the thresholds of a paved runway where there is a lack of contrast between the runway edges and the shoulders or the surrounding terrain.

(b) A runway side stripe marking shall be provided on a precision approach runway irrespective of the contrast between the runway edges and the shoulders or the surrounding terrain.

(c) A runway side stripe marking shall consist of two stripes, one placed along each edge of the runway with the outer edge of each stripe approximately on the edge of the runway, unless, where the runway is greater than 60m in width, the stripes shall be located 30m from the runway centre line.

(d) Where a runway turn pad is provided, the runway side stripe marking shall be continued between the runway and the runway turn pad.

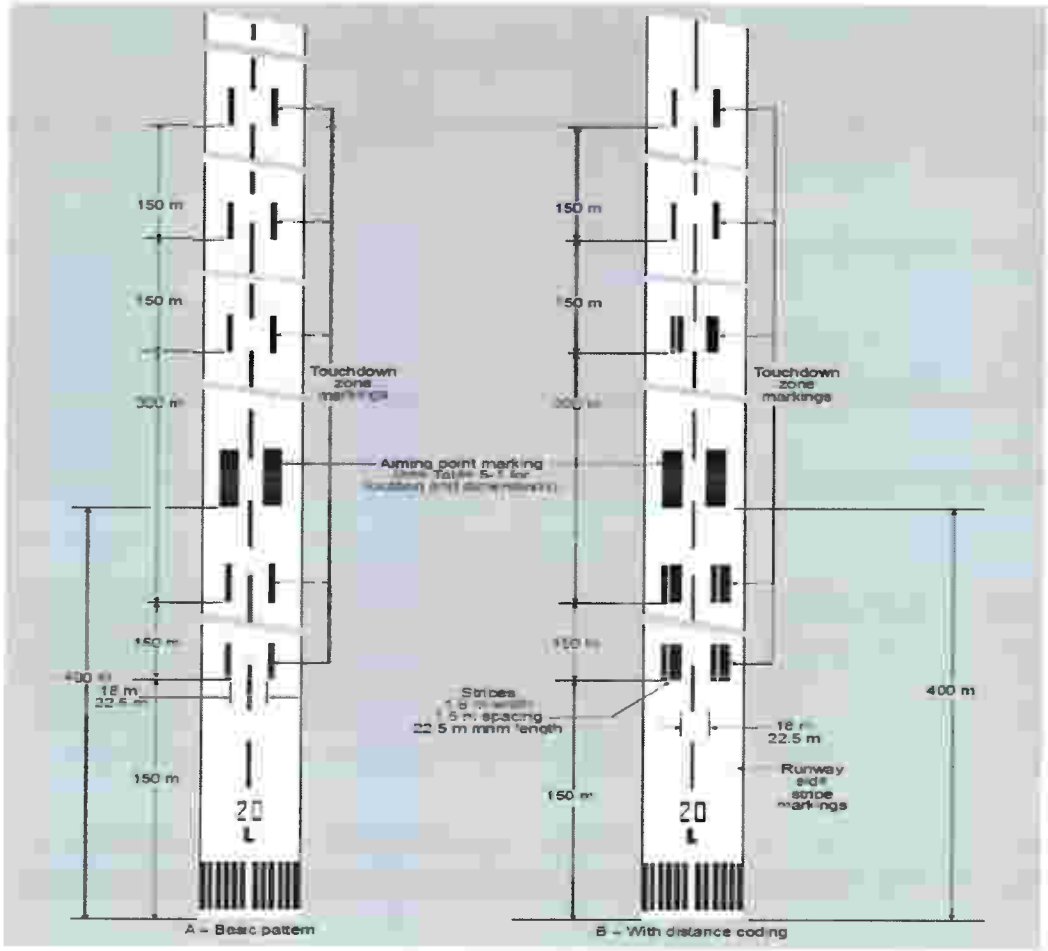

Diagram 7: Aiming point and touchdown zone markings
(illustrated for a runway with a length of 2 400m or more)

(e) A runway side stripe shall have an overall width of at least 0.9m on runways 30m or more in width and at least 0.45m on narrower runways.

(30) Taxiway centre line marking

(a) A taxiway centre line marking shall be provided on a paved taxiway, de-icing oranti-icing facility and apron where the code number is 3 or 4 in such a way as to provide continuous guidance between the runway centre line and aircraft stands.

(b) A taxiway centre line marking shall be provided on a paved taxiway, de-icing oranti-icing facility and apron where the code number is 1 or 2 in such a way as to provide continuous guidance between the runway centre line and aircraft stands.

(c) A taxiway centre line marking shall be provided on a paved runway when the runway is part of a standard taxi route and —

(i) there is no runway centre line marking; or

(ii) where the taxiway centre line is not coincident with the runway centre line.

(d) Where it is necessary to denote the proximity of a runway-holding position, an enhanced taxiway centre line marking shall be provided.

(e) Where provided, an enhanced taxiway centre line marking shall be installed at each taxiway or runway intersection.

(f) On a straight section of a taxiway, the taxiway centre line marking shall be located along the taxiway centre line. On a taxiway curve, the marking shall continue from the straight portion of the taxiway at a constant distance from the outside edge of the curve.

(g) At an intersection of a taxiway with a runway where the taxiway serves as an exit from the runway, the taxiway centre line marking shall be curved into the runway centre line marking as shown in Diagram 7.

(h) A taxiway centre line marking shall be extended parallel to the runway centre line marking for a distance of at least 60m beyond the point of tangency where the code number is 3 or 4, and for a distance of at least 30m where the code number is 1 or 2.

(i) Where a taxiway centre line marking is provided on a runway in accordance with paragraph (c), the marking shall be located on the centre line of the designated taxiway.

(j) Where provided —

(i) An enhanced taxiway centre line marking shall extend from the runway-holding position Pattern A, as defined in Diagram 8; Taxiway markings, to a distance of up to 47m in the direction of travel away from the runway. See Diagram 8 (Illustration a).

(ii) If an enhanced taxiway centre line marking intersects another runway-holding position marking such as for a precision approach category II or III runway that is located within 47m of the first runway-holding position marking, an enhanced

taxiway centre line marking shall be interrupted 0.9m prior to and after the intersected runway-holding position marking.

(iii) An enhanced taxiway centre line marking shall continue beyond the intersected runway-holding position marking for at least three dashed line segments or 47m from start to finish, whichever is greater. See Diagram 8 (Illustration b).

(iv) If an enhanced taxiway centre line marking continues through a taxiway or taxiway intersection that is located within 47m of the runway-holding position marking, an enhanced taxiway centre line marking shall be interrupted 1.5m prior to and after the point where the intersected taxiway centre line crosses the enhanced taxiway centre line.

