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REPUBLIC OF ZAMBIA
ZAMBIA AIRPORTS CORPORATION
LIMITED
Kenneth Kaunda International Airport
P. O. BOX 30175,
Lusaka. 10101
Zambia

AIRAC

AIP AIRAC AMDT 02/22

27 JAN 2022

24 FEB 2022

1. Insert or replace respectively the attached pages with effective date:

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GEN GENERAL

GEN 0.1 PREFACE

1 Name of Publishing Authority

AIP Zambia is published by Zambia Airports Corporation Limited under the Authority of Zambia Civil Aviation Authority.

2 Applicable ICAO documents

The AIP is prepared in accordance with the Standards and Recommended practices (SARPs) of Annex 15 to the Convention on International Civil Aviation and the Aeronautical Information Services Manual (ICAO Doc 8126). Charts contained in the AIP are produced in accordance with Annex 4 to the convention on International Civil Aviation and the Aeronautical Chart Manual (ICAO Doc 8697).

Differences from the ICAO Standards and Recommended Practices and Procedures are given in subsection Gen 1.7*.

3 Publication media

AIP Zambia with its amendment Service is being published through:

- paper
- Cd
- online (www.zacl.co.zm)

for details see GEN 3.1 - Aeronautical Information Service

4 The AIP structure and established regular amendment interval

4.1 The AIP structure

The AIP forms part of the Integrated Aeronautical Information Product, details of which are given in subsection Gen 3.1. The principal AIP structure is shown on GEN 0.1-3.

The AIP is made up of three parts, General (GEN) En-route (ENR) and Aerodromes(AD), each of which is divided into sections and subsections as applicable, containing various types of information subjects.

4.1.1 Part 1 - General (GEN)

Part 1 consists of five sections containing information as briefly described hereafter.

Gen 0 - Preface; Record of AIP amendments; Record of AIP Supplements; Check list of AIP pages; List of hand amendments to the AIP; and the Tables of contents to this part.

Gen 1 National Regulations and Requirements. - Designated Authorities; Entry, transit and departures of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; Summary of national regulation and international agreements/conventions; and Differences from ICAO standards recommended practices and procedures.

Gen 2 Tables and codes - Measuring system, aircraft markings, holidays; Abbreviations used in AIS publications; Chart symbols; Location indicators; List of radio navigation aids; and Conversion tables.

Gen 3 Services - Aeronautical Information service; Aeronautical Charts; Air Traffic Services; Aeronautical Communication Services; Meteorological Services and Search and Rescue services.

Gen 4 Charges for Aerodromes and Air Navigation Services - Aerodromes charges and Air navigation service charges

4.1.2 Part 2 - En-Route (ENR)

Part 2 consists of seven sections containing information briefly described hereafter.

ENR 0 Table of Contents to Part 2

ENR 1 General Rules and Procedures - General rules; Visual flight rules, Instrument flight rules, ATS airspace classification; Holding, Approach and departure, procedures; Radar services and procedures; Altimeter setting procedures; Regional supplementary procedures; Air Traffic Flow Management; Flight planning, Addressing of flight plan message; Interception of civil aircraft; Unlawful interference, Air traffic incidents; Radio communication and Helicopter operations.

ENR 2 Air Traffic Services Airspace - Detailed description of Flight Information Regions (FIR); Terminal Control Area (TMA), Control Areas (CTA) and other Regulated airspace.

ENR 3 ATS Routes - Detailed description of lower ATS routes; Upper ATS routes; and Enroute holding.

NOTE:Other types of routes which are specified in connection with procedures for traffic to and from aerodromes are described in the relevant sections and subsections of part 3 aerodromes.

ENR 4 Radio Navigation Aids and Systems - Radio Navigation Aids - En-route; Name code designator for significant reporting points; and Enroute aeronautical ground lights.

ENR 5 Navigation Warnings - Prohibited, Restricted and Danger Areas; and Bird Migration areas with sensitive fauna.

ENR 6 En-route Charts - En-route Chart - ICAO, and Charts Index.

4.1.3 Part 3 - Aerodromes (AD)

Part 3 consists of three sections containing information briefly described hereafter.

AD 0 Preface, Table of Contents to Part 3

AD1. Aerodromes/Heliports - Aerodromes/Heliports availability, Rescue and Fire Fighting Services, Index to Aerodromes/Heliports.

AD 2. Aerodromes - Detailed information about aerodromes.

4.2 Regular Amendment interval

Amendments to the AIP other than those requiring AIRAC notification will be issued as required.

5 Copyright Policy

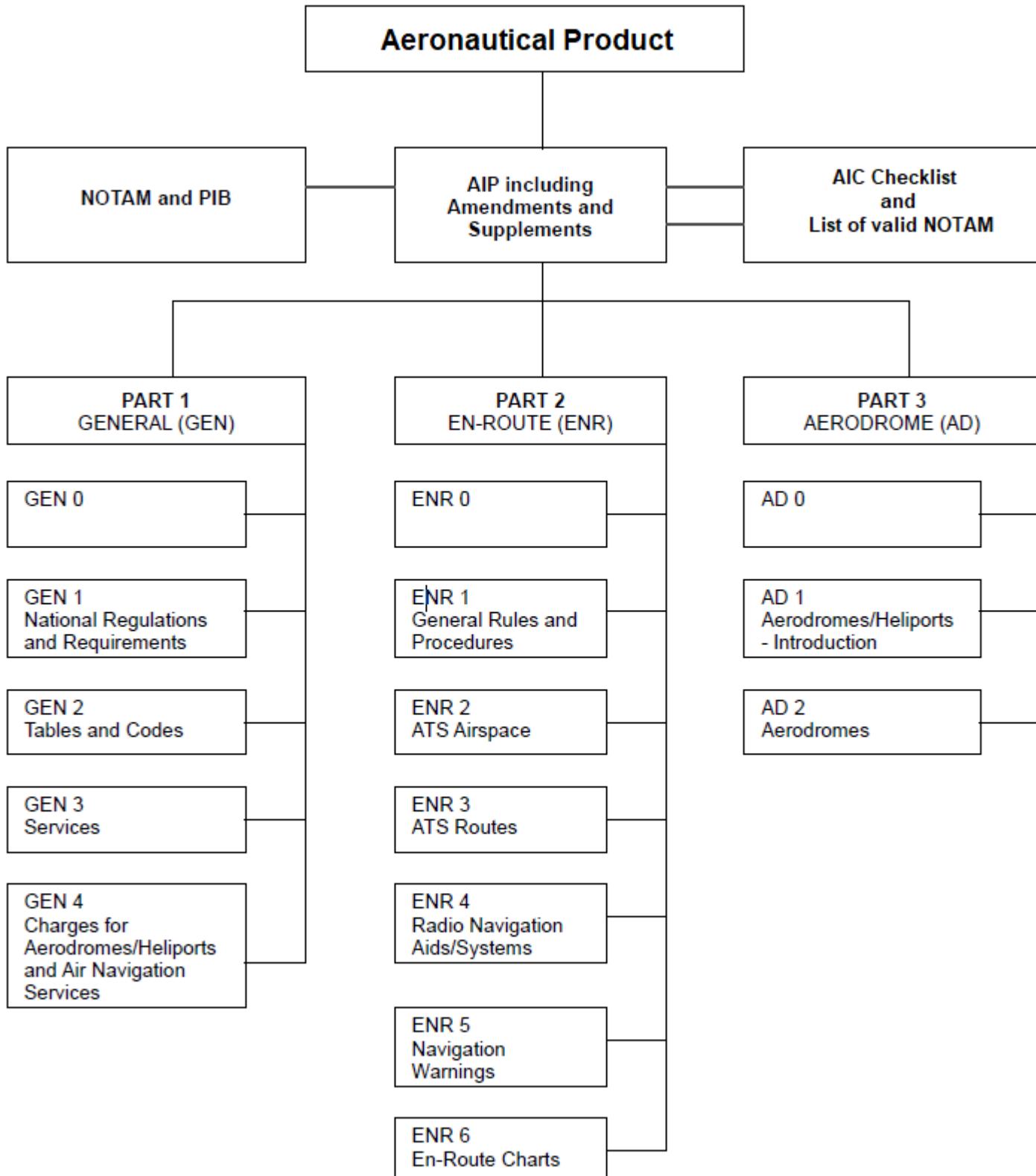
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6 Service to contact in case of detected AIP errors or omissions

In the compilation of the AIP, care has been taken to ensure that information contained therein is accurate and complete. Any errors or omissions which may nevertheless be detected, as any correspondence concerning the Integrated Aeronautical Information Product should be referred to:

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GEN 0.2 RECORD OF AIP AMENDMENTS

GEN 0.3 RECORD OF AIP SUPPLEMENTS

AIRAC AIP SUPPLEMENT INCORPORATED IN THE AIP		
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3	AIRAC AIPSUPP002/16	ENROUTE
4	AIRAC AIPSUPP003/16	GEN ; DESIGNATED AUTHORITY
5	AIRAC AIPSUPP007/16	ENROUTE 3.3
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21	AIRAC AIPSUPP009/21	AD 2 FLSK
22	AIRAC AIPSUPP010/21	FLND REMOVED FROM THE AIP AD 2
23	AIRAC AIPSUPP012/21	FLP3 REMOVED FROM ENROUTE 5.1
24	AIRAC AIPSUPP11/21	SSR CODES TO REMAIN AS SUPPLEMENTARY Information

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AD 2 FLHN 14 - 6	24 FEB 2022	AD 2 FLKK 14 - 10	24 FEB 2022	AD 2 FLMF 12 - 4	24 FEB 2022
AD 2 FLHN 14 - 7	24 FEB 2022	AD 2 FLKK 14 - 11	24 FEB 2022	AD 2 FLMF 12 - 5	24 FEB 2022
AD 2 FLHN 14 - 8	24 FEB 2022	AD 2 FLKK 14 - 12	24 FEB 2022	AD 2 FLMF 12 - 6	24 FEB 2022
AD 2 FLHN 14 - 9	24 FEB 2022	AD 2 FLKK 14 - 13	24 FEB 2022	AD 2 FLMF 12 - 7	24 FEB 2022
AD 2 FLHN 14 - 10	24 FEB 2022	AD 2 FLKK 14 - 14	24 FEB 2022	AD 2 FLMF 12 - 8	24 FEB 2022
AD 2 FLHN 14 - 11	24 FEB 2022	AD 2 FLKK 14 - 15	24 FEB 2022	AD 2 FLMF 14 - 1	24 FEB 2022
AD 2 FLHN 14 - 12	24 FEB 2022	AD 2 FLKK 14 - 16	24 FEB 2022	AD 2 FLMF 14 - 2	24 FEB 2022
AD 2 FLHN 14 - 13	24 FEB 2022	AD 2 FLKK 14 - 17	24 FEB 2022	AD 2 FLMF 14 - 3	24 FEB 2022
AD 2 FLHN 14 - 14	24 FEB 2022	AD 2 FLKK 14 - 18	24 FEB 2022	AD 2 FLMF 14 - 4	24 FEB 2022
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AD 2 FLHN 14 - 16	24 FEB 2022	AD 2 FLKK 14 - 20	24 FEB 2022	AD 2 FLMF 14 - 6	24 FEB 2022
AD 2 FLKK 1 - 1	24 FEB 2022	AD 2 FLKK 14 - 21	24 FEB 2022	AD 2 FLMF 14 - 7	24 FEB 2022
AD 2 FLKK 1 - 2	24 FEB 2022	AD 2 FLKK 14 - 22	24 FEB 2022	AD 2 FLMF 14 - 8	24 FEB 2022
AD 2 FLKK 1 - 3	24 FEB 2022	AD 2 FLKK 14 - 23	24 FEB 2022	AD 2 FLMG 1 - 1	24 FEB 2022
AD 2 FLKK 1 - 4	24 FEB 2022	AD 2 FLKK 14 - 24	24 FEB 2022	AD 2 FLMG 1 - 2	24 FEB 2022
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AD 2 FLKK 1 - 7	24 FEB 2022	AD 2 FLKK 14 - 27	24 FEB 2022	AD 2 FLMG 1 - 5	24 FEB 2022
AD 2 FLKK 1 - 8	24 FEB 2022	AD 2 FLKK 14 - 28	24 FEB 2022	AD 2 FLMG 1 - 6	24 FEB 2022
AD 2 FLKK 1 - 9	24 FEB 2022	AD 2 FLKS 1 - 1	24 FEB 2022	AD 2 FLMG 1 - 7	24 FEB 2022
AD 2 FLKK 1 - 10	24 FEB 2022	AD 2 FLKS 1 - 2	24 FEB 2022	AD 2 FLMG 1 - 8	24 FEB 2022
AD 2 FLKK 1 - 11	24 FEB 2022	AD 2 FLKS 1 - 3	24 FEB 2022	AD 2 FLMG 2 - 1	24 FEB 2022
AD 2 FLKK 1 - 12	24 FEB 2022	AD 2 FLKS 1 - 4	24 FEB 2022	AD 2 FLMG 2 - 2	24 FEB 2022
AD 2 FLKK 2 - 1	24 FEB 2022	AD 2 FLKS 5 - 1	24 FEB 2022	AD 2 FLMG 5 - 1	24 FEB 2022
AD 2 FLKK 2 - 2	24 FEB 2022	AD 2 FLKS 5 - 2	24 FEB 2022	AD 2 FLMG 5 - 2	24 FEB 2022
AD 2 FLKK 2 - 3	24 FEB 2022	AD 2 FLKS 6 - 1	24 FEB 2022	AD 2 FLMG 6 - 1	24 FEB 2022
AD 2 FLKK 2 - 4	24 FEB 2022	AD 2 FLKS 6 - 2	24 FEB 2022	AD 2 FLMG 6 - 2	24 FEB 2022
AD 2 FLKK 3 - 1	24 FEB 2022	AD 2 FLMA 1 - 1	24 FEB 2022	AD 2 FLMG 14 - 1	27 JAN 2022
AD 2 FLKK 3 - 2	24 FEB 2022	AD 2 FLMA 1 - 2	24 FEB 2022	AD 2 FLMG 14 - 2	24 FEB 2022
AD 2 FLKK 5 - 1	24 FEB 2022	AD 2 FLMA 1 - 3	24 FEB 2022	AD 2 FLSK 1 - 1	24 FEB 2022
AD 2 FLKK 5 - 2	24 FEB 2022	AD 2 FLMA 1 - 4	24 FEB 2022	AD 2 FLSK 1 - 2	24 FEB 2022
AD 2 FLKK 6 - 1	24 FEB 2022	AD 2 FLMA 5 - 1	24 FEB 2022	AD 2 FLSK 1 - 3	24 FEB 2022
AD 2 FLKK 6 - 2	24 FEB 2022	AD 2 FLMA 5 - 2	24 FEB 2022	AD 2 FLSK 1 - 4	24 FEB 2022
AD 2 FLKK 9 - 1	24 FEB 2022	AD 2 FLMA 6 - 1	24 FEB 2022	AD 2 FLSK 1 - 5	24 FEB 2022
AD 2 FLKK 9 - 2	24 FEB 2022	AD 2 FLMA 6 - 2	24 FEB 2022	AD 2 FLSK 1 - 6	24 FEB 2022
AD 2 FLKK 10 - 1	24 FEB 2022	AD 2 FLMF 1 - 1	24 FEB 2022	AD 2 FLSK 1 - 7	24 FEB 2022

AD 2 FLSK 1 - 8	24 FEB 2022
AD 2 FLSK 1 - 9	24 FEB 2022
AD 2 FLSK 1 - 10	24 FEB 2022
AD 2 FLSK 14 - 1	24 FEB 2022
AD 2 FLSK 14 - 2	24 FEB 2022
AD 2 FLSK 14 - 3	24 FEB 2022
AD 2 FLSK 14 - 4	24 FEB 2022
AD 2 FLSW 1 - 1	24 FEB 2022
AD 2 FLSW 1 - 2	24 FEB 2022
AD 2 FLSW 1 - 3	24 FEB 2022
AD 2 FLSW 1 - 4	24 FEB 2022
AD 2 FLSW 1 - 5	24 FEB 2022
AD 2 FLSW 1 - 6	24 FEB 2022
AD 2 FLSW 2 - 1	24 FEB 2022
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AD 2 FLSW 10 - 1	24 FEB 2022
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AD 2 FLSW 10 - 3	24 FEB 2022
AD 2 FLSW 10 - 4	24 FEB 2022
AD 2 FLSW 10 - 5	24 FEB 2022
AD 2 FLSW 10 - 6	24 FEB 2022
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AD 2 FLSW 12 - 3	24 FEB 2022
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AD 2 FLSW 12 - 7	24 FEB 2022
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AD 2 FLSW 14 - 3	24 FEB 2022
AD 2 FLSW 14 - 4	24 FEB 2022
AD 2 FLSW 14 - 5	24 FEB 2022
AD 2 FLSW 14 - 6	24 FEB 2022
AD 2 FLSW 14 - 7	24 FEB 2022
AD 2 FLSW 14 - 8	24 FEB 2022
AD 2 FLSW 14 - 9	24 FEB 2022
AD 2 FLSW 14 - 10	24 FEB 2022
AD 2 FLSW 14 - 11	24 FEB 2022
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GEN 1 NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 DESIGNATED AUTHORITIES

The address of the designated authorities concerned with facilitation of International Air Navigation are as follows:

1 Civil Aviation Authority

The Director General
Zambia Civil Aviation Authority
P.O. Box 50137
Lusaka 10101 , Zambia
email: civil.aviation@caa.co.zm
website: www.caa.co.zm

Tel: 260 (211) 251677
Fax: 260 (211) 251841
AFS: FLHQYFYX

2 Meteorology

The Director
Zambia Meteorology Department
P.O. Box 30200
Lusaka 10101, Zambia
email: lusakamet.2@gmail.com
website: www.zmd.gov.zm

Tel: 260 (211) 252728
Mobile: +260 955 63 2486
Telex: Not Applicable
Fax: 260 (01) 252728
AFS: FLKKYMYX

3 Customs

The Commissioner General
P.O Box 35710
Lusaka, 10101,
Zambia
website:www.zra.org.zm/advice@zra.org.zm
Tel: 260 (211) 381111/0971281111

4 Immigration

Director General of Immigration
Department of immigration
P.O.Box 50300
Lusaka, 10101,
Zambia

Tel: 260 (211) 252669/ 260 (211) 25 26 22
Mobile: +260972172550/+260971718499
Telex Not Applicable
Fax: 260 (211) 252831
AFS: Nil

website: www.zambiaimmigration.gov.zm /eservices.zambiaimmigration.gov.zm

5 Health

The Director Medical Services
Ministry of Health
P.O.Box 30200
Lusaka, 10101,
Zambia

Tel: 260 (211) 221571
Telex Not Applicable
Fax: 260 (211) 223435

6 En-route and Aerodrome/Heliport charges

The Managing Director
Zambia Airports Corporation Ltd.,
Kenneth Kaunda International Airport
P.O.Box 30175
Lusaka 10101,Zambia

Tel: 260 (211) 271248/271044
email: zacl@zacl.aero
Fax: 260 (211) 224777
AFS: FLKKYFYX
website: www.zacl.co.zm

7 Animal and Animal Products Quarantine

The Director
Department of Veterinary Services
P. O BOX 50060
Lusaka, 10101,
Zambia

Tel: 260 (211) 252608
Telex: Not Applicable
Fax: Not Applicable
AFS: Nil

The Director
Zambia Agriculture Research Institute
Mount Makulu Central Research Station
Private Bag 7
Chilanga, Lusaka 10101
Zambia

Tel: +260 (211) 278380/ 211 278141
fax: +260 (211) 278130
email: zaridirector@gov.zm
website: www.zari.gov.zm

8 Aircraft Accidents Investigation

The Director
Aircraft Accidents Investigation Board
P.O. Box 310198
Lusaka, 10101

Tel: 260 (211) 271293
Mobile: 260 (971) 232741
email: aaib@zasti.ac.zm

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GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

1 General

1.1. International flights into, from or over Zambian territory shall be subject to the current Zambian regulations relating to Civil Aviation. These regulations correspond in essence to the Standards and Recommended Practices contained in Annex 9 to the Convention on International Civil Aviation.

1.2. Aircraft flying into or departing from Zambian territory shall make their first landing at, or final departure from an International Aerodrome listed below:

- a. Kenneth Kaunda International Airport
- b. Harry Mwaanga Nkumbula International Airport
- c. Simon Mwansa Kapwepwe International Airport
- d. Mfuwe International Airport

1.3. Flights of foreign aircraft shall be conducted in the airspace of the Republic of Zambia in accordance with:

- a. the State of the airline must be a party to the International Air Service Transit Agreement and/or the International Air Transport Agreement . Zambia is a party to both Agreements.
- b. the airline must be eligible to make the flights under the provisions of a Bilateral or Multilateral Agreement to which the State of the airline and Zambia are contracting parties and must have a permit to operate into or in transit across Zambia.

2 Scheduled flights

2.1 General

2.1.1. Application for such permits shall be submitted in ample time to:

The Permanent Secretary
Ministry of Transport and Logistics
P.O. Box 50065
Lusaka 10101
Zambia

with a copy to:

The Director General
Zambia Civil Aviation Authority
P.O. Box 50137 Lusaka
Zambia

2.2 Documentary requirements for clearance of aircraft.

2.2.1. It is necessary that the under mentioned aircraft documents be submitted by airline operators for clearance on entry and departure of their aircraft to and from Zambia. All documents listed below must follow the ICAO standard format as set forth in the relevant appendices to ICAO Annex 9 and are acceptable when furnished in English and completed in legible handwriting. No visas are required with such documents.

2.2.2 Aircraft documents required (arrival/departure)

Required by	General Declaration	Pax manifest	Cargo manifest	Report of Departure	Report of Arrival
				Customs	Customs
				Form 7	Form 2
Customs & Excise	2	2	2	2	2

NOTE:

- a. Form 2 and 7 are completed when arriving or departing.
- b. One copy of the General Declaration is endorsed and returned by customs, signifying clearance.
- c. If no passengers are embarking (disembarking) and no articles are laden (unladen), no aircraft document except copies of General Declaration need to be submitted to the above authorities.

3 Non-scheduled flights

3.1 Procedures

3.1.1. If an operator intends to carry out a (series of) non-scheduled flight(s) in transit across, on non traffic stops in the territory of Zambia, it is necessary for the operator to obtain prior permission.

3.1.2. If an operator intends to perform a single or a (series of) non-scheduled flight(s) in Zambia for the purpose of taking on or discharging passengers, cargo or mail, it is necessary for the operator to apply for Temporary Air Service Permit (TASP) for permission to carry out such operations not less than Seventy Two (72) hours in advance of intended landing to:

The Permanent Secretary,
Ministry of Transport and Logistics
P.O. Box 50065, Lusaka, 10101
Zambia

with a copy to:-

The Director General
Zambia Civil Aviation Authority
P.O. BOX 50137
LUSAKA 10101
ZAMBIA
Tel.: 260 211 251677
Fax: 260 211 251841
E-mail: civil.aviation@caa.co.zm

The application must include the following information in the order shown hereunder:

- a. Name of operator including Place of business and all numbers of communications;
- b. Type of aircraft and registration marks and MTOW;
- c. Flight route, date and time of arrival at and departure from destination aerodrome;
- d. Place or places of embarkation or disembarkation abroad, as the case may be, of passengers and/or freight;
- e. Purpose of flight and number of passengers and/or nature and amount of freight; and
- f. Receiving Party (name, address and business of charterer, if any)

3.1.2.1. When due to flight urgency, the seventy two (72) hours notification may not apply. The applicant shall via email or in the application indicate the reasons for not submitting the application within the specified period.

3.1.2.2. The applicant of a Temporary Air Service Permit (TASP) will not commence his flight until he has been issued with a TASP and the number is known. The validity of such permissions is 72 hours starting from the date indicated in the permission.

3.2 Documentary requirements for clearance of aircraft

3.2.1. The same requirements as for SCHEDULED FLIGHTS.

4 Private flights

4.1 Advance notification of arrival

All Private International Flights requiring to land or overfly the Republic of Zambia and all domestic private flights (except where a special agreement exists) must have prior permission and applications must be addressed to the Director General ZCAA (see GEN 1.1 for Address).

Details as specified in GEN 1.2.3.1.2 must be included. Confirmation of approval must be received before commencement of flight for either International or Local flights.

4.2 Documentary requirements for clearance of aircraft

The Same requirements as for SCHEDULED FLIGHTS.

5 Public health measures applied to aircraft

5.1. In relation to Public Health issues, the Pilot in Command of aircraft, or their agents, shall make known to the Air Traffic Control by radio as early as possible before arrival at the airport of destination any cases of illness indicative of a disease of an infectious nature or evidence of a public health risk on board as soon as such illnesses or public health risks are made known to the Officer or Pilot in Command.

This information must be immediately relayed to the competent authority at the airport. In urgent circumstances, such information should be communicated directly by the officers or Pilot in Command to the relevant airport authority.

5.2. If evidence of possible health risks including infection or contamination sources are detected on board the aircraft, the aircraft shall be sent to the quarantine area to use all necessary specific health measures in accordance with International Health Regulations (IHR 2005).

5.3. All aircraft arriving in the Republic of Zambia from an area with an outbreak of communicable disease shall have appropriate verification in the health part of the aircraft General Declaration.

6 Military Flights/State Aircraft

Foreign military aircraft/State aircraft must obtain Diplomatic and administrative clearance from the Government and the application(s) should be addressed to.

The Permanent Secretary
Ministry of Foreign Affairs
P.O Box 50069
Lusaka, 10101
Zambia
Tel: +260 211 252718/252708/252675
Fax:+260 211 250240
email: info@mofa.gov.zm

The application should contain the following information

- a. Name of applicant / Operator including place of business and all numbers of communications;
- b. Address
- c. Telephone number
- d. Date of application
- e. Aircraft Details
 - i. Aircraft type (military or Civil)
 - ii. Aircraft registration
 - iii. Aircraft call sign
 - iv. Colour of aircraft
- f. Crew details
 - i. Name and Nationality of Aircraft Captain
 - ii. Number of crew and nationality
- g. Flight Details
 - i. Date(s) of flight

- ii. Departure point and Destination
- iii. Route, Flight levels and Crusing Speeds
- h. Any other destination(s) within Zambia
- i. Description of Photographic equipment/firearms
- j. Purpose of flight
- k. Applicant should sign State name and put date of application.

GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

1 Customs requirements

1.1. Baggages or articles belonging to disembarking passengers and crew must be cleared at the airport of first landing in Zambia. Passengers and crew are required to make a declaration to the Customs Officer either verbally or if instructed to do so by an Officer to fill CE 06 (passenger baggage declaration form) for all goods or articles in his possession or custody and form EC10 (.currency declaration form) if the passenger is in possession of USD 5,000.00 or its equivalent or more.

1.2. Passengers in direct transit through Zambia may not leave the Customs Area or Transit Lounge at any airport without permission from the Customs Officer and may be required to make verbal or written declaration at the discretion of the Customs Officer. Passengers proceeding to places abroad and those who have been given permission to leave the Transit Lounge or Customs Area, are required to clear through Customs before departure.

1.3. Arriving crew are required to clear through customs at the Airports of first landing in the same manner as passengers when:-

- a. The flight on which they are engaged is operated from outside Zambia;
- b. The aircraft is due to stop overnight in Zambia or;
- c. They are residents of Zambia even if the flight on which they are engaged is in direct transit through Zambia.

2 Immigration Requirements

2.1. All arriving passengers must have at least six months validity on their passports from the date of entry. The passport must also have at least 3 full blank pages.

2.2. All travelers who are not Zambian citizens or residents and require visas to come to Zambia must hold a valid visa to enter Zambia. Depending on the nationalities, visas can be obtained on arrival at the port of entry, at the Zambian Missions Abroad or obtained prior to travelling to Zambia. Anyone, regardless of nationality is now able to apply for an e-Visa to Zambia.

2.3. All Diplomats accredited to Zambia coming on official business should be issued with Gratis Visas at Zambian Missions Abroad or Port of Entry. This includes those Diplomats coming to do business with their respective Embassies/High Commissions.

Diplomats not accredited to Zambia coming on official business should be issued with Gratis Visas at Zambian Missions Abroad or Port of Entry. Diplomats not accredited to Zambia coming on private business should obtain Visa in the normal way and pay the applicable visa fee.

2.4. All non-citizens and non-residents arriving in Zambia by air must be in possession of valid return air tickets. Those arriving by land and water must have enough funds for their stay in and departure from Zambia.

2.5. Flight crew members on scheduled flight are allowed a maximum of seven (07) days to remain within the nearest town to the airport without undergoing any immigration formalities. Further, crew members on scheduled flights who remain at the airport where the aircraft had stopped or within the confines of the city adjacent thereto, and departs on the same aircraft or on his next regular scheduled flight out of the Republic of Zambia, his crew member license or certificate is accepted in lieu of passport or visa for temporary admission into Zambia.

However, if the crew member wishes to visit any other town other than the nearest town, immigration formalities shall apply.

2.6. Transit Visas – in the case of Zambia, Transit Visas are issued to nationals who require visas to enter Zambia and are transiting through using land transport and shall be valid for a maximum period of seven (07) days. This implies that travelers transiting through Zambia by air directly, or those who remain within the precincts of the airport, will not have to appear before an Immigration Officer for immigration formalities.

For delayed flights which may cover over night stops, transit passengers may be issued with a report order by the Immigration Officer allowing them to lodge at a prescribed hotel and report back for departure out of Zambia.

However, every other person departing from Zambia, except in direct transit through Zambia by air, having left the precincts of the airport shall appear before an Immigration Officer for immigration formalities, including paying for visas for those requiring visas.

3 Public Health requirements

3.1. Kenneth Kaunda, Harry Mwaanga Nkumbula, Simon Mwansa Kapwepwe and Mfuwe International Airport have been designated as sanitary Airports under the Public Health Act Statutory Instrument No. 13 of 1994 as a requirement under the revised World Health Organisation International Health Regulations (2005).

3.2. The same Statutory Instrument Identifies "Recognised stopping places" as Simon Mwansa Kapwepwe, Mfuwe, Lusaka and Chipata. The International Heath Regulation (2005) to protect against, control and provide public health response to the International spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with International traffic and trade".

3.3. Where any person arriving in Zambia is found to be suffering from any infectious disease, and in the opinion of the Medical Officer under Public Health Act CAP 295 cannot be accommodated or cannot be nursed and treated so as to guard against the

spread of the disease or to promote recovery, the Medical Officer may order the removal of such person to a hospital or place of isolation for such period as may be necessary in the interests of the patient or to prevent spread of infection.
When it is considered necessary for the purpose of preventing the introduction of infectious disease into Zambia, the Medical Officer may :

- a. specified part thereof of any person, or of persons of any specified class or description, or from any specified locality or area;
- b. regulate, restrict or prohibit the introduction into Zambia at its borders or any specified part thereof of any animal, article or thing;
- c. impose requirements or conditions as regards the medical examination, detention, quarantine, disinfection, vaccination, isolation or medical surveillance or otherwise of persons entering Zambia, or the examination, detention or disinfection or otherwise of any article or thing introduced into Zambia at its borders or any part thereof;
- d. apply with or without modifications any particular provisions of this part to persons, animals, articles or things entering or introduced into, departing or removed from Zambia by means of aircraft.

3.4. Any person who contravenes or fails to comply with any such notice shall be guilty of an offence.

GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

1 Customs requirements concerning cargo and other articles

1.1. The following documents are required for the clearance of goods through customs:

1. Bill of entry Customs Forms CE 20.
2. The customs officer may require also form CE 06.

All Air Freight will be cleared at designated Customs aerodromes (see AD 1-1).

All the consignment of Air freight must be accompanied by the approved certificate forms of invoice, commercial invoice and supporting documents.

1.2. As regard to air cargo simply being transhipped from one flight to another flight at the same airport under proper Customs Officer's supervision, NO forms may be entered.

1.3. All air freights destined for places outside Zambia shall only be accepted by aircraft operators when the consignment note has been officially stamped by Customs Officer.

2 Agricultural quarantine requirements

2.1. Sanitary certificate or related documents are required in respect of certain animals and plant shipments. Before shipment of any animals or carcases, seeds, tubers etc operators are requested to inquire from relevant designated authorities (refer GEN 1.1)

3 Requirements for importation and exportation of animals, animal product, by products, articles, animal feed, feed additives and veterinary products.

The Animal Health Act No. 27 of 2010 regulates the importation and exportation of the above-named products through the Department of Veterinary Services. It is compulsory for these products to have Sanitary Certificates, Health Certificates or related documents when these are imported, exported and carried in transit through the Republic of Zambia. These products may be inspected, quarantined, disinfected, destroyed, disposed of or returned to country of origin at the cost of the owner according to the assessment of the Veterinary Officer. The Veterinary Officer shall ensure that the conditions for the entry, transit of the above products are adhered to so as to prevent the introduction of animal diseases and ensure public health. The Veterinary Officer may take samples for further examination from any consignment. The vehicle and/or airplane by which infected consignment has been carried may be subjected to disinfection in a prescribed manner by the Veterinary Official.

The following will be subjected to compulsory sanitary measures and quarantine:

Live Animals or carcasses: these include vertebrates, other than human being, which includes a bee, butterfly, and other insects used in the production of animal products

Animal products: includes any meat, meat product or product of animal origin for human consumption, for use in animal feeding or pharmaceutical or agricultural use, and includes an embryo, ova, semen, blood, bone or bone meal, hide, skin, horn, fat, honey, unprocessed wool and feathers

Animal by products: includes part or entire body of an animal or products of animal origin that are not intended to be eaten by human beings

Article: includes gear, harness, seed, grass, forage, hay, straw, manure or any other thing likely to act as carrier of any disease.

Animal feed: includes substance of plant or animal origin which is intended to feed animals, any condimental food stuff or mineral substance which has nutritive properties, any stock lick or any substance which can be used as stock lick.

Feed additives: any substances that adds nutritive value to animal feed

Veterinary products: includes any medicinal or none medicinal products used for the prevention and control of animal diseases. These will include any products derived from living organisms and/or their products which includes, serum, vaccines, antigens, antitoxins, sample, diagnostic kits

Requirements of all persons

Every person on entering the Republic of Zambia shall be required to make a written or oral declaration with respect to animals, animal products, or any other thing that is the subject of regulations as stipulated above.

Notification of the arrival of regulated materials

The Customs Officials and/or Airport Manager shall notify the Veterinary Officials of an intended or unintended arrival of regulated material under the Animal Health Act as detailed above.

General Requirements

All documents and certificates accompanying imports or exports made under these regulations shall be presented in English language.

All cargo of animal or animal origin as detailed above for import, export or transit shall be clearly labelled to indicate the country of origin, name and address of shipper and name and address of consignor and consignee.

GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

1 General

Commercial air transport aircraft operating within the Republic of Zambia must adhere to the provision of ICAO Annex 6 – Operation of Aircraft, Part 1 – International Commercial Air Transport – Aeroplane, Chapter 6 (Aeroplane Instruments, Equipment and Flight documents) and ZCARS part 7 – Instruments and Equipment

2 Special equipment to be carried

Not Applicable.

3 Requirements for SSR transponder

- 3.1. All aircraft operating in the airspace of Zambia shall be equipped with serviceable Secondary Surveillance Radar (SSR) transponder in accordance with the requirements of ICAO Annex 10 and ZCARS part 7.
- 3.2. Operators of aircraft not equipped with SSR transponder and carrying out special aviation work (agricultural, construction, rescue and training) or performing one-shot flight may operate only on special authorization of the Director General of Civil Aviation Authority.

4 Requirements for ACAS II

- 4.1. All commercial aircraft operating in the airspace in Zambia with maximum certificated take-off mass exceeding 5700 kilograms or authorized to carry more than 19 passengers and non-commercial aircraft with maximum certificated take-off mass exceeding 15000 kilograms or authorized to carry more than 30 passengers shall be equipped with Airborne Collision Avoidance System (ACAS II) in compliance with the requirements of ICAO Annex 10.
- 4.2. Any airborne collision avoidance system installed on an aircraft in Zambia shall be approved by the Civil Aviation Authority.
- 4.3. Each person operating an aircraft equipped with an airborne collision avoidance system shall have that system on and operating.

5 Requirements for RVSM

- a. In respect of groups of aeroplanes that are nominally of identical design and build with respect to all details that could influence the accuracy of height-keeping performance, the height-keeping performance capability shall be such that the Total Vertical Error (TVE) for the group of aeroplanes shall have a mean no greater than 25 m (80 ft) in magnitude and shall have a standard deviation no greater than $28 - 0.013z^2$ for $0 \leq z \leq 25$ when z is the magnitude of the mean TVE in metres, or $92 - 0.004z^2$ for $0 \leq z \leq 80$ where z is in feet. In addition, the components of TVE shall have the following characteristics:
 1. the mean Altimetry System Error (ASE) of the group shall not exceed 25 m (80 ft) in magnitude;
 2. the sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245 ft); and
 3. the differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
- b. In respect of aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraph 1, the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics
 1. the ASE of the aeroplane shall not exceed 60 m (200 ft) in magnitude under all flight conditions; and the differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential
 2. The differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

6 Requirements for PBN/RNAV/RNP

- 6.1. Except for the State aircraft, all aircraft carrying out IFR flights in the controlled airspace in Zambia, except TMAs, shall have and use RNAV equipment based on all sensors meeting RNAV5 navigation specification requirements in accordance with ZCARS part 7.
- 6.2. Flight operations and air traffic control procedures are carried out according to the requirements of ICAO Docs 8168, 4444 and 7030 and Part 7 of the ZCARS.

6.3 Navigation Specification

A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined Required Navigation Performance (RNP) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

7 Equipment and flight documents to be carried by all types of flights

7.1. Instrumental, radio and navigation equipment installed on civil aircraft corresponds to requirement of Chapter 6 and 7 of ICAO Annex 6 and Part 7 of ZCARS.

7.2. The following documents or copies thereof shall be carried on board the aircraft during the flight:

- a. Certificate of Registration of the aircraft;
- b. Certificate of Airworthiness of the aircraft;
- c. Certified copy of the Noise Certificate (if applicable), including an English translation;
- d. Certified copy of the Air Operator Certificate;
- e. the Aircraft Radio Licence
- f. the original or a copy of the Third Party Liability Insurance Certificate(s);
- g. Each flight crew member shall, on each flight, carry a valid flight crew licence with appropriate rating(s) for the purpose of the flight;
- h. the current parts of the Operations Manual(OM) relevant to the duties of the crew are carried on each flight;
- i. those parts of the OM which are required for the conduct of a flight are easily accessible to the crew on board the aeroplane;
- j. the current Aeroplane Flight Manual (AFM);
- k. Operational Flight Plan;
- l. ATS flight plan (FPL);
- m. NOTAM/AIS briefing documentation;
- n. Meteorological information;
- o. Mass and Balance documentation;
- p. Notification of special loads including dangerous goods including written information to the commander;
- q. Cargo manifest, passenger manifest;
- r. Forms to comply with the reporting requirements of the Authority and the Operator;

7.3. Current and suitable maps and charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted.

7.4. Procedures, as prescribed in ICAO Annex 2, for pilots-in-command of intercepted aircraft.

7.5. A list of visual signals for use by intercepting and intercepted aircraft, as contained in ICAO Annex 2.

8 Equipment to be carried on all internal and on certain flights

8.1. On all flights with single-engine and that multi-engine aircraft not capable to maintain the prescribed minimum safe altitude in the event of engine failure, the following emergency equipment shall be carried.

8.2. Signalling equipment:

- a. An Emergency Locator Transmitter (ELT); with frequency of 121.500 MHz.
- b. Two signal flares of the day and night type;
- c. A signal sheet (1x1 m) in a reflecting color;
- d. A knife;
- e. An electric hand torch.

8.3. Survival equipment:

In accordance with ICAO Annex 6, Part 1 and ZCARS Part 7

GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

1 Aviation Acts

- 1.1. National Legislation.
- 1.2. The Air services Act CAP 446 was repealed by the Civil Aviation Act No.5 of 2016.
- 1.3. The Civil Aviation Authority Act No.7 of 2012.
- 1.4. Carriage by Air (CAP 447).
- 1.5. Air Passenger Service Charge Act (CAP 450).
- 1.6. Customs and Excise duty Act (CAP 322).
- 1.7. Immigration and Deportation Act No. 18 of 2010.

2 Notification

Certain rules and regulations require that information relevant to them shall be notified to airmen, aircraft owners and aircraft maintenance engineers and be published as a circular or publication issued by the Director General. These regulations are shown in the following;

Aeronautical Information Publication(AIP)
Aeronautical Information Circular(AIC)
Zambia Civil Aviation Requirements (ZCARs)

3 Civil Air Navigation Regulations

Zambia Civil Aviation Requirements (ZCARs)

4 Air Traffic Regulations

Air Traffic Regulations - Manual Air Traffic Services (MATS Part 1 & 2)

5 International Agreements/Conventions

- 5.1. Convention on International Civil Aviation (Chicago Convention). 7/12/44.
- 5.2. Convention on Unification of Certain Rules Relating to International Carriage by air (The Warsaw Convention). 12/10/29.
- 5.3. International Air Services Transit Agreement. 7/12/44
- 5.4. Convention on offences and Certain Other Acts Committed on Board Aircraft (Tokyo Convention).14/9/63
- 5.5. Convention for Suppression of unlawful Seizure of Aircraft (The Hague Convention). 16/12/70
- 5.6. Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation (Montreal Convention) 23/9/71
- 5.7. Abuja Safety Targets
- 5.8. Yamoussoukro Agreement
- 5.9. Cape Town Convention

6 Miscellaneous

Nil

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GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES**1 Annexes To The Convention On International Civil Aviation**

ANNEX 1 -	Personnel Licensing:
Reference	Nil
ANNEX 2 -	Rules of the air:
Reference 2.2	All flights shall be conducted in accordance with IFR during the hours between sunset and sunrise
3.1.2	Minimum safe height: flights over a city or populous area are prohibited below 1000ft above the highest obstacles within the radius of 2000ft from the aircraft. Flights over public gathering are subject to the specific permission of the Director General and then subject to the condition
3.1.4	Dropping Objects: except for the purpose of navigation or in an emergency or with specific permission from the Director General no object shall be dropped from an aircraft in flight
3.3.1	Submission of flight plans: the filling of flight plans is required for all flights within the Republic of Zambia to facilitate Air Traffic Control and Search and Rescue. For flights from aerodromes with no Air Traffic Control, or Aerodrome Flight Information Service, flight plans may be submitted after takeoff to Lusaka Area Control Centre or to appropriate AFIS station for relay
5.2.2	Within or below the joint Lusaka/Ndola TMA all flights (whether IFR or VFR) north of latitude of Kenneth Kaunda International (15° 20' S) up to Ndola latitude 12° 59' S will be allocated flight levels as shown in the table below

MAGNETIC TRACK	
270°-089°	090°-269°
THROUGH NORTH	THROUGH SOUTH
<u>FLIGHT LEVELS</u> 70 90 110 130 150 170 etc	<u>FLIGHT LEVELS</u> 60 80 100 120 140 160 etc
NOTE:	at or above flight level 245 the normal semi-circular rule of flight level allocation will apply. All flights below FL070 in the joint Lusaka/Ndola TMA will be operated under VFR only. Flights within the joint Lusaka/Ndola TMA maybe operated under VFR/IFR with 1000ft between them.

ANNEX 3 -	Meteorological service for international air navigation:
Reference 4.6	Runway Visual Range observations are not provided at present.
ANNEX 4 -	Aeronautical charts
Reference	NIL
ANNEX 5-	Units of measurements to be used in air and ground operations
Reference	Nil
ANNEX 6 -	Operation of aircraft
Reference	Reference 1.4.3.9.1 For flights between 700 and 620Hpa(10000 and 13000feet) carriage of oxygen is compulsory only for crew members.
ANNEX 7-	Aircraft nationality and registration marks
Reference	Nil
ANNEX 8-	Airworthiness of aircraft
Reference	Nil

ANNEX 9-	Facilitation
Reference	2.12 Cargo Manifest required
	2.13 Presentation of Passenger Manifest Necessary
ANNEX 10	Aeronautical telecommunications
-	
Reference	Nil Volume III Part I - Digital Data Communications Systems Part II - Voice Communications Systems
Reference	Nil Volume IV Surveillance Radar and Collision Avoidance Systems
Reference	Nil
ANNEX 11	Air traffic services
-	
Reference	Nil
ANNEX 12	Search and rescue
-	
Reference	Nil
ANNEX 13	Aircraft accident investigation
-	
Reference	Nil
ANNEX 14	Aerodromes
-	
Reference	Volume I - Aerodrome Design and Operations Nil
ANNEX 15	Aeronautical information services
-	
Reference	Nil
ANNEX 16	Environmental protection
-	
Reference	Nil Volume I - Aircraft noise
Reference	Nil
ANNEX 17	Security - Safeguarding international civil aviation against acts of unlawful interference
-	
Reference	Nil
ANNEX 18	The safe transport of dangerous goods by air
-	
Reference	Nil
ANNEX 19	Safety management
-	
Reference	Nil

2 Adherence to ICAO Documents**B. - PROCEDURES FOR AIR NAVIGATION SERVICE**

8400	ICAO Abbreviations and Codes Nil
8168	PANS OPS-Aircraft operations: Volume I - Flight procedures Volume II - Construction of visual and instrument flight procedures Nil
4444	Air Traffic Management Nil
7030/4	Regional supplementary procedures Nil

C. - AIR NAVIGATION

AIS - Aeronautical information and charts	
7101	Aeronautical chart catalogue Nil
7383	Aeronautical information services provided by states Nil
8126	Aeronautical information services manual Nil
8643	Aircraft type designators Nil
8697	Aeronautical chart manual Nil
COM - Communications	
7910	Location indicators Nil
8585	Designators for aircraft operating agencies, aeronautical authorities and services Nil
OPS/AIR - Operations/Airworthiness	
9284	Technical instructions for the safe transport of dangerous goods by air Nil

D. - MISCELLANEOUS PUBLICATIONS

9294	ICAO Lexicon - Volume I - Vocabulary Nil
9569	Definitions contained in the convention on international civil aviation , the Annexes thereto and the procedures for air navigation services Nil

NOTE: ICAO Standards, Recommended Practices and Procedures listed above are applied in The Republic of Zambia.

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GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, LEGAL HOLIDAYS**1 Units of measurement**

The following table of units shall be used in all communication with ATS units within Lusaka FIR for all air and ground operations. Deviations from the table will only be accepted on request from aircraft temporarily unable to make use of the units specified.

Dimensions Required	Unit
Distance used in navigation	Nautical miles and tenths
Relatively short distances	Metres
Runways, Taxiways etc.	Feet (1) metres (2)
Altitudes Elevations, Height i.e Vertical Distances.	
Horizontal speed	Knots
Vertical speed	Feet per minute (1) Metres /second (2)
Wind speed	Knots
Wind direction for landing and Take-off	Degrees magnetic
Wind direction for all other purposes	Degrees true
Cloud altitude and height	Feet (1) Metres (2)
Visibility	Metres, Kilometres
Altimeter setting	Hecto pascals
Temperature	Centigrade (Celsius)
Weight	Kilograms
Time	Hours, minutes and seconds, (the day of 24 hours beginning at midnight UTC)

2 Temporal Reference System

Coordinated Universal Time (UTC) is used in the air traffic, communication and meteorological services and in documents published by the Aeronautical Information Services.

3 Horizontal Reference System**3.1 Name/designation of datum**

All published geographical co-ordinates indicating Latitude and Longitude are expressed in terms of the World Geodetic System 1984 (WGS-84).

3.2 Area of application

The area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire territory of the Republic of Zambia (Lusaka Flight Information Region).

3.3 Use of an astrisk to identify published geographical coordinates

An asterisk (*) will be used to identify those published geographical coordinates which have been transformed into WGS-84 coordinates published through out the entire FIR from FL245 to unlimited.

4 Aircraft nationality and registration marks

The nationality mark of Zambian civil aircraft consists of the figure 9 and the letter J- 9J. The nationality mark is followed by a hyphen- and a registration mark consisting of three letters. Example 9J-DCA or CAA

5 Public holidays

Public Holidays

Name of holiday	Day
New Years Day	01 January
International Womens day	08 March
Youth Day	12 March
Good Friday	29 March
Holy Saturday	30 March
Easter Monday	01 April
Kenneth Kaunda Day	28 April

Name of holiday	Day
Labour Day	01 May
Africa Freedom Day	25 May
Heroes Day	01 July
Unity Day	02 July
Farmers Day	05 August
Day of National Prayer, Fasting and Reconciliation	18 October
Independence Day	24 October
Christmas Day	25 December

Note:1 Some administrative services may not be available and banks and other institutions may not be open from Noon of 23rd October, 24th and 31st December.

Note:2 Easter Holidays may come on different dates depending on the synchronisation with Religious Calendar

GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

A		A	
A	Amber	ALT	Altitude
AAA	(or AAB, AAC ...etc in sequence) Amended Meteorological message (message type designator)	ALTN	Alternate or Alternating (light alternates in the colour)
A/A	Air-to-Air	AMA	Area Minimun Altitude
AAL	Above aerodrome level	AMD	Amend or amended (used to indicate amended Meteorological message; type designator)
ABM	Abeam	AMDT	Amendments (AIP Amendment)
ABT	About	AMS	Aeronautical mobile service
AC	Altocumulus	AMSL	Above mean sea level
ACAS+	Airbourne collision avoidance system	AMSS	Aeronautical mobile satellite service
ACC++	Area control centre or area control	ANS	Answer
Accid	Notification of aircraft accidents	AOC	Aerodrome Obstacle Chart
ACFT	Aircraft	AP	Airport
ACK<	Acknowledge	APCH	Approach
ACL	Altimeter check location	APP	Approach Control Office or Approach Control or Approach Control service
ACN	Aircraft Classification Number	APR	April
ACP	Acceptance (message type designator)	APRX	Approximate or approximately
ACPT	Active or Activated or Activity	APSG	After passing
AD	Aerodrome	APV	Approve or approved or approval
ADA	Advisory Area	ARFOR	Aerial forecast (in aeronautical Meteorological code)
ADDN	Addition or Additional	ARNG	Air Traffic service Reporting office
ADF++	Automatic Direction Finding Equipment	ARO	Air Traffic service Reporting office
ADIZ	(to be pronounced "AY-DIZ") Air	ARP	Aerodrome reference point
ADJ	Adjacent	ARP	Air-Report (Message type designator)
ADR	Advisory Route	ARQ	Automatic Area Correction
ADS	Automatic Dependence Surveillance	ARR	Arrive or Arrival
ADSU	Automatic Dependence Surveillance Unit	ARR	Arrival (message type designator)
ADVS	Advisory service	ARS	Special Air Report (message type designator)
ADZ	Advise	ASRT	Arresting (specify part of) aircraft arresting equipment
AES	Aircraft Earth Service	AS	Altostratus
AFIL	Flight Plan Filed in the air	ASC	Ascent or ascending to
AFIS	Aerodrome Flight Information Service	ASDA	Accelerate stop distance available
AFM	Yes or Affirm or Affirmative or that	ASPH	Asphalt
	Is correct		
AFS	Aeronautical Fixed Service	AT...	At (followed by time at which weather change is forecast to occur)
AFT	After ... (time or place)	ATA++	Actual time of arrival
AFTN++	Aeronautical Fixed Telecommunication Network	ATC++	Air Traffic Control (in general)
A/G	Air-to-Ground	ATD	Actual time of departure
AGA	Aerodromes, air routes and ground Aids	ATFM	Air traffic flow management
AGL	Above Ground Level	ATIS	Aeroautical telecommunications network
AGN	Again	ATM	Air Traffic Management
AIC	Aeronautical Information Circular	ATN	Aeronautical telecommunications network
AIP	Aeronautical Information Publication	ATP	AT... (time or place)
AIRAC	Aeronautical Information regulation and Control	ATS	Air Traffic Services
AIREP	Air Report	ATTN	Attention
AIS	Aeronautical Information Service	ATZ	Aerodrome Traffic Zone
ALA	Alighting Area	AUG	August
ALERFA	Alert phase	AUTH	Authorised or authorisation
ALR	Alerting (message type designator)	AUW	All up weight
ALRS	Alerting Service	AUX	Auxiliary

ALS	Approach lighting system	AVASIS	Abbreviated visual approach slope indicator system
		AVBL	Available or availability
A		C	
AVG	Average	CIT	Near or over large towns
AVGAS	Aviation gasoline	CIV	Civil
AWTA	Advise at what time able	CK	Check
AWY	Airways	CL	Centre line
AZM	Azimuth	CLA	Clear type of ice formation
		CLBR	Calibration
B		CLD	Cloud
B	Blue	CLG	Calling
BA	Braking action	CLR	Clear (s) or clear to...or clearance
BASE	Cloud base	CLSD	Close or closed or closing
BCFG	Fog patches	CM	Centimetres
BCM	Beacon (aeronautical ground light)	CMB	Climb to or climbing to
BCST	Broadcast	CMPL	Completion or completed or complete
BDRY	Boundary	CNL	Flight plan cancellation (message type designator)
BECMG	Becoming	CNS	Communication, navigation and surveillance
BFR	Before	COM	Communications
BKN	Broken	CONC	Concrete
BL...	Blowing (followed by DU=Dust, SA=sand or SN=snow)	COND	Condition
BLDG	Building	CONS	Continuous
BLO	Below clouds	CONST	Construction or constructed
BLW	Below....	CONT	Continue(s) or continued
BOMB	Bombing	COOR	Co-ordinate or co-ordination
BR	Mist	COP	Change of point
BRF	Short(used to indicate the type of approach desired or required)	COR	Correct or correction or corrected(used to indicate corrected Meteorological message type designator)
BRG	Bearing	COT	At the cost
BRKG	Braking	COV	Cover or covered or covering
BS	Commercial broadcasting station	CPL	Current flight plan (message type designator)
BTL	Between layers	CRZ	Cruise
BTN	Between	CS	Cirrostratus
C		CTA	Control Area
C	Centre (runway identification)	CTAM	Climb to and maintain
C	Degrees Celsius (Centigrade)	CTC	Contact
CAT	Category	CTL	Control
CAA	Civil Aviation Authority	CTN	Caution
CAT	Clear air turbulence	CTR	Control Zone
CAVOK	(to be pronounced "KAH-OH-KAY") Visibility, cloud and present weather better than prescribed values or conditions.	CU	Cumulus
CB++	(to be pronounced ("CEE BEE") Cumulonimbus	CUST	Customs
CC	Cirrocumulus	CV FR	Controlled VFR Flight
CCA	(or CCB,CCC...etc,in sequence) corrected Meteorological message (message type designator)	CW	Continuous wave
CD	Candela	CWY	Clear way
CDA	Co-ordination (message designator)	D	
CF	Change frequency to...	D	Danger area (followed by identification)
CGL	circling guidance light (s)	D	Downward (tendency in RVR during previous 10 minutes)
CH	Channel	DA	Decision altitude
CHG	Modification (message type designator)	DCD	Double channel duplex

CI	Cirrus
CIDIN	Common ICAO data interchanged network

D		E	
DCKG	Docking	ELEV	Elevation
DCS	Double channel simplex	ELR	Extra Long Range
DCT	Direct (in relation to flight plan clearances and types of approach)	EM	Emmission
DEC	December	EMBD	Embedded in a layer (to indicate cumulonimbus embedded in layers of other clouds)
DEG	Degrees	EMERG	Emergency
DENE	Fog dispersal operations	END	Stop- end (relative to RVR)
DEP	Depart or departure	ENE	East north east
DES	Descend to or descending to	ENG	Engine
DEST	Destination	ENR	EN-route
DETRES-	Distress phase	EOBT	Estimate off – block time
FA			
DEV	Deviation or deviating	EQPT	Equipment
DFTI	Distance from touchdown indicator	ER	Here...or herewith
DH	Decision height	ESE	East south east
DIF	Diffuse	EST	Estimate or estimated or estimating (message type designator)
DIST	Distance	ETA++	Estimated time of arrival or estimating arrival
DIV	Divert or diverting	ETD++	Estimated time departure or estimating departure
DLA	Delay (message type designator)	ETO	Estimated time over significant point
DLA	Delay or delayed	EV	Every
DME++	Distance measuring equipment	EXC	Except
DNG	Danger or dangerous	EXER	Exercises or exercising or to exercise
DOM	Domestic	EXP	Expect or expected or expecting
DP	Dew point temperature	EXTD	Extend or extending
DPT	Depth		
DR	Dead reckoning	F	
DR...	Low drifting (followed by DU= Dust, SA= Sand or SN= Snow	F	Fixed
DRG	During	FAC	Facilities
DS	Duststorm	FAF	Final approach fix
DSB	Double sideband	FAL	Facilitation of international air transport
DTAM	Descend To And Maintain	FAP	Final approach point
DTG	Date- Time Group	FATO	Final Approach and take-off Area
DTRT	Deteriorate or Deteriorating	FAX	Facsimile transmission
DTW	Dual tandem wheels	FBL	FBL light (used to indicate the intensity of weather phenomena, interface or reports, eg. FBL RA = light rain)
DU	Dust	FC	Funnel cloud (Tornado or water spout)
DUC	Dense Upper Cloud	FCST	Forecast
DUR	Duration	FCT	Friction coefficient
DVOR	Doppler VOR	FEB	February
DW	Dual Wheels	FG	Fog
DZ	DrizzleE	FIC	Fighting Information Centre
		FIR++	Flight Information Region
E		FIS	Flight Information Service
E	East or Eastern Longitude	FISA	Automated flight information service
EAT	Expected Approach Time	FL	Flight level
EB	East Bound	FLD	Field
EET	Estimated Elapsed Time	FLG	Flashing
EFC	Expected Further Clearance	FLR	Flares

EHF	Extra High Frequency (30,000 to 300,00 MHz)	FLT	Flight
ELBA	Emergency Location Beacon Aircraft	FLTCK	Flight check
F			H
FLUC	Fluctuating or fluctuation or fluctuated	H24	Continuous day and night service
FLW	Follow (s) or following	HAPI	Helicopter approach path indicator
FLY	Fly or flying	HBN	Hazard beacon
FM	From	HDF	High frequency direction –finding station
FM...	From (followed by time weather change is forecast to begin)	HDG	Heading
FMU	Floor management unit	HEL	Helicopter
FNA	Final approach	HF++	High frequency (3, 000 to 30,000 KHz)
FPL	Filed flight plan (message type designator)	HGT	Height or height above
FPM	Feet per minute	HJ	Sunrise to Sunset
FPR	Flight plan route	HO	Service available to meet operational Requirements
FR	Fuel remaining	HOL	Holiday
FREQ	Frequency	HOSP	Hospital aircraft
FRI	Friday	HPA	Hectopascal
FRNG	Firing	HR	Hour
FRONT	Front (relating to weather)	HRS(*)	Hours
FRQ	Frequent	HS	Service available during hour of scheduled operations
FSL	Full stop landing	HURCN	Hurricane
FSS	Flight Service Station	HBDF	High and very high frequency direction-finding stations (at the same location)
FST	First	HVY	Heavy
FT	Feet dimensional unit	HVY	Heavy (used in indicating intensity or weather phenomena, eg. HVYRA = heavy rain)
FU	Smoke	HX	No specific working hours
FZ	Freezing	HYR	Higher
FZDZ	Freezing drizzle	HZ	Hertz (cycle per second)
FZFG	Freezing fog		
FZRA	Freezing rain	I	
G			
G	Green	IAC	Instrument approach chart
GA(*)	Go ahead resume sending	IAF	Initial approach fix
G/A	Ground-to –air	IAO	In and out of clouds
G/A/G	Ground-to-air-and air-to-ground	IAR	Intersection of air routes
GCA++	Ground controlled approach system for ground controlled approach	IAS	Indicated air speed
GEN	General	IBN	Identification Beacon
GEO	Geographic or True	IC	Diamond dust (very small ice crystals in suspension)
GES	Ground earth station	ICAO(*)	International Civil Aviation Organisation
GND	Glider	ICE	Icing
GNDCK	Ground check	ID	Identifier or identify
GNSS	Global navigation satellite system	IDENT	Identification
GP	Glide path	IF	Intermediate approach fix
GPS(*)	Global positioning system	IFF	Identification friend/foe
GR	Hail	IFR	Instrument flight rules
GRASS	Grass landing area	IGA	International General Aviation
GRID	Processed Meteorological data in the form of grid point value (Aeronautical Meteorological code)	ILS++	Instrument landing system
GRVL	Gravel	IM	Inner marker
GS	Ground speed	IMC++	Instrument Meteorological Conditions
		IMG	Immigration
		IMPR	improve or improving

GS	Small hail and /or snow pellets	IMT	Immediate or immediately
G/S(*)	Glide slope	INA	Initial approach

I		L	
INBD	Inbound	LGT	Light or lighting
INC	IN cloud	LGTD	Lighted
INCERFA	uncertainty phase	LIH	Light intensity high
INFO	Information	LIL	Light intensity low
INOP	Inoperative	LIM	Light intensity medium
INC	If not possible	LLZ	Localiser
INPR	In progress	LM	Locator, middle
INS	Inertial navigation system	LMT	Local mean time
INSTL	Install or installed or installation	LNG	Long(used to indicate the type of approach desired or required)
INSTR	instrument	LO	Locator, outer
INT	Intersection	LOC	Local or locally or location or located
INTL	International	LONG	Longitude
INTGR	Interrogator	LORAN	LORAN (long range air navigation system)
INTRP	Interrupting or interruption or interrupted	LR	The last message received by me was..
INTSF	Intensify or intensifying	LRG	Long range
INTST	intensity	LS	The last message sent by me was
IR	Ice on runway	LSQ	Line squall
ISA	International standard atmosphere	LTD	Limited
ISB	Independent sideband	LT	Landing teletypewriter
ISOL	Isolated	LV	Light and variable (relating to wind)
		LVE	Leave or leaving
J		LVL	Level
JAN	January	LYR	Layer or layeredM
JTST	Jet Stream		
JUL	July	M	
JUN	June	M	Metres (preceded by figures)
		MAA	Maximum authorised altitude
K		MAG	Magnetic
KG	Kilogram	MAINT	Maintenance
KGS(*)	Kilograms	MAP	Aeronautical maps and charts
KHZ	Kilohertz	MAPT	Missed approach point
KM	Kilometre	MAR	At sea
KMS(*)	Kilometres	MAR	March
KMH	Kilometre Per Hour	MAS	Manual AL simplex
KPA	Kilopascal	MAX	Maximum
KT	Knot	MAY	May
KTS(*)	Knots	MCA	Minimum crossing altitude
KW	Kilowatts	MCW	Modulated continuous wave
		MDA	Minimum descent altitude
L		MDA	Medium frequency direction-finding station
L	Left (runway identification)	MDH	Minimum descent height
L	Locator (see LM>LO)	MEA	Minimum en-route altitude
LAM	Logical acknowledgement (message type designator)	MEHT	Minimum eye height over threshold(for visual approach slope indicator systems)
LAN	Inland	MET	Meteorological or Meteorology
LAT	Latitude	METAR	Aviation routine weather report (aeronautical meteorological code)
LDA	Landing distance available	MF	Medium frequency (300 to 3000KHz)
LDAH	Landing distance available,helicopter	MHDF	Medium and high frequency direction-finding stations (at the same location)

LDG	Landing	MH VDF	Medium, high and very high frequency direction-finding station (at the same location)
LDI	Landing direction indication	MHZ	Megahertz
LEN	Length	MID	Mid-point (related to RVR)
LF	Low frequency (30 to 300KHz)	MIFG	Shallow fog
M		N	
MIL	Military	NEB	North- eastbound
MIN++	Minutes	NEG	No or negative or permission not granted or that is not correct
MKR	Marker radio beacon	NGT	Night
MLS++	Microwave landing system	NIL	None or I have nothing to send to you
MM	Middle maker	NM	Nautical miles
MNM	Minimum	NML	Normal
MNPS	Minimum navigation performance specifications	NNE	North north east
MNT	Monitor or monitoring or monitored	NNW	North north west
MNTN	maintain	NOF	International NOTAM office
MOA	Military operating area	NOSIG	No significant change (used in trend-type landing forecasts)
MOC	Minimum obstacle clearance (required)	NOTAM	A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure, or hazard, the timely knowledge of which is essential to personal concerned with flight operations
MOD	Moderate (used to indicate the intensity of weather phenomena, interference or static reports eg. MODRA = moderate rain)	NOV	November
MON	Above mountain	NR	Number
MON	Monday	NRH	No reply heard
MONTE	Meteorological operational Telecommunications Network Europe	NS	Nil significant Cloud
MOV	Move or moving or movement	NSW	Nil significant weather
MPS	Metres per second	NW	North- west
MRA	Minimum reception altitude	NWB	North-westbound
MRG	Medium range	NXT	Next
MRP	ATS /MET reporting points		
MS	Minus	O	
MSA	Minimum sector altitude	OAC	Oceanic area control centre
MSL	Mean sea level	OAS	Obstacle assessment surface
MT	Mountain	OBS	Observe or observed or observation
MTU	Metric units	OBSC	Obscure or Obscured or obscuring
MTW	Mountain waves	OCA	Obstacle Clearance Altitude
MVDF	Medium and very high frequency directing-finding stations (at the same location)	OCA	Obstacle Control Area
MWO	Meteorological watch office	OCC	Occasional or Occasionally
MX	Mixed type of ice formation (wide and clear)	OCT	October
		OHD	Overhead
N		OM	Outer marker
N	North or northern latitude	OPA	Opaque, white type of ice formation
N	No distinct tendency (in RVR during previous 10 minute	OPC	Open or opening or opened
NACL(*)	National Airports Corporation Limited	OPMET	Operational Meteorological (information)
NAV	Navigation	OPN	Open or opening or opened
NB	Northbound	ORR	Operated or operated or operative operating or operations
NBFR	Not before	OPSNORM	Operations normal
NC	No change	O/R	On request
NDB++	Non directional radio beacon	ORD	Indication of an order
NE	North-east	OSV	Ocean station vessel

		OTLK	Out look (used in sigmet messages for volcanic ash and tropical cyclones)
O		Q	
OTP	on top	QFE++	Atmosphere pressure at aerodrome elevation (or at runway threshold)
OTS	Organised track system	QFU	Magnetic orientation or runway
OUBD	Out bound	QNH++	Altimeter sub-scale setting to obtain elevation when on the ground
OVC	Overcast	QTE	True bearing
		QUAD	Quadrant
P		R	
P...	Prohibited area (followed identification)	R...	Restricted area (followed by identification)
PALS	Precision approach lighting system(specify category)	R	Red
PANS	Procedures for air navigation services	R...	Right (runway identification)
PAPI	Precision approach path indicator	RA	Rain
PAR++	Precision approach radar	RAC	Rules of the air and air traffic service
PARL	Parallel	RAG	Ragged
PAX	Passenger(s)	RAG	Runway arresting gear
PCD	Proceed or proceeding or proceeded	RAI	Runway alignment indicator
PCN	Pavement classification number	RAIL	Runway alignment indicator lights
PE	Ice pellets	RB	Rescue boat
PER	Performance	RCA	Reach cruising altitude
PERM	Permanent	RCC	Rescue co-ordination centre
PJE	Parachute jumping exercise	RCF	Radio communication failure (message type designator)
PLA	Practice low approach	RCH	Reach or reaching
PLN	Flight plan	RCL	Runway centre line
PLVL	Present level	RCLL	Runway centre line light(s)
PN	Prior notice required	RCLR	Recleared
PNR	Point of no return	RDH	Reference datum height (for ILS)
PO	Dust devils	RDL	Radial
POB	Persons on board	RDO	Radio
POSS	Possible	RE...	Recent (used to describe weather phenomena, e.g RERA= recent rain)
PPI	Planning position indicator	REC	Received or receiver
PPR	Prior permission required	REDL	Runway edge light(s)
PPSN	Present position	REF	Reference to... or refer to..
PRI	Primary	REG	Registration
PRKG	Parking	REIL(*)	Runway end identifier light
PROB	probability	RENL	Runway end light(s)
PROC	Procedure	REP	Report or reporting or reporting point
PROV	Provisional	REQ	Request or requested
PS	Plus	RERTE	Reroute
PSG	Passing	RG	Range (lights)
PSN	Position	RIF	Reclearance in flight
PSP	Pierced steel plank	RITE	Right (direction or turn)
PTN	Procedure turn	RL	Report leaving
PWR	Power	RLA	Replay to
		RLCE	Request level change en-route
		RLLS	Runway lead-in lighting system
Q		RLNA	Request level not available
QBI	Compulsory IFR flight	RMK	Remark
QDM++	Magnetic heading (zero wind)	RNAV	(to be pronounced "AR-NAV") Area navigation
QDR	Magnetic bearing	RNG	Radio range

R		S	
RNP	Required navigation performance ROBEX Regional OPMET bulletin exchange (scheme)	SC	Stratocumulus
ROC	Rate of climb	SCT	Scattered
ROFOR	Route forecast (in aeronautical meteorological code)	SDBY	Stand by
RON	Receiving only	SE	South –east
RPL	Repetitive flight plan	SEB	South – eastbound
RPLC	Replace or replaced	SEC	Seconds
RPS	Radar position symbol	SECT	Sector
RQMNTS	Requirements	SELCAL	Selective calling system
RQP	Request flight plan (message type designator)	SEP	September
RQS	Request supplementary flight plan (message type designator)	SER	Service or servicing or served
RR	Report reaching	SEV	Severe (used e.g. to qualify icing and turbulence reports)
RRA	(or RRB, RRC .. etc, in sequence) Delayed meteorological message (message type designator)	SFC	Surface
RSC	Rescue sub-centre	SG	Snow grains
RSCD	Runway surface condition	SGL	Signal
RSP	Responder beacon	SH...	Showers (followed by RA=rain, SN=snow, PE=ice pallets, GR=hail, GS=small hail and/or snow pallets or snow combinations thereof e.g. showers of rain and snow)
RTD	Delayed (used to indicate delayed meteorological message; message type designator)	SHRASN	shower of rain and snow
RTE	Route	SHF	Super light frequency (3,000 to 30,000 MHz)
RTF	Radiotelephone	SID	Standard instrument departure
RTG	Radiotelegraph	SIF	Selective identification feature
RTHL	Runway threshold light(s)	SIGMET	Information concerning en-route weather phenomena which may affect the safety of aircraft operations.
RTN	Return or returned or returning	SIGWX	Significant weather
RTODAH	Rejected take-off distance available, helicopter	SIMUL	Simultaneous or simultaneously
RTS	Return to service	SIWL	Single isolated wheel load
RTT	Radio teletypewriter	SKC	Sky clear
RTZL	Runway touchdown zone light(s)	SKED	Schedule or scheduled
RUT	Standard regional route transmitting frequencies	SLP	Speed limiting point
RV	rescue vessel	SLW	Slow
RVR++	Runway visual range	SMC	Surface movement control
RWY	Runway	SMR	Surface movement radar
		SN	Snow
S		SNOW-TAM	A special NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow slush and ice of the movement area, by means of a specific format.
S	South of southern latitude	SPECI	Aviation selected special weather report (in aeronautical Meteorological code)
SA	Sand	SPECIAL	Special meteorological report (in abbreviated plain language)
SALS	Simple approach lighting system	SPL	Supplementary flight plan (message type designator)
SAN	Sanitary	SPOT	Spot wind
SAP	As soon as possible	SQ	Squall
SAR	Search and rescue	SR	Sunrise
SARPS	Standards and Recommended Practices ICAO	SRA	Surveillance radar approach
SAT	Saturday	SRE	Surveillance radar element or precision approach radar system
SATCOM	Satellite communication	SRG	Short range

SB	South bound	SRR	Search and rescue region
----	-------------	-----	--------------------------

S		T	
SRY	Secondary	TEND	Trend forecast
SS	Sand storm	TFC	Traffic
SS	Sun set	TGL	Touch-and-go landing
SSB	Single side band	TGS	Taxiing guidance system
SSE	South south east	THR	Threshold
SSR++	Secondary Surveillance Radar	THU	Thursday
SST	Supersonic transport	TIL	Until
SSW	South south west	TIP	Until past... (place)
STAR	Standard instrument arrival	TKOF	Take-off
STD	Standard	TL...	Till (followed by time which weather change is forecast to end)
STF	Stratiform	TLOF	Touch-down and lift-off area
STN	station	TLX	Telex
STNR	Stationery	TMA++	Terminal control area
STOL	Short take-off and landing	TNA	Turn altitude
STS	Status	TOH	Turn height
STWL	Stopway light(s)	TO	TO... (place)
Subject:	Subject to	TOC	Top of climb
SUN	Sunday	TODA	Take off distance available
SUP	Supplementary (AIP Supplement)	TODAH	Take off distance available, helicopter
SUPPS	Regional Supplementary procedures	TOP	Cloud top
SVC	Service message	TORA	Take-off run available
SVCBL	Serviceable	TP	Turning point
SVFR(*)	Special visual flight rules	TR	Track
SW	South – west	TRA	Temporal reserved air space
SWB	South-west bound	TRANS	Transmits or transmitter
SWY	Stop-way	TRL	Transition level
T		TROP	Tropopause
T		TS	Thunderstorm(in aerodrome reports and forecast, TS used alone means thunder heard but no precipitation at the aerodrome)
T	Temperature	TS	Thunderstorm (followed by RA = rain, SN=snow, PE=ice pallets, GR=hail, GS=small hails and/or snow pallets or combinations thereof e.g. TRSASN= thunderstorms with rain and snow)
TA	Transition altitude	TT	Teletypewriter
TACAN	UHF Tactical air navigation aid	TUE	Tuesday
TAF	Aerodrome forecast	TURB	Turbulence
TAIL	Tail wind	TVOR	Terminal VOR
TAR	Terminal area surveillance radar	TWR	Aerodrome control tower or aerodrome control
TAS	True air speed	TWY	Taxiway
TAX	Taxiing or taxi	TWYZ	Taxiway-zone
TC	Tropical cyclone	TYP	Type of aircraft
TCU	Towering cumulus	TYPH	Typhoon
TDO	Tornado	U	Upward (tendency in RVR during previous 10 minutes)
TDZ	Touch down zone		
TECR	Technical reason	U	

TEL	Telephone	UAB	Until advised by ...
TEMPO	Temporary or temporal	UAC	Upper area control centre

<u>U</u>	<u>W</u>
UAR	Upper air route
UDF	Ultra high frequency direction-finding station
UFN	Until further notice
UHDT	Unable higher due traffic
UHF++	ultra high frequency (300 to 3,000 MHz)
UIC	upper information centre
UIR++	Upper flight information region
ULR	Ultra long range
UNA	Unable
UNAP	Unable to approve
UNL	Unlimited
UNREL	Unreliable
U/S	Unserviceable
UTA	Upper control area
UTC++	Co-ordinated universal time
<u>V</u>	<u>WIP</u>
VA	Volcanic ash
VAC	Visual approach chart
VAL	In valleys
VAN	Runway control van
VAR	Magnetic variation
VAR	Visual-aural radio range
VASIS	Visual approach slope indicator system
VC	Vicinity of the aerodrome (followed by FG = fog, FC=funnel cloud, SH=showers, PO=dust and sand whirls, BLDU=blowing dust, BLSA=blowing sand or BLSN=blowing snow, e.g. VCFG=vicinity fog)
VCY	Vicinity
VDF	Very high frequency direction- finding station
VER	Vertical
VFR	Visual flight rules
VHF++	Very high frequency (30 to 300 MHz)
VIP++	Very important person
VIS	Visibility
VLF	Very low frequency (3 to 30 KHz)
VLR	Very long range
VMC++	Visual meteorological condition
VORMET	Meteorological information for aircraft in flight
VOR++	VHF omnidirectional radio range
VORTAC	VOR and TACAN combination
VOT	VOR airborne equipment test facility
VRB	Variable
VSA	By visual reference to the ground
VSP	Vertical speed
VTOL	Vertical take-off and landing
<u>X</u>	<u>WX</u>
<u>Y</u>	<u>Weather</u>
<u>Z</u>	<u>Y</u>
<u>Z</u>	<u>Yellow</u>
<u>Z</u>	<u>Yellow caution zone (runway)</u>
<u>Z</u>	<u>YR</u>
<u>Z</u>	<u>Atmospherics</u>
<u>Z</u>	<u>Cross</u>
<u>Z</u>	<u>Crossbar (of approach lighting system)</u>
<u>Z</u>	<u>XNG</u>
<u>Z</u>	<u>XS</u>
<u>Z</u>	<u>Atmospherics</u>
<u>Z</u>	<u>Y</u>
<u>Z</u>	<u>Yellow</u>
<u>Z</u>	<u>YCZ</u>
<u>Z</u>	<u>YR</u>
<u>Z</u>	<u>Co-ordinated universal time</u>

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GEN 2.3 CHART SYMBOLS

1 Aerodromes

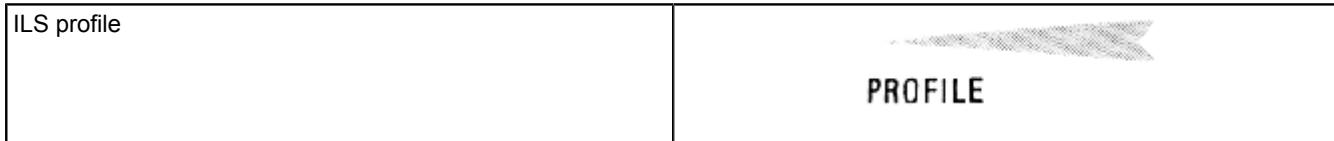
1.1 Charts other than approach charts

Civil (Land)	
Civil (Water)	
Joint civil and military (Land)	
Joint civil and military (Water)	
Military (Land)	
Military (Water)	
Emergency Aerodrome or Aerodrome with no facilities	
Heliport	
Terminal Control Area - TMA	

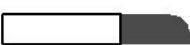
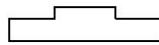
Airway - AWY Controlled Route	
Uncontrolled Route	
Control Zone - CTR	
Advisory Route - ADR	
Scale - break (on ATS route)	
Reporting Point Compulsory	
Reporting Point On Request	
Change Over Point (COP)	
ATS/MET Reporting Point Compulsory	
ATS/MET Reporting Point On Request	

1.2 Approach Charts & Navaids

AD on which the Procedure is based	
AD affecting the traffic pattern on the AD on which the Procedure is based	
Basic radio navigation aid symbol	
Non-directional Radio Beacon - NDB,L	
VHF Omnidirectional Radio-range - VOR	
Distance Measuring Equipment - DME	
collocated VOR and DME radio navigation Aids - VOR/DME	
UHF Tactical air navigation aid - TACAN	
Collocated VOR and TACAN radio navigation Aids - VORTAC	
Compass rose aligned to the magnetic north	
Radio Marker Beacon - Elliptical	
ILS plan view	



2 Aerodrome charts

Hard surface runway	
Unpaved runway	
Stopway	
Taxiways & parking areas	

3 Aerodrome installations and lights

Aerodrome Reference Point - ARP	
VOR check-point	

GEN 2.4 LOCATION INDICATORS

Encode		Decode	
Location	Indication	Indication	Location
AMELIA	FLAI*	FLAA*	KAWA
B-HIGH	FLBH*	FLAB*	KAKUMBI
BALABALA	FLRR*	FLAC*	LWIMBA
BAOBAB PLAINS	FLBP*	FLAG*	KHAL-AMANZI
BAOBAB RIDGE	FLBB*	FLAI*	AMELIA
BLUE LAGOON	FLBL*	FLAM*	CHAMA
CERES	FLCR*	FLAT*	KATETE
CHABWINO	FLCA*	FLBA*	MBALA
CHALATA	FLCB*	FLBB*	BAOBAB RIDGE
CHAMA	FLAM*	FLBH*	B-HIGH
CHIENGI	FLCI*	FLBL*	BLUE LAGOON
CHIFUNDA	FLCF*	FLBM*	MAMBILIMA
CHIKANKATA	FLCK*	FLBP*	BAOBAB PLAINS
CHILANGA	FLCL*	FLBW*	NABWALYA
CHILONGOLO	FLCG*	FLBY*	FLYBY
CHIMBWI	FLCM*	FLCA*	CHABWINO
CHINGOMBE	FLCN*	FLCB*	CHALATA
CHINSALI	FLCS*	FLCC*	CHOCHA
CHIPATA	FLCP	FLCF*	CHIFUNDA
CHOCHA	FLCC*	FLCG*	CHILONGOLO
CHOWA	FLCW*	FLCI*	CHIENGI
CHUNGA	FLCU*	FLCK*	CHIKANKATA
DAMBI HILLS	FLDH*	FLCL*	CHILANGA
DELKINS/LUSIWASI	FLDE*	FLCM*	CHIMBWI
DELTA FARM	FLDF*	FLCN*	CHINGOMBE
DIPALATA	FLDP*	FLCP	CHIPATA
EAST EIGHT	FLEH*	FLCR*	CERES
EAST FIVE	FLEE*	FLCS*	CHINSALI
EAST FOUR	FLED*	FLCU*	CHUNGA
EAST FOURTEEN	FLEN*	FLCW*	CHOWA
EAST ONE	FLEA*	FLDE*	DELKINS/LUSIWASI
EAST SEVEN	FLEG*	FLDF*	DELTA FARM
EAST SIX	FLEF*	FLDH*	DAMBI HILLS
EAST THREE	FLEC*	FLDP*	DIPALATA
EAST TWO	FLEB*	FLEA*	EAST ONE
FARM CENTRE	FLFC*	FLEB*	EAST TWO
FENWOOD	FLFD*	FLEC*	EAST THREE
FIWILA	FLFW*	FLED*	EAST FOUR
FLYBY	FLBY*	FLEE*	EAST FIVE
FULAZA	FLFZ*	FLEF*	EAST SIX
GRASSMERE	FLGM*	FLEG*	EAST SEVEN
HARRY MWAANGA NKUMBULA INTL	FLHN	FLEH*	EAST EIGHT
HILLCREST	FLHC*	FLEN*	EAST FOURTEEN
HIPPO	FLHP*	FLFC*	FARM CENTRE
IKAROS	FLIS*	FLFD*	FENWOOD
INJA	FLIJ*	FLFI	LUSAKA FIR
ISOKA	FLIK*	FLFR*	LUANGWA
JEKI	FLJK*	FLFW*	FIWILA

<i>Encode</i>		<i>Decode</i>	
<i>Location</i>	<i>Indication</i>	<i>Indication</i>	<i>Location</i>
JET EXTREME	FLJM*	FLFZ*	FULAZA
JIFUMPA	FLJP*	FLGA*	MUSUNGA
KABOMPO	FLPO*	FLGE*	MUKINGE HILL
KABWE	FLKW*	FLGM*	GRASSMERE
KAKUMBI	FLAB*	FLGW*	MPONGWE
KALABO	FLKL*	FLHC*	HILLCREST
KALENE HILL	FLKI*	FLHN	HARRY MWAANGA NKUMBULA INTL
KALENGWA	FLKG*	FLHP*	HIPPO
KALOMO	FLLO*	FLIJ*	INJA
KALUMBILA	FLKM*	FLIK*	ISOKA
KALUNDU	FLKD*	FLIL*	MOUNT ISABELLE
KANJA	FLKJ*	FLIS*	IKAROS
KANYAU	FLKU*	FLJK*	JEKI
KAOMA	FLKO*	FLJM*	JET EXTREME
KAPANDA	FLPD*	FLJP*	JIFUMPA
KASABA BAY	FLKY*	FLKA*	KASANKA
KASAMA	FLKS	FLKB*	KAWAMBWA
KASANKA	FLKA*	FLKC*	KASHIMA
KASAVASA	FLKT*	FLKD*	KALUNDU
KASEMPA	FLPA*	FLKE*	KASOMPE
KASHIKISHI	FLKH*	FLKF*	KULEFU
KASHIMA	FLKC*	FLKG*	KALENGWA
KASOMPE	FLKE*	FLKH*	KASHIKISHI
KATETE	FLAT*	FLKI*	KALENE HILL
KAWA	FLAA*	FLKJ*	KANJA
KAWAMBWA	FLKB*	FLKK	KENNETH KAUNDA INTL
KENNETH KAUNDA INTL	FLKK	FLKL*	KALABO
KHAL-AMANZI	FLAG*	FLKM*	KALUMBILA
KOTAKOTA	FLTA*	FLKN*	KYINDU
KULEFU	FLKF*	FLKO*	KAOMA
KYINDU	FLKN*	FLKS	KASAMA
LANDLESS CORNER	FLLN*	FLKT*	KASAVASA
LECHWE	FLLW*	FLKU*	KANYAU
LESA	FLLE*	FLKW*	KABWE
LOCHINVAR	FLLV*	FLKY*	KASABA BAY
LOZA	FLLZ*	FLKZ*	LUKUZI
LUAMPA	FLLU*	FLLA*	LUANSHYA
LUANGWA	FLFR*	FLLB*	LUBOMBO
LUANSHYA	FLLA*	FLLC*	LUSAKA CITY
LUBOMBO	FLLB*	FLLD*	LUNDAZI
LUBONGA	FLLP*	FLLE*	LESA
LUELO	FLLR*	FLLF*	LUFWANYAMA
LUEMBE	FLUB*	FLLG*	LUWINGU
LUENGU (MUKUMPU)	FLLJ*	FLLH*	LUSALI HILLS
LUFWANYAMA	FLLF*	FLLJ*	LUENGU (MUKUMPU)
LUKULU	FLLK*	FLLK*	LUKULU
LUKUZI	FLKZ*	FLLL*	LWELA
LUNDAZI	FLLD*	FLLM*	LUSHIMBA SPRINGS
LUNGA	FLNG*	FLLN*	LANDLESS CORNER

Encode		Decode	
Location	Indication	Indication	Location
LUSAKA CITY	FLLC*	FLLO*	KALOMO
LUSAKA FIR	FLFI	FLLP*	LUBONGA
LUSALI HILLS	FLLH*	FLLR*	LUELO
LUSHIMBA SPRINGS	FLLM*	FLLU*	LUAMPA
LUWINGU	FLLG*	FLLV*	LOCHINVAR
LWELA	FLLL*	FLLW*	LECHWE
LWIMBA	FLAC*	FLLZ*	LOZA
MAAMBA	FLMB*	FLMA	MANSA
MAMBILIMA	FLBM*	FLMB*	MAAMBA
MANO	FLNO*	FLMC*	MASTOCK CHIAWA
MANSA	FLMA	FLMD*	MUSONDA FALLS
MARAAMBA MICROLIGHT	FLMR*	FLMF	MFUWE
MASEBE RANCH	FLYS*	FLMG	MONGU
MASTOCK CHIAWA	FLMC*	FLMH*	MUSHISHIMA
MAWALA	FLWI*	FLMI*	MUNWA NKOZI
MAYFIELD	FLYD*	FLMJ*	MUTEMWA
MAYOBA	FLSR*	FLMK*	MKUSHI
MAZABUKA	FLMZ*	FLML*	MUFULIRA
MAZIBA BAY	FLMY*	FLMM*	MWAMI
MBALA	FLBA*	FLMN*	MENDAWENA
MBIZI	FLZI*	FLMO*	MONZE
MENDAWENA	FLMN*	FLMP*	MPIKA
MFUWE	FLMF	FLMQ*	MULEMBO
MKUSHI RIVER	FLMV*	FLMR*	MARAAMBA MICROLIGHT
MKUSHI	FLMK*	FLMS*	MOSHI
MONGU	FLMG	FLMU*	MULUBEZI
MONZE	FLMO*	FLMV*	MKUSHI RIVER
MOSHI	FLMS*	FLMW*	MWINILUNGA
MOUNT ISABELLE	FLIL*	FLMY*	MAZIBA BAY
MPIKA	FLMP*	FLMZ*	MAZABUKA
MPONGWE	FLGW*	FLNA*	NGOMA
MPOROKOSO	FLPK*	FLNB*	NANDABU
MTENDERE	FLTD*	FLNG*	LUNGA
MUBUYU-NYATI	FLYT*	FLNI*	NGWESHI
MUFULIRA	FLML*	FLNK*	NKAMBA BAY
MUKINGE HILL	FLGE*	FLNL*	NAMWALA
MUKONCHI	FLUK*	FLNO*	MANO
MULEMBO	FLMQ*	FLNU*	MWANYA
MULUBEZI	FLMU*	FLNY*	NYIMBA
MUNWA NKOZI	FLMI*	FLOT*	OTAGO
MUSHISHIMA	FLMH*	FLPA*	KASEMPA
MUSONDA FALLS	FLMD*	FLPD*	KAPANDA
MUSUNGA	FLGA*	FLPE*	PETAUKE
MUTEMWA	FLMJ*	FLPK*	MPOROKOSO
MWALESHI	FLWS*	FLPO*	KABOMPO
MWAMI	FLMM*	FLPP*	PUKU PAN
MWANYA	FLNU*	FLPZ*	PEDZA
MWINILUNGA	FLMW*	FLRA*	RAPID ONE ZERO
MYSTIC	FLTC*	FLRB*	RAPID TWO FIVE

Encode		Decode	
Location	Indication	Indication	Location
NABWALYA	FLBW*	FLRC*	RIVER CLUB
NAMWALA	FLNL*	FLRG*	RUSANGU
NANDABU	FLNB*	FLRO*	ROSA
NGOMA	FLNA*	FLRR*	BALABALA
NGWESHI	FLNI*	FLRU*	RUFUNSA
NKAMBA BAY	FLNK*	FLRZ*	ROYAL ZAMBEZI
NYIMBA	FLNY*	FLSB*	SABLE/MWEMBESHI
OTAGO	FLOT*	FLSC*	SICHIFULO
PEDZA	FLPZ*	FLSE*	SERENJE
PETAUKE	FLPE*	FLSG*	SINAZONGWE
PUKU PAN	FLPP*	FLSH*	SHIWANGANDU
RAPID ONE ZERO	FLRA*	FLSI*	SUN INTERNATIONAL
RAPID TWO FIVE	FLRB*	FLSJ*	SAKEJI
RIVER CLUB	FLRC*	FLSK	SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT
ROSA	FLRO*	FLSN*	SENANGA
ROYAL ZAMBEZI	FLRZ*	FLSO*	SOUTH DOWNS
RUFUNSA	FLRU*	FLSP*	SHEPLY
RUSANGU	FLRG*	FLSR*	MAYOBA
SABLE/MWEMBESHI	FLSB*	FLSS*	SESHEKE
SAKEJI	FLSJ*	FLSW	SOLWEZI
SAMFYA	FLYA*	FLSY*	SIANKABA AIRSTRIP
SENANGA	FLSN*	FLTA*	KOTAKOTA
SERENJE	FLSE*	FLTB*	TURNBULL
SESHEKE	FLSS*	FLTC*	MYSTIC
SHEPLY	FLSP*	FLTD*	MTENDERE
SHIWANGANDU	FLSH*	FLTF*	TAFIKA
SIANKABA AIRSTRIP	FLSY*	FLTI*	TARANAKI
SICHIFULO	FLSC*	FLTO*	TONGABAZI
SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT	FLSK	FLTT*	TAITA FALCON
SINAZONGWE	FLSG*	FLUB*	LUEMBE
SOLWEZI	FLSW	FLUK*	MUKONCHI
SOUTH DOWNS	FLSO*	FLVX*	VIXERS
SUN INTERNATIONAL	FLSI*	FLWA*	WEST ONE
TAFIKA	FLTF*	FLWB*	WEST TWO
TAITA FALCON	FLTT*	FLWC*	WEST THREE
TARANAKI	FLTI*	FLWD*	WEST FOUR
TONGABAZI	FLTO*	FLWE*	WEST FIVE
TURNBULL	FLTB*	FLWF*	WEST SIX
VIXERS	FLVX*	FLWG*	WEST SEVEN
WAKAWAKA	FLWW*	FLWI*	MAWALA
WANGA	FLWN*	FLWN*	WANGA
WEST FIVE	FLWE*	FLWS*	MWALESHI
WEST FOUR	FLWD*	FLWW*	WAKAWAKA
WEST ONE	FLWA*	FLYA*	SAMFYA
WEST SEVEN	FLWG*	FLYD*	MAYFIELD
WEST SIX	FLWF*	FLYS*	MASEBE RANCH
WEST THREE	FLWC*	FLYT*	MUBUYU-NYATI
WEST TWO	FLWB*	FLZB*	ZAMBEZI

Encode		Decode	
<i>Location</i>	<i>Indication</i>	<i>Indication</i>	<i>Location</i>
ZAMBEZI	FLZB*	FLZI*	MBIZI

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GEN 2.5 LIST OF RADIO NAVIGATION AIDS

<i>Identifi-cation</i>	<i>Station name</i>	<i>Facility</i>	<i>Purpose</i>	<i>Station name</i>	<i>Facility</i>	<i>Identifi-cation</i>	<i>Purpose</i>
CO	Simon Mwansa Kapwepwe	DME	A	CHIPATA	NDB	CP	AE
CP	CHIPATA	NDB	AE	KAOMA	NDB	KO	E
KO	KAOMA	NDB	E	KASAMA	L	KS	AE
KS	KASAMA	L	AE	(LUSAKA)	NDB	LY	A
KT	SOUTH-DOWNS (KITWE)	NDB	A	LIVINGS-TONE	NDB	LZ	A
LE	LUSAKA	NDB	A	LIVINGS-TONE	VOR/DME	VLI	AE
LN	LUSAKA	NDB	A	LUSAKA	NDB	LE	A
LW	LUSAKA	NDB	A	LUSAKA	NDB	LN	A
LY	LILAYI (LUSAKA)	NDB	A	LUSAKA	VOR/DME	LW	A
LZ	LIVINGS-TONE	NDB	A	LUSAKA	VOR/DME	VLS	AE
MA	MANSA	NDB	AE	MANSA	NDB	MA	AE
MF	MFUWE	NDB	A	MFUWE	INTER-NATIONAL AIRPORT	VMF	AE
MG	MONGU	L	A	MFUWE	NDB	MF	A
SW	SOLWEZI	NDB	A	MONGU	L	MG	A
VLI	LIVINGS-TONE	VOR/DME	AE	NDOLA	VOR/DME	VND	E
VLS	LUSAKA	VOR/DME	AE	SOLWEZI	NDB	SW	A
VMF	MFUWE	VOR/DME	AE	SOUTH-DOWNS (KITWE)	NDB	KT	A
VND	INTER-NATIONAL AIRPORT	VOR/DME	E	Simon Mwansa Kapwepwe	DME	CO	A

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GEN 2.6 CONVERSION TABLES

NM to KM		KM to NM 1KM = 0.54 NM		FT to M		M to FT	
1 NM = 1.852 KM				1 FT = 0.3048M		1 M = 3.281 FT	
NM	KM	KM	NM	FT	M	M	FT
0.1	0.185	0.1	0.05	1	0.305	1	3.28
0.2	0.37	0.2	0.11	2	0.61	2	6.56
0.3	0.556	0.3	0.16	3	0.914	3	9.84
0.4	0.741	0.4	0.22	4	1.219	4	13.12
0.5	0.926	0.5	0.27	5	1.524	5	16.4
0.6	1.111	0.6	0.32	6	1.829	6	19.69
0.7	1.296	0.7	0.38	7	2.134	7	22.97
0.8	1.482	0.8	0.43	8	2.438	8	26.25
0.9	1.667	0.9	0.49	9	2.743	9	29.53
1	1.852	1	0.54	10	3.048	10	32.81
2	3.704	2	1.08	20	6.096	20	65.62
3	5.556	3	1.62	30	9.144	30	98.43
4	7.408	4	2.16	40	12.192	40	131.23
5	9.26	5	2.7	50	15.24	50	164.04
6	11.112	6	3.24	60	18.288	60	196.85
7	12.964	7	3.78	70	21.336	70	229.66
8	14.816	8	4.32	80	24.384	80	262.47
9	16.668	9	4.86	90	27.432	90	295.28
10	18.52	10	5.4	100	30.48	100	328.08
20	37.04	20	10.8	200	60.96	200	656.17
30	55.56	30	16.2	300	91.44	300	984.25
40	74.08	40	21.6	400	121.92	400	1 312.34
50	92.6	50	27	500	152.4	500	1 640.42
60	111.12	60	32.4	600	182.88	600	1 968.50
70	129.64	70	37.8	700	213.36	700	2 296.59
80	148.16	80	43.2	800	243.84	800	2 624.67
90	166.68	90	48.6	900	274.32	900	2 952.76
100	185.2	100	54	1 000	304.8	1 000	3 380.84
200	370.4	200	107.99	2 000	609.6	2 000	6 561.68
300	555.6	300	161.99	3 000	914.4	3 000	9 842.52
400	740.8	400	215.98	4 000	1 219.200	4 000	13 123.36
500	926	500	269.98	5 000	1 524.000	5 000	16 404.20
				6 000	1 828.800		
				7 000	2 133.600		
				8 000	2 438.400		
				9 000	2 743.200		
				10 000	3 048.000		

From decimal minutes of an arc to seconds of an arc

MIN	SEC	MIN	SEC	MIN	SEC	MIN	SEC
0.01	0.6	0.26	15.6	0.51	30.6	0.76	45.6
0.02	1.2	0.27	16.2	0.52	31.2	0.77	46.2
0.03	1.8	0.28	16.8	0.53	31.8	0.78	46.8
0.04	2.4	0.29	17.4	0.54	32.4	0.79	47.4
0.05	3	0.3	18	0.55	33	0.8	48
0.06	3.6	0.31	18.6	0.56	33.6	0.81	48.6
0.07	4.2	0.32	19.2	0.57	34.2	0.82	49.2
0.08	4.8	0.33	19.8	0.58	34.8	0.83	49.8
0.09	5.4	0.34	20.4	0.59	35.4	0.84	50.4
0.1	6	0.35	21	0.6	36	0.85	51
0.11	6.6	0.36	21.6	0.61	36.6	0.86	51.6
0.12	7.2	0.37	22.2	0.62	37.2	0.87	52.2
0.13	7.8	0.38	22.8	0.63	37.8	0.88	52.8

0.14	8.4	0.39	23.4	0.64	38.4	0.89	53.4
0.15	9	0.4	24	0.65	39	0.9	54
0.16	9.6	0.41	24.6	0.66	39.6	0.91	54.6
0.17	10.2	0.42	25.2	0.67	40.2	0.92	55.2
0.18	10.8	0.43	25.8	0.68	40.8	0.93	55.8
0.19	11.4	0.44	26.4	0.69	41.4	0.94	56.4
0.2	12	0.45	27	0.7	42	0.95	57
0.21	12.6	0.46	27.6	0.71	42.6	0.96	57.6
0.22	13.2	0.47	28.2	0.72	43.2	0.97	58.2
0.23	13.8	0.48	28.8	0.73	43.8	0.98	58.8
0.24	14.4	0.49	29.4	0.74	44.4	0.99	59.4
0.25	15	0.5	30	0.75	45		

From seconds of an arc to decimal of an arc

SEC	MIN	SEC	MIN	SEC	MIN	SEC	MIN
1	0.02	16	0.27	31	0.52	46	0.77
2	0.03	17	0.28	32	0.53	47	0.78
3	0.05	18	0.3	33	0.55	48	0.8
4	0.07	19	0.32	34	0.57	49	0.82
5	0.08	20	0.33	35	0.58	50	0.83
6	0.1	21	0.35	36	0.6	51	0.85
7	0.12	22	0.37	37	0.62	52	0.87
8	0.13	23	0.38	38	0.63	53	0.88
9	0.15	24	0.4	39	0.65	54	0.9
10	0.17	25	0.42	40	0.67	55	0.92
11	0.18	26	0.43	41	0.68	56	0.93
12	0.2	27	0.45	42	0.7	57	0.95
13	0.22	28	0.47	43	0.72	58	0.97
14	0.23	29	0.48	44	0.73	58	0.98
15	0.25	30	0.5	45	0.75		

GEN 2.7 TABLES OF BEGINNING OF CIVIL MORNING TWILIGHT / END OF CIVIL EVENING TW**1 General**

The tables on the following pages have been prepared by the Zambian Meteorological observatory and are reproduced here with their permission. The tables include (8) public airports/heliports.

1.1. The times in the tables are given in UTC for the beginning of civil morning twilight from sunrise (SR) to sunset (SS) and end of civil evening twilight for the years from 2012 to 2021.

1.2. The times given for the beginning of civil morning twilight and end of civil evening twilight are calculated for an altitude of the sun 6° above and 6° below the horizon, as commonly used.

The tables are calculated for the year 2017, which is used as an "Average Year" for the years from 2012 to 2021.

1.3. In this period, the times on the arbitrary date and place will deviate less than 2 minutes from the times on the same date and place in the "Average Year".