(v) An enhanced taxiway centre line marking shall continue beyond the taxiway or taxiway intersection for at least three dashed line segments or 47m from start to finish, whichever is greater. See Diagram 8 (Illustration c).

(vi) Where two taxiway centre lines converge at or before the runway-holding position marking, the inner dashed line shall not be less than 3m in length. See Diagram 8 (Illustration d).

(vii) Where there are two opposing runway-holding position markings and the distance between the markings is less than 94m, the enhanced taxiway centre line markings shall extend over this entire distance.

(viii) An enhanced taxiway centre line markings shall not extend beyond either runway-holding position marking. See Diagram 8 (Illustration e).

(ix) A taxiway centre line marking shall be at least 15cm in width and continuous in length unless where it intersects with a runway-holding position marking or an intermediate holding position marking, as shown in Diagram 7.

(x) Enhanced taxiway centre line marking shall be as shown in Diagram 7.

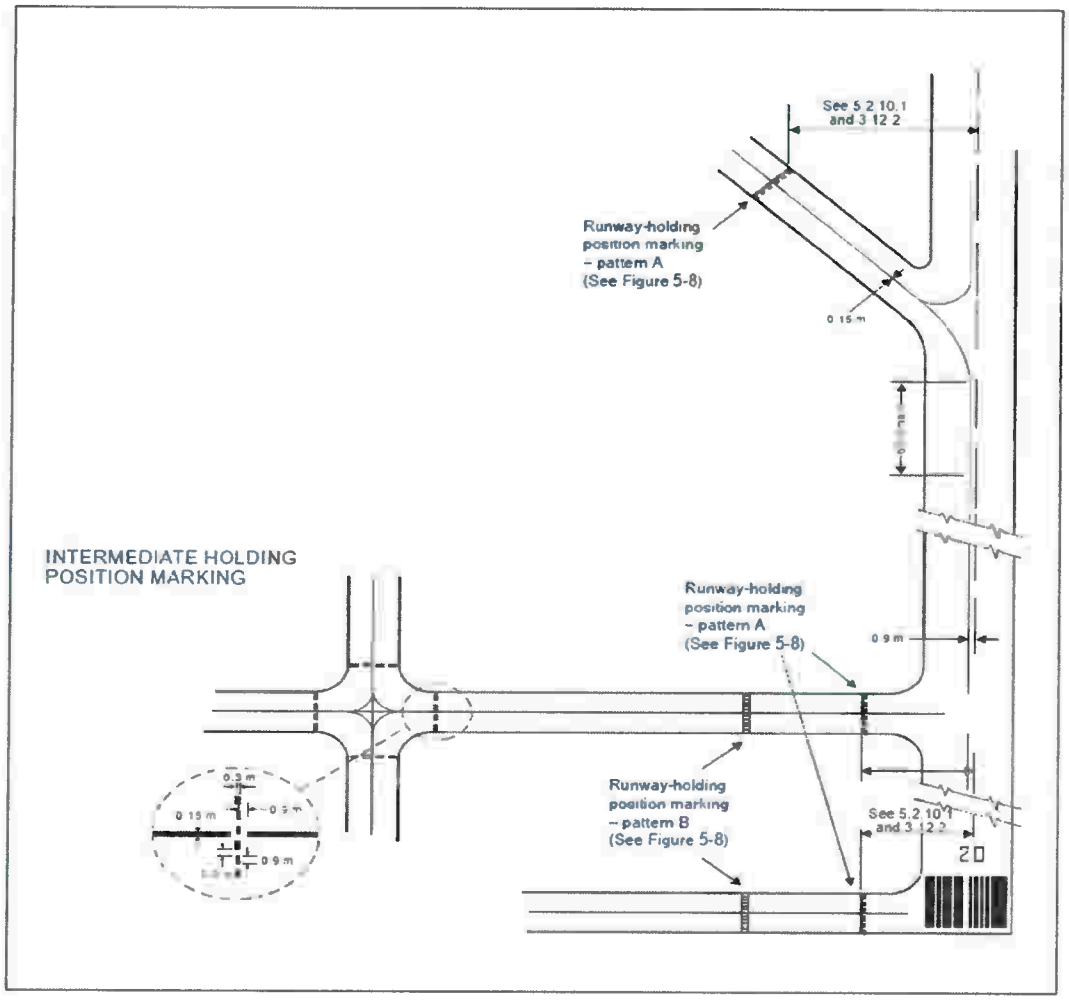

Diagram 8: Taxiway markings

(shown with basic runway markings)

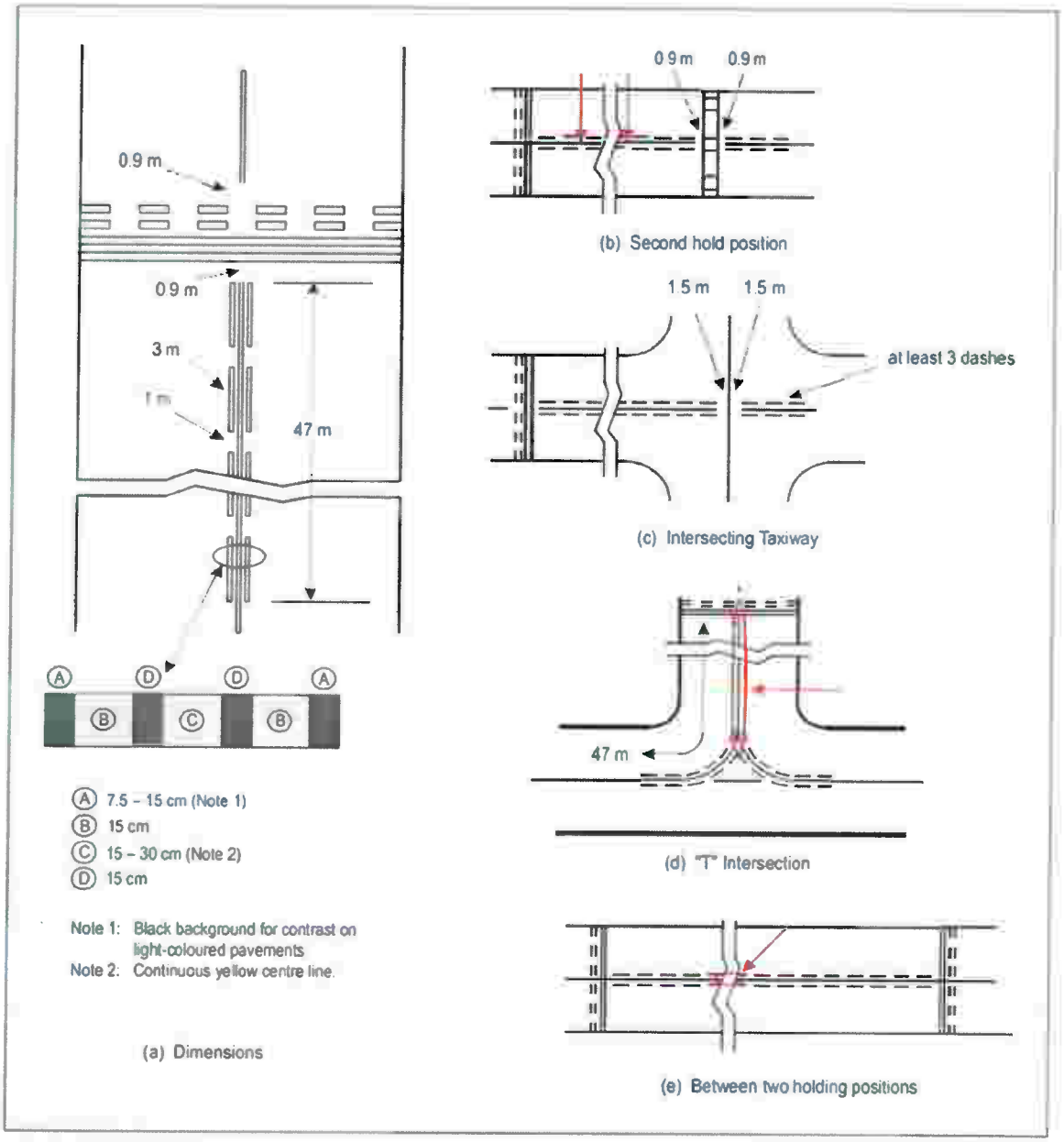

Diagram 9: Enhanced taxiway centre line marking

(31) Runway turn pad marking

(a) Where a runway turn pad is provided, a runway turn pad marking shall be provided for continuous guidance to enable an aeroplane to complete a 180-degree turn and align with the runway centre line.

(b) The runway turn pad marking shall be curved from the runway centre line into the turn pad. The radius of the curve shall be compatible with the manoeuvring capability and normal taxiing speeds of the aeroplanes for which the runway turn pad is intended.

(c) The intersection angle of the runway turn pad marking with the runway centre line shall not be greater than 30 degrees.

(d) The runway turn pad marking shall be extended parallel to the runway centre line marking for a distance of at least 60m beyond the point of tangency where the code number is 3 or 4, and for a distance of at least 30m where the code number is 1 or 2.

(e) A runway turn pad marking shall guide the aeroplane in such a way as to allow a straight portion of taxiing before the point where a 180-degree turn is to be made. The straight portion of the runway turn pad marking shall be parallel to the outer edge of the runway turn pad.

(f) The design of the curve allowing the aeroplane to negotiate a 180-degree turn shall be based on a nose wheel steering angle not exceeding 45 degrees.

(g) The design of the turn pad marking shall be such that when the cockpit of the aeroplane remains over the runway turn pad marking, the clearance distance between any wheel of the aeroplane landing gear and the edge of the runway turn pad shall be not less than those specified in Table 3.

(h) A runway turn pad marking shall be at least 15 cm in width and continuous in length.

(32) Runway-holding position marking

(a) A runway-holding position marking shall be displayed along a runway-holding position.

(b) At an intersection of a taxiway and a non-instrument, non-precision approach or take-off runway, the runway holding position marking shall be as shown in Diagram 10, pattern A.

(c) Where a single runway-holding position is provided at an intersection of a taxiway and a precision approach category I, II or III runway, the runway-holding position marking shall be as shown in Diagram 7, pattern A.

(d) Where two or three runway-holding positions are provided at such an intersection, the runway-holding position marking closest to the runway shall be as shown in Diagram 7, pattern A, and the markings farther from the runway shall be as shown in Diagram 7, pattern B.

(e) The runway-holding position marking displayed at a runway-holding position established in accordance with technical standard 139.02.10 as shown in Diagram 7, pattern A.

(f) Until 26 November 2026, the dimensions of runway-holding position markings shall be as shown in Diagram 12, pattern A1, A2 or pattern B1, B2, as appropriate.

(g) As of 26 November 2026, the dimensions of runway-holding position markings shall be as shown in Diagram 9, pattern A2 or pattern B2, as appropriate.

(h) Where increased conspicuity of the runway-holding position is required, the dimensions of the runway-holding position marking shall be as shown in Diagram 9, pattern A2 or pattern B2, as appropriate.

(i) Where a pattern B runway-holding position marking is located on an area where it would exceed 60m in length, the term "CAT II" or "CAT III" as appropriate, shall be marked on the surface at the ends of the runway-holding position marking and at equal intervals of 45m maximum between successive markings.

(j) The letters shall be not less than 1.8m high and shall be placed not more than 0.9m beyond the holding position marking.

(k) The runway-holding position marking displayed at a runway or runway intersection shall be perpendicular to the centre line of the runway forming part of the standard taxi-route. The pattern of the marking shall be as shown in Diagram 9, pattern A2.