2 Alphabetical Index of Aerodromes

Location	Page	Location	Page
CHIPATA/Chipata	GEN 2.7 - 2	MFUWE/Mfuwe	GEN 2.7 - 7
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LIVINGSTONE/Harry Mwanga Nkumbula International Airport	GEN 2.7 - 4	NDOLA/Simon Mwansa Kapwepwe International Airport	GEN 2.7 - 9
LUSAKA/Kenneth Kaunda International Airport	GEN 2.7 - 5	SOLWEZI/Solwezi	GEN 2.7 - 10
MANSA/Mansa	GEN 2.7 - 6	MANSA/Mansa	GEN 2.7 - 6

3 Sunrise / Sunset Tables

3.1 Sunrise / Sunset tables for CHIPATA/Chipata

CHIPATA/Chipata FLCP S133351.07 E0323509.89						CHIPATA/Chipata FLCP S133351.07 E0323509.89					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0326	1620		Jul	1		0413	1534	
	6		0329	1622			6		0414	1535	
	11		0331	1623			11		0414	1536	
	21		0337	1625			16		0414	1538	
	26		0340	1625			21		0413	1539	
							26		0412	1540	
Feb	1		0342	1624		Aug	1		0411	1542	
	6		0345	1623			6		0409	1543	
	11		0346	1621			11		0407	1543	
	16		0348	1619			16		0404	1544	
	21		0349	1617			21		0401	1545	
	26		0351	1614			26		0358	1545	
Mar	1		0351	1613		Sep	1		0355	1545	
	6		0352	1610			6		0351	1545	
	11		0353	1607			11		0348	1545	
	16		0353	1603			16		0344	1545	
	21		0354	1600			21		0340	1546	
	26		0354	1557			26		0337	0346	
Apr	1		0355	1553		Oct	1		0333	1546	
	6		0355	1549			6		0330	1546	
	11		0355	1546			11		0327	1547	
	16		0356	1543			16		0323	1547	
	21		0357	1540			21		0321	1548	
	26		0357	1538			26		0318	1549	
May	1		0358	1535		Nov	1		0316	1551	
	6		0359	1533			6		0314	1553	
	11		0400	1532			11		0313	1555	
	21		0403	1530			16		0312	1557	
	26		0405	1529			21		0312	1559	
							26		0312	1602	
Jun	1		0406	1529		Dec	1		0313	1605	
	6		0408	1529			6		0314	1607	
	11		0409	1529			11		0315	1610	
	16		0410	1530			16		0317	1613	
	21		0412	1531			21		0320	1615	
	26		0413	1532			26		0322	1618	

3.2 Sunrise / Sunset tables for KASAMA/Kasama

KASAMA/Kasama FLKS S101257.03 E0310820.52						KASAMA/Kasama FLKS S101257.03 E0310820.52					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0337	1620		Jul	1		0413	1545	
	6		0340	1622			6		0414	1547	
	11		0343	1624			11		0414	1548	
	16		0346	1625			16		0414	1549	
	21		0348	1625			21		0414	1550	
	26		0350	1626			26		0413	1551	
Feb	1		0353	1625		Aug	1		0412	1552	
	6		0354	1625			6		0410	1553	
	11		0356	1624			11		0409	1553	
	16		0357	1622			16		0407	1553	
	21		0358	1620			21		0404	1553	
	26		0359	1618			26		0402	1553	
Mar	1		0359	1617		Sep	1		0358	1553	
	6		0359	1614			6		0355	1553	
	11		0359	1612			11		0352	1552	
	16		0400	1609			16		0349	1552	
	21		0400	1606			21		0346	1551	
	26		0359	1603			26		0343	1551	
Apr	1		0359	1559		Oct	1		0340	1551	
	6		0359	1557			6		0337	1551	
	11		0359	1554			11		0334	1551	
	16		0359	1551			16		0331	1551	
	21		0359	1549			21		0329	1551	
	26		0400	1547			26		0327	1552	
May	1		0400	1545		Nov	1		0325	1553	
	6		0401	1543			6		0324	1555	
	11		0402	1542			11		0323	1556	
	16		0403	1541			16		0323	1558	
	21		0404	1540			21		0323	1600	
	26		0405	1540			26		0323	1602	
Jun	1		0406	1540		Dec	1		0324	1605	
	6		0408	1541			6		0325	1607	
	11		0409	1541			11		0327	1610	
	16		0410	1542			16		0329	1613	
	21		0411	1543			21		0332	1615	
	26		0412	1544			26		0334	1618	

3.3 Sunrise / Sunset tables for LIVINGSTONE/Harry Mwaanga Nkumbula International Airport

LIVINGSTONE/Harry Mwaanga Nkumbula International Airport FLHN S174844.30 E0254911.83						LIVINGSTONE/Harry Mwaanga Nkumbula International Airport FLHN S174844.30 E0254911.83					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0345	1655		Jul	1		0448	1553	
	6		0348	1657			6		0449	1554	
	11		0351	1658			11		0448	1556	
	16		0354	1658			16		0448	1558	
	21		0357	1658			21		0447	1559	
	26		0400	1658			26		0446	1601	
Feb	1		0404	1657		Aug	1		0444	1603	
	6		0406	1655			6		0441	1604	
	11		0409	1653			11		0439	1605	
	16		0411	1650			16		0436	1607	
	21		0413	1648			21		0432	1608	
	26		0415	1644			26		0429	1609	
Mar	1		0416	1642		Sep	1		0424	1610	
	6		0417	1639			6		0420	1610	
	11		0418	1635			11		0416	1411	
	16		0420	1631			16		0412	1612	
	21		0421	1627			21		0408	1612	
	26		0422	1623			26		0403	1613	
Apr	1		0423	1618		Oct	1		0359	1614	
	6		0424	1614			6		0355	1615	
	11		0425	1611			11		0351	1616	
	16		0426	1607			16		0348	1617	
	21		0427	1604			21		0344	1619	
	26		0429	1600			26		0341	1621	
May	1		0430	1558		Nov	1		0338	1623	
	6		0432	1555			6		0336	1625	
	11		0433	1553			11		0334	1628	
	16		0435	1551			16		0333	1630	
	21		0437	1550			21		0332	1633	
	26		0438	1549			26		0332	1636	
Jun	1		0441	1548		Dec	1		0332	1639	
	6		0442	1548			6		0333	1642	
	11		0444	1549			11		0334	1645	
	16		0445	1549			16		0336	1648	
	21		0447	1550			21		0339	1631	
	26		0448	1551			26		0341	1653	

3.4 Sunrise / Sunset tables for LUSAKA/Kenneth Kaunda International Airport

LUSAKA/Kenneth Kaunda International Airport FLKK S151950.80 E0282709.40						LUSAKA/Kenneth Kaunda International Airport FLKK S151950.80 E0282709.40					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0339	1641		Jul	1		0434	1547	
	6		0342	1643			6		0434	1549	
	11		0345	1644			11		0434	1550	
	16		0348	1644			16		0434	1552	
	21		0351	1645			21		0433	1553	
	26		0354	1644			26		0432	1555	
Feb	1		0357	1643		Aug	1		0430	1556	
	6		0359	1642			6		0429	1557	
	11		0401	1640			11		0426	1558	
	16		0403	1648			16		0423	1559	
	21		0405	1636			21		0420	1600	
	26		0406	1633			26		0417	1600	
Mar	1		0407	1631		Sep	1		0313	1601	
	6		0408	1628			6		0309	1602	
	11		0409	1624			11		0305	1602	
	16		0410	1621			16		0301	1602	
	21		0411	1617			21		0358	1603	
	26		0411	1613			26		0354	1603	
Apr	1		0412	1609		Oct	1		0350	1603	
	6		0413	1605			6		0346	1604	
	11		0414	1602			11		0343	1605	
	16		0414	1559			16		0339	1606	
	21		0415	1556			21		0336	1607	
	26		0416	1553			26		0323	1608	
May	1		0417	1550		Nov	1		0331	1610	
	6		0418	1548			6		0329	1612	
	11		0420	1546			11		0327	1614	
	16		0421	1545			16		0326	1617	
	21		0423	1544			21		0326	1619	
	26		0424	1543			26		0326	1622	
Jun	1		0426	1543		Dec	1		0326	1625	
	6		0428	1543			6		0328	1628	
	11		0429	1543			11		0329	1631	
	16		0431	1544			16		0331	1633	
	21		0432	1545			21		0333	1636	
	26		0433	1546			26		0336	1638	

3.5 Sunrise / Sunset tables for MANSA/Mansa

MANSA/Mansa FLMA S110817.24 E0285230.44						MANSA/Mansa FLMA S110817.24 E0285230.44					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0342	1635		Jul	1		0428	1550	
	6		0345	1637			6		0429	1552	
	11		0348	1638			11		0429	1553	
	16		0351	1639			16		0429	1554	
	21		0354	1639			21		0428	1556	
	26		0356	1639			26		0427	1557	
Feb	1		0359	1639		Aug	1		0426	1558	
	6		0401	1638			6		0424	1559	
	11		0403	1636			11		0422	1600	
	16		0404	1635			16		0419	1600	
	21		0406	1632			21		0417	1601	
	26		0407	1630			26		0414	1601	
Mar	1		0407	1628		Sep	1		0410	1601	
	6		0408	1625			6		0407	1601	
	11		0409	1622			11		0403	1601	
	16		0409	1619			16		0400	1601	
	21		0409	1616			21		0356	1601	
	26		0410	1612			26		0353	1601	
Apr	1		0410	1609		Oct	1		0349	1602	
	6		0410	1605			6		0346	1602	
	11		0411	1602			11		0343	1602	
	16		0411	1659			16		0340	1603	
	21		0412	1556			21		0337	1604	
	26		0412	1554			26		0334	1605	
May	1		0413	1552		Nov	1		0332	1606	
	6		0414	1550			6		0330	1608	
	11		0415	1548			11		0329	1610	
	16		0416	1547			16		0329	1612	
	21		0418	1546			21		0328	1614	
	26		0419	1546			26		0329	1617	
Jun	1		0421	1545		Dec	1		0329	1619	
	6		0422	1546			6		0331	1622	
	11		0424	1546			11		0332	1625	
	16		0425	1547			16		0434	1628	
	21		0426	1548			21		0336	1630	
	26		0427	1549			26		0339	1633	

3.6 Sunrise / Sunset tables for MFUWE/Mfuwe

MFUWE/Mfuwe FLMF S131525.53 E0315551.69						MFUWE/Mfuwe FLMF S131525.53 E0315551.69					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0335	1628		Jul	1		0420	1543	
	6		0338	1640			6		0421	1544	
	11		0340	1641			11		0421	1546	
	16		0344	1642			16		0421	1547	
	21		0346	1642			21		0421	1548	
	26		0348	1643			26		0420	1549	
Feb	1		0351	1632		Aug	1		0418	1550	
	6		0353	1632			6		0416	1551	
	11		0356	1643			11		0415	1552	
	16		0357	1628			16		0413	1553	
	21		0359	1626			21		0410	1553	
	26		0400	1623			26		0407	1554	
Mar	1		0400	1621		Sep	1		0404	1553	
	6		0401	1618			6		0358	1553	
	11		0402	1615			11		0357	1554	
	16		0402	1612			16		0353	1554	
	21		0402	1609			21		0349	1554	
	26		0402	1606			26		0346	1554	
Apr	1		0403	1601		Oct	1		0342	1555	
	6		0403	1658			6		0337	1555	
	11		0404	1656			11		0335	1555	
	16		0404	1552			16		0333	1555	
	21		0405	1549			21		0329	1557	
	26		0406	1547			26		0327	1558	
May	1		0406	1545		Nov	1		0324	1600	
	6		0407	1542			6		0322	1601	
	11		0408	1541			11		0322	1603	
	16		0409	1540			16		0321	1605	
	21		0411	1539			21		0321	1607	
	26		0412	1538			26		0322	1610	
Jun	1		0413	1538		Dec	1		0322	1612	
	6		0415	1538			6		0324	1615	
	11		0417	1539			11		0325	1618	
	16		0418	1539			16		0327	1621	
	21		0418	1540			21		0329	1623	
	26		0419	1541			26		0332	1625	

3.7 Sunrise / Sunset tables for MONGU/Mongu

MONGU/Mongu FLMG S151508.81 E0230900.96						MONGU/Mongu FLMG S151508.81 E0230900.96					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0400	1701		Jul	1		0454	1608	
	6		0403	1703			6		0455	1610	
	11		0406	1704			11		0455	1611	
	16		0409	1705			16		0454	1613	
	21		0412	1705			21		0454	1614	
	26		0412	1705			26		0452	1616	
Feb	1		0418	1704		Aug	1		0451	1617	
	6		0420	1702			6		0449	1618	
	11		0422	1701			11		0446	1619	
	16		0424	1659			16		0444	1620	
	21		0426	1656			21		0441	1621	
	26		0427	1653			26		0438	1621	
Mar	1		0428	1652		Sep	1		0433	1622	
	6		0429	1648			6		0430	1622	
	11		0430	1645			11		0426	1623	
	16		0431	1641			16		0422	1623	
	21		0431	1638			21		0418	1623	
	26		0432	1634			26		0414	1624	
Apr	1		0433	1630		Oct	1		0411	1624	
	6		0433	1626			6		0407	1625	
	11		0434	1623			11		0403	1625	
	16		0435	1620			16		0400	1626	
	21		0436	1616			21		0357	1627	
	26		0437	1614			26		0354	1629	
May	1		0438	1611		Nov	1		0352	1631	
	6		0439	1609			6		0350	1633	
	11		0440	1607			11		0348	1635	
	16		0442	1606			16		0447	1637	
	21		0443	1605			21		0347	1640	
	26		0445	1604			26		0347	1642	
Jun	1		0447	1604		Dec	1		0347	1645	
	6		0448	1604			6		0349	1648	
	11		0450	1604			11		0350	1651	
	16		0451	1605			16		0452	1654	
	21		0452	1606			21		0354	1656	
	26		0453	1607			26		0357	1659	

3.8 Sunrise / Sunset tables for NDOLA/Simon Mwansa Kapwepwe International Airport

NDOLA/Simon Mwansa Kapwepwe International Airport FLSK S125742.46 E0283058.45						NDOLA/Simon Mwansa Kapwepwe International Airport FLSK S125742.46 E0283058.45					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0342	1635		Jul	1		0428	1550	
	6		0345	1637			6		0429	1552	
	11		0348	1638			11		0429	1553	
	16		0351	1639			16		0429	1554	
	21		0354	1639			21		0428	1556	
	26		0356	1639			26		0427	1557	
Feb	1		0359	1639		Aug	1		0426	1558	
	6		0401	1638			6		0424	1559	
	11		0403	1636			11		0422	1600	
	16		0404	1635			16		0419	1600	
	21		0406	1632			21		0417	1601	
	26		0407	1630			26		0414	1601	
Mar	1		0407	1628		Sep	1		0410	1601	
	6		0408	1625			6		0407	1601	
	11		0409	1622			11		0403	1601	
	16		0409	1619			16		0400	1601	
	21		0409	1616			21		0356	1601	
	26		0410	1612			26		0353	1601	
Apr	1		0410	1609		Oct	1		0349	1602	
	6		0410	1605			6		0346	1602	
	11		0411	1602			11		0343	1602	
	16		0411	1659			16		0340	1603	
	21		0412	1556			21		0337	1604	
	26		0412	1554			26		0334	1605	
May	1		0413	1552		Nov	1		0332	1606	
	6		0414	1550			6		0330	1608	
	11		0415	1548			11		0329	1610	
	16		0416	1547			16		0329	1612	
	21		0418	1546			21		0328	1614	
	26		0419	1546			26		0329	1617	
Jun	1		0421	1545		Dec	1		0329	1619	
	6		0422	1546			6		0331	1622	
	11		0424	1546			11		0332	1625	
	16		0425	1547			16		0434	1628	
	21		0426	1548			21		0336	1630	
	26		0427	1549			26		0339	1633	

3.9 Sunrise / Sunset tables for SOLWEZI/Solwezi

SOLWEZI/Solwezi FLSW S121000 E0262200						SOLWEZI/Solwezi FLSW S121000 E0262200					
Month	Day	Twil From	SR	SS	Twil To	Month	Day	Twil From	SR	SS	Twil To
Jan	1		0353	1643		Jul	1		0436	1601	
	6		0356	1645			6		0436	1602	
	11		0359	1646			11		0436	1604	
	16		0401	1647			16		0436	1605	
	21		0404	1647			21		0436	1606	
	26		0406	1647			26		0435	1607	
Feb	1		0409	1647		Aug	1		0433	1608	
	6		0411	1646			6		0432	1609	
	11		0413	1645			11		0430	1610	
	16		0414	1643			16		0428	1610	
	21		0415	1641			21		0425	1611	
	26		0416	1638			26		0422	1611	
Mar	1		0417	1637		Sep	1		0419	1611	
	6		0417	1634			6		0415	1611	
	11		0418	1631			11		0412	1611	
	16		0418	1628			16		0409	1611	
	21		0419	1625			21		0406	1610	
	26		0419	1622			26		0402	1610	
Apr	1		0419	1618		Oct	1		0358	1610	
	6		0419	1615			6		0355	1611	
	11		0419	1612			11		0352	1611	
	16		0420	1609			16		0349	1611	
	21		0420	1606			21		0347	1612	
	26		0421	1604			26		0344	1613	
May	1		0421	1602		Nov	1		0342	1614	
	6		0422	1600			6		0340	1616	
	11		0423	1558			11		0339	1618	
	16		0424	1557			16		0339	1620	
	21		0426	1556			21		0339	1622	
	26		0427	1556			26		0339	1624	
Jun	1		0429	1556		Dec	1		0354	1646	
	6		0430	1556			6		0358	1649	
	11		0431	1557			11		0359	1650	
	16		0433	1547			16		0357	1651	
	21		0434	1558			21		0401	1655	
	26		0435	1600			26		0406	1657	

GEN 3.1 AERONAUTICAL INFORMATION SERVICES

1 Responsible Service

1.1. The Aeronautical Information Service, which forms part of the Zambia Airports Corporation Limited, ensures the flow of information necessary for the safety, regularity and efficiency of International and National Air Navigation within the area of its responsibility. It consists of AIS HQ, International NOTAM Office (NOF), located at Kenneth Kaunda International Airport and other AIS units (ARO) established at International Aerodromes as listed in paragraph 3.5 below

1.2 AIS Headquarters

Aeronautical Information Services
Zambia Airports Corporation Limited
P.O. Box 30175
Lusaka 10101
Zambia.

Telephone Numbers: +260 (211) 271048
+ 260 (211) 271313
+ 260 (211) 271044

Mobile: + 260974204867
+ 260962608766
+260960579866

Fax Number: + 260 211 271469
AFS Address: FLKKYFYX FLKKZPZX
Email: ais.lusaka@zacl.aero / zaclais.lusaka@gmail.com
Website: www.zacl.co.zm

1.3. International NOTAM Office
Kenneth Kaunda International Airport
P.O. Box 30175,
Lusaka 10101
Zambia

Telephone Numbers: +260 (211) 271044
+260 (211) 271313
+260-211-271048

Fax Number: +260-211-271469
Comm. Telegraphic Address: NOF LUSAKA
AFS Address: FLKKYNYX
Email: ais.lusaka@zacl.aero

This service is provided in accordance with provisions contained in ICAO Annex 15 Aeronautical Information Services.

2 Area of responsibility

The Aeronautical Information Service is responsible for the collection and dissemination of information for the entire territory of Zambia and for the airspace over the Flight Information Region.

3 Aeronautical publications

3.1. The aeronautical information is provided in the form of the Aeronautical Information Products consisting of the following:

- Aeronautical information Publication (AIP);
- Amendment Service to the AIP (AIP AMDT);
- Supplement to the AIP (AIP SUP);
- NOTAM and Preflight Information Bulletins (PIB);
- Aeronautical Information Circulars (AIC); and
- Checklist and list of valid NOTAMs

A checklist of AIP pages containing page number/chart title and the publication of effective date (day, month by name and year) of the information is reissued with each amendment and is an integral part of the AIP.

3.2 Aeronautical Information Publication (AIP)

The AIP is the basic aviation document intended primarily to satisfy international requirements for the exchange of permanent aeronautical information and temporary changes of long duration essential for air navigation.

AIP Zambia is published in one volume. The AIP is published in a loose-leaf form in English only for use in international and domestic operations of all types of flight.

3.3 Amendment service to the AIP (AIP AMDT)

Amendments to the AIP are made by means of replacement sheets. Two types of AIP AMDT are produced:

- -regular AIP Amendment (AIP AMDT), issued in accordance with the established regular interval (ref. GEN ...) and identified by a light blue coversheet, incorporates permanent changes into the AIP on the indicated publication date; and
- AIRAC AIP Amendment (AIRAC AIP AMDT), issued in accordance with the AIRAC system and identified by a pink cover sheet and the acronym

NOTE: AIRAC, incorporates operationally significant permanent changes into the AIP on the indicated AIRAC effective date.

A brief description of the subjects affected by the amendment is given on the AIP Amendment cover sheet. New information included on the reprinted AIP pages is annotated or identified by a vertical line in the left margin (or immediately to the left) of the change/ addition.

Each AIP page and each AIP replacement page introduced by an amendment, including the amendment cover sheet, are dated. The date consists of the day, month (by name) and year of the publication date (regular AIP AMDT) or of the AIRAC effective date (AIRAC AIP AMDT) of the information. Each AIP amendment cover sheet includes references to the serial number of those elements, if any, of the Aeronautical Information Products which have been incorporated in the AIP by the amendment and are consequently cancelled.

Each AIP AMDT and each AIRAC AIP AMDT are allocated separate serial numbers which are consecutive and based on the calendar year. The year, indicated by two digits, is a part of the serial number of the amendment, e.g. AIP AMDT 1/96; AIRAC AIP AMDT 1/96.

A checklist of AIP pages containing page number/chart title and the publication or effective date (day, month by name and year) of the information is reissued with each amendment and is an integral part of the AIP.

3.4 Supplement to the AIP (AIP SUP)

Temporary changes of long duration (three months and longer) and information of short duration which consists of extensive text and/or graphs, supplementing the permanent information contained in the AIP, are published as AIP Supplements (AIP SUP).

AIP Supplements are separated by information subject (General - Gen, EN-Route _ENR and Aerodromes - AD) and are placed accordingly at the beginning of each AIP part. Each AIP supplement is allocated a serial number which is consecutive and based on the calendar year, i.e AIP SUP 1/03.

An AIP Supplement is kept in the AIP as long as all or some of its contents remain valid. The period of validity of the information contained in the AIP Supplement will normally be given in the supplement itself. Alternatively NOTAM may be used to indicate changes to the period of validity or cancellation of the supplement.

The check list of AIP supplements currently in force is issued in the monthly printed plain language summary of NOTAM in force.

3.5 NOTAM and Pre-flight Information Bulletins (PIB)

NOTAM contain information concerning the establishment, condition or change in any aeronautical facility, service, procedures or hazard the timely knowledge of which is essential for personnel concerned with flight operations. The text of each NOTAM contain the information in the order shown in the ICAO NOTAM Format and is composed of the significations/uniform abbreviated phraseology assigned to the ICAO NOTAM Code complemented by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language. NOTAM are originated and issued for Lusaka FIR and are distributed in three series identified by the letters A,B and C.

Series A. General rules, en-route navigation and communication facilities, airspace restrictions and activities taking place within the FIR and information concerning major international aerodromes.

Series B. Information on the other International Airport/Aerodrome.

Series C. Information on National aerodromes.

Pre-flight Information Bulletins (PIB), which contain a recapitulation of current NOTAM and other information of urgent character for the operator/flight crew are available for Kenneth Kaunda International Airport/aerodrome AIS unit.

The text of the information contained in the PIB is indicated under 5 of this subsection.

3.6 Checklists and summary of NOTAM

A Checklist of Valid NOTAM is issued monthly via AFS/AMHS. The checklist is followed by a printed list of valid NOTAM distributed by email to all recipients of the Integrated Aeronautical Information Products. It contains a plain language (in English) presentation of the valid NOTAM and information about the number of latest issued AIP AMDT, AIRAC AIP AMDT, AIP SUP and AIC as well as the number of elements issued under the AIRAC which will become effective or, if none, the NIL AIRAC notification.

3.7 Sale of Publications

The said publication can be obtained from the Aeronautical Information Service.

4 AIRAC system

Whenever possible the AIRAC system will be adhered to in the Republic of Zambia.

AIRAC predetermined dates

AIRAC Dates		
2012 12-Jan-2012 09-Feb-2012 08-Mar-2012 05-Apr-2012 03-May-2012 31-May-2012 28-Jun-2012 26-Jul-2012 23-Aug-2012 20-Sep-2012 18-Oct-2012 15-Nov-2012 13-Dec-2012	2013 10-Jan-2013 07-Feb-2013 07-Mar-2013 04-Apr-2013 02-May-2013 30-May-2013 27-Jun-2013 25-Jul-2013 22-Aug-2013 19-Sep-2013 17-Oct-2013 14-Nov-2013 12-Dec-2013	2014 09-Jan-2014 06-Feb-2014 06-Mar-2014 03-Apr-2014 01-May-2014 29-May-2014 26-Jun-2014 24-Jul-2014 21-Aug-2014 18-Sep-2014 16-Oct-2014 13-Nov-2014 11-Dec-2014
2015 08-Jan-2015 05-Feb-2015 05-Mar-2015 02-Apr-2015 30-Apr-2015 28-May-2015 25-Jun-2015 23-Jul-2015 20-Aug-2015 17-Sep-2015 15-Oct-2015 12-Nov-2015 10-Dec-2015	2016 07-Jan-2016 04-Feb-2016 03-Mar-2016 31-Mar-2016 28-Apr-2016 26-May-2016 23-Jun-2016 21-Jul-2016 18-Aug-2016 15-Sep-2016 13-Oct-2016 10-Nov-2016 08-Dec-2016	2017 05-Jan-2017 02-Feb-2017 02-Mar-2017 30-Mar-2017 27-Apr-2017 25-May-2017 22-Jun-2017 20-Jul-2017 17-Aug-2017 14-Sep-2017 12-Oct-2017 09-Nov-2017 07-Dec-2017
2018 04-Jan-2018 01-Feb-2018 01-Mar-2018 29-Mar-2018 26-Apr-2018 24-May-2018 21-Jun-2018 19-Jul-2018 16-Aug-2018 13-Sep-2018 11-Oct-2018 08-Nov-2018 06-Dec-2018	2019 03-Jan-2019 31-Jan-2019 28-Feb-2019 28-Mar-2019 25-Apr-2019 23-May-2019 20-Jun-2019 18-Jul-2019 15-Aug-2019 12-Sep-2019 10-Oct-2019 07-Nov-2019 05-Dec-2019	2020 02-Jan-2020 30-Jan-2020 27-Feb-2020 26-Mar-2020 23-Apr-2020 21-May-2020 18-Jun-2020 16-Jul-2020 13-Aug-2020 10-Sep-2020 08-Oct-2020 05-Nov-2020 03-Dec-2020 31-Dec-2020

2021 28-Jan-2021 25-Feb-2021 25-Mar-2021 22-Apr-2021 20-May-2021 17-Jun-2021 15-Jul-2021 12-Aug-2021 09-Sep-2021 07-Oct-2021 04-Nov-2021 02-Dec-2021 30-Dec-2021	2022 27-Jan-2022 24-Feb-2022 24-Mar-2022 21-Apr-2022 19-May-2022 16-Jun-2022 14-Jul-2022 11-Aug-2022 08-Sep-2022 06-Oct-2022 03-Nov-2022 01-Dec-2022 29-Dec-2022	2023 26-Jan-2023 23-Feb-2023 20-Apr-2023 18-May-2023 15-Jun-2023 13-Jul-2023 10-Aug-2023 07-Sep-2023 05-Oct-2023 02-Nov-2023 30-Nov-2023 28-Dec-2023
2024 25-Jan-2024 22-Feb-2024 21-Mar-2024 18-Apr-2024 16-May-2024 13-Jun-2024 11-Jul-2024 08-Aug-2024 05-Sep-2024 03-Oct-2024 31-Oct-2024 28-Nov-2024 26-Dec-2024	2025 23-Jan-2025 20-Feb-2025 20-Mar-2025 17-Apr-2025 15-May-2025 12-Jun-2025 10-Jul-2025 07-Aug-2025 04-Sep-2025 02-Oct-2025 30-Oct-2025 27-Nov-2025 25-Dec-2025	

5 Pre-flight information service at aerodromes/heliports

Pre-flight Information is available at Kenneth Kaunda, Harry Mwaanga Nkumbula, Simon Mwansa Kapwepwe and Mfuwe International briefing offices.

Daily Pre-flight Information Bulletin (PIB) - Route Bulletins and summaries are available for distribution at the aerodrome AIS unit. Other major aerodromes are connected to the International Notam Office via tie-line and AFTN. Pre-flight information in the form of PIB may be obtained from the International NOTAM office via these Aerodromes.

6 Electronic terrain and obstacle data

To Be Developed.

GEN 3.2 AERONAUTICAL CHARTS

1 Responsible service

The Zambia Airports Corporation Limited provides Aeronautical Charts for all types of Civil Aviation users. The Aeronautical Information Service publishes the charts which are part of the AIP. All other aeronautical charts are produced by Zambia Airports in collaboration with the Department of Survey General. Charts suitable for pre-flight planning and briefing, selected from those listed in the Aeronautical Chart Manual Doc 8697, are available for reference at the aerodrome AIS unit. The charts are produced in accordance with provisions contained in ICAO Annex 4 Aeronautical Charts.

2 Maintenance of charts

The aeronautical charts included in the AIP are kept up to date by amendments to the AIP. Corrections to the aeronautical charts not contained in the AIP are promulgated by AIP amendments and are listed under 8 of this subsection. Information concerning the planning for or issuance of new maps and charts is notified by Aeronautical Information Circular.

If incorrect information detected on published charts is of operational significance, it is corrected by NOTAM.

3 Purchase arrangements

The charts listed under 3.2.4.1 of this subsection may be obtained from:

The Managing Director
Zambia Airport Corporation Ltd
Box 30175
Lusaka 10101,
Zambia

Tel: +260 211 271313/271044
+260 211 271048
Mobile: +260974204867/+260967980776
Fax: 260 211 271469
ATS: FLKKYFYX /FLKKZPZX
Email: ais.lusaka@zacl.aero
website: www.zacl.co.zm.

4 Aeronautical Chart series available

4.1 The following series of Aeronautical charts are published

- a. World Aeronautical Charts – ICAO 1:1000,000
- b. Plotting Chart – ICAO
- c. Aerodrome/Heliport Chart – ICAO
- d. Aerodrome Ground Movement Chart -ICAO
- e. Aircraft Parking/Docking Charts – ICAO;
- f. Aerodrome Obstacle Chart- ICAO type A (for each runway)
- g. Aerodrome Obstacle Chart- ICAO type C;
- h. Precision Approach Terrain Chart – ICAO (Precision Approach cat I and II Runways)
- i. En-Route Chart – ICAO
- j. Area Chart – ICAO (arrival and transit routes);
- k. Area Chart – ICAO (departure and transit routes)
- l. Standard Departure Chart – Instrument (SID) ICAO;
- m. Standard Arrival Chart – Instrument Arrival (STAR) - ICAO
- n. Instrument Approach Chart – ICAO (for each runway and procedure type)
- o. Visual Approach Chart ICAO.

The charts currently available are listed under 3.2.5 of this section

4.2 General description of each series

- a. *World Aeronautical Chart – ICAO 1:1000 000*. This series is constructed on Lambert Conical Orthomorphic Projection up to 80° and Polar stereographic projection between 80°N and 90°N with scales matching at 80°N. The aeronautical data shown have been kept to a minimum, consistent with the use of the chart for visual air navigation. It includes a section of aerodromes, significant obstacles, elements of the ATS system, prohibited, restricted and danger areas, and radio navigation aids. The chart provides visual air navigation and is also used as a pre-flight planning chart.
- b. *Plotting Chart – ICAO*. This series covering the North Atlantic, Western Europe and North Africa, is designated for in-flight Long-Range Navigation and constructed on Mercator's projection with simple outline of land areas at a scale of 1:5 000 000. Aeronautical data consists of major International Aerodromes, selected radio navigation Aids, lattices of long-range. Electronic Aids to Navigation FIR, CTA, CTR, reporting points, etc. The chart is designed to provide a means of maintaining a continuous record of the aircraft position.
- c. *Aerodrome/Heliport chart – ICAO*. This chart contains detailed Aerodrome/heliport data to provide flight crews with information that will facilitate the ground movement of aircraft:
 - i. -from the aircraft stand to the runway and
 - ii. -from the runway to the aircraft stand;
 - iii. and helicopter movement:
 - iv. -from the helicopter stand to the touch down and lift-off area and to the final approach and take –off area;
 - v. -from the final approach and take-off area to the touch down and lift-off area and to the helicopter stand;
 - vi. -along helicopter ground and air taxiways and
 - vii.-along air transit routes, it also provides essential operational information at the aerodrome/heliport.
- d. *Aerodrome Ground Movement Chart – ICAO*. This chart is produced for those aerodromes where, due to congestion of information, details necessary for the ground movement of aircraft along the taxiways to and from the aircraft stands and for the parking/docking of aircraft cannot be shown with sufficient clarity on the aerodrome/heliport chart – ICAO.
- e. *Aircraft Parking/Docking Chart – ICAO*. This chart is produced for those aerodromes where due to the complexity of the terminal facilities, the information to facilitate the ground movement of aircraft between the taxiways and the aircraft stands and parking/docking of aircraft cannot be shown with sufficient clarity on the aerodrome/heliport chart-ICAO or the aerodrome ground movement chart – ICAO.
- f. *Aerodrome Obstacle Chart – ICAO- Type A (operating limitations)*. This chart contains detailed information on obstacles in the take-off flight path areas of aerodromes. It is shown in plain and profile view. This obstacle information, in combination with an obstacle chart – ICAO-Type C, provides data necessary to enable an operator to comply with the operating limitations of ICAO Annex 6, parts I and II, Chapter 5.
- g. *Aerodrome Obstacle Chart – ICAO – Type C*. This chart contains obstacle data necessary to enable an operator to develop procedures to comply with the operating limitations of ICAO Annex 6, parts I and II, Chapter 5, with particular reference to information on obstacles that limit the maximum permissible take-off mass. This chart must provide certain obstacle data and type of graphical information covering a distance of 42 Km (24NM) from the aerodrome reference point. Appropriate topographical charts which are available for the area around the airports, if supplemented with "overprint" obstacle data and other significant aeronautical information should be suitable for use as the topographic base for the AOC –ICAO –Type C.
This chart is not produced if:
 - i. -the required obstacle data is included in the AIP
 - ii. -no significant obstacles exist, and this fact is included in the AIP.
- h. *Precision Approach Terrain Chart – ICAO*. This chart provides terrain profile information within a defined position of the final approach so as to enable aircraft operating agencies to assess the effect of the terrain on decision height determined by the use of Radio Altimeters. This chart is produced for all precision approach Cat I and II runways.
- i. *En-Route Chart – ICAO*. This is produced for the entire LUSAKA FIR. The aeronautical data include all aerodromes, prohibited, restricted and danger areas and the air traffic services system in detail. The chart provides the flight crew with information that will facilitate navigation along ATS routes in compliance with air traffic services procedures.
- j. *Area Chart – ICAO*. This chart is produced when the air traffic services routes or position reporting requirements are complex and cannot be shown on an En-route Chart — ICAO.

It shows, in more detail, those aerodromes that affect terminal routings, prohibited, restricted and danger areas and the air traffic services system. This chart provides the flight crew with information that will facilitate the following phases of instrument flight:

- i. -the transition between the en-route phase and the approach to an aerodrome;
- ii. -the transition between the take-off/missed approach and the en-route phase
- iii. of flight; and
- iv. -flights through areas of complex ATS routes or airspace structure.

k. *Standard Instrument Departure Chart - Instrument (SID)-ICAO.* - This chart is produced whenever a standard departure route — instrument has been established and cannot be shown with sufficient clarity on the Area Chart — ICAO.

The aeronautical data shown include the aerodrome of departure, aerodrome(s) which affect the designated Standard Instrument Departure route instrument, prohibited, restricted and danger areas and the air traffic services system. This chart provides the flight crew with information that will enable them to comply with the designated standard departure route Instrument from the take-off phase to the en-route phase.

l. *Standard Instrument Arrival Chart - Instrument (STAR) - ICAO.* - This chart is produced whenever a Standard Instrument Arrival route has been established and cannot be shown with sufficient clarity on the Area Chart — ICAO.

The aeronautical data shown include the aerodrome of landing, aerodrome(s) which affect the designated standard Instrument arrival route — instrument, prohibited, restricted and danger areas and the air traffic services system. This chart provides the flight crew with information that will enable them to comply with the designated standard arrival route — instrument from the en-route phase to the approach phase.

m. *Instrument Approach Chart - ICAO.* - This chart is produced for all aerodromes which have an approach. A separate Instrument Approach Chart — ICAO has been provided for each approach procedure.

The aeronautical data shown include information on aerodromes, prohibited, restricted and danger areas, radio communication facilities and navigation aids, minimum sector altitude, procedure track portrayed in plan and profile view, aerodrome operating minima, etc. This chart provides the flight crew with information that will enable them to perform an approved instrument approach procedure to the runway of intended landing including the missed approach procedure and where applicable, associated holding patterns.

n. *Visual Approach Chart - ICAO.* - This chart is produced for aerodromes used by civil aviation where:

- i. -only limited navigation facilities are available; or
- ii. -radio communication facilities are not available; or
- iii. -no adequate aeronautical charts of the aerodrome and its surroundings at 1:500 000 or greater scale are available; or
- iv. -no visual approach procedures have been established

The aeronautical data shown include information on aerodromes, obstacles, designated airspace, visual approach information, radio navigation aids and communication facilities, as appropriate.

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GEN 3.3 AIR TRAFFIC SERVICES

1 Responsible Service

1.1 Responsible authority

The Civil Aviation Authority is responsible for the regulation of the operations of Air Navigation and Air Traffic Services in Zambia.

The Director General
Zambia Civil Aviation Authority
P.o Box 50137
Lusaka 10101
ZAMBIA

Fax: +260 211 251841
ATS: FLHQYAYA/FLHQYFYX
Email: civil.aviation@caa.co.zm

The Zambia Airports Corporation Limited is responsible for administration and operation of Air Traffic Services in Zambia

The Managing Director
Zambia Airports Corporation Limited
Air Navigation Services
Kenneth Kaunda International Airport
P.o. Box 30175
Lusaka 10101
ZAMBIA

Fax: 224777,271018, 271118
ATS: FLKKYKYQ
Email: zacl@zacl.aero
website: www.zacl.co.zm

2 Area of Responsibility

Air Traffic Services are provided within the Lusaka FIR in conformity with the Zambia Civil Aviation Requirements (ZCARs) Part 12 vol II and ICAO Standards and Recommended Practices and Procedures.

3 Types of services

The following types of services are provided:

- Flight Information Service (FIS)
- Area Control (ACC); and
- Approach Control (APP)
- Aerodrome Control (TWR)
- Ground Control (GND)
- Aerodrome Flight Information Service (AFIS)

Note: Alerting Service (ALRS) is provided under each type of service mentioned above.

4 Co-ordination Between the Operator and ATS

Co-ordination between the operator and Air Traffic Services is effected in accordance with 2.15 of ICAO Annex 11 and 2.1.1.4 and 2.1.1.5 of part III of the Procedures For Air Navigation Services:- Air Traffic Management (Doc 4444, PANS/ATM).

5 Minimum Flight Altitude

The minimum flight altitude on the ATS routes as presented in section ENR 3, have been determined so as to ensure at least 1000 ft minimum vertical clearance above the highest obstacle within 2NM on each side of the centre line of the route.

5.1 Required Navigation Performance

The required navigation performance accuracy necessary for the operation of air routes within Lusaka FIR is RNP 5. The RNP 5 represents a navigation accuracy of plus or minus 5 NM (9.2km) on a 95 percent containment basis. The RNP type is a containment value expressed as distance in NM from the intended position within which flight would be at least 95 percent of the total flying time.

6 ATS Units Address List

Unit Name	Postal Address	Telephone No	Telefax	AFTN Address
1	2	3	4	5
LUSAKA ACC	Lusaka Area Control Centre Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260-211-271091 +260-211-271044 +260-211-271313 +260 950 708 012 EXT : 410	260-1-271469	FLFIZQZX
LUSAKA APP	Lusaka Approach Control Unit Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	AS IN ACC EXT:409	AS IN ACC	FLFIZAZX
LUSAKA TWR	Lusaka Aerodrome Control Unit Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260 950 707 432 AS IN ACC EXT:408	AS IN ACC	FLKKZTZX
LUSAKA BRIEFING	Lusaka AIS Briefing Office Kenneth Kaunda International Airport P.O Box 30175 LUSAKA 10101	+260-211-271048 EXT:333/334		FLKKZPZX
LIVINGSTONE APP	Livingstone Approach Control Unit Harry Mwaanga Nkumbula Airport P.O Box 60199 LIVINGSTONE	+260-213-320388	260-3-324235	FLHNZAZX
LIVINGSTONE TOWER	Livingstone Aerodrome Control Unit Harry Mwaanga Nkumbula Airport P.O Box 60199 LIVINGSTONE	+260-213-320388		FLHNZTZX
LIVINGSTONE BRIEFING	Livingstone AIS Briefing Office Harry Mwaanga Nkumbula Airport P.O Box 60199 LIVINGSTONE	+260 -213- 323222		FLHNZPZX
MFUWE APP	Mfuwe Approach Control Unit Mfuwe Airport P.O Box 2 MFUWE	+260-216-45027 +260 979 752 200	260-62-45029	FLMFZTZX
MFUWE TWR	Mfuwe Aerodrome Control Unit Mfuwe Airport P.O Box 2	+260-216-245027 +260 979 752 200		FLMFZTZX

MFUWE BRIEFING	Mfuwe AIS Briefing Mfuwe Airport P.O Box 2 MFUWE	+260-216-245083/245142 +260-965-860493		FLMFZPZX
Simon Mwansa Kap-wepwe APP	Ndola Approach Control Unit Simon Mwansa Kap-wepwe International Airport P.O Box 70095 NDOLA	+260-212-612869 +260 971 232 376	260-2-612635	FLSKZAZX
Simon Mwansa Kap-wepwe BRIEFING	Ndola AIS Briefing Simon Mwansa Kap-wepwe International Airport P.O Box 70095 NDOLA	+260-212-611193/611194		FLSKZPZX
Simon Mwansa Kap-wepwe TWR	Ndola Aerodrome Control Unit Simon Mwansa Kap-wepwe International Airport P.O Box 70095 NDOLA	+260 971 232 376 AS IN APP	AS IN APP	FLSKZTZX
CHIPATA FIS	Chipata Flight Information Service Chipata Airport P.O BOX 510105 CHIPATA	+260-216-222828	NIL	FLCPZPZX
KASAMA FIS	Kasama Flight Information Service Kasama Airport P.O BOX 410268 KASAMA	+260-214-220012	NIL	FLKSZPZX
MANSA FIS	Mansa Flight Information service Mansa Aerodrome P.O BOX 710002 MANSA	+260-212-821269	NIL	FLMAZPZX
MONGU FIS	Mongu Flight Information Service Mongu Aerodrome P.O BOX 910038 MONGU	+260-217-221260		FLMGZPZX
SOLWEZI TOWER	Solwezi Aerodrome Control Unit Solwezi Aerodrome P.O BOX 110005 SOLWEZI	+260-218-821213		FLSWZTZX AND FLSWZPZX

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GEN 3.4 COMMUNICATION SERVICES

1 Responsible service

The responsible Authority for the provision of telecommunication and navigation facility services in Zambia is the Zambia Airports Corporation Ltd.

The Managing Director
Kenneth Kaunda International Airport
Zambia Airports Corporation Limited
P.O. BOX 30175
LUSAKA 10101
Zambia

The service is provided in accordance with provisions contained in the following ICAO documents:-

- Annex 10 - Aeronautical Telecommunications
- Doc 8400 - Procedures for Air Navigation Services ICAO abbreviations and Codes (PANS -ABC)
- Doc 8585 - Designator for aircraft operating agencies, aeronautical authorities and services.
- Doc 7030 - Regional Supplementary Procedures.
- Doc 7910 - Location Indicators.

2 Area of responsibility

Communication services are provided for the entire Lusaka FIR. Arrangements for such services on a continuing basis should be made with the Director General, Zambia Civil Aviation Authority, who is also responsible for the application of regulations concerning the design, type and installation of aircraft radio stations.

Responsibility for the day-to-day operation of these services are vested in the Managing Director, Zambia Airports Corporation LTD, Kenneth Kaunda International Airport, P.O Box 30175 Lusaka. Inquiries, suggestions or complaints regarding any telecommunications service should be referred to the Director of Air Navigation Services, Zambia Airports Corporation Ltd or to the Director General Zambia Civil Aviation Authority.

3 Types of service

3.1 Radio Navigation Service

The following types of radio aids to navigation are available:

- LF/MF Non-directional Beacon (NDB)
- VHF Direction- Finding Station (VDF)
- Surveillance Approach Radar (SAR)
- Instrument Landing System (ILS)
- VHF Omnidirectional Radio Range (VOR)
- Distance Measuring Equipment (DME).

Selected radio broadcasting stations are included as additional navigational facilities. The information is limited to station with a power of 10KW or more. It should be noted that unserviceabilities of these stations will not be reported.

According to the judgement of the direction finding station, bearings are classified as follows:

- Class A - accurate within \pm 2 Degrees
- Class B - accurate within \pm 5 Degrees
- Class C - accurate within \pm 10 Degrees

Direction finding stations have authority to refuse to give bearings or headings to steer when conditions are unsatisfactory or when bearings do not fall within the calibrated limits of the station stating the reason at the time of refusal.

VDF is not used as an approach aid in Zambia, but limited VDF assistance is available at controlled aerodromes (class B bearings). At some uncontrolled aerodromes, VDF is available for use in emergency only.

3.2 Mobile/Fixed Services

3.2.1 Mobile Service

The aeronautical stations maintain a continuous watch on their stated frequencies during the published hours of service unless otherwise notified.

An aircraft should normally communicate with an air-ground control radio station that exercises control in the area in which the aircraft is flying.

Aircraft should maintain a continuous watch on the appropriate frequency of the control station and should not abandon watch, except in an emergency, without informing the radio control station.

3.2.2 Fixed Service

The messages to be transmitted over the Aeronautical Fixed Service will be accepted only if they are in compliance with the following requirements:

- a. ICAO Annex 10, Vol. II item 3.3
- b. The messages shall be prepared in format as specified in ICAO Annex 10;
- c. The length of an individual message does not exceed 1800 characters.

The transmission of teletype messages in the Aeronautical Telecommunication Service is performed by Aeronautical Telecommunication Stations at the international and provincial Airports.

3.3 Broadcasting Service

Sub-area Meteorological Broadcasts (VOLMET radio telepathy broadcasts) may be made available for the use of aircraft in flight.

3.4 Languages Used

English.

3.5 Where detailed information can be obtained

Details of the various facilities available for the en-route traffic can be found in part 2 ENR 4.

Details of the facilities available at the individual aerodromes can be found in the relevant sections of part 3 (AD). In cases where a facility is serving both en-route traffic and the aerodromes, details are given in the relevant section of part 2 (ENR) and part 3 (AD).

4 Requirements and conditions

The requirements of the Zambia Civil Aviation Authority and the general conditions under which the communication services are available for international use, as well as the requirements for the carriage of radio equipment , are contained in the Air Navigation (radio) Regulations of Zambia Aviation Act 5. of 2016.

The main provisions are briefly summarised below. Air Navigation (radio) Regulations part of Aviation Act 5. of 2016

Regulation-86 Types of Apparatus:

Modification and carriage of licenced operators.

Regulation 87 operation of aircraft stations.

4.1 RADIO TIME SIGNAL

Radio callsign	Transmit-ter station	Frequency	Emission	Hours of Operation	REMARKS Time signal
1	2	3	4	5	6
ZNBC RADIO 1	CHIPATA KABWE KASAMA KITWE LIVINGSTONE LUSAKA MANSA MONGU SOLWEZI	666 KHz 1224 KHz 567 KHz 1071 KHz 729 KHz 819 KHz 918 KHz 601 KHz 909 KHz	A2A/A2A	0300 – 2200 HOURLY	The main signal of letter ZNBC is transmitted from Lusaka in morse code and boosted from all booster stations. 2 dots, 1 dash of one second interval starting three seconds before every hour.

GEN 3.5 METEOROLOGICAL SERVICES**1 Responsible service**

The Meteorological Services for Civil Aviation are provided by the:

Post:	The Officer in Charge Kenneth Kaunda International Airport P.O. BOX 310095 Chelstone Lusaka	The Director Zambia Meteorological Department P.O. BOX 30200. Longacres Lusaka.
Phone:	+260 95563 2486	+260 - 211-251889
Fax:	-	-
AFS:	FLKKYMYX	
Email:	Lusakamet.2@gmail.com	
URL:	-	http://www.zmd.gov.zm

The service is provided in accordance with the provisions contained in the following ICAO documents:

- Annex 3 - Meteorological Service for International Air Navigation
- Doc 8400 - ICAO Abbreviations and Codes
- Doc 8896 - Manual of Aeronautical Meteorological Codes
- Doc 9328 - Manual of Runway Visual Range Observing and Reporting Practices

2 Area of responsibility

Meteorological service is provided within the Lusaka FIR

3 Meteorological observations and reports

Name of station/Location indicator	Type and frequency of observation/ automatic observing equipment	Types of MET reports & Supplementary information included	Observation System and Site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
KASAMA - KASAMA AIRPORT FLKS	Hourly plus special observations	METAR SPECI SYNOP	All instruments including thermometers in Met enclosure 650 from the eastern runway 13. DINES PT NIL, Barometer and cup-counter not working	0400-1600	AVAILABLE
LIVINGSTONE- HARRY MWAANGA NKUMBULA INTERNATIONAL AIRPORT FLHN	Hourly plus special observations	METAR SPECI TREND SYNOP	Electrical anemometer NIL. All instruments including thermometers in Met enclosure and the Automatic Weather Station (AWS) about 859 south of the same.	0400-1630	AVAILABLE

LUSAKA-KENNETH KAUNDA INTERNATIONAL AIRPORT FLKK	Hourly plus special observations	METAR SPECI TREND SYNOP	Electrical anemometer on mast 2100 north of the point on runway 10 1350 from the western threshold. Temperature sensor in the screen near the mast. New equipment's in the middle of the runway	H 24	AVAILABLE
MANSA MANSA AIRPORT FLMA	Hourly plus special observations	METAR SPECI SYNOP	Electrical anemometer at the top of the control building NIL. All instruments including thermometers in Met enclosure 190 south of RWY 09/27	0400-1600	AVAILABLE
MONGU-MONGU AIRPORT FLMG	Hourly plus special observations	METAR SPECI SYNOP	Cup-counter and thermometer in MET enclosure about 380m north point on the runway 10/28 and 300 from threshold RWY 10	0400-1500	AVAILABLE
NDOLA-SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT FLSK	Hourly plus special observations	METAR SPECI TREND SYNOP	Electrical anemometer and thermometers in MET. Enclosure almost 426m north of the middle point of the runway 10/28	H 24	AVAILABLE
SESHEKE-Sesheke FLSS	Hourly plus special observations	METAR SPECI SYNOP	Cup-counter and thermometer in MET enclosure about 426M to south of threshold runway 09	0400-1500	AVAILABLE
CHIPATA - CHIPATA AIRPORT FLCP	Hourly plus special observations	METAR SPECI SYNOP	Electrical anemometer on mast 90m south of the point in the middle of runway 09/27, 90m from the threshold RWY 09, temperatures sensors near the mast.	0400-1600	AVAILABLE
KAOMA/ Kaoma	Hourly plus special observations Nil	METAR SPECI SYNOP	Cup-counter and thermometer in MET enclosure situated 100m from the threshold runway.	0400-1600	AVAILABLE

MFUWE AIR-PORT FLMF	Hourly plus Special observations	METAR SPECI SYNOP	Automated Weather Observing Station (AWOS). Observed weather elements from the screen yard	0400-1600	AVAILABLE
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¹⁾ See significant weather chart

For reporting weather phenomena in vicinity of the airport following local rules apply:

- convective type of cloud (TCU and/or CB) are reported within 30 km radius around ARP,
- thunderstorm, shower (VCTS, VCSH,) in the vicinity are reported when phenomena is observed or detected between 2 km and 16 km radius around ARP,
- all other weather phenomena in the vicinity are reported when observed or detected between 2 km and 8 km radius around ARP,

4 Types Of Service

4.1 Meteorological Offices providing a service to Civil Aviation

Forecast and watch office is established at Kenneth Kaunda International, Harry Mwaanga Nkumbula, and Simon Mwansa Kapwepwe International Airport. See the table shown below for Meteorological Office services on airports within Lusaka FIR.

Meteorological Office	Services Available	Telephone	AFTN	Hours of operation
1	2	3	4	5
Kenneth Kaunda International Airport	METAR,SPECI, TAFs, ROFOR,	+260 95563 2486	FLKKYMYX	H24
Simon Mwansa Kapwepwe International Airport	METAR,SPECI, TAFs	+260 954755167	FLSKYMYX	H24
Harry Mwaanga Nkumbula Airport	METAR,SPECI, TAFs	+260 954755119	FLHNYMYX	H13
Mfuwe Airport	METAR,SPECI, TAFs	+260 0954755084	FLMFYMYX	H13

¹⁾ METAR, ²⁾ TAF, ³⁾ Foreign TAFs and METARS, ⁴⁾ Special forecasts

Meteorological Offices provide the pilot with following documentation:

Meteorological Office	Telephone	Telefax	Email
1	2	3	4
LUSAKA	+260 95563 2486	-	Lusakamet.2@g-mail.com
FLKK			
NDOLA	+260954 7551 67	-	ndolamet@gmail.com
FLSK			
LIVINGSTONE	+260 954755119	-	livingstonemet@g-mail.com
FLHN			

Meteorological Office	Telephone	Telefax	Email
MFUWE	+260 0954755084	-	mfuwemet@gmail.com
FLMF			

- Meteorological Aerodrome Reports – METAR
- Aerodrome Forecasts in TAF form
- Forecasts of en-route conditions in form of charts (SWC)
- Upper wind and temperature forecasts in chart form (WAF)
- Significant Meteorological information - SIGMET
- Special AIREP

Personal briefing and consultation for flight crew members are provided only at Kenneth Kaunda International airport, Simon Mwansa Kapwepwe and Harry Mwaanga Nkumbula. For all other aerodromes, consultation is available by telephone (00:00-24:00 UTC). Briefing is normally provided together with the issue of documentation. If Meteorological Office briefing is not available, it may be obtained by telephone from the Meteorological Office at the Kenneth Kaunda airport.

4.2 Meteorological information for general aviation

4.2.1 General

Meteorological information for General aviation is normally supplied upon request by a pilot or its organization by telephone or as briefing directly in the Meteorological office. When requesting meteorological information, the pilot is asked to supply the Meteorological office with the following information:

- Aircraft co-sign or Aircraft Registration
- destination, route and flying time (ETD/ETA)
- Flight Level
- language (English)

Information about meteorological situation and forecast at the aerodromes and routes are available for the need of General aviation. Information could be given as briefing or upon request of a pilot, in the written form as documentation.

Meteorological offices are provided at the following aerodromes:

Meteorological Office	Telephone	Telefax	Email
1	2	3	4
LUSAKA	+260 95563 2486	-	Lusakamet.2@g-mail.com
NDOLA	+260954 7551 67	-	ndolamet@gmail.com
LIVINGSTONE	+260 954755119	-	livingstonemet@g-mail.com

4.2.2 Documentation for flight

Documentation for flight may be prepared in the form of “forecast chart of significant weather” or given in the plain language including the following information:

- meteorological situation concerning the route,
- amount, type and height of clouds,
- weather, turbulence and freezing level,

- direction and speed of wind on the flight level,
- temperature on the flight level and isotherm elevation of 0°C,
- surface visibility

Documentation is supplemented by the information about meteorological information and forecast for the aerodrome of departure, arrival and alternate aerodrome.

5 Notification Required From Operators

Notification from operators in respect of briefing, consultation, flight documentation and other meteorological information they need (ref. ICAO Annex 3, 2.3) is normally required for intercontinental flights of more than 3500 km. Such notification should be received at least 2 hours before the expected time of departure. Non scheduled flights (local) should book 30 minutes in advance before the Estimated Time of Departure.

6 Aircraft Reports

Pursuant to ICAO Annex 3,5.3.1 the making and transmission of aircraft reports (AIREP) are required at the following ATS reporting points:

- KEPOK (152700S 0302300E)
- UDNOR (113424S 235806E)
- EGSUD (130640S 220000E)

There is also a MET requirement for reporting of significant low level wind shear and turbulence if expected by pilots during take-off or landing. (Ref Annex 3,5.5.1). The ATS/MET reporting points in respect to routes crossing Lusaka FIR are indicated in the relevant section of this AIP.

7 VOLMET service

No VOLMET Service available within Lusaka FIR.

8 SIGMET and AIRMET Service

8.1 General

For the safety of air traffic, the Meteorological Authority maintains an area meteorological watch and warning service. This service consists partly of a continuous weather watch within the lower and upper FIR and the issuance of appropriate information (SIGMET and AIRMET) by Meteorological Watch Offices and partly of the issuing of warnings for the respective aerodrome and, subject to agreement, for other aerodromes by all aeronautical MET offices.

8.2 Area Meteorological Watch Service

The area Meteorological watch service is performed by Lusaka Meteorological Watch Office (MWO).

The MWO issues information in the form of SIGMET messages about the occurrence or expected occurrence of one or several of the following significant meteorological phenomena.

- Thunderstorm
- Severe turbulence
- Severe icing
- Heavy sand storm/dust storm
- Volcanic ash cloud
- Tropical cyclone

The SIGMETS are issued in abbreviations and plain language using ICAO abbreviations and numbered for each consecutively day commencing at 0001; their periods of validity is generally limited to less than 4 hours from the time of transmission.

The MWO transmit SIGMETS issued by itself as well as SIGMETS adjacent MWOs upon agreement, also SIGMETS of the MWOs to the regional control centre competent for the FIR or UIR concerned.

In addition to the assurance of SIGMETS the MWO informs the regional control centres about the occurrence or expected occurrence of thunderstorms, moderate icing, light to moderate hail, of moderate turbulence within the FIRs concerned. This information is intended for the safety of low-level flights and is limited to the lower airspace.

9 Other automated meteorological services

Service name 1	Information available 2	Area, route and aero-drome coverage 3	Telephone, telex and telefax numbers Remarks 4
Aeronautical Meteorological Watch Office. Kenneth Kaunda International "Pre-Flight-Polling" (FLKK)	Prognostic General Aviation weather Chart (GWC) The 850, 700, 500, 300, 250, 200 hpa contour TAFs	All the National and adjacent FIRs	Tel: 260- 95563 2486 Telegraphic Address METZAM, LUSAKA AFS: FLKKYMYX
Harry Mwaanga Nkumbula Airport (FLHN)	Hourly plus special observations	METAR SPECI TREND SYNOP	+260 954755119.
Aeronautical Meteorological Watch Office. Simon Mwansa Kapwepwe International Airport (FLSK)	Hourly plus special observations	METAR, SPECI, TREND SYNOP)	+260- 954 7551 67
Mfuwe International Airport (FLMF)	Hourly plus special observations	METAR, SPECI, TREND SYNOP)	+260-954755084

GEN 3.6 SEARCH AND RESCUE

1 Responsible Service

The Search and Rescue Service in Zambia is provided by National Search and Rescue Organization under the Ministry of Transport and Logistics postal and telegraphic addresses of the responsible institutions are:

a. National Search and Rescue Organization

Zambia Civil Aviation Authority
P.O Box 50137
LUSAKA 10101
Number : 260-211-271091/0950708012
Mobile Numbers 260-977421424/ 0950708012
Email: civil.aviation@caa.co.zm
Aeronautical: FLKKYCYX

b. Zambia Airports Corporation Limited

Chief Search and Rescue Officer
P.O Box 30175
LUSAKA 10101

A Rescue Co-ordination Centre (RCC) is established at Kenneth Kaunda International Airport. When search and rescue operations are needed, the RCC is activated.

- Rescue Co-ordination Centre
Zambia Airports Corporation Limited
P.O. Box 30175
LUSAKA 10101

Telegraphic address

Aeronautical: FLKKYCYX/FLKKZQZX
Commercial: Chief Ridgeway Lusaka
Telephone Numbers: 260-211- 271312
 260-211-271091
Mobile Number: 260-760634261
Email: lusakarcc@zacl.aero

1.1 Applicable ICAO-Documents

The Search and Rescue Service is provided in accordance with the provisions contained in the following ICAO documents: Annex 12- Search and Rescue, Doc 7030-Regional Supplementary Procedures for alerting and Search and Rescue Services applicable in the AFI region and IAMSAR Manual Doc 9731 Vol 1, 2 and 3.

2 Area of responsibility

The Search and Rescue Coordination Centre is responsible for SAR operations within the Lusaka FIR.

3 Types of services

Details of R.C.C and related rescue units are given on page 3.6-2 rescue units. In addition, various elements of National Search and Rescue Organisation are available for search and rescue missions when required.

SEARCH AND RESCUE UNITS

Name	Location	Facilities	Remarks
1	2	3	4
Z.A.F	152000S 0282700E	Y12	Available as and when required

4 SAR Agreements

Zambia has only signed SAR agreement with the Government of The Republic of Botswana. SAR service of Zambia and the SAR service of other neighbouring states, assistance is normally provided upon receipt of request. This mutual understanding of SAR services provide for facilitation of the over-flight and landing of search and rescue aircraft without prior permission after dispatch of a flight plan, for similar facilitation of the entry of surface vessels and their operation in border areas for notification of entry to the authorities controlling entry, for defraying the costs of stop-over, accommodation and transportation of crew members, and for direct communication between the two SAR services. On all common search and rescue matters, request for the entry of aircraft,

equipment or personnel from other states to engage in the search of aircraft in distress or to rescue survivors of aircraft accidents should be transmitted to the Rescue Co-ordination Centre. Instructions as to the control which will be exercised on entry of such aircraft and/or personnel will be given by the Rescue Co-ordination Centre in accordance with a standing plan for the conduct of Search and Rescue in its areas.

5 Conditions of availability

The SAR service and facilities in the Republic of Zambia are available without charge to neighbouring states upon request to the Director General of Zambia Civil Aviation Authority at all times when they are not engaged in search and rescue operations in their home territory. All facilities are specialised in SAR techniques and functions.

6 Procedures and signals used

6.1 Procedures and signals used by aircraft

Procedures for pilot-in-command observing an accident or intercepting a distress call and/or message are outlined in ICAO Annex 12 Chapter 5.

6.2 Communications

Transmission and reception of distress message within Zambian Search and Rescue Area are handled in accordance with ICAO Annex 10, Volume II Chapter 5 Paragraph 5.3.

For communications during search and rescue operations, the codes and abbreviations, published in ICAO abbreviations and codes (Doc 8400) are used.

The frequency 121.5MHz is monitored continuously in Lusaka Area Control Centre 24hours, while monitoring at Simon Mwansa Kapwepwe, Harry Mwaanga Nkumbula and Mfuwe Airports is during operational hours.

Rescue aircraft belonging to permanent search and rescue units use both the call sign RESCUE and additional identification marks (ALFA, BRAVO, CHARLIE, etc) during rescue operations.

Rescue Unit- A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue.

Search and Rescue Area- An area within which the co-ordination of search and rescue is integrated by a single rescue co-ordination centre.

6.3 Dropable Containers and Packages

The type and dimensions of dropable containers or packages will vary with the nature and qualities of survival stores to be dropped, the size and type of the delivery (e.g. parachute, or free dropper let down from helicopter etc) and also the type of terrain on which they will fall.

The contents of each container or package should be clearly identified in print in at least one of the three languages (English, French or Spanish) by self explanatory symbols or by colour code streamers as follows:

- Red-Medical supplies and first aid equipment
- Blue-Food and water
- Yellow-Blankets and protective clothing
- Black-Miscellaneous equipment such as stoves, axes, compasses, cooking utensils etc.
- Combination of colours- Mixed contents.

6.4 Search and rescue signals

The search and Rescue signals to be used are those prescribed in ICAO Annex 12, Chapter 5, Paragraph 5.10

6.4.1 Ground/Air visual signal codes for use by survivors

No	Message	Code symbol
1	Require assistance	V
2	Require medical assistance	X
3	No or Negative	N

4	Yes or affirmative	
5	Proceeding in this direction	

INSTRUCTION FOR USE:

- Make signals not less than 8ft (2.5m)
- Take care to lay out signals exactly as shown.
- Provide as much colour contrast as possible between signals and back ground.
- Make every effort to attract attention by other means such as radio, flares, smoke, reflected light.

6.4.2 Ground/Air visual signal code for use by rescue units

No	Message	Code Symbol
1	Operation completed	
2	We have found all personnel	
3	We have found only some personnel	
4	We are not able to continue. Returning to base	
5	Have divided into two groups. Each proceeding in direction indicated	
6	Information received that aircraft is in this direction	
7	Nothing found. Will continue to search	

6.5 Emergency and Survival

Equipment to be Carried in Aircraft.

6.5.1 Public Transport Aircraft

In accordance with Regulation 28 of the Air Navigation Regulations CAP 444, the Director General Civil Aviation Authority in his powers prescribes the following minimum emergency and survival equipment to be carried in all public transport aircraft and other flights, engaged in flight across notified areas where search and rescue would be especially difficult.

- a. Four White Fabric Strips, 2.5 x 0.6 metres (8x2 feet) for making the ground signals depicted in Section GEN 3.6.6.4.
- b. Very pistol and at least six cartridges or six hand held flares.
- c. Emergency rations and water sufficient to sustain all occupants of the aircraft for at least three days.
- d. Heliograph or signalling mirror
- e. Marching compass
- f. Axe and large knife

- g. Flashing light
- h. Water proof matches
- i. Insect repellent
- j. Water bag
- k. Water purifying tablets
- l. First-aid kit
- m. Portable survival radio equipment stored so as to facilitate its ready use in an emergency and must operate on VHF.

NOTE: A hand mirror is recommended to be carried for signalling to search aircraft. The above scale of survival equipment may be varied from time to time by the Director General of Civil Aviation to suit particular cases. First aid kits must be carried in all Public Transport Aircraft for all flights, (air Navigation Regulations number 34 CAP 444) refers.

6.5.2 Private Aircraft

Whilst there is no regulation for compulsory carriage of survival and first aid equipment in private category aircraft, it is strongly recommended that such equipment particularly first aid kit and white signalling strips listed above be carried by private aircraft whilst on cross country flights across areas where search and rescue is difficult.

6.6 Search and Rescue Supplies

Survival Equipment (as recommended) by ICAO

Supplies and survival equipment must be carried by aircraft, land facilities to give aid and sustenance to survivors and to facilitate their rescue.

6.7 Basic Packs of Supplies and Survival Equipment

The list of supplies and survival equipment which follow are not intended to be all inclusive but rather to serve as guide in deciding what should be held in stock. The list indicates which items should be included in the basic pack, i.e

- a. Medical: First aid kits, insect repellent, head net, aspirin, sunburn lotion, sunglasses or glare goggles.
- b. Ration: subsistence pack of concentrate food or assorted cans of food, water in sealed cans or screw top, polythene containers, condensed milk, coffee, sugar and salt.
- c. Signalling: Portable radio transmitter/receiver, pyrotechnic signal , smoke candles and red flare, very pistol and cartridges, whistle, signalling mirror and signal code card.
- d. Covering: Tent sleeping bag, blanket, waterproof clothing, walking shoes, socks and gloves.
- e. Fire and Landing: waterproof matches, burning lens, fire kindling tablets, emergency stove, candles, flash light with spare batteries and bulbs.
- f. Sundry: Can openers, cooking and eating utensils, non-sparking axe, rope, compass, writing pad, pencil, soap, towelling and toilet tissue, cigarettes, booklet with survival units.
- g. Hunting and self Protection. Fire arms and ammunition, slash knives.
- h. Care of injured: Extra dressing and bandages, air mattresses, stretcher splints, morphine and antibiotics drugs.

6.8 Procedure and/or Signals employed by rescue Aircraft

6.8.1 Information Concerning Emergencies

Any authority or any rescue service having reason to believe that an aircraft is in an emergency shall immediately give all available information to the Lusaka R.C.C or Air Traffic Services Unit.

When information is received other than through the agency of ATS, RCC shall use such information and determine to which phase of the emergency situation corresponds, and shall apply the procedures applicable to that phase.

6.8.2 Emergency Phases

- Uncertainty phase
- Alert phase

- Distress phase

6.9 Procedures for a Pilot in Command Observing an Accident

When a pilot in command observes that either another aircraft or a surface craft is in distress, unless he is unable, or in the circumstances of the case considers it unreasonable or unnecessary, he shall:

1. Keep in sight the craft in distress until such a time as his presence is no longer necessary or until he is no longer able to remain in the vicinity of the distressed craft.
2. Report to the R.C.C or Air Traffic Services Unit as much of the following information as possible.
 - a. Report to the R.C.C or Air Traffic Services Unit as much of the following information as possible.
 - b. Its position, expressed in graphical co-ordinates or in distance and true bearing from distinctive landmark.
 - c. Time of observation expressed in UTC.
 - d. Number of persons observed, whether persons have been seen to abandon the aircraft in distress.
 - e. Apparent physical conditions of survivors.
3. Acts as instructed by the R.C.C or ATS unit.

6.9.1 Procedures for a Pilot in Command Intercepting a Distress Call and/or Message

Whenever a distress call and/or message is intercepted on radio telephone by a pilot in command of an aircraft other than a search aircraft he shall

- a. Plot the position of the craft in distress if given.
- b. If possible take bearing on the transmission.
- c. At his discretion, while awaiting instruction proceed to the position given in the distress signal.

6.9.2 Communication

Transmission and reception of distress message within the Lusaka search and Rescue Area are handled in accordance with ICAO Annex 10 Vol II Chapter 5.

For communication during Search and Rescue operations the codes and abbreviations published in ICAO Doc 8400 (codes and abbreviations) are used.

Information concerning positions, call signs, frequencies and hours of operation of the Lusaka FIR Aeronautical Station is published in ENR 2.1-1.

The search and rescue signals to be used are those prescribed in Annex 12 Chapter 6. When those symbols are used, they shall have the meaning indicated.

When survivors wish to inform an aircraft about their wellbeing, intentions and/or requirements they are to use the symbols prescribed on page GEN 3.6.6.4.

When ground signal displayed by survivors is understood by an aircraft, it should acknowledge the signal by:

- a. dropping a message
- b. rocking the wings of the aircraft
- c. making green flashing with signal lamp.
- d. Flashing the morse code procedure signal - ("T" meaning word or group received") or_.(R) meaning "received or I received your last signal/message" with a lamp signal.
- e. Any other suitable signal agreed upon during the briefing period (international distress signal-visual signals).
- f. Attention to the above signal may be attracted by other means such as radio flares, smoke, reflected light etc.

When a ground signal displayed by a survivor (GEN 3.6.6.4) is not understood by the aircraft, it should inform the survivor or land party by:

- a. Flying straight and level without rocking wings.
- b. Making a complete RIGHT HAND CIRCLE

- c. Making red flashes with a signal lamp.
- d. Flashing the morse code procedure signal ._. .___. (RPT) meaning repeat or what you have sent" with a signal lamp.

When displaying visual signals, the following must be noted:

- a. Lay out these symbols by using strips of fabric or parachutes, pieces of wood, stones or any other available material
- b. Endeavour to provide as big a colour contrast as possible between the material used for the symbols and the background against which the symbols are exposed.
- c. Symbols should be at least 2.5m (8 feet) in height or larger if possible. Care should be taken to lay out the symbols exactly as depicted to avoid confusion with other symbols.
 - ANNEX 12 - Search and Rescue
 - ANNEX13 - Aircraft Accident Investigation
 - Doc 7030 - Regional Supplementary Procedures for Alerting and Search and Rescue applicable in the AFI Region.

6.10 Definitions

When the following terms are used in this section of the AIP - Search and Rescue, they have the following meanings:

- Alert (to) to warn to prepare for search and rescue and to direct the guarding of specified radio frequencies.
- Alerting post - Any agency designated to serve as an emergency between the person reporting an aircraft in distress and R.C.C
- Distress - A state of being threatened by serious and immitent danger and require immediate assistance.
- Uncertainty Phase - A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.
- Distress Phase - A situation wherein there is a reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance.
- Alert Phase - A situation wherein apprehension exists as to the safety of an aircraft and its occupants.
- Rescue Co-ordination Centre - A centre established within an assigned Search and Rescue area to promote efficient organisation of search and rescue.
- Rescue Subcentre - A centre subordinate to a rescue co-ordination centre established to direct localised operations

GEN 4.1 AERODROME/HELIPORT CHARGE TABLE

Traffic charges applying to the use of Zambian International and provincial Aerodromes can be found in the current Aeronautical Information Publication Supplement (AIP SUP) - Zambia

- a. **International Charges Table** - For Aircraft over the weights shown and information on charges relating to specific aircraft types please contact:

Commercial Manager
Kenneth Kaunda International Airport
PO Box 30175
Lusaka
Zambia

Tel: 260-211-271313/271184
Fax: 260-211-271037

- b. **Domestic Flights** - Landing and parking fees at the airports of Kenneth Kaunda (FLKK), Simon Mwansa (FLSK), Mfuwe (FLMF) and Harry Mwaanga (FLHN). For Aircraft over the weights shown and information on charges relating to specific aircraft types please contact:

Commercial Manager
Kenneth Kaunda International Airport
PO Box 30175
Lusaka
Zambia

Tel: 260-211-271313/271184
Fax: 260-211-271037

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GEN 4.2 AIR NAVIGATION SERVICES CHARGES

Tariff charges applying to the use of Zambian airspace can be found in Aeronautical Information Publication Supplement (AIP SUP)
– Zambia

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ENR 1 GENEREAL RULES AND PROCEDURES

ENR 1.1 GENERAL RULES

The air traffic rules and procedures applicable to air traffic in Zambian airspace conform to Annex 2 and 11 to the Convention on International Civil Aviation and to those portions of the Procedures for Air Navigation Services, Rules of the Air and Air Traffic Services and the Regional Supplementary Procedures and ICAO SARPs PANS-ATM Doc 4444.

Additional provisions are indicated in GEN 1.7 .

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ENR 1.2 VISUAL FLIGHT RULES

1. Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table 1.
2. Except when a clearance is obtained from an air traffic control unit, VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or traffic pattern:
 - a. when the ceiling is less than 1500ft (450m) and/or
 - b. when the ground visibility is less than 8 km.
3. VFR flights between sunset and sunrise, or such other period between sunset and sunrise as may be prescribed by the appropriate ATS authority, shall be operated in accordance with the conditions prescribed by such authority.
4. Unless authorized by the appropriate ATS authority, VFR flights shall not be operated:
 - a. Above FL150
 - b. at transonic and supersonic speeds
5. Except when necessary for take-off or landing, or except by permission from the appropriate authority, a VFR flight shall not be flown:
 - a. over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1000ft (300m) above the highest obstacle within a radius of 8Km (4.32NM) from the aircraft.
 - b. elsewhere than as specified in 5 (a), at a height not less than 1000ft above the ground or water

Table 1* (see para 1 above)

AIRSPACE CLASS	C	G
		ABOVE 900 M (3000 FT) AMSL or above 300 M (1000 FT) above terrain, whichever is the higher.
DISTANCE FROM CLOUD	1500 M horizontally 300 M (1000 FT) vertically	Clear of cloud and in sight of ground or water
FLIGHT VISIBILITY	8 KM at above 3050 M (10 000 FT) AMSL 5 KM below 3 050 M (10 000 FT) AMSL	5 KM*

* When the height of the transition altitude is lower than 3 050 M (10 000 FT) AMSL, FL 100 should be used in lieu of 10000 FT.

** When so prescribed by the appropriate ATS authority:

- a. lower flight visibilities to 1 500 M may be permitted for flights operating:
 1. at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
 2. in circumstances in which the probability of encounters with other traffic would normally be low, eg. in areas of low volume traffic and aerial work at low levels.
- b. HELICOPTERS may be permitted to operate in less than 1 500 M flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

6. Except where otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority, VFR flights in level cruising flight when operated above 3 000 ft from the ground or water, or a higher datum as specified by the appropriate ATS authority, shall be conducted at a flight level appropriate to the track as specified in the tables of cruising levels.
7. VFR flights shall comply with the provisions of 3.6 of ICAO Annex 2.
 - a. when operated within Classes C and G airspace;
 - b. When forming part of aerodrome traffic at controlled aerodromes; or
 - c. when operated as special VFR flights.
8. An aircraft operated in accordance with the visual flight rules which wishes to change to compliance with the instrument flight rules shall:

- a. if a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan, or
- b. when so required by 3.3 of ICAO Annex 2, submit a flight plan to the appropriate air traffic services unit and obtain a clearance prior to proceeding under IFR when in controlled airspace.

ENR 1.3 INSTRUMENT FLIGHT RULES

1.3.1 Rules applicable to all IFR flights

1.3.1.1 Aircraft equipment

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

1.3.1.2 Minimum Levels

Except when necessary for take-off or landing or when specifically authorized by the appropriate authority, an IFR flight shall be flown at a level that is not below the minimum flight altitude established by the state whose territory is overflown, or, where no such minimum flight altitude has been established.

- a. over high terrain or in mountainous area, at a level which is at least 2000 ft (600m) above the highest obstacle located within 8 km of the estimated position of the aircraft.
- b. elsewhere than as specified in (a), at a level which is at least 1000 ft (300m) above the highest obstacle located within 8 km of the estimated position of the aircraft.

NOTE: The estimated position of the aircraft will take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

1.3.1.3 Change from IFR flight to VFR flight

1.3.1.3.1. An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall, if a flight plan was submitted, notify the appropriate air traffic services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

1.3.1.3.2. When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions, it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

1.3.2 Rules applicable to IFR flights within controlled airspace

1.3.2.1. IFR flights shall comply with the provisions of 13.5.7 of ZCARs Part 13 and 3.6 of ICAO Annex 2 to the Convention on International Civil Aviation when operated in controlled airspace.

1.3.2.2. An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, or, if authorized to employ cruise climb techniques, between two levels or above a level, selected from:

- a. the tables of cruising levels in Appendix 3 of ICAO Annex 2, or
- b. a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of ICAO Annex 2 for flight above FL 410,

except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority in the Aeronautical Information Publication (AIP).

1.3.3 Rules applicable to IFR flights outside controlled airspace

1.3.3.1 Cruising levels

An IFR flight operating in level cruising flight outside controlled airspace shall be flown at a cruising level appropriate to its track as specified in:

- a. the tables of cruising levels in Table 1 of Part 13.5.7 of ZCARS Part 13 and Appendix 3 of ICAO Annex 2, except when otherwise specified by the appropriate ATS authority for flight at or below 900m (3000ft) above mean sea level; or
- b. a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of ICAO Annex 2 for flight above FL 410.

NOTE: This provision does not preclude the use of cruise techniques by aircraft in supersonic flight

1.3.3.2 Communications

An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 (c) or (d) of ICAO Annex 2 shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

1.3.3.3 Position reports

An IFR flight operating outside controlled airspace is required by the appropriate ATS authority to:

- a. submit a flight plan, and
- b. maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

Pilots shall report position as specified in 3.6.3 of ICAO Annex 2 for controlled flights.

NOTE: Aircraft electing to use the air traffic advisory service whilst operating IFR within specified advisory airspace are expected to comply with the provisions of 3.6 of ICAO Annex 2, except that the flight plan and changes thereto are not subjected to clearances and that two-way communication will be maintained with the unit providing the air traffic advisory service.

ENR 1.4 ATS AIRSPACE CLASSIFICATION**1.4.1 Classification of airspace****Table 1: ATS Applicable Airspace Classification in the Lusaka Flight Information Region (Zambian Airspace)**

Class	Type of flight	Separation provided	Service provided	Speed limitation*	Radio communication requirement	Subject to an ATC clearance
A	IFR only	All aircraft	Air traffic control service	Not applicable	Continuous two-way	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Continuous two-way	Yes
	VFR	VFR from IFR	1) Air traffic control service for separation from IFR; 2) VFR/VFR traffic information (and traffic avoidance advice on request)	250 kt IAS below 3050 m (10000 ft) AMSL	Continuous two-way	Yes
G	IFR	NIL	Flight information service	250 kt IAS below 3050 m (10000 ft) AMSL	Continuous two-way	No
	VFR	NIL	Flight information service	250 kt IAS below No 3050 m (10000 ft) AMSL	No	No

* When the height of the transition altitude is lower than 3050 m (10000 ft) AMSL, FL 100 should be used in lieu of 10000 ft.

Table 2: AIRSPACE CLASSIFICATION VERTICAL DIMENSION IN THE LUSAKA FIR

AIRSPACE CLASS	DIMENSIONS	APPLICABILITY
CLASS A	FL145 TO UNLIMITED	THE ENTIRE ZAMBIAN FLIGHT INFORMATION REGION
CLASS C	FL075 TO FL145	TERMINAL CONTROL AREAS (LUSAKA, NDOLA AND MFUWE)
CLASS C	FL065 TO FL145	LIVINGSTONE TERMINAL CONTROL AREA
CLASS C	GROUND TO FL075	CONTROL ZONES (LUSAKA, NDOLA AND MFUWE)
CLASS C	GROUND TO FL065	LIVINGSTONE CONTROL ZONE
CLASS G	GROUND TO FL145	OUTSIDE CONTROLLED AIRSPACE
CLASS G	GROUND TO FL145	BETWEEN LUSAKA/LIVINGSTONE OUTSIDE CONTROLLED AIRSPACE
CLASS G	GROUND TO FL075	BETWEEN LUSAKA/MFUWE OUTSIDE CONTROLLED AIRSPACE
CLASS G	GROUND TO FL075	BETWEEN LUSAKA/NDOLA OUTSIDE CONTROLLED AIRSPACE

Table 3: AIRSPACE CLASSIFICATION VERTICAL DIMENSION IN THE SOLWEZI CTA

AIRSPACE CLASS	DIMENSIONS	APPLICABILITY
CLASS A	FL145 to FL245	
CLASS C	GROUND to FL085	Solwezi control zone
CLASS C	FL085 to FL145	
CLASS G	GROUND to FL085	Between Lusaka and Solwezi outside the controlled Airpace
CLASS G	GROUND to FL085	Between Ndola and Solwezi outside the controlled airspace

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ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES**1.5.1 General**

1.5.1.1. The holding, approach and departure procedures in use are based on those contained in the latest edition of ICAO Doc 8168 - Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS).

1.5.1.2. The holding and approach procedures in use have been based on the values and factors contained in Parts III and IV of Vol. I of the PANS-OPS. The holding patterns shall be entered and flown as indicated below.

1.5.2 Arriving flights

1.5.2.1. IFR flights entering and landing within a terminal control area will be cleared to a specified holding point and instructed to contact approach control at a specified time, level or position. The terms of this clearance shall be adhered to until further instructions are received from approach control. If the clearance limit is reached before further instructions have been received, holding procedure shall be carried out at the level last authorized.

1.5.2.2. Due to the limited airspace available, it is important that the approaches to the patterns and the holding procedures be carried out as precisely as possible. Pilots are strongly requested to inform ATC if for any reason the approach and/or holding cannot be performed as required.

1.5.3 Departing flights

1.5.3.1. IFR flights departing from controlled aerodromes will receive initial ATC clearance from the local aerodrome control tower. The clearance limit will normally be the aerodrome of destination. IFR flights departing from non-controlled aerodromes must make arrangements with the area control centre concerned prior to take-off.

1.5.3.2. Detailed instructions with regard to routes, turn, etc. will be issued after take-off.

Flight level (FL)	Category A and B aircraft	Jet aircraft	
		Normal Conditions	Turbulence conditions
Up to FL 140 (4 250 M) inclusive	170 KT	230 KT (425 KM/H)	280 KT (520 KM/H) or Mach 0.8, whichever is less
Above FL 140 (4 250 M) to FL 200 (6 100 M) inclusive		240 KT (445 KM/H)	
Above FL 200 (6 100 M) to FL 340 (10 350 M) inclusive		265 KT (490 KM/H)	
Above FL 340 (10 350 M)		Mach 0.83	Mach 0.83

1.5.4 STANDARD INSTRUMENT DEPARTURES

Lusaka International

Departure	ATC Clearance
Livingstone one RWY 10	Make a right turn after take-off, cross the 180° Radial at FL070 or above.

NOTE: Other SIDs may be adopted at a future date, after trials satisfy their viability. If so they will be entered in this section

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ENR 1.6 RADAR SERVICES AND PROCEDURES

1.6.1 Primary radar

1.6.1.1 Supplementary Services

1.6.1.1.1. A radar unit normally operates as an integral part of the parent ATS unit and provides radar service to aircraft, to the maximum extent practicable, to meet the operational requirement. Many factors, such as radar coverage, controller workload and equipment capabilities, may affect these services, and the radar controller shall determine the practicability of providing or continuing to provide radar services in any specific case.

1.6.1.1.2. A pilot will know when radar services are being provided because the radar controller will use the following phraseology... (aircraft call sign this is ...Area/Approach, radar identified/or radar contact.

- a. passing... (beacon);
- b. ... (radial I DME)FROM...;
- c. executing radar turns VOR radial / DME... FROM... (STATION).

1.6.1.2 The application of radar control service

1.6.1.2.1. Radar identification is achieved according to the provisions specified by ICAO.

1.6.1.2.2. Radar control service is provided in controlled airspace to aircraft operating within the Lusaka and Livingstone TMA. This service may include:

- a. radar separation of arriving, departing and en-route traffic;
- b. radar monitoring of arriving, departing and en-route traffic to provide information on any significant deviation from the nominal flight path;
- c. radar vectoring when required;
- d. assistance to aircraft in emergency;
- e. assistance to aircraft crossing controlled airspace;
- f. warnings and position information on other aircraft considered to constitute a hazard;
- g. information to assist in the navigation of aircraft;
- h. information on observed weather;
- i. radar watch when required.

1.6.1.2.3. The minimum horizontal radar separations are:

- a. 5NM within Radar coverage
- b. As specified by the appropriate Authority.

1.6.1.2.4. Levels assigned by the radar controller to pilots will provide a minimum terrain clearance according to the phase of flight.

1.6.1.3 ATS surveillance system and radio failure procedures

1.6.1.3.1 Radar failure

In the event of radar failure or loss of radar identification, instructions will be issued to restore non-radar standard separation and the pilot will be instructed to communicate with the parent ATS unit.

1.6.1.3.2 Radio failure

1.6.1.3.2.1. The radar controller will establish whether the aircraft radio receiver is working by instructing the pilot to carry out a turn or turns. If the turns are observed, the radar controller will continue to provide radar service to the aircraft.

1.6.1.3.2.2. If the aircraft's radio is completely unserviceable, the pilot should carry out the procedures for radio failure in accordance with ICAO provisions. If radar identification has already been established, the radar controller will vector other identified aircraft clear of its track until such time as the aircraft leaves radar coverage.

1.6.1.4 Graphic portrayal of area of radar coverage

Since the area of radar coverage is identical to that of SSR, see ENR 1.6.2.4 - Graphic portrayal of area of coverage of radar/SSR.

1.6.2 Secondary surveillance radar (SSR)

1.6.2.1 Emergency procedures

1.6.2.1.1. Except when encountering a state of emergency, pilots shall operate transponders and select modes and codes in accordance with ATC instruction. In particular, when entering Lusaka FIR, pilots who have already received specific instructions from ATC concerning the setting of the transponder shall maintain that setting until otherwise instructed.

1.6.2.1.2. Pilots of aircraft about to enter Lusaka FIR who have not received specific instructions from ATC concerning the setting of the transponder shall operate the transponder on Mode A/3, Code 24 (or 2400) before entry and maintain that code setting until otherwise instructed.

1.6.2.1.3. If the pilot of an aircraft encountering a state of emergency has previously been directed by ATC to operate the transponder on a specific code, this code setting shall be maintained until otherwise advised.

1.6.2.1.4. In all other circumstances, the transponder shall be set to Mode A/3, Code 77 (or 7700). Notwithstanding the procedure in 1.6.2.1.1 above, a pilot may select Mode A/3, Code 77 (or 7700) whenever the nature of the emergency is such that this appears to be the most suitable course of action.

Continuous monitoring of responses on Mode A/3, Code 77 is provided.

1.6.2.2 Radio communication failure and unlawful interference procedures

1.6.2.2.1 Radio communication failure procedure

In the event of an aircraft radio receiver failure, a pilot shall select Mode A/3, Code 76 (or 7600) and follow established procedures; subsequent control of the aircraft will be based on those procedures.

1.6.2.2.2 Unlawful interference procedure

Pilots of aircraft in flight subjected to unlawful interference shall endeavour to set the transponder to Mode A, Code 7500 to make the situation known, unless circumstances warrant the use of Mode A/B, Code 77 (or 7700).

1.6.2.3 System of SSR Code assignment

CATEGORY	LUSAKA (FLKK)		LIVINGSTONE(FLHN)		REMARKS
International	5500	5557	5561	5577	INTERNATIONAL & FIR
Domestic 1	5600	5657	5660	5677	DOMESTIC TMA
Domestic 2	5700	5757	5760	5777	DOMESTIC FIR
Others	5200	5257	5260	5277	MICROLIGHT & HELICOPTER

1.6.2.4 Graphic portrayal of area of coverage of radar/SSR

TO BE DEVELOPED

ENR 1.7 ALTIMETER SETTING PROCEDURES

1.7.1 Introduction

The altimeter setting procedures in use generally conform to those contained in ICAO Doc 8168, Vol. I, Part 6 and are given in full below. Differences are shown in quotation marks.

Transition altitudes are given on the instrument approach charts.

QNH reports and temperature information for use in determining adequate terrain clearance are provided in MET broadcasts and are available on request from the air traffic services units. QNH values are given in hectopascals, and in inches on request.

1.7.2 Basic altimeter setting procedures

1.7.2.1 General

1.7.2.1.1. A transition altitude is specified for each aerodrome. No transition altitude is less than 1500ft (450m) above an aerodrome.

1.7.2.1.2. Vertical positioning of aircraft when at or below the transition altitude is expressed in terms of altitude, whereas such position at or above the transition level is expressed in terms of flight levels. While passing through the transition layer, vertical positioning is expressed in terms of altitude when descending and in terms of flight levels when ascending.

1.7.2.1.3. Flight level zero is located at the atmospheric pressure level of 1013.2 hPa (29.92 in). Consecutive flight levels are separated by a pressure interval corresponding to 500 ft (152.4 m) in the standard atmosphere.

Examples of the relationship between flight levels and altimeter indications are given in the following table:

Flight level	Altimeter indication
Number	Feet
10	1000
15	1500
20	2000
50	5000
100	10000
150	15000
200	20000

1.7.2.2 Take-off and climb

1.7.2.2.1. A QNH altimeter setting is made available in aircraft taxi clearance prior to take-off.

1.7.2.2.2. Vertical positioning of aircraft during climb is expressed in term of altitudes until reaching the transition altitude above which vertical positioning is expressed in terms of flight levels.

1.7.2.3 Vertical separation - en route

1.7.2.3.1. Vertical separation during en-route flight shall be expressed in terms of flight levels at all times.

1.7.2.3.2. IFR flights, and VFR flights above 3000 ft AMSL when in level cruising flight, shall be flown at such flight levels, corresponding to the magnetic tracks shown in the following table, so as to provide the required terrain clearance:

	000°-179°		180°-359°	
	IFR	VFR	IFR	VFR

	10	15	20	
	30	35	40	45
	50	55	60	65
Flight	70	75	80	85
Level	90	95	100	105
Number	...	etc	...	etc
	270		280	
	290		310	
	330		350	
	etc		etc	

NOTE: Some of the lower levels in the above table may not be usable due to terrain clearance requirements.

1.7.2.4 LUSAKA NDOLA TMA

1.7.2.4.1. within or below the joint Lusaka/Ndola TMA all flights (whether IFR or VFR) north of latitude of Kenneth Kaunda (1520South) up to Ndola latitude 1259South will be allocated flight levels as shown in the table below

MAGNETIC TRACK	
270° -089°	090° - 269°
THROUGH NORTH	THROUGH SOUTH
<u>FLGHT LEVELS</u>	<u>FLIGHT LEVELS</u>
70	60
90	80
110	100
130	120
150	140
170	160
etc	etc

NOTE: at or above flight level 245 the normal semi-circular rule of flight level allocation will apply. All flights below FL070 in the joint Lusaka/Ndola TMA will be operated under VFR only. Flights within the joint Lusaka/Ndola TMA maybe operated under VFR/ IFR with 1000ft between them.

1.7.2.5 Approach and landing

1.7.2.5.1. A QNH altimeter setting is made available in approach clearance and in clearance to enter the traffic circuit.

1.7.2.5.2. QFE altimeter settings are available on request.

1.7.2.5.3. Vertical position of aircraft during approach is controlled by reference to flight levels until reaching the transition level below which vertical positioning is controlled by reference to altitudes.

1.7.2.6 Missed approach

1.7.2.6.1. Shall be conducted in accordance with the instrument flight procedure charts for relevant aerodromes.

1.7.3 Description of altimeter setting region

The altimeter setting regions are Lusaka, Ndola, Livingstone, Mfuwe, Kasama, Mongu, Mansa, Chipata and Solwezi.

1.7.4 Procedures applicable to operators (including pilots)

1.7.4.1 Flight planning

The levels at which a flight is to be conducted shall be specified in a flight plan:

- In terms of flight levels if the flight is to be conducted at or above the transition level, and
- In terms of altitudes if the flight is to be conducted in the vicinity of an aerodrome and at or below the transition altitude.

- Short flights in the vicinity of an aerodrome may often be conducted only at altitudes below the transition altitude.
- Flight levels are specified in a flight plan by number and not in terms of feet as is the case with altitudes.

1.7.5 Tables of cruising levels

The cruising levels to be observed when so required are as follows: in areas where, on the basis of regional air navigation agreement and in accordance with conditions specified therein, a reduced vertical separation minimum (RVSM) or 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive:

Magnetic track									
000°-179°					180°- 359°				
IFR flight		VFR flight			IFR flight		VFR flight		
Flight level	Altitude	Flight level	Altitude	Flight level	Flight level	Altitude	Flight level	Altitude	Flight level
	Feet	Metres		Feet	Metres		Feet	Metres	
-90		0		—	—	0		—	—
10	1000	300	—	—	—	20	2000	600	—
30	3000	900	35	3 500	1 050	40	4 000	1 200	45
50	5 000	1 500	55	5 500	1 700	60	6 000	1 850	65
70	7 000	2 150	75	7 500	2 300	80	8 000	2 450	85
90	9 000	2 750	95	9 500	2 900	100	10 000	3 050	105
110	11 000	3 350	115	11 500	3 500	120	12 000	3 650	125
130	13 000	3 950	135	13 500	4 100	140	14 000	4 250	145
150	15 000	4 550	155	15 500	4 700	160	16 000	4 900	165
170	17 000	5 200	175	17 500	5 350	180	18 000	5 500	185
190	19 000	5 800	195	19 500	5 950	200	20 000	6 100	205
210	21 000	6 400	215	21 500	6 550	220	22 000	6 700	225
230	23 000	7 000	235	23 500	7 150	240	24 000	7 300	245
250	25 000	7 600	255	25 500	7 750	260	26 000	7 900	265
270	27 000	8 250	275	27 500	8 400	280	28 000	8 550	285
290	29 000	8 850	290	29 000	8 850	300	30 000	9 150	300
310	31 000	9 450	310	31 000	9 450	320	32 000	9 750	320
330	33 000	10 050	330	33 000	10 050	340	34 000	10 350	340
350	35 000	10 650	350	35 000	10 650	360	36 000	10 950	360
370	37 000	11 300	370	37 000	11 300	380	38 000	11 600	380
390	39 000	11 900	390	39 000	11 900	400	40 000	12 200	400
410	41 000	12 500	410	41 000	12 500	430	43 000	13 100	430
450	45 000	13 700	450	45 000	13 700	470	47 000	14 350	470
490	49 000	14 950	490	49 000	14 950	510	51 000	15 550	510
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

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ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES (DOC 7030)

Regional Supplementary Procedures are applied in accordance with ICAO Doc 7030.

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ENR 1.9 AIR TRAFFIC FLOW AND CAPACITY MANAGEMENT (ATFCM)

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ENR 1.10 FLIGHT PLANNING

1.10.1 Procedures for the submission of a flight plan

Information relative to an intended flight or portion of a flight, to be provided to air traffic services units, shall be in the form of a flight plan. The term 'flight plan' is used to mean variously, full information on all items comprised in the flight plan description, covering the whole route of a flight, or limited information required, inter alia, when the purpose is to obtain a clearance for a minor portion of a flight such as to cross an airway, to take off from, or to land at a controlled aerodrome. At aerodromes that are not manned by Zambia Airport Corporation Limited (ZACL) the flight plan should be filled with the Reporting Officer, if established or with some other responsible person. In this way the general intentions regarding the flight will be known, or will ultimately become available to Air Traffic Services and could be used as a basis for any search operations that might become necessary.

1.10.1.1 A pilot must file a flight plan:

- a. If he/she intends to fly in controlled airspace either under IFR or at night.
- b. If he/she intends to fly an aircraft operating as a public transport under VFR or IFR
- c. If he/she intends to make an international flight.
- d. If she/he intends to take off from ZACL manned aerodrome except for a flight to a local flying area within 25 NM of the aerodrome.

NOTE: The Air Traffic Service Unit (ATSU) may, at their discretion, exempt the commander/pilot of an aircraft from the requirements of this paragraph in respect of an intended flight which is to be made in a local flying area within a radius of 25NM and in which the aircraft will return to the aerodrome of departure without making a landing.

1.10.1.2 How to file a flight plan

- a. Flights from aerodromes on the Aeronautical Message Handling System (AMHS)
- b. The pilot should complete and sign the flight plan form and submit it to the ATSU at the aerodrome (by local arrangement at larger aerodromes the operators' representative may file the flight plan on behalf of the pilot)

NOTE: A flight plan shall be submitted in accordance with ICAO Annex 2, 3.3.1, prior to operating any flight within the Lusaka FIR.

1.10.1.3 Lead times for filing flight plans

Except for repetitive flight plans, flight plans shall be filed 120 hours, or five days at the earliest ,but no later than 30 minutes for domestic flights and 60 minutes for international flights prior to the estimated off block time (EOBT).

1.10.1.4 Place of submission

- a. Flight plans shall be submitted at the Aerodrome Reporting Office (ARO) at the departure aerodrome.
- b. In the absence of such an office at the departure aerodrome, a flight plan shall be submitted by telephone or teletype to the nearest ARO as listed below:

KENNETH KAUNDA INTL	260-211-271048
	+260974204867 / +260950708010
SIMON MWANSA KAPWEPWE INTL AIRPORT	260-212-611193/94
	260-965860496
HARRY MWAANGA NKUMBULA INTL AIRPORT	260-213-321153
	+260 965 860494
MFUWE INTL AIRPORT	260-216-245083/245006/245027/245029

For flights from aerodromes with no air traffic control, or aerodrome flight information service, flight plans may be submitted after take off to Lusaka Area Control Centre or to the appropriate (AFIS) station for relay.

1.10.1.5 Acceptance of a flight plan.

The first ATSU receiving a flight plan or change thereto shall:

- a. Check it for compliance with the format and data
- b. Check it for completeness and to the extent possible for accuracy
- c. Take action if necessary to make it acceptable to Air Traffic Services, and change thereto, to the originator.

NOTE: For aircraft required to pay air navigation fees, landing fees and/ or passenger service charges direct to ZACL won't have their flight plans accepted until they show proof of payment of the navigation fees.

1.10.1.6 Types of flight plan

1.10.1.7 Filled Flight Plan

An individual flight plan shall be filed for each flight with ATS/ARO unit by the pilot /or designated representative without subsequent changes. Therefore, filing of a flight plan is mandatory and shall be filed for an intended flight or portion of flight.

1.10.1.8 Repetitive flight plan

For several IFR flights planned by the same aircraft operator using the same type of aircraft, a repetitive flight plan may be provided that these flights are planned to be conducted regularly in the same manner and at least once a week. RPL lists relating to flights in and to flights overflying the Lusaka FIR shall be submitted at least two weeks in advance, in duplicate, to the following address:

Briefing Officer
Kenneth Kaunda International Airport
P.O. Box 30175
Lusaka 10101
Zambia
Phone: +260-211-271048
Fax: +260-211-271469
Mobile: +260967980779/0974204867
Email: ais.lusaka@zacl.aero

RPL lists shall be replaced entirely by new lists prior to the introduction of the summer and winter schedules.

1.10.1.9 Incidental changes and cancellations of RPL

Incidental changes to and cancellations of RPL relating to departures from Lusaka FIR shall be notified as early as possible and not later than 30 minutes before departure to the Briefing Office. Tel.: 260-211-271091 Lusaka. Incidental changes to and cancellations of RPL relating to departures from aerodromes outside the Lusaka FIR shall be notified as early as possible and not later than 60 minutes before departure to the ARO serving the departure aerodrome.

1.10.1.10 Delay

When a specific flight is likely to encounter a delay of one hour or more in excess of the departure time stated in the RPL, the ATS unit serving the departure aerodrome shall be notified immediately.

NOTE: Failure to comply with the procedure may result in the automatic cancellation of the RPL for that specific flight at one or more of the ATS units concerned

1.10.1.11 VFR flight plan for alerting service only.

An alerting service is, in principle, provided to a flight for which a flight plan has been submitted.

1.10.1.12 Contents and form of a flight plan

The ICAO flight plan form or ZACL/ATS FORM 1 flight plan form will be used

1.10.1.12.1 Item 3 Message type designator

For a flight plan," FPL" shall be inserted. This message type designator has already been included in the ZACL/ATS FORM 1 flight plan form.

1.10.1.12.2 Item 7 Aircraft identification

- a. The aircraft identification cannot exceed 7 alphanumeric characters and is not to include hyphens or symbols in case of more than one aircraft, the registration mark of the formation leader shall be inserted: the registration marks of all the aircraft of the formation shall be inserted in item 18, separated by a space and preceded by "REG".
- b. If a formation radio call signs are used, the call sign of the formation leader shall be inserted starting with the formation leader, in Item 18, preceded by "RMK", together with the indicator "FFLT" (.). The call signs shall be separated by a space; the indicator "FFLTEND" shall be inserted after the last call sign.

1.10.1.12.3 Item 8 Flight rules and type of flight.

One or two characters may be used to indicate flight rules and type of flight.

- a. One of the following letters shall be used to denote the category of flight rules

I for flight conducted entirely under IFR

V for flight conducted entirely under VFR

Y for flights planning a change of flight rules if IFR is first

Z for flights planning a change of flight rules if VFR is first

Further details of regarding the change of flight rules shall be indicated in Item 15 (route).

NOTE: VFR flights at night shall be marked by the entry "VFR NIGHT" preceded by "RMK" in item 18.

- b. One of the following letters shall be used to denote the type of flight.

S Scheduled air transport

N Non – scheduled air transport

G General aviation

M Military

X Other flights

If the letter X is used, further details concerning the planned flight shall be indicated in Item 18 of the flight plan, preceded by "RMK".