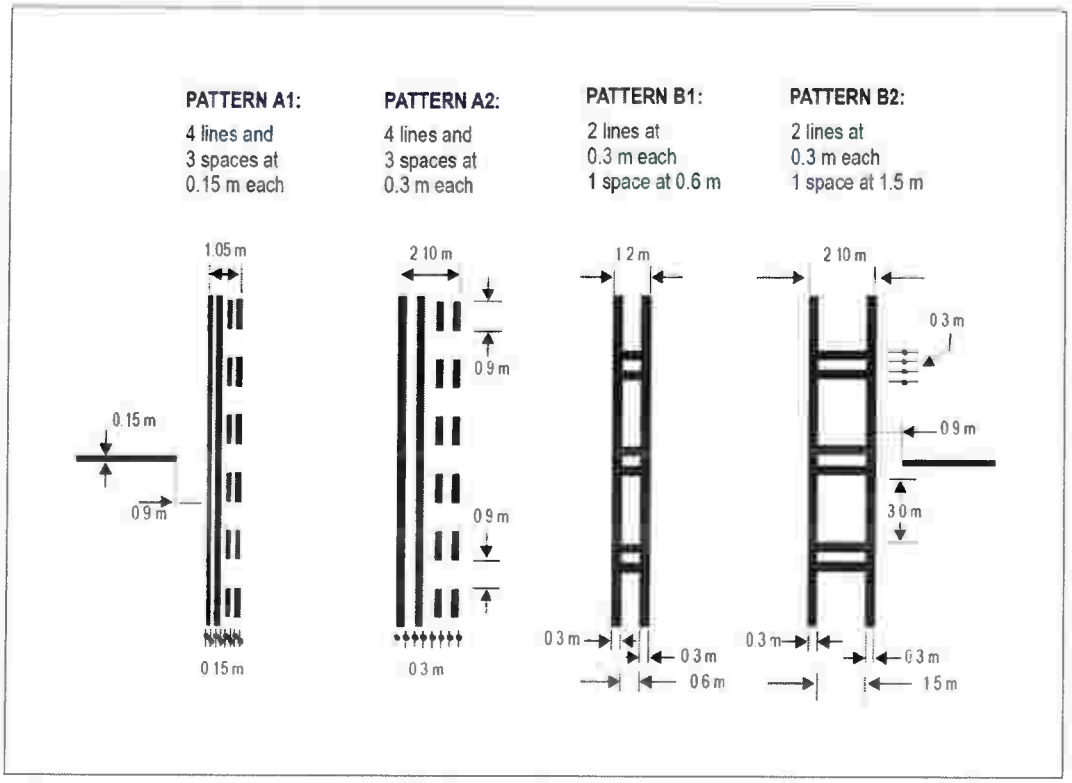

Diagram 9. Runway-holding position markings

(33) Intermediate holding position marking

(a) An intermediate holding position marking shall be displayed along an intermediate holding position.

(b) An intermediate holding position marking shall be displayed at the exit boundary of a remote de-icing or anti-icing facility adjoining a taxiway.

(c) Where an intermediate holding position marking is displayed at an intersection of two paved taxiways, it shall be located across the taxiway at a sufficient distance from the near edge of the intersecting taxiway to ensure safe clearance between taxiing aircraft. It shall be coincident with a stop bar or intermediate holding position lights, where provided.

(d) The distance between an intermediate holding position marking at the exit boundary of a remote de-icing oranti-icing facility and the centre line of the adjoining taxiway shall not be less than the dimension specified in Table 6, column 11.

(e) An intermediate holding position marking shall consist of a single broken line as shown in Diagram 7.

(34) VOR aerodrome checkpoint marking

(a) When a VOR aerodrome checkpoint is established, it shall be indicated by a VOR aerodrome checkpoint marking and sign.

(b) A VOR aerodrome checkpoint marking shall be centred on the spot at which an aircraft is to be parked to receive the correct VOR signal.

(c) A VOR aerodrome checkpoint marking shall consist of a circle 6m in diameter and have a line width of 15 cm (see Diagram 10 (Illustration A).

(d) When it is preferable for an aircraft to be aligned in a specific direction, a line shall be provided that passes through the centre of the circle on the desired azimuth. The line shall extend 6m outside the circle in the desired direction of heading and terminate in an arrowhead. The width of the line shall be 15 cm (see Diagram 10Illustration B).

(e) A VOR aerodrome checkpoint marking shall preferably be white in colour but shall differ from the colour used for the taxiway markings.

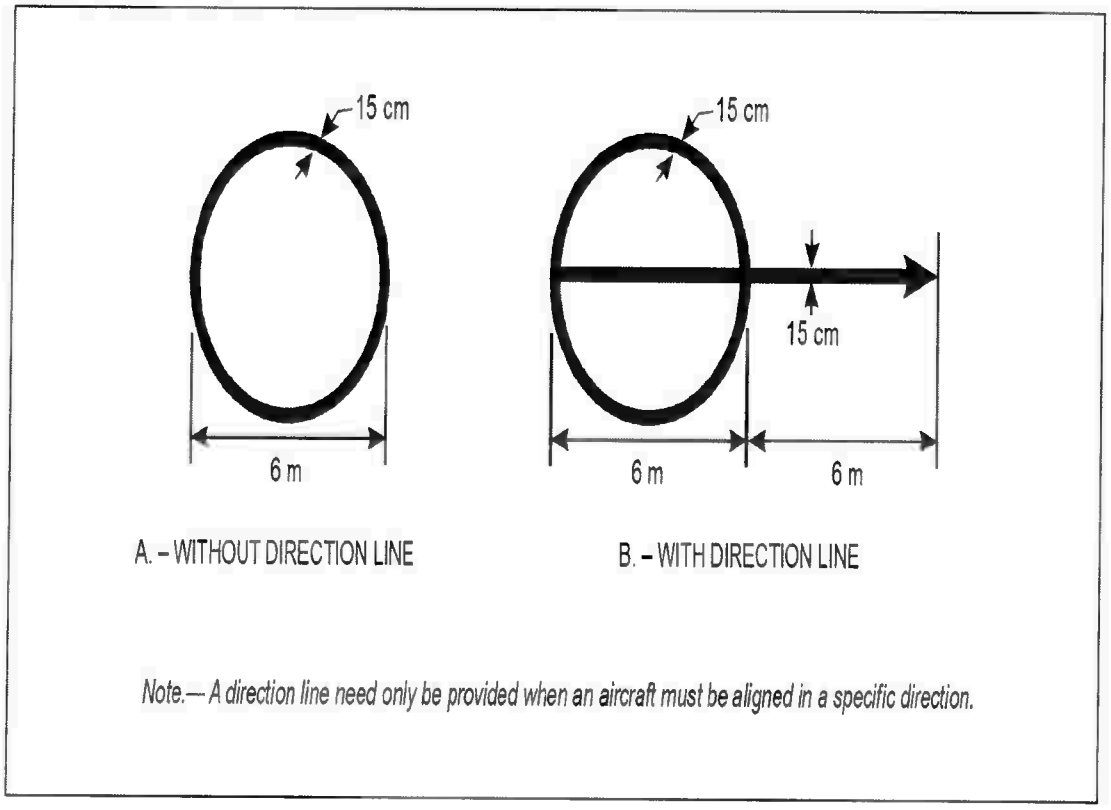

Diagram 10. VOR aerodrome checkpoint marking.

(35) Aircraft stand marking

(a) Aircraft stand markings shall be provided for designated parking positions on a paved apron and on a de-icing oranti-icing facility.

(b) Aircraft stand markings on a paved apron and on a de-icing oranti-icing facility shall be located so as to provide the clearances specified in technical standard 139.02.10 and in Technical Standard 139.02.10, respectively, when the nose wheel follows the stand marking.

(c) Aircraft stand markings shall include elements such as stand identification, lead-in line, turn bar, turning line, alignment bar, stop line and lead-out line, as are required by the parking configuration and to complement other parking aids.

(d) An aircraft stand identification such as a letter or number shall be included in the lead-in line a short distance after the beginning of the lead-in line. The height of the

identification shall be adequate to be readable from the cockpit of an aircraft using the stand.

(e) Where two sets of aircraft stand markings are superimposed on each other in order to permit more flexible use of the apron and it is difficult to identify which stand marking shall be followed, or safety would be impaired if the wrong marking was followed, then identification of the aircraft for which each set of markings is intended shall be added to the stand dentification.