- c. For state aircraft intending to perform flights within RVSM airspace (FL 290 and above), the letter "M" shall be inserted to indicate the type of flight.

NOTE: State aircraft: any aircraft used for military, customs or police.

1.10.1.12.4 Item 9: Number and type of aircraft and wake turbulence category.

- a. The number of aircraft, if more than one, shall be inserted using one or two characters.

- b. The appropriate designator as specified by ICAO shall be inserted to indicate the type of aircraft in accordance with ICAO Doc 8643.

AND/OR

INSERT one or more of the following letters to indicate the serviceable COM/NAV/approach aid equipment and capabilities available:

A GBAS landing system

B LPV (APV with SBAS)

C LORAN C

D DME

E1 FMC WPR ACARS

E2 D-FIS ACARS

E3 PDC ACARS

F ADF

G GNSS (See Note 2)

H HF RTF

I Inertial Navigation

J1 CPDLC ATN VDL Mode 2 (See Note 3)

J2 CPDLC FANS 1/A HFDL

J3 CPDLC FANS 1/A VDL Mode 4

J4 CPDLC FANS 1/A VDL Mode

J5 CPDLC FANS 1/A SATCOM(INMARSAT)

J6 CPDLC FANS 1/A SATCOM (MTSAT)

J7 CPDLC FANS 1/A SATCOM (Iridium)>

K MLS

L ILS

M1 ATC RTF SATCOM (INMARSAT)

M2 ATC RTF (MTSAT)

M3 ATC RTF (Iridium)

O VOR

P1–P9 Reserved for RCP

R PBN approved (see Note 4)

T TACAN

U UHF RTF

V VHF RTF

W RVSM approved2 X MNPS approved

Y VHF with 8.33 kHz channel spacing capability

Z Other equipment carried or other capabilities (see Note 5)

Any alphanumeric characters not indicated above are reserved.

NOTE 1: If the letter S is used, standard equipment is considered to be VHF RTF, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.

NOTE 2: If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.

NOTE 3: See RTCA/EUROCAE Interoperability Requirements Standard for ATN Baseline 1 (ATN B1INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.

NOTE 4: If the letter R is used, the performance based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance based navigation to a specific route segment, route or area is contained in the Performance-Based Navigation Manual (Doc 9613).

NOTE 5: If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/ , NAV/ and/or DAT, as appropriate

c. If no such designator has been assigned, "ZZZZ" shall be inserted and the type shall specified in Item 18 preceded by "TYP".

d. In case of a flight performed with different aircraft types "ZZZZ" shall be inserted. The types of all the formation shall be inserted in Item 18, preceded by "TYP".

1.10.1.12.5 Item 10: Equipment and capabilities

Item 10a (Radio communication, navigation and approach aid equipment and capabilities):

INSERT one letter as follows: a maximum of 64 characters may be used.

N if no COM/NAV/approach aid equipment for the route to be flown is carried or the equipment is unserviceable,

OR S if standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable (see Note 1),

NOTE 6: Information on navigation capability is provided to ATC for clearance and routing purposes. The following provisions are applicable to:

Item 10b (Surveillance equipment and capabilities):

INSERT N if no surveillance equipment for the route to be flown is carried or the equipment is unserviceable,

OR

INSERT one or more of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board:

SSR Modes A and C

A Transponder — Mode A (4 digits — 4 096 codes)

C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Mode S

E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability

H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability

I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability

L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability

P Transponder — Mode S, including pressure-altitude, but no aircraft identification capability

S Transponder — Mode S, including both pressure altitude and aircraft identification capability

X Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

Note. — Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B

B1 ADS-B with dedicated 1090 MHz ADS-B "out" capability

B2 ADS-B with dedicated 1090 MHz ADS-B "out" and "in" capability

U1 ADS-B "out" capability using UAT

U2 ADS-B "out" and "in" capability using UAT

V1 ADS-B "out" capability using VDL Mode 4

V2 ADS-B "out" and "in" capability using VDL Mode 4

ADS-C

D1 ADS-C with FANS 1/A capabilities

G1 ADS-C with ATN capabilities

Alphanumeric characters not indicated above are reserved.

Example: ADE3RV/HB2U2V2G1

NOTE: Additional surveillance application should be listed in Item 18 following the indicator SUR/.

1.10.1.12.6 Item 13– Departure aerodrome and estimated off- block time

- a. INSERT the ICAO four-letter location indicator of the departure aerodrome as specified in Doc 7910, Location Indicators,
- b. if no location indicator has been assigned, *INSERT ZZZZ* and *SPECIFY*, in Item 18, the name and location of the aerodrome preceded by DEP/,
- c. the first point of the route or the marker radio beacon preceded by DEP/..., if the aircraft has not taken off from the aerodrome,
- d. if the flight plan is received from an aircraft in flight, *INSERT AFIL*, and *SPECIFY*, in Item 18, the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, preceded by DEP/.
- e. *THEN, WITHOUT A SPACE, INSERT* for a flight plan submitted before departure, the estimated off-block time (EOBT),
- f. For a flight plan received from an aircraft in flight, the actual or estimated time over the first point of the route to which the flight plan applies.

1.10.1.12.7 Item 15c Route

(Including changes of speed, level and/or flight rules) – an editorial change has been made to clarify that it is possible to indicate, at a single point, where it is planned that a change of speed or level or both is planned to commence, or a change of ATS route and/or a change of flight rules.

NOTE: The provision has been expanded to include the possibility of describing a significant point in the route as a bearing or distance from a “reference point”, rather than only from a navigational aid, as follows:

Bearing and distance from a reference point:

The identification of the reference point, followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros — e.g. a point 180° magnetic at a distance of 40 nautical miles from VOR “LV” should be expressed as LV180040.

1.10.1.12.8 Item 16 Destination alternate aerodrome and total estimated elapsed time

- a. INSERT the ICAO four-letter location indicator of the destination aerodrome as specified in Doc 7910, Location Indicators, If no location indicator has been assigned, *INSERT ZZZZ* and *SPECIFY* in Item 18 the name and location of the aerodrome, preceded by DEST/ .

THEN WITHOUT A SPACE INSERT the total estimated elapsed time

NOTE: For a flight plan received from an aircraft in flight, the total estimated elapsed time is the estimated time from the first point of the route to which the flight plan applies to the termination point of the flight plan.

Destination alternate aerodrome

- a. INSERT the ICAO four-letter location indicator(s) of not more than two destination alternate aerodromes, as specified in Doc 7910, Location Indicators, separated by a space,if no location indicator has been assigned to the destination alternate aerodrome(s),
- b. *INSERT ZZZZ* and *SPECIFY* in Item 18 the name and location of the destination alternate aerodrome(s), preceded by ALTN/ .

1.10.1.12.9 Item 18 – Other Information:

Any supplementary data with regard to Items 7 to or any other information that may become necessary shall be indicated using the following indicators in the sequence shown below: The digit “0” shall be inserted if no other information is contained in Item 18 of the flight plan form.

STS/ Reason for special handling by ATS, e.g. a search and rescue mission, as follows:

ALTRV: for a flight operated in accordance with an altitude reservation;

ATFMX: for a flight approved for exemption from ATFM measures by the appropriate ATS authority;

FFR: fire-fighting;

FLTCK: flight check for calibration of navaids;

HAZMAT: for a flight carrying hazardous material;

HEAD: a flight with Head of State status;

HOSP: for a medical flight declared by medical authorities;

HUM: for a flight operating on a humanitarian mission;

MARSA: for a flight for which a military entity assumes responsibility for separation of military aircraft;

MEDEVAC: for a life critical medical emergency evacuation;

NONRVSM: for a non-RVSM capable flight intending to operate in RVSM airspace;

SAR: for a flight engaged in a search and rescue mission; and

STATE: for a flight engaged in military, customs or police services.

Other reasons for special handling by ATS shall be denoted under the designator RMK/.

PBN/ Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

RNAV SPECIFICATIONS	
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
RNP SPECIFICATIONS	
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g.

NAV/GBAS SBAS.

COM/ Indicate communications applications or capabilities not specified in Item 10a.

DAT/ Indicate data applications or capabilities not specified in 10a.

SUR/ Include surveillance applications or capabilities not specified in Item 10b.

DEP/ Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows:

With 4 figures describing latitude in degrees and tens and units of minutes followed by "N" (North) or "S" (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by "E" (East) or "W" (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).

OR, Bearing and distance from the nearest significant point, as follows: The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR "VLS" should be expressed as **VLS180040**.

OR, The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome. DEST/ Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant

Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.

DOF/ The date of flight departure in a six figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).

REG/ The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.

EET/ Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: EET/VLS0745 RETAR0830

EET/GADBA0204

SEL/ SELCAL Code, for aircraft so equipped.

TYP/ Type(s) of aircraft preceded if necessary without a space by number(s) of aircraft and separated by one space, if ZZZZ is inserted in Item 9.

Example: TYP/2M21 5F6 3B2

CODE/ Aircraft address (expressed in the form of an alphanumerical code of six hexadecimal characters) when required by the appropriate ATS authority. Example: "F00001" is the lowest aircraft address contained in the specific block administered by ICAO.

RVR/ The minimum RVR requirement of the flight.

Note. — This provision is detailed in the Africa-Indian Ocean Regional Supplementary Procedures (AFI SUPPs, Doc 7030), Chapter 2.

DLE/ Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four figure time in hours and minutes (hhmm).

Example: DLE/VLS0030

OPR/ ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.

ORGN/ The originator's 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

NOTE: In some areas, flight plan reception centres may insert the ORGN/ identifier and originator's AFTN address automatically.

PER/ Aircraft performance data, indicated by a single letter as specified in the Procedures for Air Navigation Services — Aircraft Operations (PANS-OPS, Doc 8168), Volume I — Flight Procedures, if so prescribed by the appropriate ATS authority.

ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RALT/ ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, *Location Indicators*, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

TALT/ ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, Location Indicators, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RIF/ The route details to the revised destination aerodrome, following by the ICAO four letter location indicator of the aerodrome. The revised route is subject to re-clearance in flight.

Examples: RIF/DTA HEC KLAX

RIF/ESP G94 CLA YPPH

RMK/ Any other plain language remarks when required by the appropriate ATS authority or deemed necessary.

RFP/ Q followed by a digit to indicate the sequence of the replacement flight plan being submitted.

Note. — This provision is detailed in the Africa-Indian Ocean Regional Supplementary Procedures (AFI SUPPs, Doc 7030), Chapter 2

a. *ICAO flight plan forms are available at AROs at uncontrolled aerodromes. The instructions for completing those forms shall be followed.*

b. *When a flight plan is submitted by telephone, teletype or telefax, the sequence of items in the flight plan form shall be strictly followed.*

1.10.1.13 Adherence to ATS route structure

No flight plans shall be filed for routes deviating from the published ATS route structure unless prior permission has been obtained from the appropriate ATC authorities.

1.10.1.14 Authorization for special flights

Flights of a specific character, such as survey flights, scientific research flights, etc., may be exempted from the restriction specified above. A request for exemption shall be mailed so as to be received at least one week before the intended day of operation to the Director General of Civil Aviation Authority

1.10.1.15 ATS/AFTN messages

For a flight operated on a RPL, no flight plan message (FPL) will be transmitted. Departure messages (DEP) or delay messages (DLA) relating to such flights will be transmitted to ATS units concerned.

1.10.2 Changes to the submitted flight plan

All changes to a flight plan submitted for an IFR flight or a controlled VFR flight and significant changes to a flight plan submitted for an uncontrolled VFR flight shall be reported as soon as possible to the appropriate ATS unit. In the event of a delay in departure of 30 minutes or more for a flight for which a flight plan has been submitted, the flight plan shall be amended or a new flight plan shall be submitted after the old flight plan has been cancelled.

NOTE 1: if a delay in departure of a controlled flight is not reported, the relevant flight plan data may no longer be readily available to the appropriate ATS unit when a clearance is ultimately requested, which will consequently result in extra delay for the flight.

NOTE 2: If a delay in departure (or cancellation) of an uncontrolled VFR flight is not reported, alerting or search and rescue action may be unnecessarily initiated when the flight fails to arrive at the destination aerodrome within 30 minutes after its current ETA.

Whenever a flight, for which a flight plan has been submitted, is cancelled, the appropriate ATS unit shall be informed immediately. Changes to a current flight plan for a controlled flight during flight shall be reported or requested, subject to the provisions in ICAO Annex 2, 3.6.2 (Adherence to flight plan). Significant changes to a flight planned for an uncontrolled VFR flight include changes in endurance or in the total number of persons on board and changes in time estimates of 30 minutes or more.

1.10.2.1 Arrival report (closing a flight plan)

A report of arrival shall be made at the earliest possible moment after landing to the airport office of the arrival aerodrome by any flight for which a flight plan has been submitted except when the arrival has been acknowledged by the local ATS units. After landing at an aerodrome which is not the destination aerodrome (diversionary landing), the local ATS unit shall be specifically informed accordingly. In the absence of a local ATS unit at the aerodrome of diversionary landing, the pilot is responsible for passing the arrival report to the destination aerodrome.

Arrival reports shall contain the following elements of information:

- aircraft identification
- departure aerodrome
- destination aerodrome
- time of arrival

In the case of diversion, insert the "arrival aerodrome" between "destination aerodrome" and "time of arrival". Aircraft which do not carry the necessary frequencies to make a before landing call to ACC or AFIS station MUST file NIL search and Rescue required in field type 18 of the flight plan.

1.10.2.2 AFTN/ATS Messages Examples

1.10.2.3 Flight plan message

(FPL-ATA005-ZX
-05ZZZZ/M – ZGE3J4M2SRY/HB2U2V2G1
-ZZZZ1200
-N0400F095 DCT OVALA/N0400F120IFR UZ18 NEVEN UQ8 EGSIL
-FAPE0100 FAEL FAGG
-STS/AFTMX MARSA FLTCK PBN/A1C3L1 NAV/GBAS SBAS DAT/NO SPECIFIC DESIGNATORS
SUR/ADDITIONAL INFO DEP/CREWROOM 4620S07805E DOF/121115 TYP/2F15 3 F5
DLE/NEVEN0130 ORGN/EBBDZMP PER/A TALTN/FALA RMK/SARNML PRESSURISATION
PROBLEM ABOVE F120

1.10.2.4 MODIFICATION (CHG) MESSAGES

Composition

(3 –Message Type, number and reference data – 7 ACFT ID and SSR Mode and Code

- 13 Departure aerodrome and time

-16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)

- 18 other Information

- 22 Amendment)

1.10.2.5 Flight plan cancellation messages

Composition

(3 –Message Type, number and reference data – 7 ACFT ID and SSR Mode and Code

- 13 Departure aerodrome and time

-16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)

- 18 other Information

Rules:

Fields 13a, 13b and 18 are MANDATORY.

Example : (CNL-ATA005-ZZZZ1200-FAPE-DOF/121115)

(CNL-ATA005-ZZZZ1200-FAPE-0)

1.10.2.5.1 Delay (DLA) Messages

Composition

(3-Message type, number and reference data -7ACFT ID and SSR Mode and Code

-13Departure aerodrome and new EOBT time

-16Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)

-18Other information)

Rules :

Fields 13a, 13b and 18 are MANDATORY.

A FPL can be delayed via a CHG or a DLA message (see CHG message above). DOF/ shall be used for associating the messages to the correct FPL.

Example: (DLA-ATA005-ZZZZ1300-FAPE-DOF/121115)

(DLA-ATA005-ZZZZ1300-FAPE-0)

1.10.2.5.2 Departure (DEP) Messages

Composition

(3-Message type, number and reference data -7 ACFT ID and SSR Mode and Code

-13Departure aerodrome ATD

-16Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)

-18Other information)

Rules:

Fields 13a, 13b and 18 are MANDATORY.

Example: (DEP-ATA005-ZZZZ1305-FAPE-DOF/121115)

(DEP-ATA005-ZZZZ1305-FAPE-0)

1.10.2.5.3 Arrival (ARR) Messages

Composition :

(3-Message type, number and reference data -7ACFT ID and SSR Mode and Code

-13Departure aerodrome and time

- 16Arrival aerodrome and time)

Example: (ARR-ATA005-ZZZZ1305-FAPE1410

(ARR-ATA005-ZZZZ1305-FAPE-FAGG1447)

*In case of diversion

Request FPL (RQP) Messages

Composition:

(3 –Message Type, number and reference data – 7 ACFT ID and SSR Mode and Code

- 13 Departure aerodrome and time

-16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)

- 18 other Information)

Rules:

Fields 13a, 13b and 18 are MANDATORY, insert EOBT if known. Should you need to request a FPL that has taken place the previous day, e.g. from Europe arriving on the next day; the actual date of departure is DOF is used of the previous day.

Example: (RQP-ATA005-ZZZZ1300-FAPE-DOF/121115)

(RQP-ATA005-ZZZZ1300-FAPE-0)

(RQP-ATA005-ZZZZ-FAPE-DOF/121115)

(RQP-ATA005-ZZZZ-FAPE-0)

Request supplementary flight plan (RQS) Messages

Composition

(3 –Message Type, number and reference data – 7 ACFT ID and SSR Mode and Code

- 13 Departure aerodrome and time(last EOBT)
-16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)
- 18 other Information
Rules: Fields 13a, 13b and 18 are MANDATORY
Example: (RQS-ATA005-ZZZZ1300-FAPE-DOF/121115)
(RQS-ATA005-ZZZZ1300-FAPE-0)

ENR 1.11 ADDRESSING OF FLIGHT PLAN MESSAGES

Flight movement messages relating to traffic into or via the Lusaka FIR shall be addressed as stated below in order to warrant correct relay and delivery.

All flights into or via Lusaka FIR shall be addressed to FLKKZPZX and FLFIZQZX

NOTE: Flight movement messages in this context comprise flight plan messages, amendment messages relating thereto and flight plan cancellation messages (ICAO PANS-ATM, Doc 4444, Part VIII, 2.1.1.3 refers).

Category of flight (IFR, VFR or both)	Route (into or via FIR and/or TMA)	Message address
1	2	3
IFR and VFR flights	into or via Lusaka FIR and, in addition, for flights:	FLFIZQZX
	- into or via Lusaka TMA	FLKKZAZX FLKKZTZX FLKKZPZX
	- within the Lusaka FIR	FLFIZQZX FLKKZPZX
	into or via Solwezi CTA	FLSWZTZX FLSWZPZX
	into or via Ndola TMA	FLSKZTZX FLSKZAZX FLSKZPZX
	into or via Mfuwe TMA	FLMFZTZX FLMFZPZX
	into or via Livingstone CTA	FLHNZTZX FLHNZAZX FLHNZPZX
	Into or Via FLKS aerodrome	FLKSZPZX
	Into or via FLMG aerodrome	FLHNZTZX FLHNZPZX FLMGZPZX
	Into or Via FLMA aerodrome	FLMAZPZX
	Into or Via FLCP aerodrome	FLMFZPZX FLMFZTZX FLCPZPZX
All flights	uncontrolled aerodrome	No AFTN address for uncontrolled aerodromes use ICAO location indicator for the nearest controlled aerodrome plus "FLFIZFZX" for VFR or "FLFIZQZX" for IFR

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ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT**1.12.1 Interception Procedures**

Interception of civil aircraft in Republic of Zambia is governed by the Aviation Act No 5 of 2016 and the Convention on International Civil Aviation, Chapter 3, 3.8 of the Annex 2 and Attachment A of that Annex.

1.12.1.1. The following procedures and visual signals apply over the land and territorial waters of Zambia. In the event of an aircraft being intercepted by another aircraft it shall immediately:

- a. follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in 3.3.15.2 of ZCARs Part 13 and Appendix1 of ICAO Annex 2;
- b. notify, if possible, the appropriate air traffic services unit;
- c. attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5Mhz, giving the identity of the intercepted aircraft and the nature of the flight; if no contact has been established and if practicable, repeat this call on the emergency frequency 243 MHz;
- d. if equipped with SSR transponder, select mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

1.12.1.2. If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in the table below, transmitting each phrase twice:

Phrase	Pronunciation1	Meaning
CALL SIGN (call sign) ²	KOL SA-IN (Call sign)	My call sign is (call sign)
WILCO	WIL-KO	Understood. Will comply
CANNOT	KANN NOTT	Unable to comply
REPEAT	REE-PEET	Repeat your instruction
AM LOST	AM LOSST	Position unknown
MAYDAY	MAYDAY	I am in distress
HIJACK ³	HI-JACK	I have been hijacked
LAND (place name)	LAAND (place name)	I request to land at (place name)
DESCEND	DEE-SEND	I require descent

1 Syllables to be emphasized are printed in bold letters.

2 The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

3 Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK".

The word "interception" in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with ZCARs Part 12 Vol.2 Section 2 and Search and Rescue Manual (Doc 7333)

1.12.1.3. The phrases shown in the table below shall be used by the intercepting aircraft and transmitted twice in the circumstances described in the preceding paragraph.

1.12.1.4. If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

1.12.1.5. If instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

1.12.1.6. The visual signals for use in the event of intercepting are detailed on page ENR 1.12-3.

Phrase	Pronunciation1	Meaning
CALL SIGN	KOL SA-IN	What is your call sign?
FOLLOW	FOL -LO	Follow
DESCEND	DEE -SEND	Descend for landing
YOU LAND	YOU LAAND	Land at this aerodrome
PROCEED	PRO -SEED	You may proceed

-
1. Syllables to be emphasized are printed in bold letters.

1.12.2 Signals for use in the event of interception

Signals initiated by intercepting aircraft and responses by intercepted aircraft Series

Series	INTERCEPTING aircraft signals	Meaning	INTERCEPTED aircraft responds	Meaning
1	<p>DAY or NIGHT- Rocking aircraft wings and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left, (or to the right in the case of a helicopter) on the desired heading.</p> <p>Note 1.-Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in series 1.</p> <p>Note 2.-If the intercepted aircraft is not able keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft wings each time it passes the intercepted aircraft.</p>	You have been intercepted. Follow me.	DAY or NIGHT - Rocking aircraft wings, flashing navigational lights at irregular intervals and following. Note. - Additional action required to be taken by intercepted aircraft is prescribed in Annex 2, chapter 3, 3.8.	Understood, will comply.
2	DAY or NIGHT - An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT - Rocking the aircraft wings	Understood, will comply.

Series	INTERCEPTING aircraft signals	Meaning	INTERCEPTED aircraft responds	Meaning
3	DAY or NIGHT - Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT - Lowering landing gear, (if fitted), showing steady landing lights and following the intercepting aircraft and, if after overfly the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.
4	DAY or NIGHT - Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300M (1000ft) but not exceeding 600M (2 000ft) (in the case of a helicopter, at a height exceeding 50M (170ft) but not exceeding 100M (330ft) above the aerodrome level, and continuing to circle runway in use or helicopter landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT - if it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT - Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT - Irregular flashing of all available lights.	In distress.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.

ENR 1.13 UNLAWFUL INTERFERENCE

1.13.1 General

The following procedures are intended for use by aircraft when unlawful interference occurs and the aircraft is unable to notify an ATS unit of this fact.

1.13.2 Procedures

1.13.2.1. Unless considerations aboard the aircraft dictate otherwise, the pilot-in-command should attempt to continue flying on the assigned track and at the assigned cruising level at least until notification to an ATS unit is possible or the aircraft is within radar coverage.

1.13.2.2. When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot-in-command should whenever possible:

- a. attempt to broadcast warnings on the VHF emergency frequency and other appropriate frequency, unless considerations aboard the aircraft dictate otherwise. Other equipment such as on board transponders, data links, etc. should also be used when it is advantageous to do so and circumstances permit; and
- b. proceed in accordance with applicable special procedures for in-flight contingencies, where such procedures have been established and promulgated in Doc 7030 - Regional Supplementary Procedures; or
- c. if no applicable regional procedures have been established, proceed at a level which differs from the cruising levels normally used for IFR flight in the area by 1000ft if above FL410 or by 500ft if below FL410.

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ENR 1.14 AIR TRAFFIC INCIDENTS

1.14.1 Definition of air traffic incidents

1.14.1.1. "Air traffic incident" is used to mean a serious occurrence related to the provision of air traffic services, such as:

- a. aircraft proximity (AIRPROX.);
- b. serious difficulty resulting in a hazard to aircraft caused, for example, by:
 - i. Faulty procedures
 - ii. Non compliance with procedures
 - iii. Failure of ground facilities

1.14.1.1.1 Definitions for aircraft proximity and **AIRPROX.**

Aircraft proximity. A situation in which, in the opinion of the pilot or the air traffic services personnel, the distance between aircraft, as well as their relative positions and speed, has been such that the safety of the aircraft involved may have been compromised. Aircraft proximity is classified as follows:

Risk of collision. The risk classification of aircraft proximity in which serious risk of collision has existed.

Safety not assured. The risk classification of aircraft proximity in which the safety of the aircraft may have been compromised.

No risk of collision. The risk classification of aircraft proximity in which no risk of collision has existed.

Risk not determined. The risk classification of aircraft proximity in which insufficient data was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

AIRPROX. The code word used in an air traffic incident report to designated aircraft proximity.

1.14.1.2. Air traffic incidents are designated and identified in reports as follows:

Type	Designation
Air traffic incident	Incident
as a) above	AIRPROX (aircraft proximity)
as b)1) and 2) above	Procedure
as b)3) above	Facility

1.14.2 Use of the Air Traffic Incident Report Form

(see model on pages ENR 1.14-3 to 1.14-6)

The Air Traffic Incident Report Form is intended for use:

- a. by a pilot for filing a report on an air traffic incident after arrival or for confirming a report made initially by radio during flight.

NOTE: The form, if available on board, may also be of use in providing a pattern for making the initial report in-flight.

- b. by an ATS unit for recording an air traffic incident report received by radio, telephone or email.

NOTE: The form may be used as the format for the text of a message to be transmitted over the AMHS network.

1.14.3 Reporting procedures (including in flight procedures)

1.14.3.1. The following are the procedures to be followed by a pilot who is or has been involved in an incident:

- a. during flight, use the appropriate air/ground frequency for reporting an incident of major significance, particularly if it involves other aircraft, so as to permit the facts to be ascertained immediately;
- b. as promptly as possible after landing, submit a completed Air Traffic Incident Report Form

1.14.3.2. An initial report made by radio contain the following information:

- a. aircraft identification;
- b. type of incident, e.g aircraft proximity;
- c. the incident; 1.a) and b); 2,a),b),c),d),n);3.a),b),c),i);4.a),b);
- d. miscellaneous:1.e).

1.14.3.3. The confirmatory report on an incident of major significance initially reported by radio or the initial report on any other incident should be submitted to the Director General of Civil Aviation Authority or to the ATS Reporting Office of the aerodrome of first landing for submission to the Director General of Civil Aviation Authority. The pilot should complete the Air Traffic Incident Report Form, supplementing the details of the initial reports as necessary.

NOTE:Where there is no ATS Reporting Office, the report may be submitted to another ATS unit.

1.14.4 Purpose of reporting and handling of the form

1.14.4.1. The purpose of the reporting of aircraft proximity incidents and their investigation is to promote the safety of aircraft. The degree of risk involved in an aircraft proximity incident investigation and classified as “risk of collision,” “safety not assured,” “no risk of collision” or “risk not determined”.

1.14.4.2. The purpose of the form is to provide investigatory authorities with as complete information on an air traffic incident as possible and to enable them to report back, with the least possible delay to the pilot or operator concerned, the result of the investigation of the incident and, if appropriate, the remedial action taken.

AIR TRAFFIC INCIDENT REPORT FORM

For use when submitting and receiving reports on air traffic incidents.
In an initial report by radio, shaded items should be included.

A— AIRCRAFT IDENTIFICATION

B— TYPE OF INCIDENT

AIRPROX / PROCEDURE/ FACILITY*

C— THE INCIDENT

1. General

- a) Date / time of incident _____ UTC
b) Position _____

2. Own aircraft

- a) Heading and route _____
- b) True airspeed _____ measured in ()kt () km/h _____
- c) Level and altimeter setting _____
- d) Aircraft climbing or descending
 Level flight Climbing Descending
 Aircraft bank angle
 Wings level Slight bank Moderate bank
 Steep bank Inverted Unknown
 f) Aircraft direction of bank
 Left Right Unknown
 g) Restrictions to visibility (select as many as required)
 Sunglare Windscreen pillar Dirty windscreen
 Other cockpit structure None
 h) Use of aircraft lighting (select as many as required)
 Navigation lights Strobe lights Cabin lights
 Red anti-collision lights Landing/taxi lights Logo (tail fin) lights
 Sunglare None
 i) Traffic avoidance advice issued by ATS
 Yes, based on radar Yes, based on visual sighting Yes, based on other information
 No
 j) Traffic information issued
 Yes, based on radar Yes, based on visual sighting Yes, based on other information
 No
 k) Airborne collision avoidance system - ACAS
 Not carried Type Traffic advisory issued
 Resolution advisory issued Traffic advisory or resolution advisory not issued
 l) Radar identification
 No radar available No No radar identification
 m) Other aircraft sighted
 Yes No Wrong aircraft sighted
 n) Avoiding action taken
 Yes No
 o) Type of flight plan
 IFR/VFR/none*
 p) Yes No Wrong aircraft sighted
 q) Avoiding action taken
 Yes No

3. Other aircraft

a) Type and call sign/registration (if known) _____

b) If a) above not known, describe below

- | | | |
|---------------|-------------------------|---------------|
| () High wing | () Mid wing | () Low wing |
| () Rotocraft | | |
| () 1 engine | () 2 engines | () 3 engines |
| () 4 engines | () More than 4 engines | |

Marking, colour or other available details

c) Aircraft climbing or descending

- | | | |
|------------------|--------------|----------------|
| () Level flight | | |
| () Unknown | () Climbing | () Descending |

d) Aircraft bank angle

- | | | |
|-----------------|-----------------|-------------------|
| () Wings level | () Slight bank | () Moderate bank |
| () Steep bank | () Inverted | () Unknown |

e) Aircraft direction of bank

- | | | |
|----------|-----------|-------------|
| () Left | () Right | () Unknown |
|----------|-----------|-------------|

f) Lights displayed

- | | | |
|-------------------------------|-------------------------|----------------------------|
| () Navigation lights | () Strobe lights | () Cabin lights |
| () Red anti-collision lights | () Landing/taxi lights | () Logo (tail fin) lights |
| () Other | () None | () Unknown |

g) Traffic avoidance advice issued by ATS

- | | | |
|-------------------------|-----------------------------------|-------------------------------------|
| () Yes, based on radar | () Yes, based on visual sighting | () Yes, based on other information |
| () No | () Unknown | |

h) Traffic information issued

- | | | |
|-------------------------|-----------------------------------|-------------------------------------|
| () Yes, based on radar | () Yes, based on visual sighting | () Yes, based on other information |
| () No | () Unknown | |

i) Avoiding action taken

- | | | |
|---------|--------|-------------|
| () Yes | () No | () Unknown |
|---------|--------|-------------|

4. Distance

a) Closest horizontal distance _____

b) Closest vertical distance _____

5. Flight weather conditions

a) IMC/VMC*

b) Above/before* clouds/fog/haze*

c) Distance vertically from cloud _____ m/ft* below _____ m/ft* above

d) In cloud/rain/snow/sleet/fog/haze*

e) Flying into/out of* sun

f) Flight visibility ____ m/km*

6. Any other information considered important by the pilot-in command

D— MISCELLANEOUS

1. Information regarding reporting aircraft

- a) Aircraft registration
- b) Aircraft type
- c) Operator
- d) Aerodrome of departure
- e) Aerodrome of first landing
- f) Reported by radio or other means to _____ destination
- g) Date/time/place of completion of form

(Name of ATS unit) at time _____ UTC

2. Function, address and signature of person submitting report

- a) Function
- b) Address
- c) Signature
- d) Telephone number

3. Function and signature of person receiving report

a) Function _____

b) _____

E— SUPPLEMENTARY INFORMATION BY ATS UNIT CONCERNED

1. Receipt of report

a) Report received via AFTN/radio/telephone/other (specify)* _____

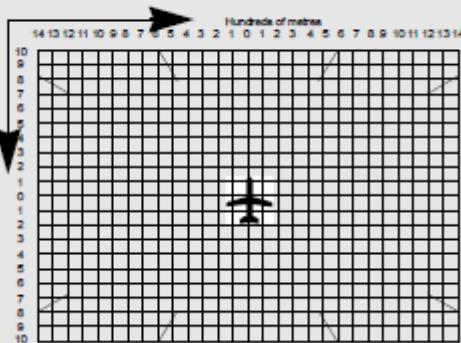
b) Report received by _____ (name of ATS unit)

2. Details of ATS action

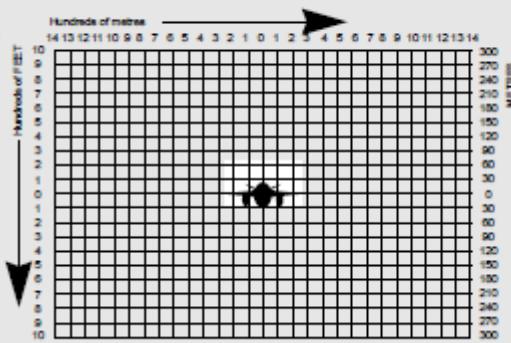
Clearance, incident seen (radar/visually, warning given, result of local enquiry, etc.)

DIAGRAMS OF AIRPROX

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming YOU are at the center of each diagram. Include first sighting and passing distance.



View form above



View from astern

1.14.4.2.1 Instructions for the completion of the Air Traffic Incident Report Form

item	
A	Aircraft identification of the aircraft filing the report.
B	An AIRPROX report should be filed immediately by radio.
C1	Date/time UTC and position in bearing and distance from a navigation aid or in LAT/LONG.
C2	Information regarding aircraft filing the report, tick as necessary
C2c)	E.g. FL350/1 013 hpa or 2500 ft/QNH 1007hpa or 1200ft/ QFE998 hpa.
C3	Information regarding the other aircraft involved.
C4	Passing distance - state units used.
C6	Attach additional papers as required. The diagrams may be used to show aircraft's positions.
D1f)	State name of ATS unit and date/time in UTC.
D1g)	Date and time in UTC.
E2	Include details of ATS unit such as service provided, radiotelephony frequency, SSR Codes assigned and altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required.

1.14.4.3. The confirmatory report on an incident of major significance initially reported by radio or the initial report on any other incident should be submitted to:

Ministry of Transport and Logistics of the Republic of Zambia

Director General
Zambia Civil Aviation Authority
P.O Box 50137
Lusaka 10101
Zambia
Tel:+260 211 251677/251861
Email: civil.aviation@caa.co.zm

Managing Director
Zambia Airports Corporation Ltd
Kenneth Kaunda International Airport
P.O Box 30175.
Lusaka 10101
Zambia
Tel:+260 211 271044/224777/271372
Email: zacl@zacl.aero

ENR 2.1 FIR, TMA

Name Lateral limits Vertical limits Class of Airspace	Unit providing service	Call sign languages area and conditions of use hours of service	Frequency and Purpose	Remarks
1	2	3	4	5
LUSAKA FIR Area bounded by lines joining points S 13°00'00" E 022°00'00"; S 13°00'00" E 023°00'00"; S 11°00'00" E 024°20'00"; S 12°00'00" E 025°30'00"; S 12°00'00" E 028°00'00"; S 08°07'00" E 029°53'00"; S 08°11'32" E 030°46'16" (Intersection of boundaries of the Democratic Republic of Congo, Tanzania and Zambia) and along the Tanzania/Zambia border up to S 09°22'00" E 033°00'00" then along Malawi/Zambia border up to S 14°00'00" E 033°15'00" then along Mozambique/Zambia border up to S 15°37'55" E 030°24'57" then along Zimbabwe/Zambia border up to S 17°48'08" E 025°15'52" then along Namibia/Zambia border up to S 17°39'00" E 023°26'00" then along Angola/Zambia border up to point of origin. UNL _____ FL145 Class: A FL145 _____ GND Class: C FL145 _____ GND Class: G	G/A/G	LUSAKA INFOR English HJ OUT-SIDE THESE HOURS VIA LUSAKA CONTROL	6952.0 KHZ	1) VDF available 2) Selcal not avble 3) ATS STNS avble on notified freqs as relay units during their hrs of service 4) Except when authorised no aircraft to be operated in this airspace unless two-way radio contact is maintained with ATC.
LUSAKA UPPER CONTROL AREA (UTA) Area bounded by lines joining points S 17°25'00" E 023°04'00" then along the clockwise arc of a circle of 150NM radius centred on S ° W ° (VOR VLI); to S 12°00'00" E 026°21'00" then along the clockwise arc of a circle of 150NM radius centred on S ° W ° (VOR VND); to S 10°33'00" E 023°04'00" then along the clockwise arc of a cir-	LUSAKA ACC	LUSAKA CONTROL English H24	120.500 MHZ AREA CTRL FLIGHT INF SERVICE ADVISORY SERVICE 8888.0 KHZ REGIONAL NETWORK 8873.0 KHZ REGIONAL NETWORK 6586.0 KHZ REGIONAL NETWORK 6915.0 KHZ SUBREGION NETWORK	VHF EXTD RANGE 120.500Mhz

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
Circle of 150NM radius centred on S °°° W °°° (VOR VMF); to point of origin. UNL FL245 Class: A				
LIVINGSTONE CTA FLHN1 Area bounded by lines joining points S 17°34'00" E 025°02'00" then along the clockwise arc of a circle of 50NM radius centred on S 17°48'42" E 025°49'11" (VOR VLI); to S 17°02'00" E 026°03'00"; S 17°34'00" E 026°37'00"; S 18°04'00" E 026°36'00" then along Zimbabwe/Zambia border up to S 17°34'00" E 025°01'00" to point of origin. FLHN2 Area bounded by lines joining points S 17°02'00" E 026°03'00"; S 16°27'00" E 026°41'00"; S 17°01'00" E 027°15'00"; S 17°34'00" E 026°37'00" to point of origin.	FLHN ATS	Living-stone Tower English 0500-1600	118.100 MHZ VDF available in approach	Nil
LIVINGSTONE CTA1 Area bounded by lines joining points S 17°34'00" E 025°02'00" then along the clockwise arc of a circle of 50NM radius centred on S 17°48'42" E 025°49'11" (VOR VLI); to S 17°02'00" E 026°03'00"; S 17°34'00" E 026°37'00"; S 18°04'00" E 026°36'00" then along Zimbabwe/Zambia border up to S 17°34'00" E 025°01'00" to point of origin. FL245 FL145 Class: A FL145	LIVINGS-TONE APP	Livingstone Approach English 0500-1600	124.300 MHZ	1) VDF AVBLE 2) Except where authorised, no aircraft is to be operated in this airspace unless two way radio contact is maintained with ATC

Name Lateral limits Vertical limits Class of Airspace	Unit providing service	Call sign languages area and conditions of use hours of service	Frequency and Purpose	Remarks
1	2	3	4	5
FL065 Class: C FL065 GND Class: G				
LIVINGSTONE CTA2 Area bounded by lines joining points S 17°02'00" E 026°03'00"; S 16°27'00" E 026°41'00"; S 17°01'00" E 027°15'00"; S 17°34'00" E 026°37'00" to point of origin. FL245 FL145 Class: A FL145 FL115 Class: C FL115 GND Class: G	LIVINGS-TONE APP	Livingstone Approach English 0500-1600	124.300 MHZ	1) VDF AVBLE 2) Except where authorised, no aircraft is to be operated in this airspace unless two way radio contact is maintained with ATC
LUSAKA TMA FLKK1 Area bounded by lines joining points S 14°00'00" E 029°24'00"; S 14°34'50" E 029°21'28"; S 14°03'09" E 030°17'25"; S 14°43'58" E 030°17'51"; S 15°10'14" E 029°16'03" then along the clockwise arc of a circle of 50NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 15°54'35" E 029°03'02" then along Zimbabwe/Zambia border up to S 16°03'04" E 028°51'40" then along the clockwise arc of a circle of 50.07NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 15°31'25" E 027°34'56"; S 14°38'32" E 027°44'16"; S 13°51'19" E 027°11'44"; S 13°39'14" E 027°33'14"; S			1) Except when authorised no aircraft to be operated in this airspace unless two-way radio contact is maintained with ATC.	

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<p>14°01'00" E 027°46'04"; S 14°00'00" E 029°24'00" to point of origin. FLKK2 Area bounded by lines joining points S 16°08'27" E 028°12'36" then along the counter clockwise arc of a circle of 50.03NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 16°09'06" E 028°34'23"; S 16°35'25" E 028°35'08" then along Zimbabwe/Zambia border up to S 16°49'25" E 028°08'19" to point of origin. LUSAKA TMA 3 Area bounded by lines joining points S 16°08'07" E 028°11'16"; S 17°01'00" E 027°15'00"; S 16°27'00" E 026°41'00"; S 15°32'42" E 027°35'19" then along the counter clockwise arc of a circle of 50.01NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to to point of origin.</p> <hr/>				
<p>LUSAKA TMA 1 Area bounded by lines joining points S 14°00'00" E</p>	LUSAKA APP	LUSAKA APP English H24	121.300 MHZ APPROACH DEPARTURE TMA CTRL.	1) VDF AVBLE 2) Except when authorised no

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<p>029°24'00"; S 14°34'50" E 029°21'28"; S 14°03'09" E 030°17'25"; S 14°43'58" E 030°17'51"; S 15°10'14" E 029°16'03" then along the clockwise arc of a circle of 50NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 15°54'35" E 029°03'02" then along Zimbabwe/Zambia border up to S 16°03'04" E 028°51'40" then along the clockwise arc of a circle of 50.07NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 15°31'25" E 027°34'56"; S 14°38'32" E 027°44'16"; S 13°51'19" E 027°11'44"; S 13°39'14" E 027°33'14"; S 14°01'00" E 027°46'04"; S 14°00'00" E 029°24'00" to point of origin.</p> <p style="text-align: center;"><u>FL245</u> <u>FL145</u> Class: A</p> <p style="text-align: center;"><u>FL145</u> <u>FL075</u> Class: C</p> <p style="text-align: center;"><u>FL075</u> <u>GND</u> Class: G</p>	LUSAKA RADAR	LUSAKA AP-PROACH RADAR English 0400 - 1800	120.100 MHZ RADAR SURVEIL-LANCE. RADAR VECTORS. ASSISTANCE TO AIRCRAFT IN EMERGENCY.	<p>aircraft to be operated in this airspace unless two way radio contact is maintained with ATC.</p> <p>3) All ACFT operating with in FL 245/GND in this airspace shall be allocated:-</p> <p>a) Northbound ACFT ODD IFR levels.</p> <p>b) Southbound ACFT EVEN IFR levels from 152000S to 155953S</p> <p>4) No IFR flights below FL080</p>
<p>LUSAKA TMA 2 Area bounded by lines joining points S 16°08'27" E 028°12'36" then along the counter clockwise arc of a circle of 50.03NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to S 16°09'06" E 028°34'23"; S 16°35'25" E 028°35'08" then along Zimbabwe/Zambia border up to S 16°49'25" E 028°08'19" to point of origin.</p> <p style="text-align: center;"><u>FL245</u> <u>FL145</u> Class: A</p>				<p>1) VDF AVBLE</p> <p>2) Except when authorised no aircraft to be operated in this airspace unless two way radio contact is maintained with ATC.</p>

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<u>FL145</u> <u>FL075</u> Class: C <u>FL075</u> <u>GND</u> Class: G				
LUSAKA TMA 3 Area bounded by lines joining points S 16°08'07" E 028°11'16"; S 17°01'00" E 027°15'00"; S 16°27'00" E 026°41'00"; S 15°32'42" E 027°35'19" then along the counter clockwise arc of a circle of 50.01NM radius centred on S 15°19'41" E 028°25'15" (VOR VLS); to to point of origin. <u>FL245</u> <u>FL145</u> Class: A <u>FL145</u> <u>FL075</u> Class: C <u>FL075</u> <u>GND</u> Class: G				1) VDF AVBLE 2) Except when authorised no aircraft to be operated in this airspace unless two way radio contact is maintained with ATC.
MFUWE TMA Area bounded by lines joining points S 12°58'00" E 030°18'40"; S 13°01'38" E 031°05'37" then along the clockwise arc of a circle of 50NM radius centred on S 13°15'43" E 031°54'49" (VOR VMF); to S 13°00'02" E 032°43'30"; S 13°00'00" E 032°56'20"; S 14°00'00" E 032°35'03"; S 14°00'00" E 032°22'15" then along the clockwise arc of a circle of 50NM radius centred on S 13°15'43" E 031°54'49" (VOR VMF); to S 14°05'22" E 031°47'07"; S 14°43'58" E 030°17'51"; S 14°03'09" E	MFUWE APP.	MFUWE APP. English HJ	120.700 MHZ AP-PROACH/DE-PAR TERMINAL AREA CONTROL 6915.0 KHZ Sub-regional network 6952.0 KHZ Domestic flight information service network	1) VDF AVAILABLE 2) Except when authorised, no aircraft to be operated in this airspace unless two-way radio contact is maintained with Air Traffic Control.

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<p>030°17'25"; S 13°34'46" E 031°07'01" then along the clockwise arc of a circle of 50NM radius centred on S 13°15'43" E 031°54'49" (VOR VMF); to S 13°21'57" E 031°03'56"; S 13°18'19" E 030°16'59" to point of origin.</p> <p style="text-align: center;"><u>FL245</u> <u>FL145</u> Class: A</p> <p style="text-align: center;"><u>FL145</u> <u>FL075</u> Class: C</p> <p style="text-align: center;"><u>FL075</u> <u>GND</u> Class: G</p>				
<p>NDOLA TMA Area bounded by lines joining points S 14°01'00" E 027°46'04"; S 13°39'14" E 027°33'14"; S 13°12'58" E 027°18'27"; S 12°34'21" E 027°28'56"; (WPT IBGOX); S 12°00'07" E 027°25'23"; S 12°00'00" E 028°00'00"; S 11°56'00" E 028°02'00"; S 11°48'00" E 028°08'00"; S 12°11'08" E 028°28'55" then along the clockwise arc of a circle of 50NM radius centred on S 12°59'53" E 028°40'00" (VOR VND); to S 12°10'51" E 028°51'01"; S 11°28'00" E 029°29'00"; S 12°00'00" E 030°06'00"; S 12°42'05" E 029°27'51" then along the clockwise arc of a circle of 50NM radius centred on S 12°59'53" E 028°40'00" (VOR VND); to S 12°54'27" E 029°30'54"; S 12°57'59" E 030°18'33"; S 13°18'19" E 030°16'59"; S 13°14'30" E 029°29'43"; S 14°00'00" E 029°24'00" to point of origin.</p> <p style="text-align: center;"><u>FL245</u> <u>FL145</u></p>	NDOLA APP	Ndola Approach English 0400-1800 and O/R	119.700 MHZ VDF avbl.	1) VDF AVAILABLE 2) Except when authorised, no aircraft to be operated in this airspace unless two way radio contact is maintained with Air Traffic Control. 3) Northbound ACFT odd IFR Flight Levels within the Ndola/Lusaka TMA from 155953S to 152000S a) Southbound ACFT even IFR Flight Levels within the Ndola/Lusaka TMA from 155953S to 152000S 4) No IFR flights permitted below FL 080 in these airspaces

<i>Name Lateral limits Vertical limits Class of Airspace</i>	<i>Unit providing service</i>	<i>Call sign languages area and conditions of use hours of service</i>	<i>Frequency and Purpose</i>	<i>Remarks</i>
1	2	3	4	5
<p>Class: A</p> <p><u>FL145</u></p> <p>FL075</p> <p>Class: C</p> <p><u>FL075</u></p> <p>GND</p> <p>Class: G</p>				
<p>Solwezi TMA</p> <p>Area bounded by lines joining points S 12°00'07" E 027°25'23"; S 12°34'21" E 027°28'56"; (WPT IBGOX); S 13°12'58" E 027°18'27"; S 13°39'14" E 027°33'14"; S 13°51'19" E 027°11'44"; S 13°19'37" E 026°50'05" then along the clockwise arc of a circle of 70NM radius centred on S 12°10'14" E 026°21'49" (NDB SW); to S 11°45'23" E 025°12'52" then along FIR boundary with Congo DR up to point of origin.</p> <p><u>FL245</u></p> <p>FL145</p> <p>Class: A</p> <p><u>FL145</u></p> <p>FL085</p> <p>Class: C</p> <p><u>FL085</u></p> <p>GND</p> <p>Class: G</p>	SOLWEZI TWR	<p>Solwezi Approach English 0400-1600 and O/R</p>	123.925 MHZ	Contiguous with: Ndola TMA Linked to Lusaka TMA by a corridor.

ENR 2.2 OTHER REGULATED AIRSPACE

Not Applicable

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ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
A400							
▲EGSUD 13°06'36"S 022°00'000"E							
	125° 306° 154 NM	FL245 — FL145 Class A FL145 — FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Inf.Ser LSK CTRL FREQ. 8888.0Khz 8873.0Khz 6952.0Khz 120.500Mhz
△GEXAG 14°28'07"S 024°14'04"E							
	125° 307° 38 NM	FL245 — FL145 Class A FL145 — FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Inf.Ser LSK CTRL FREQ. 8888.0Khz 8873.0Khz 6952.0Khz 120.500Mhz
▲KAOMA NDB 'KO' 14°47'08"S 024°47'24"E							
	125° 303° 76 NM	FL245 — FL145 Class A FL145 — FL075 Class G	10	↓	↑		Two-way radio contact to be maintained with Area Ctrl LSK CTRL FREQ. 120.500mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲IXATA 15°22'24"S 025°56'49"E							
	122° 302°	FL145	10	↓	↑		Two-way radio contact to be maintained with

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
	45 NM	FL075 Class C					LUSAKA AP-PROACH FREQ. 121.300mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲EVOLU 15°42'42"S 026°38'18"E							
	084° 264° 56 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Area Ctrl LSK CTRL FREQ. 120.500mhz LUSAKA AP-PROACH FREQ. 121.300mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲ETBOM 15°31'25"S 027°34'56"E							
	082° 262° 50 NM	FL245 FL145 Class A FL145 FL075 Class C FL075 GND Class G	10				Two-way radio contact to be maintained with LUSAKA AP-PROACH FREQ. 121.300mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	100° 280° 51 NM	FL245 FL145 Class A FL145 FL075	10	↓	↑		LUSAKA AP-PROACH FREQ. 121.300mhz Two-way radio contact to be maintained with Area Ctrl FREQ.

Route designator Name of sig- nificant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral lim- its (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
		Class C FL075 GND Class G					120.500mhz
▲TIMAX 15°23'24"S 029°17'36"E							
	099° 279° 63 NM	FL245 FL145 Class A FL145 FL075 Class C FL075 GND Class G	10				LUSAKA AP- PROACH FREQ. 121.300mhz Two-way radio con- tact to be maintained with Area Ctrl FREQ. 120.500mhz
▲KEPOK 15°27'00"S 030°23'00"E							

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ENR 3.1 LOWER ATS ROUTES

Route designator Name of sig- nificant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral lim- its (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
A405							
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							
	196° 018° 202 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ETOLI 12°11'30"S 032°35'18"E	200° 021° 74 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ADMIS 13°22'52"S 032°19'15"E							
	173° 353° 12 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↓	↑		Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz MFUWE APPROACH FREQ 120.700Mhz
▲UDPIX 13°34'42"S 032°16'00"E							

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
							Two-way radio contact to be maintained with ATC Units in these airspaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz MFUWE APPROACH FREQ 120.700Mhz
▲TEVAS 14°22'18"S 032°03'30"E							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
A406							
▲BESHO 11°59'29"S 027°48'57"E							
	143° 323° 28 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↓	↑		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz NDOLA APPROACH FREQ 120.000Mhz
▲TOBAN 12°21'10"S 028°07'34"E							
	144° 324° 50 NM	FL245 FL145 Class A FL145 FL075 Class C	0				Two-way radio contact to be maintained with Area Ctrl FREQ. 120.500mhz NDOLA APPROACH FREQ 120.000Mhz
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	099° 279° 97 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↓	↑		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz NDOLA APPROACH FREQ 120.000Mhz
▲SENGI 13°08'18"S 030°18'30"E							
	099° 279°	FL245 FL145	0				Two-way radio contact to be maintained with Area Control

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
	94 NM	Class A FL145 FL075 Class C					Area Control Frequency 120.500Mhz NDOLA APPROACH FREQ 120.000Mhz MFUWE APPROACH FREQ 120.700Mhz
▲MFUWE INTERNATIONAL AIRPORT VOR/DME 'VMF' 13°15'43"S 031°54'49"E							
	111° 291° 56 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↓	↑		Two-way radio contact to be maintained with Area Control. Area Control Frequency 120.500Mhz MFUWE APPROACH FREQ 120.700Mhz
▲AXEBO 13°31'48"S 032°49'42"E							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
A409							
▲SOBTO 10°03'54"S 028°56'44"E							
	189° 008° 63 NM	FL245 — FL145 Class A — FL145 — FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz
▲MANSA NDB 'MA' 11°07'27"S 028°51'46"E							
	189° 009° 113 NM	FL245 — FL145 Class A — FL145 — FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	189° 010° 58 NM	FL245 — FL145 Class A — FL145 — FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control Area Control Frequency 120.500Mhz
▲AVEKU 13°58'00"S 028°33'54"E							
	190° 011°	FL245 — FL145	0				Two-way radio contact to be maintained

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Later- al lim- its (NM) MOCA	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
B530							
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	046° 224° 221 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↓	↑		Two-way radio contact to be maintained with NDOLA APPROACH 120.000Mhz
▲KASAMA NDB 'KS' 10°12'30"S 031°08'25"E							
	063° 242° 110 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↓	↑		Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.500Mhz 6586.0Khz 6952.0Khz
▲UTEMA 09°17'49"S 032°45'08"E							
	063° 243° 48 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↓	↑		Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.500Mhz 6586.0Khz 6952.0Khz
▲MBEYA NDB 'MB' 08°55'34"S							

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
033°27'27"E						
<p>Two-way radio contact to be maintained with ATS in these airspace Ndola Approach Kasama /Mansa information available as relay stations Lusaka Contol Frequency:</p> <p>120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz</p>						

ENR 3.1 LOWER ATS ROUTES

Route designator Name of sig- nificant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral lim- its (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
G652							
▲UDNOR 11°33'55"S 023°56'57"E							
	120° 301° 193 NM	FL245 FL145 Class A FL145 FL075 Class G	10	↓	↑		Two-way radio contact to be maintained with ATC in these airspace Solwezi Approach Freq 123.925Mhz as a relay station. Lusaka Control Frequency 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲NIDOS 13°04'00"S 026°51'06"E							
	149° 329° 85 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with ATC in these airspace Solwezi Approach Freq 123.925MHz as a relay station. Lusaka Control Frequency 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲AVUPA 14°14'00"S 027°41'00"E							
	151° 332° 78 NM	FL245 FL145 Class A FL145	10	↓	↑		Two-way radio contact to be maintained with Lusaka Approach Control.

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
		FL075 Class C					Lusaka Approach. Frequency: 121.300Mhz SOLWEZI AP- PROACH FREQ 123.925Mhz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	143° 322° 25 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Lusaka Approach Control. Lusaka Approach. Frequency: 121.300Mhz
▲VLS08 15°37'50"S 028°43'01"E							
	142° 322° 26 NM	FL245 FL145 Class A FL145 FL075 Class C	10	↓	↑		Two-way radio contact to be maintained with Lusaka Approach Control. Lusaka Approach. Frequency: 121.300Mhz
▲GADBA 15°56'03"S 029°00'53"E							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
G655							
▲MOTAM 12°00'000"S 027°35'48"E							
	169° 350° 55 NM	FL245 — FL145 Class A — FL145 — FL075 Class C		↓	↑		
▲EGPAK 12°54'06"S 027°49'06"E							
	170° 351° 109 NM	FL245 — FL145 Class A — FL145 — FL075 Class C		↓	↑		
▲CTR BDRY 14°40'36"S 028°15'24"E							
	171° 352° 42 NM	FL245 — FL145 Class A — FL145 — GND Class C	10	↓	↑		Two-way radio contact to be maintained with ATC unit Ndola Approach 120.000Mhz Lusaka Approach 121.300Mhz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	184° 004°	FL245 — FL145		↑	↓		

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
	25 NM	Class A FL145 GND Class C					
▲CTR BDRY 15°44'42"S 028°26'12"E							
	183° 004° 25 NM	FL245 FL145 Class A FL145 GND Class C		↑	↓		
▲TMA BDRY 16°09'48"S 028°27'12"E							
	184° 005° 28 NM	FL245 FL145 Class A FL145 GND Class C FL075 GND Class G		↑	↓		
▲RETAR 16°37'47"S 028°28'18"E							
Two-way radio contact to be maintained with ATC unit Ndola Approach available as a relay station. No IFR flights below FL 075 in these airspaces. Lusaka Control frequency: 120.500Mhz 6589.0Khz 8888.0Khz. For continuation See AIP below.							

ENR 3.1 LOWER ATS ROUTES

Route designator Name of sig- nificant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral lim- its (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
R779							
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							
	219° 039° 39 NM	FL245 — FL145 Class A FL145 — FL075 Class G	0				Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available as a relays stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲GESAT 09°26'30"S 033°03'47"E							
	219° 040° 106 NM	FL245 — FL145 Class A FL145 — FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available as a relays stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ITKAN 10°50'48"S 031°58'36"E							
	220° 040° 19 NM	FL245 — FL145 Class A FL145 — FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available as a relays stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
▲APGEL 11°05'42"S 031°47'00"E							
	220° 042° 139 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available as a relays stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲GEPET 12°56'30"S 030°20'00"E							
	222° 042° 33 NM	FL245 FL145 Class A FL145 FL075 Class G	0	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available as a relays stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲AVEKA 13°22'36"S 029°59'18"E							
	222° 043° 55 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control. Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲OKSIX 14°06'12"S 029°24'30"E							
	223° 044° 93 NM	FL245 FL145 Class A	0				Two-way radio contact to be maintained with Area Control.

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
		FL145 FL075 Class C					Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	230° 052° 161 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control. Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲AVOMU 17°13'58"S 026°26'53"E							
	233° 054° 50 NM	FL245 FL145 Class A FL145 FL075 Class C	0	↑	↓		Two-way radio contact to be maintained with Area Control. Lusaka Control Frequency: 120.500Mhz 8888.0Khz 6586.0Khz
▲LIVINGSTONE VOR/DME 'VLI' 17°48'45"S 025°49'12"E							

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ENR 3.1 LOWER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit MEA Airspace class	Lateral limits (NM) MOCA	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
		FL145 — FL075 Class C					
▲CTR BDRY 15°10'42"S 028°49'24"E							
	254° — 075° 25 NM	FL245 — FL145 Class A FL145 — FL075 Class C		↑	↓		
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
Two-way radio contact to be maintained with ATC and Mfuwe information available as relay station in these air-spaces. Lusaka Control. Frequency: 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz For continuation See AIP below.							

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks	
				Odd	Even			
1	2	3	4	5	6	7		
UA400								
▲EGSUD 13°06'36"S 022°00'000"E								
	125° 306° 154 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka Area CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz	
▲GEXAG 14°28'07"S 024°14'04"E	125° 307° 38 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka Area CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz	
△ KAOMA NDB 'KO' 14°47'08"S 024°47'24"E	125° 303° 76 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz	
△ IXATA 15°22'24"S 025°56'49"E	122° 302° 45 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz	

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
▲EVOLU 15°42'42"S 026°38'18"E						8873.0Khz 6952.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E	<p style="text-align: center;">083° 263° 106 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑	<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲KEPOK 15°27'00"S 030°23'00"E	<p style="text-align: center;">099° 279° 114 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑	<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
				<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6		7
UA406							
▲BESHO 11°59'29"S 027°48'57"E							
	<p style="text-align: center;">143° 325° 77 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.000Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	<p style="text-align: center;">100° 279° 99 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.000Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
△ APLUX 13°08'24"S 030°21'18"E							
	<p style="text-align: center;">099° 279° 92 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz</p>

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
						8873.0Khz 6586.0Khz
▲MFUWE INTERNATIONAL AIRPORT VOR/DME 'VMF' 13°15'43"S 031°54'49"E						
	<hr/> 116° 296° 25 NM	<hr/> UNL FL245 Class A		 		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ADMIS 13°22'52"S 032°19'15"E						
	<hr/> 109° 289° 31 NM	<hr/> UNL FL245 Class A		 		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲AXEBO 13°31'48"S 032°49'42"E						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
UA409							
▲SOBTO 10°03'54"S 028°56'44"E							
	185° 007° 64 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲MANSA NDB 'MA' 11°07'27"S 028°51'46"E							
	190° 009° 113 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E							
	191° 012° 140 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
							8888.0Khz 8873.0Khz 6586.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	200° 021° 70 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ETLUN 16°28'00"S 028°07'00"E							
	203° 023° 24 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ESTAK 16°51'00"S 028°00'000"E							
Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.5.500Mhz 6586.0Khz 6952.0Khz							

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UA607								
▲BESHO 11°59'29"S 027°48'57"E								
	143° 324° 78 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E								
	159° 341° 176 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲AVIVA 15°40'05"S 029°57'00"E								
Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz								

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ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
				<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6		7
UB528							
▲APDAR 14°02'00"S 022°00'000"E							
	145° 325° 29 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲APKUS 14°25'00"S 022°19'00"E							
	139° 319° 76 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲NIBEG 15°18'44"S 023°14'47"E							
	141° 322° 177 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲IMVES 17°25'17"S 025°23'23"E							
	140° 321° 34 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Livingstone Approach available as a relay station.

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
							Lusaka Control Frequency 120.500Mhz 124.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲LIVINGSTONE VOR/DME 'VLI' 17°48'45"S 025°49'12"E							Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Lateral limits (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UB530								
▲NDOLA VOR/DME 'VND' 12°59'53"S 028°40'00"E								
	046° 224° 221 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.000Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲KASAMA NDB 'KS' 10°12'30"S 031°08'25"E	063° 242° 110 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz	
▲UTEMA 09°17'49"S 032°45'08"E	063° 243° 48 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz	
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E								

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
Two-way radio contact to be maintained with ATS in these airspace Ndola Approach Kasama /Mansa information available as relay stations Lusaka Contol Frequency: 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
UG424							
▲SONPO 11°20'00"S 028°20'00"E							
	<p style="text-align: center;">073° 254° 34 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.000Khz 8873.000Khz 6586.000Khz</p>
▲MANSA NDB 'MA' 11°07'27"S 028°51'46"E							
	<p style="text-align: center;">071° 249° 72 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.000Khz 8873.000Khz 6586.000Khz</p>
▲EKBOV 10°40'00"S 030°00'000"E							
	<p style="text-align: center;">071° 251° 73 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.000Khz</p>

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
▲KASAMA NDB 'KS' 10°12'30"S 031°08'25"E							8873.000Khz 6586.000Khz
▲GESAT 09°26'30"S 033°03'47"E	071° 250° 123 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.000Khz 8873.000Khz 6952.000Khz
▲IBROP 09°19'24"S 033°21'16"E	070° 250° 19 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.000Khz 8873.000Khz 6952.000Khz
▲ITBEX 09°16'20"S 033°28'47"E	070° 250° 8 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.000Khz 8873.000Khz 6952.000Khz
Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz							

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
UG652							
▲UDNOR 11°33'55"S 023°56'57"E							
	120° 300° 77 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲ITLOR 12°10'00"S 025°06'13"E							
	120° 301° 74 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲OKSED 12°44'34"S 026°13'07"E							
	121° 301° 42 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲NIDOS 13°04'00"S 026°51'06"E							
	149° 329° 85 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
▲AVUPA 14°14'00"S 027°41'00"E						6952.0Khz
	<hr/> 151° 332° 78 NM	UNL FL245 Class A				Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E	<hr/> 142° 323° 50 NM	UNL FL245 Class A		↓	↑	Two-way radio contact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲GADBA 15°56'03"S 029°00'53"E						

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
UG655							
▲MOTAM 12°00'000"S 027°35'48"E							
	169° 352° 205 NM	FL330 FL245 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	185° 005° 78 NM	FL330 FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲RETAR 16°37'47"S 028°28'18"E							
Two-way radio contact to be maintained with Area Control freq. 120.500Mhz							

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ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
UG656							
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E							
	178° 358° 21 NM	UNL FL145 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ITBEX 09°16'20"S 033°28'47"E	178° 359° 21 NM	UNL FL145 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲OVANA 09°37'00"S 033°30'000"E	178° 359° 65 NM	UNL FL145 Class A		↓	↑		Two-way radio contact to be maintained with ATC in these air-spaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
						8873.0Khz 6586.0Khz
▲MEKRO 10°44'20"S 033°35'00"E						
	<p>182° 360° 43 NM</p> <p>UNL FL145 Class A</p>			↑ ↓	Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲UTALA 11°22'12"S 033°37'54"E						
	<p>183° 360° 6 NM</p> <p>UNL FL145 Class A</p>			↑ ↓	Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲ANTOP 11°30'000"S 033°38'30"E						

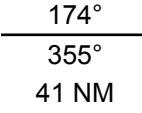
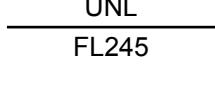
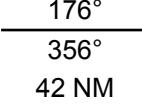
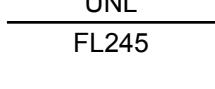
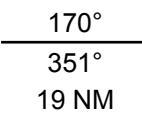
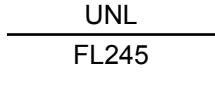
ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UL431								
▲GIPVO 11°40'00"S 033°18'00"E								
	<p style="text-align: center;">237° 057° 52 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz		
▲ETOLI 12°11'30"S 032°35'18"E								
	<p style="text-align: center;">234° 055° 70 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz		
△ ABVMF 12°56'00"S 031°40'00"E								
	<p style="text-align: center;">239° 060° 23 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz		
△ IMLUP 13°08'53"S 031°21'05"E								
	<p style="text-align: center;">236° 057° 65 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓	120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz		

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
△ APGIK 13°49'12"S 030°28'18"E						
	<hr/> 237° 059° 150 NM	UNL FL245 Class A		↑	↓	Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 121.300Mhz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UL432								
▲KENOT 08°34'48"S 029°39'42"E								
	172° 352° 37 NM	UNL FL245 Class A		↓	↑	Two-way radio con- tact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz		
▲IBMIS 09°11'51"S 029°45'41"E								
	172° 353° 89 NM	UNL FL245 Class A		↓	↑	Two-way radio con- tact to be maintained with Lusaka AREA CTRL FREQ. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz		
▲EKBOV 10°40'00"S 030°00'000"E								
	174° 355° 137 NM	UNL FL245 Class A		↓	↑	Two-way radio con- tact to be maintained with ATC in these air- spaces. Ndola Ap- proach available as a relay station. Lusa- ka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz		
▲GEPET 12°56'30"S 030°20'00"E								
	178° 358° 12 NM	UNL FL245		↓	↑	Two-way radio con- tact to be maintained with ATC in these air-		

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5		6	7
		Class A					spaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ APLUX 13°08'24"S 030°21'18"E							
	<p style="text-align: center;">  $\overline{174^\circ}$ $\overline{355^\circ}$ 41 NM </p>	<p style="text-align: center;">  UNL FL245 Class A </p>		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ APGIK 13°49'12"S 030°28'18"E							
	<p style="text-align: center;">  $\overline{176^\circ}$ $\overline{356^\circ}$ 42 NM </p>	<p style="text-align: center;">  UNL FL245 Class A </p>		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ GESUD 14°31'12"S 030°35'00"E							
	<p style="text-align: center;">  $\overline{170^\circ}$ $\overline{351^\circ}$ 19 NM </p>	<p style="text-align: center;">  UNL FL245 Class A </p>		↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available as a relay station. Lusa-

Route designator Name of sig- nificant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
							ka Control Frequency 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ ETKAV 14°50'00"S 030°39'54"E							
Two-way radio contact to be maintained with Lusaka Control in these airspaces. Lusaka Control Frequency: 8888.0Khz 120.500Mhz 6586.0Khz 6952.0Khz							

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ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6		7
UM439							
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	240° 061° 77 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲IBGOT 16°04'42"S 027°19'50"E	239° 060° 72 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Lusaka Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲DURTO 16°47'18"S 026°19'42"E	241° 062° 66 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Livingstone Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 124.300Mhz 8888.0Khz

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
▲IMVES 17°25'17"S 025°23'23"E						8873.0Khz 6586.0Khz
▲TIKOK 17°38'18"S 025°05'06"E	<p>240° 060° 22 NM</p>	<p>UNL FL245 Class A</p>		↑ ↓		<p>Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available as a relay station. Lusaka Control Frequency 120.500Mhz 124.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
						<p>Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz</p>

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks	
				Odd	Even			
1	2	3	4	5	6	7		
UN305								
▲LABON 13°40'00"S 032°48'00"E								
	<p style="text-align: center;">253° 073° 67 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲IXALU 14°04'48"S 031°44'00"E								
	<p style="text-align: center;">253° 074° 63 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲NESAK 14°27'48"S 030°44'00"E								
	<p style="text-align: center;">254° 073° 9 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
△ GESUD 14°31'12"S 030°35'00"E								

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5		6	7
	<p style="text-align: center;">253° 075° 135 NM</p>	<p style="text-align: center;">UNL FL245 Class A</p>		↑	↓		<p>Two-way radio contact to be maintained with AREA CTRL FREQ and LUSAKA APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 121.300Mhz</p>
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E	Two-way radio contact to be maintained with area control Lusaka Control Frequency:- 120.500Mhz						

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
				<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6	7	
UN308							
▲KASAMA NDB 'KS' 10°12'30"S 031°08'25"E							
	043° 222° 88 NM	UNL FL245 Class A		↓	↑		Two-way radio con- tact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz
▲UDNOT 09°05'08"S 032°06'11"E							

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ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UP312								
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E								
	196° 016° 25 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲IBROP 09°19'24"S 033°21'16"E	196° 017° 10 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲APKOL 09°29'16"S 033°18'44"E	197° 019° 167 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz	
▲ETOLI 12°11'30"S 032°35'18"E								

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5		6	7
	<p style="text-align: center;">196° — 017° 73 NM</p>	<p style="text-align: center;">UNL — FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲ADMIS 13°22'52"S 032°19'15"E							
	<p style="text-align: center;">200° — 020° 12 NM</p>	<p style="text-align: center;">UNL — FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲UDPIX 13°34'42"S 032°16'00"E							
	<p style="text-align: center;">199° — 020° 49 NM</p>	<p style="text-align: center;">UNL — FL245 Class A</p>		↑	↓		Two-way radio contact to be maintained with AREA CTRL FREQ and MFUWE APPROACH. 120.500Mhz 8888.0Khz 8873.0Khz 6952.0Khz 120.700Mhz
▲TEVAS 14°22'18"S 032°03'30"E							

ENR 3.2 UPPER ATS ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks	
				Odd	Even			
1	2	3	4	5	6	7		
UR525								
▲KAOMA NDB 'KO' 14°47'08"S 024°47'24"E								
	124° 302° 76 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Area Control Mongu information available as a relay station. Lusaka Control Freq. 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz	
▲IXATA 15°22'24"S 025°56'49"E	122° 302° 45 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with Area Control Lusaka Control Freq. 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz	
▲EVOLU 15°42'42"S 026°38'18"E	124° 305° 46 NM	UNL FL245 Class A		↓	↑		Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz	
▲IBGOT 16°04'42"S 027°19'50"E	123° 303°	UNL FL245		↓	↑		Two-way radio contact to be maintained	

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels	RNP Type	Remarks
				Odd		
1	2	3	4	5	6	7
		51 NM				with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲ETLUN 16°28'00"S 028°07'00"E						
	<u>122°</u> 302° 23 NM	UNL FL245 Class A		↓	↑	Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲RETAR 16°37'47"S 028°28'18"E						

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UR779								
▲MBEYA NDB 'MB' 08°55'34"S 033°27'27"E								
	219° 039° 39 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Kasama/Mfuwe available as a relays stations. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲GESAT 09°26'30"S 033°03'47"E	219° 040° 106 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲ITKAN 10°50'48"S 031°58'36"E	220° 040° 19 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available HJ as a relays stations. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz	
▲APGEL 11°05'42"S								

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Later- al lim- its (NM)	Direc- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5	6	7	
031°47'00"E							
	220° 042° 139 NM	UNL FL245 Class A		↑ ↓			Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available HJ as a relays stations. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲GEPET 12°56'30"S 030°20'00"E							
	222° 042° 33 NM	UNL FL245 Class A		↑ ↓			Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe available HJ as a relays stations. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲AVEKA 13°22'36"S 029°59'18"E							
	222° 044° 148 NM	UNL FL245 Class A		↑ ↓			Two-way radio contact to be maintained with AREA CTRL FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	231° 052° 161 NM	UNL FL245		↑ ↓			Two-way radio contact to be maintained with AREA CTRL

Route designator Name of sig- nificant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral lim- its (NM)	Dirac- tion of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5		6	7
		Class A					FREQ and Lusaka APPROACH. 121.300Mhz 8888.0Khz 8873.0Khz 6952.0Khz
▲AVOMU 17°13'58"S 026°26'53"E							
	233° 054° 50 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach 124.300Mhz available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲LIVINGSTONE VOR/DME 'VLI' 17°48'45"S 025°49'12"E							

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ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
1	2	3	4	5	6	7		
UR984								
▲KENOT 08°34'48"S 029°39'42"E								
	<p>139° 321° 131 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>	
▲KASAMA NDB 'KS' 10°12'30"S 031°08'25"E								
	<p>147° 327° 65 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency. 120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>	
▲APGEL 11°05'42"S 031°47'00"E								
	<p>147° 328° 81 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>	
▲ETOLI 12°11'30"S 032°35'18"E								

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Lateral limits (NM)	Direction of cruising levels		RNP Type	Remarks
				Odd	Even		
1	2	3	4	5		6	7
	<p>148° 328° 40 NM</p>	<p>UNL FL245 Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲TIBAK 12°44'00"S 032°59'24"E	<p>Two-way radio contact to be maintained with area control Lusaka Control Frequency:- 120.500Mhz</p>						

ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>	
				<i>Odd</i>	<i>Even</i>			
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>		
UT252								
▲SOBTO 10°03'54"S 028°56'44"E								
	<p style="text-align: center;">045° 224° 71 NM</p>	<p style="text-align: center;">UNL FL245</p> <p style="text-align: center;">Class A</p>		↓	↑		<p>Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available HJ as a relay station.</p> <p>Lusaka Control Frequency. 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>	
▲IBMIS 09°11'51"S 029°45'41"E								
	<p style="text-align: center;">044° 224° 20 NM</p>	<p style="text-align: center;">UNL FL245</p> <p style="text-align: center;">Class A</p>					<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency.</p> <p>120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>	
▲EXOGA 08°56'56"S 029°59'39"E								
	<p style="text-align: center;">044° 224° 60 NM</p>	<p style="text-align: center;">UNL FL245</p> <p style="text-align: center;">Class A</p>					<p>Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Control Frequency.</p> <p>120.500Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>	
▲ESRES 08°12'43"S 030°40'26"E								

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ENR 3.2 UPPER ATS ROUTES

<i>Route designator Name of sig- nificant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Later- al lim- its (NM)</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
				<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6		7
UT916							
▲LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E							
	218° 040° 192 NM	UNL FL245 Class A		↑	↓		Two-way radio contact to be maintained with ATC in these air-spaces. Lusaka Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲XOSIV 18°02'50"S 026°39'24"E							

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
UM214						
▲ ETOXO 11°31'36"S 024°56'17"E						
	168° 348° 39 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ ITLOR 12°10'00"S 025°06'13"E						
	168° 349° 78 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ DUGBA 13°25'51"S 025°25'59"E						
	169° 353° 120 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ IXATA 15°22'24"S						

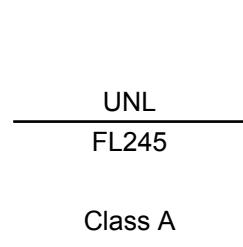
Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
025°56'49"E						
	171° 353° 87 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ DURTO 16°47'18"S 026°19'42"E						
	172° 353° 27 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ AVOMU 17°13'58"S 026°26'53"E						
	173° 353° 50 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 121.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ XOSIV 18°02'50"S 026°39'24"E						

ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
UM215						
▲ MOTAM 12°00'000"S 027°35'48"E						
	169° 352° 205 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ LUSAKA VOR/DME 'VLS' 15°19'41"S 028°25'15"E						
	185° 005° 78 NM	UNL FL330 Class A	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Lusaka Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 121.300Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
△ RETAR 16°37'47"S 028°28'18"E						

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
UM437						
▲ NIDOS 13°04'00"S 026°51'06"E						
	<p>212° 036° 300 NM</p>	<p>UNL FL245 Class A</p> 				<p>Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz</p>
▲ TIGEL 17°28'12"S 024°22'00"E						
Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz						

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
UM731						
▲ EPNUL 13°35'38"S 022°00'10"E						
	163° 344° 53 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC Units in these air-spaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
△ APKUS 14°25'00"S 022°19'00"E						
	161° 341° 79 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC Units in these air-spaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ AVONI 15°38'00"S 022°52'00"E						
	163° 345° 126 NM	UNL FL330 Class A	↓	↑		Two-way radio contact to be maintained with ATC Units in these air-spaces Lusaka Control frequency 120.500Mhz 8888.0Khz 6586.0Khz
▲ EPMAG 17°34'59"S 023°41'13"E						

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
UQ83						
▲ INUXI 12°00'000"S 027°03'00"E						
	230° 051° 66 NM	UNL FL245 Class A	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ OKSED 12°44'34"S 026°13'07"E						
	231° 052° 62 NM	UNL FL245 Class A	↑	↓		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ DUGBA 13°25'51"S 025°25'59"E						
	232° 053° 94 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ GEXAG 14°28'07"S						

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
024°14'04"E						
	233° 054° 76 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ NIBEG 15°18'44"S 023°14'47"E						
	234° 054° 29 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ AVONI 15°38'00"S 022°52'00"E						
	232° 053° 62 NM	UNL FL245 Class A				Two-way radio contact to be maintained with ATC in these airspaces. Livingstone Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 124.300Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ UVDOM 16°20'05"S 022°04'32"E						

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz						

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
			<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6	
UR784						
▲ NIDOS 13°04'00"S 026°51'06"E						
	027° 206° 70 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ ENKOT 11°59'32"S 027°19'33"E						
Two-way radio contact to be maintained with Area Control.						

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ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
UT281						
▲ BESHO 11°59'29"S 027°48'57"E						
	113° 293° 57 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ EPSOT 12°20'04"S 028°44'24"E						
	115° 296° 24 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ AXULO 12°29'25"S 029°07'27"E						
	114° 294° 76 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Ndola Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 119.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ GEPET 12°56'30"S						

Route designator Name of significant points Coordinates	Track MAG Rev Track MAG Length (NM)	Upper limit Lower limit Airspace class	Direction of cruising levels		RNP Type	Remarks
			Odd	Even		
1	2	3	4	5	6	
030°20'00"E						
	106° 286° 61 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ IMLUP 13°08'53"S 031°21'05"E						
	106° 287° 34 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Mfuwe Approach available HJ as a relay station. Lusaka Control Frequency. 120.500Mhz 120.700Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ MFUWE INTERNATIONAL AIRPORT VOR/DME 'VMF' 13°15'43"S 031°54'49"E						
Two-way radio contact to be maintained with Area Control. Lusaka Control Freq:- 120.500Mhz 8888.0Khz 6586.0Khz 6952.0Khz						

ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

<i>Route designator Name of significant points Coordinates</i>	<i>Track MAG Rev Track MAG Length (NM)</i>	<i>Upper limit Lower limit Airspace class</i>	<i>Direction of cruising levels</i>		<i>RNP Type</i>	<i>Remarks</i>
			<i>Odd</i>	<i>Even</i>		
1	2	3	4	5	6	
UT967						
▲ ITLOR 12°10'00"S 025°06'13"E						
	017° 197° 25 NM	UNL FL245 Class A	↓	↑		Two-way radio contact to be maintained with ATC in these airspaces. Solwezi Approach available HJ as a relay station. Lusaka Control Frequency. 123.925Mhz 8888.0Khz 8873.0Khz 6586.0Khz
▲ KOKEN 11°45'54"S 025°12'33"E						

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ENR 3.4 HELICOPTER ROUTES

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ENR 3.5 OTHER ROUTES (NATIONAL ROUTES)

TO BE DEVELOPED.

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ENR 3.6 EN-ROUTE HOLDING

TO BE DEVELOPED.

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ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

Name of station (VAR)	Ident	Frequency (CH)	Hours of operation	Coordinates	Elevation DME Antenna	Coverage Remarks
1	2	3	4	5	6	7
CHIPATA NDB (05° W)	CP	218.00 KHZ	H24	133350.28S 0323507.68E	-	Power output 100w Coverage 50NM
KAOMA NDB (07° W)	KO	349.00 KHZ	H24	144707.80S 0244724.00E	-	Power output 100w Coverage 50NM
KASAMA L (03° W)	KS	367.00 KHZ	H24	101230.00S 0310824.60E	4527.6 FT (1380 M)	Power output 100w Coverage 50NM
LIVINGSTONE VOR/DME (07° W)	VLI	112.50 MHZ (CH72X)	H24	174845.38S 0254912.10E	3301.92 FT (1006 M)	Channel 72X co-axially co-located with CVOR. 1159 MHz transmits and receives.
LUSAKA VOR/DME (05° W)	VLS	113.50 MHZ (CH82X)	H24	151940.82S 0282515.40E	3804 FT (1159 M)	100 MAG 0.78NM TO THR RWY 10 Channel 82X co-axially co-located with DVOR
MANSA NDB (04° W)	MA	316.00 KHZ	H24	110727.00S 0285146.20E	-	Power output 1kw Coverage 200NM
MFUWE INTERNATIONAL AIRPORT VOR/DME (04° W)	VMF	112.90 MHZ (CH76X)	H24	131542.79S 0315448.72E	1839.26 FT (561 M)	Channel 76X co-axially co-located with DVOR
NDOLA VOR/DME (04° W)	VND	112.10 MHZ (CH58X)	H24	123542.72S 0282344.52E	4196 FT (1279 M)	Channel 58X co-axially co-located with DVOR

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ENR 4.2 SPECIAL NAVIGATION SYSTEMS

Name of station (ID) of chain	Type of SVC	Frequency	Hours of operation	Coordinates TRANS STN	Remarks
1	2	3	4	5	6
To Be Developed					

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ENR 4.3 GLOBAL NAVIGATION SATELLITE SYSTEM

TO BE DEVELOPED.

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ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS

Name-code Designator	Coordinates	ATS Route or other route	Remarks
1	2	3	4
ADMIS	13°22'52"S 032°19'15"E	A405, UA406, UP312	
ANTOP	11°30'00"S 033°38'30"E	UG656	
APDAR	14°02'00"S 022°00'00"E	UB528	
APGEL	11°05'42"S 031°47'00"E	R779, UR779, UR984	
APGIK	13°49'12"S 030°28'18"E	UL431, UL432	
APKOL	09°29'16"S 033°18'44"E	UP312	
APKUS	14°25'00"S 022°19'00"E	UB528, UM731	
APLUX	13°08'24"S 030°21'18"E	UA406, UL432	
APMAB	14°29'00"S 030°25'00"E	-	-
AVEKA	13°22'36"S 029°59'18"E	R779, UR779	
AVEKU	13°58'00"S 028°33'54"E	A409	
AVIVA	15°40'05"S 029°57'00"E	UA607	
AVOMU	17°13'58"S 026°26'53"E	R779, UM214, UR779	
AVONI	15°38'00"S 022°52'00"E	UM731, UQ83	
AVUPA	14°14'00"S 027°41'00"E	G652, UG652	
AXEBO	13°31'48"S 032°49'42"E	A406, UA406	
AXERO	14°15'00"S 030°18'00"E	-	-
AXULO	12°29'25"S 029°07'27"E	UT281	
BESHO	11°59'29"S 027°48'57"E	A406, UA406, UA607, UT281	
DUGBA	13°25'51"S 025°25'59"E	UM214, UQ83	
DURTO	16°47'18"S 026°19'42"E	UM214, UM439	
EGPAK	12°54'06"S 027°49'06"E	G655	
EGSUD	13°06'36"S 022°00'00"E	A400, UA400	
EKBOV	10°40'00"S 030°00'00"E	UG424, UL432	
ENKOT	11°59'32"S 027°19'33"E	UR784	

<i>Name-code Designator</i>	<i>Coordinates</i>	<i>ATS Route or other route</i>	<i>Remarks</i>
1	2	3	4
EPMAG	17°34'59"S 023°41'13"E	UM731	
EPNUL	13°35'38"S 022°00'10"E	UM731	
EPSOT	12°20'04"S 028°44'24"E	UT281	
ESRES	08°12'43"S 030°40'26"E	UT252	
ESTAK	16°51'00"S 028°00'00"E	A409, UA409	
ETBOM	15°31'25"S 027°34'56"E	A400	
ETKAV	14°50'00"S 030°39'54"E	UL432	
ETLUN	16°28'00"S 028°07'00"E	A409, UA409, UR525	
ETOLI	12°11'30"S 032°35'18"E	A405, UL431, UP312, UR984	
ETOZO	11°31'36"S 024°56'17"E	UM214	
EVOLU	15°42'42"S 026°38'18"E	A400, UA400, UR525	
EXOGA	08°56'56"S 029°59'39"E	UT252	
GADBA	15°56'03"S 029°00'53"E	G652, UG652	
GEPET	12°56'30"S 030°20'00"E	R779, UL432, UR779, UT281	
GESAT	09°26'30"S 033°03'47"E	R779, UG424, UR779	
GESUD	14°31'12"S 030°35'00"E	UL432, UN305	
GEXAG	14°28'07"S 024°14'04"E	A400, UA400, UQ83	
GIPVO	11°40'00"S 033°18'00"E	UL431	
IBGOT	16°04'42"S 027°19'50"E	UM439, UR525	
IBMIS	09°11'51"S 029°45'41"E	UL432, UT252	
IBNOP	14°59'36"S 029°19'18"E	R782	
IBROP	09°19'24"S 033°21'16"E	UG424, UP312	
IMLUP	13°08'53"S 031°21'05"E	UL431, UT281	
IMVES	17°25'17"S 025°23'23"E	UB528, UM439	
INUXI	12°00'00"S 027°03'00"E	UQ83	
ITBEX	09°16'20"S 033°28'47"E	UG424, UG656	

Name-code Designator	Coordinates	ATS Route or other route	Remarks
1	2	3	4
ITKAN	10°50'48"S 031°58'36"E	R779, UR779	
ITLOR	12°10'00"S 025°06'13"E	UG652, UM214, UT967	
IXALU	14°04'48"S 031°44'00"E	R782, UN305	
IXATA	15°22'24"S 025°56'49"E	A400, UA400, UM214, UR525	
KENOT	08°34'48"S 029°39'42"E	UL432, UR984	
KEPOK	15°27'00"S 030°23'00"E	A400, UA400	
KOKEN	11°45'54"S 025°12'33"E	UT967	
LABON	13°40'00"S 032°48'00"E	R782, UN305	
MEKRO	10°44'20"S 033°35'00"E	UG656	
MOTAM	12°00'00"S 027°35'48"E	G655, UG655, UM215	
NESAK	14°27'48"S 030°44'00"E	R782, UN305	
NIBEG	15°18'44"S 023°14'47"E	UB528, UQ83	
NIDOS	13°04'00"S 026°51'06"E	G652, UG652, UM437, UR784	
OKSED	12°44'34"S 026°13'07"E	UG652, UQ83	
OKSIX	14°06'12"S 029°24'30"E	R779	
OVANA	09°37'00"S 033°30'00"E	UG656	
RETAR	16°37'47"S 028°28'18"E	G655, UG655, UM215, UR525	
SENGI	13°08'18"S 030°18'30"E	A406	
SOBTO	10°03'54"S 028°56'44"E	A409, UA409, UT252	
SONPO	11°20'00"S 028°20'00"E	UG424	
TEVAS	14°22'18"S 032°03'30"E	A405, UP312	
TIBAK	12°44'00"S 032°59'24"E	UR984	
TIGEL	17°28'12"S 024°22'00"E	UM437	
TIKOK	17°38'18"S 025°05'06"E	UM439	
TIMAX	15°23'24"S 029°17'36"E	A400	
TOBAN	12°21'10"S 028°07'34"E	A406	

<i>Name-code Designator</i>	<i>Coordinates</i>	<i>ATS Route or other route</i>	<i>Remarks</i>
1	2	3	4
UDNOR	11°33'55"S 023°56'57"E	G652, UG652	
UDNOT	09°05'08"S 032°06'11"E	UN308	
UDPIX	13°34'42"S 032°16'00"E	A405, UP312	
UTALA	11°22'12"S 033°37'54"E	UG656	
UTEMA	09°17'49"S 032°45'08"E	B530, UB530	
UVDOM	16°20'05"S 022°04'32"E	UQ83	
XOSIV	18°02'50"S 026°39'24"E	UM214, UT916	

ENR 4.5 AERONAUTICAL GROUND LIGHTS - EN-ROUTE

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ENR 5.1 PROHIBITED, RESTRICTED AND DANGER AREAS

PROHIBITED AREAS

<i>Identification, Name & Lateral Limits</i>	<i>Upper Limit Lower Limit</i>	<i>Remarks (Time of activity, type of restriction, nature of hazard, risk of interception)</i>
1	2	3
FLP1-LUKANGA LOWER Area bounded by lines joining points S 13°39'00" E 028°31'00"; S 13°39'00" E 028°40'00"; S 13°54'00" E 028°49'00"; S 13°55'00" E 028°32'00" to point of origin.	FL080 GND	Army battle training area. No person shall, at any time, fly an aircraft below FL 090 within these areas
FLP1-LUKANGA UPPER Area bounded by lines joining points S 13°39'00" E 028°31'00"; S 13°39'00" E 028°40'00"; S 13°54'00" E 028°49'00"; S 13°55'00" E 028°32'00" to point of origin.	FL170 GND	Army battle training area. Active when notified by NOTAM no person shall, whenever activated by a NOTAM, fly an aircraft below FL 180 within these areas.
FLP2-STATE HOUSE Circular area centered on S 15°25'42" E 028°19'42" within a 0.5NM radius.	6000 FT AMSL GND	Presidential Residence No person shall, at any time, fly an aircraft below 6000FT AMSL within this area
FLP4-MUMBWA Area bounded by lines joining points S 14°58'00" E 026°47'00"; S 14°55'30" E 026°31'00"; S 15°01'00" E 026°24'00"; S 14°57'00" E 026°05'00"; S 15°00'00" E 026°00'00"; S 14°57'00" E 025°55'00"; S 14°54'00" E 026°02'00"; S 14°52'00" E 026°08'00"; S 14°49'00" E 026°12'00"; S 14°42'00" E 026°07'00"; S 14°36'00" E 026°11'00"; S 14°43'30" E 026°20'00"; S 14°35'00" E 026°25'00"; S 14°22'00" E 026°21'00"; S 14°00'00" E 026°21'00"; S 14°00'00" E 027°10'00"; S 14°42'00" E 027°23'00"; S 14°48'00" E 027°30'00"; S 15°21'00" E 027°30'00" then along the clockwise arc of a circle of 25NM radius centred on S 15°04'00" E 027°11'36" to point of origin.	UNL GND	Air Force Base. No person shall, at any time whatsoever fly an aircraft in these areas. A violation of the Air space is risk to interception.
FLP34-MKANGO Circular area centered on S 15°34'00" E 028°37'00" within a 3NM radius.	FL070 GND	Army Gun Firing Range 17 NM South East of Lusaka. No Aircraft shall whatsoever fly, at or below FL070 in this area. IFR Flights to adhere to ATC route Instructions. Inbound IFR flights to maintain FL080 until 12 NM from Lusaka VOR/DME (VLS).

RESTRICTED AREAS

<i>Identification, Name & Lateral Limits</i>	<i>Upper Limit Lower Limit</i>	<i>Remarks (Time of activity, type of restriction, nature of hazard, risk of interception)</i>
1	2	3
FLR5-KAFUE NATIONAL PARK Area bounded by lines joining points S 14°10'00" E 025°40'00"; S 14°10'00" E 026°35'00"; S 15°00'00" E 026°45'00"; S 15°00'00" E 026°00'00"; S 16°40'00" E	1500 FT AGL GND	GAME RESERVE No person, without prior authorisation shall fly over or land an aircraft into this area except when landing at or from airfields within the GAME RESERVE

<i>Identification, Name & Lateral Limits</i>	<i>Upper Limit Lower Limit</i>	<i>Remarks (Time of activity, type of restriction, nature of hazard, risk of interception)</i>
1	2	3
026°05'00"; S 16°40'00" E 025°50'00"; S 15°50'00" E 025°05'00" to point of origin.		
FLR6-KARIBA GORGE Circular area centered on S 16°31'00" E 028°46'00" within a 1NM radius.	1500 FT AGL GND	KARIBA DAM No person shall, whatsoever, fly an aircraft at or below 1500 FT AGL over this area.
FLR7-LAVUSHI MANDA Area bounded by lines joining points S 12°00'00" E 030°45'00"; S 12°10'00" E 031°05'00"; S 12°40'00" E 030°45'00"; S 12°20'00" E 030°40'00" to point of origin.	1500 FT AGL GND	GAME RESERVE No person, without prior authorisation shall fly over or land an aircraft in-to this area except when landing at or taking off from airfields within the GAME RESERVE
FLR9-MWERU MARSH GAME RESERVE Area bounded by lines joining points S 08°25'00" E 029°15'00"; S 08°20'00" E 030°00'00"; S 09°00'00" E 030°00'00"; S 09°00'00" E 029°15'00" to point of origin.	1500 FT AGL GND	GAME RESERVE No person, without prior authorisation shall fly over or land an aircraft in-to this area except when landing at or taking off from airfields within the GAME RESERVE
FLR08-LUNGA GAME RESERVE Area bounded by lines joining points S 12°30'00" E 024°30'00"; S 12°30'00" E 024°55'00"; S 13°00'00" E 025°05'00"; S 13°10'00" E 024°35'00" to point of origin.	1500 FT AGL GND	GAME RESERVE No person, without prior authorisation shall fly over or land an aircraft in-to this area except when landing at or taking off from airfields within the GAME RESERVE
FLR10-VICTORIA FALLS Circular area centered on S 17°55'00" E 025°51'00" within a 1NM radius.	1500 FT AGL GND	BRIDGE No person shall, whatsoever, fly an aircraft in this area at or below 1500 FT AGL
FLR11-BANGWEULU SWAMPS Area bounded by lines joining points S 12°00'00" E 029°35'00"; S 10°52'00" E 029°30'00"; S 10°38'00" E 029°50'00"; S 11°10'00" E 030°30'00"; S 11°50'00" E 030°30'00" to point of origin.	FL095 GND	SWAMPY AREA The area is difficult for search and rescue, Single Engine aircraft overflying this area to be at or above FL100.
FLR12-LUANGWA NORTH GAME PARK Area bounded by lines joining points S 13°04'00" E 030°58'00"; S 11°12'00" E 032°00'00"; S 10°22'00" E 032°37'00"; S 10°52'00" E 033°09'00"; S 12°22'00" E 033°04'00"; S 13°05'00" E 032°45'00"; S 13°20'00" E 032°23'00"; S 13°00'00" E 031°49'00" to point of origin.	1500 FT AGL GND	GAME RESERVE No person, without prior authorization Shall fly over or land an aircraft in this area except for landing at or taking off from airfields within the GAME RESERVE
FLR13-LUANGWA SOUTH GAME PARK Area bounded by lines joining points S 14°34'00" E 030°00'00"; S 14°00'00" E 030°00'00"; S 13°14'00" E 030°51'00"; S 13°04'00" E 030°58'00"; S 13°00'00" E 031°49'00"; S 13°20'00" E 032°23'00" to point of origin.	1500 FT AGL GND	GAME RESERVE No person, without prior authorization shall fly over or land an aircraft in this area except for landing at or taking off from airfields within the GAME RESERVE

<i>Identification, Name & Lateral Limits</i>	<i>Upper Limit Lower Limit</i>	<i>Remarks (Time of activity, type of restriction, nature of hazard, risk of interception)</i>
1	2	3
FLR14-LUKANGA SWAMP Area bounded by lines joining points S 14°07'30" E 027°22'30"; S 14°06'40" E 027°55'50"; S 14°35'00" E 028°04'00"; S 14°32'50" E 027°33'30" to point of origin.	<u>FL095</u> GND	SWAMPY AREA The area is difficult for search and rescue, Single Engine aircraft overflying this area to be at or above FL100.
FLR24-LOWER ZAMBEZI Area bounded by lines joining points S 15°10'00" E 029°19'00"; S 15°10'00" E 030°12'30"; S 15°38'08" E 030°12'30" then along Zimbabwe/Zambia border up to S 15°46'09" E 029°15'56" to point of origin.	<u>1500</u> <u>FT AGL</u> GND	GAME RESERVE No person, without prior authorization Shall fly over or land an aircraft in this area except for landing at or taking off from airfields within the GAME RESERVE

DANGER AREAS

<i>Identification, Name & Lateral Limits</i>	<i>Upper Limit Lower Limit</i>	<i>Remarks (Time of activity, type of restriction, nature of hazard, risk of interception)</i>
1	2	3
FLD19-TUG-ARGAN Circular area centered on S 13°04'00" E 028°45'00" within a 3NM radius.	<u>FL170</u> GND	Army gun firing range 7NM South east of Ndola. Active when notified by NOTAM no person shall, whenever activated by a NOTAM, fly an aircraft below FL 180 within these areas.
FLD35-LUMWANA MINE Circular area centered on S 12°13'13" E 025°51'45" within a 8NM radius.	<u>5000 FT</u> <u>AMSL</u> GND	Blasting of rocks 8NM of the mine daily between 0330-1430 UTC from ground to 5000FT AMSL

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ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS

Name & Lateral Limits	Upper/lower limits and system/means of activation announcement INFO for CIV FLT	Remarks Time of ACT Risk of interception (ADIZ)
1	2	3
MILITARY TRAINING AREAS		
SW1 TRG Area bounded by lines joining points S 15°25'42" E 027°59'52"; S 15°42'55" E 027°59'52"; S 15°43'38" E 027°58'23"; S 15°44'44" E 027°57'58"; S 15°44'44" E 027°54'05"; S 15°42'50" E 027°54'05"; S 15°42'50" E 027°53'11"; S 15°43'57" E 027°50'00"; S 15°44'44" E 027°49'00"; S 15°42'00" E 027°48'10"; S 15°38'00" E 027°39'16"; S 15°30'47" E 027°36'08" to point of origin.	FL070 _____ GND	Flying training will take place from sunrise to sunset
WEST ONE Area bounded by lines joining points S 14°48'00" E 027°30'00"; S 14°50'00" E 027°46'00"; S 15°20'30" E 027°55'50"; S 15°29'00" E 027°17'00" then follow FLP4 Eastern boundary up to point of origin.	FL300 _____ GND	The flying training area will be activated every Mondays and Wednesdays from 0730 to 1230 UTC and Air traffic controller (ATC) will give routing instructions to IFR Flights when the area is active.

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ENR 5.3 OTHER ACTIVITIES OF A DANGEROUS NATURE

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ENR 5.4 AIR NAVIGATION OBSTACLES - EN-ROUTE - TEXT

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ENR 5.5 AERIAL SPORTING AND RECREATIONAL ACTIVITIES

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ENR 5.6 BIRD MIGRATION AND AREAS WITH SENSITIVE FAUNA

1 General birds activities and migration

The existence of activity of flocks of birds on or in the vicinity of the airports is generally seasonal. Bird migration is experienced just before the rain season in November. The migratory birds are present between November and April and constitute most of the bird species in Zambia. ATS units, as far as is practicable will be advised of such phenomena of Aerodromes of intended landing.

2 Areas with sensitive Fauna

Identification of areas with sensitive fauna was not done.

3 Concentration and movements of various types

Generally all lake areas and plain game areas should be considered hazard zones. Whenever game concentrates, there will be found vultures and eagles as residents scavenging on game kills. These birds often fly at considerable altitude making use of thermals and wonder over great distances.

4 Concentration and movements of various types

Birds that constitute a hazard to aircraft, include some of the common types and species in Zambia which are but not limited to crows, marabou storks, hornbill, eagles, lapwings, herons, guinea fowls, white storks and swallows.

NOTE: Presence of prolonged nature will be notified by NOTAM promulgation. and/or AIP Supplements.

5 Aerodrome mostly affected by bird hazard and fauna

1. Mfuwe
2. all airports in the National Parks and Game Reserve

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AD 1 AERODROMES/HELIPORTS INTRODUCTION

AD 1.1 AERODROME/HELIPORT AVAILABILITY AND CONDITIONS OF USE

AD 1.1.1 General conditions

Commercial flights are not permitted to take off from or land at any aerodrome/heliport not listed in this AIP except in cases of real emergency or when special permission has been obtained from the Director General Civil Aviation Authority.

In addition to the aerodromes/heliports available for public use listed in this AIP, a number of other aerodromes/airfields are located throughout the country. These aerodromes/airfields are available only for private flights and are subject to permission for use by the owner. Details about these aerodromes/airfields can be obtained through the Director General Zambia Civil Aviation Authority.

AD 1.1.1.1 Landings made other than at an international aerodrome/heliport or a designated alternate aerodrome/heliport.

If a landing is made other than at an International aerodrome/heliport or a designated alternate aerodrome/heliport, the pilot-in-command shall report the landing as soon as practicable to the Health, Customs and Immigration authorities at the International aerodrome/heliport at which the landing was scheduled to take place. This notification may be made through any available communication link.

The pilot-in-command shall be responsible for ensuring that:

- a. If pratique has not been granted to the aircraft at the previous landing, contact between other persons on the one hand and passengers and crew on the other is avoided.
- b. Cargo, baggage and mail are not removed from the aircraft except as provided below.
- c. Any foodstuff of overseas origin or any plant material is not removed from the aircraft except where local food is unobtainable. All food refuse including peelings, cores, stones of fruit, etc must be collected and returned to the galley refuse container, the contents of which should not be removed from the aircraft except for hygiene reasons; in that circumstance the contents must be destroyed either by burning or by deep burial.

AD 1.1.1.2 Traffic of persons and vehicles on aerodromes.

AD 1.1.1.2.1 Demarcation of zones

The grounds of each aerodrome are divided in two zones:

- a. a public zone comprising the part of the aerodrome open to the public; and
- b. a restricted zone comprising the rest of the aerodrome/heliport.

AD 1.1.1.2.2 Movement of persons

Access to the restricted zone is authorised only under the conditions prescribed by the special rules governing the aerodrome/heliport. The customs, police and health inspection offices and the premises assigned to transit traffic are normally accessible only to passengers, to staff of the public authorities and airlines and to authorised persons in pursuit of their duty. The movement of persons having access to the restricted zone of the aerodrome/heliport is subject to the conditions prescribed by the air navigation regulations and by the special rules laid down by the aerodrome administration.

AD 1.1.1.2.3 Movement of vehicles

The movement of vehicles in the restricted zone is strictly limited to the vehicles driven or used by persons carrying a traffic permit or an official card of admittance. Drivers of vehicles, of whatever type, operating within the confines of the aerodrome/heliport must respect the direction of the traffic, the traffic signs and the posted speed limits and generally comply with the provisions of the highway code and with the instructions given by the competent authorities.

AD 1.1.1.3 Policing

Care and protection of aircraft, vehicles, equipment and goods used at the aerodrome/heliport are not the responsibility of the state or any concessionaire; they cannot be held responsible for loss or damage which is not incurred through action by them or their agents.

Use of heliports

Unless other permission has been granted by the ATS Unit the helicopters may be used only for flights in accordance with the Visual Flight Rules (VFR).

Pilots shall, before using an aerodrome/heliport, ensure that a clear approach and departure can be carried out and, in case of an emergency, that suitable landing sites are available along the planned track, taking into consideration the performance of the helicopter.

Landing, parking and storage of aircraft on aerodromes/heliports under the control of the District Local Authorities (Councils)/Zambia Airports Corporation Limited.

The conditions under which aircraft may land and be parked, housed or otherwise dealt with at any of the aerodromes/heliports under the control of the District Local Authorities (Councils)/Zambia Airports Corporation Limited/Zambia Airports Corporation Limited are as follows:

- a. The fees and charges for the landing, parking or housing of aircraft shall be those published from time to time by the Civil Aviation Authority in the AIP or AIC. The fees or charges for any supplies or services which may be furnished to the aircraft by or on behalf of the District Local Authorities (Councils)/ZACL at any aerodrome/heliport under the control of the District Local Authorities (Councils)/ZACL shall, unless otherwise agreed before such fees or charges are incurred, be such reasonable fees and charges as may from time to time be determined by the District Local Authorities (Councils)/ZACL for that aerodrome/heliport. The fees and charges referred to shall accrue from day to day and shall be payable to the District Local Authorities (Councils)/ZACL on demand.
- b. The District Local Authorities (Councils)/ZACL shall have a lien on the aircraft, its parts and accessories, for such fees and charges as aforesaid.
- c. If payment of such fees and charges is not made to the District Local Authorities (Councils)/ZACL within 14 days after a letter demanding payment thereof has been sent by post addressed to the registered owner of the aircraft, the District Local Authorities (Councils)/ZACL shall be entitled to sell, destroy or otherwise dispose of the aircraft and any of its parts and accessories and to apply the proceeds from so doing to the payment of such fees and charges.
- d. Neither the District Local Authorities (Councils)/ZACL nor any servant or agent of the Government shall be liable for loss or damage to the aircraft, its parts or accessories or any property contained in the aircraft, however such loss and damage may arise, occurring while the aircraft is on any aerodrome/heliport under the control of the District Local Authorities (Councils)/ZACL or is in the course of landing at or taking off from any such aerodrome/heliport.

AD 1.1.2 Use of military air bases

AD 1.1.2.1 General

Use of military air bases in Zambia by any aircraft other than Zambia Air Force may be made solely when prior permission has been obtained. The use of military air bases as alternate aerodromes is prohibited.

AD 1.1.2.2 Submission of application

Application in writing for permission to use a military base shall be submitted directly to the Air Commander well in advance of the date of flight. The address is as follows:

Address: The Air Commander
Ministry of Defence
Air Headquarters
P.O. BOX 39291
LUSAKA 10101
ZAMBIA

AD 1.1.2.3 Rules and conditions

Operations on the airbase if and when approved must be carried out in accordance with the rules and conditions stated below with due regard to such other conditions as may have been stipulated for each individual permission.

- a. A flight plan shall be submitted for each flight. During the flight in controlled airspace and during operations on the manoeuvring area, the pilot-in-command shall closely observe the directions given.
- b. The commander of the air base establishes the rules which are to be observed by flight crew members and passengers concerning security measures, traffic and stay at the air base. As regards the air bases Mumbwa and Lusaka, photographing from the air as well as on the ground is prohibited. At the remaining air bases, the local ban on photography will apply as posted. Flight crew members and ground personnel shall immediately report any violations.
- c. The Defence Forces shall not be liable for the theft, fire, water or any other damage to aircraft, their equipment, flight crew, passengers, cargo etc caused during stay at the air base.
The Defence Forces reserve the right to claim compensation for damage caused by civil aircraft, flight crew members or passengers to Air Force material, buildings and personnel within the area of an air base.
- d. Landing and other charges will be collected in accordance with the provisions of the current "Tariff Regulations applying to public state operated Airports", approved by the Ministry of Communications and Transport.

AD 1.1.3 Low visibility procedures

Promulgation of an aerodrome as available for category II/III operations means that it is suitably equipped and that procedures appropriate to such operations have been determined and applied when relevant. Promulgation implies that at least the following facilities are available:

ILS – certified to relevant performance Category.

Lighting – suitable for category promulgated.

RVR system –may be automatic or manned system for category II; will be automatic system for category III.

Special procedures and safeguards will be applied during category II and III operations. In general, these are intended to provide protection for aircraft operating in low visibilities and to avoid disturbance of the ILS signals.

Protection of ILS signals during Category II and III operations may dictate that pre-take-off holding positions be more distant from the runway than the holding positions used in good weather. Such holding positions will be appropriately marked and will display signs conforming to specification on ICAO Annex 14, Volume 1, on one or both sides of the taxiway; there may also be a stop bar of red lights. For aircraft taxiing off the runway during Category III operations, exit taxiway centre line lights are colour-coded to facilitate notification of runway vacating: the colour coding ends at the boundary of ILS critical/sensitive area. Pilots are required to make a "Runway Vacated" call on RTF when the aircraft has reached the colour code of part of the exit taxiway centre line lights, due allowance being made for aircraft size to ensure that the entire aircraft is clear of the ILS critical/sensitive area.

In actual Category II or III weather conditions, pilots will be informed by ATC of any unserviceabilities in the promulgated facilities so that they can amend their minima, if necessary, according to their operations manual. Pilots who wish to carry out a practice Category II (or Category III) approach on initial contact with Approach Control. For practice approaches there is no guarantee that the full safeguarding procedures will be applied and pilots should anticipate the possibility of a resultant ILS signal disturbance.

AD 1.1.4 Aerodrome operating minima

For the friction measuring devices used. Where only water is present on a runway and periodic measurements indicate that the runway will not become slippery when wet, no measuring will take place and the runway will be reported as being "WET"

AD 1.1.5 Other information

The International Standards, Recommended Practices and Procedures contained in the following ICAO documents are applicable:
Annex 14 Volume 1 - Aerodrome Design and Operations
Annex 14 Volume 2 - Heliports, are applied without differences.

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AD 1.2 RESCUE AND FIRE FIGHTING SERVICES AND SNOW PLAN

1.2.1 RESCUE AND FIRE FIGHTING SERVICES

At aerodromes approved for scheduled and/or non-scheduled traffic with aeroplanes carrying passengers, rescue and fire fighting services are established in accordance with the regulations for Civil Aviation.

Information about whether there is service and what the extent of that service is, is given on page AD 2.2 for each aerodrome. Scheduled or non-scheduled commercial flights are not normally allowed to use aerodromes without rescue and fire fighting services.

Each individual service is categorised according to the table shown below. Temporary changes will be published by NOTAM.

Rescue and fire fighting services

Aerodrome Category	Amount of water in litres for production of performance level A foam
3	1200
4	2400
5	5400
6	7900
7	12100
8	18200
9	24300

(Category 1 and 2 not used in Zambia)

1.2.2 Snow plan

Not required

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AD 1.3 INDEX TO AERODROMES

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International- al - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
AMELIA (FLAI)	NTL	IFR - VFR	NS-P	FLAI AD 4
B-HIGH (FLBH)	NTL	IFR - VFR	NS-P	FLBH AD 4
BALABALA (FLRR)	NTL	IFR - VFR	NS-P	FLRR AD 4
CHABWINO (FLCA)	NTL	IFR - VFR	NS-P	FLCA AD 4
CHAMA (FLAM)	NTL	IFR - VFR	NS-P	FLAM AD 4
CHIKANKATA (FLCK)	NTL	IFR - VFR	NS-P	FLCK AD 4
CHIMBWI (FLCM)	NTL	IFR - VFR	NS-P	FLCM AD 4
CHINGOMBE (FLCN)	NTL	IFR - VFR	NS-P	FLCN AD 4
CHINSALI (FLCS)	NTL	IFR - VFR	NS-P	FLCS AD 4
CHIPATA (FLCP)	NTL	IFR - VFR	NS-P-S	FLCP AD 2
CHOCHA (FLCC)	NTL	IFR - VFR	NS-P	FLCC AD 4
CHUNGA (FLCU)	NTL	IFR - VFR	NS-P	FLCU AD 4
DAMBI HILLS (FLDH)	NTL	IFR - VFR	NS-P	FLDH AD 4
DELKINS/LUSIWASI (FLDE)	NTL	IFR - VFR	NS-P	FLDE AD 4
DELTA FARM (FLDF)	NTL	IFR - VFR	NS-P	FLDF AD 4
DIPALATA (FLDP)	NTL	IFR - VFR	NS-P	FLDP AD 4
EAST EIGHT (FLEH)	NTL	IFR - VFR	NS-P	FLEH AD 4
EAST FIVE (FLEE)	NTL	IFR - VFR	NS-P	FLEE AD 4
EAST FOUR (FLED)	NTL	IFR - VFR	NS-P	FLED AD 4
EAST FOURTEEN (FLEN)	NTL	IFR - VFR	NS-P	FLEN AD 4
EAST ONE (FLEA)	NTL	IFR - VFR	NS-P	FLEA AD 4
EAST SEVEN (FLEG)	NTL	IFR - VFR	NS-P	FLEG AD 4
EAST SIX (FLEF)	NTL	IFR - VFR	NS-P	FLEF AD 4
EAST THREE (FLEC)	NTL	IFR - VFR	NS-P	FLEC AD 4
EAST TWO (FLEB)	NTL	IFR - VFR	NS-P	FLEB AD 4
FARM CENTRE (FLFC)	NTL	IFR - VFR	NS-P	FLFC AD 4
FIWILA (FLFW)	NTL	IFR - VFR	NS-P	FLFW AD 4
FLYBY (FLBY)	NTL	IFR - VFR	NS-P	FLBY AD 4
HARRY MWAANGA NKUMBULA INTL (FLHN)	INTL-NTL	IFR - VFR	NS-P-S	FLHN AD 2
HILLCREST (FLHC)	NTL	IFR - VFR	NS-P	FLHC AD 4
HIPPO (FLHP)	NTL	IFR - VFR	NS-P	FLHP AD 4
IKAROS (FLIS)	NTL	IFR - VFR	NS-P	FLIS AD 4
INJA (FLIJ)	NTL	IFR - VFR	NS-P	FLIJ AD 4
ISOKA (FLIK)	NTL	IFR - VFR	NS-P	FLIK AD 4
JEKI (FLJK)	NTL	IFR - VFR	NS-P	FLJK AD 4
KABOMPO (FLPO)	NTL	IFR - VFR	NS-P	FLPO AD 4
KABWE (FLKW)	NTL	IFR - VFR	NS-P	FLKW AD 4
KALENE HILL (FLKI)	NTL	IFR - VFR	NS-P	FLKI AD 4
KALENGWA (FLKG)	NTL	IFR - VFR	NS-P	FLKG AD 4
KALOMO (FLLO)	NTL	IFR - VFR	NS-P	FLLO AD 4
KALUMBILA (FLKM)	NTL	IFR - VFR	NS-P	FLKM AD 4
KALUNDU (FLKD)	NTL	IFR - VFR	NS-P	FLKD AD 4

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International- al - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
KAOMA (FLKO)	NTL	IFR - VFR	NS-P	FLKO AD 4
KASABA BAY (FLKY)	NTL	IFR - VFR	NS-P-S	FLKY AD 4
KASAMA (FLKS)	NTL	IFR - VFR	NS-P	FLKS AD 2
KASANKA (FLKA)	NTL	IFR - VFR	NS-P	FLKA AD 4
KASAVASA (FLKT)	NTL	IFR - VFR	NS-P	FLKT AD 4
KASEMPA (FLPA)	NTL	IFR - VFR	NS-P	FLPA AD 4
KASHIKISHI (FLKH)	NTL	IFR - VFR	NS-P	FLKH AD 4
KASOMPE (FLKE)	NTL	IFR - VFR	NS-P	FLKE AD 4
KATETE (FLAT)	NTL	IFR - VFR	NS-P	FLAT AD 4
KAWA (FLAA)	NTL	IFR - VFR	NS-P	FLAA AD 4
KAWAMBWA (FLKB)	NTL	IFR - VFR	NS-P	FLKB AD 4
KENNETH KAUNDA INTL (FLKK)	INTL-NTL	IFR - VFR	NS-P-S	FLKK AD 2
KHAL-AMANZI (FLAG)	NTL	IFR - VFR	NS-P	FLAG AD 4
KULEFU (FLKF)	NTL	IFR - VFR	NS-P	FLKF AD 4
KYINDU (FLKN)	NTL	IFR - VFR	NS-P	FLKN AD 4
LANDLESS CORNER (FLLN)	NTL	IFR - VFR	NS-P	FLLN AD 4
LESA (FLLE)	NTL	IFR - VFR	NS-P	FLLE AD 4
LOCHINVAR (FLLV)	NTL	IFR - VFR	NS-P	FLLV AD 4
LOZA (FLLZ)	NTL	IFR - VFR	NS-P	FLLZ AD 4
LUAMPA (FLLU)	NTL	IFR - VFR	NS-P	FLLU AD 4
LUANSHYA (FLLA)	NTL	IFR - VFR	NS-P	FLLA AD 4
LUBOMBO (FLLB)	NTL	IFR - VFR	NS-P	FLLB AD 4
LUFWANYAMA (FLLF)	NTL	IFR - VFR	NS-P	FLLF AD 4
LUKULU (FLLK)	NTL	IFR - VFR	NS-P	FLLK AD 4
LUNDAZI (FLLD)	NTL	IFR - VFR	NS-P	FLLD AD 4
LUSAKA CITY (FLLC)	NTL	IFR - VFR		FLLC AD 4
LUSHIMBA SPRINGS (FLLM)	NTL	IFR - VFR	NS-P	FLLM AD 4
LUWINGU (FLLG)	NTL	IFR - VFR	NS-P	FLLG AD 4
LWELA (FLLL)	NTL	IFR - VFR	NS-P	FLLL AD 4
LWIMBA (FLAC)	NTL	IFR - VFR	NS-P	FLAC AD 4
MAAMBA (FLMB)	NTL	IFR - VFR	NS-P	FLMB AD 4
MANSA (FLMA)	NTL	IFR - VFR	NS-P	FLMA AD 2
MASEBE RANCH (FLYS)	NTL	IFR - VFR	NS-P	FLYS AD 4
MAYOBA (FLSR)	NTL	IFR - VFR	NS-P	FLSR AD 4
MAZABUKA (FLMZ)	NTL	IFR - VFR	NS-P	FLMZ AD 4
MENDAWENA (FLMN)	NTL	IFR - VFR	NS-P	FLMN AD 4
MFUWE (FLMF)	INTL-NTL	IFR - VFR	NS-P-S	FLMF AD 2
MKUSHI (FLMK)	NTL	IFR - VFR	NS-P	FLMK AD 4
MKUSHI RIVER (FLMV)	NTL	IFR - VFR	NS-P	FLMV AD 4
MONGU (FLMG)	NTL	IFR - VFR	NS-P-S	FLMG AD 2
MONZE (FLMO)	NTL	IFR - VFR	NS-P	FLMO AD 4
MOUNT ISABELLE (FLIL)	NTL	IFR - VFR	NS-P	FLIL AD 4

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
MPIKA (FLMP)	NTL	IFR - VFR	NS-P	FLMP AD 4
MPONGWE (FLGW)	NTL	IFR - VFR	NS-P	FLGW AD 4
MPOROKOSO (FLPK)	NTL	IFR - VFR	NS-P	FLPK AD 4
MUFULIRA (FLML)	NTL	IFR - VFR	NS-P	FLML AD 4
MUKINGE HILL (FLGE)	NTL	IFR - VFR	NS-P	FLGE AD 4
MULEMBO (FLMQ)	NTL	IFR - VFR	NS-P	FLMQ AD 4
MULUBEZI (FLMU)	NTL	IFR - VFR	NS-P	FLMU AD 4
MUNWA NKOZI (FLMI)	NTL	IFR - VFR	P-S	FLMI AD 4
MUSHISHIMA (FLMH)	NTL	IFR - VFR	P-S	FLMH AD 4
MUSONDA FALLS (FLMD)	NTL	IFR - VFR	P-S	FLMD AD 4
MWAMI (FLMM)	NTL	IFR - VFR	NS-P	FLMM AD 4
MWINILUNGA (FLMW)	NTL	IFR - VFR	NS-P	FLMW AD 4
NABWALYA (FLBW)	NTL	IFR - VFR	NS-P	FLBW AD 4
NGOMA (FLNA)	NTL	IFR - VFR	NS-P	FLNA AD 4
NYIMBA (FLNY)	NTL	IFR - VFR	NS-P	FLNY AD 4
OTAGO (FLOT)	NTL	IFR - VFR	NS-P	FLOT AD 4
PEDZA (FLPZ)	NTL	IFR - VFR	NS-P	FLPZ AD 4
PETAUKE (FLPE)	NTL	IFR - VFR	NS-P	FLPE AD 4
PUKU PAN (FLPP)	NTL	IFR - VFR	NS-P	FLPP AD 4
ROSA (FLRO)	NTL	IFR - VFR	NS-P	FLRO AD 4
RUFUNSA (FLRU)	NTL	IFR - VFR	NS-P	FLRU AD 4
RUSANGU (FLRG)	NTL	IFR - VFR	NS-P	FLRG AD 4
SAKEJI (FLSJ)	NTL	IFR - VFR	NS-P	FLSJ AD 4
SAMFYA (FLYA)	NTL	IFR - VFR	NS-P	FLYA AD 4
SENANGA (FLSN)	NTL	IFR - VFR	NS-P	FLSN AD 4
SERENJE (FLSE)	NTL	IFR - VFR	NS-P	FLSE AD 4
SESHEKE (FLSS)	NTL	IFR - VFR	NS-P	FLSS AD 4
SHIWANGANDU (FLSH)	NTL	IFR - VFR	NS-P	FLSH AD 4
SIANKABA AIRSTRIP (FLSY)	NTL	IFR - VFR	NS-P	FLSY AD 4
SIMON MWANSA KAP- WEPWE INTERNATIONAL- AL AIRPORT (FLSK)	INTL-NTL	IFR - VFR	NS-P-S	FLSK AD 2
SINAZONGWE (FLSG)	NTL	IFR - VFR	NS-P	FLSG AD 4
SOLWEZI (FLSW)	NTL	IFR - VFR	NS-P-S	FLSW AD 2
SOUTH DOWNS (FLSO)	NTL	IFR - VFR	NS-P	FLSO AD 4
VIXERS (FLVX)	NTL	IFR - VFR	NS-P	FLVX AD 4
WAKAWAKA (FLWW)	NTL	IFR - VFR	NS-P	FLWW AD 4
WEST FIVE (FLWE)	NTL	IFR - VFR	NS-P	FLWE AD 4
WEST FOUR (FLWD)	NTL	IFR - VFR	NS-P	FLWD AD 4
WEST ONE (FLWA)	NTL	IFR - VFR	NS-P	FLWA AD 4
WEST SEVEN (FLWG)	NTL	IFR - VFR	NS-P	FLWG AD 4
WEST SIX (FLWF)	NTL	IFR - VFR	NS-P	FLWF AD 4
WEST THREE (FLWC)	NTL	IFR - VFR	NS-P	FLWC AD 4
WEST TWO (FLWB)	NTL	IFR - VFR	NS-P	FLWB AD 4

Aerodrome/heliport name Location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International - National (INTL - NTL)	IFR-VFR	S = Scheduled NS = Non-Scheduled P = Private	
1	2	3	4	5
ZAMBEZI (FLZB)	NTL	IFR - VFR	NS-P	FLZB AD 4

AD 1.4 GROUPING OF AERODROMES

1 The following International Aerodromes are described in the AIP

Aerodrome of entry and departure for international air traffic, where all formalities concerning customs, immigration, health, animal and plant quarantine and similar procedures are carried out and where air traffic services are available on a regular basis.

*AERODROME DIRECTORY — LAND	
City/ Aerodrome	Reference/Remarks
1	2
LIVINGSTONE/HARRY MWAANGA NKUMBULA	See FLHN AD 2
LUSAKA/ KENNETH KAUNDA	See FLKK AD 2
MFUWE/MFUWE	See FLMF AD 2
NDOLA/SIMON MWANSA KAPWEPWE	See FLSK AD 2

2 The following Domestic Aerodromes are described in the AIP

National aerodrome available for entry or departure of international air traffic, at which the formalities of customs, immigration, health and similar procedures and air traffic services are made available on a restricted basis to flights, with prior approval from the Civil Aviation Authority.

*AERODROME DIRECTORY — LAND	
City/ Aerodrome	Reference/Remarks
1	2
CHIPATA/CHIPATA	See FLCP AD 2
KASAMA/KASAMA	See FLKS AD 2
MANSA/MANSA	See FLMA AD 2
MONGU/MONGU	See FLMG AD 2
SOLWEZI/SOLWEZI	See FLSW AD 2

2.1 Other Aerodromes

Refer to AIC with latest list of licensed Aerodromes.

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AD 1.5 CERTIFICATION OF AERODROMES

AERODROME NAME AND LOCATION	STATUS OF CERTIFICATION	DATE OF CERTIFICATION	VALIDITY OF CERTIFICATION OPERATOR AND REMARKS
Kenneth Kaunda International Airport - FLKK	CERTIFIED	20 th August, 2020	19 th August 2022. Zambia Airports Corporation Limited.
Harry Mwaanga Nkumbula International Airport - FLHN	CERTIFIED	25 th November 2020	24 th November 2022. Zambia Airports Corporation Limited.
Simon Mwansa Kapwepwe International Airport - FLSK	CERTIFIED	27 th September 2021	26 th September 2023. Zambia Airports Corporation Limited.

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FLCP AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLCP - CHIPATA

FLCP AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 13°33'25.00" E 032°35'14.20" Nil
2	<i>Direction and distance from (city)</i>	5NM NW of Chipata
3	<i>Elevation/Reference temperature</i>	Elev: 3359 FT (1024 M) / T: 32.2° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W (2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Box 510105 Chipata Airport Tel: 260-216-222828 AFS: FLCPZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

FLCP AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	Nil
9	<i>Handling</i>	Nil
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLCP AD 2.4 HANDLING SERVICES AND FACILITIES

FLCP AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	Hotels and rest houses in town
2	<i>Restaurants</i>	In town
3	<i>Transportation</i>	Nil
4	<i>Medical facilities</i>	First aid at AD, Hospital in town
5	<i>Bank and Post Office</i>	Bank and Post Office in town
6	<i>Tourist Office</i>	Tourist Office Jassat Travel Agency PO Box 510040 Tel: 260-216-221471/ 260-216-221029/ 260-216-221767 Telex: 260-212-617250
7	<i>Remarks</i>	Nil

FLCP AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	CAT 4
2	<i>Rescue equipment</i>	YES; Two (2) fire tenders, 1 Ambulances, 9 trained personnel per shift.
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLCP AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLCP AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLCP Apron	Bitumen	SIWL 9500 KG
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Desig-nator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLCP Taxiway	18 M	Bitumen
3	<i>Altimeter checkpoint location and elevation</i>	Location: At Apron	THR36	THR18
		Elevation: Nil Info	3363FT	3295FT
4	<i>VOR/INS checkpoints</i>	VOR: Nil		
		INS: Nil		
5	<i>Remarks</i>	Nil		

FLCP AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Nil
2	<i>RWY and TWY markings and LGT</i>	RWY: Edge markings and threshold TWY: Nil
3	<i>Stop bars</i>	Nil
4	<i>Remarks</i>	Nil

FLCP AD 2.10 AERODROME OBSTACLES

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
18/APCH	FLCP_3911 Elev: 1011.37 m Unlighted	S 13°33'00.64" E 032°35'10.49"	Nil
18/APCH	FLCP_3958 Elev: 1010.296 m Unlighted	S 13°33'02.61" E 032°35'05.21"	Total Area of Object is 61.36 m ² as the maximum size of the Obstacle_ with this point the Highest Point of Object
18/APCH	FLCP_87 Elev: 1006.72 m Unlighted	S 13°33'00.66" E 032°35'11.40"	Total Area of Object is 58.692 m ² as the maximum size of the Obstacle_ with this point the Highest Point of Object
36/APCH	FLCP_2495 Elev: 1070.852 m Unlighted	S 13°34'48.92" E 032°35'40.43"	Nil
36/APCH	FLCP_2907 Elev: 1160.489 m Unlighted	S 13°36'25.06" E 032°35'38.26"	Nil
36/APCH	FLCP_3608 Elev: 1030.621 m Unlighted	S 13°33'59.96" E 032°35'19.97"	Nil

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
36/APCH	FLCP_3673 Elev: 1045.11 m Unlighted	S 13°34'11.41" E 032°35'15.96"	Nil
36/APCH	FLCP_3704 Elev: 1032.429 m Unlighted	S 13°33'58.25" E 032°35'19.58"	Nil
36/APCH	FLCP_4141 Elev: 1057.704 m Unlighted	S 13°34'12.04" E 032°35'19.80"	Nil
36/APCH	FLCP_709 Elev: 1254.464 m Unlighted	S 13°38'25.94" E 032°37'00.72"	Nil
36/TKOF	FLCP_3911 Elev: 1011.37 m Unlighted	S 13°33'00.64" E 032°35'10.49"	Nil
36/TKOF	FLCP_3958 Elev: 1010.296 m Unlighted	S 13°33'02.61" E 032°35'05.21"	Total Area of Object is 61.36 m ² as the maximum size of the Obstacle_ with this point the Highest Point of Object
<i>In circling area and at AD</i>			
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>	
a	b	c	
NOTE: Nil			

FLCP AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Chipata
2	<i>Hours of service MET Office outside hours</i>	0600 - 1500 UTC Nil
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenenth Kaunda International Airport As required by flights
4	<i>Trend forecast Interval of issuance</i>	Metar - Speci 2 HR
5	<i>Briefing/consultation provided</i>	Prior notice required
6	<i>Flight documentation Language(s) used</i>	Nil
7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	Mfuwe Approach Chipata FIS
10	<i>Additional information (limitation of service, etc.)</i>	Nil

FLCP AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
08	078°(True) 000°(Mag)	809 x 21	Grass SWY: Nil	GUND: Nil	THR -	
26	258°(True) 000°(Mag)	809 x 21	Grass SWY: Nil	GUND: Nil	THR -	
18	169°(True) 174°(Mag)	1470 x 21	SIWL 9500 KG SWY: Nil	S 13°33'12.00" E 032°35'12.00" GUND: Nil	THR 3295 FT (1004 M)	
36	349°(True) 354°(Mag)	1470 x 21	SIWL 9500 KG SWY: Nil	S 13°33'48.00" E 032°00'000.00" GUND: Nil	THR 3363 FT (1025 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	
7	8	9	10	11	12	
For Rwy 08: Nil	Nil	Nil	Nil	Nil	Nil	
For Rwy 26: Nil	Nil	Nil	Nil	Nil	Nil	
For Rwy 18: +1.1%	Nil	Nil	1590 x 140	Nil	Nil	
For Rwy 36: Nil	Nil	Nil	1590 x 140	Nil	Nil	
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
08						
26						
18	Due slope usually aircraft land RWY 18 and take off at RWY 36. Prevailing wind is EASTERLY.					
36	Due slope usually aircraft land RWY 18 and take off at RWY 36. Prevailing wind is EASTERLY.					

FLCP AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
08	809	809	809	809	
18	1470	1470	1470	1470	
26	809	809	809	809	
36	1470	1470	1470	1470	

FLCP AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
08	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
26	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
36	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
18	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

FLCP AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**FLCP AD 2.16 HELICOPTER LANDING AREA**

As guided by AFIS

FLCP AD 2.17 ATS AIRSPACE

1	<i>Designation and lateral limits</i>	Chipata ATZ Circular area centered on S 13°33'50" E 032°35'08" within a 10NM radius. MFUWE CTR Circular area centered on S 13°15'37" E 031°54'54" within a 25NM radius.
2	<i>Vertical limits</i>	Nil Nil
3	<i>Airspace classification</i>	G G
4	<i>ATS unit call sign Language(s)</i>	Mfuwe Approach, English Mfuwe TWR, English
5	<i>Transition altitude</i>	7000 FT (2134 M)
6	<i>Hours of applicability</i>	
7	<i>Remarks</i>	Nil Secondary power supply available with 15seconds changeover time

FLCP AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	Chipata Radio	118.3 MHZ 6952 KHZ	Mon-Fri 0600-1500	Nil	Nil	Primary Freq. Secondary Freq. (HF)
APP	Mfuwe APP	120.7 MHZ	Mon-Fri 0400-1600	Nil	Nil	Primary Freq.

FLCP AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (05° W)	CP	218.00 KHZ	H24	S 13°33'50.28" E 032°35'07.68"	—	Power output 100w Coverage 50NM

FLCP AD 2.20 LOCAL AERODROME REGULATIONS

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLCP AD 2.21 NOISE ABATEMENT PROCEDURES

FLCP AD 2.22 FLIGHT PROCEDURES

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLCP AD 2.23 ADDITIONAL INFORMATION

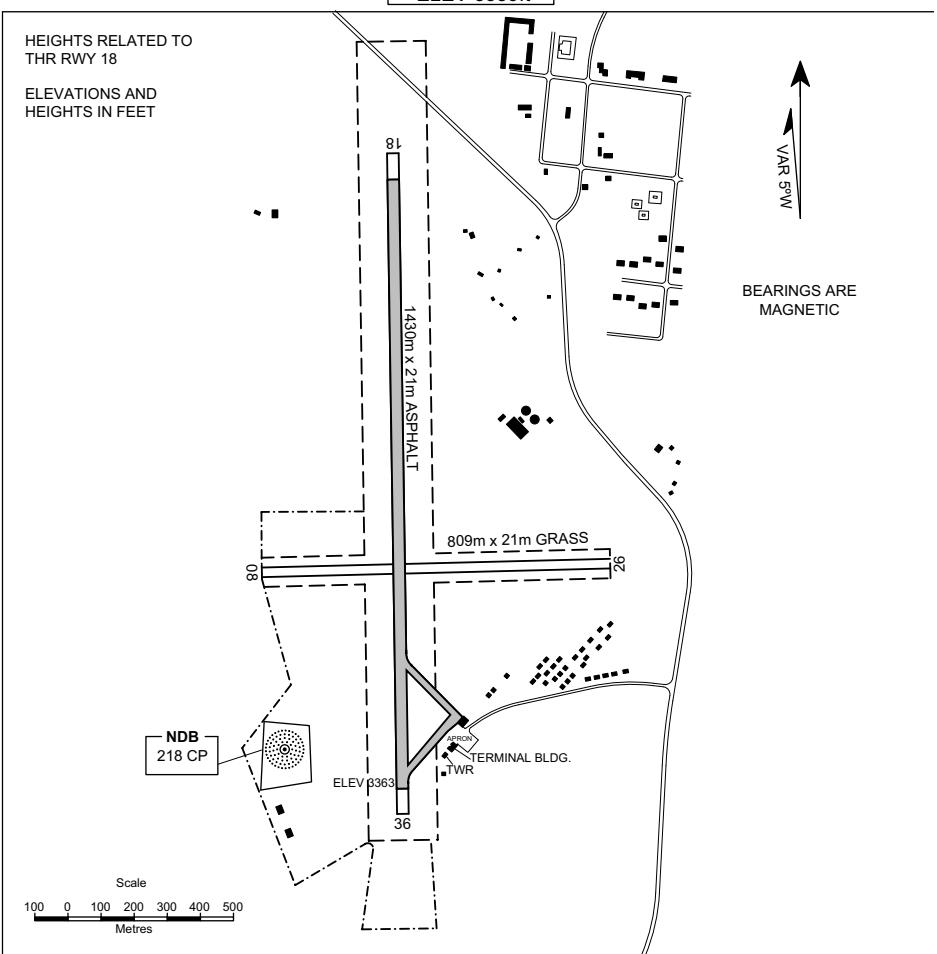
FLCP AD 2.24 CHARTS RELATED TO AN AERODROME

<i>Charts</i>	<i>Pages</i>
LANDING CHART - ICAO	AD 2 FLCP 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 18-36	AD 2 FLCP 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLCP 6 - 1
Instrument Approach Chart — ICAO NDB RWY 18	AD 2 FLCP 14 - 1

LANDING CHART - ICAO

13° 33.7' S
032° 35.1' E
ELEV 3359ft

CHIPATA/Chipata
FLCF



REVISION: CHART REDRAWN

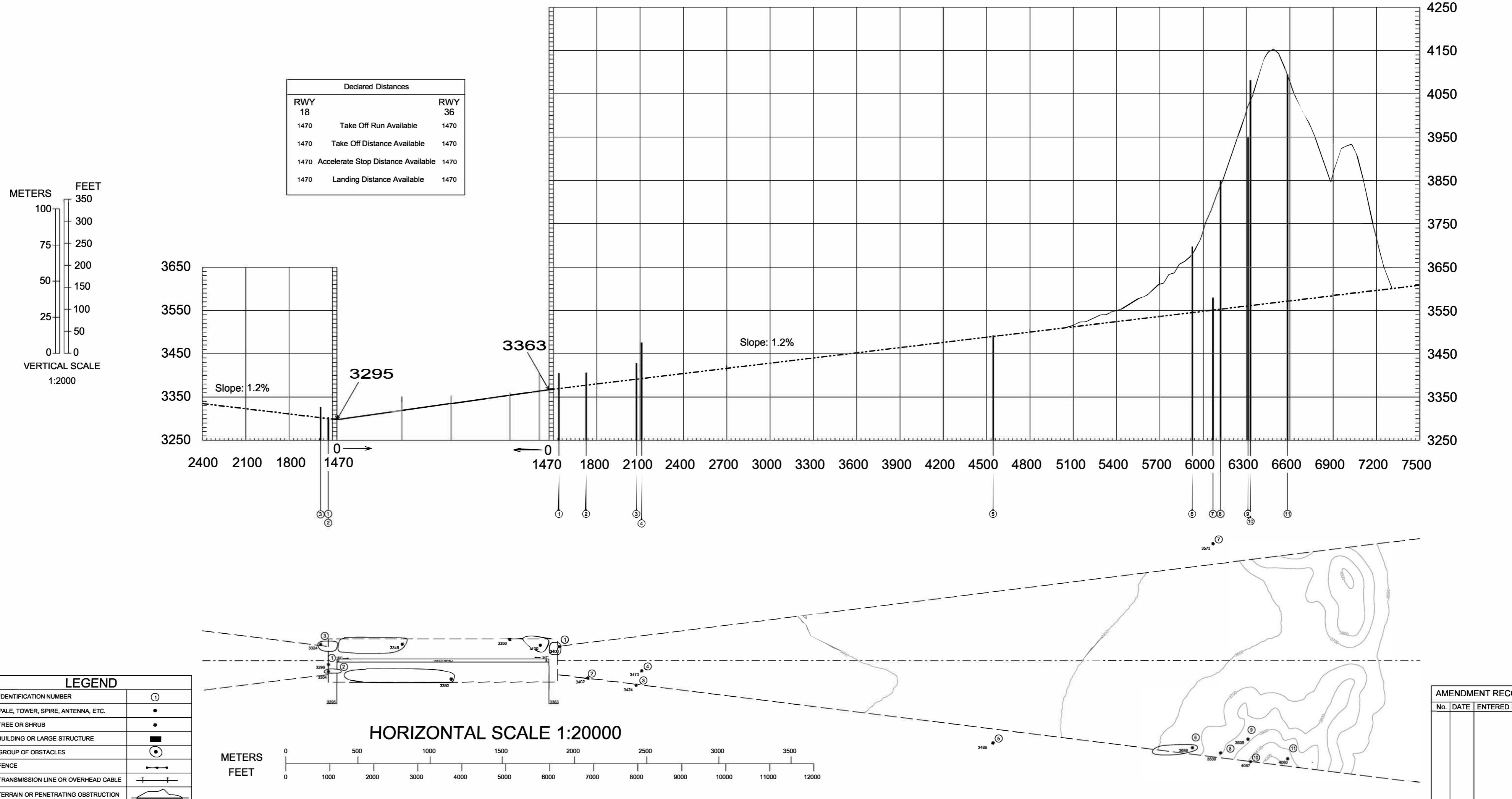
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Dimensions in metres
Elevations in feet


AERODROME OBSTACLE CHART - ICAO TYPE A (Operating Limitations)

**CHIPATA
RWY 18/36**

Magnetic variation: 8° W (2007)



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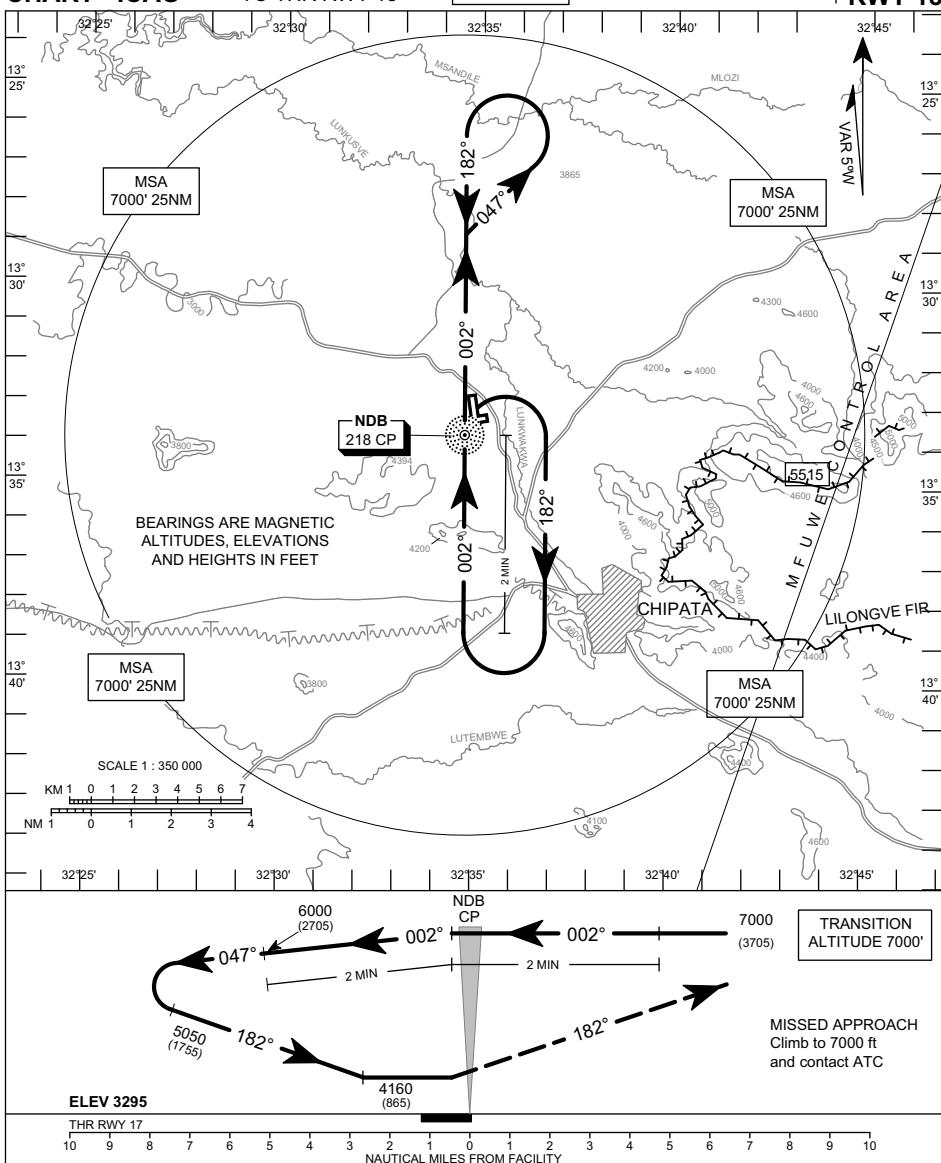
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INSTRUMENT APPROACH CHART - ICAO

ELEV 3359
HEIGHTS RELATED
TO THR RWY 18

TWR 118.3
APP NII

**CHIPATA/Chipata
NDB
| RWY 18**



STRAIGHT - IN APPROACH		CIRCLING APPROACH		
AIRCRAFT CATEGORY	OCH AND VISIBILITY	AIRCRAFT CATEGORY	OCA/H	VISIBILITY
A	865' - 4100M	A	4160' (865')	4100M
B		B	4700' (1405')	4100M
C		C	5000' (1705')	4100M

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FLHN AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLHN - HARRY MWAANGA NKUMBULA INTL

FLHN AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 17°49'08.00" E 025°49'07.00" Nil
2	<i>Direction and distance from (city)</i>	N.W. 2.5 NM
3	<i>Elevation/Reference temperature</i>	Elev: 3255 FT (992 M) / T: 34.5° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W (2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Harry Mwaanga Nkumbula International Airport, PO Box 60199 Livingstone Zambia Tel: +260 977 790822 Tel: 260-213-321682 Tel: 260-213-321153 Tel: 260-213-323222 Tel: +260 965 860494 Fax: 260-213-324235 AFS: FLHNZPZX eMail: zaclliv@zacl.aero Website: www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	NIL

FLHN AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0500-1600 and O/R
2	<i>Customs and immigration</i>	0500-1600 and O/R
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	As AD Adminstration
12	<i>Remarks</i>	Nil

FLHN AD 2.4 HANDLING SERVICES AND FACILITIES

1	<i>Cargo-handling facilities</i>	Nil
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS Oil : Nil
3	<i>Fuelling facilities/capacity</i>	Jet A1 - 92,000Lts- 30,000Lts (fueller) Delivery rate: 800Lts per minute AVGAS - 28,000Lts Delivery rate: 140Lts per minute
4	<i>De-icing facilities</i>	NIL
5	<i>Hangar space for visiting aircraft</i>	Limited: Light aircraft only.
6	<i>Repair facilities for visiting aircraft</i>	NIL
7	<i>Remarks</i>	Nil

FLHN AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	In Town
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2	<i>Restaurants</i>	At AD and in the city
3	<i>Transportation</i>	Taxis at AD and in town
4	<i>Medical facilities</i>	First aid at AD. Hospitals in town
5	<i>Bank and Post Office</i>	At AD and in the city
6	<i>Tourist Office</i>	Offices in Town Tel: 260-213-321405,320123,321487 E-mail: livingstone@zambiatourism.org.zm Website: www.zambiatourism.com
7	<i>Remarks</i>	Nil

FLHN AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 7
2	<i>Rescue equipment</i>	YES; Two (2) fire tenders, 1 Ambulances, 15 trained personnel per shift per shift
3	<i>Capability for removal of disabled aircraft</i>	NIL
4	<i>Remarks</i>	Nil

FLHN AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLHN AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>	
		FLHN Apron	Concrete	PCN 52/R	
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>	
		Twy A	23 M	Bitumen	
		Twy B	23 M	Bitumen	
3	<i>Altimeter checkpoint location and elevation</i>	Location : At Apron Elevation : 3232 FT			
4	<i>VOR/INS checkpoints</i>	VOR: Holding Bay INS: Apron THR RWY 10/28			
5	<i>Remarks</i>	Nil			

FLHN AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Taxiing guidance signs at all intersections with TWY and RWY and at all holding positions. Day: Yellow centre line markings. Night : Blue OMNI directional edge lights guide lines at apron. Nose-in guidance at aircraft stands.
2	<i>RWY and TWY markings and LGT</i>	RWY: 10/28, THR Green TDZ, centre line, aiming point, RWY Side Strip, edge runway end low intensity OMNI directional white and day markings TWY : Blue edge lights TWY/RWY intersections, marked
3	<i>Stop bars</i>	Stop bars. white markings at all holding positions
4	<i>Remarks</i>	Nil

FLHN AD 2.10 AERODROME OBSTACLES

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
28/TKOF	Mast Elev: 3452 FT (1052 M)	S 17°48'10.80" E 025°51'24.00"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
28/TKOF	Mast Elev: 3485 FT (1062 M)	S 17°49'04.30" E 025°51'27.70"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
33/TKOF	Mast Elev: 3452 FT (1052 M)	S 17°48'10.80" E 025°51'24.00"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
33/TKOF	Mast Elev: 3485 FT (1062 M)	S 17°49'04.30" E 025°51'27.70"	All obstructions outside approach And take-off areas are provided with day markings and obstruction lights.
<i>In circling area and at AD</i>			
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>		<i>Remarks</i>
a	b		c
NOTE: Nil			

FLHN AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Harry Mwaanga Nkumbula
2	<i>Hours of service MET Office outside hours</i>	0500-1600 or on request
3	<i>Office responsible for TAF preparation Period of validity</i>	Harry Mwaanga Nkumbula 9, 18 HR
4	<i>Trend forecast Interval of issuance</i>	METAR TREND 2HR, SPECI as required
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Charts, abbreviated plain language text English
7	<i>Charts and other information available for briefing or consultation</i>	Cross section form of forecasts, charts and tables forms of documentation for both international and domestic flights

8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	FLHN MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

FLHN AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
10	094°(True) 102°(Mag)	2987 x 46	PCN 52/F Bitumen SWY: Nil	S 17°49'13.48" E 025°48'10.68" GUND: Nil	THR 3255 FT (992 M)	
28	274°(True) 282°(Mag)	2987 x 46	PCN 52/F Bitumen SWY: Nil	S 17°49'20.28" E 025°49'52.13" GUND: Nil	THR 3237 FT (987 M)	
15	139°(True) 147°(Mag)	1373 x 30	AUW 20500 KG Grass Note: Max tyre Pres. 7.73Kg/cm sq SWY: Nil	S 17°48'46.16" E 025°48'52.49" GUND: Nil	THR 3287.21 FT (1002 M)	
33	319°(True) 327°(Mag)	1373 x 30	AUW 20500 KG Grass Note: Max tyre Pres. 7.73Kg/cm sq SWY: Nil	S 17°49'16.18" E 025°49'19.72" GUND: Nil	THR 3275.12 FT (998 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 10: +1.2%	60 x 46	Nil	3592 x 305	Nil	Nil	Nil
For Rwy 28: +1.2%	60 x 46	Nil	3592 x 305	Nil	Nil	Nil
For Rwy 15: Nil	91 x 30	Nil	1732 x 152	Nil	Nil	Nil
For Rwy 33: Nil	0 x 30	Nil	1732 x 152	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
10	NIL					
28	NIL					
15	NIL THR DISP by 75M					
33	NIL					

FLHN AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
10	2987	2987	3047	2987	
15	1373	1613	1464	1298	
28	2987	2987	3047	2987	
33	1373	1493	1373	1373	

FLHN AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	UEL high intensity lights 420 M	Green	PAPI 3°	Nil	Nil	3000 M, 60 M White	Red	Nil	Nil
28	UEL high intensity lights 420 M	Green	PAPI 3°	Nil	Nil	60 M White	Red	Nil	Nil
15	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
33	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

FLHN AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN :
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: Nil
3	TWY edge and centre line lighting	Taxiway Edge: Twy B - Blue Taxiway Edge: Twy A - Blue
4	Secondary power supply/switch-over time	15 seconds
5	Remarks	Nil

FLHN AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

FLHN AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	LIVINGSTONE CTR Area bounded by lines joining points S 17°51'36" E 025°30'36" then along the clockwise arc of a circle of 18NM radius centred on S 17°48'44" E 025°49'12" to S 17°56'30" E 026°06'15"; S 17°58'05" E 026°05'23" then along Zimbabwe/Zambia border up to S 17°51'46" E 025°30'39" to point of origin.
2	Vertical limits	GND to FL65
3	Airspace classification	C
4	ATS unit call sign Language(s)	Livingstone Approach, English Livingstone Tower, English
5	Transition altitude	5000 FT (1524 M)
6	Hours of applicability	

7	Remarks	Nil
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FLHN AD 2.18 ATS COMMUNICATION FACILITIES

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>SATVOICE</i>	<i>Logon address</i>	<i>Remarks</i>
1	2	3	4	5	6	7
Approach Control	Livingstone Approach	124.3 MHZ	0500-1600	Nil	Nil	
Fuelling	Air Puma	131.7 MHZ	0500- 1600	Nil	Nil	
Tower Control	Living-stone Tower	118.1 MHZ	0500-1600	Nil	Nil	VDF available in approach

FLHN AD 2.19 RADIO NAVIGATION AND LANDING AIDS

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
1	2	3	4	5	6	7
NDB (07° W)	LZ	308.00 KHZ	H24	S 17°49'11.50" E 025°47'40.08"	—	Power output 125w Coverage 60NM
VOR/DME (07° W)	VLI	112.50 MHZ (CH72X)	H24	S 17°48'45.38" E 025°49'12.10"	3302 FT	Channel 72X co-axially co-located with CVOR. 1159 MHz transmits and receives.

FLHN AD 2.20 LOCAL AERODROME REGULATIONS

FLHN AD 2.20.1 Airport Regulations

At Harry Mwaanga Nkumbula International Airport a number of local traffic regulations apply.
The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;
- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Marsheller assistance and towing assistance;
- d. Use of engine power exceeding idle power;
- e. Engine start-up and use of APU;
- f. Fuel spillage; and
- g. Precautions during extreme weather conditions.

Marsheller assistance can be requested and further information about the regulations can be obtained from the Airport Manager or Surface Movement Control (SMC).

When a local regulation is of importance for the safe operation of aircraft on the apron, the information may be given by SMC or Tower.

“Local regulations” may be requested , in writing form :

The Airport Manager
Harry Mwaanga Nkumbula International Airport
P'O Box 60199
Livingstone
Zambia
Email: zacliv@zacl.aero

FLHN AD 2.20.2 Taxiing to and from stands

Departing IFR flights shall contact Tower to obtain ATC clearance before commencing taxiing. Request for ATC clearance may take place at the earliest 10 minutes prior to engine start-up. Frequency 118.100MHz shall be used during aerodrome hours of operations. Departing aircraft shall obtain departure clearance and taxi instruction from NkumbulaTower.

FLHN AD 2.20.3 Parking Area for small aircraft (General Aviation)

General Aviation aircraft will have to use the General parking area.

FLHN AD 2.20.4 Parking area for helicopters

Helicopters parking on the apron will be guided by marsheller or Tower.

FLHN AD 2.20.5 Apron-taxiing during winter conditions

Not applicable.

FLHN AD 2.20.6 Taxiing limitations

Nil

FLHN AD 2.20.7 School and training flights –technical test flights – use of runway

School and training flights must only be made after permission has been obtained from ATS.. Permission will only be granted for such flights subject to departing and arriving traffic.

FLHN AD 2.20.8 Helicopter traffic – limitation

Non-scheduled public air traffic with helicopters is permitted only after prior approval from Livingstone ATSU. Any contact concerning the above shall be made via the handling or directly to the Aerodrome Reporting Office during the hours of service and if possible not later than the day before it is to be carried out

Any request for approval of traffic shall contain the following information:

- a. Owner/operator
- b. Type of helicopter, registration/call sign

- c. Date, arrival time/departure time, destination (s)
- d. Requested flight altitude
- e. ATS route to be flown
- f. ATS serviceable communications equipment

FLHN AD 2.20.9 Removal of disabled aircraft from runways

When aircraft is disabled on the runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General of Civil Aviation Authority. If a disabled aircraft is not removed from the runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority at the owner's or user's expense.

FLHN AD 2.21 NOISE ABATEMENT PROCEDURES

To be developed.

FLHN AD 2.22 FLIGHT PROCEDURES

FLHN AD 2.22.1 General

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLHN AD 2.22.2 Procedures for IFR flight within Livingstone TMA and CTR

The inbound, transit and outbound routes shown on the charts may be varied at the discretion of ATS. If necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

FLHN AD 2.22.3 Missed approach

Missed approach procedures to be followed in the absence of other ATS instructions are as detailed on the Instrument Approach Chart.

FLHN AD 2.22.4 Communication failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

FLHN AD 2.22.5 Procedures for VFR flights within Livingstone CTA and CTR

Provided traffic and weather conditions so permit, ATC clearance for VFR flights will be given under the conditions described below

- a. A flight plan . Containing items 7 to 18 and shall be submitted.
- b. ATC clearance shall be obtained 5 minutes before the aircraft enters the Control Zone or Control Area.
- c. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
- d. Deviation from the ATC clearance may only be made when prior permission has been obtained or under emergency situation
- e. The flight shall be conducted with vertical visual reference to the ground unless the flight can be conducted in accordance with the Instrument Flight Rules.
- f. Two-way radio communication shall be maintained on the frequency prescribed. Information about the appropriate frequency can be obtained from Livingstone Approach.
- g. The pilot-in-command shall be the holder of an International VHF Licence.

NOTE: ATC clearance is intended only to provide separation between IFR and VFR flights

FLHN AD 2.22.6 Radar procedures within TMA

Radar vectoring in TMA shall be carried out by ATC unit providing direct control over aircraft movement.

Note: radar vectoring charts are not published.

FLHN AD 2.22.7 Surveillance radar approaches

SRA procedures are not applied.

FLHN AD 2.22.8 Precision radar approach

PAR approach procedures are not applied.

FLHN AD 2.23 ADDITIONAL INFORMATION**FLHN AD 2.23.1 Bird concentration in the vicinity of the airport**

Harry Mwaanga Nkumbula International Airport is located in Mosi-oa-tunya National Park which is a wildlife habitat for birds and animals, bird migration usually occurs during the wet season between late October – April when migrants are at the aerodrome and many birds are in breeding plumage. Intense activity of flocks of Abdim's stork may take place from approximately November to March especially in the morning and late afternoon. As far as practicable aerodrome control will inform pilots of this bird activity and the heights AGL. During the above periods, pilots of aircraft are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight within the terminal area and during take-off, approach to land and climb and descend procedures. The aircraft engine noise is not always effective in the clearing of the Birds from the landing area. Pilots should exercise extreme caution. Prominent birds around the airport are as tabulated below. Prominent birds around the airport are as tabulated below.

SPECIES	STATUS
Lark	Resident
Barn swallow	Migrant
Pied crow	Resident
African green pigeon	Resident
Black bellied bustard	Resident
White heron	Resident
Black headed heron	Migrant
Marabou stork	Migrant
Cattle egret	Migrant
Stork	Migrant
Hammerkop	Resident
Brown snake eagle	Possible migrant
African fish eagle	Resident
African Red winged starling	Resident
Coqui Francolin	Resident

FLHN AD 2.23.2 Local flying restrictions

The following procedures for the avoidance for the falls viewing area shall apply to aircraft:

- a. Traffic from the south into Livingstone via overhead the falls viewing area shall maintain FL070 until overhead the VLI for the left downwind RWY10 or right downwind for RYW 28.
- b. Taffic from the south wishing to join right downwind RWY 10 or left downwind RWY 28 shall maintain FL070 until established on final
- c. VFR traffic to Victoria Falls International airport shall route east of Livingstone town when RWY 10 is in use or route west of Victoria Falls town when RWY 28 is in use
- d. VFR traffic to Kasane via overhead the falls viewing area shall be cleared to 6000ft and after viewing the falls shall descend to 4500ft after 10NM from the bridge.
- e. Only aircraft equipped with serviceable VHF radio are accepted at Harry Mwaanga Nkumbula aerodrome, unless under special circumstances.Right-hand circuit for Runway 28 and left-hand circuit for Runway 10.

FLHN AD 2.24 CHARTS RELATED TO AN AERODROME

Charts	Pages
AERODROME CHART - ICAO	AD 2 FLHN 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLHN 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLHN 6 - 1
Standard Departure Chart — Instrument — ICAO RNP SID RWY 10	AD 2 FLHN 10 - 1

<i>Charts</i>	<i>Pages</i>
Standard Departure Chart — Instrument — ICAO RNP SID RWY 28	AD 2 FLHN 10 - 5
Standard Arrival Chart — Instrument — ICAO RNP STAR RWY 10	AD 2 FLHN 12 - 1
Standard Arrival Chart — Instrument — ICAO RNP STAR RWY 28	AD 2 FLHN 12 - 5
Instrument Approach Chart — ICAO RNP RWY 10	AD 2 FLHN 14 - 1
Instrument Approach Chart — ICAO RNP RWY 28	AD 2 FLHN 14 - 3
Instrument Approach Chart — ICAO VOR RWY 10	AD 2 FLHN 14 - 5
Instrument Approach Chart — ICAO VOR RWY 28	AD 2 FLHN 14 - 7
Instrument Approach Chart — ICAO NDB Z RWY 10	AD 2 FLHN 14 - 9
Instrument Approach Chart — ICAO NDB Y RWY 10	AD 2 FLHN 14 - 11
Instrument Approach Chart — ICAO NDB Z RWY 28	AD 2 FLHN 14 - 13
Instrument Approach Chart — ICAO NDB Y RWY 28	AD 2 FLHN 14 - 15

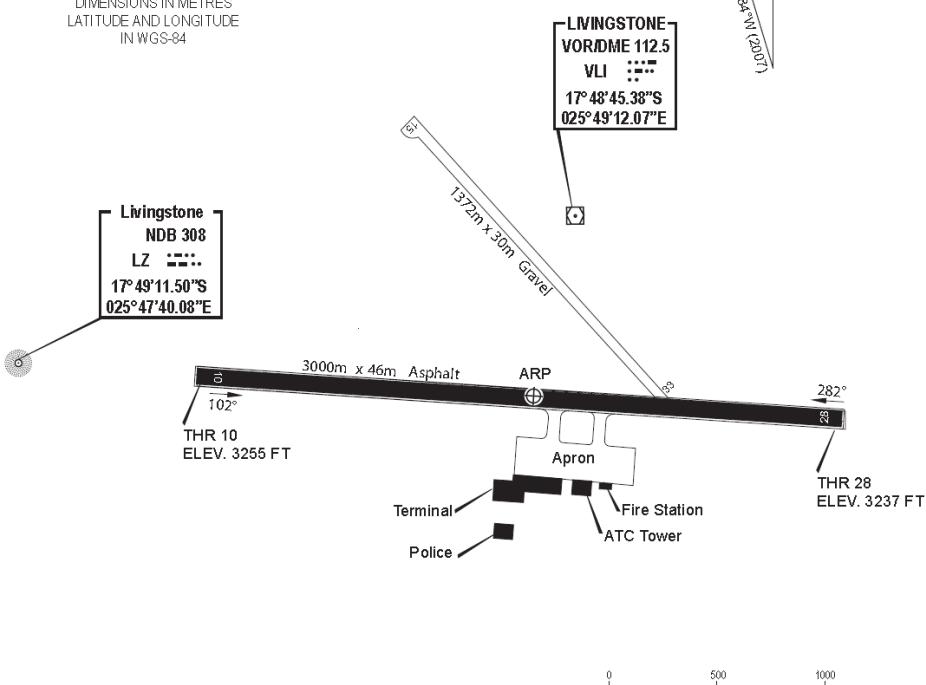
AERODROME
CHART - ICAO17°49'16.89"S
025°49'01.47"E

ELEV - 3255 FT

TWR 124.3

HARRY MWAANGA NKUMBULA (FLL)
ZAMBIA
AERODROME

ALTITUDES, ELEVATIONS IN FEET
BEARINGS ARE MAGNETIC
DIMENSIONS IN METRES
LATITUDE AND LONGITUDE
IN WGS-84



MARKING AIDS RWY 10/28 AND EXIT TWY



LIGHTING AIDS RWY 10/28 AND EXIT TWY



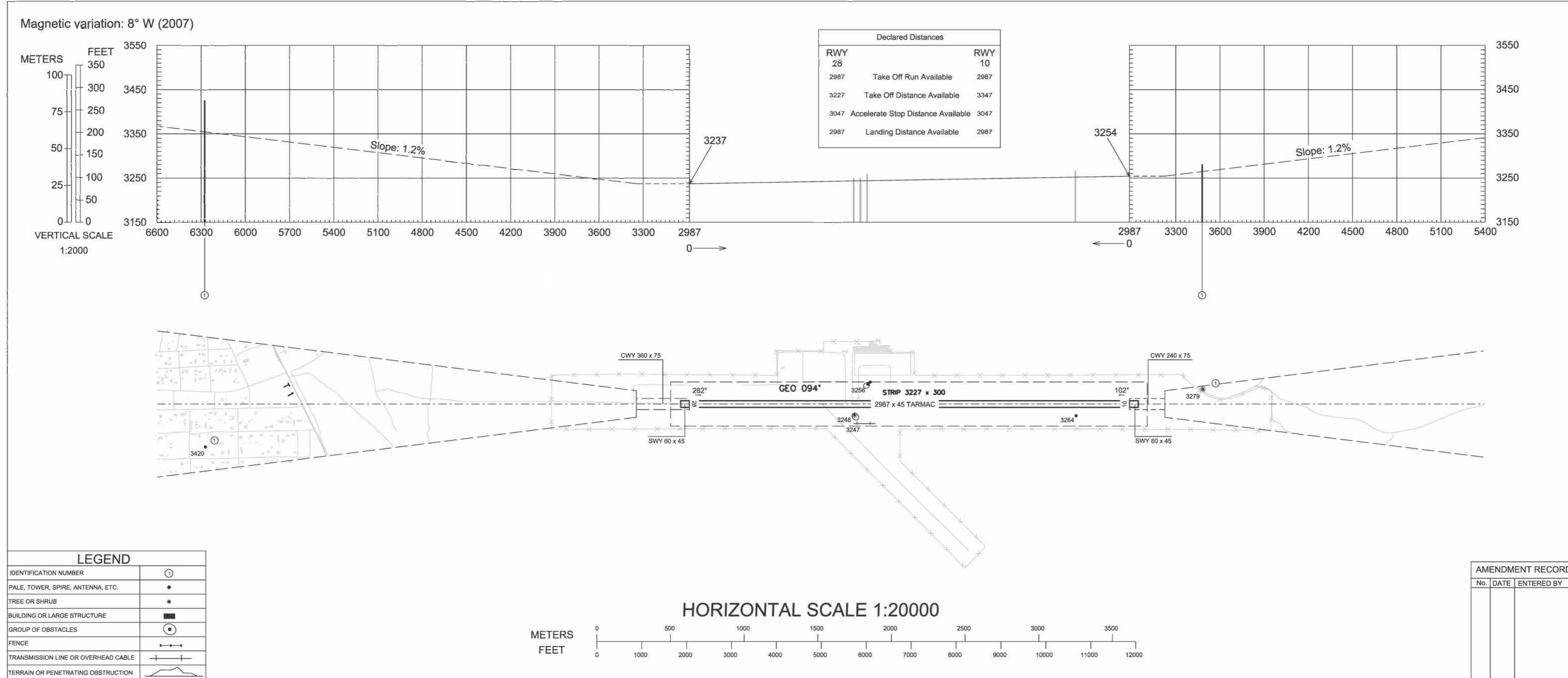
RWY	DIRECTION	THR	BEARING STRENGTH	DECLARED DISTANCES	
10	094 °GEO 102 °MAG	17°49'15.10"S 025°48'34.87"E		RWY 10	RWY 28
				3000 3000	TAKE-OFF DISTANCE AVAILABLE REJECTED TAKE-OFF DISTANCE

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
Dimensions in metres
Elevations in feet

AERODROME OBSTACLE CHART - ICAO
TYPE A (Operating Limitations)

LIVINGSTONE / Harry Mwaanga Nkumbula INTL
RWY 28/10



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STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO

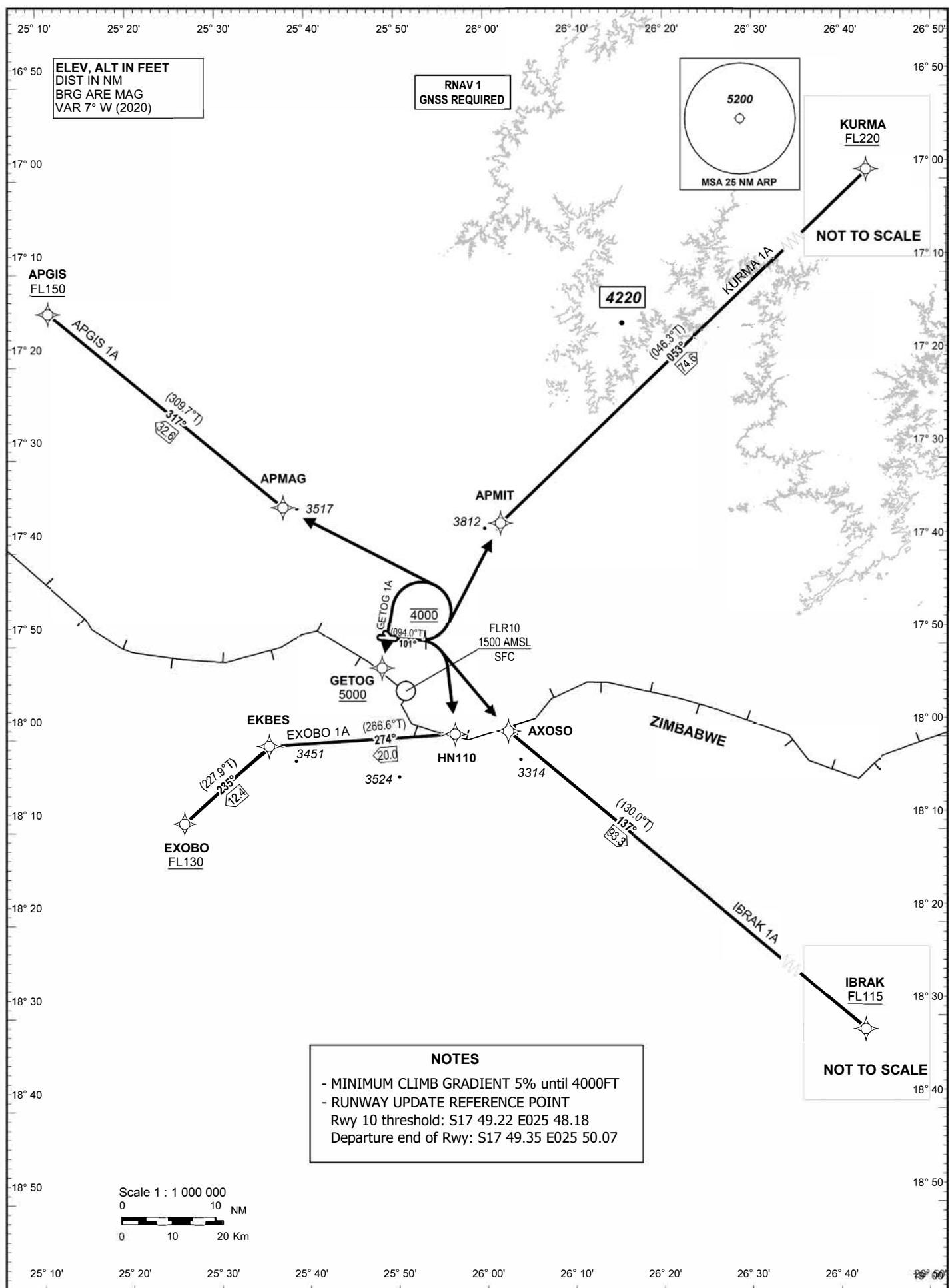
TRANSITION ALTITUDE
5000

HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

RNAV SID RWY 10

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A



**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)**
RNAV SID RWY 10

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A

TABULAR DESCRIPTION**RNAV SID RWY 10****APGIS 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMAG	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	APGIS	-	317 (309.7)	-	32.6	-	+FL150	-	-	-	RNAV 1

EXOBO 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	HN110	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EKBES	-	274 (266.6)	-	20.0	-	-	-	-	-	RNAV 1
040	TF	EXOBO	-	235 (227.9)	-	12.4	-	+FL130	-	-	-	RNAV 1

GETOG 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	GETOG	-	-	-	-	L	+5000	-	-	-	RNAV 1

IBRAK 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	AXOSO	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	IBRAK	-	137 (130.0)	-	93.3	-	+FL115	-	-	-	RNAV 1

KURMA 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	101 (094.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMIT	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	KURMA	-	053 (046.3)	-	74.6	-	+FL220	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

**HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)**
RNAV SID RWY 10

APGIS 1A, EXOBO 1A, GETOG 1A, IBRAK 1A, KURMA 1A

**WAYPOINT LIST
RNAV SID RWY 10**

Waypoint/Identifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APMAG	S 17 35 09.6	E 025 37 23.7
APMIT	S 17 36 56.4	E 026 01 45.9
AXOSO	S 17 59 22.1	E 026 02 33.8
EKBES	S 18 00 50.3	E 025 35 40.0
EXOBO	S 18 09 09.0	E 025 26 02.7
GETOG	S 17 52 30.0	E 025 48 24.0
HN110	S 17 59 39.6	E 025 56 34.0
IBRAK	S 18 59 15.8	E 027 17 59.3
KURMA	S 16 45 04.0	E 026 57 59.0

ROUTING

NAME	TEXT
APGIS 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to APMAG, then track 317° to APGIS. MCA/MCL: APGIS AT or ABOVE FL150.
EXOBO 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn RIGHT direct to HN110, track 274° to EKBES, then track 235° to EXOBO. MCA/MCL: EXOBO AT or ABOVE FL130.
GETOG 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to GETOG. MCA/MCL: GETOG AT or ABOVE 5000'.
IBRAK 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn RIGHT direct to AXOSO, then track 137° to IBRAK. MCA/MCL: IBRAK AT or ABOVE FL115.
KURMA 1A	Minimum climb gradient 5.0% to 4000 FT. After take-off climb on course 101° to 4000 FT, turn LEFT direct to APMIT, then track 053° to KURMA. MCA/MCL: KURMA AT or ABOVE FL220.

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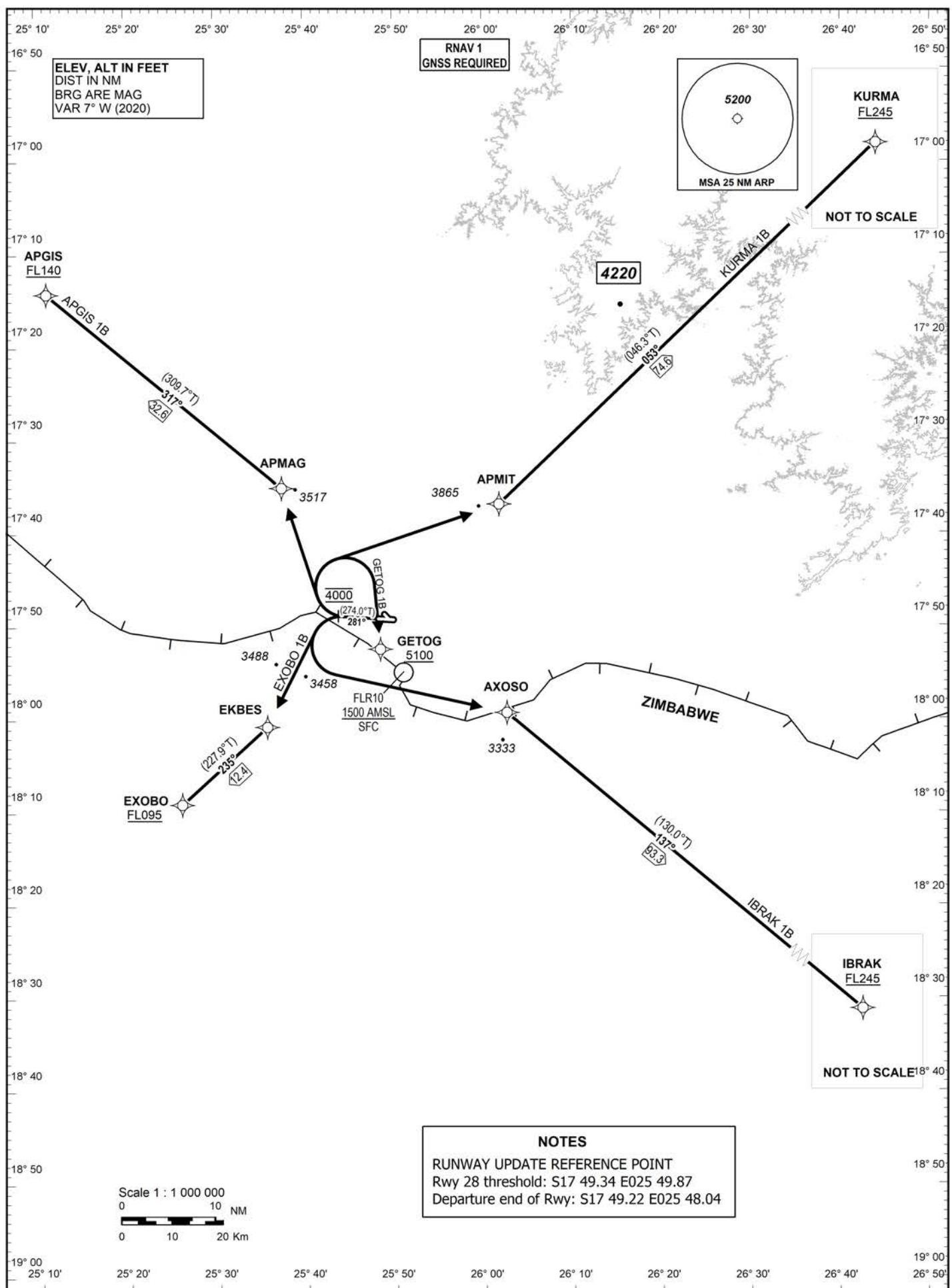
STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAOTRANSITION ALTITUDE
5000

HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

RNAV SID RWY 28

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B



STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAOHARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
RNAV SID RWY 28

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B

TABULAR DESCRIPTION

RNAV SID RWY 28

APGIS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMAG	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	APGIS	-	317 (309.7)	-	32.6	-	+FL140	-	-	-	RNAV 1

EXOBO 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	EKBES	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EXOBO	-	235 (227.9)	-	12.4	-	+FL095	-	-	-	RNAV 1

GETOG 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	GETOG	-	-	-	-	R	+5100	-	-	-	RNAV 1

IBRAK 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	AXOSO	-	-	-	-	L	-	-	-	-	RNAV 1
030	TF	IBRAK	-	137 (130.0)	-	93.3	-	+FL245	-	-	-	RNAV 1

KURMA 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	281 (274.0)	-7.2	-	-	@4000	-	-	-	RNAV 1
020	DF	APMIT	-	-	-	-	R	-	-	-	-	RNAV 1
030	TF	KURMA	-	053 (046.3)	-	74.6	-	+FL245	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
RNAV SID RWY 28**

APGIS 1B, EXOBO 1B, GETOG 1B, IBRAK 1B, KURMA 1B

**WAYPOINT LIST
RNAV SID RWY 28**

Waypoint Identifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APMAG	S 17 35 09.6	E 025 37 23.7
APMIT	S 17 36 56.4	E 026 01 45.9
AXOSO	S 17 59 22.1	E 026 02 33.8
EKBES	S 18 00 50.3	E 025 35 40.0
EXOBO	S 18 09 09.0	E 025 26 02.7
GETOG	S 17 52 30.0	E 025 48 24.0
IBRAK	S 18 59 15.8	E 027 17 59.3
KURMA	S 16 45 04.0	E 026 57 59.0

ROUTING

NAME	TEXT
APGIS 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to APMAG, then track 317° to APGIS . MCA/MCL: APGIS AT or ABOVE FL140.
EXOBO 1B	After take-off climb on course 281° to 4000 FT, turn LEFT direct to EKBES, then track 235° to EKBES. MCA/MCL: EXOBO AT or ABOVE FL095.
GETOG 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to GETOG. MCA/MCL: GETOG AT or ABOVE 5100'.
IBRAK 1B	After take-off climb on course 281° to 4000 FT, turn LEFT direct to AXOSO, then track 137° to IBRAK. MCA/MCL: IBRAK AT or ABOVE FL245.
KURMA 1B	After take-off climb on course 281° to 4000 FT, turn RIGHT direct to APMIT, then track 53° to KURMA. MCA/MCL: KURMA AT or ABOVE FL245.

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**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO**

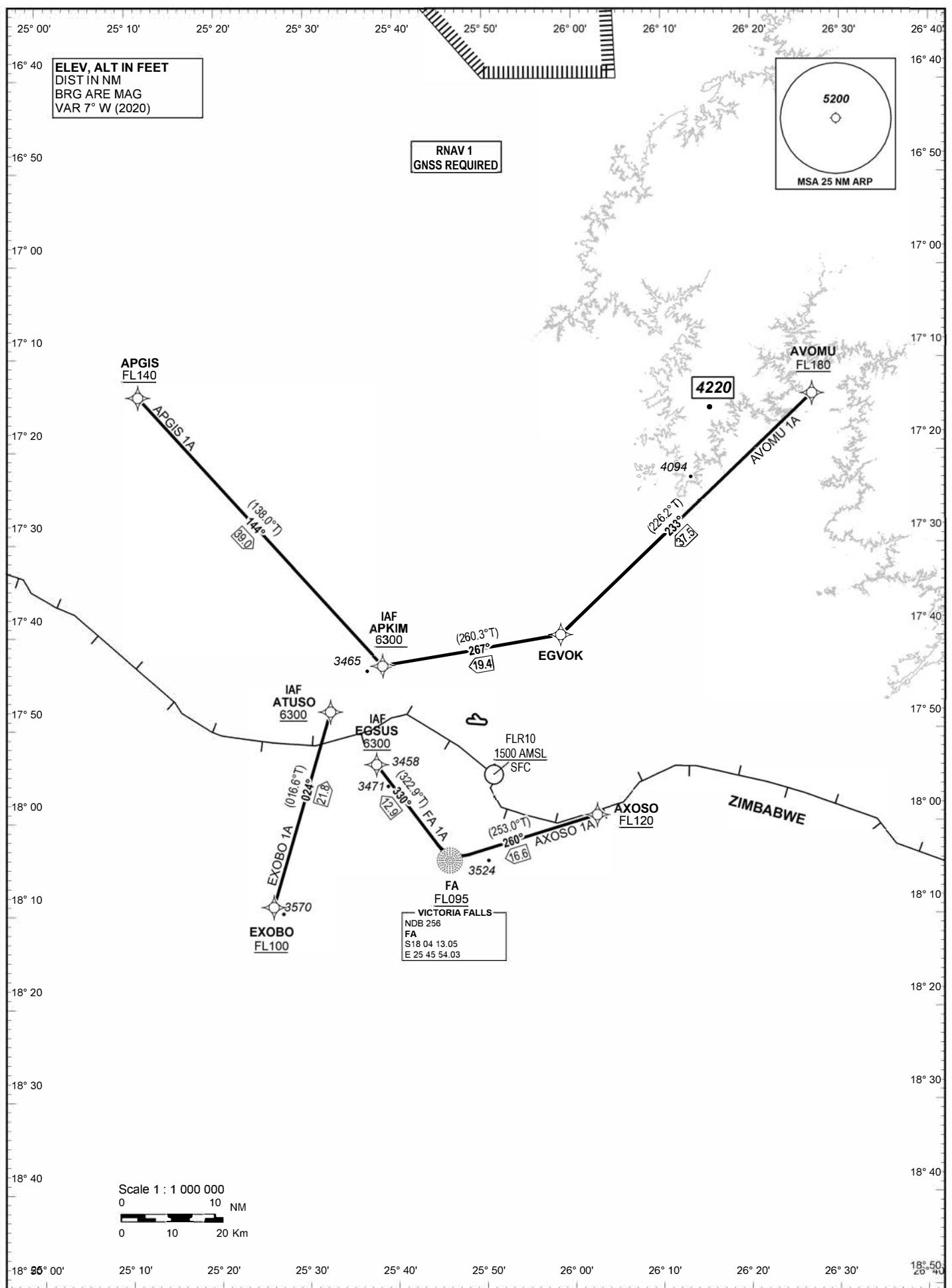
**TRANSITION ALTITUDE
5000**

HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

RNAV STAR RWY 10

APGIS 1A, AVOMU 1A, AXOSO 1A, EXOBO 1A, FA 1A



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone****(FLHN)****RNAV STAR RWY 10**

APGIS 1A, AVOMU 1A, AXOSO 1A, EXOBO 1A, FA 1A

TABULAR DESCRIPTION**RNAV STAR RWY 10**

APGIS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	APGIS	-	-	-	-	-	+FL140	-	-	-	RNAV 1
020	TF	APKIM	-	144 (138.0)	-	39.0	-	+6300	-	-	-	RNAV 1

AVOMU 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVOMU	-	-	-	-	-	+FL180	-	-	-	RNAV 1
020	TF	EGVOK	-	233 (226.2)	-	37.5	-	-	-	-	-	RNAV 1
030	TF	APKIM	-	267 (260.3)	-	19.4	-	+6300	-	-	-	RNAV 1

AXOSO 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXOSO	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	FA	-	260 (253.0)	-	16.6	-	+FL095	-	-	-	RNAV 1
030	TF	EGSUS	-	330 (322.9)	-	12.9	-	+6300	-	-	-	RNAV 1

EXOBO 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EXOBO	-	-	-	-	-	+FL100	-	-	-	RNAV 1
020	TF	ATUSO	-	024 (016.6)	-	21.8	-	+6300	-	-	-	RNAV 1

FA 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	FA	-	-	-	-	-	+FL095	-	-	-	RNAV 1
020	TF	EGSUS	-	330 (322.9)	-	12.9	-	+6300	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)****RNAV STAR RWY 10**

APGIS 1A, AVOMU 1A, AXOSO 1A, EXOBO 1A, FA 1A

**WAYPOINT LIST
RNAV STAR RWY 10**

Waypoint Identifier	Coordinates	
APGIS	S 17 14 13.0	E 025 11 11.6
APKIM	S 17 43 14.1	E 025 38 31.5
ATUSO	S 17 48 09.8	E 025 32 34.8
AVOMU	S 17 13 58.0	E 026 26 53.0
AXOSO	S 17 59 22.1	E 026 02 33.8
EGSUS	S 17 53 51.6	E 025 37 43.5
EGVOK	S 17 39 57.9	E 025 58 34.5
EXOBO	S 18 09 09.0	E 025 26 02.7
FA	S 18 04 13.1	E 025 45 54.0

ROUTING

NAME	TEXT
APGIS 1A	From APGIS track 144° to APKIM. MEL/MEA: APGIS AT or ABOVE FL140, APKIM AT or ABOVE 6300'.
AVOMU 1A	From AVOMU track 233° to EGVOK, track 267° to APKIM. MEL/MEA: AVOMU AT or ABOVE FL180, APKIM AT or ABOVE 6300'.
AXOSO 1A	From AXOSO track 260° to FA, track 330° to EGSUS. MEL/MEA: AXOSO AT or ABOVE FL120, FA AT or ABOVE FL095, EGSUS AT or ABOVE 6300'.
EXOBO 1A	From EXOBO track 024° to ATUSO. MEL/MEA: EXOBO AT or ABOVE FL100, ATUSO AT or ABOVE 6300'.
FA 1A	From FA track 330° to EGSUS. MEL/MEA: FA AT or ABOVE FL095, EGSUS AT or ABOVE 6300'.

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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

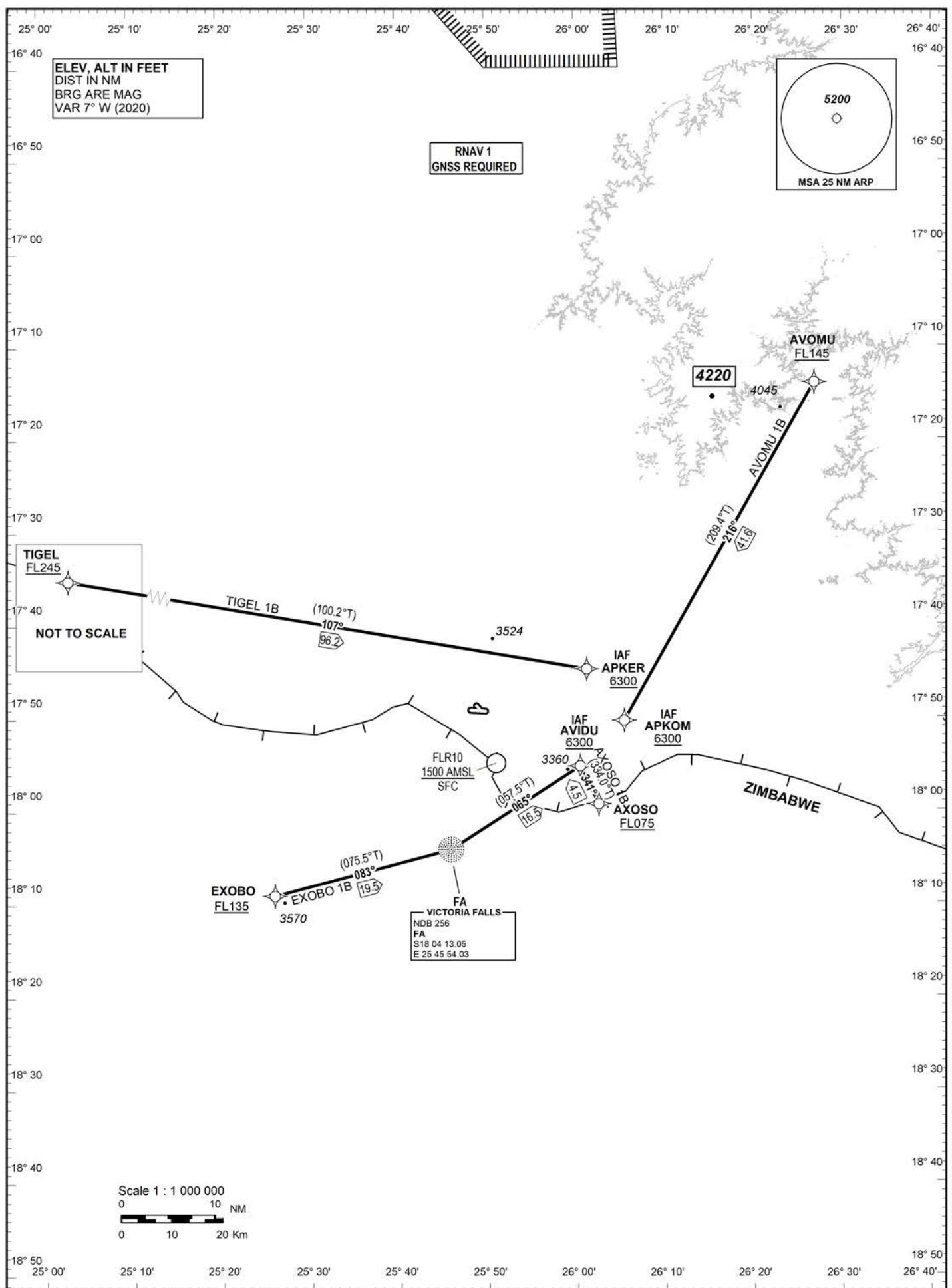
**TRANSITION ALTITUDE
5000**

HARRY MWAANGA NKUMBULA INTL/Livingstone

(FLHN)

(V.L.W.)
RNAV STAR RWY 28

AVOMU 1B, AXOSO 1B, EXOBO 1B, TIGEL 1B



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)****RNAV STAR RWY 28**

AVOMU 1B, AXOSO 1B, EXOBO 1B, TIGEL 1B

TABULAR DESCRIPTION**RNAV STAR RWY 28****AVOMU 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVOMU	-	-	-	-	-	+FL145	-	-	-	RNAV 1
020	TF	APKOM	-	216 (209.4)	-	41.6	-	+6300	-	-	-	RNAV 1

AXOSO 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXOSO	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	AVIDU	-	341 (334.0)	-	4.5	-	+6300	-	-	-	RNAV 1

EXOBO 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EXOBO	-	-	-	-	-	+FL135	-	-	-	RNAV 1
020	TF	FA	-	083 (075.5)	-	19.5	-	-	-	-	-	RNAV 1
030	TF	AVIDU	-	065 (057.5)	-	16.5	-	+6300	-	-	-	RNAV 1

TIGEL 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TIGEL	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	APKER	-	107 (100.2)	-	96.2	-	+6300	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
RNAV STAR RWY 28**

AVOMU 1B, AXOSO 1B, EXOBO 1B, TIGEL 1B

**WAYPOINT LIST
RNAV STAR RWY 28**

Waypoint Identifier	Coordinates	
APKER	S 17 44 50.7	E 026 01 15.2
APKOM	S 17 50 22.7	E 026 05 27.1
AVIDU	S 17 55 18.0	E 026 00 29.5
AVOMU	S 17 13 58.0	E 026 26 53.0
AXOSO	S 17 59 22.1	E 026 02 33.8
EXOBO	S 18 09 09.0	E 025 26 02.7
FA	S 18 04 13.1	E 025 45 54.0
TIGEL	S 17 28 12.0	E 024 22 00.0

ROUTING

NAME	TEXT
AVOMU 1B	From AVOMU track 216° to APKOM. MEL/MEA: AVOMU AT or ABOVE FL145, APKOM AT or ABOVE 6300'.
AXOSO 1B	From AXOSO track 341° to AVIDU. MEL/MEA: AXOSO AT or ABOVE FL075, AVIDU AT or ABOVE 6300'.
EXOBO 1B	From EXOBO track 083° to FA, track 065 to to AVIDU. MEL/MEA: EXOBO AT or ABOVE FL075, AVIDU AT or ABOVE 6300'.
TIGEL 1B	From TIGEL track 107° to APKER. MEL/MEA: TIGEL AT or ABOVE FL245, APKER AT or ABOVE 6300'.