(f) Lead-in, turning and lead-out lines shall normally be continuous in length and have a width of not less than 15 cm. Where one or more sets of stand markings are superimposed on a stand marking, the lines shall be continuous for the most demanding aircraft and broken for other aircraft.

(g) The curved portions of lead-in, turning and lead-out lines shall have radii appropriate to the most demanding aircraft type for which the markings are intended.

(h) Where it is intended that an aircraft proceed in one direction only, arrows pointing in the direction to be followed shall be added as part of the lead-in and lead-out lines.

(i) A turn bar shall be located at right angles to the lead-in line, abeam the left pilot position at the point of initiation of any intended turn.

(j) A turn bar shall have a length and width of not less than 6m and 15cm, respectively, and include an arrowhead to indicate the direction of turn.

(k) If more than one turn bar or stop line is required, they shall be coded.

(l) An alignment bar shall be placed to be coincident with the extended centre line of the aircraft in the specified parking position and visible to the pilot during the final part of the parking manoeuvre. It shall have a width of not less than 15cm.

(m) A stop line shall be located at right angles to the alignment bar, abeam the left pilot position at the intended point of stop, and it shall have a length and width of not less than 6m and 15cm, respectively.

(36) Apron safety lines

(a) Apron safety lines shall be provided on a paved apron as required by the parking configurations and ground facilities.

(b) Apron safety lines shall be located to define the areas intended for use by ground vehicles and other aircraft servicing equipment to provide safe separation from aircraft.

(c) Apron safety lines shall include such elements as wing tip clearance lines and service road boundary lines as required by the parking configurations and ground facilities.

(d) An apron safety line shall be continuous in length and at least 10cm in width.

(37) Road-holding position marking

(a) A road-holding position marking shall be provided at all road entrances to a runway.

(b) The road-holding position marking shall be located across the road at the holding position.

(c) The road-holding position marking shall be in accordance with the local road traffic regulations.

(38) Mandatory instruction marking

(a) Where it is impracticable to install a mandatory instruction sign in accordance with Technical Standard 139.02.10 a mandatory instruction marking shall be provided on the surface of the pavement.

(b) Where operationally required, such as on taxiways exceeding 60m in width, or to assist in the prevention of a runway incursion, a mandatory instruction sign shall be supplemented by a mandatory instruction marking.

(c) The mandatory instruction marking on taxiways where the code letter is A, B, C or D shall be located across the taxiway equally placed about the taxiway centre line and on the holding side of the runway-holding position marking, as shown in Diagram 11 (Illustration A).

(d) The distance between the nearest edge of the marking and the runway-holding position marking or the taxiway centre line marking shall be not less than 1m.

(e) The mandatory instruction marking on taxiways where the code letter is E or F shall be located on both sides of the taxiway centre line marking and on the holding side of the runway-holding position marking as shown, in Diagram 11 (Illustration B).

(f) The distance between the nearest edge of the marking and the runway-holding position marking or the taxiway centre line marking shall be not less than 1m.

(g) Unless operationally required, a mandatory instruction marking shall not be located on a runway.

(h) A mandatory instruction marking shall consist of an inscription in white on a red background. Except for a NO ENTRY marking, the inscription shall provide information identical to that of the associated mandatory instruction sign.

(i) A NO ENTRY marking shall be in white to read as "NO ENTRY" on a red background. Where there is insufficient contrast between the marking and the pavement surface, the mandatory instruction marking shall include an appropriate border, preferably white or black.

(j) The character height shall be 4m for inscriptions where the code letter is C, D, E or F, and 2m where the code letter is A or B.

(k) The background shall be rectangular and extend a minimum of 0.5m laterally and vertically beyond the extremities of the inscription.

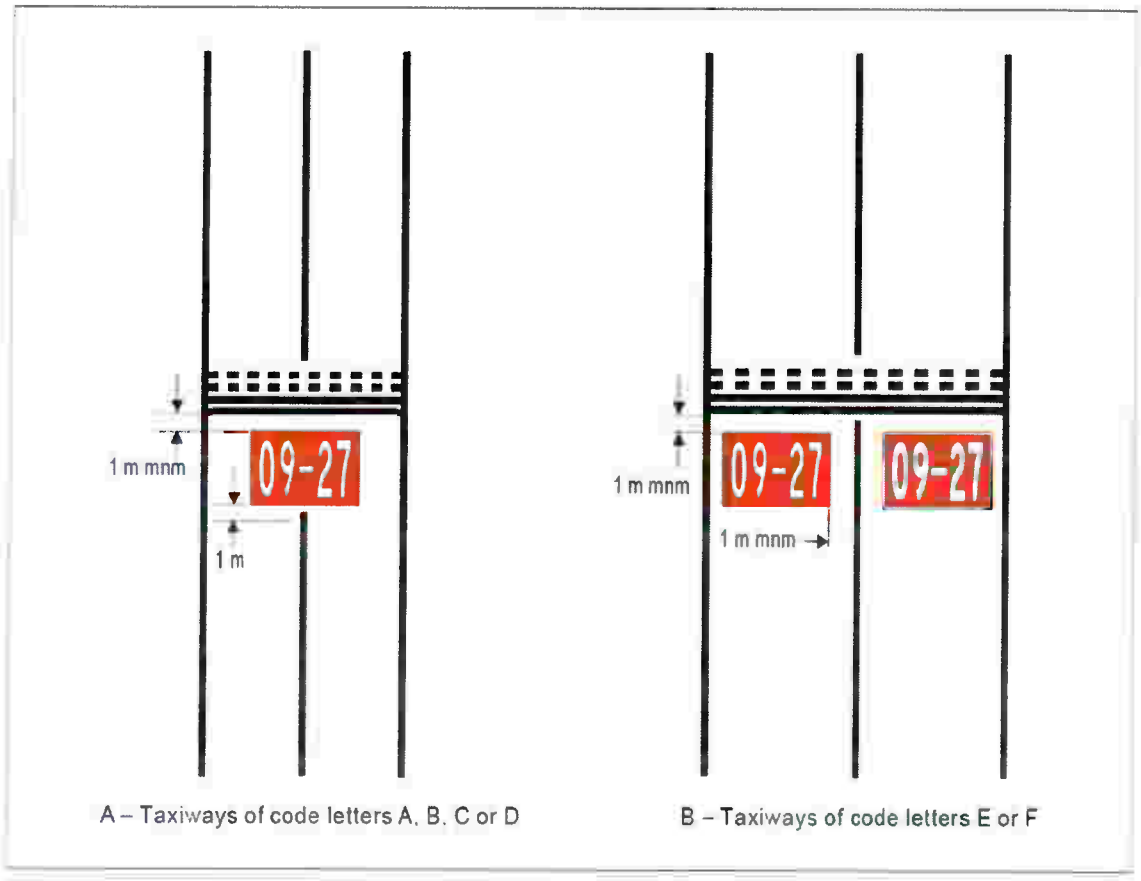

Diagram 11. Mandatory instruction marking

(39) Information marking

(a) Where an information sign would normally be installed and is impractical to install, as determined by the appropriate Authority, an information marking shall be displayed on the surface of the pavement.