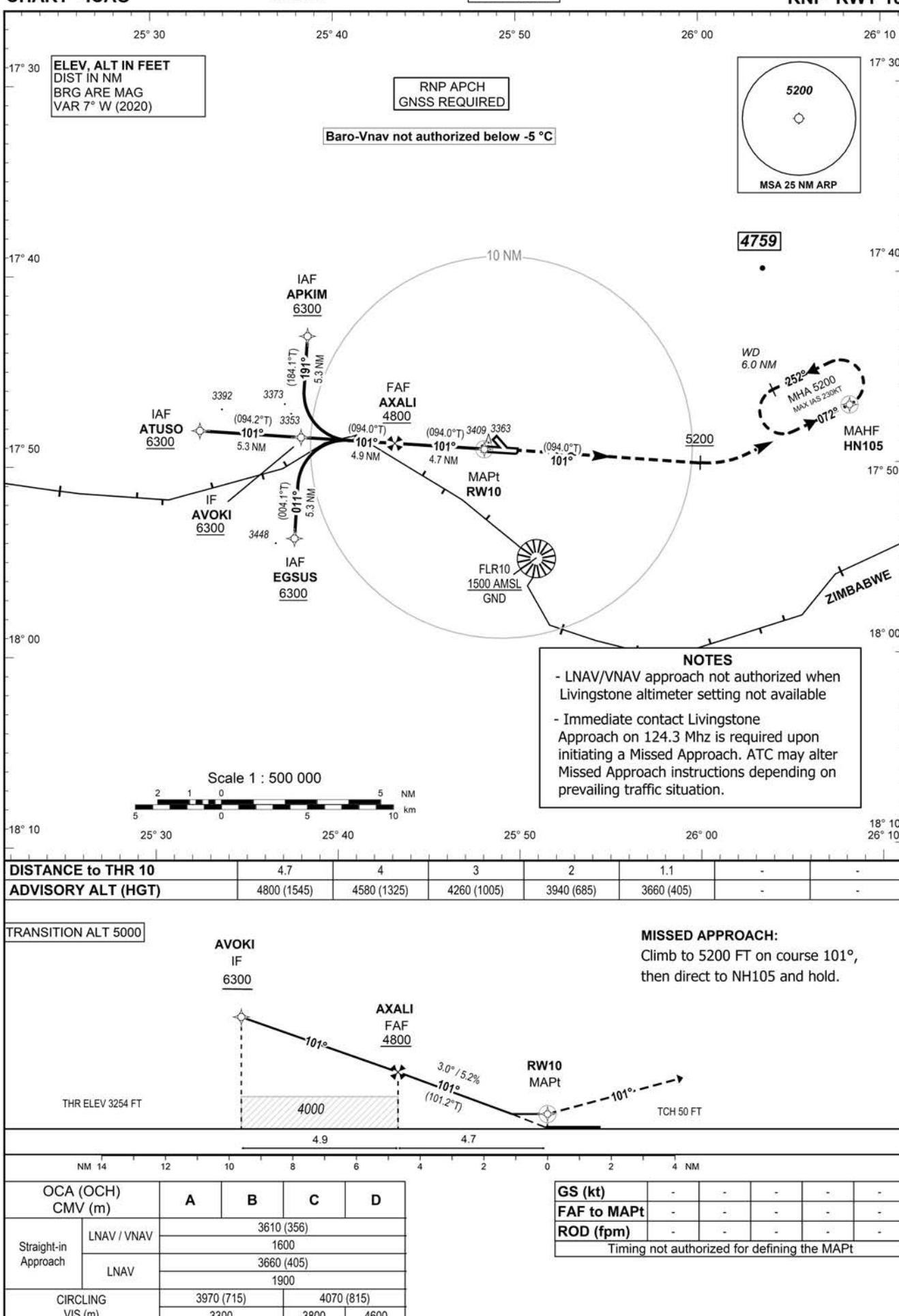
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3255 FT
HEIGHTS RELATED TO
AD ELEV

HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
RNP RWY 10

APP 124.300
TWR 118.100



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	EGSUS	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVOKI	-	011 / (004.1)	5.3	-	+6300	-	-	RNP APCH
010	IF	APKIM	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVOKI	-	191 / (184.1)	5.3	-	+6300	-	-	RNP APCH
010	IF	ATUSO	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVOKI	-	101 / (094.2)	5.3	-	+6300	-	-	RNP APCH
030	TF	AXALI	-	101 / (094.0)	4.9	-	+4800	-	-	RNP APCH
040	TF	RW10	Y	101 / (094.0)	4.7	-	@3304	-	-3.00 / 50	RNP APCH
050	CA	-	-	101 / (094.0)	-	-	+5200	-	-	RNP APCH
060	DF	HN105	Y	-	-	-	+5200	-	-	RNP APCH
070	HM	HN105	Y	072 / (065.0)	6.0	L	+5200	-230	-	RNP APCH

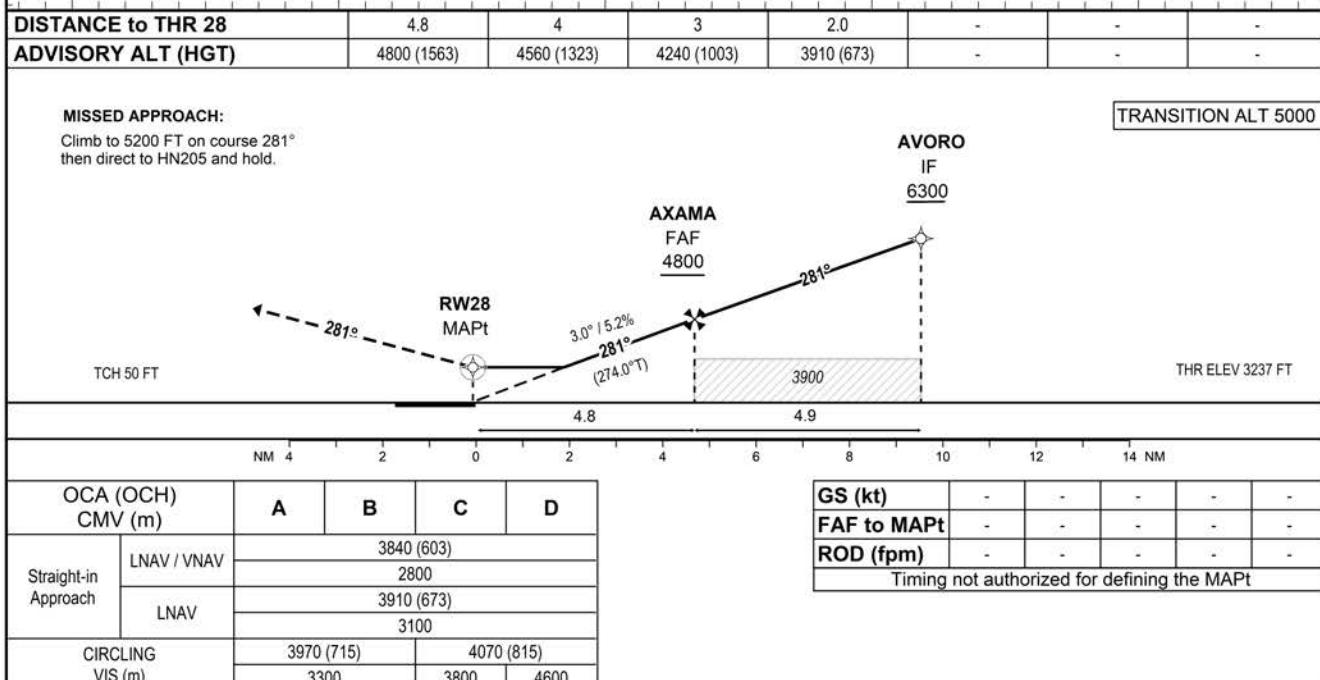
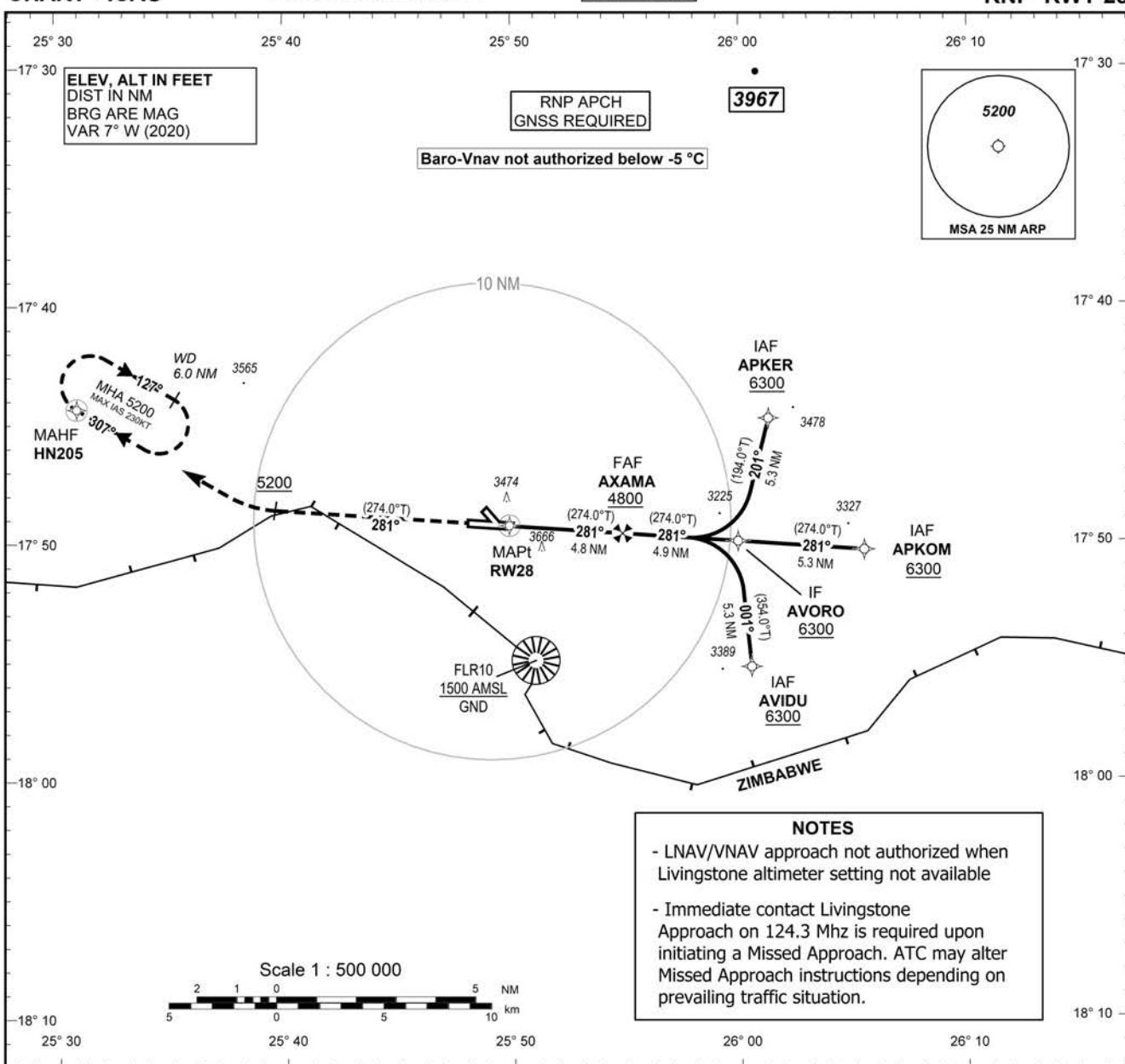
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APKIM	S 17 43 14.1 E 025 38 31.5
ATUSO	S 17 48 09.8 E 025 32 34.8
AVOKI	S 17 48 32.8 E 025 38 07.5
AXALI	S 17 48 53.7 E 025 43 16.2
EGSUS	S 17 53 51.6 E 025 37 43.5
HN105	S 17 44 24.6 E 026 13 53.6
RW10	S 17 49 13.48 E 025 48 10.89

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3255 FT
HEIGHTS RELATED TO
THR RWY 28 - ELEV 3237 FT

HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
RNP RWY 28

APP 124.300
TWR 118.100



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	APKOM	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVORO	-	281 / (274.0)	5.3	-	+6300	-	-	RNP APCH
010	IF	APKER	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVORO	-	201 / (194.0)	5.3	-	+6300	-	-	RNP APCH
010	IF	AVIDU	-	-	-	-	+6300	-	-	RNP APCH
020	TF	AVORO	-	001 / (354.0)	5.3	-	+6300	-	-	RNP APCH
030	TF	AXAMA	-	281 / (274.0)	4.9	-	+4800	-	-	RNP APCH
040	TF	RW28	Y	281 / (274.0)	4.8	-	@3287	-	-3.00 / 50	RNP APCH
050	CA	-	-	281 / (274.0)	-	-	+5200	-	-	RNP APCH
060	DF	HN205	Y	-	-	-	+5200	-	-	RNP APCH
070	HM	HN205	Y	307 / (300.1)	6.0	R	+5200	-230	-	RNP APCH

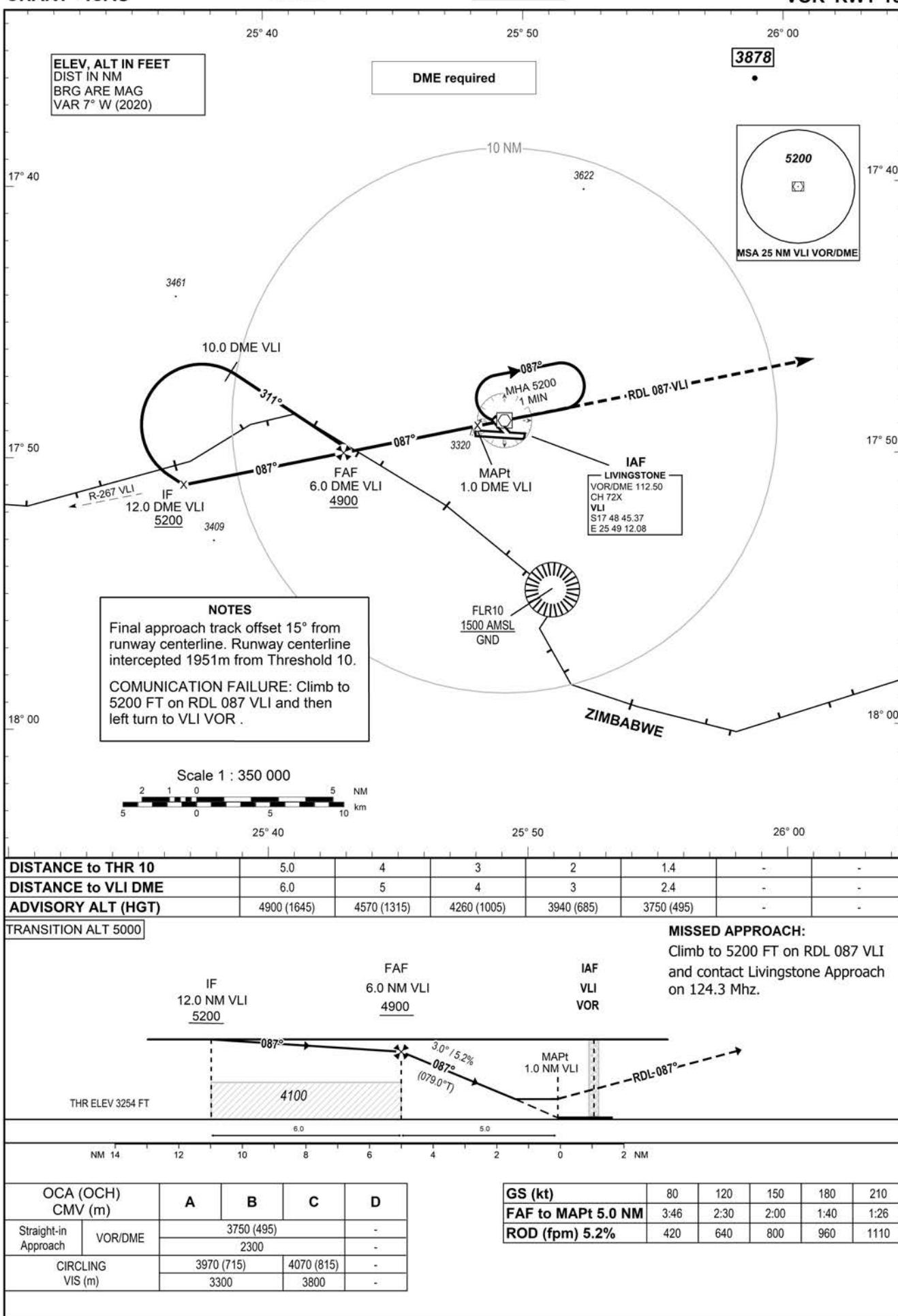
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APKER	S 17 44 50.7 E 026 01 15.2
APKOM	S 17 50 22.7 E 026 05 27.1
AVIDU	S 17 55 18.0 E 026 00 29.5
AVORO	S 17 50 00.5 E 025 59 54.6
AXAMA	S 17 49 40.1 E 025 54 50.2
HN205	S 17 41 08.5 E 025 25 06.5
RW28	S 17 49 20.26 E 025 49 52.08

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3255 FT
HEIGHTS RELATED TO
AD ELEV

HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
VOR RWY 10

APP 124.300
TWR 118.100



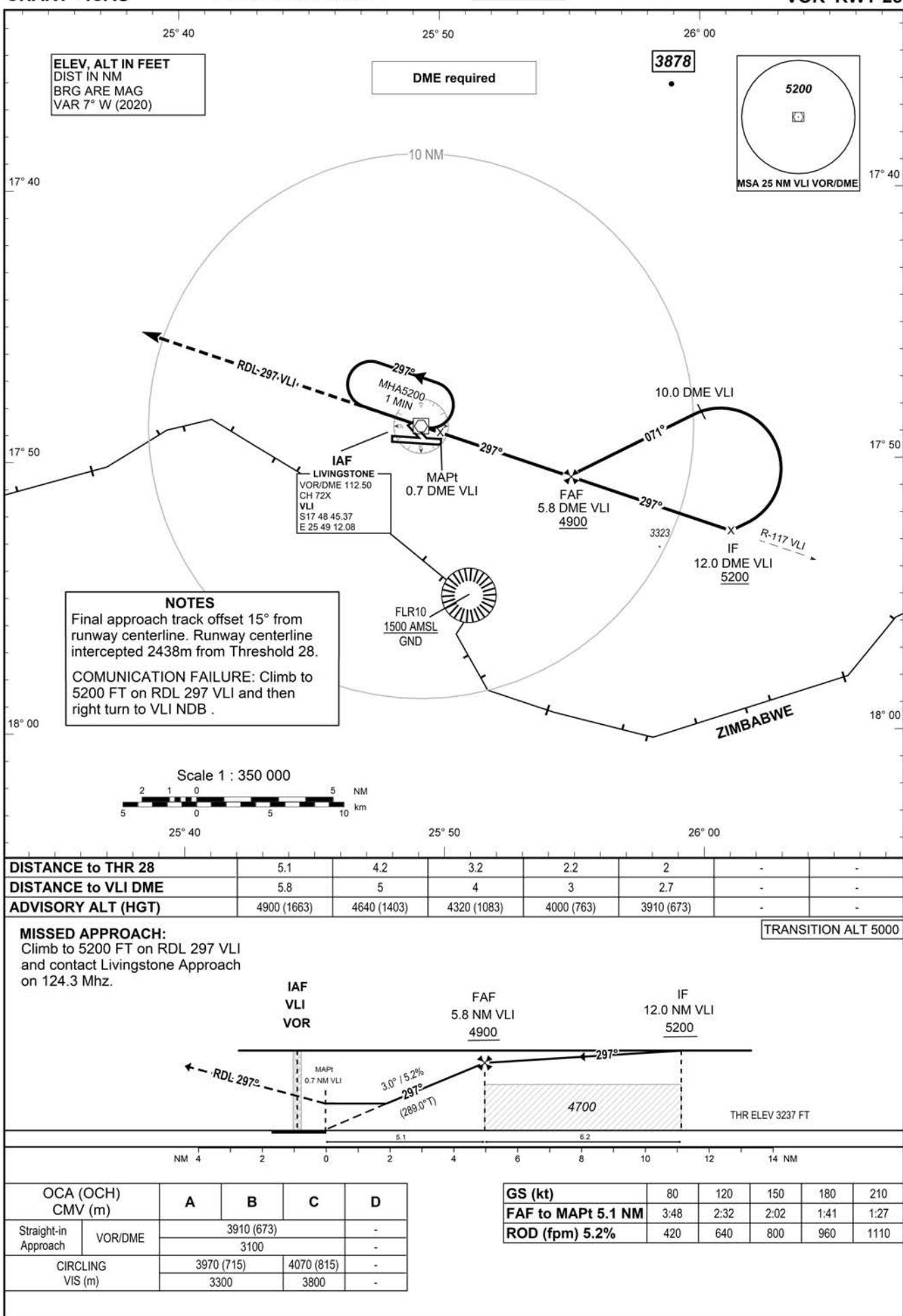
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THR RWY 28 - ELEV 3237 FT

HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
VOR RWY 28

APP 124.300
TWR 118.100

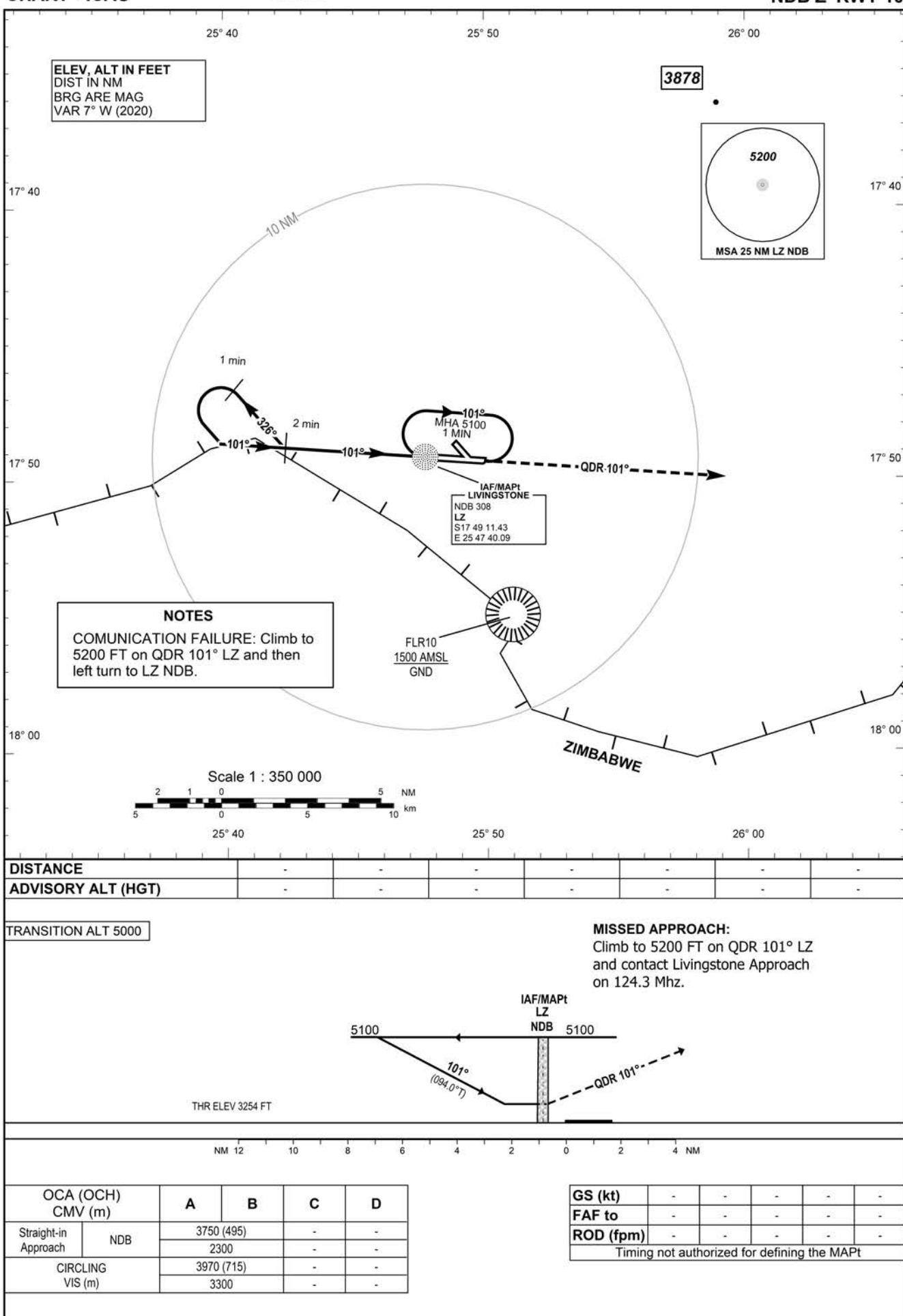


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AD ELEV

HARRY MWAANGA NKUMBULA INTL/Livingstone
(FLHN)
NDB Z RWY 10



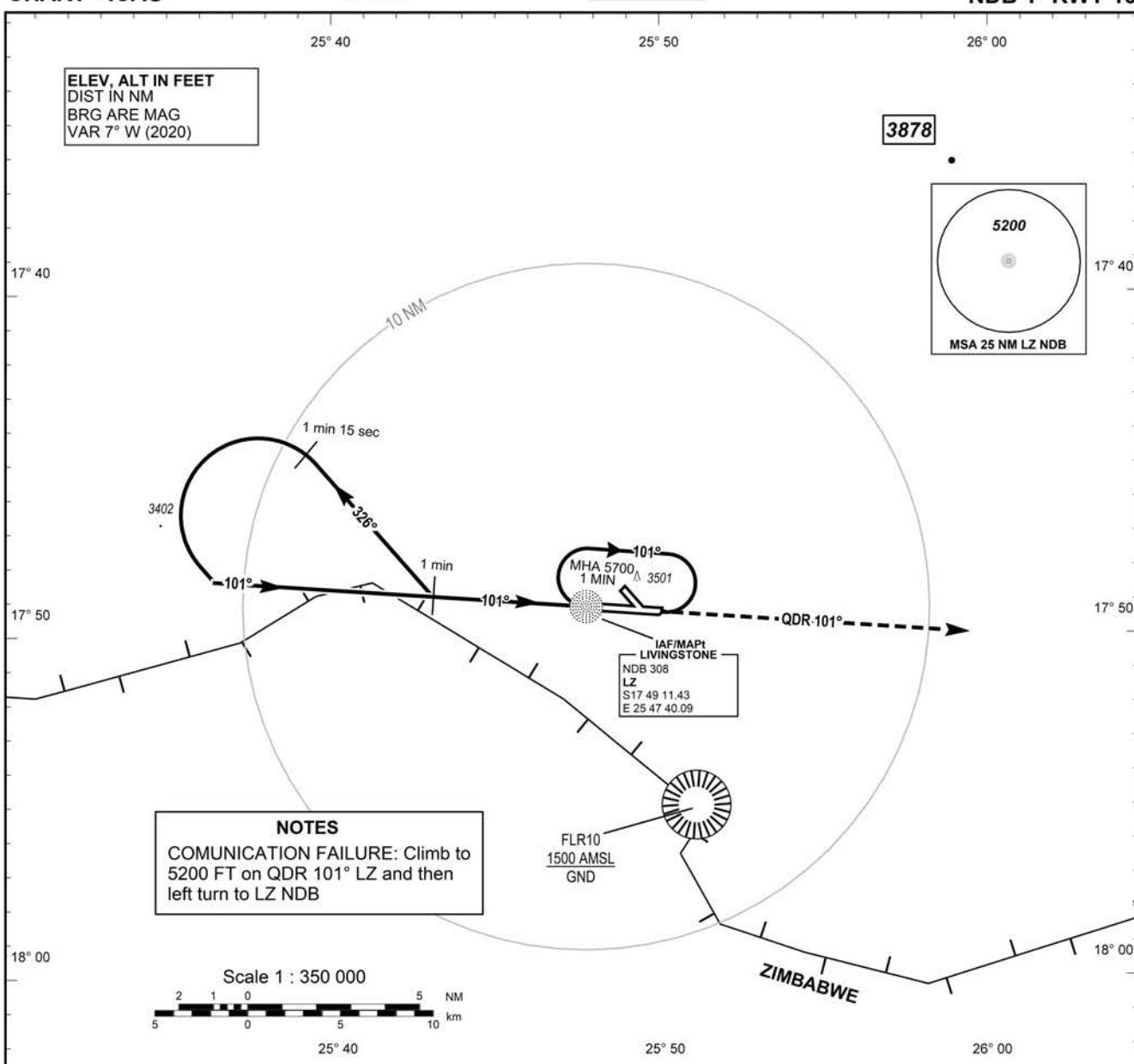
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(FLHN)
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APP 124.300
TWR 118.100



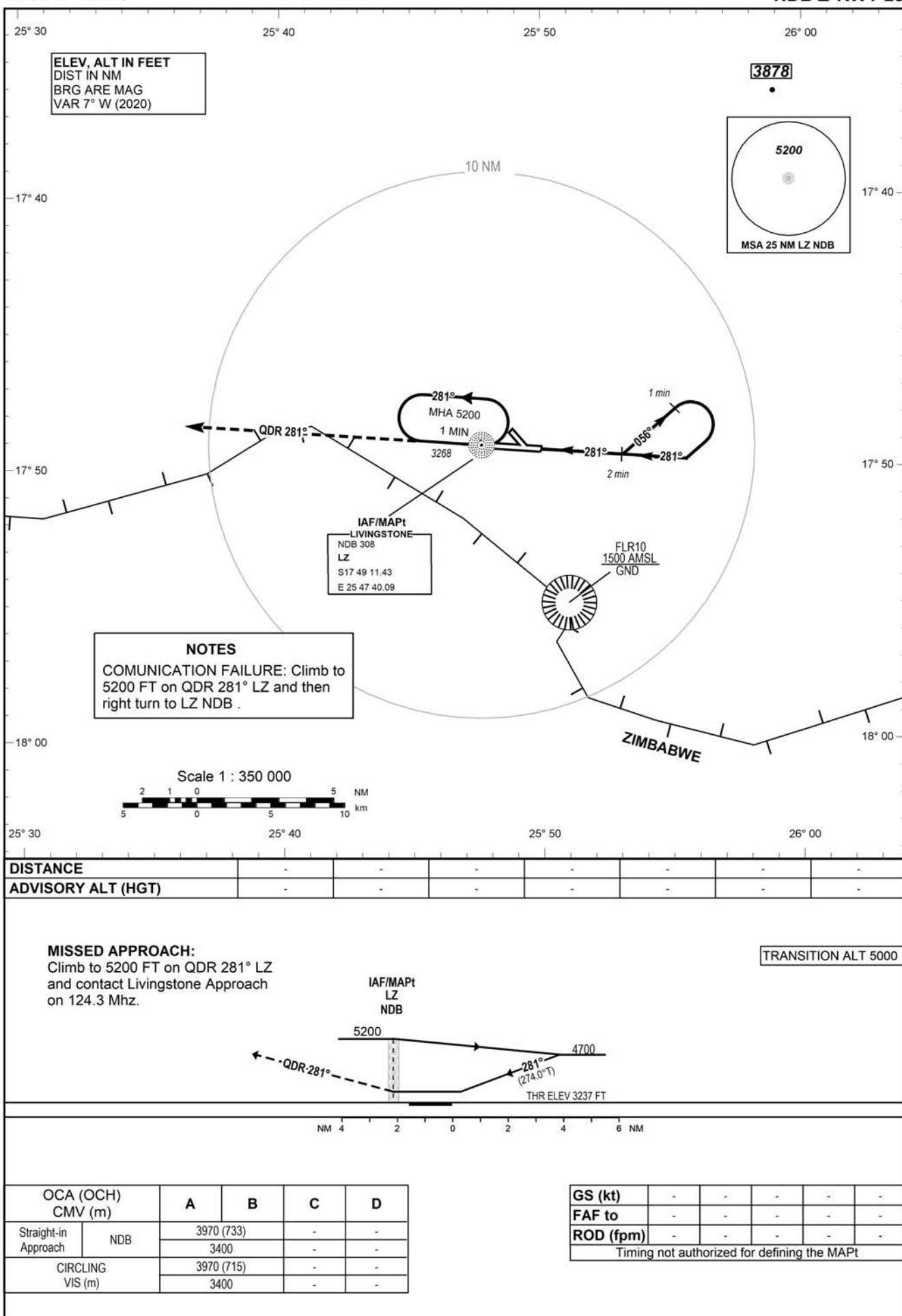
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(FLHN)
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APP 124.300
TWR 118.100



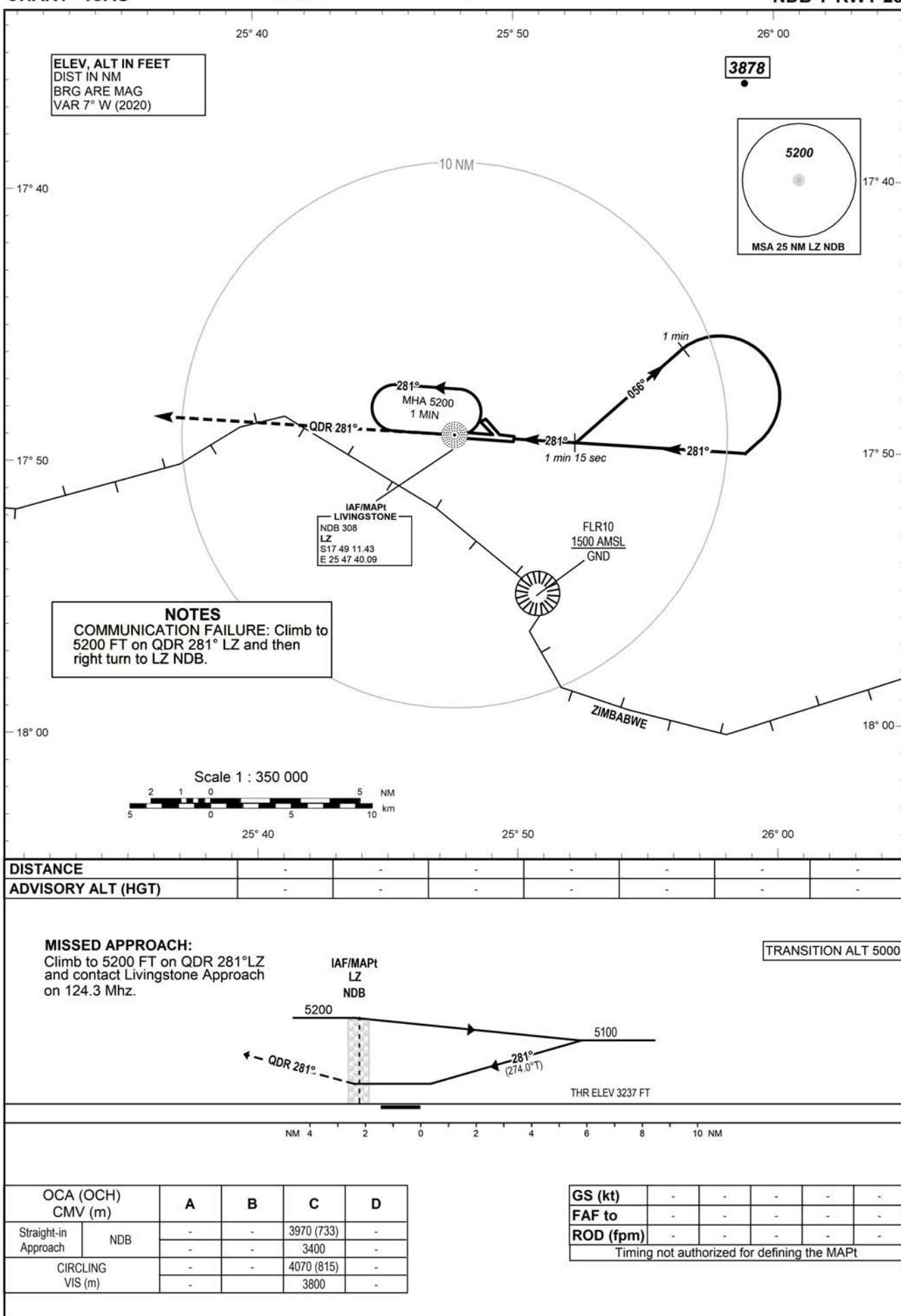
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(FLHN)
NDB Y RWY 28

APP 124.300
TWR 118.100



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FLKK AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLKK - KENNETH KAUNDA INTL

FLKK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 15°19'50.80" E 028°27'09.40" Nil
2	<i>Direction and distance from (city)</i>	11 NM NE from Lusaka post office
3	<i>Elevation/Reference temperature</i>	Elev: 3779 FT (1152 M) / T: 32° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W (2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited. Kenneth Kaunda International Airport, Box 30175 Lusaka Zambia Tel: 260-211-271044, 260-211-271248 Fax: 260-211-224777, 260-211-271781 AFS: FLKKZPZX eMail: zacl@zocl.aero Website: www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Helicopter operations to be guided by ATC.

FLKK AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	H24 Daily
2	<i>Customs and immigration</i>	H24 Daily
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLKK AD 2.4 HANDLING SERVICES AND FACILITIES

1	<i>Cargo-handling facilities</i>	Trucks 1.5-3.5 tonnes. Up to 10 tonnes handling possible, Mechanical forlifts, conveyors, cold rooms, cargo x-rays, customs clearance.
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS_LL , AVTUR Oil : All types normally available.
3	<i>Fuelling facilities/capacity</i>	2 mobile dispensers 11365 & 682 litres per minute
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Avble for A/craft up to 5 700 KG. Major repairs by arrangement with the AD
7	<i>Remarks</i>	Nil

FLKK AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	In the city
2	<i>Restaurants</i>	At AD and in the city
3	<i>Transportation</i>	Taxis and car hire from the AD
4	<i>Medical facilities</i>	First aid at AD, hospital in the city.
5	<i>Bank and Post Office</i>	At AD and in the City

6	<i>Tourist Office</i>	At AD and in the city : Zambia National Tourist Board Te: (260-211) 229087 – 90 Fax : (260 -211) 225174
7	<i>Remarks</i>	Nil

FLKK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 9
2	<i>Rescue equipment</i>	YES; Three (3) fire tenders, 2 Ambulances, 17 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLKK AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLKK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLKK Apron	Concrete	PCN 59/R
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLKK Twy	23 M	Other surface
				PCN 59/F
3	<i>Altimeter checkpoint location and elevation</i>	Location: At apron Elevation: 3771 FT		
4	<i>VOR/INS checkpoints</i>	VOR: Holding bays to RWY and THR RWY 10 INS: Aprons		
5	<i>Remarks</i>	Nil		

FLKK AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Taxiing guidance signs at all intersections with TWY and RWY and at all holding positions. Guide lines at apron. Nose-in guidance at aircrafts stands. Letter coded entry gates - Alpha, Bravo, and Charlie into and out of apron.
2	<i>RWY and TWY markings and LGT</i>	RWY: Designation, TDZ, Aiming Point, centre line, RWY side strip, marked and lighted. TWY: Centre line, holding positions and at all TWY/RWY intersections, marked and lighted.
3	<i>Stop bars</i>	At all holding positions, TWY/RWY intersections, marked and lighted.
4	<i>Remarks</i>	Nil

FLKK AD 2.10 AERODROME OBSTACLES

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
10/APCH	FLKK_3833 Elev: 1162.807 m Unlighted	S 15°19'50.09" E 028°25'50.69"	Nil

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
10/APCH	FLKK_3834 Elev: 1163.017 m Unlighted	S 15°19'50.30" E 028°25'50.72"	Nil
10/APCH	FLKK_3836 Elev: 1161.41 m Unlighted	S 15°19'50.08" E 028°25'51.40"	Nil
10/APCH	FLKK_476 Elev: 1159.881 m Unlighted	S 15°19'37.71" E 028°25'51.00"	Nil
10/APCH	FLKK_477 Elev: 1160.596 m Unlighted	S 15°19'37.77" E 028°25'49.79"	Nil
10/APCH	FLKK_478 Elev: 1162.165 m Unlighted	S 15°19'37.19" E 028°25'50.05"	Nil
10/APCH	FLKK_480 Elev: 1165.737 m Unlighted	S 15°19'48.66" E 028°25'45.82"	TotalAreaofObjectis44236.085m ² ,asthe-maximumsizeoftheObstacle,withthispointtheHighest-PointofObject
10/APCH	FLKK_485 Elev: 1163.872 m Unlighted	S 15°19'50.53" E 028°25'42.17"	Nil
10/APCH	FLKK_526 Elev: 1174.573 m Unlighted	S 15°19'51.61" E 028°25'25.01"	Nil
28/APCH	FLKK_418 Elev: 1150.962 m Unlighted	S 15°20'03.68" E 028°28'29.17"	Nil
28/APCH	FLKK_423 Elev: 1150.731 m Unlighted	S 15°19'51.44" E 028°28'31.07"	Nil
28/APCH	FLKK_428 Elev: 1147.262 m Unlighted	S 15°20'03.24" E 028°28'23.91"	Nil
<i>In circling area and at AD</i>			
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>	
a	b	c	

NOTE: Nil

FLKK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Kenneth Kaunda International Airport
2	<i>Hours of service MET Office outside hours</i>	H24
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport 9, 18 HR

4	<i>Trend forecast Interval of issuance</i>	Trend Metar, SPECI 2HR
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Charts, abbreviated plain language text English
7	<i>Charts and other information available for briefing or consultation</i>	Cross section form of forecasts, charts and tabular forms of documentation for both International and domestic flights.
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	FLKK MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

FLKK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
10	095°(True) 101°(Mag)	3937 x 46	PCN 59/F SWY: Nil	S 15°19'45.07" E 028°26'03.66" GUND: Nil	THR 3779 FT (1152 M)	
28	275°(True) 280°(Mag)	3937 x 46	PCN 59/F SWY: Nil	S 15°19'56.57" E 028°28'15.12" GUND: Nil	THR 3746 FT (1142 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 10: +1.2%	305 x 46	915 x 306	6614 x 306	92 x 90	Nil	Nil
For Rwy 28: +1.2%	152 x 46	1737 x 306	6614 x 306	92 x 90	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
10						
28						

FLKK AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
10	3937	4852	4242	3937	
28	3937	5674	4089	3937	

FLKK AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	CAT1 high intensity lights 900 M CALVERT	Green high intensity lights	PAPI 3°	Nil	30 M White high intensity lights 3962 m Directional	60 M White high intensity lights Omni-directional	Red	Nil	Nil
28	CAT II Simple approach system high intensity lights 420 M	Green high intensity lights	PAPI 3°	Nil	30 M White high intensity lights 3962 m Directional	60 M White high intensity lights Omni-directional	Red	Nil	Nil

FLKK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	IBN : At Tower Building, steady Red/IBN H24: H24
2	LDI location and LGT Anemometer location and LGT	LDI: Nil Anemometer: Nil
3	TWY edge and centre line lighting	Taxiway centre line: FLKK Twy - TWY Illuminated sign boards A,B,C at Entrance to RWY and Apron
4	Secondary power supply/switch-over time	Secondary power supply to all lighting at AD. Switch-overtime of within 15 seconds
5	Remarks	Nil

FLKK AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

FLKK AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	LUSAKA CTR Area bounded by lines joining points S 14°54'32" E 028°03'59" then along the clockwise arc of a circle of 18NM radius centred on S 14°59'00" E 028°22'00" to S 14°50'42" E 028°38'36"; S 15°09'15" E 028°48'45" then along the clockwise arc of a circle of 25NM radius centred on S 15°19'36" E 028°25'12" to S 15°14'43" E 027°59'50" to point of origin.
2	Vertical limits	GND to 7500 FT AMSL
3	Airspace classification	C
4	ATS unit call sign Language(s)	LUSAKA APP, English Kenneth Kaunda TWR, English
5	Transition altitude	6000 FT (1829 M)

6	<i>Hours of applicability</i>	H24
7	<i>Remarks</i>	Nil

FLKK AD 2.18 ATS COMMUNICATION FACILITIES

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	SATVOICE	Logon address	<i>Remarks</i>
1	2	3	4	5	6	7
ACC	Lusaka Area	120.5 MHZ	H24	Nil	Nil	
Approach Control	Lusaka Approach	121.3 MHZ	H24	Nil	Nil	VDF available
Approach Radar	Lusaka Radar Approach	120.1 MHZ	H24	Nil	Nil	
HF	-	6586 KHZ 6915 KHZ 6952 KHZ 8888 KHZ 8903 KHZ	H24	Nil	Nil	
Fuelling	Air Puma	131.7 MHZ	H24	Nil	Nil	
Tower Control	Kenneth Kaunda Tower	118.1 MHZ	H24	Nil	Nil	VDF avbl. in emergency
SATPHONE			H24	Nil	Nil	+870 776 124 495

FLKK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
1	2	3	4	5	6	7
NDB (05° W)	LE	325.00 KHZ	H24	S 15°20'16.26" E 028°31'59.76"	—	Power output 1kw Coverage 200NM
NDB	LN	338.00 KHZ	H24	S 14°58'52.62" E 028°22'26.34"	—	Power output 100w Coverage 50NM
LOC 10 ILS CAT II	LO	110.30 MHZ	H24	S 15°19'57.99" E 028°28'34.47"	—	280° MAG/0.26 NM TO THR RWY 28 Frequency 110.300Mhz H 24 (6° W/1994)
GP 10 ILS CAT II	LO	335.00 MHZ	H24	S 15°19'57.99" E 028°28'34.47"	—	280° MAG/0.26 NM TO THR RWY 28 Frequency 110.300Mhz H 24 (6° W/1994)
NDB (05° W)	LW	386.00 KHZ	H24	S 15°19'25.08" E 028°22'15.78"	—	Power output 125w Coverage 60NM

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB	LY	235.00 KHZ	H24	S 15°29'36.00" E 028°14'37.98"	—	Power output 125w Coverage 60NM
VOR/DME (05° W)	VLS	113.50 MHZ (CH82X)	H24	S 15°19'40.82" E 028°25'15.40"	3804 FT	100 MAG 0.78NM TO THR RWY 10 Channel 82X co-axially co-located with DVOR
DME 10 ILS CAT II				S 15°19'57.99" E 028°28'34.47"	NIL	280° MAG/0.26 NM TO THR RWY 28 Frequency 110.300Mhz H 24 (6° W/1994)

FLKK AD 2.20 LOCAL AERODROME REGULATIONS

FLKK AD 2.20.1 Airport regulations

At Kenneth Kaunda International Airport a number of local regulations apply. These are:-

- a. Information about aircraft stands including visual docking guidance systems;
- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Marshaller assistance
- d. Use of engine power exceeding idle power;
- e. Engine start-up and use of APU
- f. Fuel spillage; and
- g. Precautions during extreme weather conditions.

Marshaller assistance can be requested and further information about the regulations can be obtained from the Airport Manager or Surface Movement Control (SMC).

When local regulation is of importance for the safe operation of the aircraft on the apron, the information may be given by Airport Manager "Local Regulations" may be requested in writing from

Airport Manager
Kenneth Kaunda International Airport
P.O Box 30175
Lusaka 10101

FLKK AD 2.20.2 Taxiing

Arriving aircraft will be allocated a stand number by the TWR. General aviation aircraft will have to use the general aviation parking area.

Departing IFR flights shall contact the Kenneth Kaunda TWR to obtain ATC clearance before commencing taxiing. Request for ATC clearance may take place at the earliest 10 minutes prior to engine start-up and Frequency 118.10 MHz shall be used.

Departing aircraft shall obtain taxi instruction from Kenneth Kaunda TWR.

FLKK AD 2.20.3 Parking area for small aircraft (general Aviation)

General aviation aircraft shall be guided by marshallers to the parking area for small aircraft.

FLKK AD 2.20.4 Parking area for helicopters

Helicopters will be guided by a marshaller or TWR on the stand.

FLKK AD 2.20.5 Apron — taxiing during winter conditions

Taxiways in the apron area are not equipped with centre line lights. Taxiway centre line markings, are visible all the time.

FLKK AD 2.20.6 Taxiing — limitations

Tight turning angle onto exit Gate B from stands 4 and 6 to taxiway Delta for heavy aircraft. Taxiing information will be given to each aircraft from the TWR.

FLKK AD 2.20.7 School and training flights - Technical test flights — use of runways

School and training flights may only be made after permission has been obtained from ATS. Permission will only be granted for such flights subject to departing and arriving traffic density.

FLKK AD 2.20.8 Helicopter traffic — limitation

Non-scheduled public air traffic with helicopters is permitted only after approval from the Lusaka ATSU. Any contact concerning the above shall be made via the handling company or directly to the Airport Manager during the hours of service and, if possible, not later than the day before the flights is to be carried out.

Any request for approval of traffic shall contain the following information:

- a. Owner/operator
- b. Type of helicopter, registration/call sign
- c. Date, arrival time/departure time, destination(s)
- d. Requested altitude
- e. ATS route used
- f. ATS serviceable communication

FLKK AD 2.20.9 Removal of disabled aircraft from runways

When an aircraft is disabled on the runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General of Civil Aviation Authority. If a disabled aircraft is not removed as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority or at the owner's or user's expense.

FLKK AD 2.21 NOISE ABATEMENT PROCEDURES

TO BE DEVELOPED.

FLKK AD 2.22 FLIGHT PROCEDURES

FLKK AD 2.22.1 General

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

Unless permission has been obtained from an ATC unit, all flights within the Lusaka FIR shall be conducted within and in accordance with established ATS routes.

FLKK AD 2.22.2 Procedures for flights within Lusaka UTA

The inbound, transit and outbound routes shown on charts may be varied at the discretion of ACC. En-route clearance shall be given under the conditions described below.

a.

- A flight plan shall be submitted for the flight concerned
- b. En-route clearance shall be obtained from Lusaka ACC
 - c. Deviation from the en-route clearance may be made when prior permission has been obtained
 - d. Two-way radio contact shall be established with ACC before the flight takes place in the UTA
 - e. Two-way radio communication shall be maintained with ACC or nearest ATS Unit on the frequency prescribed
 - f. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2
 - g. The pilot —in- command shall be the holder of an International VHF licence.

FLKK AD 2.22.3 Procedures for IFR flights

The inbound transit and outbound routes shown on charts may be varied at the discretion of ATS. If necessary, in the case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

FLKK AD 2.22.4 Radar procedures within Lusaka TMA and CTR

Normally, aircraft will be vectored and sequenced from a circle 50NM radius centered at VLS VOR/DME to the appropriate final approach track (ILS. Locator, VOR/DME), so as to ensure an expeditious flow of traffic. Radar vectors and flight levels/altitudes will be issued as required, for spacing and separating aircraft so that the correct landing intervals are maintained, taking into account aircraft characteristics.

Radar vectoring charts are not published since the instrument approach procedures and altitude ensure that adequate terrain clearance exists at all times until the point where the pilot will resume navigation on final approach or circuit it.

FLKK AD 2.22.5 Surveillance Radar Approaches

NIL

FLKK AD 2.22.6 Communication failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

Flights departing from unmanned aerodromes within the TMA and CTR shall obtain en-route ATC clearance from Lusaka Approach control or Lusaka ACC immediately before leaving the aerodrome traffic zone.

FLKK AD 2.22.7 Procedures for VFR flights within Lusaka TMA and CTR

Provided that the VFR conditions shall so permit, ATC clearance for VFR flights will be given under the conditions described below.

- 1. flight plan . Containing items 7 to 18 and shall be submitted.
- 2. ATC clearance shall be obtained 5 minutes before the aircraft enters the Control Zone or Control Area.
- 3. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
- 4. Deviation from the ATC clearance may only be made when prior permission has been obtained or under emergency situation
- 5. The flight shall be conducted with vertical visual reference to the ground unless the flight can be conducted in accordance with the Instrument Flight Rules.
- 6. Two-way radio communication shall be maintained on the frequency prescribed. Information about the appropriate frequency can be obtained from Lusaka Approach.
- 7. The pilot-in-command shall be the the holder of an International VHF Licence.

NOTE: ATC clearance is intended only to provide separation between IFR and VFR flights

FLKK AD 2.23 ADDITIONAL INFORMATION

FLKK AD 2.23.1 Bird concentrations in the vicinity of the airport

Migratory birds are usually present at the aerodrome from late October to April during the country's wet season. Cattle egrets cross the approach path of runway 10 at less than 5000 feet between 15:00 UTC and 18:00 UTC almost all year round. During the above periods pilots of aircraft are advised where the design limitations of aircraft installation permit, to operate landing lights in flight, within the terminal area and during take-off, approach-to-land and climb and descent procedures.

As far as practicable, Aerodrome Control will inform pilots of this bird activity and the estimated heights AGL. As a control measure, runway sweeps are conducted daily before landing and takeoff on aircrafts.

The aircraft engine noise is not always effective in the clearing of these birds from the landing area, pilots should exercise extreme caution. Prominent birds around the airport are as tabulated below.

SPECIES	STATUS
Lapwing	Resident
Lark	Resident
Night Jar	Migrant
Swallows	Migrant
Guinea Fowl	Resident
Black Bellied Bustard	Resident
Kites	Migrant
Pied Crow	Resident
Heron	Possible migrant
Ban Swallow	Migrant/Resident
Abdim's Storks	Migrant
Owls	Resident
Cattle Egret	Migrant/Resident

FLKK AD 2.23.2 Local Flying Restrictions

Only aircraft equipped with serviceable VHF radio will be accepted at this airport.

Aircraft flying in Lusaka circuit are restricted to maximum altitude of 5000FT on Lusaka QNH. Circuit traffic on the right hand traffic pattern to remain north of the Great East Road and clear of Airforce Base.

Blasting operations on the right hand at 152200S 0282500E. Monday to Friday between 1200 and 1430 UTC.

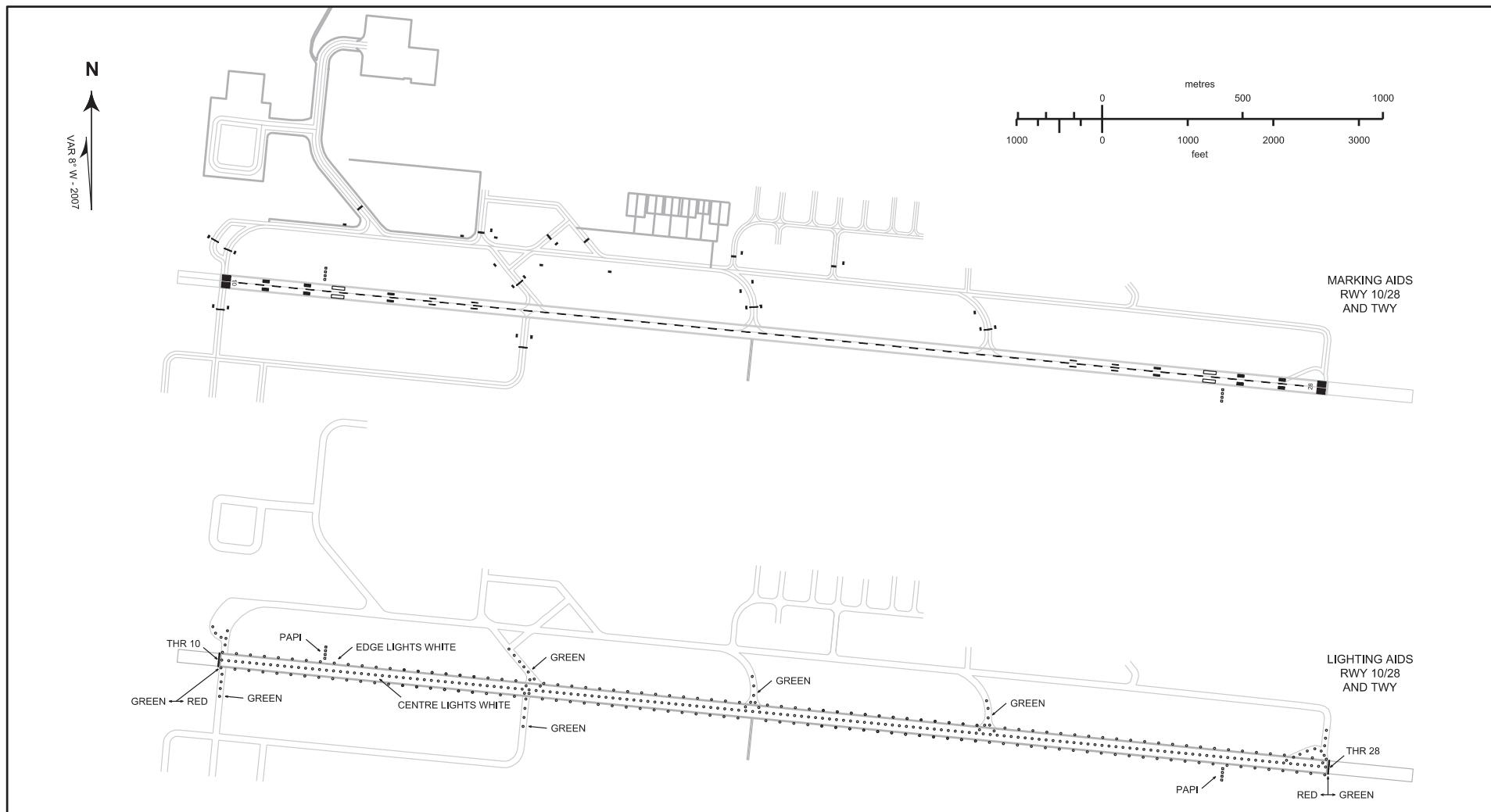
FLKK AD 2.24 CHARTS RELATED TO AN AERODROME

Charts	Pages
AERODROME CHART - ICAO	AD 2 FLKK 2 - 1
APRON PARKING DIAGRAM.pdf	AD 2 FLKK 2 - 3
AERODROME GROUND MOVEMENT CHART - ICAO	AD 2 FLKK 3 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLKK 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLKK 6 - 1
TERMINAL AREA CHART - ICAO DEPARTURE AND TRANSIT ROUTES - TMA	AD 2 FLKK 9 - 1
Standard Departure Chart — Instrument — ICAO RNP SID RWY 10	AD 2 FLKK 10 - 1
Standard Departure Chart — Instrument — ICAO RNP SID RWY 28	AD 2 FLKK 10 - 5
Standard Arrival Chart — Instrument — ICAO RNP STAR RWY 10	AD 2 FLKK 12 - 1
Standard Arrival Chart — Instrument — ICAO RNP STAR RWY 28	AD 2 FLKK 12 - 5
Instrument Approach Chart — ICAO RNP RWY 10	AD 2 FLKK 14 - 1

<i>Charts</i>	<i>Pages</i>
Instrument Approach Chart — ICAO RNP RWY 28	AD 2 FLKK 14 - 3
Instrument Approach Chart — ICAO ILS Z RWY 10	AD 2 FLKK 14 - 5
Instrument Approach Chart — ICAO ILS Y RWY 10	AD 2 FLKK 14 - 7
Instrument Approach Chart — ICAO VOR RWY 10	AD 2 FLKK 14 - 9
Instrument Approach Chart — ICAO VOR RWY 28	AD 2 FLKK 14 - 11
Instrument Approach Chart — ICAO NDB Z RWY 10	AD 2 FLKK 14 - 13
Instrument Approach Chart — ICAO NDB Y RWY 10	AD 2 FLKK 14 - 15
Instrument Approach Chart — ICAO NDB X RWY 10	AD 2 FLKK 14 - 17
Instrument Approach Chart — ICAO NDB W RWY 10	AD 2 FLKK 14 - 19
Instrument Approach Chart — ICAO NDB Z RWY 28	AD 2 FLKK 14 - 21
Instrument Approach Chart — ICAO NDB Y RWY 28	AD 2 FLKK 14 - 23
Instrument Approach Chart — ICAO NDB X RWY 28	AD 2 FLKK 14 - 25
Instrument Approach Chart — ICAO NDB W RWY 28	AD 2 FLKK 14 - 27

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LUSAKA / Kenneth Kaunda INTL
RWY 10/28

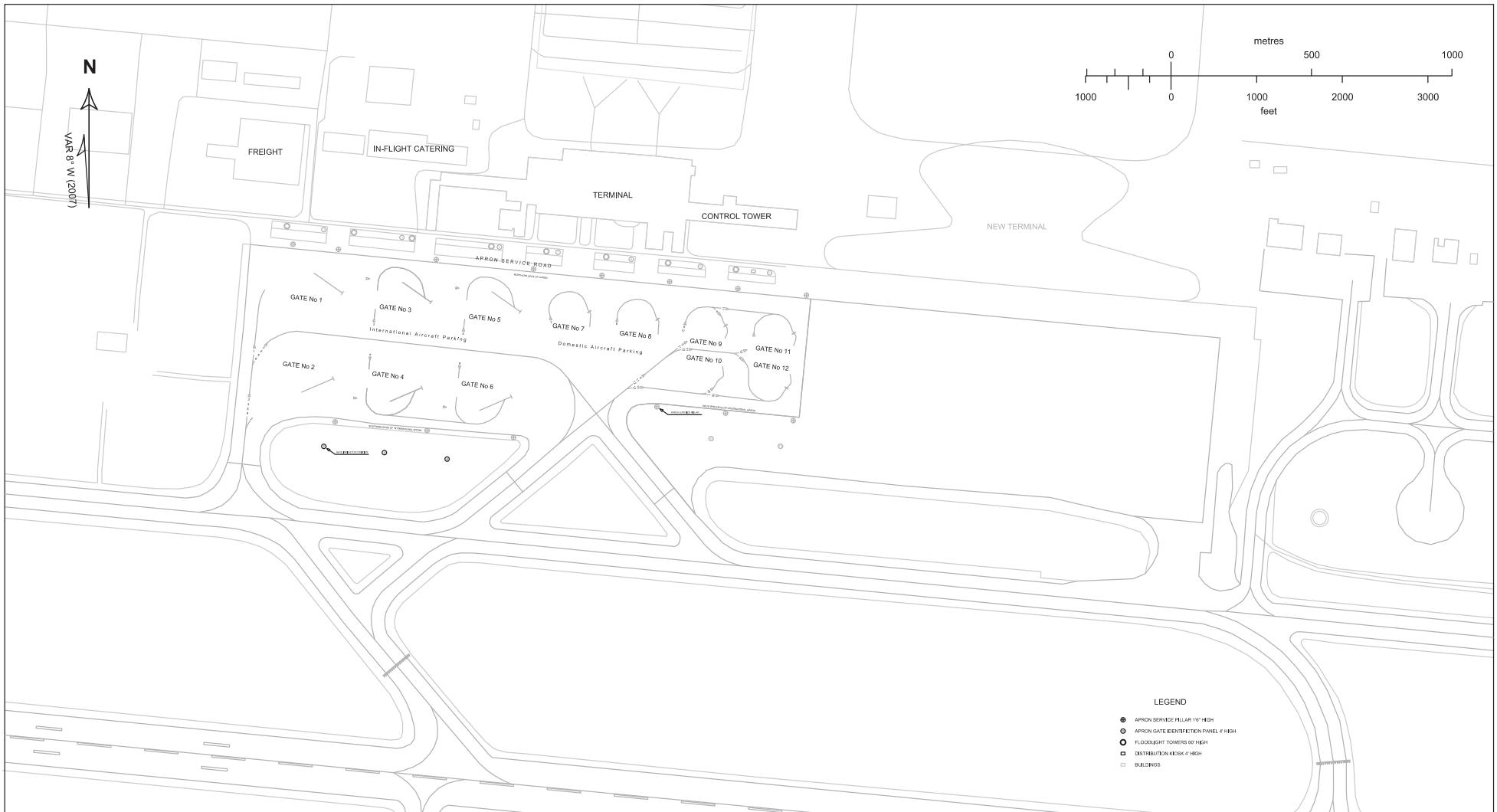


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AIRCRAFT PARKING/
DOCKING CHART - ICAO

APRON ELEV
3771 FT

LUSAKA / Kenneth Kaunda INTL

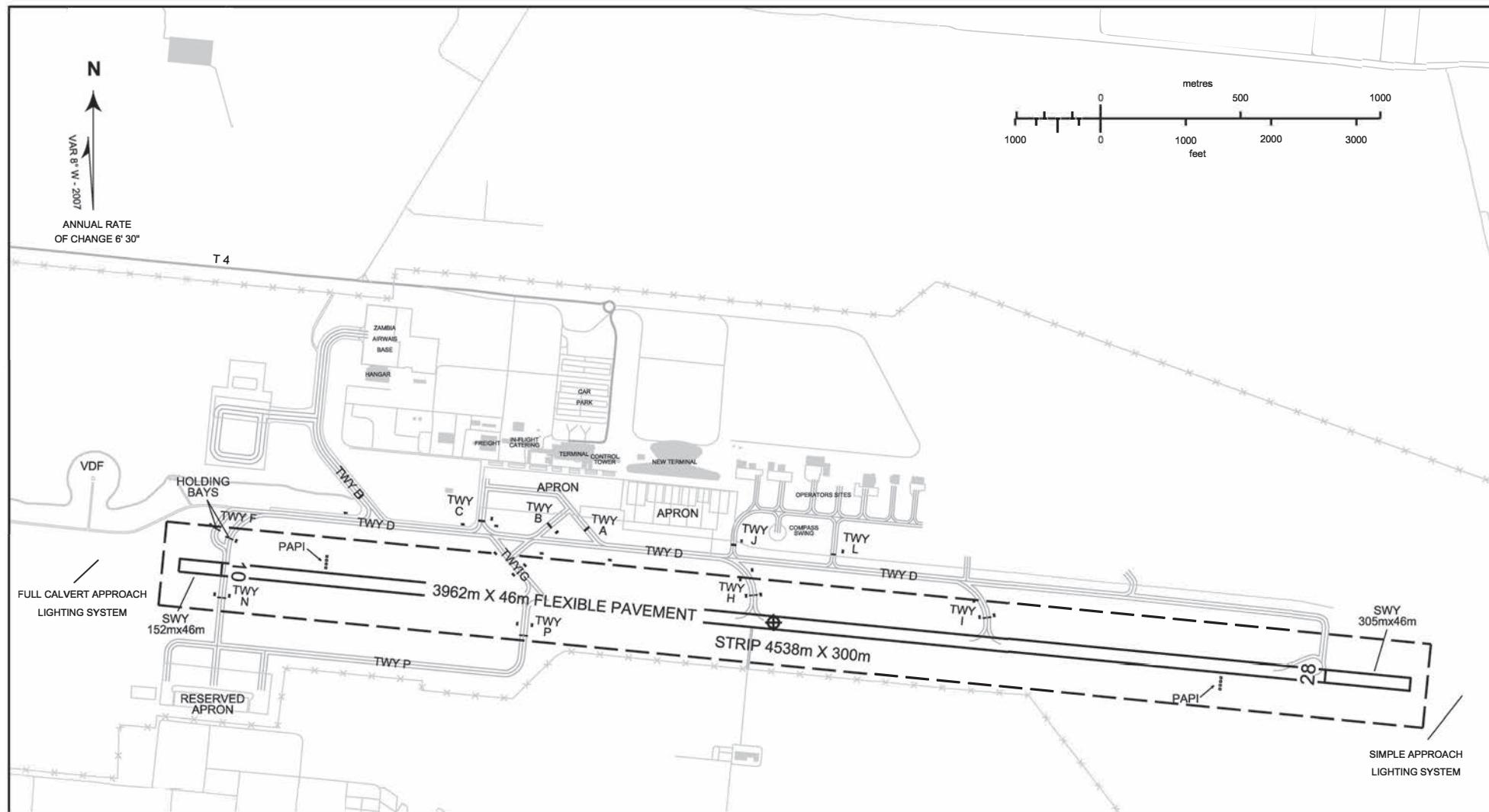


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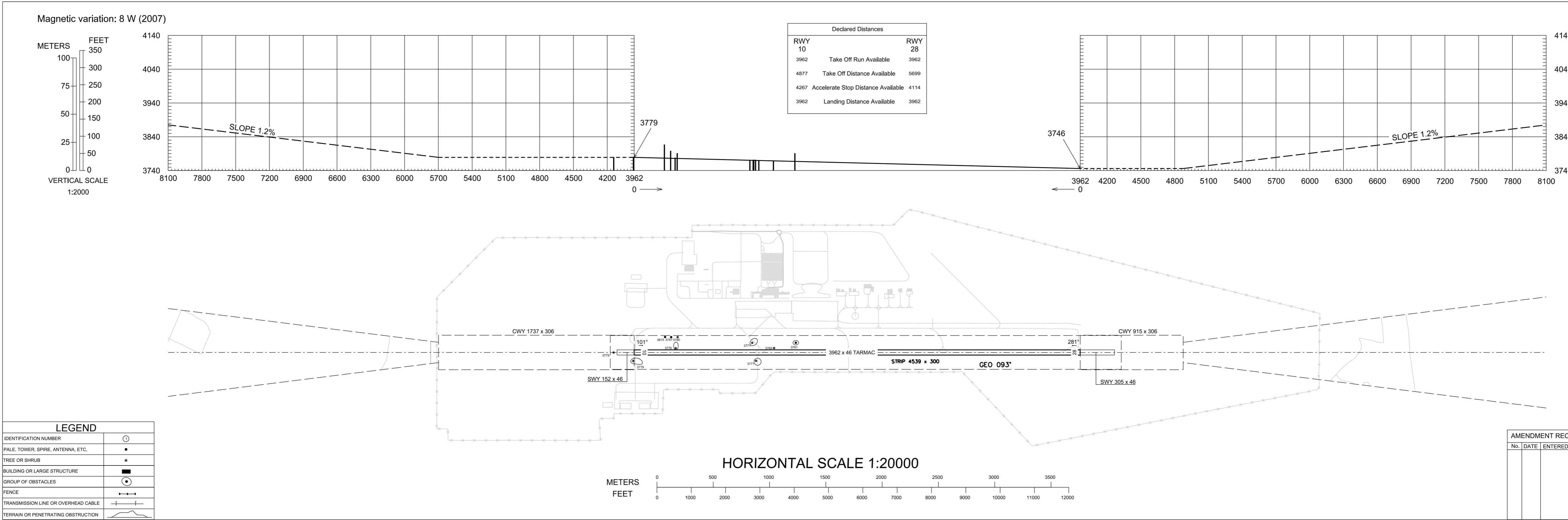
GROUND MOVEMENT
CHART - ICAO

15° 19' 51" S
028° 27' 09" E
3779 FT


LUSAKA / Kenneth Kaunda INTL
RWY 10/28



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Dimensions in metres
Elevations in feetAERODROME OBSTACLE CHART - ICAO
TYPE A (Operating Limitations)LUSAKA / Kenneth Kaunda INTL
FLKK - RWY 10/28

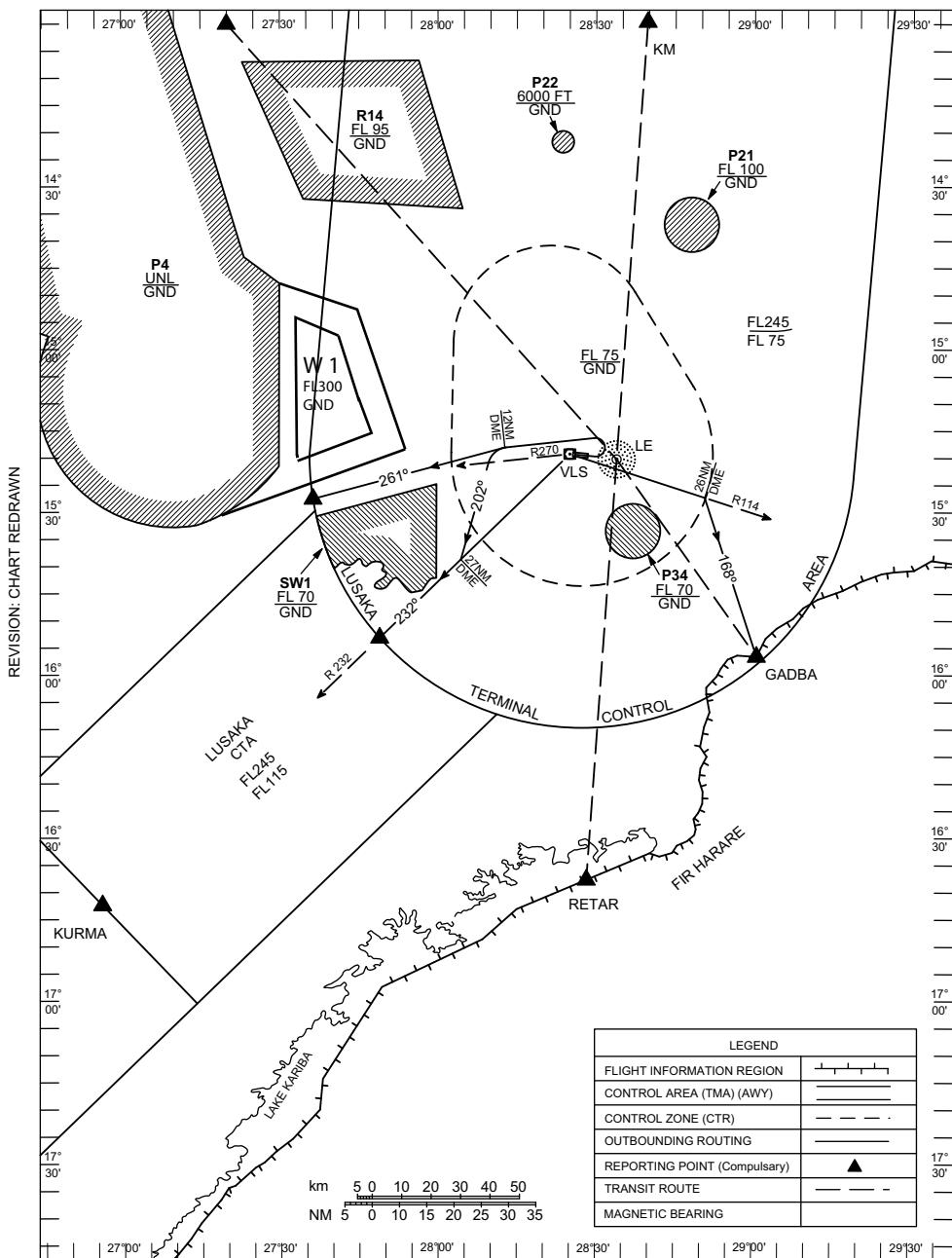
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TERMINAL AREA CHART - ICAO DEPARTURE AND TRANSIT ROUTES - TMA

KENNETH KAUNDA



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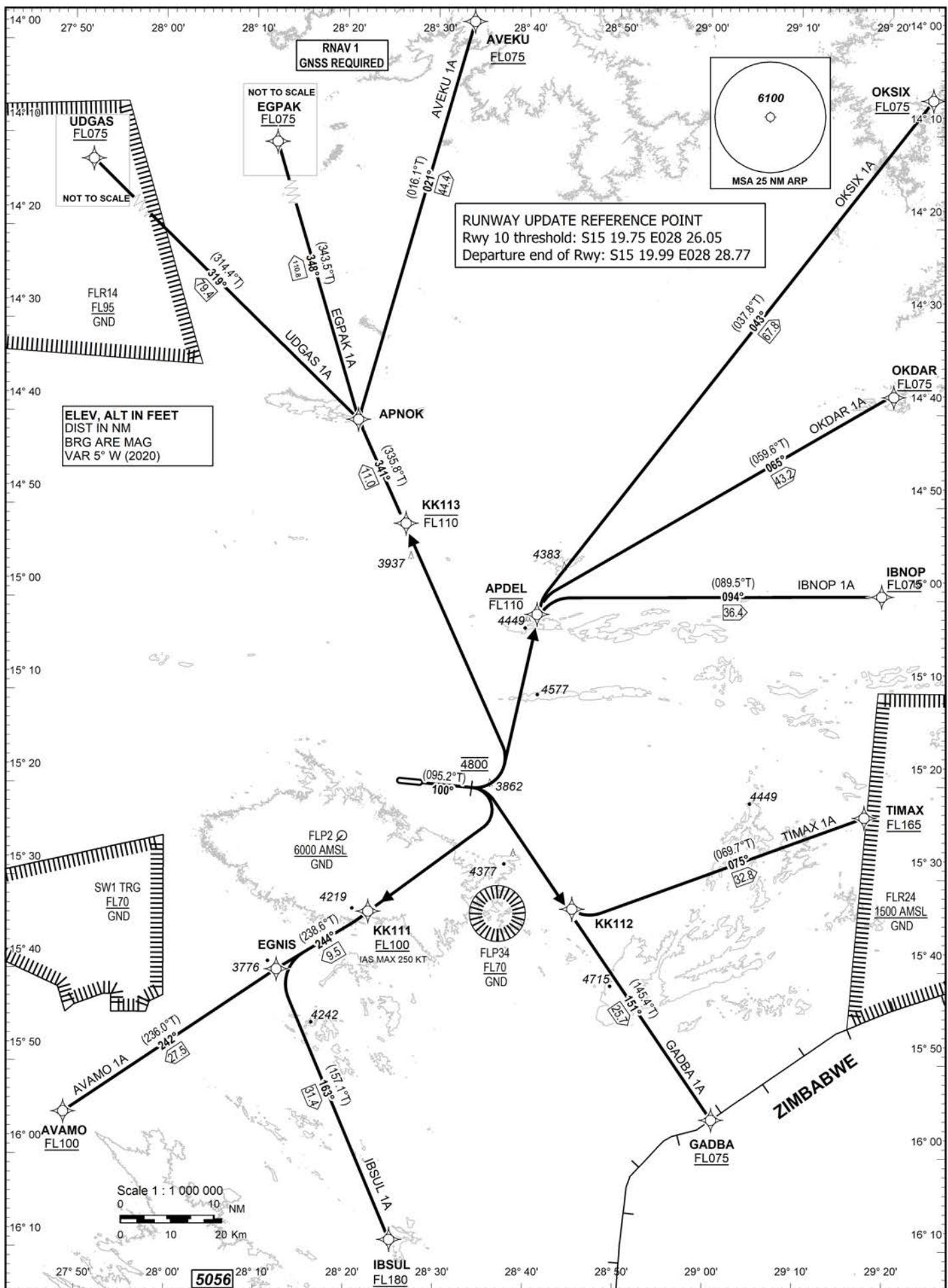
STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAOTRANSITION ALTITUDE
6000APP 121.300
120.100
TWR 118.100

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV SID RWY 10

AVAMO 1A, AVEKU 1A, EGPAK 1A, GADBA 1A, IBNOP 1A, IBSUL 1A, OKDAR 1A, OKSIX 1A, TIMAX 1A, UDGAS 1A



STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV SID RWY 10

AVAMO 1A, AVEKU 1A, EGPAK 1A, GADBA 1A, IBNOP 1A, IBSUL 1A, OKDAR 1A, OKSIX 1A, TIMAX 1A, UDGAS 1A

TABULAR DESCRIPTION

RNAV SID RWY 10

AVAMO 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK111	-	-	-	-	-	+FL100	-250	-	-	RNAV 1
030	TF	EGNIS	-	244 (238.6)	-	9.5	-	-	-	-	-	RNAV 1
040	TF	AVAMO	-	242 (236.0)	-	27.5	-	+FL100	-	-	-	RNAV 1

AVEKU 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK113	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APNOK	-	341 (335.8)	-	11.0	-	-	-	-	-	RNAV 1
040	TF	AVEKU	-	021 (016.0)	-	44.4	-	+FL075	-	-	-	RNAV 1

EGPAK 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK113	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APNOK	-	341 (335.8)	-	11.0	-	-	-	-	-	RNAV 1
040	TF	EGPAK	-	348 (343.5)	-	110.8	-	+FL075	-	-	-	RNAV 1

GADBA 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK112	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	GADBA	-	151 (145.4)	-	25.7	-	+FL075	-	-	-	RNAV 1

IBNOP 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	APDEL	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	IBNOP	-	094 (089.5)	-	36.4	-	+FL075	-	-	-	RNAV 1

IBSUL 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK111	-	-	-	-	-	+FL110	-250	-	-	RNAV 1
030	TF	EGNIS	-	244 (238.6)	-	9.5	-	-	-	-	-	RNAV 1
040	TF	IBSUL	-	163 (157.1)	-	31.4	-	+FL180	-	-	-	RNAV 1

OKDAR 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	APDEL	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	OKDAR	-	065 (059.6)	-	43.2	-	+FL075	-	-	-	RNAV 1

OKSIX 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	APDEL	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	OKSIX	-	043 (037.8)	-	67.8	-	+FL075	-	-	-	RNAV 1

TIMAX 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK112	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	TIMAX	-	075 (069.7)	-	32.8	-	+FL165	-	-	-	RNAV 1

UDGAS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	100 (095.2)	-5.3	-	-	@4800	-	-	-	RNAV 1
020	DF	KK113	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APNOK	-	341 (335.8)	-	11.0	-	-	-	-	-	RNAV 1
040	TF	UDGAS	-	319 (314.4)	-	79.4	-	+FL075	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

**KENNETH KAUNDA INTL/Lusaka
(FLKK)
RNAV SID RWY 10**

AVAMO 1A, AVEKU 1A, EGPAK 1A, GADBA 1A, IBNOP 1A, IBSUL 1A, OKDAR 1A, OKSIX 1A, TIMAX 1A, UDGAS 1A

**WAYPOINT LIST
RNAV SID RWY 10**

Waypoint Identifier	Coordinates	
APDEL	S 15 00 00.1	E 028 41 43.7
APNOK	S 14 40 54.2	E 028 21 15.1
AVAMO	S 15 55 29.0	E 027 48 48.0
AVEKU	S 13 58 00.0	E 028 33 54.0
EGNIS	S 15 40 05.0	E 028 12 27.9
EGPAK	S 12 54 06.0	E 027 49 06.0
GADBA	S 15 56 03.2	E 029 00 53.2
IBNOP	S 14 59 36.0	E 029 19 18.0
IBSUL	S 16 09 09.0	E 028 25 10.0
KK111	S 15 35 05.9	E 028 20 54.9
KK112	S 15 34 50.2	E 028 45 45.9
KK113	S 14 50 59.7	E 028 25 54.7
OKDAR	S 14 38 00.0	E 029 20 12.0
OKSIX	S 14 06 12.0	E 029 24 30.0
TIMAX	S 15 23 24.0	E 029 17 36.0
UDGAS	S 13 44 59.6	E 027 22 58.5

ROUTING

NAME	TEXT
AVAMO 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to KK111, then track 244° to EGNIS , then track 242° to AVAMO. IAS 250kt until KK111. MCA/MCL: KK111 AT or ABOVE FL100, AVAMO AT or ABOVE FL100.
AVEKU 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to KK113, then track 341° to APNOK, then track 021° to AVEKU. MCA/MCL: KK110 AT or BELOW FL110, AVEKU AT or ABOVE FL075
EGPAK 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to KK113, then track 341° to APNOK, then track 348° to EGPAK. MCA/MCL: KK110 AT or BELOW FL110, EGPAK AT or ABOVE FL075.
GADBA 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to KK112, then track 151° to GADBA 1A. MCA/MCL: GADBA AT or ABOVE FL075.
IBNOP 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to APDEL, then track 094° to IBNOP. MCA/MCL: APDEL AT or BELOW FL110, IBNOP AT or ABOVE FL075.
IBSUL 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to KK111, then track 244° to EGNIS , then track 163° to IBSUL. IAS 250kt until KK111. MCA/MCL: KK111 AT or ABOVE FL110, IBSUL AT or ABOVE FL180.
OKDAR 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to APDEL, then track 065° to OKDAR. MCA/MCL: APDEL AT or BELOW FL110, OKDAR AT or ABOVE FL075.
OKSIX 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to APDEL, then track 043° to OKSIX. MCA/MCL: APDEL AT or BELOW FL110, OKSIX AT or ABOVE FL075.
TIMAX 1A	After take-off climb on course 100° to 4800 FT, turn RIGHT direct to KK112, then track 075° to TIMAX X. MCA/MCL: TIMAX AT or ABOVE FL165.
UDGAS 1A	After take-off climb on course 100° to 4800 FT, turn LEFT direct to KK113, then track 341° to APNOK, then track 319° to UDGAS. MCA/MCL: KK110 AT or BELOW FL110, UDGAS AT or ABOVE FL075.

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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

**TRANSITION ALTITUDE
6000**

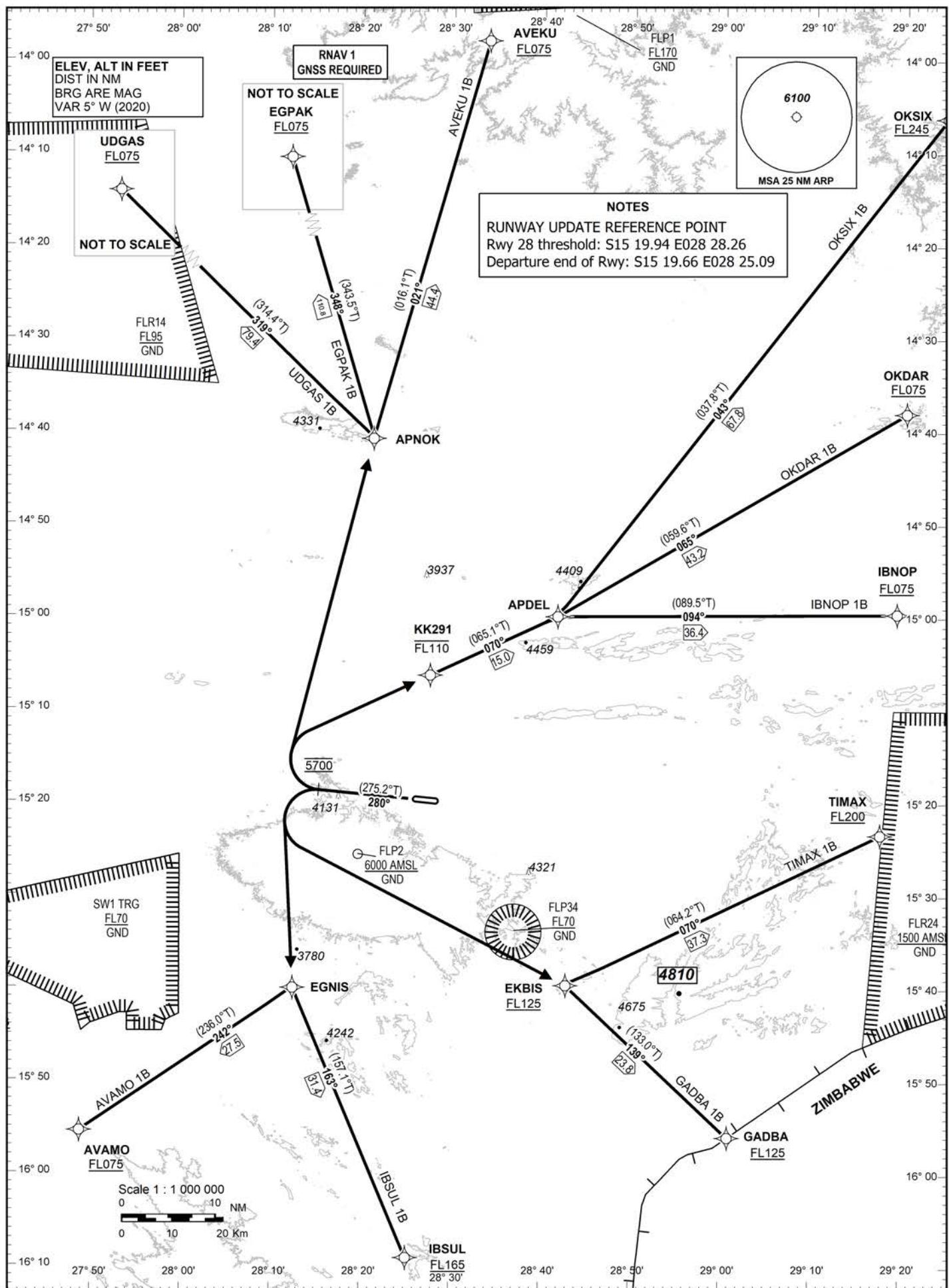
APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV SID RWY 28

AVAMO 1B, AVEKU 1B, EGPAK 1B, GADBA 1B, IBNOP 1B, IBSUL 1B, OKDAR 1B, OKSIX 1B, TIMAX 1B, UDGAS 1B



**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****KENNETH KAUNDA INTL/Lusaka****(FLKK)****RNAV SID RWY 28**

AVAMO 1B, AVEKU 1B, EGPAK 1B, GADBA 1B, IBNOK 1B, IBSUL 1B, OKDAR 1B, OKSIX 1B, TIMAX 1B, UDGAS 1B

TABULAR DESCRIPTION**RNAV SID RWY 28****AVAMO 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EGNIS	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	AVAMO	-	242 (236.0)	-	27.5	-	+FL075	-	-	-	RNAV 1

AVEKU 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	APNOK	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	AVEKU	-	021 (016.1)	-	44.4	-	+FL075	-	-	-	RNAV 1

EGPAK 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	APNOK	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	EGPAK	-	348 (343.5)	-	110.8	-	+FL075	-	-	-	RNAV 1

GADBA 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EKBIS	-	-	-	-	-	+FL125	-	-	-	RNAV 1
030	TF	GADBA	-	139 (133.0)	-	23.8	-	+FL125	-	-	-	RNAV 1

IBNOK 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	KK291	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APDEL	-	070 (065.1)	-	15.0	-	-	-	-	-	RNAV 1
040	TF	IBNOK	-	094 (089.5)	-	36.4	-	+FL075	-	-	-	RNAV 1

IBSUL 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EGNIS	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	IBSUL	-	163 (157.1)	-	31.4	-	+FL165	-	-	-	RNAV 1

OKDAR 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	KK291	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APDEL	-	070 (065.1)	-	15.0	-	-	-	-	-	RNAV 1
040	TF	OKDAR	-	065 (059.6)	-	43.2	-	+FL075	-	-	-	RNAV 1

OKSIX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	KK291	-	-	-	-	-	-FL110	-	-	-	RNAV 1
030	TF	APDEL	-	070 (065.1)	-	15.0	-	-	-	-	-	RNAV 1
040	TF	OKSIX	-	043 (037.8)	-	67.7	-	+FL245	-	-	-	RNAV 1

TIMAX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	EKBIS	-	-	-	-	-	+FL125	-	-	-	RNAV 1
030	TF	TIMAX	-	070 (064.2)	-	37.3	-	+FL200	-	-	-	RNAV 1

UDGAS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CA	-	-	280 (275.2)	-5.3	-	-	@5700	-	-	-	RNAV 1
020	DF	APNOK	-	-	-	-	-	-	-	-	-	RNAV 1
030	TF	UDGAS	-	319 (314.4)	-	79.4	-	+FL075	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****KENNETH KAUNDA INTL/Lusaka**

(FLKK)

RNAV SID RWY 28

AVAMO 1B, AVEKU 1B, EGPAK 1B, GADBA 1B, IBNOP 1B, IBSUL 1B, OKDAR 1B, OKSIX 1B, TIMAX 1B, UDGAS 1B

**WAYPOINT LIST
RNAV SID RWY 28**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APDEL	S 15 00 00.1	E 028 41 43.7	TIMAX	S 15 23 24.0	E 029 17 36.0
APNOK	S 14 40 54.2	E 028 21 15.1	UDGAS	S 13 44 59.6	E 027 22 58.5
AVAMO	S 15 55 29.0	E 027 48 48.0			
AVEKU	S 13 57 60.0	E 028 33 54.0			
EGNIS	S 15 40 05.0	E 028 12 27.9			
EGPAK	S 12 54 06.0	E 027 49 06.0			
EKBIS	S 15 39 44.6	E 028 42 48.5			
GADBA	S 15 56 03.2	E 029 00 53.2			
IBNOP	S 14 59 36.0	E 029 19 18.0			
IBSUL	S 16 09 09.0	E 028 25 10.0			
KK291	S 15 06 22.8	E 028 27 37.7			
OKSIX	S 14 06 12.0	E 029 24 30.0			

ROUTING

NAME	TEXT
AVAMO 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EGNIS, then track 242° to AVAMO. MCA/MCL: AVAMO AT or ABOVE FL075.
AVEKU 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to APNOK, then track 021° to AVEKU . MCA/MCL: AVEKU AT or ABOVE FL075.
EGPAK 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to APNOK, then track 348° to EGPAK . MCA/MCL: EGPAK AT or ABOVE FL075.
GADBA 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EKBIS, then track 139° to GADBA . MCA/MCL: EKBIS AT or ABOVE FL125, GADBA AT or ABOVE FL125.
IBNOP 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to KK291, then track 070° to APDEL , then track 094° to IBNOP. MCA/MCL: KK291 AT or BELOW FL110, IBNOP AT or ABOVE FL075.
IBSUL 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EGNIS, then track 163° to IBSUL. MCA/MCL: IBSUL AT or ABOVE FL165.
OKDAR 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to KK291, then track 070° to APDEL , then track 065° to OKDAR. MCA/MCL: KK291 AT or BELOW FL110, OKDAR AT or ABOVE FL075.
OKSIX	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to KK291, then track 070° to APDEL , then track 043° to OKSIX. MCA/MCL: KK291 AT or BELOW FL110, OKSIX AT or ABOVE FL245.
TIMAX 1B	After take-off climb on course 280° to 5700 FT, turn LEFT direct to EKBIS, then track 070° to TIMAX . MCA/MCL: EKBIS AT or ABOVE FL125, TOMAX AT or ABOVE FL200.
UDGAS 1B	After take-off climb on course 280° to 5700 FT, turn RIGHT direct to APNOK, then track 319° to UDGAS . MCA/MCL: UDGAS AT or ABOVE FL075.

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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

**TRANSITION ALTITUDE
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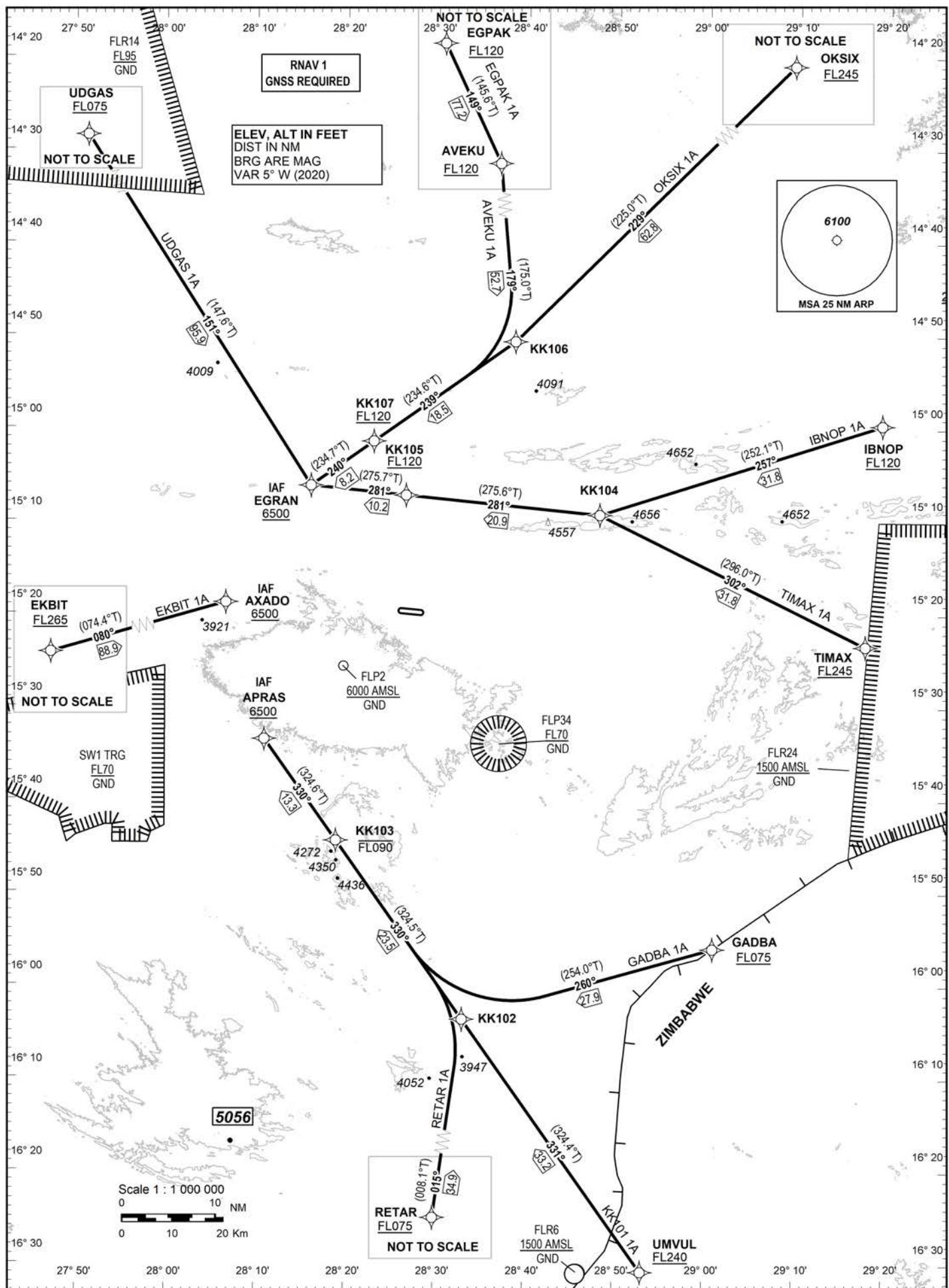
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120.100
TWR 118.100

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV STAR RWY 10

AVEKU 1A, EGPAK 1A, EKBIT 1A, GADBA 1A, IBNOP 1A, OKSIX 1A, RETAR 1A, TIMAX 1A, UDGAS 1A, UMVUL 1A



STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO

KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV STAR RWY 10

AVEKU 1A, EGPAK 1A, EKBIT 1A, GADBA 1A, IBNOP 1A, OKSIX 1A, RETAR 1A, TIMAX 1A, UDGAS 1A, UMVUL 1A

TABULAR DESCRIPTION

RNAV STAR RWY 10

AVEKU 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVEKU	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	KK106	-	179 (175.0)	-	52.7	-	-	-	-	-	RNAV 1
030	TF	KK107	-	239 (234.6)	-	18.5	-	+FL120	-	-	-	RNAV 1
040	TF	EGRAN	-	240 (234.7)	-	8.2	-	+6500	-	-	-	RNAV 1

EGPAK 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
10	IF	EGPAK	-	-	-3.4	-	-	+FL120	-	-	-	RNAV 1
20	TF	AVEKU	-	149 (145.6)	-	77.2	-	-	-	-	-	RNAV 1
30	TF	KK106	-	179 (175.0)	-	51.9	-	-	-	-	-	RNAV 1
40	TF	KK107	-	239 (234.6)	-	18.0	-	+FL120	-	-	-	RNAV 1
50	TF	EGRAN	-	240 (234.7)	-	8.2	-	+6500	-	-	-	RNAV 1

EKBIT 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EKBIT	-	-	-	-	-	+FL265	-	-	-	RNAV 1
020	TF	AXADO	-	080 (074.4)	-	88.9	-	+6500	-	-	-	RNAV 1

GADBA 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	GADBA	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	KK102	-	260 (254.0)	-	27.9	-	-	-	-	-	RNAV 1
030	TF	KK103	-	330 (324.5)	-	23.5	-	-FL090	-	-	-	RNAV 1
040	TF	APRAS	-	330 (324.6)	-	13.3	-	+6500	-	-	-	RNAV 1

IBNOP 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBNOP	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	KK104	-	257 (252.1)	-	31.8	-	-	-	-	-	RNAV 1
030	TF	KK105	-	281 (275.6)	-	20.9	-	+FL120	-	-	-	RNAV 1
040	TF	EGRAN	-	281 (275.7)	-	10.2	-	+6500	-	-	-	RNAV 1

OKSIX 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	OKSIX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	KK106	-	229 (225.0)	-	62.8	-	-	-	-	-	RNAV 1
030	TF	KK107	-	239 (234.6)	-	18.5	-	+FL120	-	-	-	RNAV 1
040	TF	EGRAN	-	240 (234.7)	-	8.2	-	+6500	-	-	-	RNAV 1

RETAR 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	RETAR	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	KK102	-	015 (008.1)	-	34.9	-	-	-	-	-	RNAV 1
030	TF	KK103	-	330 (324.5)	-	23.2	-	-FL090	-	-	-	RNAV 1
040	TF	APRAS	-	330 (324.6)	-	13.3	-	+6500	-	-	-	RNAV 1

TIMAX 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TIMAX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	KK104	-	302 (296.0)	-	31.8	-	-	-	-	-	RNAV 1
030	TF	KK105	-	281 (275.6)	-	20.9	-	+FL120	-	-	-	RNAV 1
040	TF	EGRAN	-	281 (275.7)	-	10.2	-	+6500	-	-	-	RNAV 1

UDGAS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UDGAS	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	EGRAN	-	151 (147.6)	-	95.9	-	+6500	-	-	-	RNAV 1

UMVUL 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UMVUL	-	-	-	-	-	+FL240	-	-	-	RNAV 1
020	TF	KK102	-	331 (324.4)	-	33.2	-	-	-	-	-	RNAV 1
030	TF	KK103	-	330 (324.5)	-	23.5	-	-FL090	-	-	-	RNAV 1
040	TF	APRAS	-	330 (324.6)	-	13.3	-	+6500	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****KENNETH KAUNDA INTL/Lusaka**

(FLKK)

RNAV STAR RWY 10

AVEKU 1A, EGPAK 1A, EKBIT 1A, GADBA 1A, IBNOP 1A, OKSIX 1A, RETAR 1A, TIMAX 1A, UDGAS 1A, UMVUL 1A

**WAYPOINT LIST
RNAV STAR RWY 10**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APRAS	S 15 33 33.8	E 028 10 55.0	KK106	S 14 50 42.0	E 028 38 35.9
AVEKU	S 13 57 60.0	E 028 33 54.0	KK107	S 15 01 28.3	E 028 22 58.4
AXADO	S 15 18 50.6	E 028 06 36.8	OKSIX	S 14 06 12.0	E 029 24 30.0
EGPAK	S 12 54 06.0	E 027 49 06.0	RETAR	S 16 37 46.8	E 028 28 18.0
EGRAN	S 15 06 15.1	E 028 16 01.4	TIMAX	S 15 23 24.0	E 029 17 36.0
EKBIT	S 15 43 05.0	E 026 37 59.0	UDGAS	S 13 44 59.6	E 027 22 58.5
GADBA	S 15 56 03.2	E 029 00 53.2	UMVUL	S 16 30 52.0	E 028 53 08.0
IBNOP	S 14 59 36.0	E 029 19 18.0			
KK102	S 16 03 42.8	E 028 33 03.9			
KK103	S 15 44 29.1	E 028 18 55.4			
KK104	S 15 09 20.8	E 028 48 03.0			
KK105	S 15 07 16.7	E 028 26 33.9			

ROUTING

NAME	TEXT
AVEKU 1A	From AVEKU track 179° to KK106, track 239° to KK107, track 240° to EGRAN. MEL/MEA: AVEKU AT or ABOVE FL120, KK107 AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
EGPAK 1A	From EGPAK track 149° to AVEKU, track 179° to KK106, track 239° to KK107, track 240° to EGRAN. MEL/MEA: EGPAK AT or ABOVE FL120, KK107 AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
EKBIT 1A	From EKBIT track 080° to AXADO. MEL/MEA: EKBIT AT or ABOVE FL265, AXADO AT or ABOVE 6500'.
GADBA 1A	From GADBA track 260° to KK102, track 330° to KK103, track 330° to APRAS. MEL/MEA: GADBA AT or ABOVE FL075, KK103 AT or BELOW FL090, APRAS AT or ABOVE 6500'.
IBNOP 1A	From IBNOP track 257° to KK104, track 281° to KK105, track 281° to EGRAN. MEL/MEA: IBNOP AT or ABOVE FL120, KK105 AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
OKSIX 1A	From OKSIX track 229° to KK106, track 239° to KK107, track 240° to EGRAN. MEL/MEA: OKSIX AT or ABOVE FL245, KK107 AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
RETAR 1A	From RETAR track 015° to KK102, track 330° to KK103, track 330° to APRAS. MEL/MEA: RETAR AT or ABOVE FL075, KK103 AT or BELOW FL090, APRAS AT or ABOVE 6500'.
TIMAX 1A	From TIMAX track 302° to KK104, track 281° to KK105, track 281° to EGRAN. MEL/MEA: TIMAX AT or ABOVE FL245, KK105 AT or ABOVE FL120, EGRAN AT or ABOVE 6500'.
UDGAS 1A	From UDGAS track 151° to EGRAN. MEL/MEA: UDGAS AT or ABOVE FL075, EGRAN AT or ABOVE 6500'.
UMVUL 1A	From UMVUL track 331° to KK102, track 330° to KK103, track 330° to APRAS. MEL/MEA: UMVUL AT or ABOVE FL240, KK103 AT or BELOW FL090, APRAS AT or ABOVE 6500'.

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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

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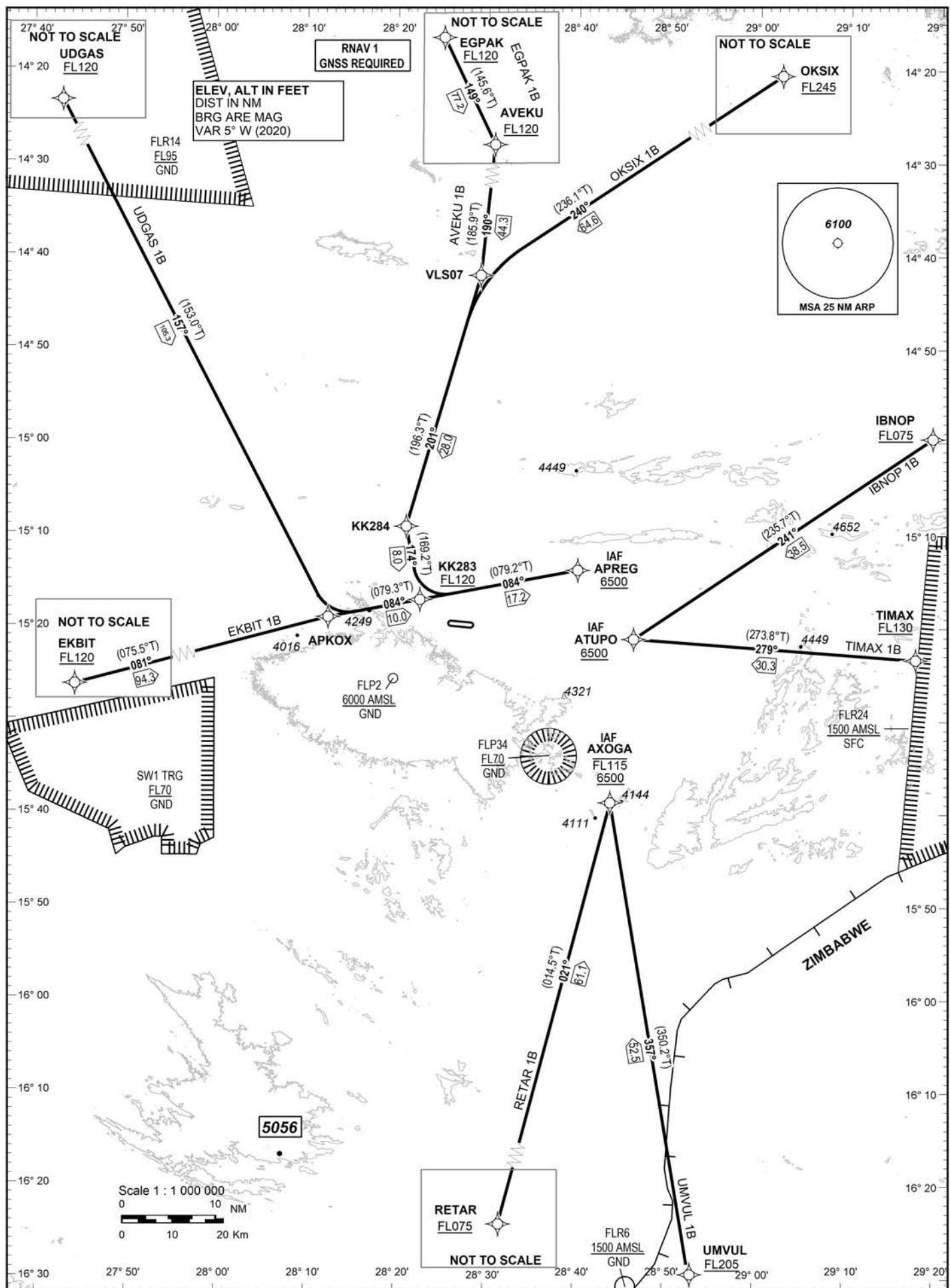
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KENNETH KAUNDA INTL/Lusaka

(FLKK)

RNAV STAR RWY 28

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****KENNETH KAUNDA INTL/Lusaka****(FLKK)****RNAV STAR RWY 28**

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B

TABULAR DESCRIPTION**RNAV STAR RWY 28****AVEKU 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AVEKU	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	VLS07	-	190 (185.9)	-	44.3	-	-	-	-	-	RNAV 1
030	TF	KK284	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
040	TF	KK283	-	174 (169.2)	-	8.0	-	+FL120	-	-	-	RNAV 1
050	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

EGPAK 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
10	IF	EGPAK	-	-	-	-	-	+FL120	-	-	-	RNAV 1
20	TF	AVEKU	-	149 (145.6)	-	77.2	-	-	-	-	-	RNAV 1
30	TF	VLS07	-	190 (185.9)	-	44.3	-	-	-	-	-	RNAV 1
40	TF	KK284	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
50	TF	KK283	-	174 (169.2)	-	7.3	-	-	-	-	-	RNAV 1
60	TF	APREG	-	084 (079.2)	-	16.5	-	+6500	-	-	-	RNAV 1

EKBIT 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	EKBIT	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	APKOK	-	081 (075.5)	-	94.3	-	-	-	-	-	RNAV 1
030	TF	KK283	-	084 (079.3)	-	10.0	-	+FL120	-	-	-	RNAV 1
040	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

IBNOP 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBNOP	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	ATUPO	-	241 (235.7)	-	38.5	-	+6500	-	-	-	RNAV 1

OKSIX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	OKSIX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	VLS07	-	240 (236.1)	-	64.6	-	-	-	-	-	RNAV 1
030	TF	KK284	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
040	TF	KK283	-	174 (169.2)	-	8.0	-	+FL120	-	-	-	RNAV 1
050	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

RETAR 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	RETAR	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	AXOGA	-	021 (014.5)	-	61.1	-	-	-FL115 +6500	-	-	RNAV 1

TIMAX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TIMAX	-	-	-	-	-	+FL130	-	-	-	RNAV 1
020	TF	ATUPO	-	279 (273.8)	-	30.3	-	+6500	-	-	-	RNAV 1

UDGAS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UDGAS	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	APKOK	-	157 (153.0)	-	105.3	-	-	-	-	-	RNAV 1
030	TF	KK283	-	084 (079.3)	-	10.0	-	+FL120	-	-	-	RNAV 1
040	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

UMVUL 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UMVUL	-	-	-	-	-	+FL205	-	-	-	RNAV 1
020	TF	AXOGA	-	357 (350.2)	-	52.5	-	-	-FL115 +6500	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****KENNETH KAUNDA INTL/Lusaka**

(FLKK)

RNAV STAR RWY 28

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B

**WAYPOINT LIST
RNAV STAR RWY 28**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APKOX	S 15 19 05.0	E 028 12 26.6	TIMAX	S 15 23 24.0	E 029 17 36.0
APREG	S 15 13 58.0	E 028 40 05.4	UDGAS	S 13 44 59.6	E 027 22 58.5
ATUPO	S 15 21 21.7	E 028 46 20.0	UMVUL	S 16 30 52.0	E 028 53 08.0
AVEKU	S 13 57 60.0	E 028 33 54.0	VLS07	S 14 42 17.0	E 028 29 11.0
AXOGA	S 15 38 57.6	E 028 43 50.8			
EGPAK	S 12 54 06.0	E 027 49 06.0			
EKBIT	S 15 43 05.0	E 026 37 59.0			
IBNOP	S 14 59 36.0	E 029 19 18.0			
KK283	S 15 17 12.6	E 028 22 36.5			
KK284	S 15 09 19.0	E 028 21 03.7			
OKSIX	S 14 06 12.0	E 029 24 30.0			
RETAR	S 16 37 46.8	E 028 28 18.0			

ROUTING

NAME	TEXT
AVEKU 1B	From AVEKU track 190° to VLS07, track 201° to KK284, track 174° to KK283, track 084° to APREG. MEL/MEA: AVEKU AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
EGPAK 1B	From EGPAK track 149° to AVEKU, track 190° to VLS07, track 201° to KK284, track 174° to KK283, track 084° to APREG. MEL/MEA: EGPAK AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
EKBIT 1B	From EKBIT track 081° to APKOX, track 084° to KK283, track 084° to APREG. MEL/MEA: EKBIT AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
IBNOP 1B	From IBNOP track 241° to ATUPO. MEL/MEA: IBNOP AT or ABOVE FL075, ATUPO AT or ABOVE 6500'.
OKSIX 1B	From OKSIX track 240° to VLS07, track 201° to KK284, track 174° to KK283, track 084° to APREG. MEL/MEA: OKSIX AT or ABOVE FL245, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
RETAR 1B	From RETAR track 021° to AXOGA. MEL/MEA: RETAR AT or ABOVE FL075, AXOGA BETWEEN FL115 and 6500'.
TIMAX 1B	From TIMAX track 241° to ATUPO. MEL/MEA: TIMAX AT or ABOVE FL130, ATUPO AT or ABOVE 6500'.
UDGAS 1B	From UDGAS track 157° to APKOX, track 084° to KK283, track 084° to APREG. MEL/MEA: UDGAS AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
UMVUL 1B	From UMVUL track 357° to AXOGA. MEL/MEA: UMVUL AT or ABOVE FL205, AXOGA BETWEEN FL115 and 6500'.