(b) Where operationally required, an information sign shall be supplemented by an information marking.

(c) An information location or direction marking shall be displayed prior to and following complex taxiway intersections and where operational experience has indicated the addition of a taxiway location marking could assist flight crew ground navigation.

(d) An information location marking shall be displayed on the pavement surface at regular intervals along taxiways of great length.

(e) The information marking shall be displayed across the surface of the taxiway or apron where necessary and positioned to be legible from the cockpit of an approaching aircraft.

(f) An information marking shall consist of the following:

(i) inscription in yellow upon a black background when it replaces or supplements a location sign; and

(ii) an inscription in black upon a yellow background when it replaces or supplements a direction or destination sign.

(g) Where there is insufficient contrast between the marking background and the pavement surface, the marking shall include the following:

(i) black border where the inscriptions are in black; and

(ii) a yellow border where the inscriptions are in yellow.

(h) The character height shall be 4m.";

(q) the substitution for Technical Standard 139.02.14 of the following Technical Standard:

"**1. Emergency operations centre and command post**

(1) A fixed emergency operations centre and a mobile command post shall be available for use during an emergency.

(2) A fixed emergency operations centre shall be a part of the aerodrome facilities and shall be responsible for the overall coordination and general direction of the response to an emergency.

(3) The command post shall be a facility capable of being moved rapidly to the site of an emergency when required, and shall undertake the local coordination of those agencies responding to the emergency.

(4) A person shall be assigned to assume control of the fixed emergency operations centre, and when appropriate, another person to the command post.

2. Communication system

(1) Adequate communication systems linking the command post and the emergency operations centre with each other and with the participating agencies shall be provided in accordance with the plan and consistent with the particular requirements of an aerodrome.

(2) Aerodrome emergency exercise plan

(a) The plan shall contain procedures for periodic testing of the adequacy of the plan and for reviewing the results in order to improve its effectiveness.

(b) The plan shall be tested by conducting —

(i) a full-scale aerodrome emergency exercise at intervals not exceeding two years and partial emergency exercises in the intervening year to ensure that any deficiencies found during the full-scale aerodrome emergency exercise have been corrected; or

(ii) a series of modular tests commencing in the first year and concluding in a full-scale aerodrome emergency exercise at intervals not exceeding three years and reviewed thereafter, or after an actual emergency so as to correct any deficiency found during such exercises or actual emergency.

(3) Emergencies in difficult environments

(a) The plan shall include the availability of, and coordination with, appropriate specialist rescue services to be able to respond to emergencies where an aerodrome is located close to water or swampy areas and where a significant portion of approach or departure operations take place over these areas.

(b) At those aerodromes located close to water or swampy areas, or difficult terrain, the aerodrome emergency plan should include the establishment, testing and

assessment at regular intervals of a predetermined response for the specialist rescue services.

(c) An assessment of the approach and departure areas within 1,000m of the runway threshold shall be carried out to determine the options available for intervention.

(r) the insertion in Technical Standard 139.02.14 after subsection (13) of the following subsection:

"(14) Family assistance plan for families and victims involved in an aircraft accident and incident

(a) An aerodrome operator shall develop plans to provide immediate care and support following an accident.

(b) A family assistance plan shall be implemented in coordination with an air service operator's plan so as to facilitate harmonization of the assistance to be provided.

(c) An aerodrome operator shall identify facilities at or near an aerodrome for family members and friends to gather.

(d) Where the reception centre is located off the aerodrome grounds, an aerodrome operator shall provide transportation to the family and friends to the reception centre.

(e) Support provided shall be coordinated with an air service operator.

(f) An aerodrome operator shall include in their emergency response planning manual provision for post-accident privacy for the families and the survivors.";

(s) the insertion in Technical Standard 139.02.15 after section 1 of the following of the following sections:

"2. Level of Protection for Rescue and Firefighting services

(1) An aerodrome category shall be determined from Table 1 and shall be based on the longest aeroplanes normally using an aerodrome and their fuselage width.

(2) If, after selecting the category appropriate to the longest aeroplane's overall length, that aeroplane's fuselage width is greater than the maximum width in Table 1, Column 3 for that category, then the category for that aeroplane shall actually be one category higher.

(3) **Classification matrix**

Aerodrome category (1)	Aeroplane overall length (2)	Maximum fuselage width (3)
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	18 m up to but not including 24 m	4 m
5	24 m up to but not including 28 m	4 m
6	28 m up to but not including 39 m	5 m
7	39 m up to but not including 49 m	5 m
8	49 m up to but not including 61 m	7 m
9	61 m up to but not including 76 m	7 m
10	76 m up to but not including 90 m	8 m

Table 1. Aerodrome category for rescue and firefighting

(4) Both principal and complementary agents shall be provided at an aerodrome.

(5) The principal extinguishing agent shall be —

(a) a foam meeting the minimum performance level A; or

(b) a foam meeting the minimum performance level B; or

(c) a foam meeting the minimum performance level C; or

(d) a combination of these agents;

(e) except that the principal extinguishing agent for aerodromes in categories 1 to 3 shall preferably meet a performance level B or C foam.

(6) The complementary extinguishing agent shall be a dry chemical powder suitable for extinguishing hydrocarbon fires.

(7) The amounts of water for foam production and the complementary agents to be provided on the rescue and firefighting vehicles shall be in accordance with the aerodrome category determined under subsections (1)(2) and (3) and Table 2, unless aerodrome categories 1 and 2 up to 100 per cent of the water may be substituted with a complementary agent.

(8) For the purpose of agent substitution, 1kg of complementary agent shall be taken as equivalent to 1.0L of water for the production of a foam meeting performance level A.

(9) At an aerodrome where operations by aeroplanes larger than the average size in a given category are planned, the quantities of water shall be recalculated and the amount of water for foam production and the discharge rates for foam solution shall be increased accordingly.