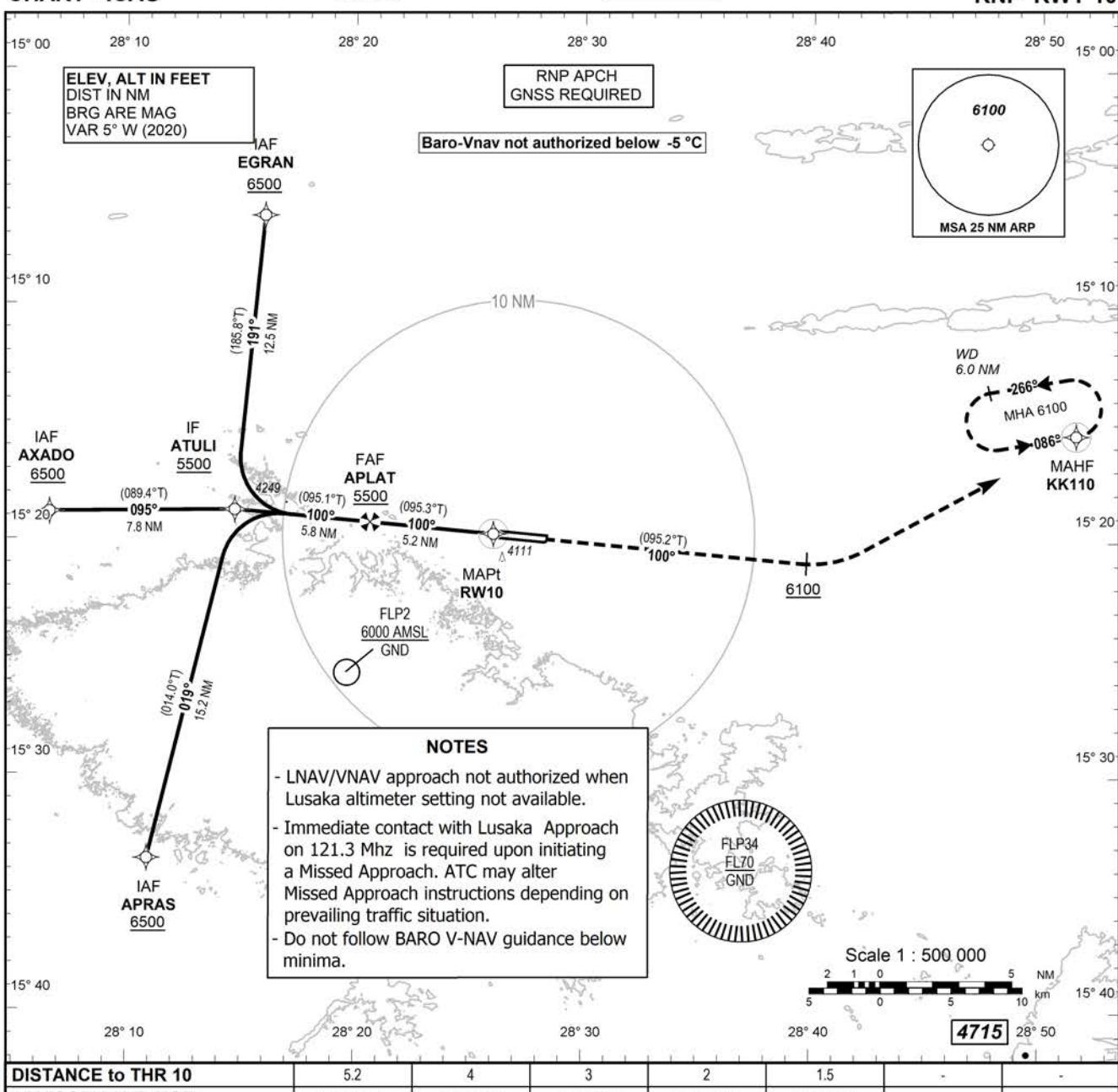
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INSTRUMENT
APPROACH
CHART - ICAO

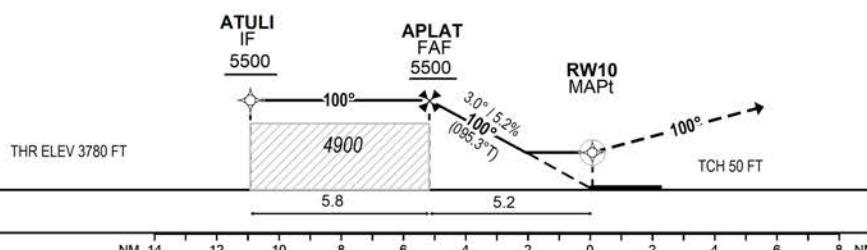
AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
AD ELEV

APP 121.300
120.100
TWR 118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
RNP RWY 10



MISSED APPROACH:
Climb to 6100 FT on course 100°, then direct to KK110 and hold.



OCA (OCH) CMV (m)	A	B	C	D
Straight-in Approach	LNAV / VNAV	4280 (500)	2300	
Straight-in Approach	LNAV	4320 (540)	2400	
CIRCLING VIS (m)	4460 (680)	4540 (760)	4830 (1050)	4840 (1060)
	3100	3500	4900	

GS (kt)	-	-	-	-	-
FAF to MAPt	-	-	-	-	-
ROD (fpm)	-	-	-	-	-

Timing not authorized for defining the MAPt

<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	EGRAN	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	191 / (185.8)	12.5	-	+5500	-	-	RNP APCH
010	IF	APRAS	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	019 / (014.0)	15.2	-	+5500	-	-	RNP APCH
010	IF	AXADO	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	095 / (089.4)	7.8	-	+5500	-	-	RNP APCH
030	TF	APLAT	-	100 / (095.1)	5.8	-	+5500	-	-	RNP APCH
040	TF	RW10	Y	100 / (095.3)	5.2	-	@3830	-	-3.00 / 50	RNP APCH
050	CA	-	-	100 / (095.2)	-	-	+6100	-	-	RNP APCH
060	DF	KK110	Y	-	-	-	+6100	-	-	RNP APCH
070	HM	KK110	Y	086 / (080.7)	6.0	L	+6100	-230	-	RNP APCH

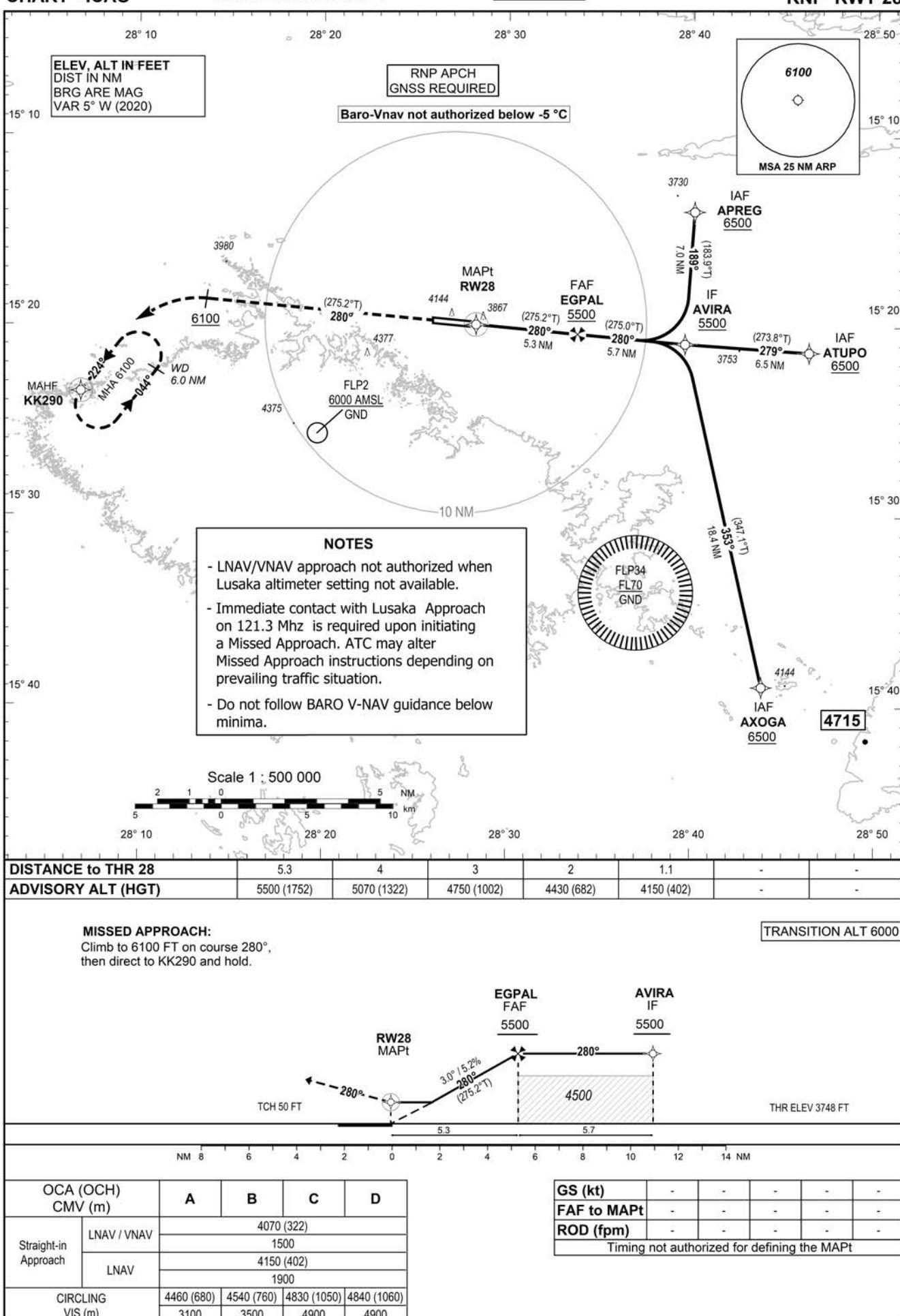
<i>Waypoint Identifier</i>	<i>Coordinates</i>
APLAT	S 15 19 15.9 E 028 20 39.2
APRAS	S 15 33 33.8 E 028 10 55.0
ATULI	S 15 18 45.2 E 028 14 43.6
AXADO	S 15 18 50.6 E 028 06 36.8
EGRAN	S 15 06 15.1 E 028 16 01.4
KK110	S 15 15 28.0 E 028 51 32.5
RW10	S 15 19 44.82 E 028 26 03.25

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
THR RWY 28 - ELEV 3748 FT

APP 121.300
120.100
TWR 118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
RNP RWY 28



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	AXOGA	-	-	-	-	+6500	-	-	RNP APCH
020	TF	AVIRA	-	353 / (347.1)	18.4	-	+5500	-	-	RNP APCH
010	IF	ATUPO	-	-	-	-	+6500	-	-	RNP APCH
020	TF	AVIRA	-	279 / (273.8)	6.5	-	+5500	-	-	RNP APCH
010	IF	APREG	-	-	-	-	+6500	-	-	RNP APCH
020	TF	AVIRA	-	189 / (183.9)	7.0	-	+5500	-	-	RNP APCH
030	TF	EGPAL	-	280 / (275.0)	5.7	-	+5500	-	-	RNP APCH
040	TF	RW28	Y	280 / (275.2)	5.3	-	@3798	-	-3.00 / 50	RNP APCH
050	CA	-	-	280 / (275.2)	-	-	+6100	-	-	RNP APCH
060	DF	KK290	Y	-	-	-	+6100	-	-	RNP APCH
070	HM	KK290	Y	224 / (218.3)	6.0	L	+6100	-230	-	RNP APCH

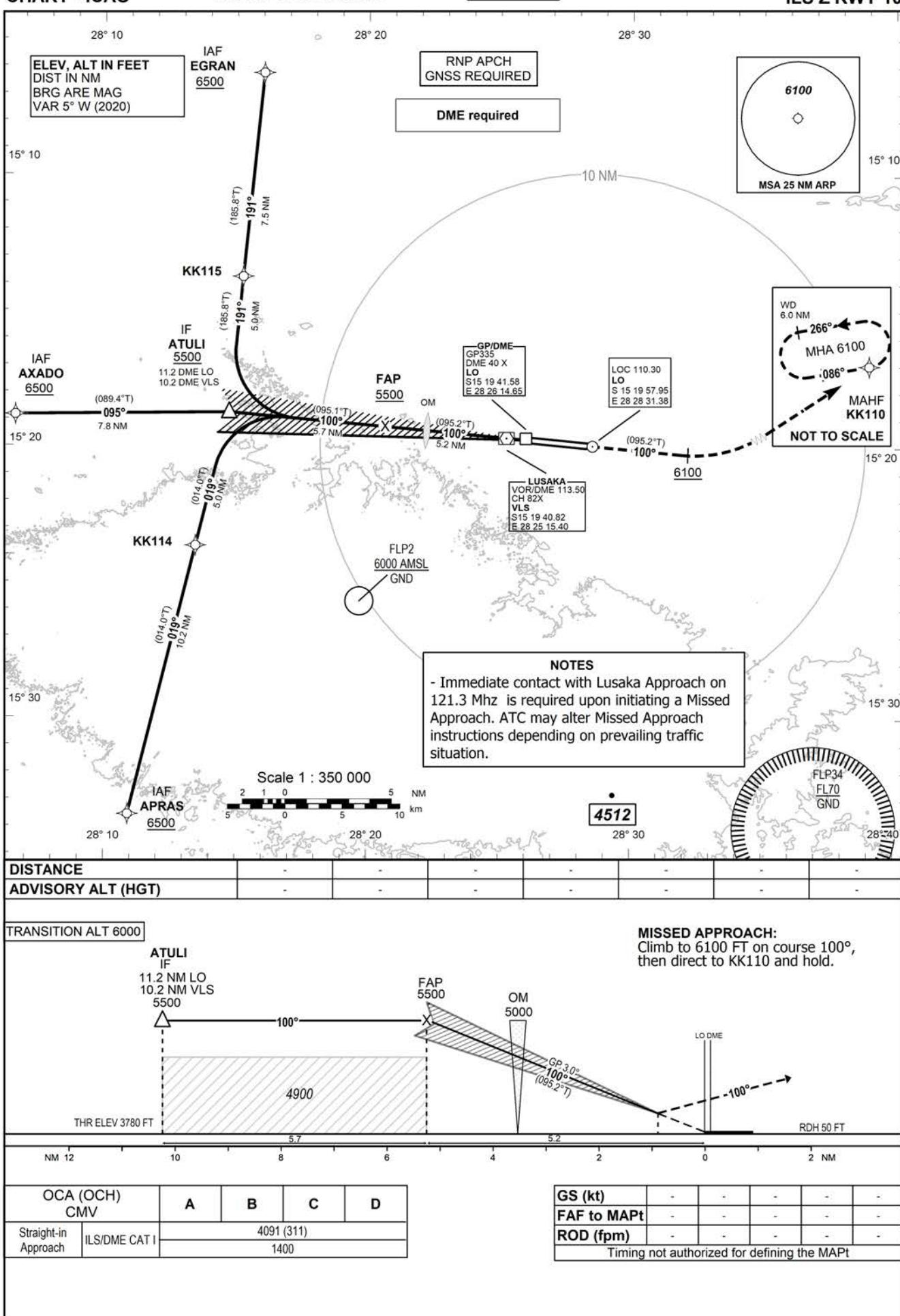
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APREG	S 15 13 58.0 E 028 40 05.4
ATUPO	S 15 21 21.7 E 028 46 20.0
AVIRA	S 15 20 55.8 E 028 39 35.8
AXOGA	S 15 38 57.6 E 028 43 50.8
EGPAL	S 15 20 25.9 E 028 33 46.0
KK290	S 15 23 30.3 E 028 06 15.3
RW28	S 15 19 56.58 E 028 28 15.53

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
THR RWY 10 - ELEV 3780 FT

APP 121.300
120.100
TWR 118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
ILS Z RWY 10



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	EGRAN	-	-	-	-	+6500	-	-	RNP APCH
020	TF	KK115	-	191 / (185.8)	7.5	-	+5500	-	-	RNP APCH
030	TF	ATULI	-	191 / (185.8)	5.0	-	+5500	-	-	RNP APCH
010	IF	APRAS	-	-	-	-	+6500	-	-	RNP APCH
020	TF	KK114	-	019 / (014.0)	10.2	-	+5500	-	-	RNP APCH
030	TF	ATULI	-	019 / (014.0)	5.0	-	+5500	-	-	RNP APCH
010	IF	AXADO	-	-	-	-	+6500	-	-	RNP APCH
020	TF	ATULI	-	095 / (089.4)	7.8	-	+5500	-	-	RNP APCH
040	IF	ATULI	-	-	-	-	+5500	-	-	RNP APCH
050	CF	FAP	Y	100 / (095.2)	5.8	-	+5500	-	-	-
060	CF	RW10	Y	100 / (095.2)	5.2	-	@3830	-	-3.00 / 50	-
070	CA	-	-	100 / (095.2)	15.2	-	+6100	-	-	RNP APCH
080	DF	KK110	Y	-	11.9	-	+6100	-	-	RNP APCH
090	HM	KK110	Y	086 / (080.7)	6.0	L	+6100	-230	-	RNP APCH

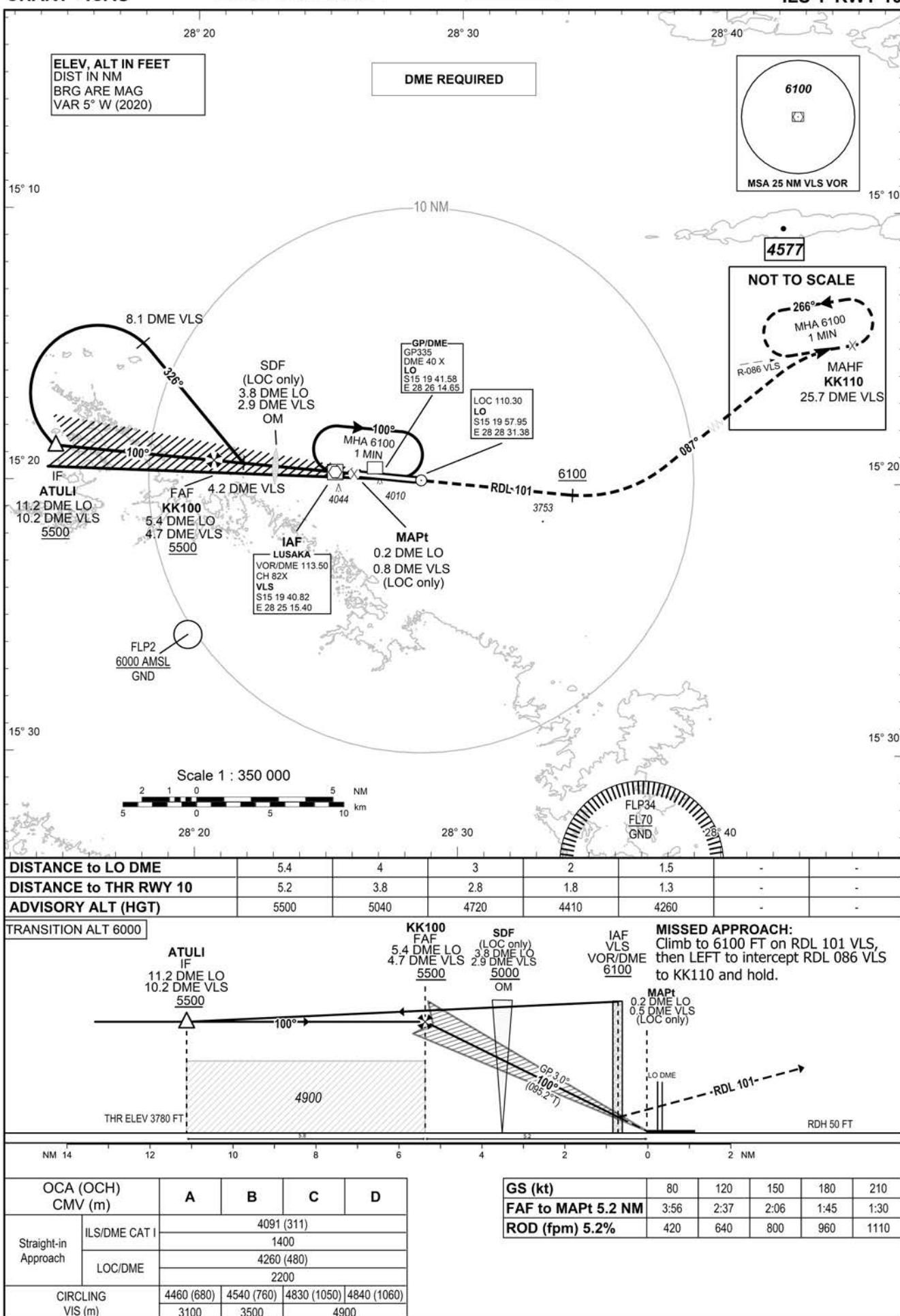
<i>Waypoint Identifier</i>	<i>Coordinates</i>
RW10	S 15 19 44.82 E 28 26 03.25
APRAS	S 15 33 33.8 E 028 10 55.0
ATULI	S 15 18 45.2 E 028 14 43.6
AXADO	S 15 18 50.6 E 028 06 36.8
EGRAN	S 15 06 15.1 E 028 16 01.4
FAP	S 15 19 16.0 E 028 20 39.1
KK110	S 15 15 28.0 E 028 51 32.5
KK114	S 15 23 37.5 E 028 13 28.4
KK115	S 15 13 45.5 E 028 15 14.7

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
THR RWY 10 - ELEV 3780 FT

APP 121.300
120.100
TWR 118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
ILS Y RWY 10



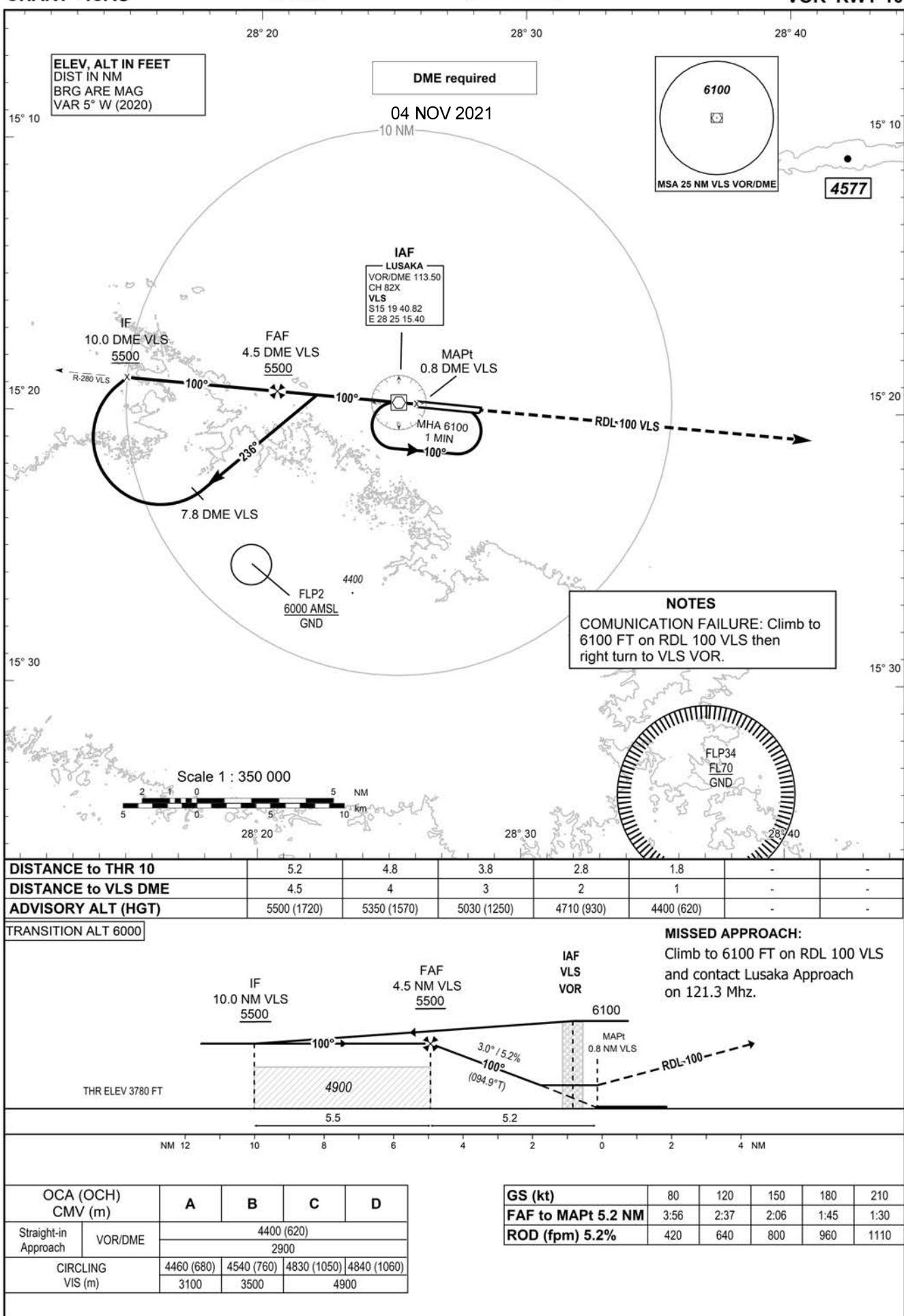
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
AD ELEV

APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
VOR RWY 10



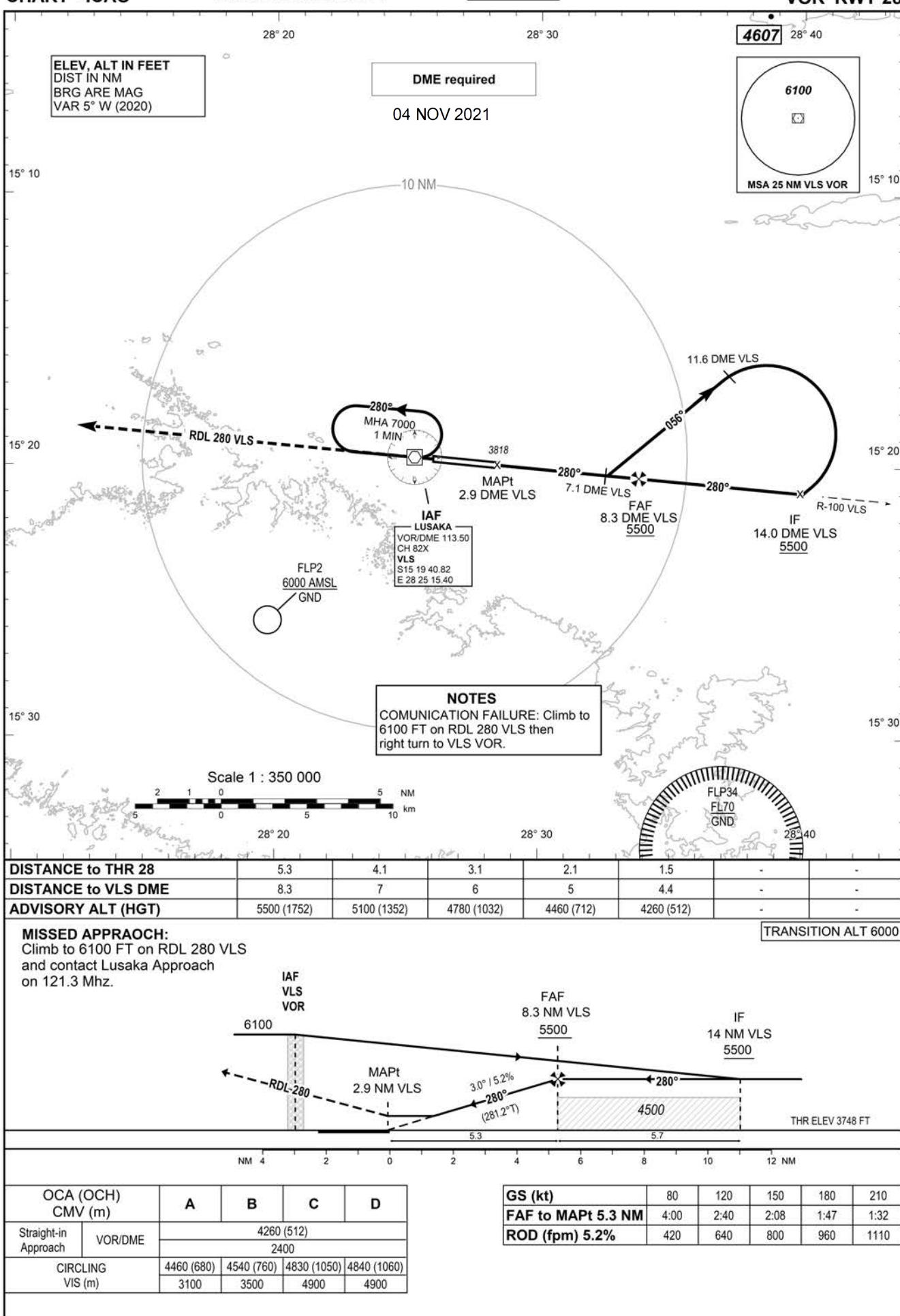
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CHART - ICAO

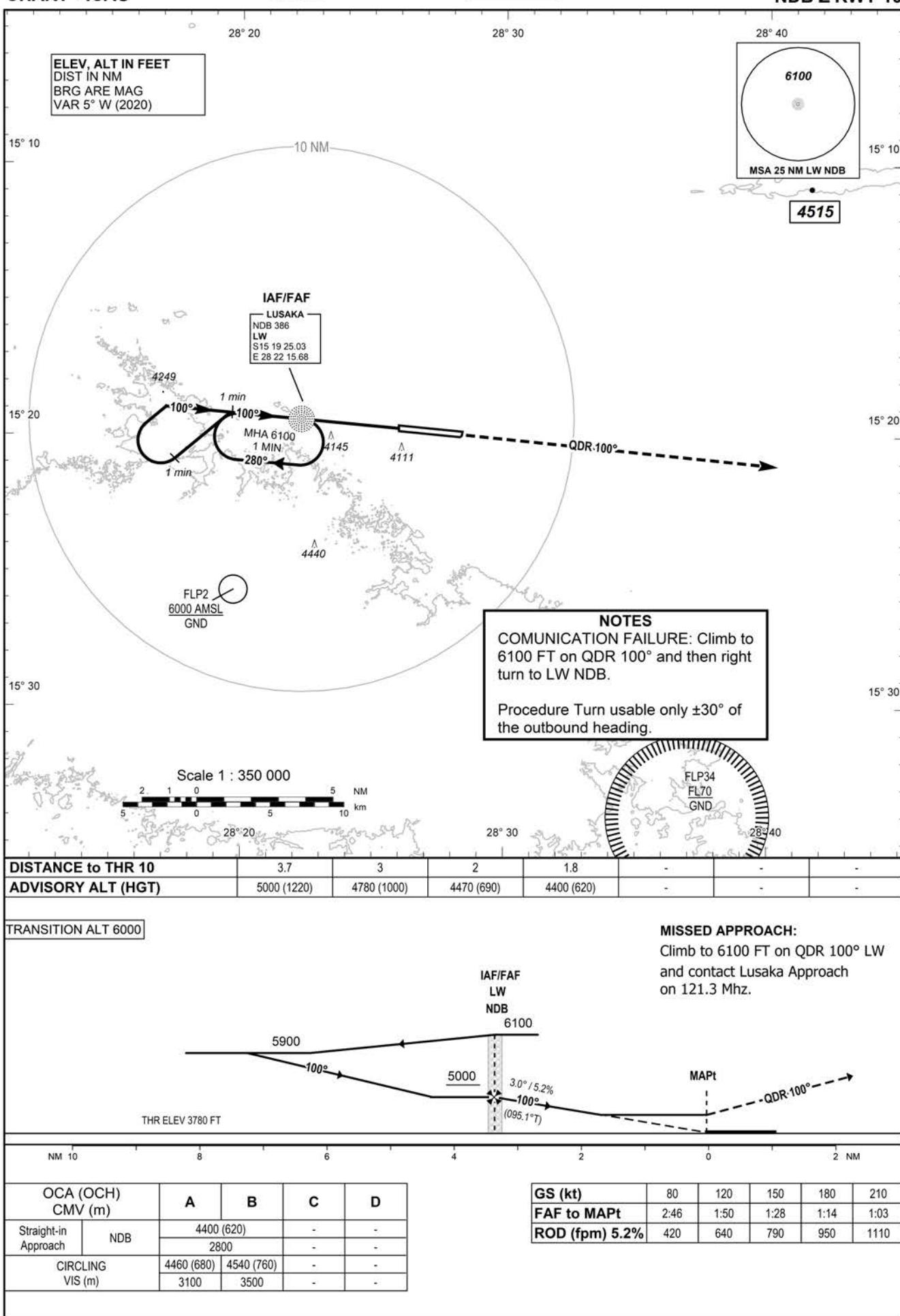
AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
THR RWY 28 - ELEV 3748 FT

APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
VOR RWY 28



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APPROACH
CHART - ICAOAERODROME ELEV 3780 FT
HEIGHTS RELATED TO
AD ELEVAPP 121.300
120.100
TWR 118.100KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB Z RWY 10

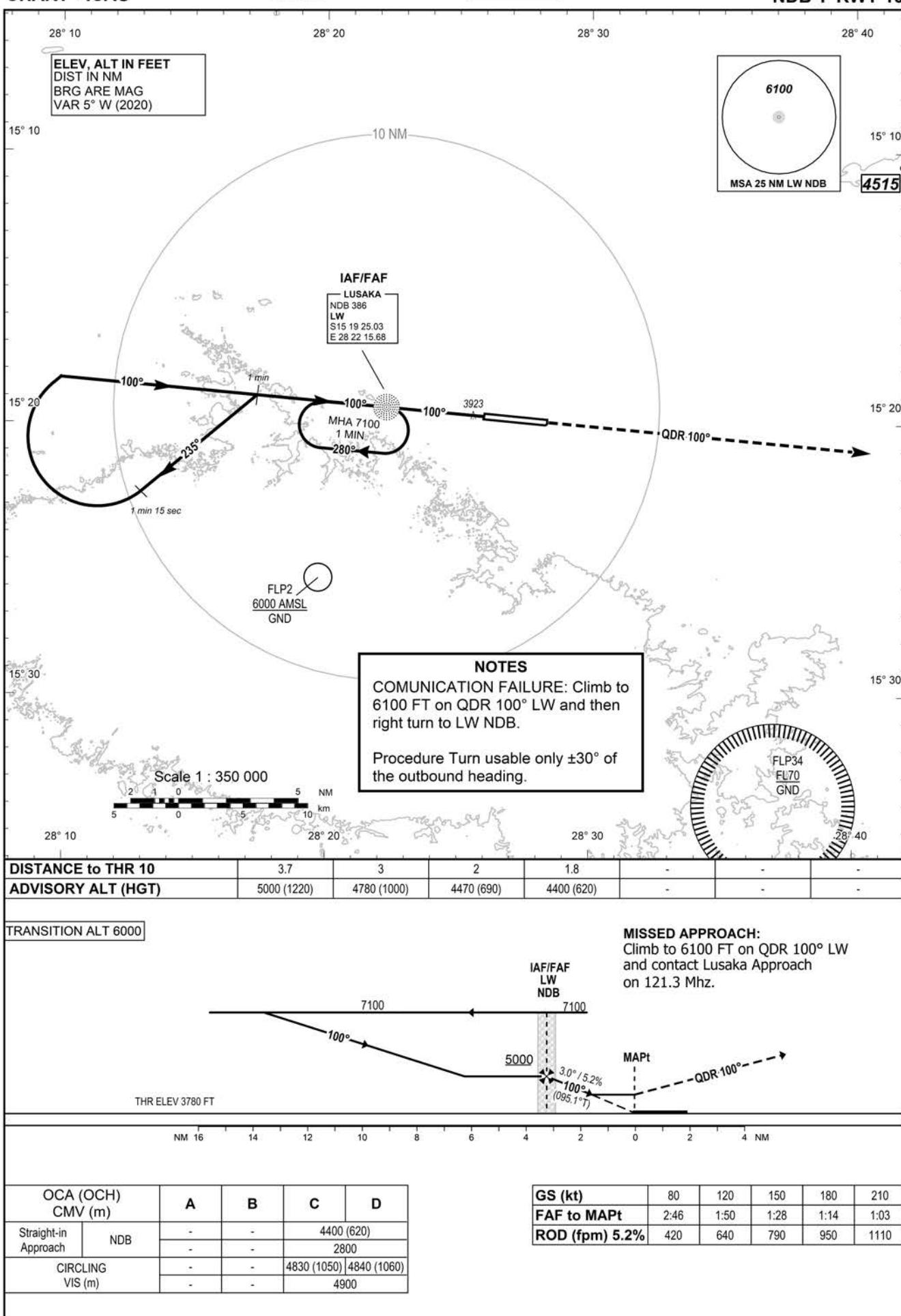
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HEIGHTS RELATED TO
AD ELEV

APP	121.300
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KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB Y RWY 10



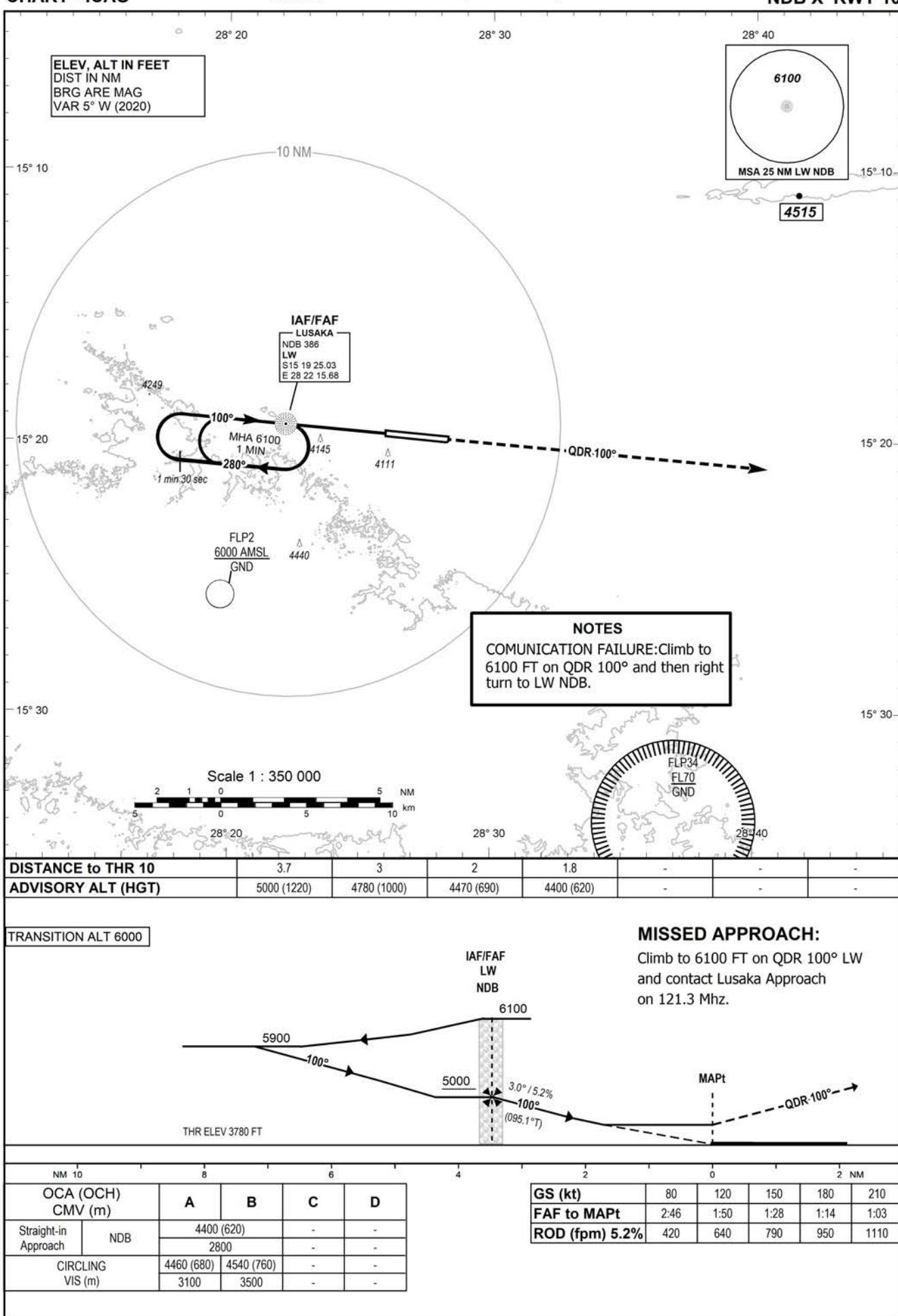
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AERODROME ELEV 3780 FT
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AD ELEV

APP	121.300
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TWR	118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB X RWY 10



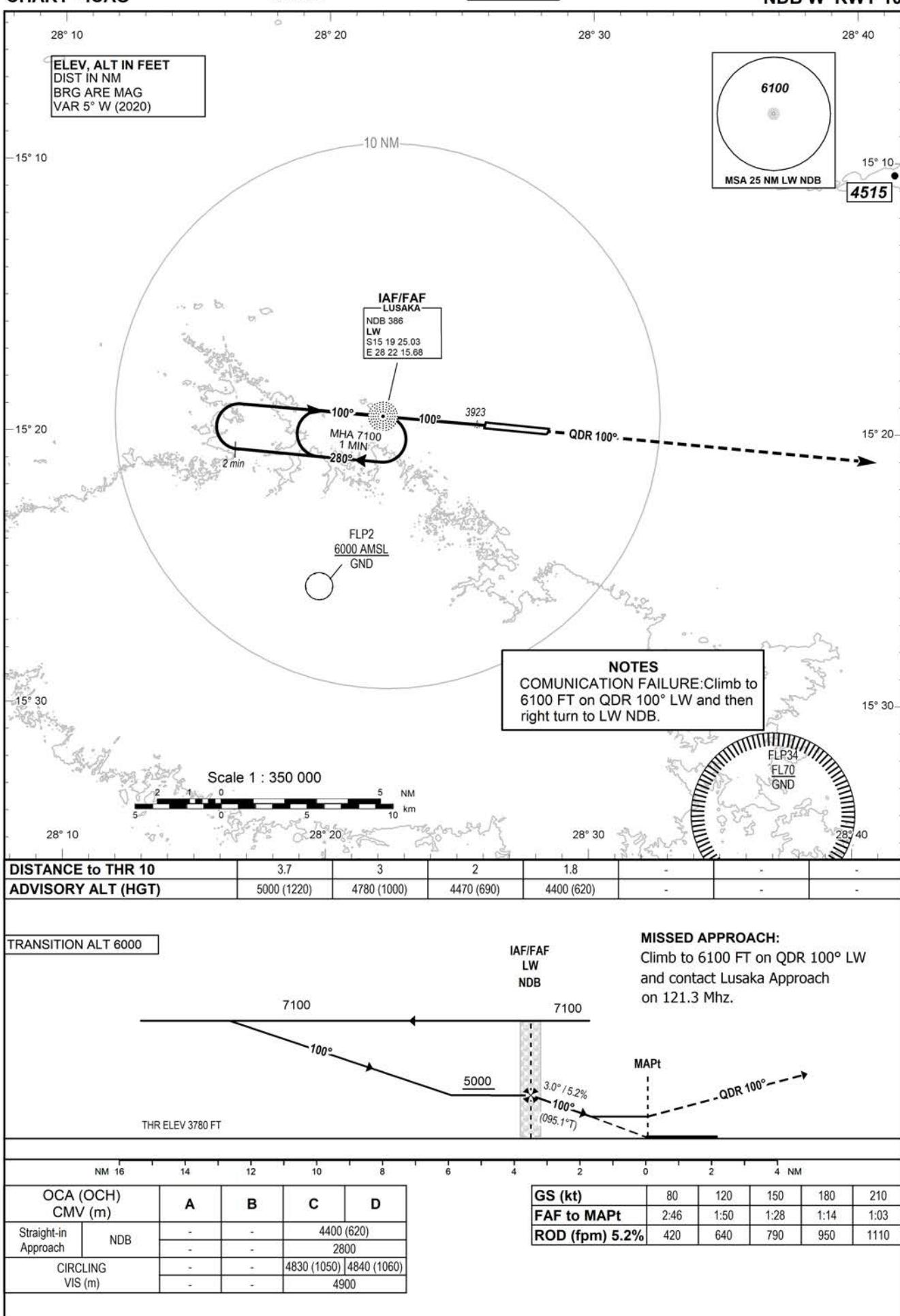
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AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
AD ELEV

APP	121.300
	120.100
TWR	118.100

KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB W RWY 10



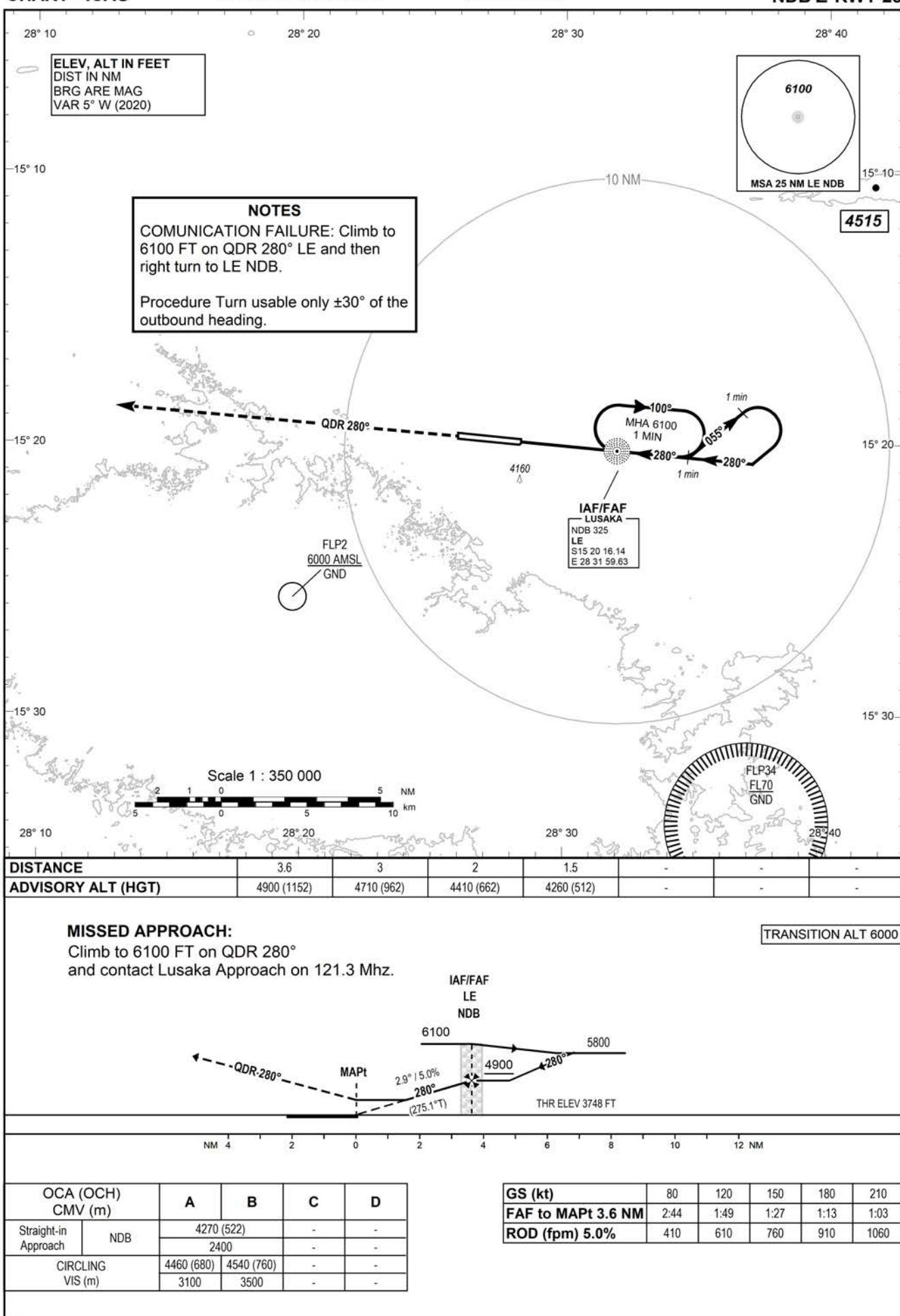
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CHART - ICAO

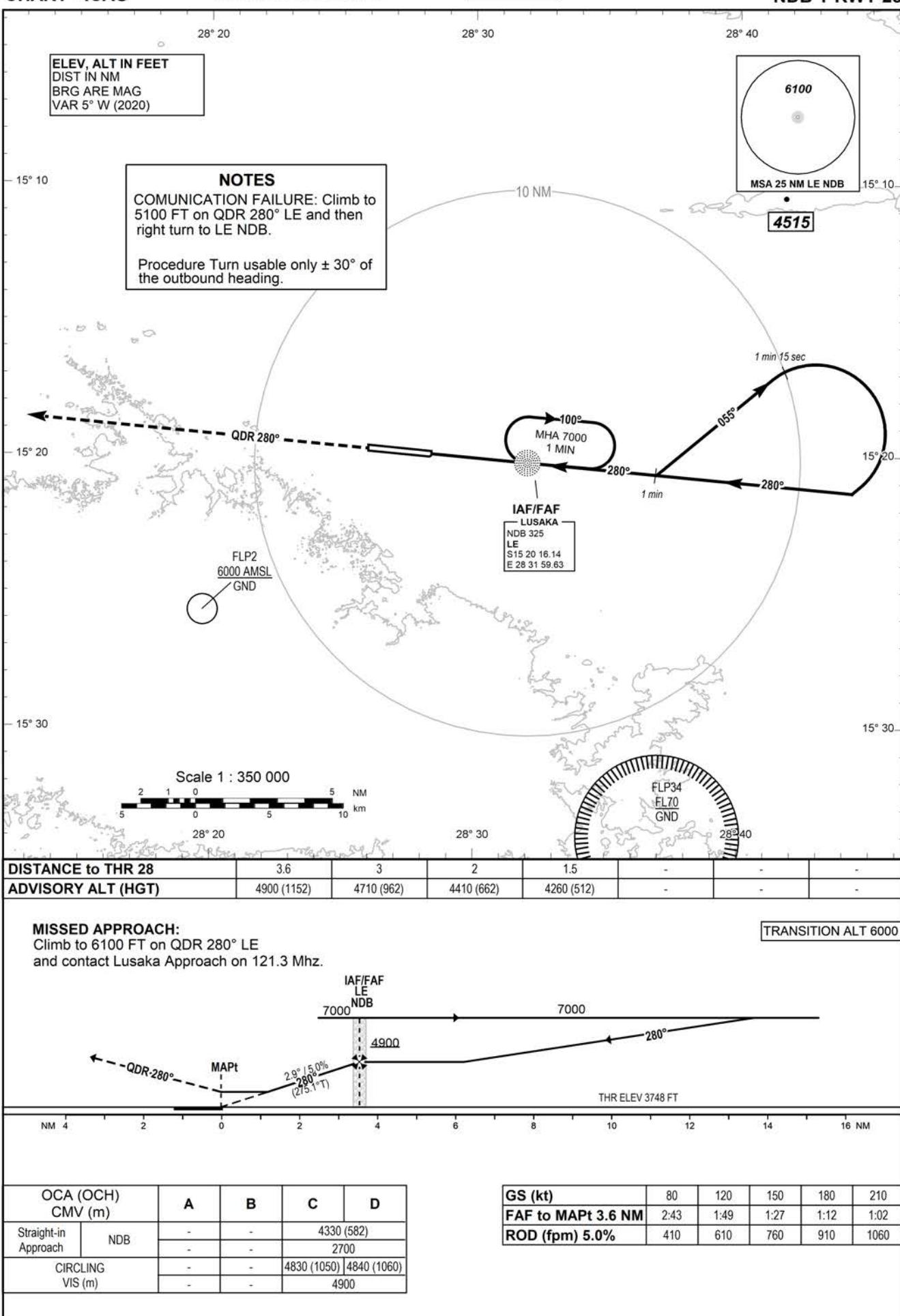
AERODROME ELEV 3780 FT
HEIGHTS RELATED TO
THR RWY 28 - ELEV 3748 FT

APP	121.300
	120.100
TWR	118.100

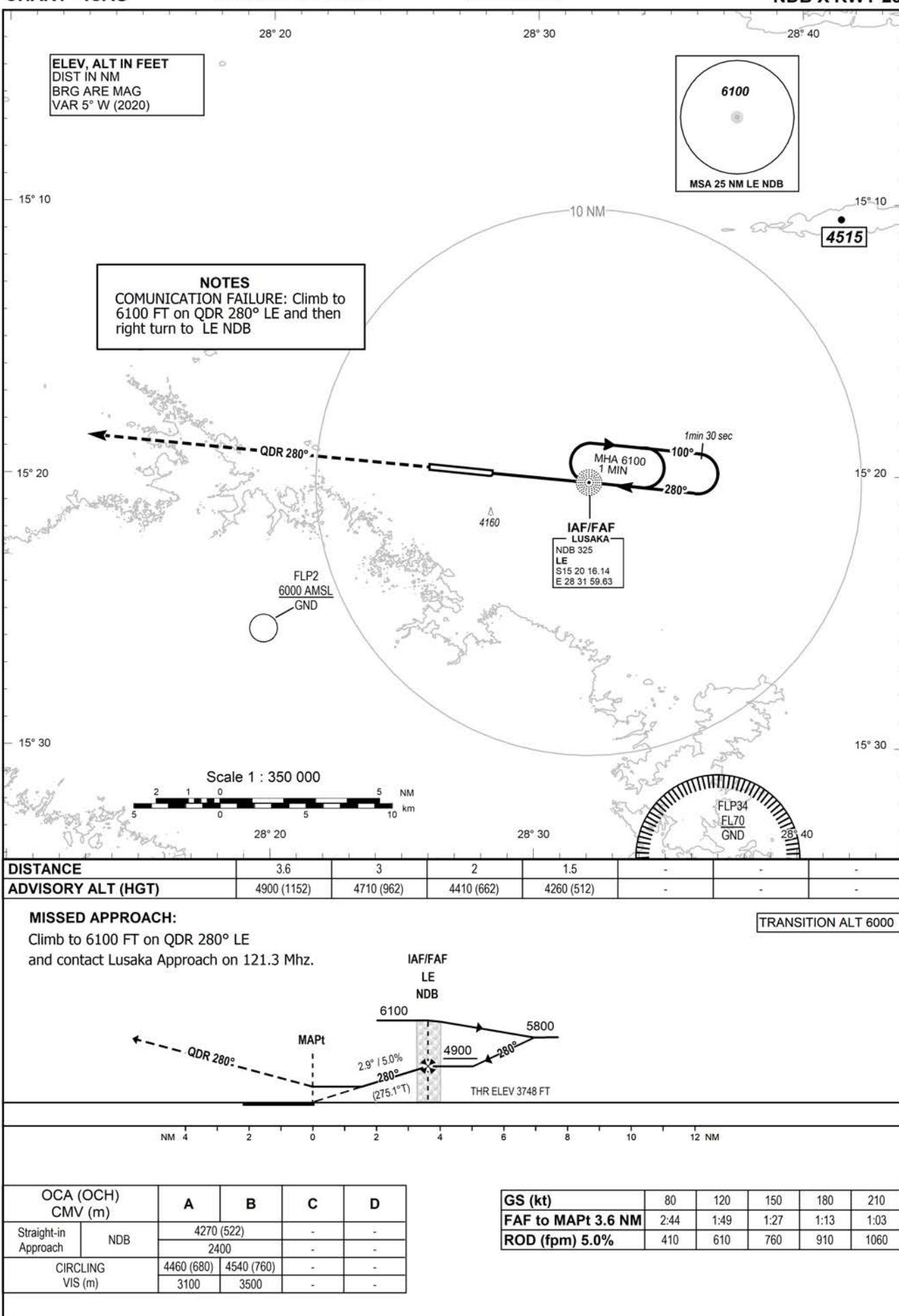
KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB Z RWY 28



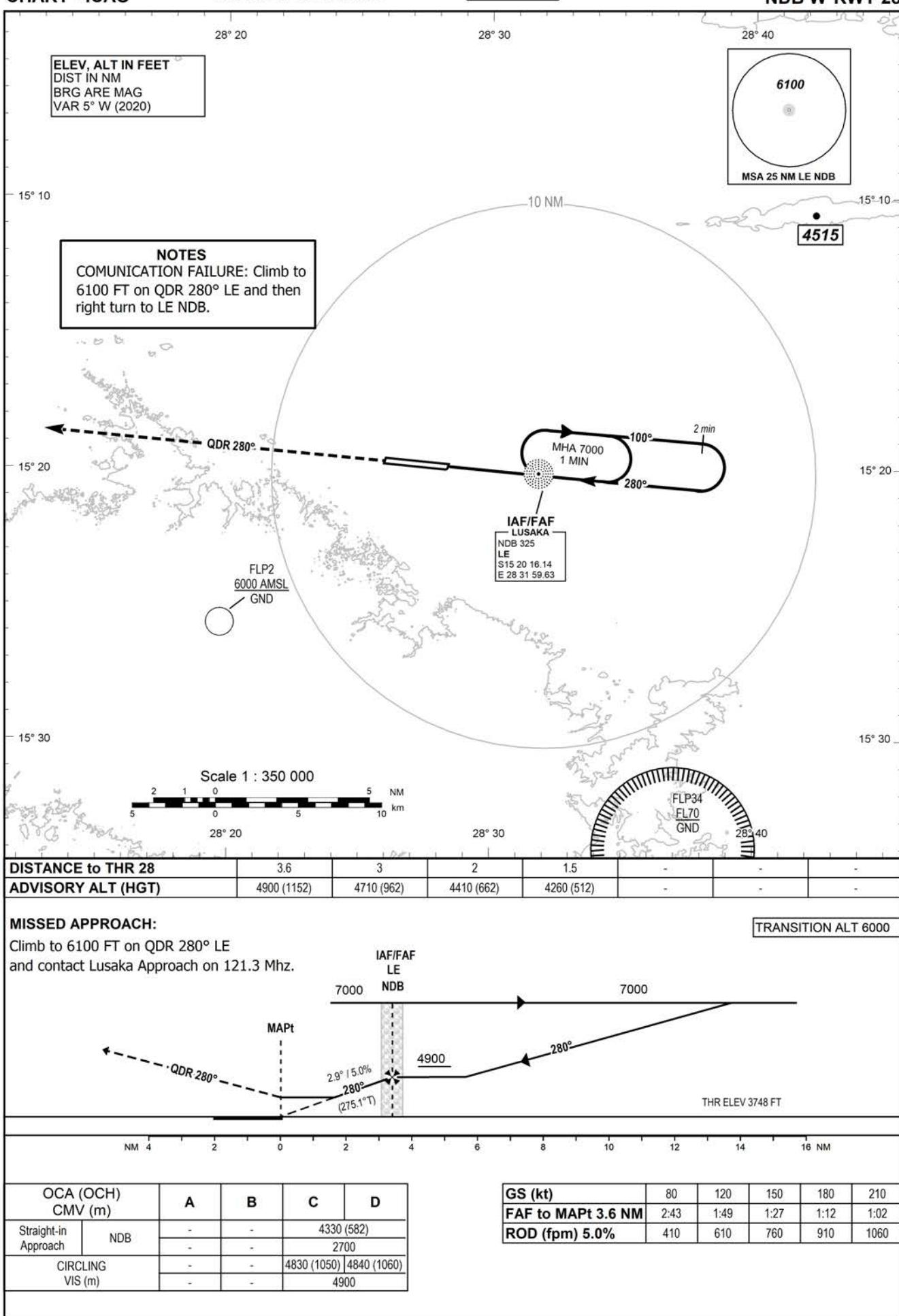
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HEIGHTS RELATED TO
THR RWY 28 - ELEV 3748 FTAPP 121.300
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TWR 118.100KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB Y RWY 28

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(FLKK)
NDB X RWY 28

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120.100
TWR 118.100KENNETH KAUNDA INTL/Lusaka
(FLKK)
NDB W RWY 28

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FLKS AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLKS - KASAMA

FLKS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 10°13'07.00" E 031°08'06.60" Nil
2	<i>Direction and distance from (city)</i>	Nil
3	<i>Elevation/Reference temperature</i>	Elev: 4576.8 FT (1395 M) / T: Nil
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W (2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited AFS: FLKSZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

FLKS AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	Nil
8	<i>Fuelling</i>	Nil
9	<i>Handling</i>	Nil
10	<i>Security</i>	Nil
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLKS AD 2.4 HANDLING SERVICES AND FACILITIES

FLKS AD 2.5 PASSENGER FACILITIES

FLKS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR : CAT 4
2	<i>Rescue equipment</i>	YES; 2 fire tenders, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLKS AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLKS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

FLKS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

FLKS AD 2.10 AERODROME OBSTACLES

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c
NOTE: Nil		

FLKS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Kasama
2	<i>Hours of service MET Office outside hours</i>	0600-1500
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport As required by flights
4	<i>Trend forecast Interval of issuance</i>	Metar - Speci 2 HR
5	<i>Briefing/consultation provided</i>	Prior notice required
6	<i>Flight documentation Language(s) used</i>	Nil
7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	Kasama FIS
10	<i>Additional information (limitation of ser- vice, etc.)</i>	Nil

FLKS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designa- tions RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of preci- sion APP RWY</i>	
1	2	3	4	5	6	
13	128°(True) 130°(Mag)	2008 x 24	SWY: Nil	S 10°11'59.65" E 031°06'35.57" GUND: Nil	THR 4527.6 FT (1380 M)	
31	308°(True) 310°(Mag)	2008 x 24	SWY: Nil	S 10°13'06.88" E 031°08'01.40" GUND: Nil	THR 4576.8 FT (1395 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimen- sions (M)</i>	<i>CWY dimen- sions (M)</i>	<i>Strip dimen- sions (M)</i>	<i>RESA dimen- sions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 13: Nil	Nil	240 x 250	2650 x 250	Nil	Nil	Nil
For Rwy 31: Nil	Nil	240 x 250	2650 x 250	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
13						
31						

FLKS AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
13	1874	2008	2008	1874	

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
31	2008	2248	2008	2008	

FLKS AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
13	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
31	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

FLKS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

FLKS AD 2.16 HELICOPTER LANDING AREA

As guided by AFIS

FLKS AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	KASAMA ATZ Circular area centered on S 10°12'30" E 031°08'25" (NDB KS) within a 10NM radius.
2	Vertical limits	Nil
3	Airspace classification	G
4	ATS unit call sign Language(s)	Kasama Radio, English
5	Transition altitude	6000 FT (1829 M)
6	Hours of applicability	0600-1500
7	Remarks	Nil

FLKS AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	Kasama Radio	118.3 MHZ 6952 KHZ	HJ	Nil	Nil	Primary Freq. Secondary Freq.

FLKS AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
L (03° W)	KS	367.00 KHZ	H24	S 10°12'30.00" E 031°08'24.60"	—	Power output 100w Coverage 50NM

FLKS AD 2.20 LOCAL AERODROME REGULATIONS

FLKS 2.20.1 Aerodrome Regulations

At Kasama Airport a number of local regulations apply.

The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;

- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- d. Towing assistance;
- e. Use of engine power exceeding idle power;
- f. Engine start-up and use of APU;
- g. Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR (AFIS).

"Local Regulations" may be requested , in writing from:
Officer in Charge
Kasama Airport

FLKS AD 2.21 NOISE ABATEMENT PROCEDURES

FLKS AD 2.22 FLIGHT PROCEDURES

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLKS AD 2.23 ADDITIONAL INFORMATION

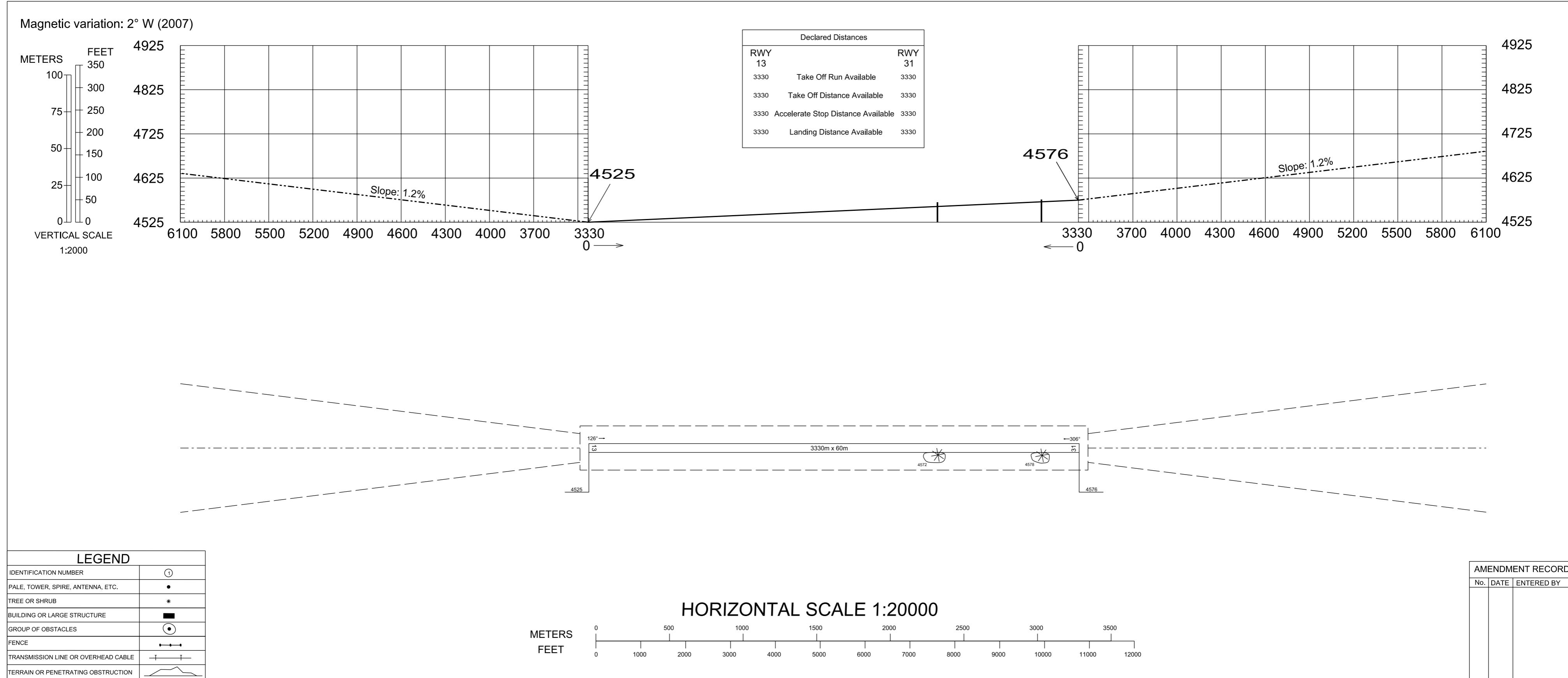
FLKS AD 2.24 CHARTS RELATED TO AN AERODROME

<i>Charts</i>	<i>Pages</i>
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 13-31	AD 2 FLKS 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLKS 6 - 1


Dimensions in metres
Elevations in feet

AERODROME OBSTACLE CHART - ICAO TYPE A (Operating Limitations)

KASAMA
RWY 13/31



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FLMA AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLMA - MANSA

FLMA AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 11°08'19.60" E 028°52'40.50" Nil
2	<i>Direction and distance from (city)</i>	Nil
3	<i>Elevation/Reference temperature</i>	Elev: 4106.28 FT (1252 M) / T: 30.9° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W (2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited AFS: FLMAZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

FLMA AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	Nil
8	<i>Fuelling</i>	Nil
9	<i>Handling</i>	Nil
10	<i>Security</i>	Nil
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLMA AD 2.4 HANDLING SERVICES AND FACILITIES

FLMA AD 2.5 PASSENGER FACILITIES

FLMA AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 4
2	<i>Rescue equipment</i>	YES; 1 fire tender, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLMA AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLMA AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

FLMA AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

FLMA AD 2.10 AERODROME OBSTACLES

In circling area and at AD		
Obstacle type Elevation Markings/LGT	Coordinates	Remarks
a	b	c
NOTE: Nil		

FLMA AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Mansa
2	Hours of service MET Office outside hours	0600-1500
3	Office responsible for TAF preparation Period of validity	Kenneth Kaunda International Airport As required by flights
4	Trend forecast Interval of issuance	Metar - Speci 2 HR
5	Briefing/consultation provided	Prior notice required
6	Flight documentation Language(s) used	Nil
7	Charts and other information available for briefing or consultation	Provided in tabular form for domestic flights only
8	Supplementary equipment available for providing information	Nil
9	ATS units provided with information	Mansa FIS
10	Additional information (limitation of ser- vice, etc.)	Nil

FLMA AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designa- tions RWY	TRUE & MAG BRG	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR elevation and highest elevation of TDZ of preci- sion APP RWY	
1	2	3	4	5	6	
10	099°(True) 000°(Mag)	1710 x 18	SWY: Nil	S 11°08'00.00" E 028°52'12.00" GUND: Nil	THR 4106.89 FT (1252 M)	
28	279°(True) 000°(Mag)	1710 x 18	SWY: Nil	S 11°08'00.00" E 028°52'12.00" GUND: Nil	THR 4105.66 FT (1251 M)	
Slope OF RWY and SWY	SWY dimen- sions (M)	CWY dimen- sions (M)	Strip dimen- sions (M)	RESA dimen- sions (M)	RAG	OFZ
7	8	9	10	11	12	13
For Rwy 10: Nil	Nil	Nil	Nil	Nil	Nil	Nil
For Rwy 28: Nil	Nil	Nil	Nil	Nil	Nil	Nil
Designations RWY	Remarks					
1	14					
10						
28						

FLMA AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
10	1710	1710	1710	1710	

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
28	1710	1710	1710	1710	

FLMA AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
28	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

FLMA AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

FLMA AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

FLMA AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	MANSA ATZ Circular area centered on S 11°08'20" E 028°52'41" within a 10NM radius.
2	Vertical limits	Nil
3	Airspace classification	G
4	ATS unit call sign Language(s)	Mansa Radio, English
5	Transition altitude	6000 FT (1829 M)
6	Hours of applicability	0600 - 1500
7	Remarks	Nil

FLMA AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	Mansa Radio	118.3 MHZ 6952 KHZ	0600 - 1500	Nil	Nil	Primary Freq. Secondary Freq

FLMA AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB (04° W)	MA	316.00 KHZ	H24	S 11°07'27.00" E 028°51'46.20"	—	Power output 1kw Coverage 200NM

FLMA AD 2.20 LOCAL AERODROME REGULATIONS

FLMA 2.20.1 Aerodrome Regulations

At Mansa Airport a number of local regulations apply.
The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;

- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- d. Towing assistance;
- e. Use of engine power exceeding idle power;
- f. Engine start-up and use of APU;
- g. Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR (AFIS).

"Local Regulations" may be requested , in writing from:
Officer in Charge
Mansa Airport

FLMA AD 2.21 NOISE ABATEMENT PROCEDURES

FLMA AD 2.22 FLIGHT PROCEDURES

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLMA AD 2.23 ADDITIONAL INFORMATION

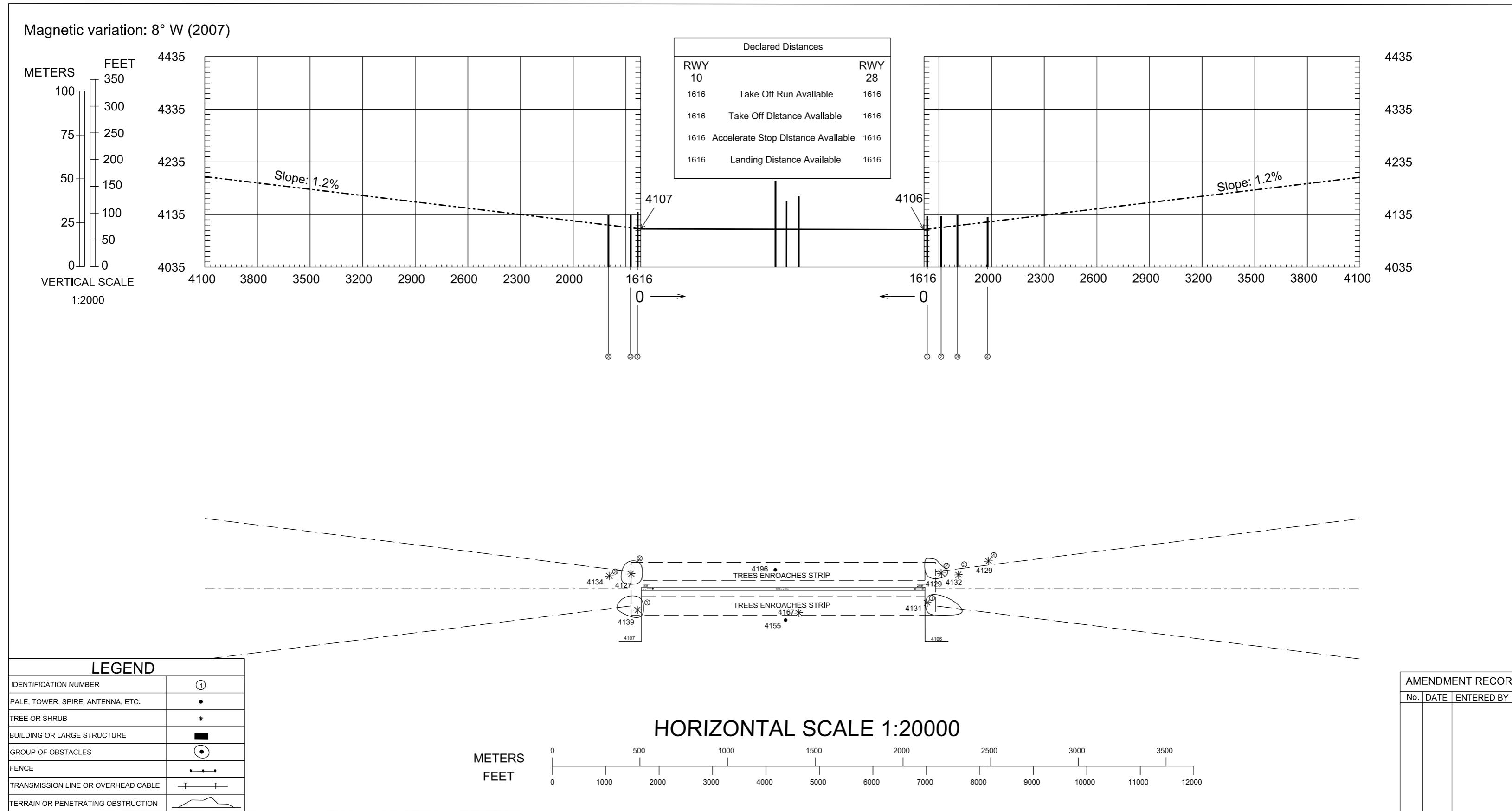
FLMA AD 2.24 CHARTS RELATED TO AN AERODROME

<i>Charts</i>	<i>Pages</i>
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLMA 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLMA 6 - 1


Dimensions in metres
Elevations in feet

AERODROME OBSTACLE CHART - ICAO
TYPE A (Operating Limitations)

MANSA
RWY 10/28



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FLMF AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLMF - MFUWE

FLMF AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 13°15'29.90" E 031°56'23.30" Nil
2	<i>Direction and distance from (city)</i>	North-West of Chipata Town/119Km
3	<i>Elevation/Reference temperature</i>	Elev: 1844 FT (562 M) / T: 36.3° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	8° W (2007)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Mfuwe P.O. Box 2 Mfuwe Zambia Tel: 260-216-245006, 245083, 245142 Fax: 260-216-245029 AFS: FLMFZPZX eMail: zaclmf@zacl.aero Website: www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

FLMF AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0500-1600 and O/R
2	<i>Customs and immigration</i>	As AD Administration
3	<i>Health and sanitation</i>	First aid as AD Administration
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLMF AD 2.4 HANDLING SERVICES AND FACILITIES

1	<i>Cargo-handling facilities</i>	Nil
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS_LL , AVTUR Oil : All types normally available.
3	<i>Fuelling facilities/capacity</i>	Two(2) fixed containers
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Nil
7	<i>Remarks</i>	Nil

FLMF AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	Lodges and rest rooms near by
2	<i>Restaurants</i>	Restaurant/Cafe at AD
3	<i>Transportation</i>	Buses by tour operations to the National park
4	<i>Medical facilities</i>	First aid at AD
5	<i>Bank and Post Office</i>	In Terminal Building
6	<i>Tourist Office</i>	At AD
7	<i>Remarks</i>	Nil

FLMF AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 4
2	<i>Rescue equipment</i>	YES, 1 Tender, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLMF AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLMF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>	
		FLMF Apron	Concrete	PCN 120/R/D/X/T	
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>	
		FLMF Twy	23 M	PCN 105/F/A/W/T	
3	<i>Altimeter checkpoint location and elevation</i>	Location: At apron Elevation: 1847 feet			
4	<i>VOR/INS checkpoints</i>	VOR: Holding Bay INS: Apron THR RWY 09/27			
5	<i>Remarks</i>	Nil			

FLMF AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Taxiing guidance signs at all intersections with TWY and RWY AND at all holding positions. Guide lines at apron. Nose- in guidance at aircraft stands
2	<i>RWY and TWY markings and LGT</i>	RWY: Designation, THR, TDZ, centre line, edge runway end as appropriate, marked. TWY: Centre line, holding positions and at all TWY/RWY intersections marked.
3	<i>Stop bars</i>	NIL
4	<i>Remarks</i>	Nil

FLMF AD 2.10 AERODROME OBSTACLES

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
09/APCH	FLMF_2647 Elev: 573.798 m Unlighted	S 13°15'34.89" E 031°55'22.88"	Nil
09/TKOF	FLMF_895 Elev: 589.087 m Unlighted	S 13°15'24.07" E 031°57'55.73"	Nil
09/TKOF	FLMF_977 Elev: 584.358 m Unlighted	S 13°15'17.58" E 031°57'35.84"	Nil

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
27/APCH	FLMF_1347 Elev: 575.262 m Unlighted	S 13°15'22.08" E 031°57'08.21"	Nil
27/APCH	FLMF_1402 Elev: 578.863 m Unlighted	S 13°15'19.08" E 031°57'01.60"	Nil
27/APCH	FLMF_1529 Elev: 573.166 m Unlighted	S 13°15'29.17" E 031°56'59.90"	TotalAreaofObjectis100334.139m ² _asthe-maximumsizeoftheObstacle_withthispointtheHighestPointofObject
27/APCH	FLMF_1530 Elev: 576.595 m Unlighted	S 13°15'23.54" E 031°56'56.67"	TotalAreaofObjectis53282.387m ² _asthe-maximumsizeoftheObstacle_withthispointtheHighestPointofObject
27/APCH	FLMF_3358 Elev: 568.35 m Unlighted	S 13°15'29.34" E 031°56'49.59"	Nil
27/APCH	FLMF_3373 Elev: 570.719 m Unlighted	S 13°15'24.81" E 031°56'49.49"	TotalAreaofObjectis123.621m ² _asthemaximumsizeoftheObstacle_withthispointtheHighestPointofObject
27/APCH	FLMF_968 Elev: 584.624 m Unlighted	S 13°15'28.79" E 031°57'22.54"	Nil
27/TKOF	FLMF_2887 Elev: 577.395 m Unlighted	S 13°15'39.03" E 031°54'55.52"	Nil
<i>In circling area and at AD</i>			
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>	
a	b	c	
NOTE: Nil			

FLMF AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Mfuwe
2	<i>Hours of service MET Office outside hours</i>	0400 –1600
3	<i>Office responsible for TAF preparation Period of validity</i>	Mfuwe 2 HR
4	<i>Trend forecast Interval of issuance</i>	TREND METAR, SPECI 2 HR
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Charts, abbreviated plain language text English
7	<i>Charts and other information available for briefing or consultation</i>	Cross section form of forecasts, charts and tables of documentation for both international and domestic flights.

8	<i>Supplementary equipment available for providing information</i>	Self briefing terminal
9	<i>ATS units provided with information</i>	FLMF MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

FLMF AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
09	083°(True) 088°(Mag)	2189 x 30	PCN 78/F/A/W/T SWY: Nil	S 13°15'36.73" E 031°55'35.08" GUND: Nil	THR 1841 FT (561 M)	
27	263°(True) 268°(Mag)	2189 x 30	PCN 78/F/A/W/T SWY: Nil	S 13°15'27.67" E 031°56'47.22" GUND: Nil	THR 1844 FT (562 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 09: +1.2%	Nil	900 x 400	3670 x 140	Nil	Nil	Nil
For Rwy 27: +1.2%	150 x 30	748 x 400	3670 x 140	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
09						
27						

FLMF AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
09	2189	3089	2189	2189	
27	2189	2937	2339	2189	

FLMF AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
09	Nil	Green nil wbar	PAPI	Nil	Nil	60 M White	Red	Nil	Nil
27	Nil	Green nil wbar	Nil	Nil	Nil	60 M White	Red	Nil	Nil

FLMF AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

FLMF AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

FLMF AD 2.17 ATS AIRSPACE

1	<i>Designation and lateral limits</i>	MFUWE CTR Circular area centered on S 13°15'37" E 031°54'54" within a 25NM radius.
2	<i>Vertical limits</i>	Nil
3	<i>Airspace classification</i>	G
4	<i>ATS unit call sign Language(s)</i>	Mfuwe Approach, English Mfuwe TWR, English
5	<i>Transition altitude</i>	5000 FT (1524 M)
6	<i>Hours of applicability</i>	
7	<i>Remarks</i>	Secondary power supply available with 15seconds changeover time

FLMF AD 2.18 ATS COMMUNICATION FACILITIES

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	SATVOICE	<i>Logon address</i>	<i>Remarks</i>
1	2	3	4	5	6	7
Approach Control	Mfuwe Approach	120.7 MHZ	0500 - 1600	Nil	Nil	VDF available
Tower Control	Mfuwe TWR	118.3 MHZ	0500 - 1600	Nil	Nil	

FLMF AD 2.19 RADIO NAVIGATION AND LANDING AIDS

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
1	2	3	4	5	6	7
NDB (04° W)	MF	401.00 KHZ	H24	S 13°15'48.09" E 031°54'05.12"	—	Power output 125w Coverage 60NM
VOR/DME (04° W)	VMF	112.90 MHZ (CH76X)	H24	S 13°15'42.79" E 031°54'48.72"	1839 FT	Channel 76X co-axially co-located with DVOR

FLMF AD 2.20 LOCAL AERODROME REGULATIONS

FLMF AD 2.20.1 Airport regulations

At Mfuwe Airport a number of local regulations apply. The regulations are listed below:

- Information about aircraft stands including visual docking guidance systems;
- Information about taxiing from aircraft stands including taxi clearance;
- Marshaller assistance and towing assistance;
- Use of engine power exceeding idle power;
- Engine start-up and use of APU
- Fuel spillage; and
- Precautions during extreme weather conditions.

Marshaller assistance can be requested and further information about the regulations can be obtained from the Airport Manager. When a local regulation is of importance for the safe operation of aircraft on the apron, the information may be given by Approach. "Local regulations" may be requested, in writing from:

The Airport Manager
Mfuwe Airport

FLMF AD 2.20.2 Taxiing to and from stands

Arriving aircraft will be allocated a stand number by the approach. General Aviation aircraft will have to use the general aviation parking area. Departing IFR flight shall contact the Approach to obtain ATC clearance before commencing taxiing. Request for ATC clearance may take place at the earliest 10 minutes prior to engine to engine start-up. Tower FREQ 118.300MHZ shall be used during aerodrome hour of operation. Departing aircraft shall obtain departure clearance and taxi instruction from Mfuwe Approach.

FLMF AD 2.20.3 Parking for small aircraft (General Aviation)

General Aviation aircraft shall be guided by marshallers to the parking area for small aircraft.

FLMF AD 2.20.4 Parking area for helicopters

Helicopters parking on the apron will be guided by marsheller or Tower.

FLMF AD 2.20.5 Apron-taxiing during Winter conditions

Not applicable

FLMF AD 2.20.6 Taxiing-limitation

Nil

FLMF AD 2.20.7 School and training flights -Technical test flights- Use of runways

School and training must only be made after permission has been obtained from ATS. Permission will only be granted for such flights subject to departing and arriving traffic.

FLMF AD 2.20.8 Helicopter traffic-limitation

Non scheduled public air traffic with helicopter is permitted only after prior approval from Mfuwe ATSU. Any contact concerning the above shall be made via the handing or directly to the Airport Office during the hours of service and ,if possible, not later than the day before is to be carried out.

Any request for approval of traffic shall contain the following information:

- a. Owner/operator
- b. Type of helicopter, registration/call sign
- c. Date. Arrival time/departure time, destination(s).
- d. Requested flight altitude
- e. ATS routes to be flown
- f. ATS serviceable communications equipment.

FLMF AD 2.20.9 Removal of disabled aircraft form runways

When an aircraft is disabled on the runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General Civil Aviation Authority. If a disabled aircraft is not removed form the runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority or at the owner's or user's expense.

FLMF AD 2.21 NOISE ABATEMENT PROCEDURES

TO BE DEVELOPED.

FLMF AD 2.22 FLIGHT PROCEDURES

FLMF AD 2.22.1 GENERAL

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLMF AD 2.22.2 Procedures for IFR flight within Mfuwe TMA and CTR.

The inbound, transit and outbound routes shown on the charts may be varied at the discretion of ATS. If necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

FLMF AD 2.22.3 Missed approach

Missed approach procedures to be followed in the absence of other ATS instructions are as detailed on the Instrument Approach Chart.

FLMF AD 2.22.4 Communication failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

FLMF AD 2.22.5 Procedures for VFR flights within Mfuwe TMA and CTR

Provided traffic and weather conditions so permit, ATC clearance for VFR flights will be given under the conditions described below:

- a. A flight plan requesting ATC clearance, containing item 7 to 18 and indicating the purpose of the flight, shall be submitted.
- b. ATC clearance shall be obtained 5 minutes before the aircraft enters the controlled airspace concerned.
- c. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
- d. Deviation from the ATC clearance may only be made when prior permission has been obtained.
- e. The flight shall be conducted with Vertical Visual Reference to the ground unless the flight be conducted in accordance the Instrument flight rules.
- f. Two-way radio communication shall be maintained on the frequency prescribed.
- g. The pilot-in-command shall be the holder of an International VHF Licence.

NOTE: ATC clearance is intended only to provide separation between IFR and VFR flights.

FLMF AD 2.23 ADDITIONAL INFORMATION**FLMF AD 2.23.1 Wildlife Concentration in the vicinity of the Airport**

Mfuwe International Airport lies within the Luangwa valley in the Lupande Game Management area. Wild animals are sometimes spotted in the vicinity of the airport but excluded from the airfield by a fence. Bird migration usually occurs during the wet season between November and April when many of the birds are in breeding plumage. As far as practicable aerodrome control will inform pilots of this bird activity and the heights AGL. The aircraft engine noise is not always effective in the clearing of the birds from the landing area, pilots shall exercise extreme caution. Prominent birds around the airport are as tabulated below.

SPECIES	STATUS
Lapwing	Resident
Guinea fowl	Resident
Roller	Resident
Southern ground hornbill	Resident
Black stork	Migrant
Little bee eater	Migrant
White stork	Migrant
Swallow	Migrant
Black headed heron	Migrant
Black stork	Migrant

FLMF AD 2.23.2 Local flying restrictions

Departing east-bound IFR aircraft on the A406 Air route must be at FL080 or above by 25NM from Mfuwe VOR. Arriving IFR aircraft on the A406 Air route shall maintain FL080 or above until 25NM to Mfuwe VOR within the terminal area and during take-off, approach-to-land and climb and descent procedures. During the above periods pilots of aircrafts are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight.

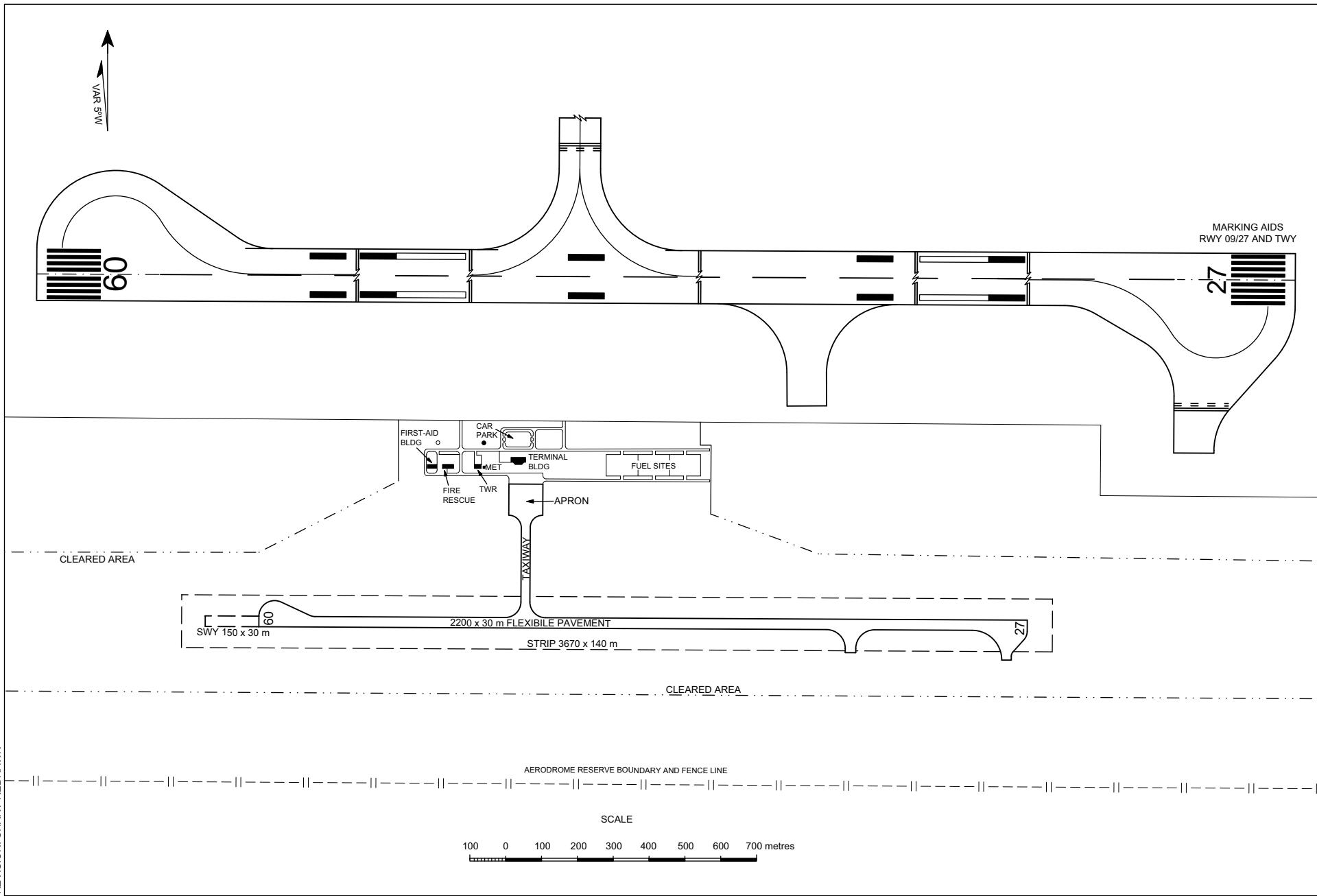
FLMF AD 2.24 CHARTS RELATED TO AN AERODROME

Charts	Pages
Aerodrome Chart — ICAO	AD 2 FLMF 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 27-09	AD 2 FLMF 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLMF 6 - 1
Standard Departure Chart — Instrumen — ICAO RNP RWY 09	AD 2 FLMF 10 - 1
Standard Departure Chart — Instrumen — ICAO RNP RWY 27	AD 2 FLMF 10 - 5

<i>Charts</i>	<i>Pages</i>
Standard Arrival Chart — Instrument — ICAO RNP RWY 09	AD 2 FLMF 12 - 1
Standard Arrival Chart — Instrument — ICAO RNP RWY 27	AD 2 FLMF 12 - 5
Instrument Approach Chart — ICAO RNP RWY 09	AD 2 FLMF 14 - 1
Instrument Approach Chart — ICAO RNP RWY 27	AD 2 FLMF 14 - 3
Instrument Approach Chart — ICAO VOR RWY 09	AD 2 FLMF 14 - 5
Instrument Approach Chart — ICAO VOR RWY 27	AD 2 FLMF 14 - 7

AERODROME CHART

MFUWE/Mfuwe
LFMF

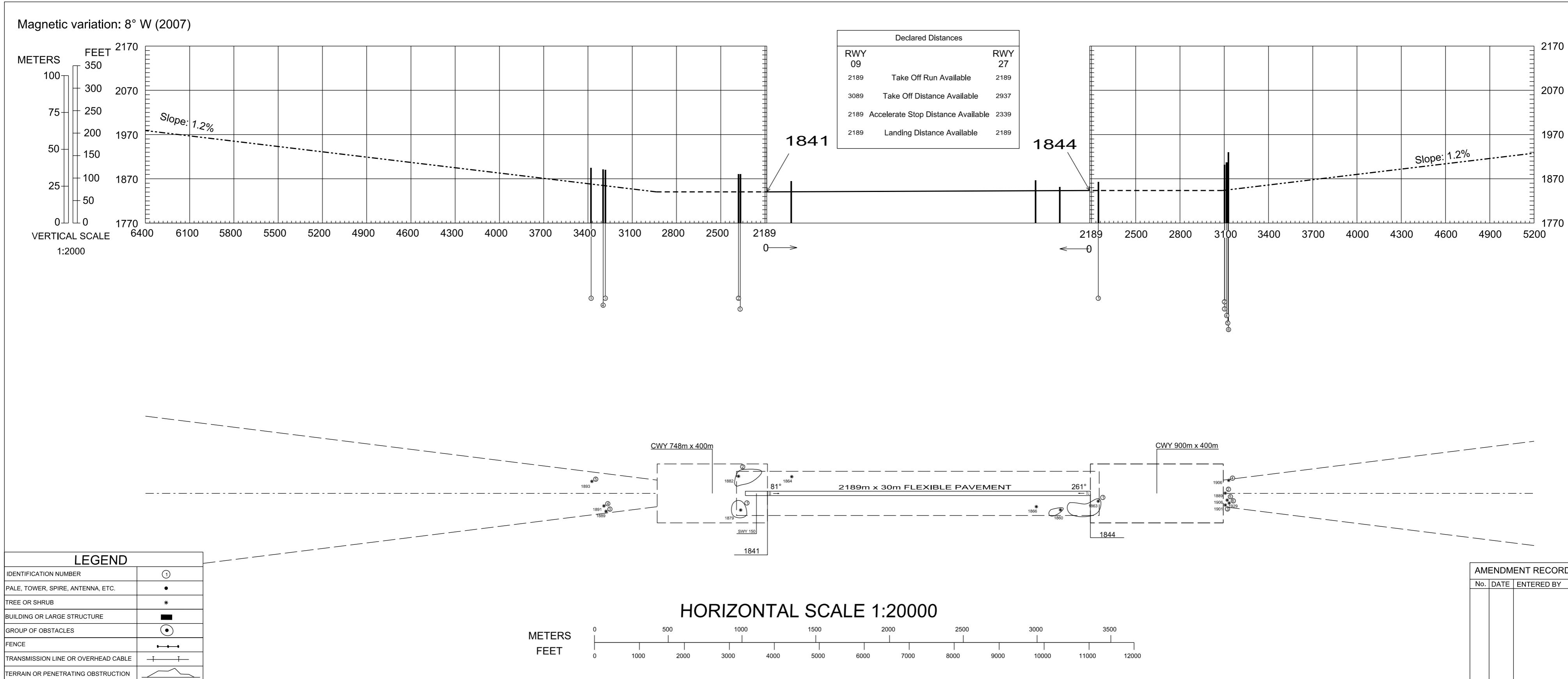


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
Dimensions in metres
Elevations in feet

AERODROME OBSTACLE CHART - ICAO TYPE A (Operating Limitations)

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RWY 09/27**



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**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

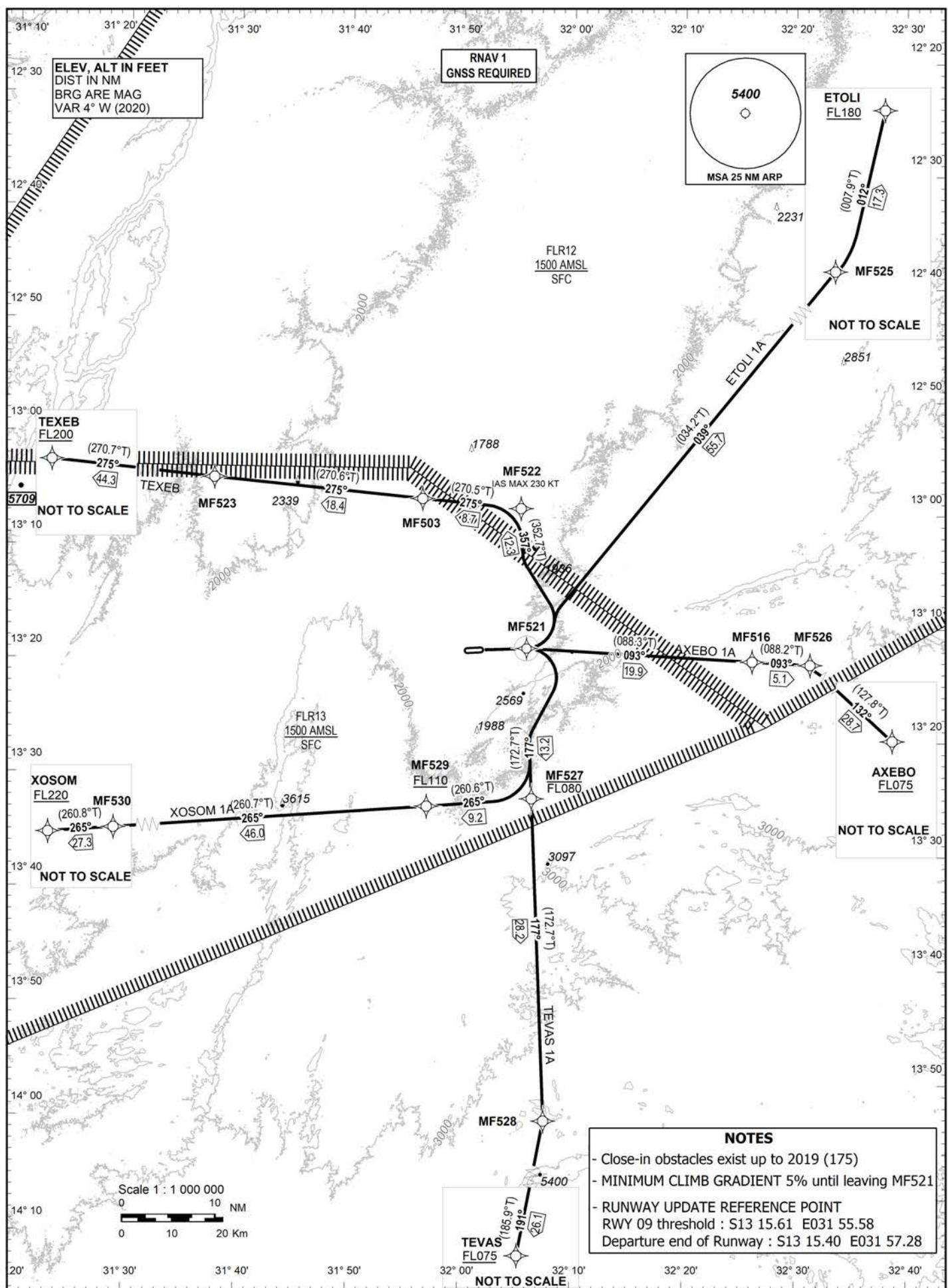
**TRANSITION ALTITUDE
5000**

**APP 120.700
TWR 118.300**

**MFUWE/Mfuwe
(FLMF)**

RNAV SID RWY 09

AXEBO 1A, ETOLI 1A, TEVAS 1A, TEXEB 1A, XOSOM 1A



**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

MFUWE/Mfuwe

(FLMF)

RNAV SID RWY 09

AXEBO 1A, ETOLI 1A, TEVAS 1A, TEXEB 1A, XOSOM 1A

TABULAR DESCRIPTION

RNAV SID RWY 09

AXEBO 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF521	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	MF516	-	093 (088.3)	-	19.9	-	-	-	-	-	RNAV 1
030	TF	MF526	-	093 (088.2)	-	5.1	-	-	-	-	-	RNAV 1
040	TF	AXEBO	-	132 (127.8)	-	28.7	-	+FL075	-	-	-	RNAV 1

ETOLI 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF521	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	MF525	-	039 (034.2)	-	55.7	-	-	-	-	-	RNAV 1
030	TF	ETOLI	-	012 (007.9)	-	17.3	-	+FL180	-	-	-	RNAV 1

TEVAS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF521	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	MF527	-	177 (172.7)	-	13.2	-	-FL080	-	-	-	RNAV 1
030	TF	MF528	-	177 (172.7)	-	28.2	-	-	-	-	-	RNAV 1
040	TF	TEVAS	-	191 (185.9)	-	26.1	-	+FL075	-	-	-	RNAV 1

TEXEB 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF521	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	MF522	-	357 (352.7)	-	12.3	-	-	-230	-	-	RNAV 1
030	TF	MF503	-	275 (270.5)	-	8.7	-	-	-	-	-	RNAV 1
040	TF	MF523	-	275 (270.6)	-	18.4	-	-	-	-	-	RNAV 1
050	TF	TEXEB	-	275 (270.7)	-	44.3	-	+FL200	-	-	-	RNAV 1

XOSOM 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF521	Y	087 (082.7)	-4.3	-	-	-	-	5.0	-	RNAV 1
020	TF	MF527	-	177 (172.7)	-	13.2	-	-FL080	-230	-	-	RNAV 1
030	TF	MF529	-	265 (260.6)	-	9.2	-	+FL110	-	-	-	RNAV 1
040	TF	MF530	-	265 (260.7)	-	46.0	-	-	-	-	-	RNAV 1
050	TF	XOSOM	-	265 (260.8)	-	27.3	-	+FL220	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****MFUWE/Mfuwe**

(FLMF)

RNAV SID RWY 09

AXEBO 1A, ETOLI 1A, TEVAS 1A, TEXEB 1A, XOSOM 1A

**WAYPOINT LIST
RNAV SID RWY 09**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
AXEBO	S 13 31 48.0	E 032 49 42.0	MF530	S 13 37 02.5	E 031 06 36.3
ETOLI	S 12 11 30.0	E 032 35 18.0	TEVAS	S 14 22 18.0	E 032 03 30.0
MF503	S 13 02 36.4	E 031 50 18.4	TEXEB	S 13 01 48.3	E 030 46 01.2
MF516	S 13 14 20.1	E 032 21 14.3	XOSOM	S 13 41 22.9	E 030 38 54.0
MF521	S 13 14 57.1	E 032 00 50.4			
MF522	S 13 02 41.3	E 031 59 14.0			
MF523	S 13 02 24.0	E 031 31 25.6			
MF525	S 12 28 41.2	E 032 32 52.2			
MF526	S 13 14 10.3	E 032 26 27.6			
MF527	S 13 28 06.7	E 032 02 34.2			
MF528	S 13 56 12.7	E 032 06 16.3			
MF529	S 13 29 37.1	E 031 53 13.3			

ROUTING

NAME	TEXT
AXEBO 1A	Minimum climb gradient 5.0% until MF521. After take-off climb on course 087° to MF521, track 093° to MF516, track 093° to MF526 then track 132° to AXEBO. MCA/MCL: AXEBO AT or ABOVE FL075.
ETOLI 1A	Minimum climb gradient 5.0% until MF521. After take-off climb on course 087° to MF521, track 039° to MF525, then track 012° to ETOLI. MCA/MCL: ETOLI AT or ABOVE FL180.
TEVAS 1A	Minimum climb gradient 5.0% until MF521. After take-off climb on course 087° to MF521, track 177° to MF527, track 177° to MF528, then track 191° to TEVAS. MCA/MCL: MF527 AT or BELOW FL080, TEVAS AT or ABOVE FL075.
TEXEB 1A	Minimum climb gradient 5.0% until MF521. After take-off climb on course 087° to MF521, track 357° to MF522, track 275° to MF503, track 275° to MF523, then track 275° to TEXEB. IAS MAX 230 KT until MF522. MCA/MCL: TEXEB AT or ABOVE FL200.
XOSOM 1A	Minimum climb gradient 5.0% until MF521. After take-off climb on course 087° to MF521, track 177° to MF527, track 265° to MF529, track 265° to MF530, then track 265° to XOSOM. IAS MAX 230 KT until MF527. MCA/MCL: MF527 AT or BELOW FL080, MF529 AT or ABOVE FL110, XOSOM AT or ABOVE FL220.

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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

**TRANSITION ALTITUDE
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APP 120.700
TWR 118.300

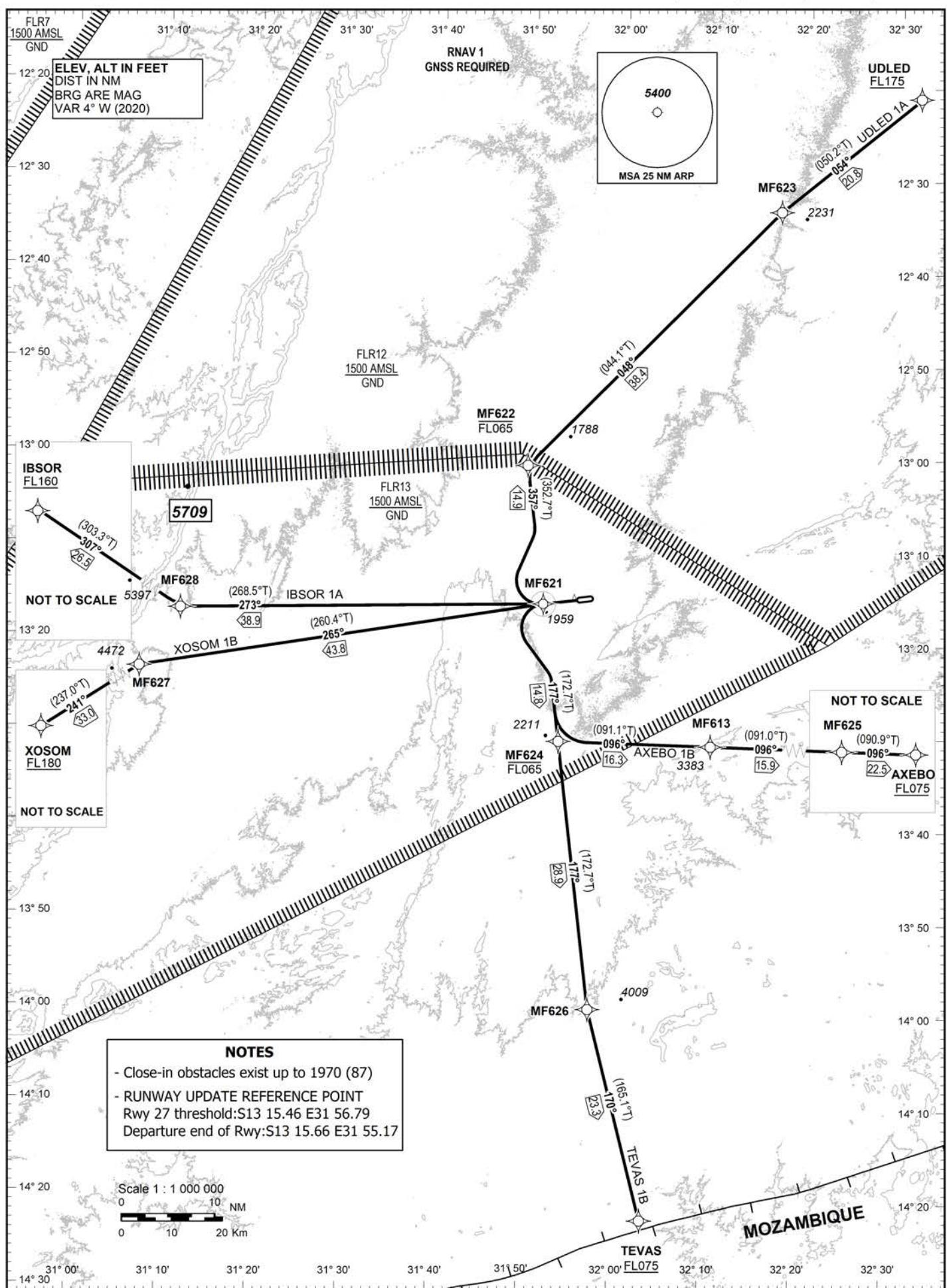
MFUWE/Mfuwe

(FLMF)

RNAV SID RWY 27

S 1B, UDLED 1A, XOSOM 1B

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B



**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

MFUWE/Mfuwe

(FLMF)

RNAV SID RWY 27

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

TABULAR DESCRIPTION

RNAV SID RWY 27

AXEBO 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF621	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	MF624	-	177 (172.7)	-	14.8	-	-	-FL065	-	-	RNAV 1
030	TF	MF613	-	096 (091.1)	-	16.3	-	-	-	-	-	RNAV 1
040	TF	MF625	-	096 (091.0)	-	15.9	-	-	-	-	-	RNAV 1
050	TF	AXEBO	-	096 (090.9)	-	22.5	-	+FL075	-	-	-	RNAV 1

IBSOR 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF621	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	MF628	-	273 (268.5)	-	38.9	-	-	-	-	-	RNAV 1
030	TF	IBSOR	-	307 (303.3)	-	26.5	-	+FL160	-	-	-	RNAV 1

TEVAS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF621	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	MF624	-	177 (172.7)	-	14.8	-	-	-FL065	-	-	RNAV 1
030	TF	MF626	-	177 (172.7)	-	28.9	-	-	-	-	-	RNAV 1
040	TF	TEVAS	-	170 (165.1)	-	23.3	-	-	-	-	-	RNAV 1

UDLED 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF621	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	MF622	-	357 (352.7)	-	14.9	-	-	-FL065	-	-	RNAV 1
030	TF	MF623	-	048 (044.1)	-	38.4	-	-	-	-	-	RNAV 1
040	TF	UDLED	-	054 (050.2)	-	20.8	-	+FL175	-	-	-	RNAV 1

XOSOM 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	MF621	Y	267 (262.7)	-4.3	3.9	-	-	-	-	-	RNAV 1
020	TF	MF627	-	265 (260.4)	-	43.8	-	-	-	-	-	RNAV 1
030	TF	XOSOM	-	241 (237.0)	-	33.0	-	+FL180	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****MFUWE/ Mfuwe****(FLMF)****RNAV SID RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

**WAYPOINT LIST
RNAV SID RWY 27**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
AXEBO	S 13 31 48.0	E 032 49 42.0	UDLED	S 12 20 06.5	E 032 33 22.3
IBSOR	S 13 02 25.2	E 030 49 02.7	XOSOM	S 13 41 22.9	E 030 38 54.0
MF613	S 13 31 10.2	E 032 10 16.5			
MF621	S 13 16 06.6	E 031 51 36.9			
MF622	S 13 01 13.3	E 031 49 40.3			
MF623	S 12 33 30.9	E 032 17 00.2			
MF624	S 13 30 52.2	E 031 53 32.6			
MF625	S 13 31 26.6	E 032 26 37.7			
MF626	S 13 59 40.1	E 031 57 19.3			
MF627	S 13 23 22.0	E 031 07 19.2			
MF628	S 13 17 02.9	E 031 11 45.0			
TEVAS	S 14 22 18.0	E 032 03 30.0			

ROUTING

NAME	TEXT
AXEBO 1B	After take-off climb on course 267° to MF621, track 177° to MF624, track 096° to MF613, track 096° to MF625, then track 096° to AXEBO. MCA/MCL: MF624 AT or BELOW FL065, AXEBO AT or ABOVE FL075.
IBSOR 1A	After take-off climb on course 267° to MF621, track 273° to MF628, then track 307° to IBSOR. MCA/MCL: IBSOR AT or ABOVE FL160.
TEVAS 1B	After take-off climb on course 267° to MF621, track 177° to MF624, track 177° to MF626, then track 170° to TEVAS. MCA/MCL: MF624 AT or BELOW FL065.
UDLED 1A	After take-off climb on course 267° to MF621, track 357° to MF622, track 048° to MF623, then track 054° to UDLED. MCA/MCL: MF622 AT or BELOW FL065, UDLED AT or ABOVE FL175.
XOSOM 1B	After take-off climb on course 267° to MF621, track 265° to MF627, then track 241° to XOSOM. MCA/MCL: XOSOM AT or ABOVE FL180.

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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

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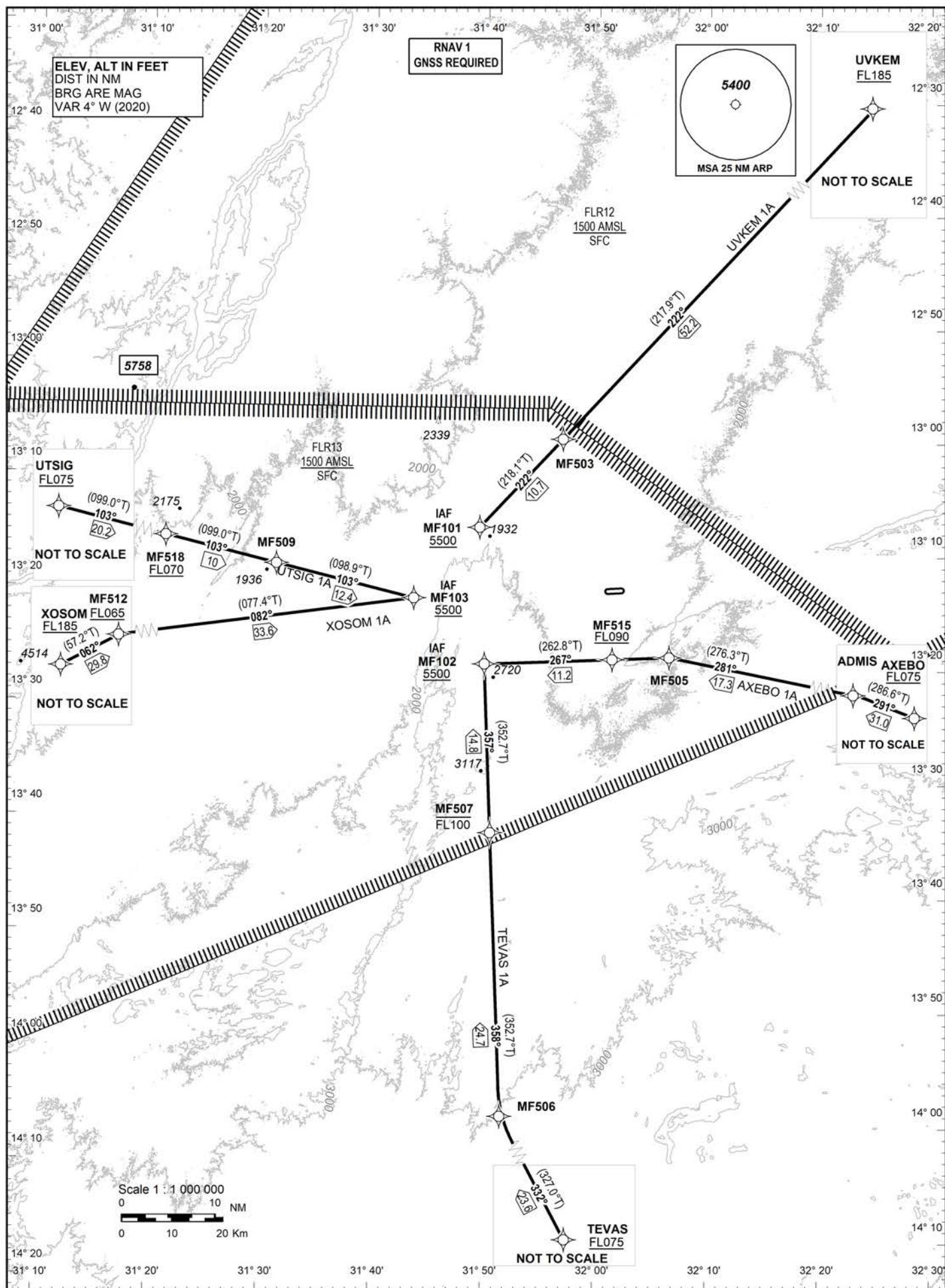
APP 120.700
TWR 118.300

MFUWE/Mfuwe

(FLMF)

(EMT)

AXEBO 1A, TEVAS 1A, UTSIG 1A, UVKEM 1A, XOSOM 1A



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****MFUWE/Mfuwe****(FLMF)****RNAV STAR RWY 09**

AXEBO 1A, TEVAS 1A, UTSIG 1A, UVKEM 1A, XOSOM 1A

TABULAR DESCRIPTION**RNAV STAR RWY 09****AXEBO 1A**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXEBO	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	ADMIS	-	291 (286.6)	-	31.0	-	-	-	-	-	RNAV 1
030	TF	MF505	-	281 (276.3)	-	17.3	-	-	-	-	-	RNAV 1
040	TF	MF515	-	267 (262.7)	-	5.0	-	+FL090	-	-	-	RNAV 1
050	TF	MF102	-	267 (262.8)	-	11.2	-	+5500	-	-	-	RNAV 1

TEVAS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TEVAS	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	MF506	-	332 (327.0)	-	23.6	-	-	-	-	-	RNAV 1
030	TF	MF507	-	358 (352.7)	-	24.7	-	-FL100	-	-	-	RNAV 1
040	TF	MF102	-	357 (352.7)	-	14.8	-	+5500	-	-	-	RNAV 1

UTSIG 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UTSIG	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	MF518	-	103 (099.0)	-	20.2	-	+FL070	-	-	-	RNAV 1
030	TF	MF509	-	103 (099.0)	-	10.0	-	-	-	-	-	RNAV 1
040	TF	MF103	-	103 (098.9)	-	12.4	-	+5500	-	-	-	RNAV 1

UVKEM 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UVKEM	-	-	-	-	-	+FL185	-	-	-	RNAV 1
020	TF	MF503	-	222 (217.9)	-	52.2	-	-	-	-	-	RNAV 1
030	TF	MF101	-	222 (218.1)	-	10.7	-	+5500	-	-	-	RNAV 1

XOSOM 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	XOSOM	-	-	-	-	-	+FL185	-	-	-	RNAV 1
020	TF	MF512	-	062 (057.2)	-	29.8	-	+FL065	-	-	-	RNAV 1
030	TF	MF103	-	082 (077.4)	-	33.6	-	+5500	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****MFUWE/Mfuwe****(FLMF)****RNAV STAR RWY 09**

AXEBO 1A, TEVAS 1A, UTSIG 1A, UVKEM 1A, XOSOM 1A

**WAYPOINT LIST
RNAV STAR RWY 09**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ADMIS	S 13 22 51.6	E 032 19 15.0	MF518	S 13 14 17.1	E 031 15 28.1
AXEBO	S 13 31 48.0	E 032 49 42.0	TEVAS	S 14 22 18.0	E 032 03 30.0
MF101	S 13 11 02.5	E 031 43 33.9	UTSIG	S 13 11 07.0	E 030 55 02.0
MF102	S 13 22 59.9	E 031 45 07.3	UVKEM	S 12 21 16.7	E 032 23 11.8
MF103	S 13 17 46.8	E 031 38 14.4	XOSOM	S 13 41 22.9	E 030 38 54.0
MF503	S 13 02 36.4	E 031 50 18.4			
MF505	S 13 20 56.8	E 032 01 37.7			
MF506	S 14 02 23.3	E 031 50 15.9			
MF507	S 13 37 43.9	E 031 47 02.5			
MF509	S 13 15 50.9	E 031 25 37.8			
MF512	S 13 25 08.6	E 031 04 38.8			
MF515	S 13 21 34.8	E 031 56 32.4			

ROUTING

NAME	TEXT
AXEBO 1A	From AXEBO track 291° to ADMIS, track 281° to MF505, track 267° to MF515, track 267° to MF102. MEA/MEL: AXEBO AT or ABOVE FL075, MF515 AT or ABOVE FL090, MF102 AT or ABOVE 5500'.
TEVAS 1A	From TEVAS track 332° to MF506, track 358° to MF507, track 357° to MF102. MEA/MEL: TEVAS AT or ABOVE FL075, MF507 AT or BELOW FL100, MF102 AT or ABOVE 5500'.
UTSIG 1A	From UTSIG track 103° to MF518, track 103° to MF509, track 103° to MF103. MEA/MEL: UTSIG AT or ABOVE FL075, MF518 AT or ABOVE FL070, MF103 AT or ABOVE 5500'.
UVKEM 1A	From UVKEM track 222° to MF503, track 222° to MF101. MEA/MEL: UVKEM AT or ABOVE FL185, MF101 AT or ABOVE 5500'.
XOSOM 1A	From XOSOM track 062° to MF512, track 082° to MF103. MEA/MEL: XOSOM AT or ABOVE FL185, MF512 AT or ABOVE FL065, MF103 AT or ABOVE 5500'.

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STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

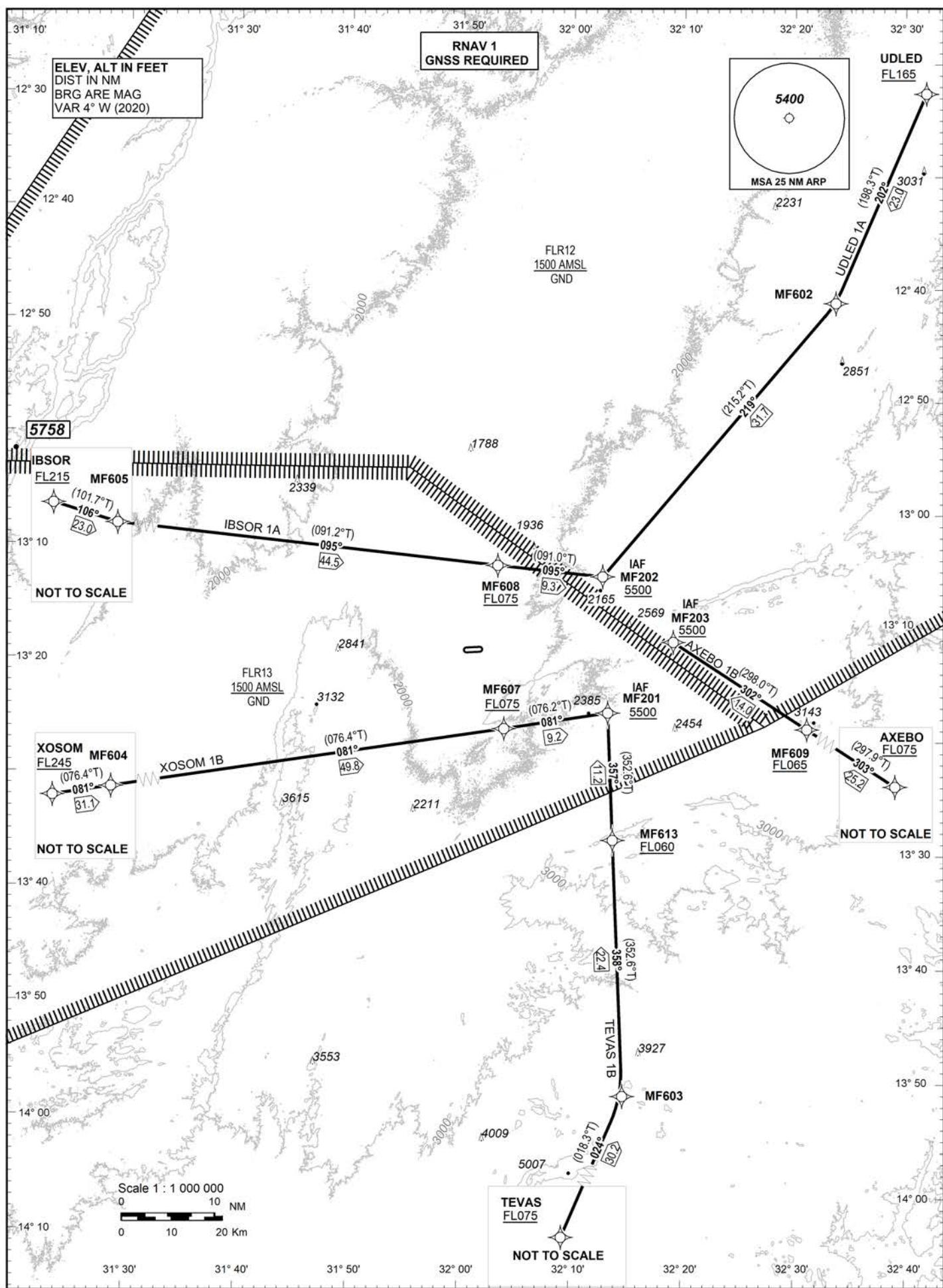
**TRANSITION ALTITUDE
5000**

APP 120.700
TWR 118.300

**MFUWE/Mfuwe
(FLMF)**

RNAV STAR RWY 27

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO**

MFUWE/Mfuwe

(FLMF)

RNAV STAR RWY 27

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

TABULAR DESCRIPTION

RNAV STAR RWY 27

AXEBO 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	AXEBO	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	MF609	-	303 (297.9)	-	25.2	-	+FL065	-	-	-	RNAV 1
030	TF	MF203	-	302 (298.0)	-	14.0	-	+5500	-	-	-	RNAV 1

IBSOR 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBSOR	-	-	-	-	-	+FL215	-	-	-	RNAV 1
020	TF	MF605	-	106 (101.7)	-	23.0	-	-	-	-	-	RNAV 1
030	TF	MF608	-	095 (091.2)	-	44.5	-	+FL075	-	-	-	RNAV 1
040	TF	MF202	-	095 (091.0)	-	9.3	-	+5500	-	-	-	RNAV 1

TEVAS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	TEVAS	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	MF603	-	024 (018.3)	-	30.2	-	-	-	-	-	RNAV 1
030	TF	MF613	-	358 (352.6)	-	22.4	-	+FL060	-	-	-	RNAV 1
040	TF	MF201	-	357 (352.6)	-	11.2	-	+5500	-	-	-	RNAV 1

UDLED 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	UDLED	-	-	-	-	-	+FL165	-	-	-	RNAV 1
020	TF	MF602	-	202 (198.3)	-	23.0	-	-	-	-	-	RNAV 1
030	TF	MF202	-	219 (215.2)	-	31.7	-	+5500	-	-	-	RNAV 1

XOSOM 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	XOSOM	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	MF604	-	081 (076.5)	-	31.1	-	-	-	-	-	RNAV 1
030	TF	MF607	-	081 (076.4)	-	49.8	-	+FL075	-	-	-	RNAV 1
040	TF	MF201	-	081 (076.2)	-	9.2	-	+5500	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****MFUWE/Mfuwe****(FLMF)****RNAV STAR RWY 27**

AXEBO 1B, IBSOR 1A, TEVAS 1B, UDLED 1A, XOSOM 1B

**WAYPOINT LIST
RNAV SID RWY 10**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
AXEBO	S 13 31 48.0	E 032 49 42.0	MF613	S 13 31 10.2	E 032 10 16.5
IBSOR	S 13 02 25.2	E 030 49 02.7	TEVAS	S 14 22 18.0	E 032 03 30.0
MF201	S 13 20 01.4	E 032 08 48.3	UDLED	S 12 20 06.5	E 032 33 22.3
MF202	S 13 08 04.1	E 032 07 13.8	XOSOM	S 13 41 22.9	E 030 38 54.0
MF203	S 13 13 16.4	E 032 14 07.0			
MF602	S 12 42 02.7	E 032 25 59.8			
MF603	S 13 53 31.1	E 032 13 13.9			
MF604	S 13 34 04.2	E 031 09 57.8			
MF605	S 13 07 04.9	E 031 12 07.6			
MF607	S 13 22 14.1	E 031 59 36.5			
MF608	S 13 07 54.7	E 031 57 42.1			
MF609	S 13 19 54.2	E 032 26 49.4			

ROUTING

NAME	TEXT
AXEBO 1B	From AXEBO track 303° to MF609, track 302 to MF203. MEA/MEL: AXEBO AT or ABOVE FL075, MF609 AT or ABOVE FL065, MF203 AT or ABOVE 5500'.
IBSOR 1A	From IBSOR track 106° to MF605, track 095° to MF608, track 095° to MF202. MEA/MEL: IBSOR AT or ABOVE FL215, MF608 AT or ABOVE FL075, MF202 AT or ABOVE 5500'.
TEVAS 1B	From TEVAS track 024° to MF603, track 358° to MF613, track 357° to MF201. MEA/MEL: TEVAS AT or ABOVE FL075, MF613 AT or ABOVE FL060, MF201 AT or ABOVE 5500'.
UDLED 1A	From UDLED track 202° to MF602, track 219° to MF202. MEA/MEL: UDLED AT or ABOVE FL165, MF202 AT or ABOVE 5500'.
XOSOM 1B	From XOSOM track 081° to MF604, track 081° to MF607, track 081° to MF201. MEA/MEL: XOSOM AT or ABOVE FL245, MF607 AT or ABOVE FL075, MF201 AT or ABOVE 5500'.

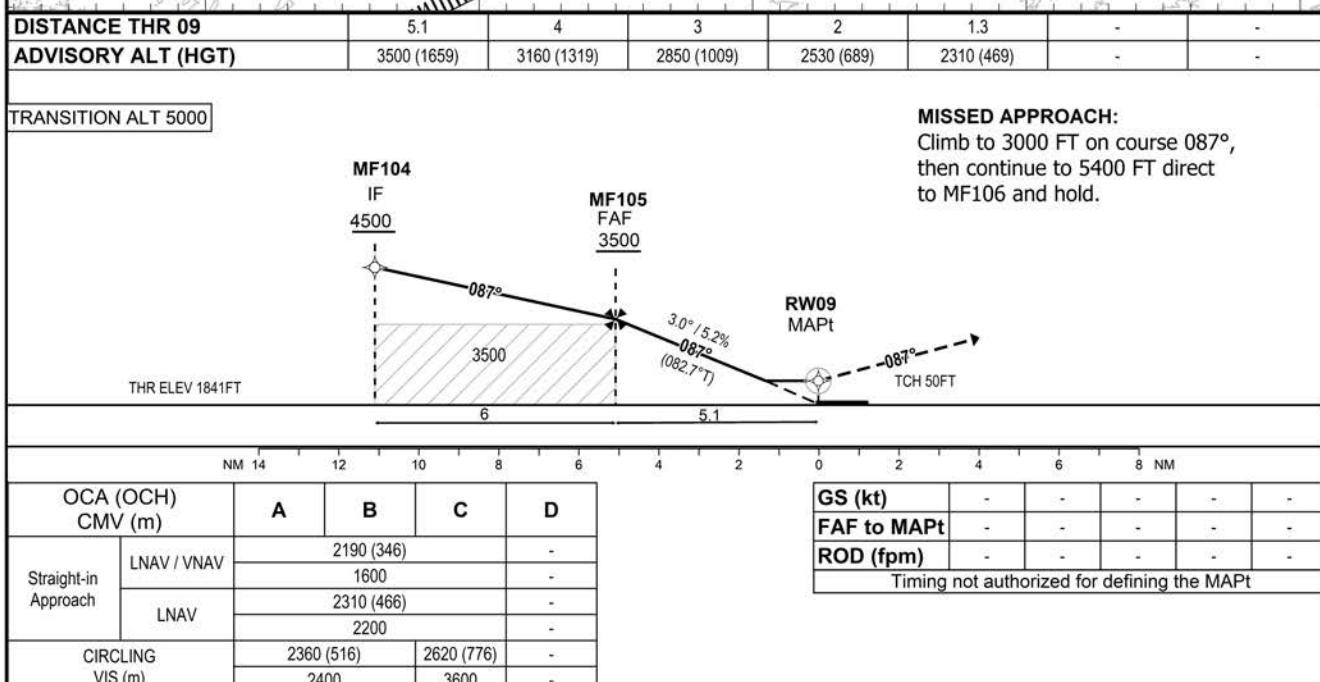
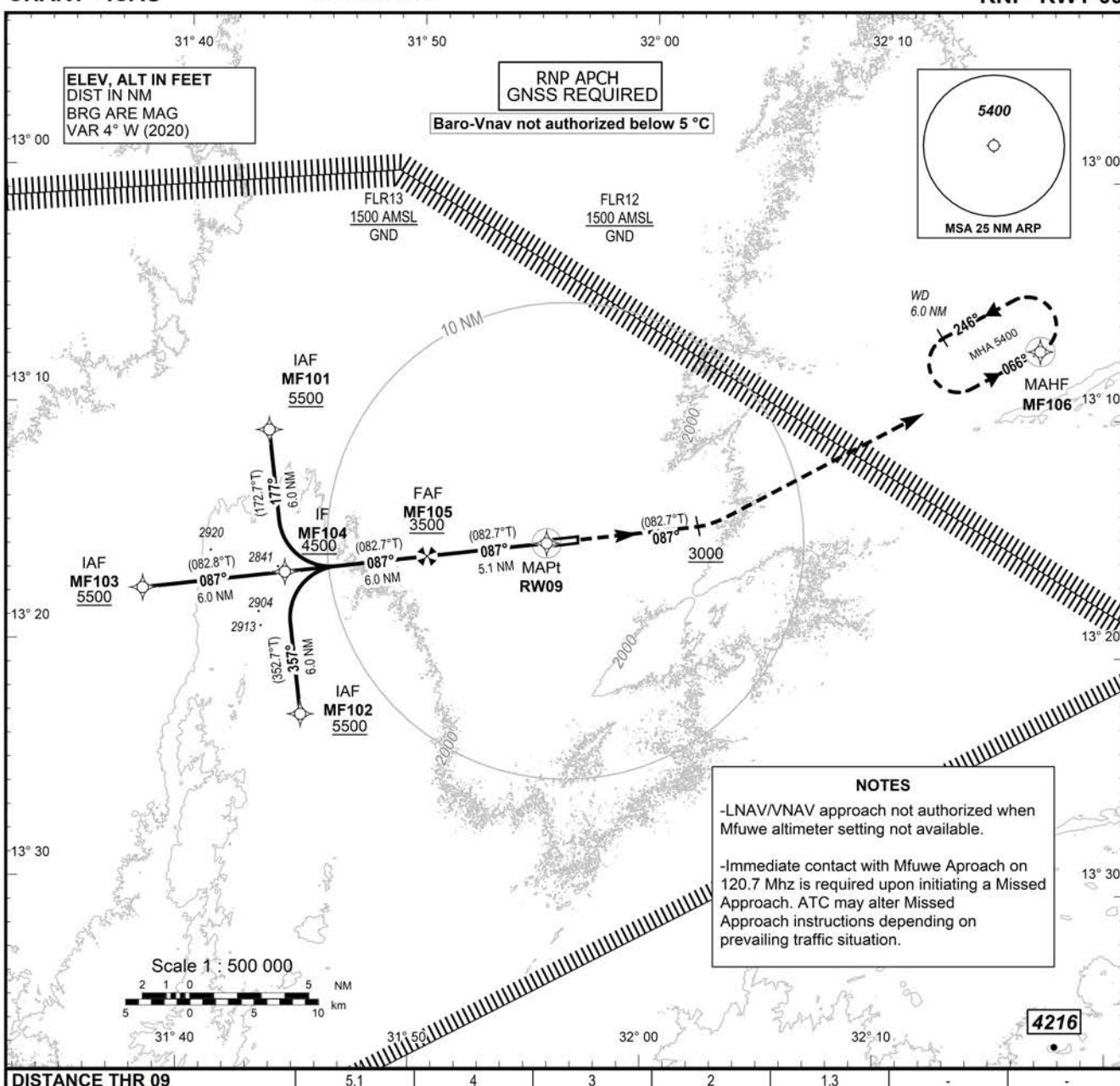
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 1844 FT
HEIGHTS RELATED TO
AD ELEVATION

APP 120.700
TWR 118.300

MFUWE/Mfuwe
(FLMF)
RNP RWY 09



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	MF101	-	-	-	-	+5500	-	-	RNP APCH
020	TF	MF104	-	177 / (172.7)	6.0	-	+4500	-	-	RNP APCH
010	IF	MF102	-	-	-	-	+5500	-	-	RNP APCH
020	TF	MF104	-	357 / (352.7)	6.0	-	+4500	-	-	RNP APCH
010	IF	MF103	-	-	-	-	+5500	-	-	RNP APCH
020	TF	MF104	-	087 / (082.8)	6.0	-	+4500	-	-	RNP APCH
030	TF	MF105	-	087 / (082.7)	6.0	-	+3500	-	-	RNP APCH
040	TF	RW09	Y	087 / (082.7)	5.1	-	@1891	-	-3.00 / 50	RNP APCH
050	CA	-	-	087 / (082.7)	-	-	+3000	-	-	RNP APCH
060	DF	MF106	Y	-	-	-	+5400	-	-	RNP APCH
070	HM	MF106	Y	066 / (061.8)	6.0	L	+5400	-230	-	RNP APCH

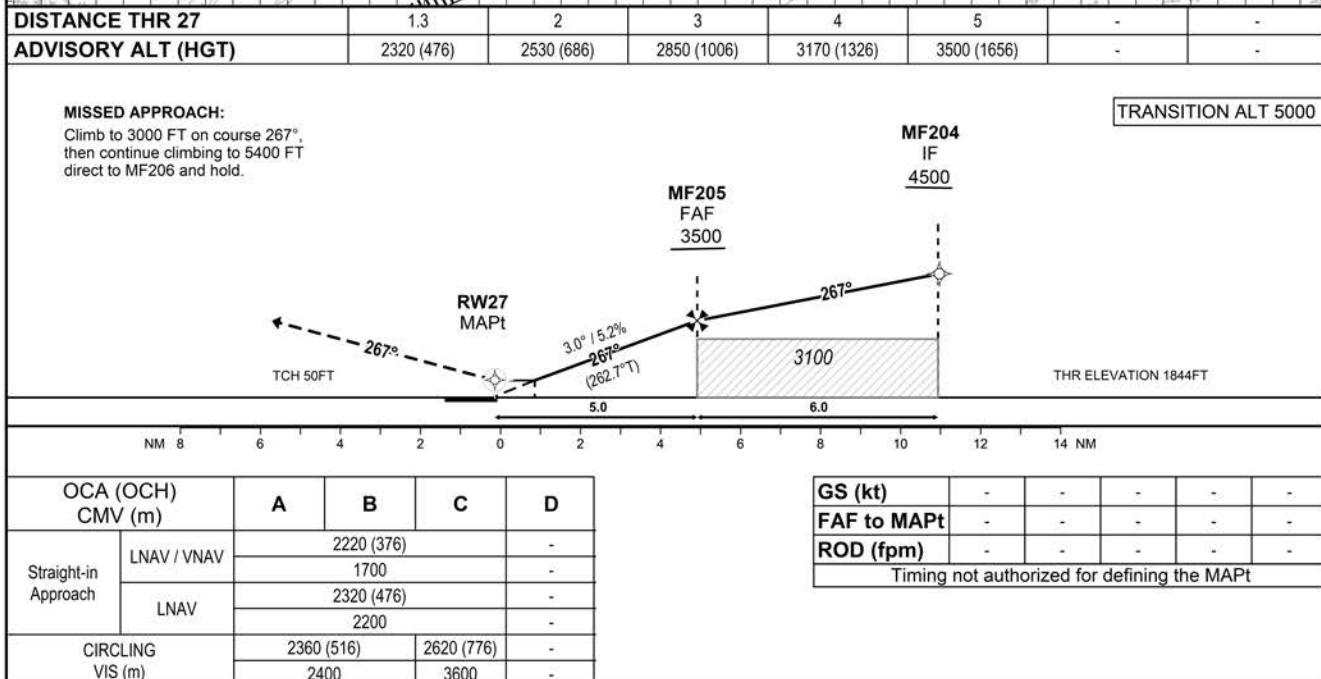
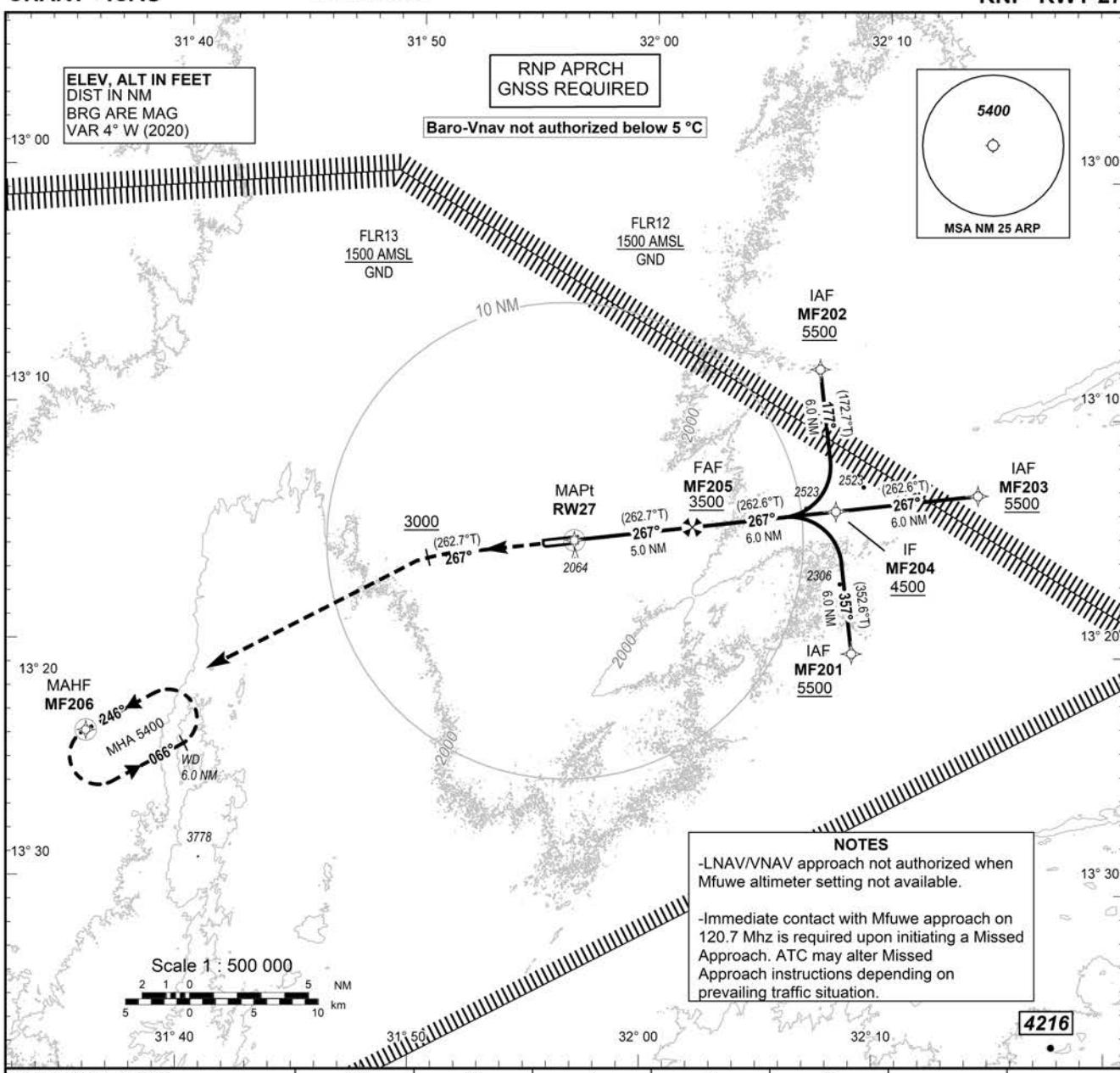
<i>Waypoint Identifier</i>	<i>Coordinates</i>
MF101	S 13 11 02.5 E 031 43 33.9
MF102	S 13 22 59.9 E 031 45 07.3
MF103	S 13 17 46.8 E 031 38 14.4
MF104	S 13 17 01.2 E 031 44 20.6
MF105	S 13 16 15.4 E 031 50 26.8
MF106	S 13 07 08.1 E 032 16 38.0
RW09	S 13 15 36.73 E 031 55 35.08

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 1844 FT
HEIGHTS RELATED TO
AD ELEVATION

APP 120.700
TWR 118.300

MFUWE/Mfuwe
(FLMF)
RNP RWY 27



<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	MF202	-	-	-	-	+5500	-	-	RNP APCH
020	TF	MF204	-	177 / (172.7)	6.0	-	+4500	-	-	RNP APCH
010	IF	MF203	-	-	-	-	+5500	-	-	RNP APCH
020	TF	MF204	-	267 / (262.6)	6.0	-	+4500	-	-	RNP APCH
010	IF	MF201	-	-	-	-	+5500	-	-	RNP APCH
020	TF	MF204	-	357 / (352.6)	6.0	-	+4500	-	-	RNP APCH
030	TF	MF205	-	267 / (262.6)	6.0	-	+3500	-	-	RNP APCH
040	TF	RW27	Y	267 / (262.7)	5.0	-	@1894	-	-3.00 / 50	RNP APCH
050	CA	-	-	267 / (262.7)	-	-	+3000	-	-	RNP APCH
060	DF	MF206	Y	-	-	-	+5400	-	-	RNP APCH
070	HM	MF206	Y	246 / (241.7)	6.0	L	+5400	-230	-	RNP APCH

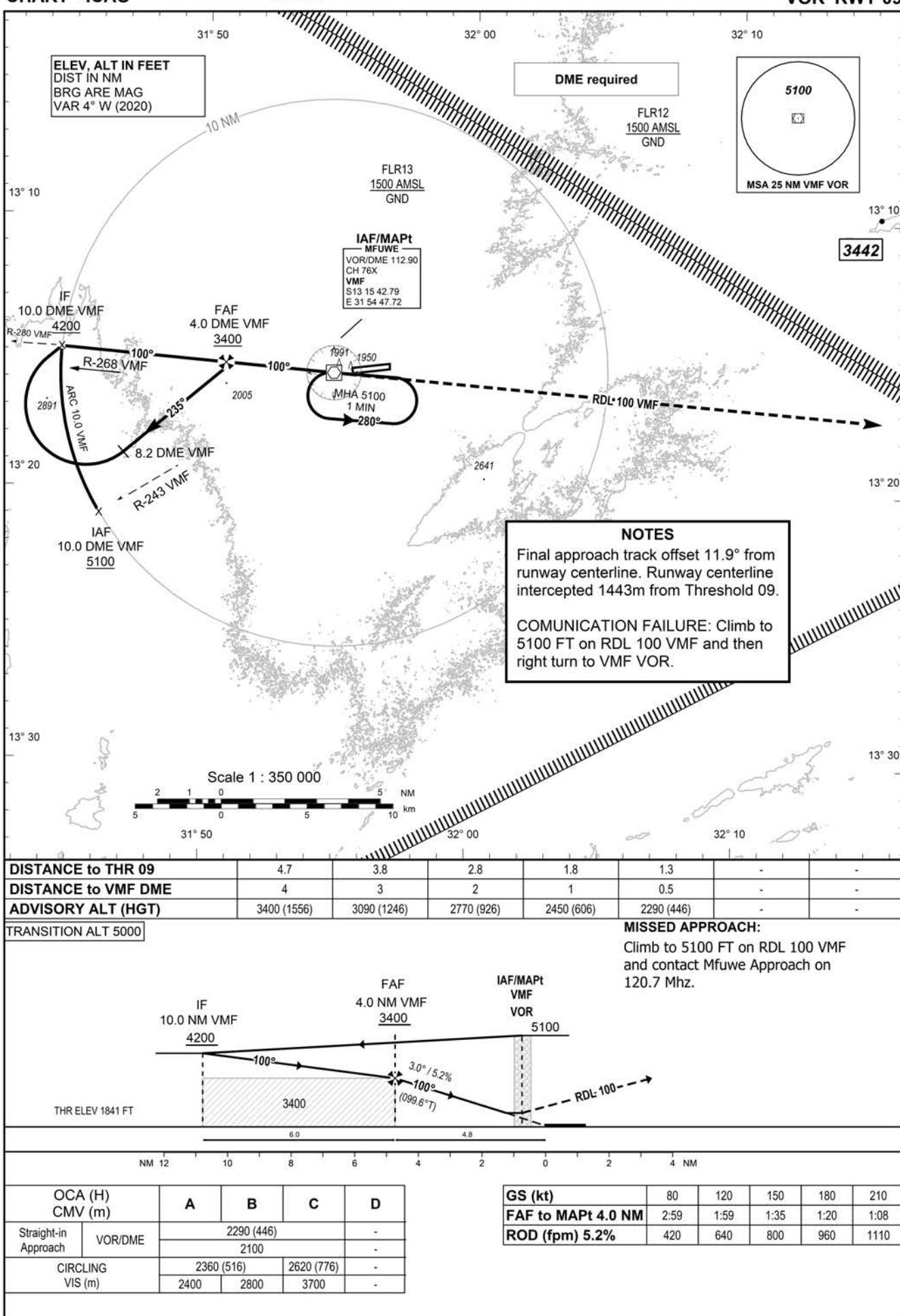
<i>Waypoint Identifier</i>	<i>Coordinates</i>
MF201	S 13 20 01.4 E 032 08 48.3
MF202	S 13 08 04.1 E 032 07 13.8
MF203	S 13 13 16.4 E 032 14 07.0
MF204	S 13 14 02.8 E 032 08 01.0
MF205	S 13 14 49.0 E 032 01 54.9
MF206	S 13 23 50.1 E 031 35 54.3
RW27	S 13 15 27.67 E 031 56 47.22

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 1844 FT
HEIGHTS RELATED TO
AD ELEV

APP 120.700
TWR 118.300

MFUWE/Mfuwe
(FLMF)
VOR RWY 09



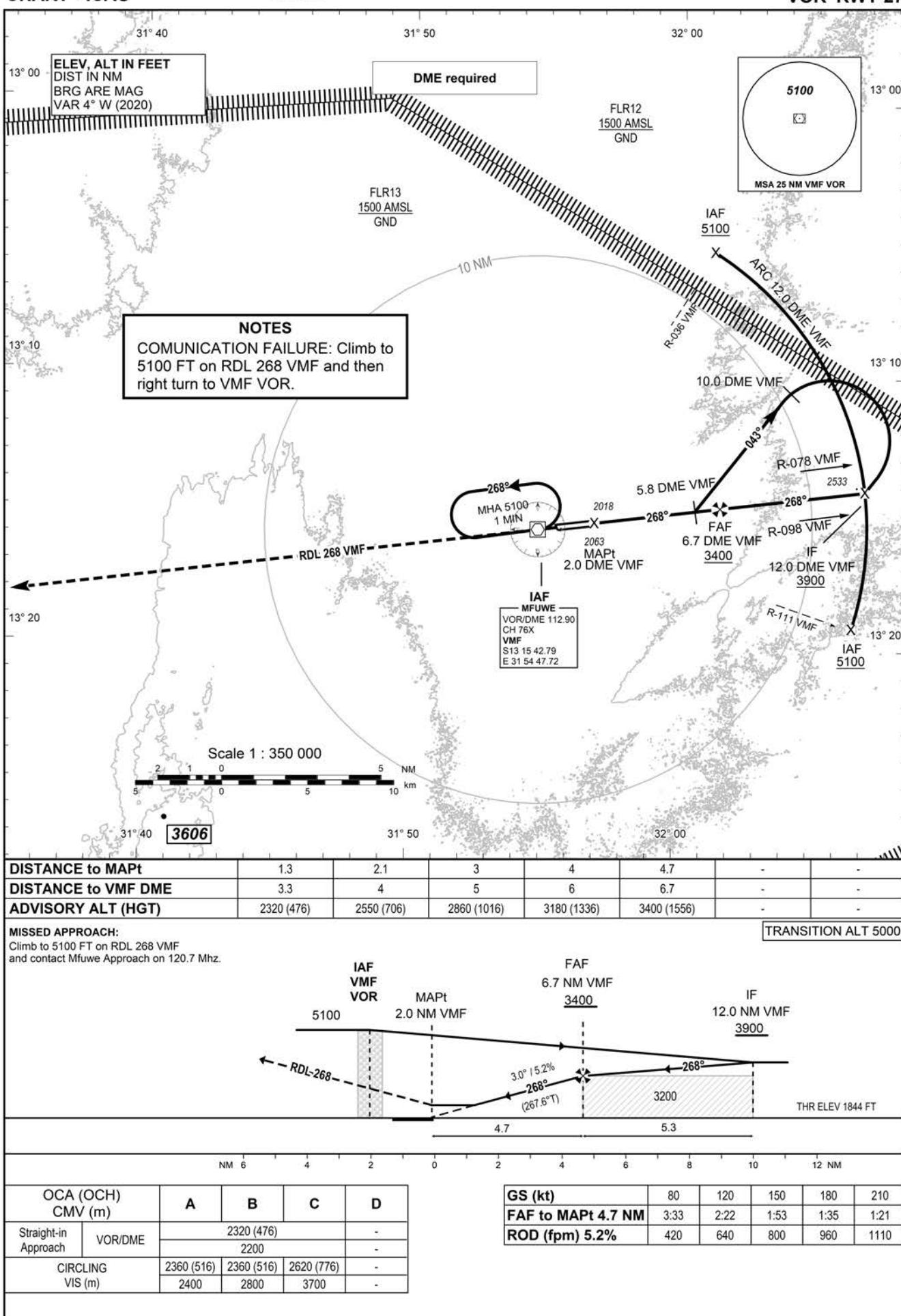
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 1844 FT
HEIGHTS RELATED TO
AD ELEV

APP 120.700
TWR 118.300

MFUWE/Mfuwe
(FLMF)
VOR RWY 27



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FLMG AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLMG - MONGU

FLMG AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 15°15'16.10" E 023°09'21.70" Nil
2	<i>Direction and distance from (city)</i>	EAST of MONGU 2NM
3	<i>Elevation/Reference temperature</i>	Elev: 3465 FT (1056 M) / T: 33.9° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	7° W (1994)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited Mongu Airport P.O Box 910038 Mongu Zambia Tel: 260-217-221260 AFS: FLMGZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

FLMG AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0600-1500
2	<i>Customs and immigration</i>	On Request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLMG AD 2.4 HANDLING SERVICES AND FACILITIES

1	<i>Cargo-handling facilities</i>	Nil
2	<i>Fuel/oil types</i>	Fuel : Nil Oil : Nil
3	<i>Fuelling facilities/capacity</i>	Nil
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Nil
7	<i>Remarks</i>	Nil

FLMG AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	Hotels In Town
2	<i>Restaurants</i>	In Town
3	<i>Transportation</i>	Nil
4	<i>Medical facilities</i>	First aid at AD Hospital in Town
5	<i>Bank and Post Office</i>	In town
6	<i>Tourist Office</i>	Office in Lyambai Hotel Tel: 260-21-7-221138 Telefax: Nil
7	<i>Remarks</i>	Nil

FLMG AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 4
2	<i>Rescue equipment</i>	YES; 1 fire tenders, 1 Ambulances, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLMG AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLMG AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLMG Apron	Bitumen	PCN 20
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLMG Twy		Bitumen
3	<i>Altimeter checkpoint location and elevation</i>	Location: Elevation: At Apron Nil Info		
4	<i>VOR/INS checkpoints</i>	VOR: Nil INS: Apron		
5	<i>Remarks</i>	Nil		

FLMG AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	NIL
2	<i>RWY and TWY markings and LGT</i>	NIL
3	<i>Stop bars</i>	NIL
4	<i>Remarks</i>	Nil

FLMG AD 2.10 AERODROME OBSTACLES

<i>In approach/TKOF areas</i>			
<i>RWY/Area affected</i>	<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c	d
10/APCH	Antenna Elev: 3505 FT (1068 M)	S 15°15'10.96" E 023°08'32.83"	Nil
10/APCH	TERRAIN Elev: 3476 FT (1059 M)	S 15°15'18.46" E 023°09'15.48"	Nil
10/APCH	Trees Elev: 3487 FT (1063 M)	S 15°15'13.00" E 023°09'04.48"	Nil
28/APCH	Trees2 Elev: 3540 FT (1079 M)	S 15°15'16.52" E 023°10'32.90"	Nil
28/APCH	Trees3 Elev: 3532 FT (1077 M)	S 15°15'16.52" E 023°10'32.90"	Nil
28/APCH	Trees4 Elev: 3555 FT (1084 M)	S 15°15'18.15" E 023°10'34.09"	Nil

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c
NOTE: Nil		

FLMG AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Mongu
2	<i>Hours of service MET Office outside hours</i>	0400 –1600
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport As required by flights.
4	<i>Trend forecast Interval of issuance</i>	METAR- SPECI 2 HR
5	<i>Briefing/consultation provided</i>	Prior notice required
6	<i>Flight documentation Language(s) used</i>	NIL
7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only.
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	FLMG MET Briefing Office
10	<i>Additional information (limitation of ser- vice, etc.)</i>	Nil

FLMG AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designa- tions RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of preci- sion APP RWY</i>	
1	2	3	4	5	6	
10	087°(True) 094°(Mag)	1463 x 21	PCN 20 Bitumen Note: SEALED BRICK SWY: Nil	S 15°15'18.86" E 023°09'22.78" GUND: Nil	THR 3503 FT (1068 M)	
28	267°(True) 274°(Mag)	1463 x 21	PCN 20 Bitumen Note: SEALED BRICK SWY: Nil	S 15°15'15.32" E 023°10'11.15" GUND: Nil	THR 3462 FT (1055 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimen- sions (M)</i>	<i>CWY dimen- sions (M)</i>	<i>Strip dimen- sions (M)</i>	<i>RESA dimen- sions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 10: +1.2%	Nil	183 x 150	1770 x 150	Nil	Nil	Nil
For Rwy 28: +1.2%	Nil	122 x 150	1770 x 150	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
10						
28						

FLMG AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
10	1463	1646	1523	1463	
28	1463	1585	1523	1463	

FLMG AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
28	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

FLMG AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

FLMG AD 2.16 HELICOPTER LANDING AREA

FLMG AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	MONGU ATZ Circular area centered on S 15°13'30" E 023°09'10" () within a 10NM radius.
2	Vertical limits	Nil
3	Airspace classification	G
4	ATS unit call sign Language(s)	MONGU Radio, English
5	Transition altitude	5000 FT (1524 M)
6	Hours of applicability	0400 - 1500
7	Remarks	Nil

FLMG AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
AFIS	MONGU Radio	118.3 MHZ 6952 KHZ	HJ	Nil	Nil	Primary Freq. Secondary Freq.

FLMG AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid MAG VAR CAT of ILS/MLS	ID	Frequency	Hours of operation	Site of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
L (07° W)	MG	391.00 KHZ	H24	S 15°12'51.60" E 023°09'22.80"	—	Power output 100w Coverage 50NM
VOR/DME	VMG	115.30 MHZ (CH100X)	H24	S 15°15'06.78" E 023°11'24.96"	3465 FT	Nil

FLMG AD 2.20 LOCAL AERODROME REGULATIONS

FLMG AD 2.20.1 Aerodrome Regulations

At Mongu Airport a number of local regulations apply. The regulations are listed below:

- a. Information about aircraft stands including visual docking guidance systems;

- b. Information about taxiing from aircraft stands including taxi clearance;
- c. Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- d. Towing assistance;
- e. Use of engine power exceeding idle power;
- f. Engine start-up and use of APU;
- g. Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR.
"Local Regulations" may be requested , in writing from:

Officer in Charge
Mongu Airport

FLMG AD 2.20.2 Taxiing to and from stands

Arriving aircraft will be allocated a stand number by Mongu Radio. The General aviation aircraft will have to use the general aviation parking area.

Departing flights shall contact Mongu Radio to obtain clearance before commencing taxiing. Requesting for ATC clearance may take place at the earliest 10 minutes prior to engine start-up.

Frequency 118.1Mhz is to be used throughout the Aerodrome H.O.O departing aircraft shall obtain clearance and taxi instruction from Mongu Radio on 118.1Mhz.

FLMG AD 2.20.3 Parking area for small aircraft (General Aviation)

General aviation aircraft shall be guided by AFIS to the parking area for small aircraft.

FLMG AD 2.20.4 Parking area for helicopters

There is no specific parking area for Helicopters. Helicopters will always be guided by Mongu Radio.

FLMG AD 2.20.5 Apron - taxiing during winter conditions

Taxiways in the apron area are not ground marked with centerline and TWY edge markings. Taxiing assistance can be requested via the Mongu Radio

FLMG AD 2.20.6 Taxiing -limitations

Information will be given to each aircraft from the AFIS

FLMG AD 2.20.7 School and training flights-technical test flights-use of runways

School and training flights may be made during the Aerodrome H.O.O permission will only be granted for such flights. Subject to traffic density.

FLMG AD 2.20.8 Helicopter traffic - limitation

Non-scheduled public air traffic with helicopters is permitted only after prior notice to Mongu AFIS. Any contact concerning the above shall be made to the officer in charge during the hours of service and, if possible, not later than the day before the flight is to be carried out.

Any request for approval of traffic shall contain the following information:

- a. Owner/ operator
- b. Type of helicopter, registration/ call sign
- c. Date, arrival time/ departure time, destination(s)
- d. ATC flight plan. Further more, other details relevant to the evaluation of the request shall be given as required.

FLMG AD 2.20.9 Removal of disabled aircraft from runways

When an aircraft is wrecked on a runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible after prior approval from Director General Civil Aviation Authority. If a wrecked aircraft is not removed from runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority at the owners or user's expense.

FLMG AD 2.21 NOISE ABATEMENT PROCEDURES

TO BE DEVELOPED.

FLMG AD 2.22 FLIGHT PROCEDURES

FLMG AD 2.22.1 General

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules. Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLMG AD 2.22.2 Procedures for flights within Lusaka Upper Control Area.

The inbound, transit and outbound routes shown on charts may be varied at the discretion of ATS. If necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated Airways reporting points.

FLMG AD 2.22.3 Communication failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

FLMG AD 2.22.4 En route Clearance

En-route clearance will be given under the conditions described below:

- a. Flight Plan shall be submitted for the flight concerned.
- b. En-route Clearance shall be obtained from Lusaka Control
- c. Deviation from the en-route clearance may only be made when prior permission has been obtained.
- d. Two-way radio communication shall be established and maintained with Lusaka Control or ATS unit nearest to the ATS route before flight takes place in the UTA.
- e. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2.
- f. The pilot-in-command shall be the holder of an international VHF licence.

FLMG AD 2.22.5 Procedures for flights outside the Lusaka Upper Control Area.

Unless permission has been obtained from Lusaka control:-

- a. A Flight Plan shall be submitted for the flight concerned.
- b. ATC Clearance shall be obtained from Lusaka Control and/or nearest Air Traffic Service Unit when departing from uncontrolled aerodrome.
- c. Two-way radio communication shall be maintained on the appropriate frequency prescribed by Area Control or ATS Units.
- d. En-route clearance shall be obtained from Lusaka Control or nearest ATS Unit.
- e. Deviation from the en-route clearance may only be made when prior permission has been obtained.
- f. VFR flights shall be conducted with vertical visual reference to the ground.
- g. Position reports shall be submitted in accordance with 3.6.3 of ICAO Annex 2. Where flying time is one hour or more between designated reporting points, pilots shall submit a half hourly "Operations Normal" report to Lusaka Control or nearest ATS unit.
- h. ATC clearance shall be obtained immediately before the aircraft enters a controlled airspace concerned.
- i. Two-way radio contact shall be established with appropriate approach control unit on the frequency prescribed before the flight takes place in the Control Zone, Control Area, Terminal or per Control Areas.
- j. The pilot-in-command shall be the holder of an international VHF Licence.

FLMG AD 2.22.6 Procedures for flights within Mongu ATZ

Except with permission from Mongu information, All flights shall maintain two-way radio contact with Mongu information on 118.100Mhz.

If necessary in case of congestion, inbound IFR aircraft may also be instructed to hold at one of designated reporting points.
Missed Approach Procedures to be followed are as detailed on Instrument Approach Chart.

NOTE: ATC clearance is intended only to provide separation between flights in as far as practicable below FL245.

FLMG AD 2.23 ADDITIONAL INFORMATION

FLMG AD 2.23.1 Bird concentrations in the vicinity of the airport

Bird activity of Abdim's Stock may take place from approximately September to May, especially in the morning and late afternoon. As far as practicable, Mongu information will inform pilots of this bird activity and the estimated heights AGL. During the above periods pilots of aircraft are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight, within the terminal area and during take off, approach-to-land and climb and descent procedures.

FLMG AD 2.23.2 Pedestrians Cyclists and Animals

Pedestrians, cyclists and herds of domestic and/or wild animals may wonder in the vicinity at the aerodromes. Due to the hazard of them crossing the runway, pilots must excercise caution on landing and take-off.

FLMG AD 2.24 CHARTS RELATED TO AN AERODROME

<i>Charts</i>	<i>Pages</i>
Landing Chart - ICAO	AD 2 FLMG 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 10-28	AD 2 FLMG 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLMG 6 - 1
Instrument Approach Chart — ICAO NDB RWY 10	AD 2 FLMG 14 - 1

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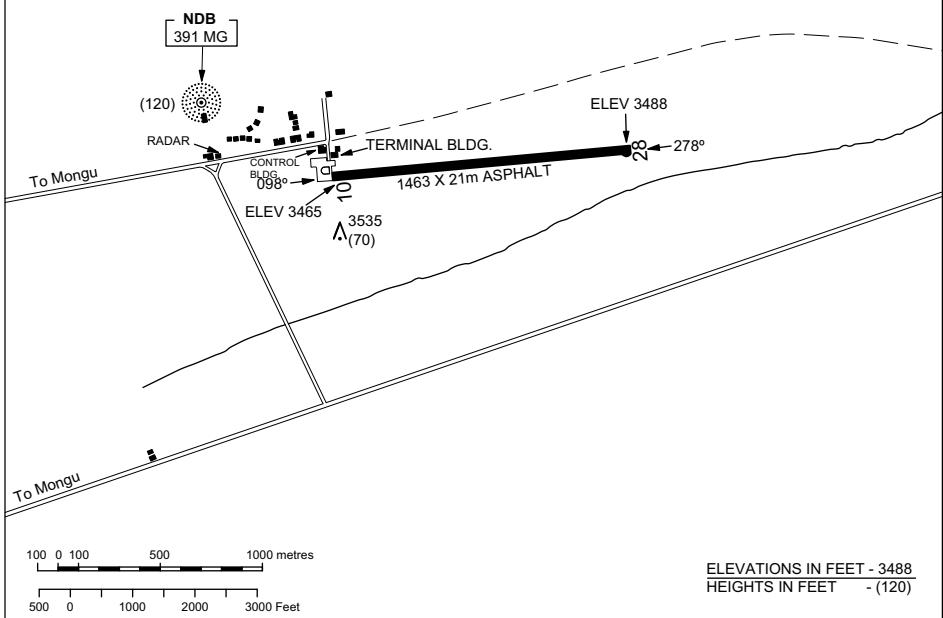
LANDING CHART - ICAO

15° 13.5' S
023° 09.2'E
ELEV 3465ft

MONGU/Mongu
FLMG

BEARINGS ARE MAGNETIC

VAR 7°W

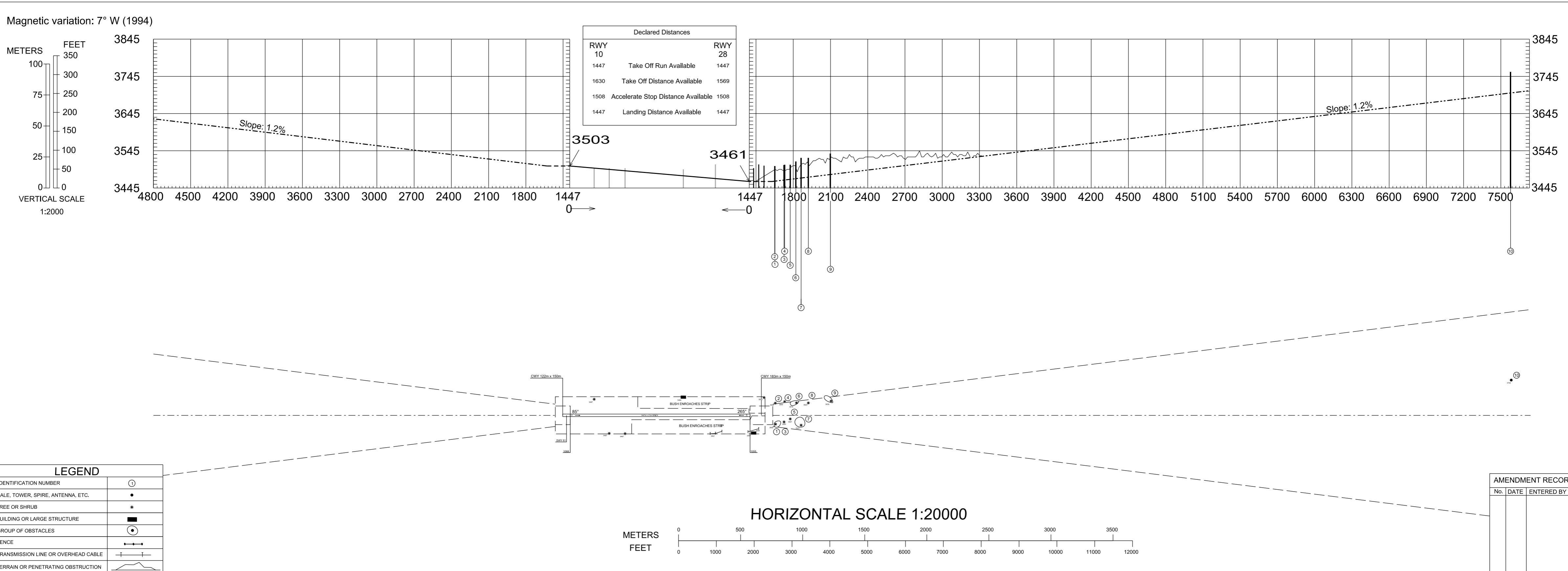


AERODROME LIGHTING
FLARE-POTS (EMERGENCY ONLY)


FACILITIES AVAILABLE
Fire Rescue Services: Category III

REVISION: CHART REDRAWN

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Dimensions in metres
Elevations in feetAERODROME OBSTACLE CHART - ICAO
TYPE A (Operating Limitations)MONGU
RWY 10/28

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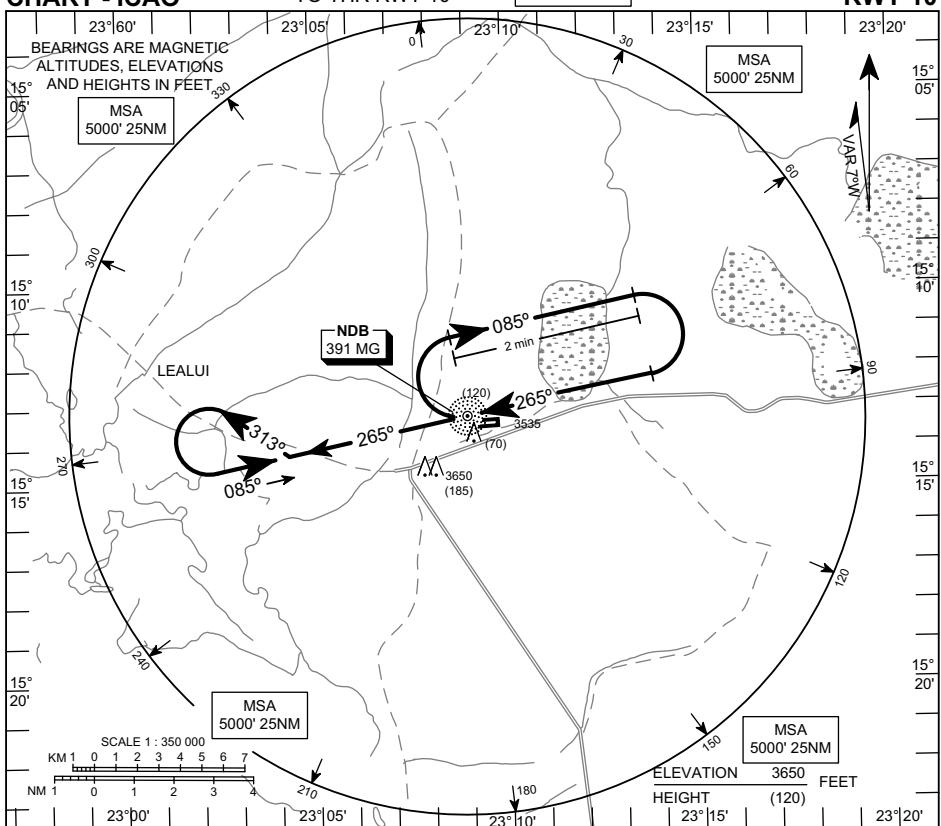
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INSTRUMENT APPROACH CHART - ICAO

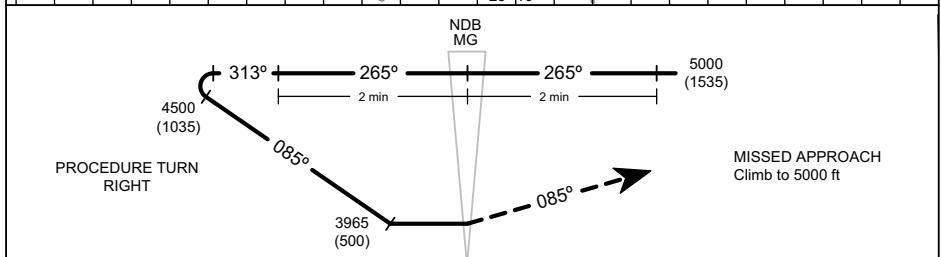
ELEV 3465ft
HEIGHTS RELATED
TO THP PKWY 10

TWR 118.1
APP NII

**MONGU/Mongu
NDB
RWY 10**



REVISION: CHART REDRAWN; MAGNETIC VARIATION



THR RWY 10 (ELEV 3465FT)

NAUTICAL MILES FROM FACILITY

CEILING AND VISIBILITY MINIMA							
TAKE-OFF	DAY 500FT 2000m		90 Kts	105 Kts	120 Kts	140 Kts	160 Kts
LANDING	DAY 500FT 2000m						

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FLSK AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLSK - SIMON MWANSA KAPWEPWE INTERNATIONAL AIRPORT
FLSK AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 12°57'42.46" E 028°30'58.45" From the Control Tower: 7.8° MAG / 465 Metres - From the Control Tower: 465 metres with a true bearing of 4.3° - Control Tower coordinates: S 12° 57' 57.5" E 028° 30' 57.3"
2	<i>Direction and distance from (city)</i>	7.78NM West of the Ndola Main Post Office
3	<i>Elevation/Reference temperature</i>	Elev: 4295.93 FT (1309 M) / T: 32° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	4° W (2019)/0°1'E increasing
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited P.O Box 70095, Ndola, Zambia. Tel: + 260 212 611193-4 Tel: +260 977 790638, +260 965 8604 Telex: + 260 212 614226 AFS: FLSKYFYX, FLSKZPZX eMail: zaclnd@zacl.aero Website: http://www.zacl.co.zm
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	Nil

FLSK AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0400 – 1800
2	<i>Customs and immigration</i>	As AD Administration
3	<i>Health and sanitation</i>	As AD Administration
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	As AD Administration
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Not available
12	<i>Remarks</i>	Nil

FLSK AD 2.4 HANDLING SERVICES AND FACILITIES

1	<i>Cargo-handling facilities</i>	a) NAC 2000; with handling capability up to code C aircraft. Contact : Tel +260212611274 Email: mgr.ndola@nac2000.com.zm b) Import and Export Cargo Transit terminal with high value hazard material and perishable goods storage capability.
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS_LL Oil : Nil
3	<i>Fuelling facilities/capacity</i>	Jet A1 (60,000 litres) Avgas (30,000 litres)
4	<i>De-icing facilities</i>	Not Available
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Available up to code C aircrafts; Operator: ZACL
7	<i>Remarks</i>	Nil

FLSK AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	In the Ndola City
---	---------------	-------------------

2	<i>Restaurants</i>	At the Airport and in the Ndola City
3	<i>Transportation</i>	Taxis, shuttles, rental cars, buses
4	<i>Medical facilities</i>	a) First aid emergency medical centre available at the terminal building; b) Ambulance service available at the terminal building; c) Hospital in Ndola city, 15 km away
5	<i>Bank and Post Office</i>	Available in the Ndola City
6	<i>Tourist Office</i>	Available
7	<i>Remarks</i>	Nil

FLSK AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	CAT 7
2	<i>Rescue equipment</i>	Category 7 compliant
3	<i>Capability for removal of disabled aircraft</i>	As per SMKIA Disabled Aircraft Removal Plan
4	<i>Remarks</i>	Nil

FLSK AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Airside management service – general inspections
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLSK AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		01	Concrete	PCN 82/R/B/W/T
		01L	Concrete	PCN 82/R/B/W/T
		01R	Concrete	PCN 82/R/B/W/T
		02	Concrete	PCN 82/R/B/W/T
		03	Concrete	PCN 82/R/B/W/T
		04	Concrete	PCN 82/R/B/W/T
		05	Concrete	PCN 82/R/B/W/T
		06	Concrete	PCN 82/R/B/W/T
		07	Concrete	PCN 82/R/B/W/T
		101	Concrete	PCN 82/R/B/W/T
		102	Concrete	PCN 82/R/B/W/T
		103	Concrete	PCN 82/R/B/W/T
		104	Concrete	PCN 82/R/B/W/T
		105	Concrete	PCN 82/R/B/W/T
		106	Concrete	PCN 82/R/B/W/T
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		TWY A	23 M	Concrete
		TWY B	23 M	Concrete and asphalt
		TWY C	23 M	Concrete and asphalt

3	<i>Altimeter checkpoint location and elevation</i>	Apron 01R: 1310.26 m Apron 01: 1310.12 m Apron 01L: 1310.09 m Apron 02: 1310.00 m Apron 03: 1309.91 m Apron 04: 1309.82 m Apron 05: 1309.67 m Apron 06: 1309.55 m Apron 07: 1309.46 m Apron 101: 1310.13 m Apron 102: 1310.06 m Apron 103: 1309.93 m Apron 104: 1309.78 m Apron 105: 1309.66 m Apron 106: 1309.53 m
4	<i>VOR/INS checkpoints</i>	VOR: Holding Bays and Runway 09 Threshold INS: Apron 1 (Commercial): number P01R, Aircraft Type B, Coordinates S 12° 57' 56.1" E 028° 30' 52.0" number P01, Aircraft Type E, Coordinates S 12° 57' 56.1" E 028° 30' 52.7" number P01L, Aircraft Type B, Coordinates S 12° 57' 56.1" E 028° 30' 53.4" number P02, Aircraft Type C, Coordinates S 12° 57' 56.1" E 028° 30' 54.7" number P03, Aircraft Type C, Coordinates S 12° 57' 56.1" E 028° 30' 56.2" number P04, Aircraft Type C, Coordinates S 12° 57' 56.1" E 028° 30' 57.7" number P05, Aircraft Type E, Coordinates S 12° 57' 56.1" E 028° 31' 0.2" number P06, Aircraft Type C, Coordinates S 12° 57' 56.0" E 028° 31' 2.2" number P07, Aircraft Type C, Coordinates S 12° 57' 56.0" E 028° 31' 3.8" Apron 2 (General): number P101, Aircraft Type A, Coordinates S 12° 57' 56.1" E 028° 30' 48.2" number P102, Aircraft Type A, Coordinates S 12° 57' 55.5" E 028° 30' 48.2" number P103, Aircraft Type B, Coordinates S 12° 57' 54.7" E 028° 30' 48.2" number P104, Aircraft Type B, Coordinates S 12° 57' 53.8" E 028° 30' 48.2" number P105, Aircraft Type B, Coordinates S 12° 57' 52.9" E 028° 30' 48.2" number P106, Aircraft Type A, Coordinates S 12° 57' 52.2" E 028° 30' 48.2"
5	<i>Remarks</i>	Nil

FLSK AD 2.9 SURFACE MOVEMENT GUI-DANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Apron marking: Guidance and safety lines Apron lighting: High-pole floodlighting (10 units) Stand signboard available at all Parking Bays. Marshal Aircraft parking stand Identification: Pole-mounted stand identification Signs have been provided on the Apron
2	<i>RWY and TWY markings and LGT</i>	* Runway markings: Designation, thresholds, touch down zone, aiming point, centre line and edge line. Runway's lighting: Edge light, centreline light, threshold light, threshold wing bar light, end light, turn pad light and guard light. * Taxiway marking: Centre line, edge line and holding position line at TWY/RWY intersection. Taxiway lighting: Edge light and guidance sign boards.
3	<i>Stop bars</i>	Nil
4	<i>Remarks</i>	Nil

FLSK AD 2.10 AERODROME OBSTACLES

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c

NOTE: Nil

FLSK AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	MET Office – Simon Mwansa Kapwepwe International Airport
2	<i>Hours of service MET Office outside hours</i>	H24
3	<i>Office responsible for TAF preparation Period of validity</i>	MET Office - Simon Mwansa Kapwepwe International Airport Validity: 30 hours Interval of issuance: 6 hours (0000 – 0600 – 1200 – 1800 UTC)
4	<i>Trend forecast Interval of issuance</i>	Available Interval of issuance: Hourly.
5	<i>Briefing/consultation provided</i>	In person and by phone
6	<i>Flight documentation Language(s) used</i>	Route Forecast, TAFs, Temperature, Wind, Take off Data, Significant charts all in English
7	<i>Charts and other information available for briefing or consultation</i>	SIGMET, Surface Charts, Upper air
8	<i>Supplementary equipment available for providing information</i>	Automatic observation system Conventional World Meteorological data base (satellite connectivity)
9	<i>ATS units provided with information</i>	ATC (TWR, APP and ACC) Flight service reporting office
10	<i>Additional information (limitation of service, etc.)</i>	All meteorological information (observations, outputs and forecast) by MET Office – Simon Mwansa Kapwepwe International Airport are available at the MET office

FLSK AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
09	089°(True) 093°(Mag)	3500 x 45	PCN 85/F/B/W/T Concrete and asphalt SWY: Nil	S 12°57'42.80" E 028°30'00.40" GUND: Nil	THR 4.267 FT (1 M)	
27	269°(True) 273°(Mag)	3500 x 45	PCN 85/F/B/W/T Concrete and asphalt SWY: Nil	S 12°57'42.12" E 028°31'56.50" GUND: Nil	THR 4.277 FT (1 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 09: +0.37%	Nil	300 x 300	3620 x 300	240 x 90	Nil	Nil
For Rwy 27: -0.204%	Nil	300 x 300	3620 x 300	240 x 90	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
09						
27						

FLSK AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
09	3500	3800	3500	3500	
27	3500	3800	3500	3500	

FLSK AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
09	CAT1 high intensity lights 900 M SALS	Green high intensity lights Wing bar: Colour: Green Intensity: High	PAPI Left side/3°	Nil	Length: 3500 m Spacing: 15 m Colour: First 900 m: white Next 1700 m: white Next 600m red/white Final 300 m: red Intensity: High	Length: 3500 m Spacing: 60 m Colour: First 600 m: white/yellow Next 2300 m: white Final 600 m: white/yellow Intensity: High	Red high intensity lights	Nil	Nil

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
27	high intensity lights 420 M SALS	Green high intensity lights Wing bar: Colour: Green Intensity: High	PAPI Left side/3°	Nil	Length: 3500 m Spacing: 15 m Colour: First 900 m: white Next 1700 m: white Next 600m red/white Final 300 m: red Intensity: High	Length: 3500 m Spacing: 60 m Colour: First 600 m: white/ yellow Next 2300 m: white Final 600 m: white/ yellow Intensity: High	Red high intensity lights	Nil	Nil

FLSK AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	<i>ABN/IBN location, characteristics and hours of operation</i>	ABN : RWY 09: Above the ATC Tower Building, flashes alternately white and green colours at a Frequency of 20-26 per minute, H24 RWY 27: Situated on top of the Control Tower:
2	<i>LDI location and LGT Anemometer location and LGT</i>	LDI: RWY 09 Windsock: From the RWY west side - centre point: 360 m toward east / parallel to RW centreline; 100 m toward north / perpendicular to RW centreline RWY 27 Windsock: From the RWY east side - centre point: 300 m toward west / parallel to RW centreline; 100 m toward north / perpendicular to RW centreline Anemometer: RWY 09: From the RWY centre point: 100 m toward north / perpendicular to RW centreline RWY 27: From the RW centre point: 100 m toward north / perpendicular to RW centreline
3	<i>TWY edge and centre line lighting</i>	Taxiway Edge: TWY A - Blue Taxiway Edge: TWY B - Blue Taxiway Edge: TWY C - Blue

4	Secondary power supply/switch-over time	RWY 09: Secondary power supply: To all RWY and TWY lighting at Aerodrome. Switch-over time: Not more than – 15 seconds RWY 27: Secondary power supply: To all RWY and TWY lighting at Aerodrome. Switch-over time: Not more than – 15 seconds
5	Remarks	Nil

FLSK AD 2.16 HELICOPTER LANDING AREA

Apron

FLSK AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	NDOLA CTR Area bounded by lines joining points S 13°18'00" E 027°34'48" then along the clockwise arc of a circle of 35NM radius centred on S 13°04'59" E 028°15'11" to S 13°18'00" E 028°48'30"; S 13°18'00" E 028°31'59" to point of origin.
2	Vertical limits	GND to FL75
3	Airspace classification	C
4	ATS unit call sign Language(s)	Kapwepwe Tower, English Ndola Approach, English
5	Transition altitude	6000 FT (1829 M)
6	Hours of applicability	0400-1800 UTC
7	Remarks	Military area at the south-east of the airport D19: GND/ FL170 Activated by NOTAM

FLSK AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	SATVOICE	Logon address	Remarks
1	2	3	4	5	6	7
Ndola Approach	Ndola Approach	120 MHZ	0400 to 1800	Nil	Nil	
ATIS (Automatic terminal information service)	Kapwepwe Information	126.6 MHZ	H24	Nil	Nil	
Kapwepwe Emergency	Kapwepwe Emergency	121.5 MHZ	0400 to 1800	Nil	Nil	Emergency frequency
Tower Control	Kapwepwe Tower	118.3 MHZ 119.7 MHZ	0400-1800 and O/R	Nil	Nil	ADD 125.0 Mhz MONITORED

FLSK AD 2.19 RADIO NAVIGATION AND LANDING AIDS

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
1	2	3	4	5	6	7
LOC 009 ILS CAT I	CO	109.30 MHZ	H24	S 12°57'42.10" E 028°32'07.00"	—	From the RW east side - centre point: 315 m toward east / RW centreline; S 12° 57' 42.1" E 028° 32' 7.0"
GP 009 ILS CAT I	CO	332.00 MHZ	H24	S 12°57'42.10" E 028°32'07.00"	—	- Glide path 3° - Threshold crossing height: 15 m;
DME 009 ILS CAT I	CO	(CH30X)	H24	S 12°57'42.10" E 028°32'07.00"	1303 M	Height of the Tx antenna (20 metres)
VOR/DME	VCD	114.00 MHZ (CH87X)	H24	S 12°57'43.02" E 028°29'20.59"	1290 M	- Height of the Tx antenna (20 m) and counterpoise of VOR (5 m). From the RWY west side - centre point: 1200 m toward west / RW centreline; S 12° 57' 43.02" E 028° 29' 20.59" Intended use: high and low level en-route navigation; - Power: high; - Coverage: 150 NM;

FLSK AD 2.20 LOCAL AERODROME REGULATIONS

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FLSK AD 2.21 NOISE ABATEMENT PROCEDURES

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FLSK AD 2.22 FLIGHT PROCEDURES

FLSK AD 2.22.1 General

All flights in Lusaka FIR within and outside controlled airspace at and above FL150 shall be conducted in accordance with instrument flight rules only. Flights below FL150 within and outside controlled airspace shall be conducted in accordance with instrument/visual flight rules.

Unless permission has been obtained from an ATC Unit, all flights within Lusaka FIR shall be conducted within and in accordance with established ATS routes.

FLSK AD 2.22.2 Procedure for IFR flights within Ndola CTR

The inbound transit and outbound routes shown on charts may be varied at the discretion of ATS, if necessary, in case of congestion, inbound aircraft may also be instructed to hold at one of the designated airways, reporting points.

FLSK AD 2.22.3 Missed Approach

Missed approach procedures to be followed in the absence of other ATS instructions are as detailed on the instrument approach charts as attached.

FLSK AD 2.22.4 Communication Failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedure in the Zambia Civil Aviation Requirements Part 13, 13.3.13 and ICAO Annex 2, 3.6.5.2.

FLSK AD 2.22.5 Procedures for VFR Flights within Ndola CTR

Provided traffic and weather conditions so permit, ATC clearance for VFR Flights will be given under the conditions described below:

- a. A flight plan requesting ATC clearance, containing the items 7 to 18 and indicating the purpose of the flight, shall be submitted.
- b. ATC clearance shall be obtained immediately before the aircraft enters, the CTR.
- c. Position reports shall be submitted in accordance with Zambia Civil Aviation Requirements Part 13, 13.3.7 and ICAO Annex 2, 3.6.3.

FLSK AD 2.23 ADDITIONAL INFORMATION

FLSK AD 2.23.1 Bird concentrations in the vicinity of the airport

Migratory birds are usually present at the aerodrome from late October to April during the country's wet season.

As far as practicable, Aerodrome Control will inform pilots of this bird activity and the estimated heights AGL.

During the above periods pilots of aircraft are advised, where the design limitations of aircraft installations permit, to operate landing lights in flight, within the terminal area and during take-off, approach-to-land and climb and descent procedures.

The aircraft engine noise is not always effective in the clearing of the birds from the landing area, pilots should exercise extreme caution.

FLSK AD 2.24 CHARTS RELATED TO AN AERODROME

Chart Description

Kapwepwe IAC VOR Y RWY 09

For IFR flights, aircraft will arrive over the VCD VOR (114.0MHz) from which it is intended that an instrument approach procedure will be commenced, the holding and procedure turn is to the North with the right hand pattern, outbound on heading of 112° followed by westbound heading of 292° to overhead the VOR and continue heading 292° before making a base turn at 7.4 NM VCD/8.2 NM CPB (CAT A-B) and 8.8 NM VCD/9.6 NM CPB (CAT C-D) for Initial Fix (IF). The Instrument Landing System (ILS) (GP/DME 332.0MHz, LOC 109.3MHz) CAT 1 is available for landing runway 09.

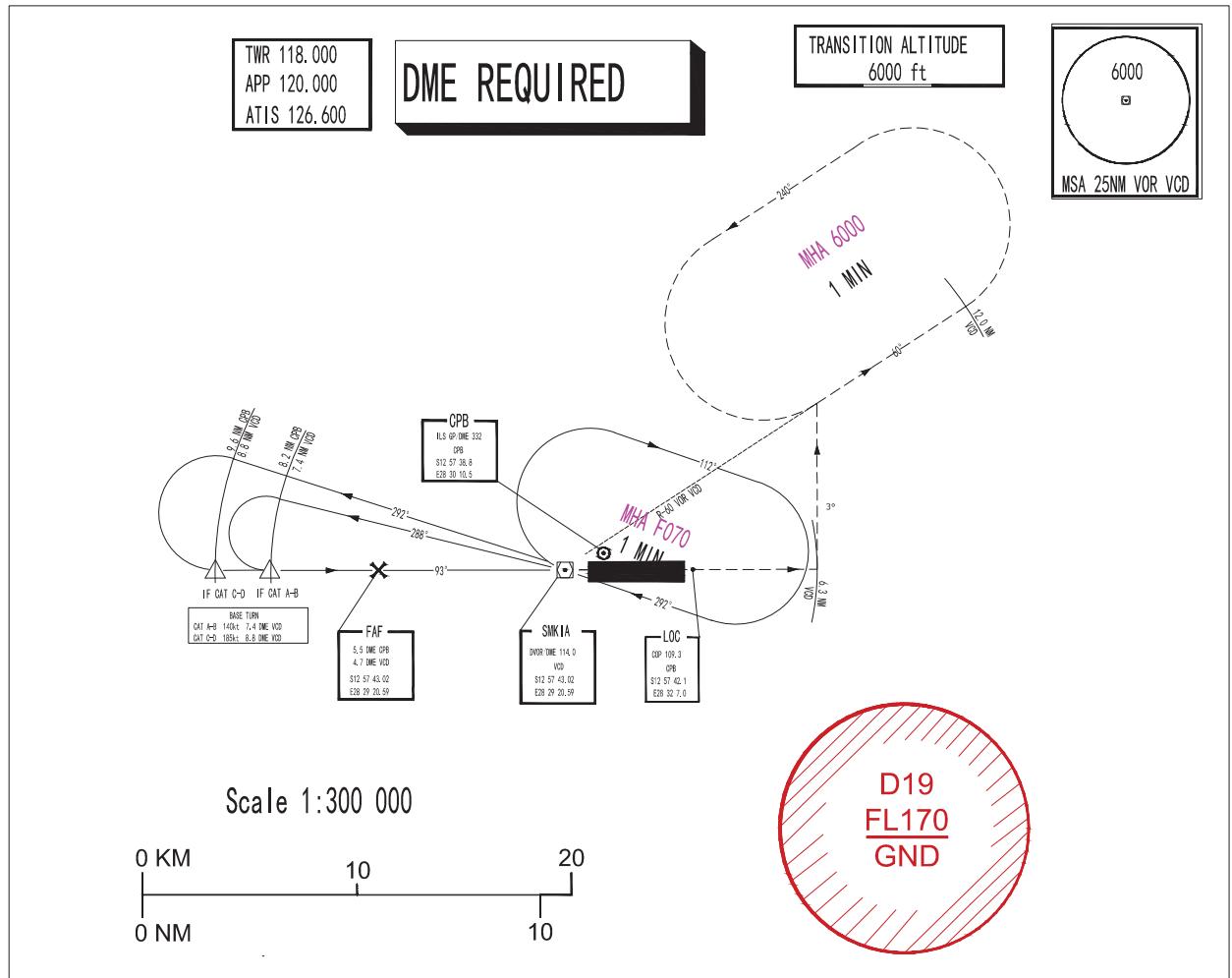
Kapwepwe IAC VOR RWY 27 - Conventional

For IFR flights, aircraft will arrive over the VCD VOR (114.0MHz) from which it is intended that an instrument approach procedure will be commenced, the holding and procedure turn is to the North with a left hand pattern, outbound on heading of 273° followed by Eastbound heading of 093° to overhead the VOR and to intercept and maintain radial 093° VCD before making a 45° reversal procedure turn for 1 min at 8.8 DME VCD then 180° to intercept in bound track of 273° for landing runway 27. The missed approach holding procedure begins at 4.7 DME VCD with a left turn to join the right-hand holding pattern

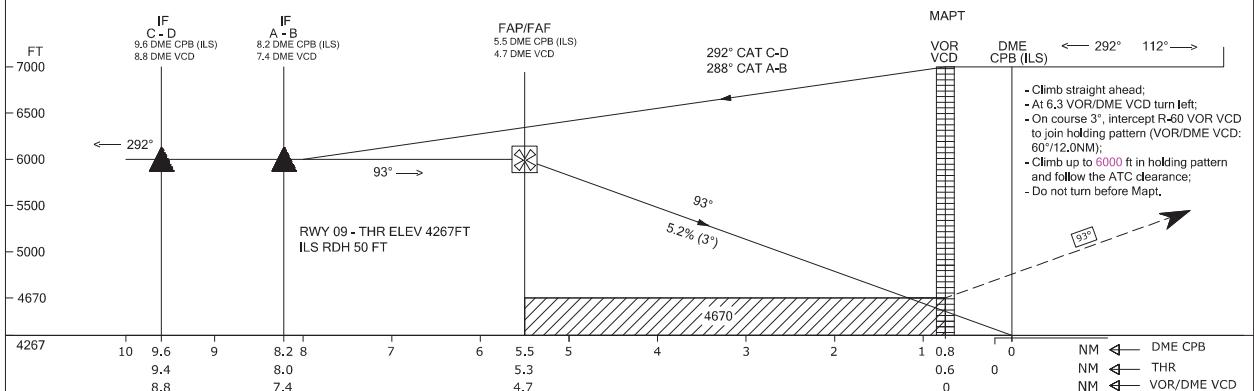
<i>Charts</i>	<i>Pages</i>
INSTRUMENT APPROACH CHART - ICAO VOR Y RWY 09	AD 2 FLSK 14 - 1

<i>Charts</i>	<i>Pages</i>
INSTRUMENT APPROACH CHART ICAO VOR Y RWY 27	AD 2 FLSK 14 - 3

INSTRUMENT APPROACH
CHART - ICAO AD ELEV 4288 FT
OCH RELATED TO THR 09 ELEVATION 4267 ELEVATIONS AND ALTITUDES ARE IN FEET
DISTANCES IN NAUTICAL MILE
BEARINGS ARE MAGNETIC
VAR 3.47 °W (2019) SIMON MWANSA KAPWEPE INTERNATIONAL AIRPORT / SMKIA / FLSK
VOR Y - RWY 09

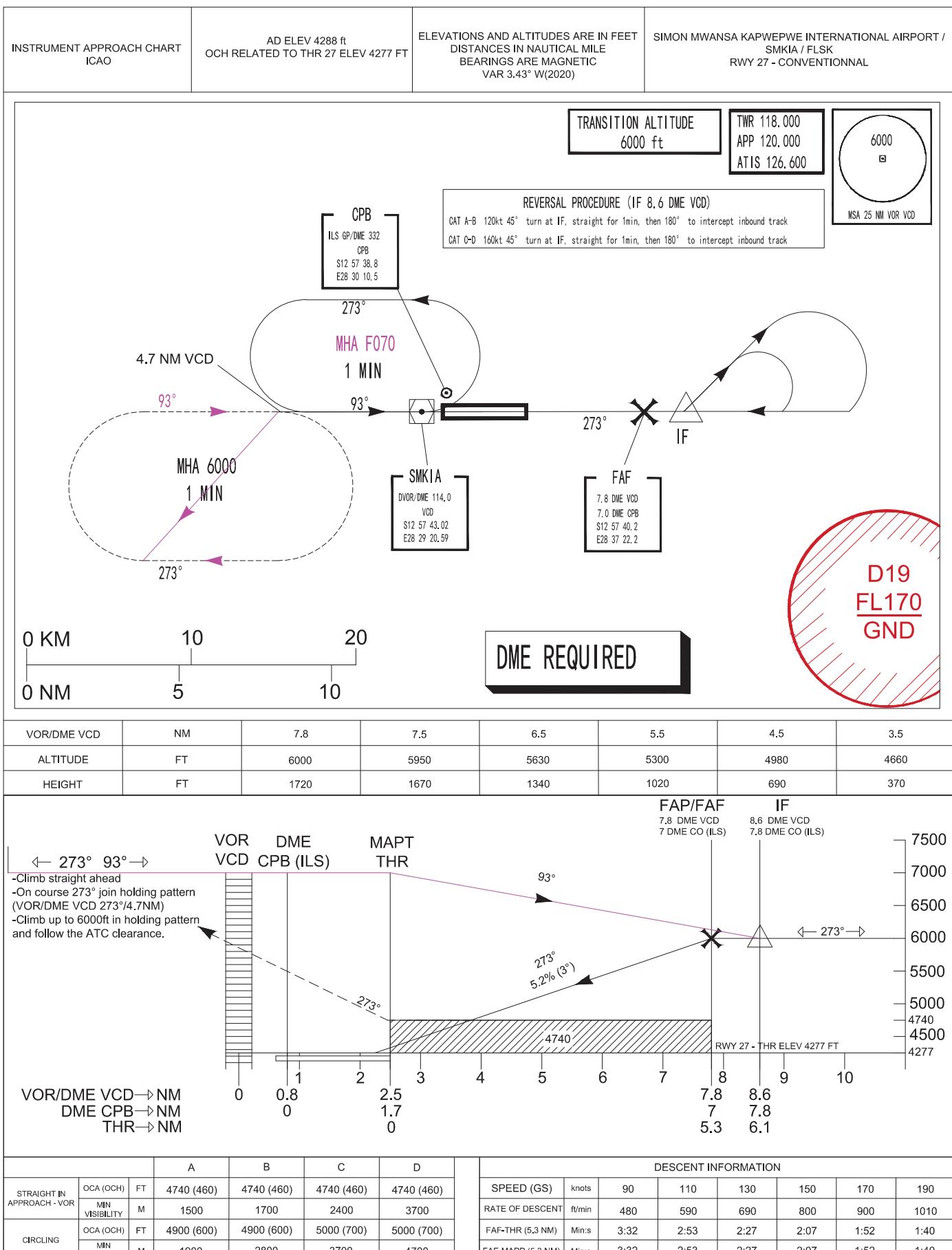


VOR/DME VCD	NM	8.8	4.7	4	3	2	1
ALTITUDE	ft	6000	6000	5820	5500	5170	4850
HEIGHT	ft	1730	1730	1550	1220	900	580



			A	B	C	D	DESCENT INFORMATION							
Straight in approach -VOR	OCA(OCH)	FT	4670(400)	4670(400)	4670(400)	4670(400)	SPEED (GS)	knots	90	110	130	150	170	190
	MNM VISIBILITY	M	1500	1700	2400	3700	RATE OF DESCENT	ft/min	480	590	690	800	900	1010
CIRCLING	OCA(OCH)	FT	4900(600)	4900(600)	5000(700)	5000(700)	FAP-THR (5.3NM)	Min:s	3 min 32	2 min 53	2 min 27	2 min 7	1 min 52	1 min 40
	MNM VISIBILITY	M	1900	2800	3700	4700	FAP-Mapp (4.7NM)	Min:s	3 min 8	2 min 34	2 min 10	1 min 53	1 min 40	1 min 29

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FLSW AD 2.1 AERODROME LOCATION INDICATOR AND NAME
FLSW - SOLWEZI

FLSW AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	<i>ARP coordinates and site at AD</i>	S 12°10'25.80" E 026°22'01.20" Nil
2	<i>Direction and distance from (city)</i>	2NM NNW of Solwezi
3	<i>Elevation/Reference temperature</i>	Elev: 4553.81 FT (1388 M) / T: 30.6° C
4	<i>Geoid undulation at AD ELEV PSN</i>	-
5	<i>MAG VAR/Annual change</i>	5° W (1994)
6	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	Zambia Airports Corporation Limited P.O Box 110005 Solwezi Tel: 260-218-821213 AFS: FLSWZPZX
7	<i>Types of traffic permitted (IFR/VFR)</i>	IFR/VFR
8	<i>Remarks</i>	NIL

FLSW AD 2.3 OPERATIONAL HOURS

1	<i>AD Administration</i>	0400 - 1600
2	<i>Customs and immigration</i>	Available on request
3	<i>Health and sanitation</i>	Available within AD hours
4	<i>AIS Briefing Office</i>	As AD Administration
5	<i>ATS Reporting Office (ARO)</i>	As AD Administration
6	<i>MET Briefing Office</i>	As AD Administration
7	<i>ATS</i>	As AD Administration
8	<i>Fuelling</i>	As AD Administration
9	<i>Handling</i>	N/A
10	<i>Security</i>	As AD Administration
11	<i>De-icing</i>	Nil
12	<i>Remarks</i>	Nil

FLSW AD 2.4 HANDLING SERVICES AND FACILITIES

1	<i>Cargo-handling facilities</i>	Nil
2	<i>Fuel/oil types</i>	Fuel : A1 , AVGAS Oil : All Oil types available on request
3	<i>Fuelling facilities/capacity</i>	2 mobile dispensers each at 250 litres/minute and 1 fixed dispenser at 380 litres/minute
4	<i>De-icing facilities</i>	Nil
5	<i>Hangar space for visiting aircraft</i>	Nil
6	<i>Repair facilities for visiting aircraft</i>	Nil
7	<i>Remarks</i>	Nil

FLSW AD 2.5 PASSENGER FACILITIES

1	<i>Hotels</i>	In town
2	<i>Restaurants</i>	In town.
3	<i>Transportation</i>	Taxis on arrangement
4	<i>Medical facilities</i>	First aid at AD, Hospital in town
5	<i>Bank and Post Office</i>	In town
6	<i>Tourist Office</i>	Within Shoprite Supermarket at Solwezi City Mall Tel 260-218-82157/3/4 Telefax: Nil
7	<i>Remarks</i>	Nil

FLSW AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	<i>AD category for fire fighting</i>	Within AD HR: CAT 4
2	<i>Rescue equipment</i>	2 fire tenders, 1 Ambulance, 9 trained personnel per shift
3	<i>Capability for removal of disabled aircraft</i>	Nil
4	<i>Remarks</i>	Nil

FLSW AD 2.7 SEASONAL AVAILABILITY

1	<i>Types of clearing equipment</i>	Nil
2	<i>Clearance priorities</i>	Nil
3	<i>Remarks</i>	Nil

FLSW AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	<i>Designation, Surface and Strength of Aprons</i>	<i>Designator</i>	<i>Surface</i>	<i>Strength</i>
		FLSW Apron	Bitumen	PCN 23/F
2	<i>Designation, Width, Surface and Strength of Taxiways</i>	<i>Designator of TWY</i>	<i>Width</i>	<i>Surface</i>
		FLSW Twy	18 M	Bitumen
				PCN 23/F
3	<i>Altimeter checkpoint location and elevation</i>	Location: At Apron Elevation: Nil Info		
4	<i>VOR/INS checkpoints</i>	VOR: Nil INS: Aprons		
5	<i>Remarks</i>	Nil		

FLSW AD 2.9 SURFACE MOVEMENT GUI-DANCE AND CONTROL SYSTEM AND MARKINGS

1	<i>Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands</i>	Nil
2	<i>RWY and TWY markings and LGT</i>	RWY: White centerline marking TWY: White centerline marking
3	<i>Stop bars</i>	Nil
4	<i>Remarks</i>	Nil

FLSW AD 2.10 AERODROME OBSTACLES

<i>In circling area and at AD</i>		
<i>Obstacle type Elevation Markings/LGT</i>	<i>Coordinates</i>	<i>Remarks</i>
a	b	c

NOTE: Nil

FLSW AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	<i>Associated MET Office</i>	Solwezi
2	<i>Hours of service MET Office outside hours</i>	0400 - 1600
3	<i>Office responsible for TAF preparation Period of validity</i>	Kenneth Kaunda International Airport Kenneth Kaunda International Airport as required by flights
4	<i>Trend forecast Interval of issuance</i>	Metar - SPECI 2 HR
5	<i>Briefing/consultation provided</i>	Personal briefing and consultation
6	<i>Flight documentation Language(s) used</i>	Nil

7	<i>Charts and other information available for briefing or consultation</i>	Provided in tabular form for domestic flights only.
8	<i>Supplementary equipment available for providing information</i>	Nil
9	<i>ATS units provided with information</i>	FLSW MET Briefing Office
10	<i>Additional information (limitation of service, etc.)</i>	Nil

FLSW AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

<i>Designations RWY</i>	<i>TRUE & MAG BRG</i>	<i>Dimension of RWY (M)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>	
1	2	3	4	5	6	
08	077°(True) 079°(Mag)	2705 x 35	PCN 23 Bitumen SWY: Nil	S 12°10'36.36" E 026°21'10.86" GUND: Nil	THR 4534.12 FT (1382 M)	
26	257°(True) 259°(Mag)	2705 x 35	PCN 23 Bitumen SWY: Nil	S 12°10'16.24" E 026°22'37.98" GUND: Nil	THR 4553.81 FT (1388 M)	
<i>Slope OF RWY and SWY</i>	<i>SWY dimensions (M)</i>	<i>CWY dimensions (M)</i>	<i>Strip dimensions (M)</i>	<i>RESA dimensions (M)</i>	<i>RAG</i>	<i>OFZ</i>
7	8	9	10	11	12	13
For Rwy 08: Nil	Nil	Nil	3500 x 300	Nil	Nil	Nil
For Rwy 26: Nil	Nil	Nil	3500 x 300	Nil	Nil	Nil
<i>Designations RWY</i>	<i>Remarks</i>					
1	14					
08						
26						

FLSW AD 2.13 DECLARED DISTANCES

<i>RWY Designator</i>	<i>TORA (M)</i>	<i>TODA (M)</i>	<i>ASDA (M)</i>	<i>LDA (M)</i>	<i>Remarks</i>
1	2	3	4	5	6
08	2700	2700	2700	2700	
26	2700	2700	2700	2700	

FLSW AD 2.14 APPROACH AND RUNWAY LIGHTING

<i>RWY Designator</i>	<i>APCH LGT type LEN INTST</i>	<i>THR LGT colour WBAR</i>	<i>VASIS (MEHT) PAPI</i>	<i>TDZ, LGT LEN</i>	<i>RWY Centre Line LGT Length, spacing, colour, INTST</i>	<i>RWY edge LGT LEN, spacing colour INTST</i>	<i>RWY End LGT colour WBAR</i>	<i>SWY LGT LEN (M) colour</i>	<i>Remarks</i>
1	2	3	4	5	6	7	8	9	10
08	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
26	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

FLSW AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

FLSW AD 2.16 HELICOPTER LANDING AREA

As guided by ATC

FLSW AD 2.17 ATS AIRSPACE

1	<i>Designation and lateral limits</i>	SOLWEZI CTR
---	---------------------------------------	-------------

		Area bounded by lines joining points S 12°00'10" E 026°45'00" then along the clockwise arc of a circle of 24.89NM radius centred on S 12°10'14" E 026°21'49" (NDB SW); to S 12°00'06" E 025°58'30" to point of origin.
2	<i>Vertical limits</i>	GND to FL75
3	<i>Airspace classification</i>	C
4	<i>ATS unit call sign Language(s)</i>	Solwezi Approach, English
5	<i>Transition altitude</i>	7000 FT (2134 M)
6	<i>Hours of applicability</i>	0400 - 1600
7	<i>Remarks</i>	Nil

FLSW AD 2.18 ATS COMMUNICATION FACILITIES

<i>Service designation</i>	<i>Call sign</i>	<i>Frequency</i>	<i>Hours of operation</i>	SATVOICE	<i>Logon address</i>	<i>Remarks</i>
1	2	3	4	5	6	7
Approach Control	Solwezi Approach	123.925 MHZ 6952 KHZ	Nil	Nil	Nil	Approach Control Service frequency (APP-U)
Tower Control	Solwezi Tower	118.3 MHZ	0400 - 1600	Nil	Nil	Secondary Freq.