Foam meeting performance level A			Foam meeting performance level B		Foam meeting performance level C		Complementary agents	
Aerodrome category (1)	Water (L) (2)	Discharge foam solution/ minute (L) (3)	Water (L) (4)	Discharge foam solution/ minute (L) (5)	Water (L) (6)	Discharge foam solution/ minute (L) (7)	Dry chemical powders (kg) (8)	Discharge Rate (kg/ second) (9)
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3		N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	3600	2600	2400	1800	1700	1100	135	2.25
5	8100	4500	5400	3000	3900	2200	180	2.25
6	11800	6000	7900	4000	5800	2900	225	2.25
7	18200	7900	12100	5300	8800	3800	225	2.25
8	27300	10800	18200	7200	12800	5100	450	4.5
9	36400	13500	24200	9000	17100	6300	450	4.5
10	48200	16600	32300	11200	22800	7900	450	4.5
Note.— The quantities of water shown in columns 2, 4 and 6 are based on the average overall length of aeroplanes in a given category.								

Table 2. Minimum usable amounts of extinguishing agents

(10) The quantity of foam concentrates separately provided on vehicles for foam production shall be in proportion to the quantity of water provided and the foam concentrate selected.

(11) The amount of foam concentrate provided on a vehicle shall be sufficient to produce at least two loads of foam solution.

(12) Supplementary water supplies for the expeditious replenishment of rescue and firefighting vehicles at the scene of an aircraft accident shall be provided.

(13) When a combination of different performance level foams are provided at an aerodrome, the total amount of water to be provided for foam production shall be calculated for each foam type, and the distribution of these quantities shall be documented for each vehicle and applied to the overall rescue and firefighting requirement.

(14) The discharge rate of the foam solution shall not be less than the rates shown in Table 2.

(15) The complementary agents shall comply with the appropriate National Standards.

(16) The discharge rate of complementary agents shall be no less than the values shown in Table 2.

(17) Dry chemical powders shall only be substituted with an agent that has equivalent or better firefighting capabilities for all types of fires where the complementary agent is expected to be used.

(18) A reserve supply of foam concentrate equivalent to 200%of the quantities identified in Table 2 shall be maintained on the aerodrome for vehicle replenishment purposes.

(19) A reserve supply of complementary agent equivalent to 100%of the quantity identified in Table 2 shall be maintained on the aerodrome for vehicle replenishment purposes.

(20) Sufficient propellant gas shall be included to utilize this reserve complementary agent.

(21) Where a major delay in the replenishment of the supplies is anticipated, the amount of reserve supply in subsections (18)(19) and (20) shall be increased as established by a risk assessment.

(22) The fire appliances deployed shall be a self-propelled airport firefighting vehicle that can achieve the required response times of 0 to 80 km/h within 25 seconds as depicted for Rapid Intervention Vehicles when fully laden and have a maximum speed of not less than 105 km/h.

(23) An aerodrome operator shall ensure that both principal and complementary agents are provided at an aerodrome and the principal extinguishing agent shall be:

(a) a foam meeting the minimum performance level A predicated on an application rate of 8.2 L/min/m2;

(b) a foam meeting the minimum performance level B predicated on an application rate of 5.5 L/min/m2;

(c) a foam meeting the minimum performance level C or predicated on an application rate of 3.75 L/min/m2; or

(d) a combination of these agents A, B or C.

(24) Where a major delay in the replenishment of the supplies is anticipated, the aerodrome operator shall ensure that a contingency plan is put in place to address the delay.

3. Rescue equipment

(1) Rescue equipment commensurate with the level of aircraft operations shall be provided on the rescue and firefighting vehicle.

Categories of Aerodromes	4-5	6-7	8-10
Equipment for rescue operations			
Forcible Entry Tools			
Prying Tool (Hooligan Tool)	1	1	2
Crowbar. 95 cm	1	1	2
Crowbar 1.65 m	1	1	2
Axe. rescue, large non wedge type	1	1	2
Axe. rescue, large non wedge type or aircraft type	2	2	4
Cutter bolt 61 cm	1	2	2
Hammer 1.8 kg	1	2	2
Chisel, cold 2.5 cm	1	2	2
A suitable range of rescue/cut-in equipment including powered rescue tools			
Hydraulic/electrical (combination) portable rescue equipment	1	1	2
Powered rescue saw complete with minimum 406 diameter spare blades	1	1	1
Reciprocating/Oscillating saw	1	1	2
A range of equipment for the delivery of firefighting agent			

Delivery hoses 30m lengths X 50 and 64mm diameters	10	16	22
Foam branches (nozzles)	1	2	3
Water branches (nozzles)	2	4	6
Coupling adapters	1	2	3
Portable fire extinguishers			
CO2	1	2	3
DCP	1	2	3
SCBA-sufficient to maintain the prolonged internal operations (note: one BA per crew member)			
BA set complete with face mask and air cylinder			
BA spare air cylinder			
BA spare facemask			
A range of ladders			
Extension ladder, rescue and suitable for critical aircraft rescue	1	2	3
Protective clothing			
Firefighting helmet, coat, over trousers (complete with braces) boots and gloves (Note; one set per operational fire fighter)	- -	-	-
Additional items for personal protection			
Protective goggles	1	2	3
Flash Hood (One per fire-fighter)	-	-	-
1 Box of surgical gloves	-	-	-
Blanket fire resisting	1	2	2

Rope lines			
Rope line rescue 45m	1	2	2
Rope line general use 30m	1	2	2
Rope line pocket 6m one per fire-fighter			
Communication equipment			
Portable transceivers (handheld and intrinsically safe)	2	2	3
Mobile transceivers (One per vehicle)			
A range of hand-held/portable lighting equipment			
Hand-held flashlight (intrinsically safe	2	4	4
Portable lighting-spot or flood intrinsically safe	1	2	3
A range of general tools			
Shovel overhaul	1	2	3
First aid equipment			
Medical first aid kit	1	2	3
Automated external defibrillator (AED)	1	2	3
Oxygen Resuscitation Equipment (ORE)	1	2	3
Miscellaneous equipment (Chocks and wedges-various sizes)			
Tarpaulin- lightweight	1	2	3
Thermal imaging camera	-	1	2
Rescue toolbox and content			
Hammer, claw 0.6kg	1	2	3
Cutters, cable 1.6cm	1	2	3
Socket set	1	2	3

Hacksaw, heavy duty complete with spare blades	1	2	3
Screwdriver set-slotted	1	2	3
Pliers, insulated	1	2	3
Side cutting 20cm	1	2	3
Slip joint-multi-grip 25cm	1	2	3
Seatbelt/harness cutting tool	1	2	3
Wrench, adjustable 30cm	1	2	3
Spanners, combination 10mm-21mm or20cm	1	2	3

Table 3

Number of rescue and firefighting vehicles

Aerodrome category	Rescue and firefighting vehicles
1	N/A
2	N/A
3	N/A
4	1
5	1
6	2
7	2
8	3

9	3
10	3

Table 4";

(t) deletion of Technical Standard 139.02.18.".