FLSW AD 2.19 RADIO NAVIGATION AND LANDING AIDS

<i>Type of aid MAG VAR CAT of ILS/MLS</i>	<i>ID</i>	<i>Frequency</i>	<i>Hours of operation</i>	<i>Site of transmitting antenna coordinates</i>	<i>Elevation of DME transmitting antenna</i>	<i>Remarks</i>
1	2	3	4	5	6	7
NDB (03° W)	SW	415.00 KHZ	H24	S 12°10'14.24" E 026°21'50.50"	—	Power output 100w Coverage 50NM

FLSW AD 2.20 LOCAL AERODROME REGULATIONS

FLSW 2.20.1 Aerodrome Regulations

At Solwezi Airport a number of local regulations apply.

The regulations are listed below:

- Information about aircraft stands including visual docking guidance systems;
- Information about taxiing from aircraft stands including taxi clearance;
- Limitations in the operation of large aircraft including limitations in the use of the aircraft own power for taxiing;
- Towing assistance;
- Use of engine power exceeding idle power;
- Engine start-up and use of APU;
- Fuel spillage;

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given by the TWR .

"Local Regulations" may be requested , in writing from:

Officer in Charge
Solwezi Airport

FLSW AD 2.21 NOISE ABATEMENT PROCEDURES

FLSW AD 2.22 FLIGHT PROCEDURES

All flights within Lusaka FIR at or below FL150 within and outside controlled airspace shall be operated in accordance with instrument/visual flight rules.

Flights above FL150 within and outside controlled airspace shall be operated in accordance with instrument flight rules only.

FLSW AD 2.23 ADDITIONAL INFORMATION

FLSW AD 2.23.1 Bird concentrations in the vicinity of the airport

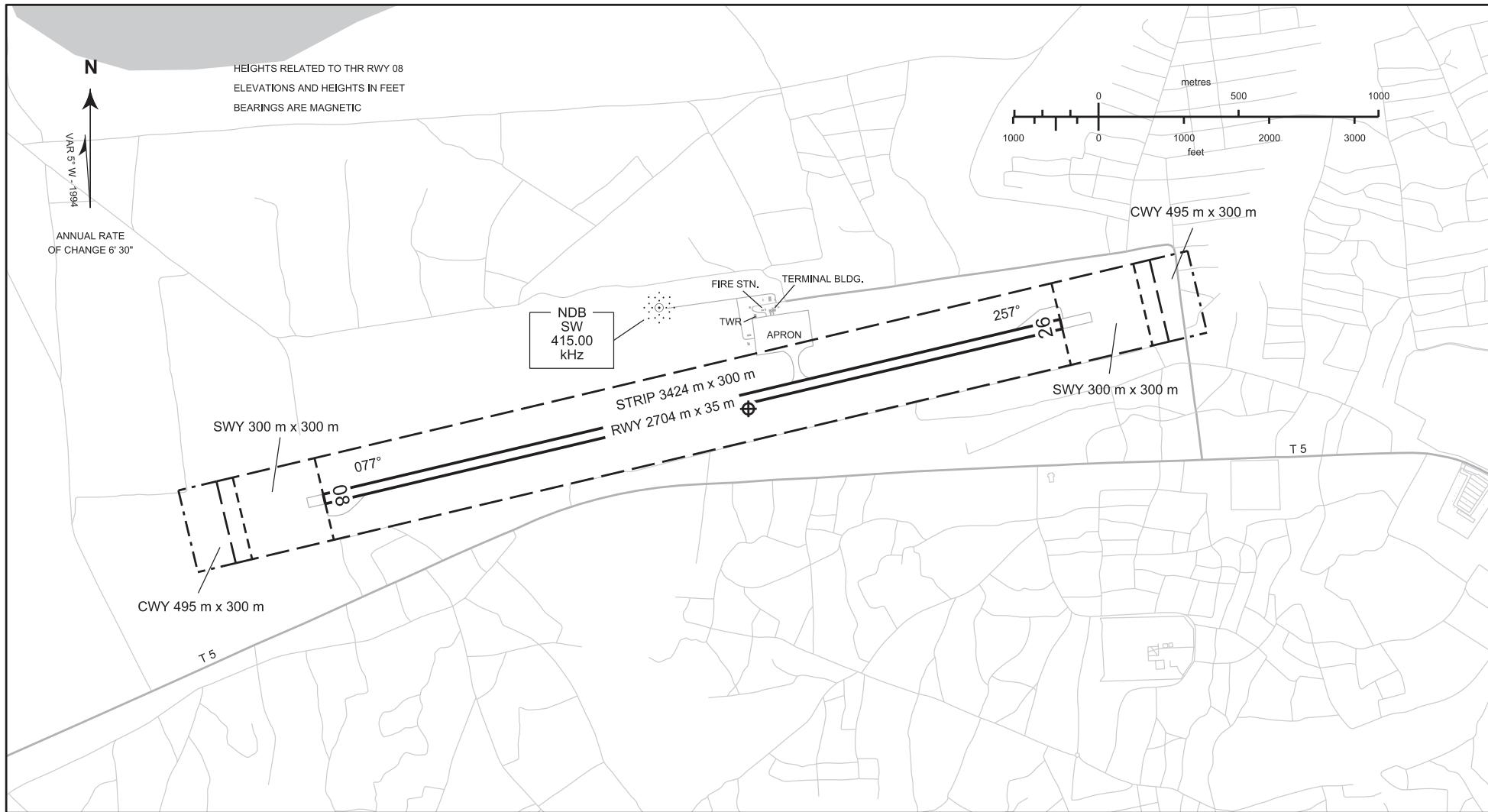
Migratory birds are usually present at the aerodrome from late October to April during the country's wet season. The airport experiences an influx of Black and yellow billed Kites which are migratory especially in the morning and late afternoon of the day.

The aircraft engine noise is not always effective in the clearing of the birds from the landing area, pilots should exercise extreme caution.

FLSW AD 2.24 CHARTS RELATED TO AN AERODROME

Charts	Pages
LANDING CHART - ICAO	AD 2 FLSW 2 - 1
AERODROME OBSTACLE CHART - ICAO TYPE A RWY 08-26	AD 2 FLSW 5 - 1
AERODROME OBSTACLE CHART - ICAO TYPE B	AD 2 FLSW 6 - 1
Standard Departure Chart — Instrum- ment — ICAO RNP RWY 08	AD 2 FLSW 10 - 1
Standard Departure Chart — Instru- ment — ICAO RNP RWY 26	AD 2 FLSW 10 - 5
Standard Arrival Chart — Instru- ment — ICAO RNP RWY 08	AD 2 FLSW 12 - 1
Standard Arrival Chart — Instru- ment — ICAO RNP RWY 26	AD 2 FLSW 12 - 5
Instrument Approach Chart — ICAO RNP RWY 08	AD 2 FLSW 14 - 1
Instrument Approach Chart — ICAO RNP RWY 26	AD 2 FLSW 14 - 3
Instrument Approach Chart — ICAO NDB Z RWY 08	AD 2 FLSW 14 - 5
Instrument Approach Chart — ICAO NDB Y RWY 08	AD 2 FLSW 14 - 7
Instrument Approach Chart — ICAO NDB Z RWY 26	AD 2 FLSW 14 - 9
Instrument Approach Chart — ICAO NDB Y RWY 26	AD 2 FLSW 14 - 11

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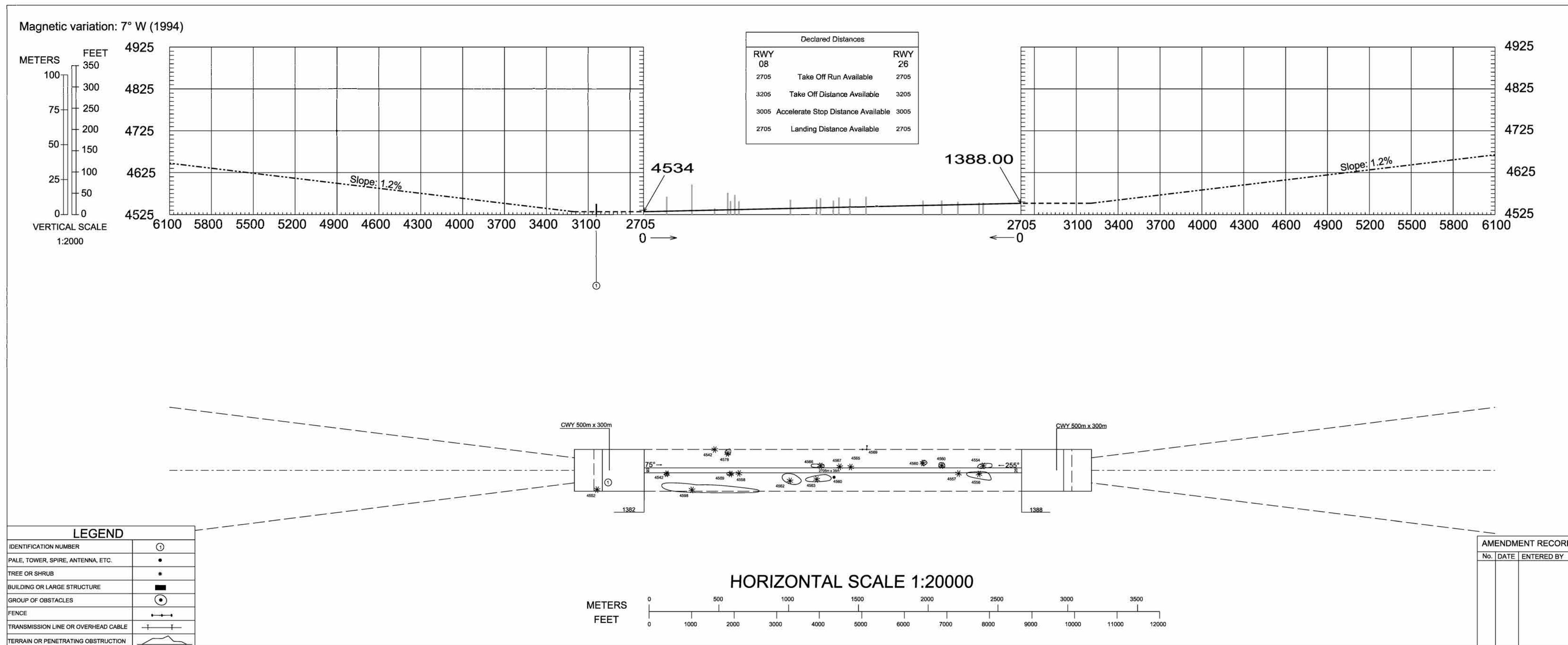


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
Dimensions in metres
Elevations in feet

AERODROME OBSTACLE CHART - ICAO
TYPE A (Operating Limitations)

SOLWEZI
RWY 08/26



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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

**TRANSITION ALTITUDE
7000**

APP 123.925
TWR 118.300

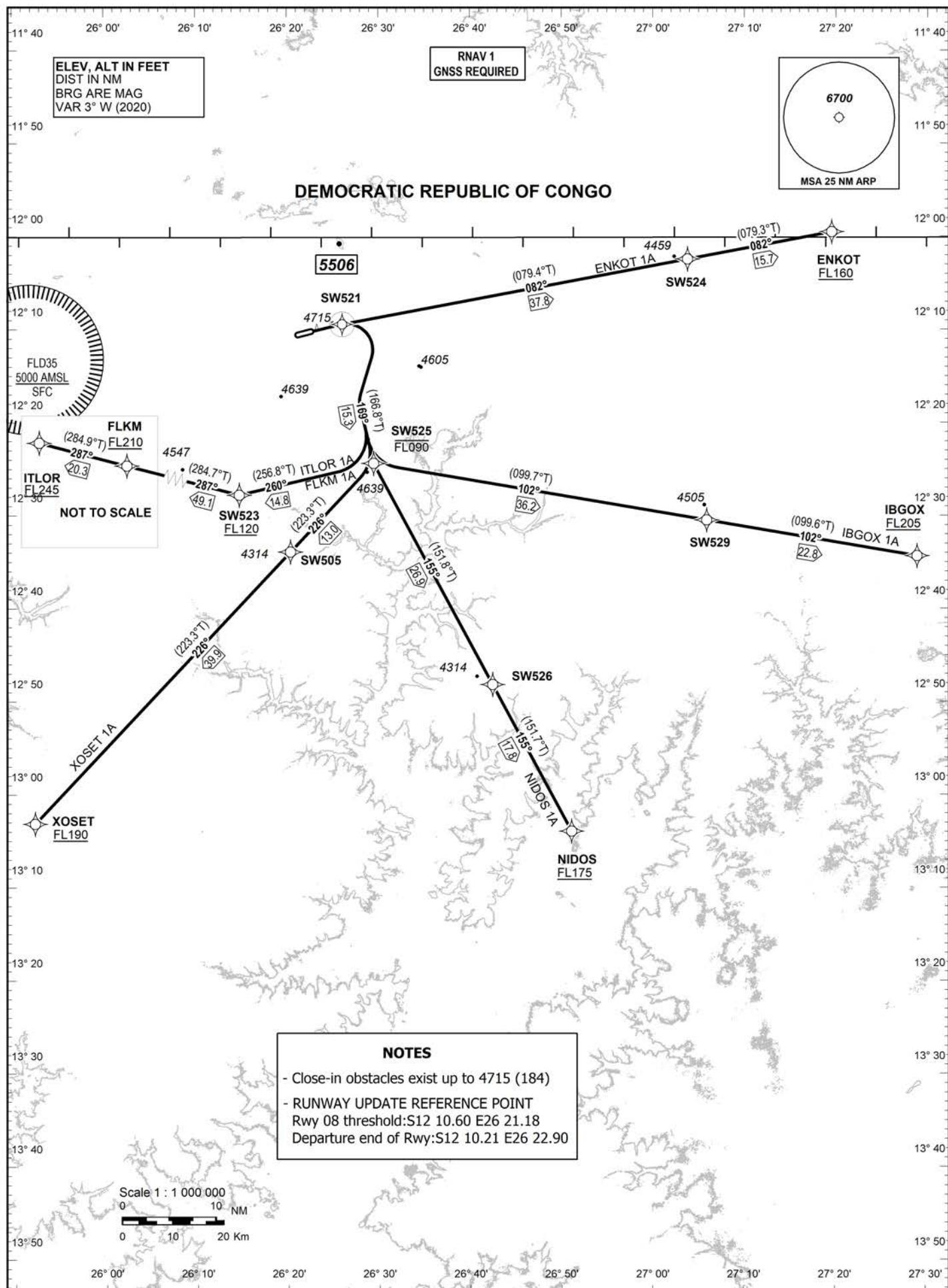
SOLWEZI/Solwezi

(FLSW)

**(PULL)
RNAV SID RWY 08**

1A, NIDOS 1A, XOSSET 1A

ENKOT 1A, FLKM 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A, XOSET 1A



**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO**

SOLWEZI/Solwezi

(FLSW)

RNAV SID RWY 08

ENKOT 1A, FLKM 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A, XOSSET 1A

TABULAR DESCRIPTION

RNAV SID RWY 08

ENKOT 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	SW521	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW524	-	082 (079.4)	-	37.8	-	-	-	-	-	RNAV 1
030	TF	ENKOT	-	082 (079.3)	-	15.7	-	+FL160	-	-	-	RNAV 1

FLKM 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	SW521	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW525	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	SW523	-	260 (256.8)	-	14.8	-	+FL120	-	-	-	RNAV 1
040	TF	FLKM	-	287 (284.7)	-	49.1	-	+FL210	-	-	-	RNAV 1

IBGOX 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	SW521	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW525	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	SW529	-	102 (099.7)	-	36.2	-	-	-	-	-	RNAV 1
040	TF	IBGOX	-	102 (099.6)	-	22.8	-	+FL205	-	-	-	RNAV 1

ITLOR 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	SW521	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW525	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	SW523	-	260 (256.8)	-	14.8	-	-	-	-	-	RNAV 1
040	TF	FLKM	-	287 (284.7)	-	49.1	-	-	-	-	-	RNAV 1
050	TF	ITLOR	-	287 (284.9)	-	20.3	-	+FL245	-	-	-	RNAV 1

NIDOS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	SW521	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW525	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	SW526	-	155 (151.8)	-	26.9	-	-	-	-	-	RNAV 1
040	TF	NIDOS	-	155 (151.7)	-	17.8	-	+FL175	-	-	-	RNAV 1

XOSSET 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	CF	SW521	Y	079 (076.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW525	-	169 (166.8)	-	15.3	-	-FL090	-	-	-	RNAV 1
030	TF	SW505	-	226 (223.3)	-	13.0	-	-	-	-	-	RNAV 1
040	TF	XOSET	-	226 (223.3)	-	39.9	-	+FL190	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV SID RWY 08**

ENKOT 1A, FLKM 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A, XOSET 1A

**WAYPOINT LIST
RNAV SID RWY 08**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ENKOT	S 11 59 32.0	E 027 19 33.0	XOSET	S 13 03 08.6	E 025 52 16.5
FLKM	S 12 15 15.0	E 025 26 15.0			
IBGOX	S 12 34 21.0	E 027 28 56.0			
ITLOR	S 12 10 00.2	E 025 06 13.4			
NIDOS	S 13 03 60.0	E 026 51 06.0			
SW505	S 12 33 57.6	E 026 20 20.2			
SW521	S 12 09 31.2	E 026 25 53.0			
SW523	S 12 27 50.4	E 026 14 44.4			
SW524	S 12 02 29.1	E 027 03 47.6			
SW525	S 12 24 26.7	E 026 29 27.1			
SW526	S 12 48 14.0	E 026 42 27.4			
SW529	S 12 30 32.5	E 027 05 53.9			

ROUTING

NAME	TEXT
ENKOT 1A	After take-off climb on course 079° to SW521, track 082° to SW524, then track 082° to ENKOT. MCA/MCL: ENKOT AT or ABOVE FL160.
FLKM 1A	After take-off climb on course 079° to SW521, track 169° to SW525, track 260° to SW523, then track 2 87° to FLKM. MCA/MCL: SW525 AT or BELOW FL090, SW523 AT or ABOVE FL120, FLKM AT or ABOVE FL210.
IBGOX 1A	After take-off climb on course 079° to SW521, track 169° to SW525, track 102° to SW529, then track 1 02° to IBGOX. MCA/MCL: SW525 AT or BELOW FL090, IBGOX AT or ABOVE FL205.
ITLOR 1A	After take-off climb on course 079° to SW521, track 169° to SW525, track 260° to SW523, track 287° to FLKM, then track 287° to ITLOR. MCA/MCL: SW525 AT or BELOW FL090, ITLOR AT or ABOVE FL245.
NIDOS 1A	After take-off climb on course 079° to SW521, track 169° to SW525, track 155° to SW526, then track 1 55° to NIDOS. MCA/MCL: SW525 AT or BELOW FL090, NIDOS AT or ABOVE FL175.
XOSET 1A	After take-off climb on course 079° to SW521, track 169° to SW525, track 226° to SW505, then track 2 26° to XOSET. MCA/MCL: SW525 AT or BELOW FL090, XOSET AT or ABOVE FL190.

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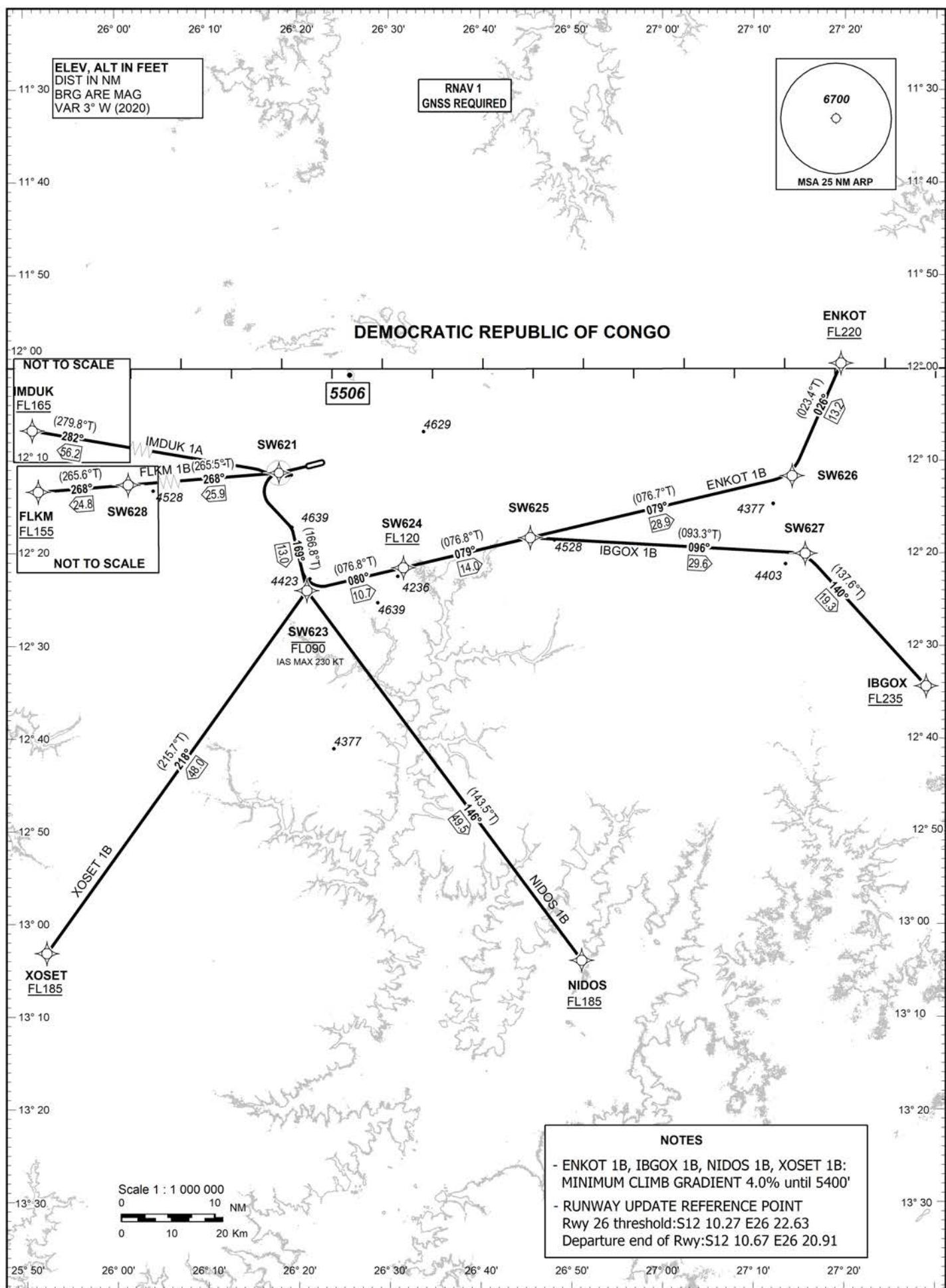
STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAOTRANSITION ALTITUDE
7000APP 123.925
TWR 118.300

SOLWEZI/Solwezi

(FLSW)

RNAV SID RWY 26

ENKOT 1B, FLKM 1B, IBGOX 1B, IMDUK 1A, NIDOS 1B, XOSET 1B



**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV SID RWY 26**

ENKOT 1B, FLKM 1B, IBGOX 1B, IMDUK 1A, NIDOS 1B, XOSET 1B

TABULAR DESCRIPTION**RNAV SID RWY 26****ENKOT 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	CF	SW621	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW623	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	SW624	-	080 (076.8)	-	10.7	-	+FL120	-	-	-	RNAV 1
040	TF	SW625	-	079 (076.8)	-	14.0	-	-	-	-	-	RNAV 1
050	TF	SW626	-	079 (076.7)	-	28.9	-	-	-	-	-	RNAV 1
060	TF	ENKOT	-	026 (023.4)	-	13.2	-	+FL220	-	-	-	RNAV 1

FLKM 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	CF	SW621	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW628	-	268 (265.5)	-	25.9	-	-	-	-	-	RNAV 1
030	TF	FLKM	-	268 (265.6)	-	24.8	-	+FL155	-	-	-	RNAV 1

IBGOX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	CF	SW621	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW623	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	SW624	-	080 (076.8)	-	10.7	-	+FL120	-	-	-	RNAV 1
040	TF	SW625	-	079 (076.8)	-	14.0	-	-	-	-	-	RNAV 1
050	TF	SW627	-	096 (093.3)	-	29.6	-	-	-	-	-	RNAV 1
060	TF	IBGOX	-	140 (137.6)	-	19.3	-	+FL235	-	-	-	RNAV 1

IMDUK 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	CF	SW621	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	IMDUK	-	282 (279.8)	-	56.2	-	+FL165	-	-	-	RNAV 1

NIDOS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	CF	SW621	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW623	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	NIDOS	-	146 (143.5)	-	49.5	-	+FL185	-	-	-	RNAV 1

XOSET 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	CF	SW621	Y	259 (256.8)	-2.6	3.0	-	-	-	-	-	RNAV 1
020	TF	SW623	-	169 (166.8)	-	13.0	-	-FL090	-230	-	-	RNAV 1
030	TF	XOSET	-	218 (215.7)	-	48.0	-	+FL185	-	-	-	RNAV 1

**STANDARD DEPARTURE CHART -
INSTRUMENT (SID) - ICAO****SOLWEZI/Solwezi**

(FLSW)

RNAV SID RWY 26

ENKOT 1B, FLKM 1B, IBGOX 1B, IMDUK 1A, NIDOS 1B, XOSET 1B

**WAYPOINT LIST
RNAV SID RWY 26**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ENKOT	S 11 59 32.0	E 027 19 33.0	XOSET	S 13 03 08.6	E 025 52 16.5
FLKM	S 12 15 15.0	E 025 26 15.0			
IBGOX	S 12 34 21.0	E 027 28 56.0			
IMDUK	S 12 01 40.5	E 025 21 25.5			
NIDOS	S 13 03 60.0	E 026 51 06.0			
SW621	S 12 11 21.4	E 026 17 55.8			
SW623	S 12 24 04.2	E 026 20 57.9			
SW624	S 12 21 37.2	E 026 31 34.0			
SW625	S 12 18 23.4	E 026 45 29.2			
SW626	S 12 11 41.3	E 027 14 12.3			
SW627	S 12 20 03.7	E 027 15 38.6			
SW628	S 12 13 21.9	E 025 51 31.9			

ROUTING

NAME	TEXT
ENKOT 1B	Minimum climb gradient of 4.0% to 5400. After take-off climb on course 259° to SW621, track 169° to SW623, track 080° to SW624, track 079° to SW625, track 079° to SW626, then track 026° to ENKOT. IAS Max 230 Kts until SW623. MCA/MCL: SW623 AT or BELOW FL090, SW624 AT or ABOVE FL120, ENKOT AT or ABOVE FL220.
FLKM 1B	After take-off climb on course 259° to SW621, track 268° to SW628, then track 268° to FLKM. MCA/MCL: FLKM AT or ABOVE FL155.
IBGOX 1B	Minimum climb gradient of 4.0% to 5400. After take-off climb on course 259° to SW621, track 169° to SW623, track 080° to SW624, track 079° to SW625, track 096° to SW627, then track 140° to IBGOX. IAS Max 230 Kts until SW623. MCA/MCL: SW623 AT or BELOW FL090, SW624 AT or ABOVE FL120, IBGOX AT or ABOVE FL235.
IMDUK 1A	After take-off climb on course 259° to SW621, track 268° to SW628, then track 282° to IMDUK. MCA/MCL: IMDUK AT or ABOVE FL165.
NIDOS 1B	Minimum climb gradient of 4.0% to 5400. After take-off climb on course 259° to SW621, track 169° to SW623, then track 146° to NIDOS. IAS Max 230 Kts until SW623. MCA/MCL: SW623 AT or BELOW FL090, NIDOS AT or ABOVE FL185.
XOSET 1B	Minimum climb gradient of 4.0% to 5400. After take-off climb on course 259° to SW621, track 169° to SW623, then track 218° to XOSET. IAS Max 230 Kts until SW623. MCA/MCL: SW623 AT or BELOW FL090, XOSET AT or ABOVE FL185.

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STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO

TRANSITION ALTITUDE
7000

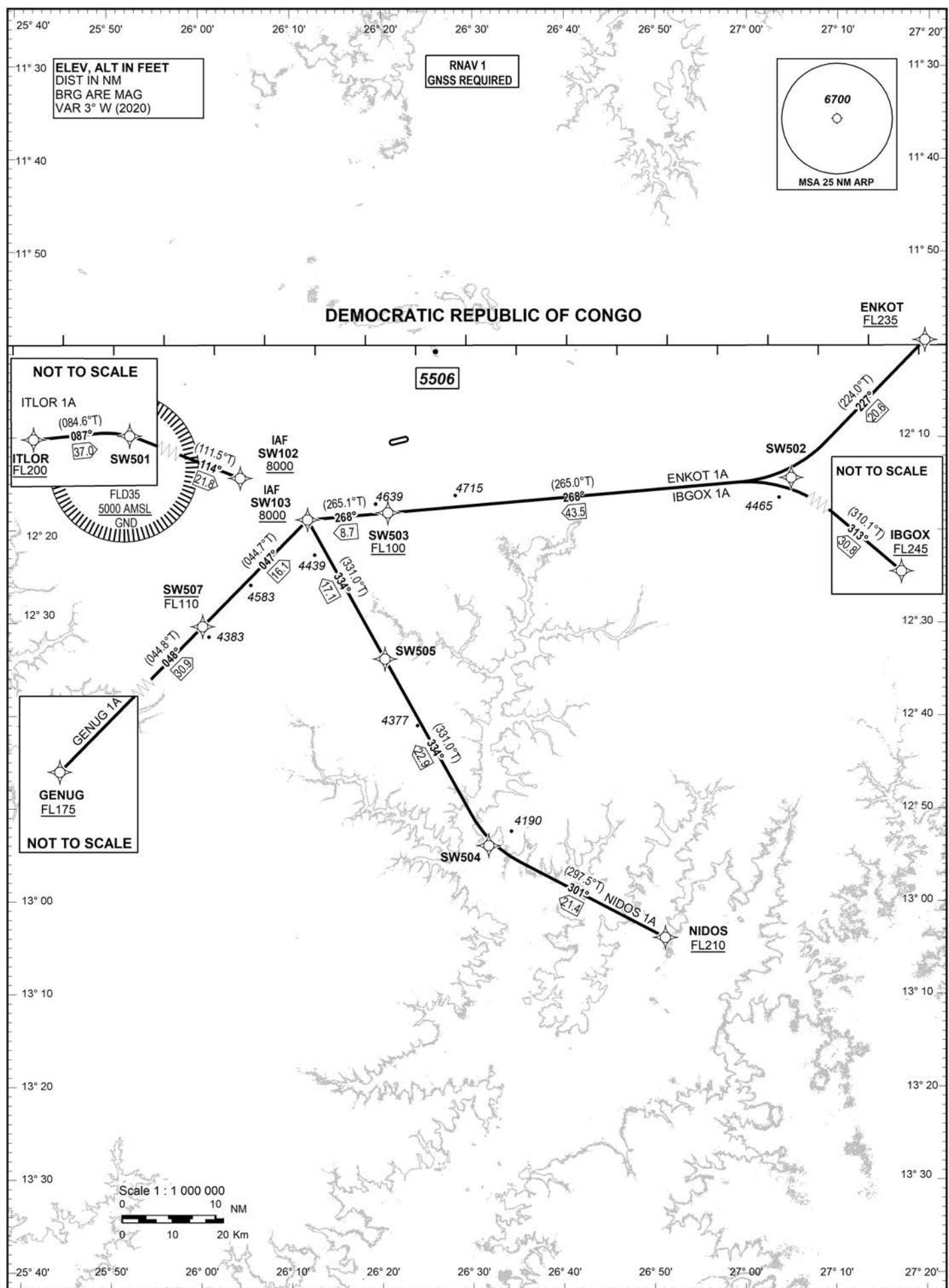
APP 123.925
TWR 118.300

SOLWEZI/Solwezi

(FLSW)

RNAV STAR RWY 08

ENKOT 1A, GENUG 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO**

SOLWEZI/Solwezi

(FLSW)

RNAV STAR RWY 08

ENKOT 1A, GENUG 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A

TABULAR DESCRIPTION

RNAV STAR RWY 08

ENKOT 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ENKOT	-	-	-	-	-	+FL235	-	-	-	RNAV 1
020	TF	SW502	-	227 (224.0)	-	20.6	-	-	-	-	-	RNAV 1
030	TF	SW503	-	268 (265.0)	-	43.5	-	+FL100	-	-	-	RNAV 1
040	TF	SW103	-	268 (265.1)	-	8.7	-	+8000	-	-	-	RNAV 1

GENUG 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	GENUG	-	-	-	-	-	+FL175	-	-	-	RNAV 1
020	TF	SW507	-	048 (044.8)	-	30.9	-	-FL110	-	-	-	RNAV 1
030	TF	SW103	-	047 (044.7)	-	16.1	-	+8000	-	-	-	RNAV 1

IBGOX 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBGOX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	SW502	-	313 (310.1)	-	30.8	-	-	-	-	-	RNAV 1
030	TF	SW503	-	268 (265.0)	-	43.5	-	+FL100	-	-	-	RNAV 1
040	TF	SW103	-	268 (265.1)	-	8.7	-	+8000	-	-	-	RNAV 1

ITLOR 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ITLOR	-	-	-	-	-	+FL200	-	-	-	RNAV 1
020	TF	SW501	-	087 (084.6)	-	37.0	-	-	-	-	-	RNAV 1
030	TF	SW102	-	114 (111.5)	-	21.8	-	+8000	-	-	-	RNAV 1

NIDOS 1A

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	NIDOS	-	-	-	-	-	+FL210	-	-	-	RNAV 1
020	TF	SW504	-	301 (297.5)	-	21.4	-	-	-	-	-	RNAV 1
030	TF	SW505	-	334 (331.0)	-	22.9	-	-	-	-	-	RNAV 1
040	TF	SW103	-	334 (331.0)	-	17.1	-	+8000	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****SOLWEZI/Solwezi**

(FLSW)

RNAV STAR RWY 08

ENKOT 1A, GENUG 1A, IBGOX 1A, ITLOR 1A, NIDOS 1A

**WAYPOINT LIST
RNAV STAR RWY 08**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ENKOT	S 11 59 32.0	E 027 19 33.0	SW507	S 12 30 25.1	E 026 00 20.3
GENUG	S 12 52 28.9	E 025 38 04.6			
IBGOX	S 12 34 21.0	E 027 28 56.0			
ITLOR	S 12 10 00.2	E 025 06 13.4			
NIDOS	S 13 03 60.0	E 026 51 06.0			
SW102	S 12 14 26.7	E 026 04 31.1			
SW103	S 12 18 56.4	E 026 11 52.9			
SW501	S 12 06 26.4	E 025 43 48.8			
SW502	S 12 14 25.1	E 027 04 55.2			
SW503	S 12 18 12.1	E 026 20 41.4			
SW504	S 12 54 05.5	E 026 31 41.9			
SW505	S 12 33 57.6	E 026 20 20.2			

ROUTING

NAME	TEXT
ENKOT 1A	From ENKOT track 227° to SW502, track 268° to SW503, track 268° to SW103. MEL/MEA: ENKOT AT or ABOVE FL235, SW503 AT or ABOVE FL100, SW103 AT or ABOVE 8000'.
GENUG 1A	From GENUG track 048° to SW507, track 047° to SW103. MEL/MEA: GENUG AT or ABOVE FL175, SW507 AT or BELOW FL110, SW103 AT or ABOVE 8000'.
IBGOX 1A	From IBGOX track 313° to SW502, track 268° to SW503, track 268° to SW103. MEL/MEA: IBGOX AT or ABOVE FL245, SW503 AT or ABOVE FL100, SW103 AT or ABOVE 8000'.
ITLOR 1A	From ITLOR track 087° to SW501, track 114° to SW102. MEL/MEA: ITLOR AT or ABOVE FL200, SW102 AT or ABOVE 8000'.
NIDOS 1A	From NIDOS track 301° to SW504, track 334° to SW505, track 334° to SW103. MEL/MEA: NIDOS AT or ABOVE FL210, SW103 AT or ABOVE 8000'.

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**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO**

TRANSITION ALTITUDE
7000

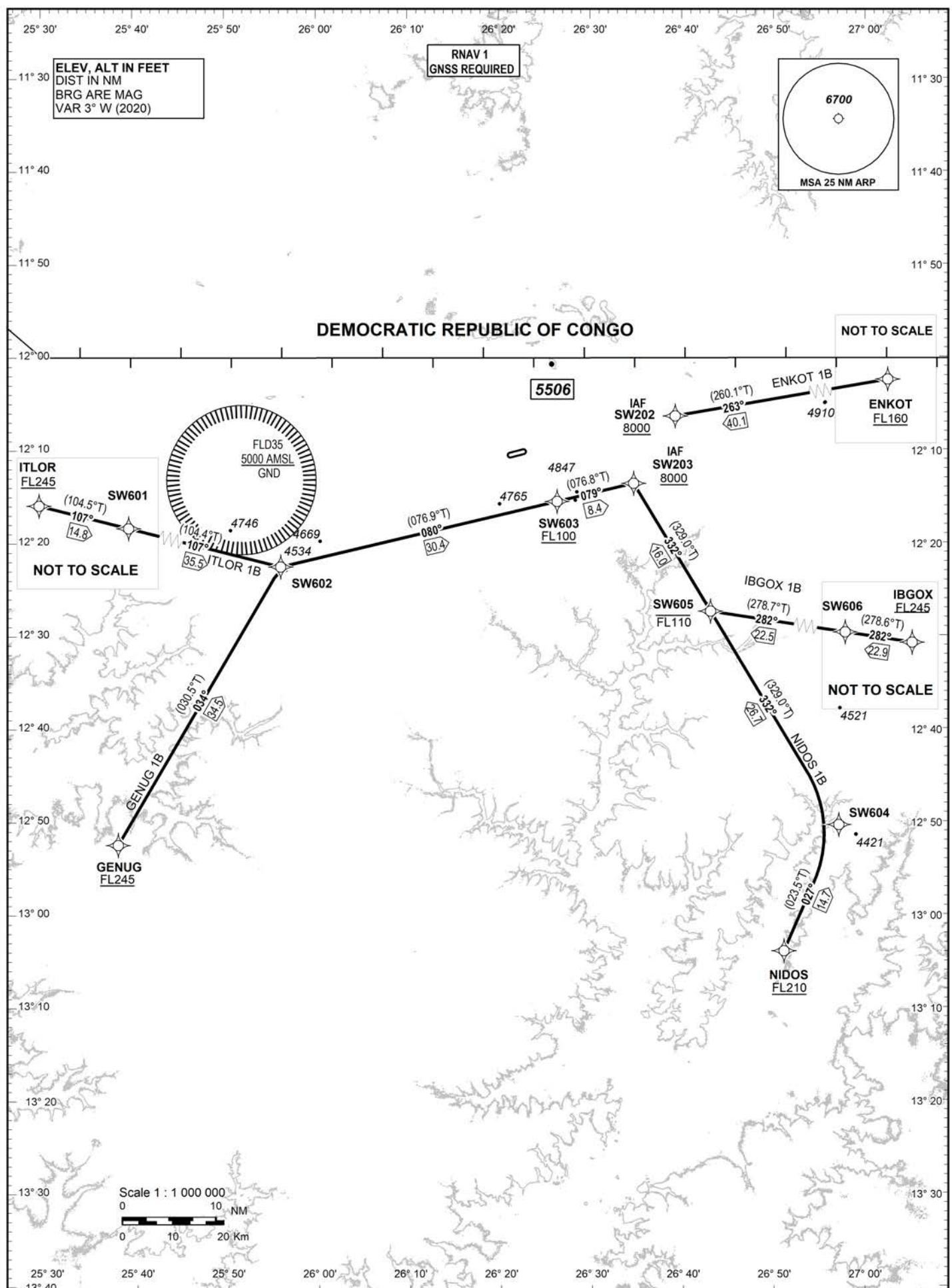
APP 123.925
TWR 118.300

SOLWEZI/Solwezi

(FLSW)

RNAV STAR RWY 26

ENKOT 1B, GENUG 1B, IBGOX 1B, ITLOR 1B, NIDOS 1B



**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****SOLWEZI/Solwezi****(FLSW)****RNAV STAR RWY 26**

ENKOT 1B, GENUG 1B, IBGOX 1B, ITLOR 1B, NIDOS 1B

TABULAR DESCRIPTION**RNAV STAR RWY 26****ENKOT 1B**

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ENKOT	-	-	-	-	-	+FL160	-	-	-	RNAV 1
020	TF	SW202	-	263 (260.1)	-	40.1	-	+8000	-	-	-	RNAV 1

GENUG 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	GENUG	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	SW602	-	034 (030.5)	-	34.5	-	-	-	-	-	RNAV 1
030	TF	SW603	-	080 (076.9)	-	30.4	-	+FL100	-	-	-	RNAV 1
040	TF	SW203	-	079 (076.8)	-	8.4	-	+8000	-	-	-	RNAV 1

IBGOX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	IBGOX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	SW606	-	282 (278.6)	-	22.9	-	-	-	-	-	RNAV 1
030	TF	SW605	-	282 (278.7)	-	22.5	-	-	-	-	-	RNAV 1
040	TF	SW203	-	332 (329.0)	-	16.0	-	+8000	-	-	-	RNAV 1

ITLOR 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	ITLOR	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	SW601	-	107 (104.5)	-	14.8	-	-	-	-	-	RNAV 1
030	TF	SW602	-	107 (104.4)	-	35.5	-	-	-	-	-	RNAV 1
040	TF	SW603	-	080 (076.9)	-	30.4	-	+FL100	-	-	-	RNAV 1
050	TF	SW203	-	079 (076.8)	-	8.4	-	+8000	-	-	-	RNAV 1

NIDOS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Navaids	Navigation Specification
010	IF	NIDOS	-	-	-	-	-	+FL210	-	-	-	RNAV 1
020	TF	SW604	-	027 (023.5)	-	14.7	-	-	-	-	-	RNAV 1
030	TF	SW605	-	332 (329.0)	-	26.7	-	-	-	-	-	RNAV 1
040	TF	SW203	-	332 (329.0)	-	16.0	-	+8000	-	-	-	RNAV 1

**STANDARD ARRIVAL CHART -
INSTRUMENT (STAR) - ICAO****SOLWEZI/Solwezi**

(FLSW)

RNAV STAR RWY 26

ENKOT 1B, GENUG 1B, IBGOX 1B, ITLOR 1B, NIDOS 1B

**WAYPOINT LIST
RNAV STAR RWY 26**

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
ENKOT	S 11 59 32.0	E 027 19 33.0	SW606	S 12 30 52.6	E 027 05 45.0
GENUG	S 12 52 28.9	E 025 38 04.6			
IBGOX	S 12 34 21.0	E 027 28 56.0			
ITLOR	S 12 10 00.2	E 025 06 13.4			
NIDOS	S 13 03 60.0	E 026 51 06.0			
SW202	S 12 06 25.7	E 026 39 13.5			
SW203	S 12 13 40.6	E 026 34 40.1			
SW601	S 12 13 42.9	E 025 20 50.6			
SW602	S 12 22 35.1	E 025 56 00.7			
SW603	S 12 15 37.0	E 026 26 17.4			
SW604	S 12 50 25.1	E 026 57 07.0			
SW605	S 12 27 26.7	E 026 43 04.0			

ROUTING

NAME	TEXT
ENKOT 1B	From ENKOT track 263° to SW202. MEL/MEA: ENKOT AT or ABOVE FL160, SW202 AT or ABOVE 8000'.
GENUG 1B	From GENUG track 034° to SW602, track 080° to SW603, track 079° to SW203. MEL/MEA: GENUG AT or ABOVE FL245, SW603 AT or above FL100, SW203 AT or ABOVE 8000'.
IBGOX 1B	From IBGOX track 282° to SW602, track 282° to SW605, track 332° to SW203. MEL/MEA: IBGOX AT or ABOVE FL245, SW605 AT or BELOW FL110, SW203 AT or ABOVE 8000'.
ITLOR 1B	From ITLOR track 107° to SW601, track 107° to SW602, track 080° to SW603, track 079° to SW203. MEL/MEA: ITLOR AT or ABOVE FL245, SW603 AT or ABOVE FL100, SW203 AT or ABOVE 8000'.
NIDOS 1B	From NIDOS track 027° to SW604, track 332° to SW605, track 332° to SW203. MEL/MEA: NIDOS AT or ABOVE FL210, SW605 AT or BELOW FL110 SW203 AT or ABOVE 8000'.

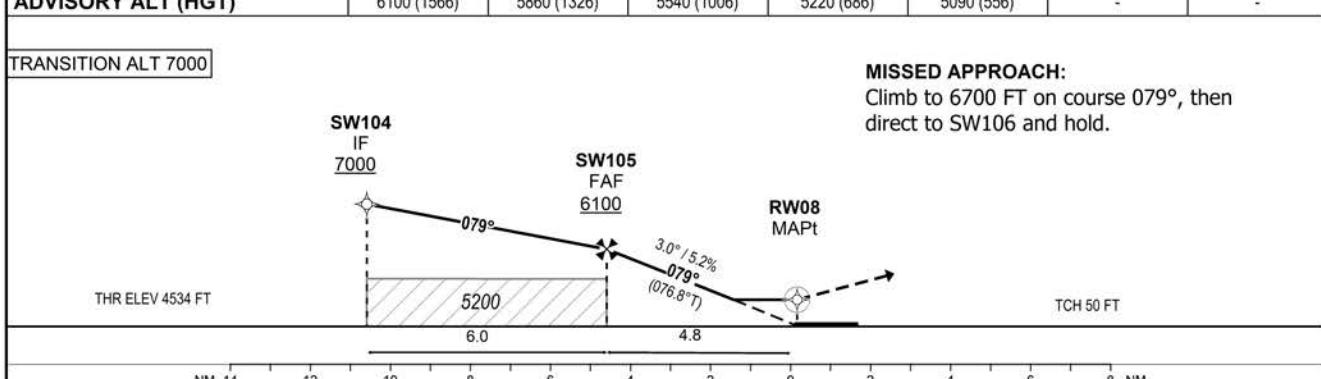
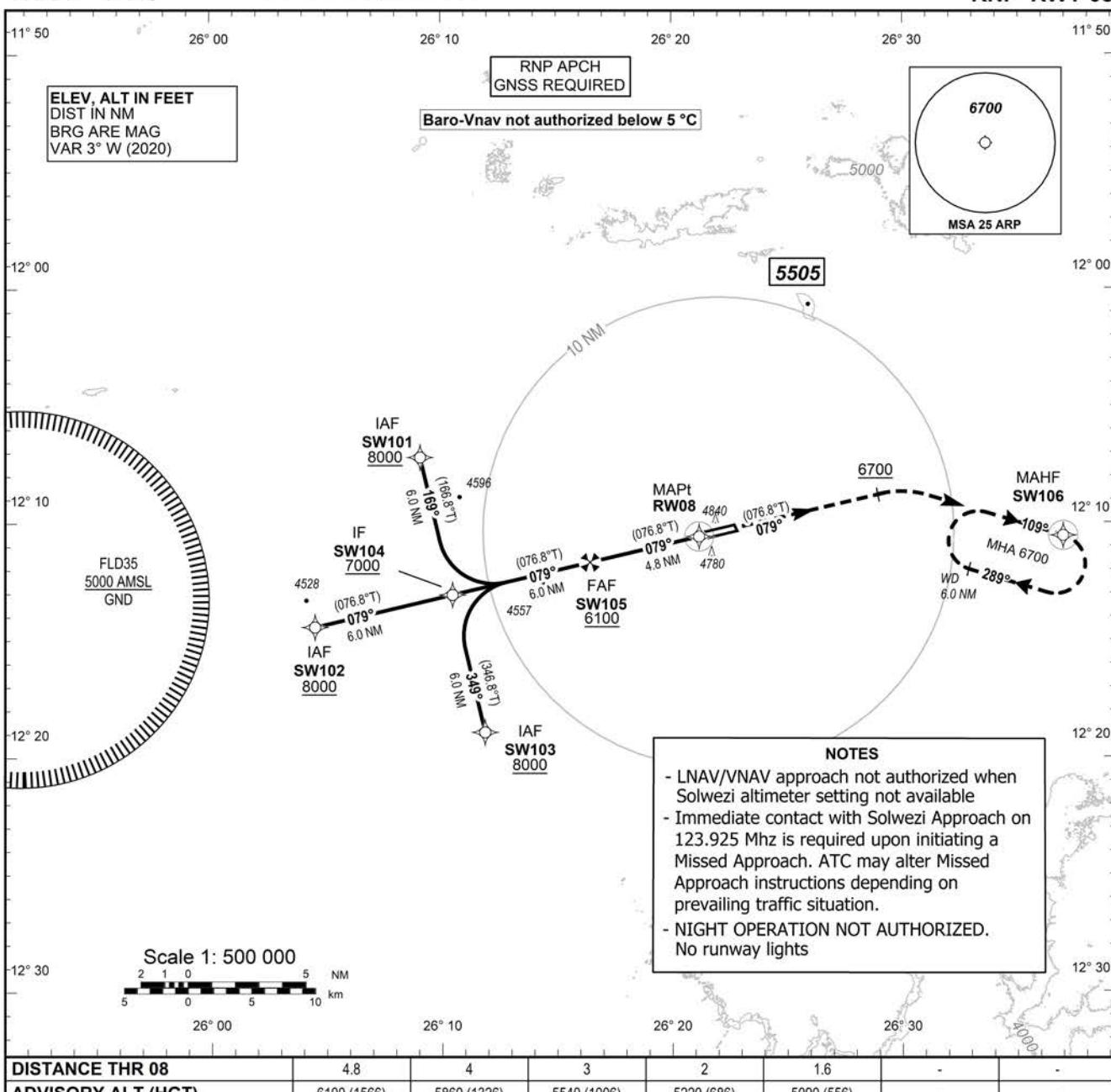
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 4554 FT
HEIGHTS RELATED TO
THR RWY 08 - ELEV 4534 FT

APP 123.925
TWR 118.300

SOLWEZI/Solwezi
(FLSW)
RNP RWY 08



OCA (OCH) CMV (m)	A	B	C	D
Straight-in Approach	LNAV / VNAV	4940 (406)		-
		1900		-
	LNAV	5090 (556)		-
		2500		-
CIRCLING		5270 (716)	5310 (756)	5480 (926)
VIS (m)		3300	3500	4300

GS (kt)	-	-	-	-	-
FAF to MAPt	-	-	-	-	-
ROD (fpm)	-	-	-	-	-

Timing not authorized for defining the MAPt

<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	SW101	-	-	-	-	+8000	-	-	RNP APCH
020	TF	SW104	-	169 / (166.8)	6.0	-	+7000	-	-	RNP APCH
010	IF	SW103	-	-	-	-	+8000	-	-	RNP APCH
020	TF	SW104	-	349 / (346.8)	6.0	-	+7000	-	-	RNP APCH
010	IF	SW102	-	-	-	-	+8000	-	-	RNP APCH
020	TF	SW104	-	079 / (076.8)	6.0	-	+7000	-	-	RNP APCH
030	TF	SW105	-	079 / (076.8)	6.0	-	+6100	-	-	RNP APCH
040	TF	RW08	Y	079 / (076.8)	4.8	-	@4584	-	-3.00 / 50	RNP APCH
050	CA	-	-	079 / (076.8)	-	-	+6700	-	-	RNP APCH
060	DF	SW106	Y	-	-	-	+6700	-	-	RNP APCH
070	HM	SW106	Y	109 / (106.5)	6.0	L	+6700	-230	-	RNP APCH

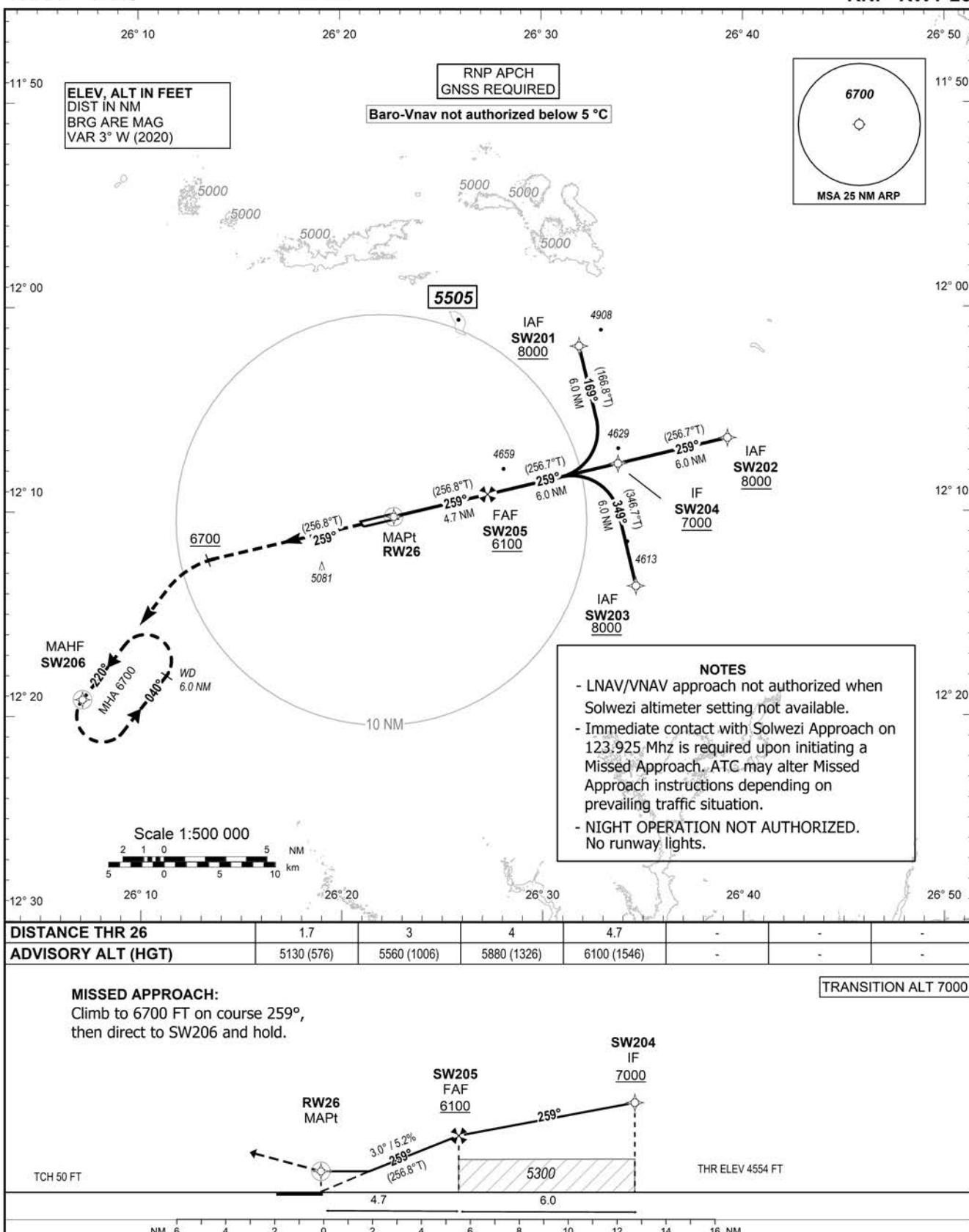
<i>Waypoint Identifier</i>	<i>Coordinates</i>
RW08	S 12 10 36.36 E 26 21 10.86
SW101	S 12 07 12.2 E 026 09 05.3
SW102	S 12 14 26.7 E 026 04 31.1
SW103	S 12 18 56.4 E 026 11 52.9
SW104	S 12 13 04.4 E 026 10 29.1
SW105	S 12 11 41.9 E 026 16 27.0
SW106	S 12 11 22.2 E 026 46 41.7

INSTRUMENT APPROACH CHART - ICAO

**AERODROME ELEV 4554 FT
HEIGHTS RELATED TO
AD ELEV**

APP 123.925
TWR 118.300

**SOLWEZI/Solwezi
(FLSW)
RNP RWY 26**



OCA (OCH) CMV (m)	A	B	C	D
Straight-in Approach	LNAV / VNAV	5040 (486)		-
	LNAV	2300		-
		5130 (576)		-
		2600		-
CIRCLING VIS (m)		5270 (716)	5310 (756)	5480 (926)
		3300	3500	4300

GS (kt)	-	-	-	-
FAF to MAPt	-	-	-	-
ROD (fpm)	-	-	-	-

Timing not authorized for defining the MAPt

<i>Serial Number</i>	<i>Path Descriptor</i>	<i>Waypoint Identifier</i>	<i>Fly-over</i>	<i>Course / Track °M(°T)</i>	<i>Dist (NM)</i>	<i>Turn Direction</i>	<i>Altitude (ft/FL)</i>	<i>Speed (KTs)</i>	<i>VPA/ TCH</i>	<i>Navigation Specification</i>
010	IF	SW203	-	-	-	-	+8000	-	-	RNP APCH
020	TF	SW204	-	349 / (346.7)	6.0	-	+7000	-	-	RNP APCH
010	IF	SW201	-	-	-	-	+8000	-	-	RNP APCH
020	TF	SW204	-	169 / (166.8)	6.0	-	+7000	-	-	RNP APCH
010	IF	SW202	-	-	-	-	+8000	-	-	RNP APCH
020	TF	SW204	-	259 / (256.7)	6.0	-	+7000	-	-	RNP APCH
030	TF	SW205	-	259 / (256.7)	6.0	-	+6100	-	-	RNP APCH
040	TF	RW26	Y	259 / (256.8)	4.7	-	@4604	-	-3.00 / 50	RNP APCH
050	CA	-	-	259 / (256.8)	-	-	+6700	-	-	RNP APCH
060	DF	SW206	Y	-	-	-	+6700	-	-	RNP APCH
070	HM	SW206	Y	220 / (217.8)	6.0	L	+6700	-230	-	RNP APCH

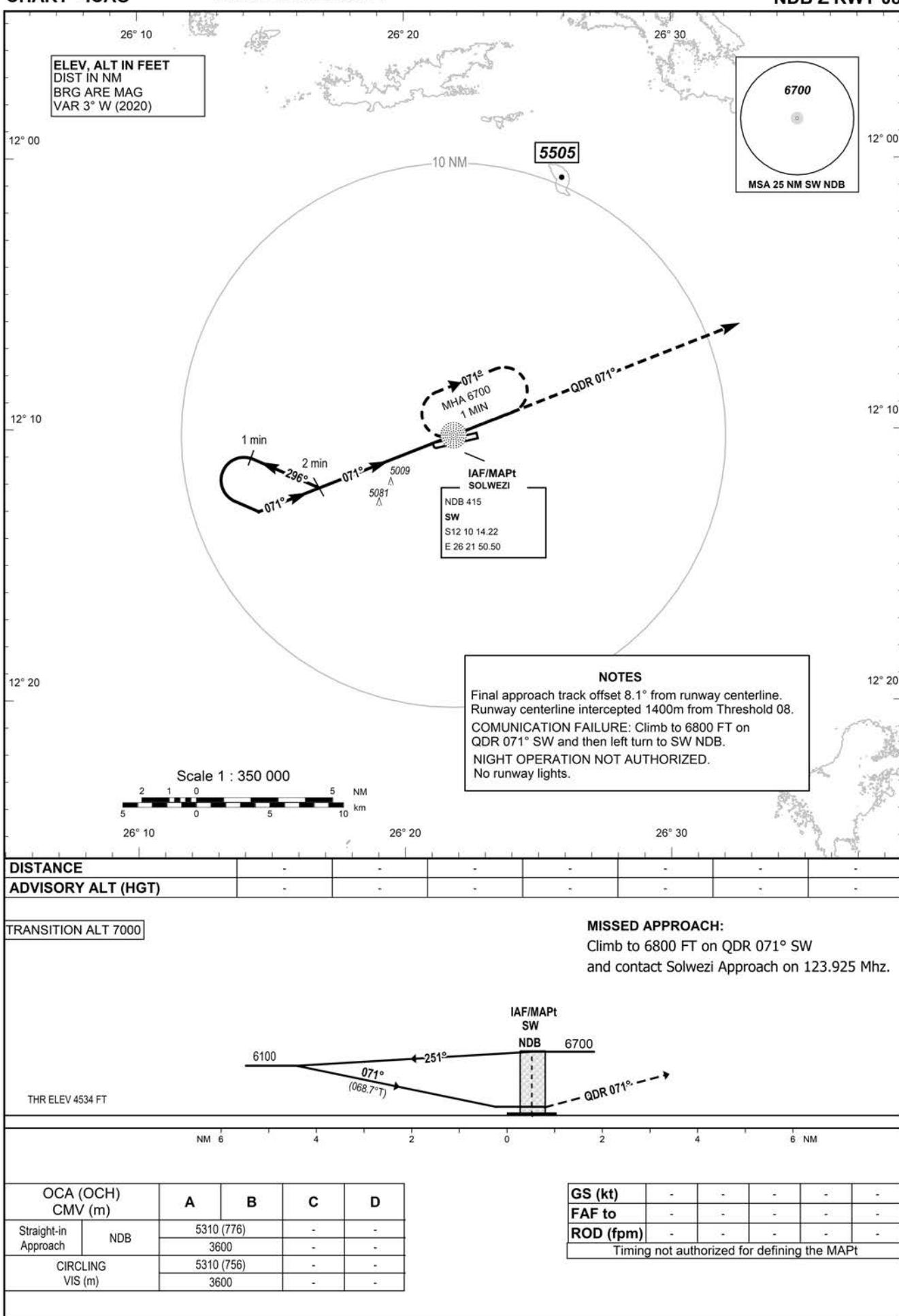
<i>Waypoint Identifier</i>	<i>Coordinates</i>
RW26	S 12 10 16.24 E 26 22 37.98
SW201	S 12 01 56.6 E 026 31 51.6
SW202	S 12 06 25.7 E 026 39 13.5
SW203	S 12 13 40.6 E 026 34 40.1
SW204	S 12 07 48.6 E 026 33 15.9
SW205	S 12 09 11.5 E 026 27 18.1
SW206	S 12 19 45.6 E 026 04 37.7

INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 4554 FT
HEIGHTS RELATED TO
THR RWY 08 - ELEV 4534 FT

APP 123.925
TWR 118.300

SOLWEZI/Solwezi
(FLSW)
NDB Z RWY 08



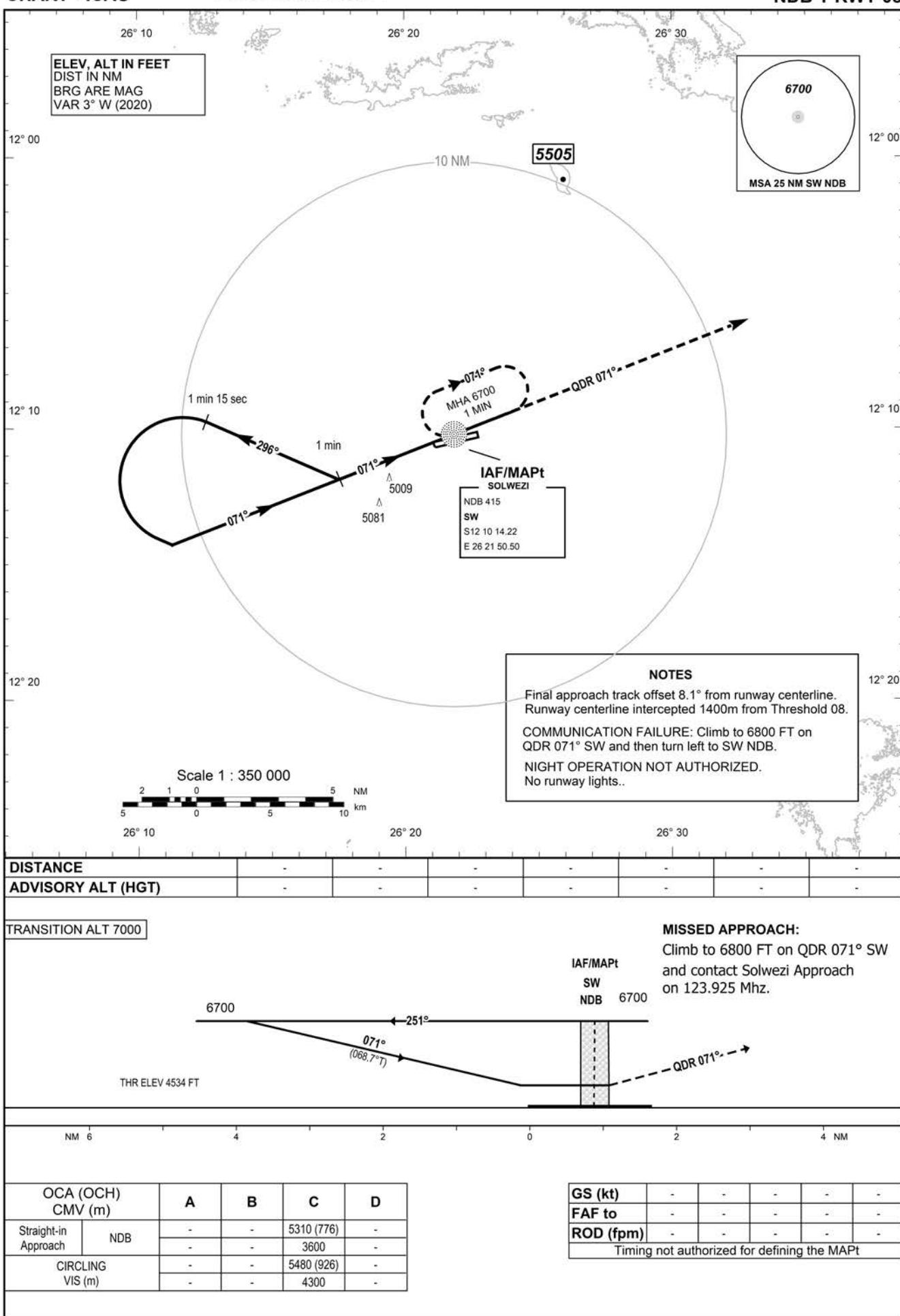
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 4554 FT
HEIGHTS RELATED TO
THR RWY 08 - ELEV 4534 FT

APP 123.925
TWR 118.300

SOLWEZI/Solwezi
(FLSW)
NDB Y RWY 08



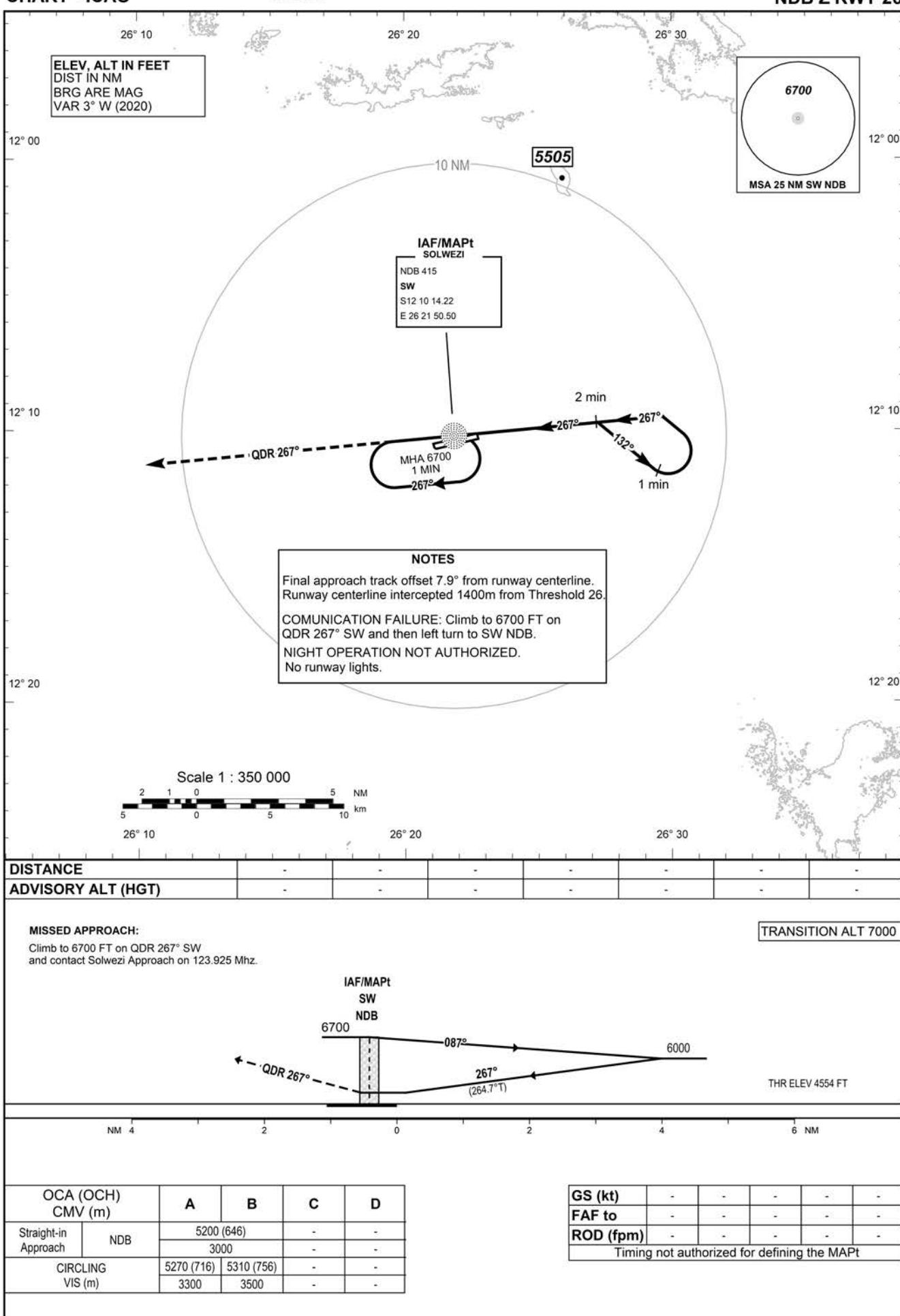
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 4554 FT
HEIGHTS RELATED TO
AD ELEV

APP 123.925
TWR 118.300

SOLWEZI/Solwezi
(FLSW)
NDB Z RWY 26



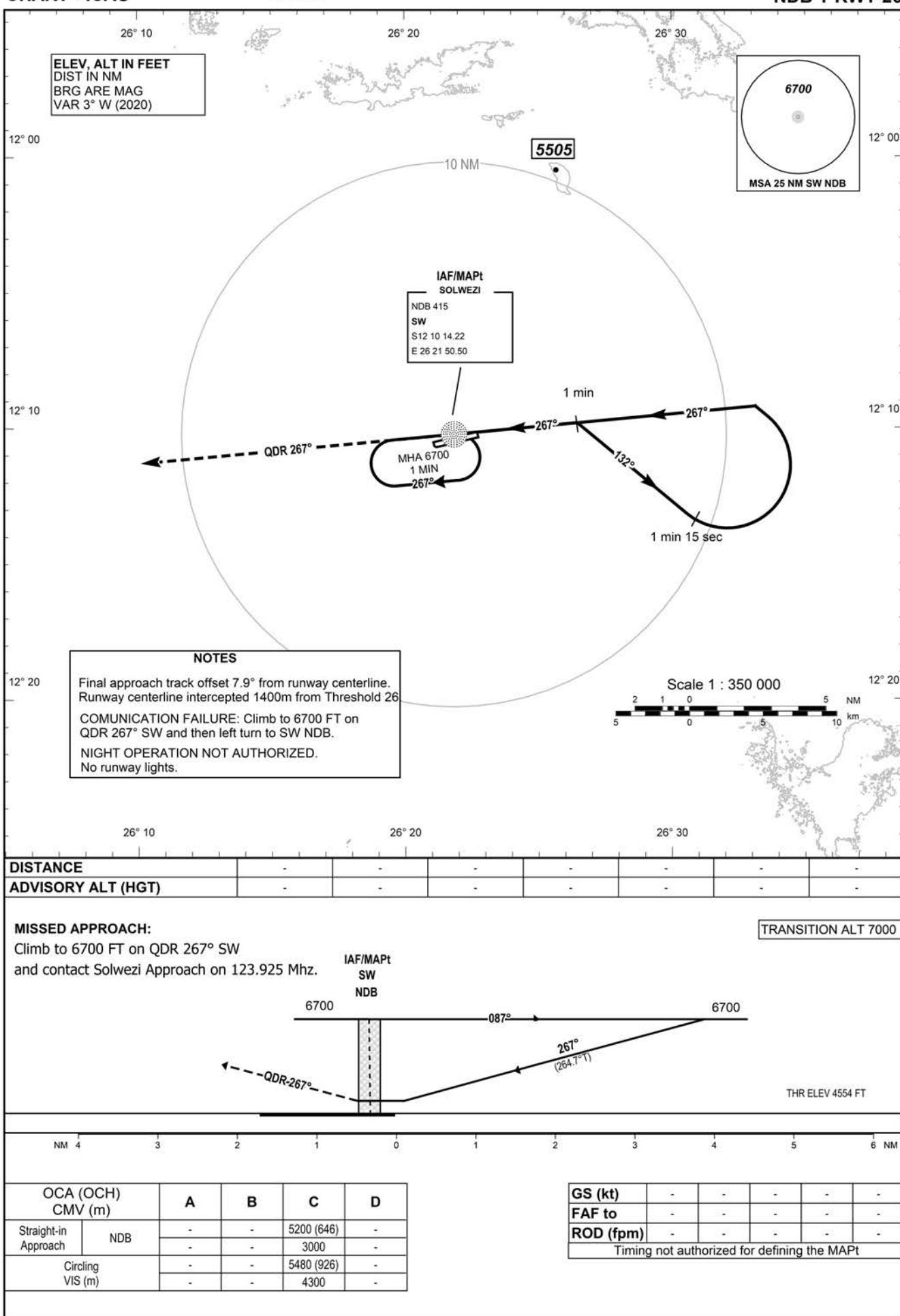
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INSTRUMENT
APPROACH
CHART - ICAO

AERODROME ELEV 4554 FT
HEIGHTS RELATED TO
AD ELEV

APP 123.925
TWR 118.300

SOLWEZI/Solwezi
(FLSW)
NDB Y RWY 26



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AD 4 SECONDARY AERODROMES

CERTIFIED AERODROMES

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLHN HARRY MWAANGA NKUMBULA INTL S 17°49'08.0" E 025°49'07.0" Elev: 3255 FT (992 M) / T: 34.5° C	10 28 15 33	2987 x 46 1373 x 30	0 x 30 91 x 30 60 x 46	PCN 52/F Bitumen AUW 20500 KG Grass	Zambia Airports Corporation Limited Harry Mwaanga Nkumbula International Airport, PO Box 60199 Livingstone Zambia Tel: +260 977 790822 Tel: 260-213-321682 Tel: 260-213-321153 Tel: 260-213-323222 Tel: +260 965 860494 Fax: 260-213-324235 AFS: FLHNZPZX eMail: zaclliv@za-cl.aero Website: www.za-cl.co.zm NIL
FLKK KENNETH KAUNDA INTL S 15°19'50.8" E 028°27'09.4" Elev: 3779 FT (1152 M) / T: 32° C	10 28	3937 x 46	152 x 46 305 x 46	PCN 59/F	Zambia Airports Corporation Limited. Kenneth Kaunda International Airport, Box 30175 Lusaka Zambia Tel: 260-211-271044, 260-211-271248 Fax: 260-211-224777, 260-211-271781 AFS: FLKKZPZX eMail: zacl@za-cl.aero Website: www.za-cl.co.zm Helicopter operations to be guided by ATC.

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLSK SIMON MWANSA KAPWEPWE IN- TERNATIONAL AIRPORT S 12°57'42.5" E 028°30'58.4" Elev: 4295.93 FT (1309 M) / T: 32° C	09 27	3500 x 45	Nil	PCN 85/F/B/W/T Concrete and asphalt	Zambia Airports Cor- poration Limited P.O Box 70095, Ndola, Zambia. Tel: + 260 212 611193-4 Tel: +260 977 790638, +260 965 8604 Telex: + 260 212 614226 AFS: FLSKYFYX, FLSKZPZX eMail: zaclnd@za- cl.aero Website: http:// www.zacl.co.zm

LICENSED AERODROMES

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLAA KAWA S 13°42'00.0" E 029°30'000.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	N. Young PPR
FLAB KAKUMBI S 13°04'08.5" E 031°45'48.3" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W, P.O Box18 Mfuwe
FLAC LWIMBA S 15°28'25.0" E 028°42'24.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Lwimba Ranch, Pala- bana, Lusaka.
FLAG KHAL-AMANZI S 15°22'40.4" E 028°31'50.6" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Khal – Amazi Farm, Chongwe.
FLAI AMELIA S 13°45'000.0" E 029°19'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	G.D.L . Williams P.O Box 840105 Mkushi PPR

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLBB BAOBAB RIDGE S 17°53'53.0" E 025°52'02.4" Elev: - / T: Nil	Nil	Nil	Nil	Nil	United Air Charter, P.O Box 60428, Livingstone P.O. Box 60428 Livingstone Tel: 260-213-323743 Fax: 260-213-323095 PPR.
FLBH B-HIGH S 12°54'11.9" E 028°15'48.5" Elev: - / T: Nil	Nil	Nil	Nil	Nil	BTech, P.O Box 28148, Kitwe.
FLBM MAMBILIMA S 10°31'33.1" E 028°39'47.7" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Mission Medic - Air P.O. BOX 90509 Luanshya P.O. BOX 90509 Luanshya
FLBP BAOBAB PLAINS S 17°53'37.9" E 025°52'22.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	United Air Charter, P.O Box 60428, Livingstone
FLBW NABWALYA S 12°25'48.6" E 031°56'19.6" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Baobab Safaris P.O. Box 34272 Lusaka PPR
FLBY FLYBY S 14°51'18.0" E 028°18'25.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Flyby Limited, Farm 2237, Chisamba.
FLCA CHABWINO S 13°45'44.2" E 029°07'38.2" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Lochhead Farm, P.O Box 810066, Mkushi.
FLCB CHALATA S 13°34'27.8" E 029°38'24.4" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Kingdom Cropping, Farm 1672a, Mkushi.
FLCG CHILONGOLO S 15°29'12.0" E 028°10'06.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Private Bag E891 Lusaka Tel: 01-214386
FLCL CHILANGA S 15°33'00.0" E 028°18'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	City Investment Tel: 01-228683 PPR
FLCM CHIMBWI S 11°58'06.0" E 030°15'12.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W, P.O. Box 1 Chilanga Tel: 278366 Fax: 278244 PPR

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLCR CERES S 15°46'00.0" E 027°50'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	M.G.M. Farms Limited P.O. Box 670171 Mazabuka Tel: 260-213-230519 PPR
FLDF DELTA FARM S 15°46'55.5" E 028°00'47.9" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Makuku Farms, Mazabuka.
FLDP DIPALATA S 13°17'50.0" E 023°13'09.7" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Dipalata Mission, Zambezi.
FLFC FARM CENTRE S 13°46'59.0" E 029°11'50.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Serioes Farm PPR
FLFD Fenwood S 15°00'10.0" E 028°05'07.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Fenwood Farm, Fringila, Chisamba
FLFZ FULAZA S 11°36'15.4" E 032°32'21.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Wildcat Safaris, P.O Box 39141 Lusaka P.O. Box 39141 Lusaka Tel: 01 253630 Fax: 01 253630 PPR
FLGE MUKINGE HILL S 13°29'00.0" E 025°52'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Evangelical Church in Zambia P.O Box 120092 Kasempa Tel: 08-251086 Fax: 08-251081
FLGW MPONGWE S 13°30'000.0" E 028°11'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Mission Medic-Air P.O. BOX 90509 Luanshya
FLHC HILLCREST S 15°55'53.0" E 027°57'32.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Hillcrest Estates Limited, Mazabuka.
FLIJ INJA S 12°15'37.3" E 030°35'08.2" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W P.O. Box 450169 Mpika Tel: 278366 Fax: 278244 PPR

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLIL MOUNT ISABELLE S 13°46'08.2" E 029°03'32.7" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Mount Isabelle Ltd, Farm 923, Mkushi.
FLIS IKAROS S 13°52'00.0" E 029°20'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Mr J.P. Karnezos P.O. Box 840054 Mkushi Tel: 362182 PPR
FLJK JEKI S 15°38'00.0" E 029°36'11.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W. P/Bag 1 Chilanga Tel: 278366 Fax: 278244 PPR
FLKF KULEFU S 15°34'00.0" E 029°48'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Wildlife Safaris, P.O Box 120, Lusaka
FLKJ KANJA S 16°27'00.0" E 023°22'00.0" Elev: 3370 FT (1027 M) / T: Nil	Nil	Nil	Nil	Nil	Veterinary AT setse Control Division P.O. Box 50060 LUSAKA TF. PPR
FLKM KALUMBILA S 12°15'15.0" E 025°26'15.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	First Quantum Miner- als, Kalumbila
FLKN KYINDU S 15°30'000.0" E 028°04'30.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Leopard Investment PPR
FLKT KASAVASA S 14°36'31.0" E 028°20'15.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Tara Farm, Kabwe.
FLKZ LUKUZI S 12°49'00.0" E 032°04'00.0" Elev: 1800 FT (549 M) / T: Nil	10 28	1200 x 30	Nil	Nil	Zambia Safaris Ltd. P.O. Box 32955 Lusa- ka PRI, PPR.
FLLH LUSALI HILLS S 14°54'08.2" E 028°14'42.5" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Dive Gordon Chisam- ba Sable Farms Tel: 01 611249/01 233808 PPR
FLLJ LUENGU (MUKUMPU) S 13°38'12.0" E 027°45'04.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Somawhe Estates, P/ Bag 11 Luanshya.

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLLM LUSHIMBA SPRINGS S 14°15'20.0" E 025°33'15.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Hunters and Guide, Lusaka. P.O. Box 34811 Lusa- ka Tel: 227023 Fax: 221226
FLLP LUBONGA S 11°45'000.0" E 032°10'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W P.O. Box 450189 Mp- ika PPR
FLLR Luelo S 11°53'02.4" E 032°33'49.7" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Muchinga Adventures Box 390003, Lusaka.
FLLZ LOZA S 13°43'46.6" E 029°14'01.3" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Chobe Agrivision, P.O Box 840058, Mkushi.
FLMB MAAMBA S 17°22'00.0" E 027°11'00.0" Elev: 2050 FT (625 M) / T: Nil	05 23	915 x 30	Nil	AUW 5700 KG Gravel	Maamba Collieries P.O. Box 99
FLMC MASTOCK CHIAWA S 15°55'00.0" E 028°52'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Lendor Agricultural Holding P.O. Box 31378 Lusa- ka Tel: 244409 ppr
FLMF MFUWE S 13°15'29.9" E 031°56'23.3" Elev: 1844 FT (562 M) / T: 36.3° C	09 27	2189 x 30	150 x 30 Nil	PCN 78/F/A/W/T	Zambia Airports Cor- poration Limited Mfuwe P.O. Box 2 Mfuwe Zambia Tel: 260-216-245006, 245083, 245142 Fax: 260-216-245029 AFS: FLMFZPZX eMail: zaclmf@za- cl.aero Website: www.za- cl.co.zm Nil
FLMH MUSHISHIMA S 12°40'00.0" E 027°45'000.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	LAZY (A) RANCHING COMPANY P.O BOX 10473 Chin- gola
FLMI MUNWA NKOZI S 13°44'21.0" E 029°24'47.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	A.D.D. Anderson P.O. Box Mkushi PPR

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLMJ MUTEMWA S 17°03'12.0" E 024°00'07.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Mutemwa Safaris Lodge P.O. Box 31812 Lusa- ka Tel: 01-286706 PPR
FLMQ MULEMBO S 12°32'36.4" E 030°18'42.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Kasankaka Trust, P.O Box 30974, Serenje
FLMR MARAAMBA MICROLIGHT S 17°53'02.7" E 025°50'41.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Batoka Sky P.O. Box 60971 Liv- ingstone
FLMV MKUSHI RIVER S 13°36'09.2" E 029°38'05.8" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Clem Investments, P.O Box 840206, Mkushi.
FLNA NGOMA S 15°57'59.9" E 025°55'40.3" Elev: 3400 FT (1036 M) / T: Nil	09 27	1100 x 30	Nil	AUW 20500 KG	D.N.P.W Dept of Wildlife Fish- eries & National Parks, Box 1 Chilan- ga AD closed in rainy season BTN 31 Dec / 30 Apr varia- tions to be notified by NOTAM. CAT. II of Fire protection AVBL when in operation. For Pvt & Charter Flts PPR-FM. AD is in the National Park.
FLNG LUNGA S 14°10'55.7" E 026°21'06.5" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Wildlife Safaris P.O Box 120 Lusaka PPR
FLNK NKAMBA BAY S 08°36'26.9" E 030°33'14.5" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Dept. of National Parks and Wildlife, Nsumbu
FLNO MANO S 11°36'39.7" E 032°00'42.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W P.O. Box 450169 Mpika
FLOT OTAGO S 14°56'32.2" E 028°06'43.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Bush Pilots Aviation, Lusaka.

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLRA RAPID ONE ZERO S 17°58'15.3" E 025°51'51.1" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Batoka Sky P.O. Box 60971 Livingstone Tel: 03-320058 Fax: 03-324071 PPR
FLRB RAPID TWO FIVE S 17°58'57.1" E 025°59'11.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Batoka Sky P.O. Box 60971 Livingstone Tel: 03-320058 Fax: 03-324071 PPR
FLRC RIVER CLUB S 17°49'20.6" E 025°42'19.2" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Batoka Sky P.O. Box 60971 Livingstone Tel: 03-320058 Fax: 03-324071 PPR
FLRR BALABALA S 14°50'22.0" E 028°01'07.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Farm 2159, P.O Box 27 Fringilla, Chisamba.
FLRZ ROYAL ZAMBEZI S 15°43'38.5" E 029°17'44.8" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Camp Lower Zambezi, Chongwe
FLSG SINAZONGWE S 17°12'40.0" E 027°29'00.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Gwembe Valley Development Company Ltd P.O. Box 32853 Lusaka Tel: 03 278117 Fax: 03 278117 PPR
FLSH SHIWANGANDU S 11°12'06.0" E 031°44'00.0" Elev: 4600 FT (1402 M) / T: Nil	10 28	900 x 45	Nil	Nil Grass	Shiva Estates Limited No. 827 Chinsali PRIV PPR not required.
FLSI SUN INTERNATIONAL S 17°55'17.0" E 025°51'58.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Sun International Hotel P.O. Box 600971 Livingstone Tel: 03 323095 PPR
FLSR MAYOBA S 17°17'33.0" E 026°17'11.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Happy Rest Farm, P.O Box 7, Zimba.
FLTD MTENDERE S 15°05'28.8" E 028°16'19.2" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Protea Hotel P.O. BOX 32396 Lusaka

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLTI TARANAKI S 15°48'12.0" E 027°57'27.0" Elev: - / T: Nil	Nil	Nil	Nil	Nil	J. Miers Agair Ltd P.O. Box 235 Mazabuka Tel: 097 790630
FLUB LUEMBE S 14°16'57.2" E 030°31'19.8" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Bimm Safaris P.O Box 34656 Lusaka Tel: 02 611417/19 PPR
FLVX VIXERS S 14°12'26.1" E 028°37'45.2" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Vixers Farm Limited, Farm No. 3797 Kabwe
FLWS MWALESHI S 11°58'01.8" E 032°20'39.3" Elev: - / T: Nil	Nil	Nil	Nil	Nil	D.N.P.W P.O. Box 450169 Mpika PPR
FLYD MAYFIELD S 16°05'35.2" E 027°51'41.3" Elev: - / T: Nil	Nil	Nil	Nil	Nil	P.O Box 670109, Mazabuka.
FLYS MASEBE RANCH S 13°46'47.8" E 029°17'58.5" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Masebe Ranch, P.O Box 840055, Mkushi.

LIST OF GOVERNMENT AERODROMES

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLCP CHIPATA S 13°33'25.0" E 032°35'14.2" Elev: 3359 FT (1024 M) / T: 32.2° C	08 26 18 36	809 x 21 1470 x 21	Nil	Nil Grass SIWL 9500 KG	Zambia Airports Corporation Limited Box 510105 Chipata Airport Tel: 260-216-222828 AFS: FLCPZPZX
FLCS CHINSALI S 10°34'58.9" E 032°04'21.6" Elev: 4350 FT (1326 M) / T: 26° C	09 27	Nil	61 x 30	Nil Grass	Zambia Airports Corporation Limited
FLFR LUANGWA S 15°36'23.8" E 030°23'58.8" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Ministry of Local Government

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLKB KAWAMBWA S 09°48'01.2" E 029°05'49.0" Elev: 4640 FT (1414 M) / T: Nil	12 30	1100 x 30	Nil	Nil Gravel	Ministry of Local Government
FLKE KASOMPE S 12°34'17.9" E 027°53'32.0" Elev: 4636 FT (1413 M) / T: Nil	11 29	1432 x 23	Nil	Nil Bitumen	Ministry of Local Government CAUTION Aerial must 3NM W. AD HGT 250 AGL 4750FT AMSL. Special Flying Restrictions at airport Caution open pits in the vicinity of the AD. Any overflying ACFT must maintain 1,000ft above ground on the area QNH Applicable at the time. Blasting takes place any time BTN 0400 & 1700 UTC
FLKH KASHIKISHI S 09°18'30.3" E 028°45'20.4" Elev: - / T: Nil	Nil	Nil	Nil	Nil	Ministry of Local Government
FLKL KALABO S 14°59'55.5" E 022°38'47.6" Elev: 3450 FT (1052 M) / T: Nil	10 28	1100 x 30	Nil	AUW 20500 KG	Ministry of Local Government Crash Protection Category III AVBL.
FLKO KAOMA S 14°47'43.5" E 024°48'08.2" Elev: 3760 FT (1146 M) / T: 23.7° C	12 30	1200 x 16	Nil	AUW 20500 KG Grass	Ministry of Local Government 245 M sealed surface at west-end of Rwy
FLKS KASAMA S 10°13'07.0" E 031°08'06.6" Elev: 4576.8 FT (1395 M) / T: Nil	13 31	2008 x 24	Nil	Nil	Zambia Airports Corporation Limited AFS: FLKSZPZX
FLKW KABWE S 14°27'08.8" E 028°23'02.5" Elev: 3920 FT (1195 M) / T: Nil	13 31	1190 x 30	Nil	Nil	Ministry of Local Government Unlit OBST 3NM NE. AD HGT 200ft AGL. 4075 AMSL
FLLD LUNDAZI S 12°17'03.9" E 033°11'25.8" Elev: 375 FT (114 M) / T: 26.5° C	09 27	1100 x 30	Nil	AUW 20500 KG	Ministry of Local Government
FLLK LUKULU S 14°22'37.2" E 023°14'35.6" Elev: 3480 FT (1061 M) / T: Nil	09 27	1100 x 30	Nil	AUW 20500 KG	Ministry of Local Government

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLMA MANSA S 11°08'19.6" E 028°52'40.5" Elev: 4106.28 FT (1252 M) / T: 30.9° C	10 28	1710 x 18	Nil	Nil	Zambia Airports Corporation Limited AFS: FLMAZPZX
FLMG MONGU S 15°15'16.1" E 023°09'21.7" Elev: 3465 FT (1056 M) / T: 33.9° C	10 28	1463 x 21	Nil	PCN 20 Bitumen	Zambia Airports Corporation Limited Mongu Airport P.O Box 910038 Mongu Zambia Tel: 260-217-221260 AFS: FLMGZPZX
FLML MUFULIRA S 12°33'47.1" E 028°18'13.0" Elev: 4350 FT (1326 M) / T: 26.4° C	09 27	1280 x 45	Nil	AUW 20500 KG	Ministry of Local Government Gravel 25 M. Wide. Caution: Parachute jumping and Glider flying on SATS/SUNS from 0800/1600 GND/FL120 Radius 2NM centred FLML. Towing & Dropping will Flt Pln & maintain Com. FLND APP 119.7 when in the FLND TMA and Clear of FLML circuit. Unlit OBST. Chimney Psn. 12 31.9S 28 13.9E 4107FT AMSL, 212FT agl. Aerial Masts 3NM NW 200FT agl 4450 AMSL
FLMP MPIKA S 11°53'50.1" E 031°25'42.3" Elev: 4650 FT (1417 M) / T: Nil	12 30	1480 x 30	Nil	AUW 20500 KG Gravel	Ministry of Local Government OBSTACLES 1NM HGT. 4657ft AMSL 2.5. NM NNE HGT. 5562 FT AMSL. ALL UNLIT
FLMU MULUBEZI S 16°46'00.0" E 025°11'00.0" Elev: 3175 FT (968 M) / T: Nil	04 22	790 x 30	Nil	Nil Grass	AVA
FLMW MWNILUNGA S 11°39'11.9" E 024°25'44.5" Elev: 4524 FT (1379 M) / T: 30.8° C	10 28	1650 x 18	Nil	AUW 20500 KG Grass	Ministry of Local Government

LOCATION INDICATOR NAME COORDINATES ELEV/REF TEMP	RWY NR	DIMENSIONS (M)		SURFACE STRENGTH	OPERATOR AND REMARKS
		RWY	SWY		
1	2	3	4	5	6
FLPE PETAUKE S 14°13'02.8" E 031°13'16.1" Elev: 3300 FT (1006 M) / T: 28.3° C	09 27	1000 x 30	Nil	Nil Grass	Ministry of Local Government
FLPO KABOMPO S 13°34'26.9" E 024°13'31.3" Elev: 3535 FT (1077 M) / T: Nil	12 30	1100 x 20	Nil	Nil Gravel	Ministry of Local Government
FLSO SOUTH DOWNS S 12°54'24.2" E 028°19'58.4" Elev: 4145 FT (1263 M) / T: 31.6° C	11 29	2000 x 30	Nil	SIWL 9500 KG Asphalt	Zambia Airports Corporation Limited P.O. Box 260294, Kalulushi Kitwe Zambia Tel: 260-21-2-239020
FLSW SOLWEZI S 12°10'25.8" E 026°22'01.2" Elev: 4553.81 FT (1388 M) / T: 30.6° C	08 26	2705 x 35	Nil	PCN 23 Bitumen	Zambia Airports Corporation Limited P.O Box 110005 Solwezi Tel: 260-218-821213 AFS: FLSWPZ NIL
FLZB ZAMBEZI S 13°32'14.2" E 023°06'35.8" Elev: - / T: Nil	13 31	Nil	Nil	Nil	Ministry of Local Government