Amendment of Document SA-CATS 172

11. Document SA-CATS 172 is hereby amended by:

(a) the insertion in Technical Standard 172.02.3 section 1 after subsection (3) of the following subsections:

"**172.02.3 Designation of Control Areas**

1. Requirements for the designation of the CTA

(1) The lowest limit of designated CTA shall be at least 700ft above the ground or water.

(2) The lower limit of the CTA shall coincide with the upper limit of the control zone.

(3) The CTA shall have the upper limit established, unless a CTA is limited by an upper CTA, the lower limit specified for the upper CTA constitutes the upper vertical limit of the CTA and must coincide with a VFR cruising level.

(4) Control areas including, inter alia, airways and terminal control areas shall be delineated so as to encompass sufficient airspace to contain the flight paths of those IFR flights or portions thereof to which it is desired to provide the applicable parts of the air traffic control service, taking into account the capabilities of the navigation aids normally used in that area.

(5) When the lower limit of the control area is above 900m (3000ft) MSL, it shall coincide with a VFR cruising level, as prescribed in the tables in Technical Standard 91.06.33.".

(b) the substitution for Technical Standard 172.03.4 section 10 of the following section:

"10. Time

(1) An ATSU shall **[establish a procedure to]** ensure that ATS-unit clocks and other time recording devices:

(a) use Co-ordinated Universal Time (UTC) and express that time in hours, **[and]** minutes and seconds of a **[the]** 24-hour day beginning at 0000 Standard Universal Time (UTC**[S]**), and

[(b) are correct to within 5 seconds of UTC as determined by reference to a standard time station or GPS time standard.]

(b) where data-link communication is used, clocks and other time-recording devices are correct to within 1 second of UTC.

(2) An **[The]** ATSU shall **[establish a procedure to]** ensure that the correct time to the nearest half minute, is provided:

(a) in respect of any aerodrome control service or aerodrome flight information service, to **[IFR]**an aircraft, prior to taxiing or take-off unless arrangements have been made for the pilot to obtain it from other sources; and

(b) to any aircraft on request.".

(c) Document SA-CATS 172 Annexure F: ATS Standard and Procedures Manual is amended by inserting and deleting provisions after Section 2 – Air Traffic Services, Chapter 8 – Flight Plans, as follows:

1. General

1.1 Either a flight plan form based on the model in Section 10, Chapter 5 of this manual or a flight plan message based upon the procedures in Section 12 shall be used by operators and ATSU for the purpose of completing applicable flight plans.

1.2 Operators and ATSU shall comply with the following:

(a) the instructions for construction or completion of the applicable flight plans in accordance with Section 10 Chapter 5 and Section 12; and

(b) any restrictions, limitations or advisory information related to flight planning identified in relevant AIPs or other publications, such as NOTAMs.

***Note 1**. Failure to adhere to the provisions in 1.2 may result in data being rejected, processed incorrectly or lost.*

***Note 2.** The instructions for completing the flight plan may be conveniently printed on the inside cover of flight plan form pads, or posted in briefing rooms.*

2. Filing of Flight Plans

2.1 The filing of a flight plan is mandatory in the following cases:

(a) international flights;

(b) all flights in the public transport operation or public transport of cargo operation categories;

(c) all flights for which overdue action is required; and

(d) all flights operating between aerodromes where an ATSU is operating.

2.2 Flight plans shall be filed for all flights conducted in controlled or advisory airspaces; except in the following circumstances:

(a) Local flight;

(b) The flight may cross an airway or advisory route at right angles;

(c) A VFR flight departing from or arriving at an aerodrome within an ATZ Class C/ G or a CTR, and the remainder of the flight will be conducted clear of all controlled or advisory airspaces.

Note 1: *Flight plans may be filed for any flight.*

Note 2: *For compilation of a flight plan, see Section 10, Chapter 5.*

2.3 Flight plans for IFR flights within controlled, advisory and information airspaces shall be filed in sufficient time before ETD to allow the ATSU to fit the intended flight into the traffic pattern. ATC may request compliance with the following:

(a) Thirty (30) minutes warning before take-off when the point of departure is within a CTR or when the flight will be joining controlled or advisory airspace almost immediately after take-off; or

(b) Ten (10) minutes' warning before controlled or advisory airspace will be entered when filed in flight.

2.4 In the event of a delay of thirty minutes in excess of the estimated off-block time for a scheduled flight or a delay of one (1) hour for a non-scheduled or general aviation flight for which a flight plan has been submitted, the flight plan shall be amended and such flight plan submitted, and the old flight plan shall be cancelled.

2.5 A flight plan that is submitted during flight shall be transmitted to the ATSU in charge of the FIR, control area, advisory area or advisory route in or on which the aircraft is flying; or in, or through which the aircraft wishes to fly or to the aeronautical telecommunication station serving the ATSU concerned. When this is not practicable, the flight plan shall be transmitted to another ATSU for retransmission as required to the appropriate ATSU.

2.6 Where relevant, such as in respect of ATSUs serving high or medium density airspace, the ANSP shall prescribe conditions and limitations with respect to the submission of flight plans during flight to those specified sectors.

2.7 Flight plans, excluding preliminary flight plans, shall not be submitted more than 120 hours (5 days) before the estimated off-block time of a flight.

2.8 A flight plan submitted prior to departure shall be submitted to the ATSU at the departure aerodrome or, when applicable, to any other ATSU serving the departure aerodrome as prescribed by the appropriate ANSP.

3. Acceptance of a Flight Plan

3.1 The first unit receiving a flight plan or any changes shall —

(a) Check it for compliance with the format and data conventions;

(b) Check it for completeness and, to the extent possible, for accuracy;

(c) Take action, if necessary, to make it acceptable to an ATSU; and

(d) Indicate acceptance of the flight plan or change thereof to the originator.

3.2 Acceptance of IFR Flight Plans

3.2.1 The filing of an IFR flight plan indicates that the pilot is qualified, and that the aircraft is equipped for IFR flight and further, that the pilot-in-command will conform to all provisions of IFR.

3.2.2 This does not preclude an ATC from verifying whether a pilot is qualified or whether the aircraft is suitably equipped for an IFR flight when the controller has reason to believe otherwise.

Note. The first unit may be an ATSU at a departure aerodrome, an FF-ICE services unit or an ATSU receiving a flight plan from an aircraft in flight.

4. Repetitive Flight Plans (RPL)

4.1 A repetitive flight plan scheme is a more convenient method of filing flight plans for flights that operate regularly. Only one plan is filed and the details are brought forward for each flight.

5. Booking Out

5.1 A pilot who does not file a flight plan is required to inform an ATSU at the aerodrome of his or her departure, where the filing of a flight plan is not mandatory. This is referred to as booking out. An ATSU shall record the departure, and no further action is required.".